UPDATE ON REGULATORY MATTERS AND INTERNATIONAL ACTIVITIES

National Marine Fisheries Service (NMFS) will brief the Council on recent regulatory actions, outcomes from international forums related to highly migratory species (HMS), and future HMS-related international meetings (see Agenda Item E.1.b, NMFS Report). The following international meetings have occurred since the Council was last briefed on HMS matters (March 2014).

Delegations from the U.S. and Canada met April 16-17 in Portland, Oregon, and successfully negotiated a three-year fishing regime, 2014-2016, pursuant to the U.S.-Canada Albacore Treaty:

The 5th Meeting of the Scientific Advisory Committee (SAC) to the Inter-American Tropical Tuna Commission (IATTC) was held May 12-16 in La Jolla, California. The SAC reviewed information on scientific topics relevant to HMS in the Eastern Pacific Ocean (EPO) including stock assessments for bigeye and yellowfin tuna stocks in the EPO prepared by IATTC scientific staff.

The Albacore Working Group of the International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC) held a stock assessment workshop for North Pacific albacore April 14-28 in La Jolla California. The stock assessment will be finalized and reviewed at the ISC's plenary meeting, July 15-21 in Taipei, Taiwan. The Working Group used an age and sex structured Stock Synthesis seasonal model covering the period 1966-2012. The results show that the stock is well above commonly accepted biomass limit reference points and fishing mortality is below commonly accepted fishing mortality limit reference points.

At the March 2014 Council meeting, the Council directed staff to continue working on the development of a precautionary management approach for the North Pacific Albacore at the international level (see URL), including both the IATTC and WCPFC arenas. No intersessional meetings have occurred in either arena since the March Council meeting due in part to competing work load responsibilities.

The Scientific Advisory Subcommittee (SAS) to the U.S. Section to the IATTC meets on June 4, 2014, and the General Advisory Committee (GAC) to the U.S. Section to the IATTC meets on June 5, 2014, in La Jolla, California. The U.S. Section consists of four U.S. Commissioners to the IATTC and a representative of the Deputy Assistant Secretary of State for Oceans and Fisheries. The GAC and SAS support the U.S. Section to the IATTC in an advisory capacity; in particular, they provide advice on the development of U.S. policies and positions.

Between the June and September Council meeting three relevant international HMS meetings will be held. The 87th meeting of the IATTC will be held July 14-18, in Lima, Peru. The 14th Plenary Session of the International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean meets July 16-21 in Taipei, Taiwan. The Plenary is preceded by meetings of various working groups to finalize stock assessments. The 10th Regular Session of the Western and Central Pacific Fisheries Commission is scheduled for September 1-4 in Japan. The status of North Pacific albacore and Pacific bluefin tuna will be discussed in these venues and management recommendations and/or conservation measures could be developed.

The attached NMFS Regulatory Report and Southwest Fisheries Science Center Report contain additional details about these activities.

At this meeting the Council has the opportunity to provide comments on international management that can be transmitted to the U.S. delegations to the relevant meetings.

Council Action:

Consider Developments regarding General Regulatory Activities and International Fishery Issues.

Reference Materials:

- 1. Agenda Item E.1.b, NMFS Report: Regulatory and International Activities Update.
- 2. Agenda Item E.1.b, NMFS SWFSC Report.

Agenda Order:

- a. Agenda Item Overview Kit Dahl Mark Helvey
- b. Report of the National Marine Fisheries Service
- c. Reports and Comments of Advisory Bodies and Management Entities
- d. Public Comment
- e. Council Action: Consider Developments regarding General Regulatory Activities and **International Fishery Issues**

PFMC 05/30/14

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FEATURE COMPARISON OF "FRAMEWORK FOR A PRECAUTIONARY MANAGEMENT APPROACH FOR NORTH PACIFIC ALBACORE" (COUNCIL PROPOSAL) AND "CANDIDATE TARGET AND LIMIT REFERENCE POINTS AND DECISION FRAMEWORK FOR NORTH PACIFIC ALBACORE" (NMFS PROPOSAL)

Feature	Council Proposal	NMFS Proposal	
Format	Preliminary WCPFC CMM, management framework	Proposed IATTC Resolution, proposed work plan and	
	outline	assignment to IATTC staff	
Purpose, Goals and Objectives	Implements management framework	Evaluation of candidate measures	
Scope	 CCM flag vessels fishing for NP albacore or catching NP albacore incidentally, both current and potential Intended to apply ultimately in both the WCPFC and IATTC jurisdictions 	Not specified; compatibility in IATTC and WCPFC arenas promoted	
Biological Reference Points			
F limit	 F_{SPR-20%} as initial proposal to seed negotiations F_{curr} with "current" TBD as a benchmark reference point 	None identified	
F target	F _{target max} – "ACL-below-OFL type" buffer	 F_{SPR-10%} F_{SPR-20%} F_{SPR-30%} F_{SPR-40%} F_{SSB-ATHL} 	
Biomass (stock status) limit	SSB _{MSY}	 SB_{0.5R0}, h = 0.75¹ 20% of unfished SB 	
Biomass (stock status) target	Not specified	Not identified	

Note: Acronyms are listed and defined on page 3.

¹ Spawning biomass that produces half of the recruitment of an unexploited population, using the Beverton-Holt spawner-recruit relationship at the specified steepness (h).

Feature	Council Proposal	NMFS Proposal
Evaluation of Measures	Not specified	Management strategy evaluation of 6 BRP combinations and 2 HCRs (TAC, TAE) with respect to 7 performance criteria
Harvest Control Rules		
Catch	 "ACL-below-OFL" buffer in the range of 5-20% CCM-specific partial F fishing rates TBD as a basis for national TACs 3-year TAC to be considered 	 If SB_{curr} ≥ SB-limit annual TAC = F-target at B_{curr} for 3 years (no buffer) IF SB_{curr} < SB-limit, annual TAC = (F-target * SB_{curr})/SB-limit at B_{curr}
Effort	Disallow acute increase in net fishing effort directed at NP albacore by any CCM, but still rely on catch accounting as the key control mechanism	Rules as above converted to total allowable effort (TAE) but F – E relationship not specified
Management Measures	 Catch-based measures TBD with different measures applied depending on stock status; flexibility for CCMs to implement measures relative to individual F_{target} catch limits Measures to prevent increase in fishing effort TBD, with focus on preventing acute increases in effort with catch-based management as the primary focus 	No measures specified beyond HCRs; TBD at some point after July 2015
Timeline	Not specified but presumed to be consistent with NC Work Plan (see below)	"The IATTC scientific staff shall present the results of the MSE at the 2015 Scientific Advisory Committee meeting. If applicable, the staff should endeavor to recommend reference points in their provision of advice on the status of North Pacific albacore and on recommendations for management measures."

WCPFC Northern Committee Work Plan for North Pacific albacore (NC 9 Summary Report excerpt)

Werk eres	Objectives	1-year tasks		
work areas	2014-2016	2014	2015	2016
1. Northern stocks		Consider other management option than the existing management measures, if appropriate.	ns	
a. Monitor status; consider management action	 Review status and take action as needed for:² North Pacific albacore Tasks (A)Review members' reports on their implementation of CMM 2005-03 (1)Estimate the proportion of the total catch of albacore in the North Pacific Ocean (in the Convention Area, and/or across the entire North Pacific Ocean, as appropriate) that is effectively subject to the effort limits mandated in the CMM. (2) Determine how total effort across those fisheries has changed from 2002 through 2012 through a review of members' reports of annual fishing effort by their vessels "fishing for" NP albacore fisheries. (B) Establish a precautionary approach-based management framework, including: (1) recommend appropriate reference points; (2) agreeing in advance to actions that will be taken in the event each of the particular limit reference points is breached (decision rules); (3) recommend any changes to CMM 2005-03. 	Review the compiled members' reports and identify and rectify shortcomings Finalize Task (B) (1) and (2)	Review the compiled members' reports and identify and rectify shortcomings Recommend any changes to CMM 2005-03 (Task(B)(3))	Review the compiled members' reports and identify and rectify shortcomings

 $^{^{2}}$ In the event that the Commission, in accordance with paragraph 5 of Annex I of the Commission Rules of Procedure, adds additional stocks, such as the northern stock of striped marlin, to the list of stocks understood to be "northern stocks", this work programme will be revised to include periodic status reviews and consideration of management action for such stocks.

Acronyms

ACL	Annual catch limit
BRP	Biological reference point
CCM	Members, Cooperating Non-Members and participating Territories
CMM	Conservation and management measure
F	Fishing mortality rate
h	Steepness
HCR	Harvest control rule
IATTC	Inter-American Tropical Tuna Commission
OFL	Overfishing limit
R_0	Recruitment under unexploited conditions
SB	Spawning biomass
SPR	Spawning potential ratio
TAC	Total allowable catch
TAE	Total allowable effort
TBD	To be determined
MICDEC	

WCPFC Western and Central Pacific Fisheries Commission

Framework for a Precautionary Management Approach for North Pacific Albacore

Preliminary Draft Proposal Version U.S. 2, August 2013

The following should be considered an early draft seed effort of a North Pacific Albacore precautionary management approach framework document, with the expectation that it will evolve or engender a similar document to fulfill the schedule in the Northern Committee Work Programme. This draft document is organized according to the following section headers, each of which contains a description of the future content of such a section (blue font) or draft language proposed by the US for consideration (black font).

Purpose Goals and Objectives Scope Fishery Data Requirements Biological Reference Points Fishery Decision Control Rules Fishery Management Measures Exceptions, Reviews, and Enforcement Assumptions and Attachments

<u>Purpose</u>

This section should contain a Purpose Statement reflecting the precautionary intent and justification reasoning on the Northern committee VNC) record, together with appropriate refinements.

Goals and Objectives

The goals and objectives of this North Pacific Albacore Precautionary Management Approach Framework (APMA) are as follows.

- Maintain the long-term conservation and sustainable catch of North Pacific Albacore (NP Albacore) by implementing precautionary fishery management strategies that significantly reduce the risk of overfishing; provide for rapid recovery from an overfished condition, should it occur; and achieve an optimum level of average yield relative to the biologically sustainable maximum.
- 2. Implement harvest strategies that are robust with respect to scientific and management uncertainty.
- 3. Establish measures to facilitate rapid and successful implementation of any necessary future management actions, in an equitable manner to all Members, Co-operating Non-Members, and if appropriate, Participating Territories (CCM) fishing for NP Albacore or incidentally taking NP Albacore, and in a manner that provides a disincentive to any CCM that does not comply with the provisions of this APMA.
- 4. Maintain and support long-term economic and social benefits to the various NP Albacore fishery participants of CCMs.

- 5. Provide a long-term, stable supply of high-quality NP Albacore to consumers.
- 6. Implement measures to adequately account and manage for total fishery related mortalities, including directed and incidental fishery impacts, including discarded fish not landed.

<u>Scope</u>

This PMA applies directly to CCM with registered or authorized vessels fishing for NP Albacore, and is structured to apply also to those with vessels that have incidental or non-directed catches as well as those with vessels that do not now but may enter directed or incidental fisheries in the future.

This APMA is intended to align with essentially similar precautionary approach elements presumed at some point to be adopted by the IATTC for waters of its jurisdiction (see IATTC Resolution C-13-03, points 5 and 6).

Fishery Data Requirements

This section should describe and list catch and effort accounting and reporting recessities, and any associated fishery data obligations, of all CCM fishing for or otherwise catching NP Albacore. It will note WCPFC CMMs (such as 2005-03) and IATTC Resolutions as appropriate and replicate critical wording as appropriate.

Biological Reference Points

This section should have a description of the specific proposal for reference points, with citation to an Appendix that would include background material and candidate reference points the proposal was selected from.

This section should provide specifics of both fishery limit and stock status biological reference points proposed to be adopted by this APMA. The draft fishery limit reference point proposed in this document, in the spirit of a starter for serious discussions, is an SPR-based F limit: F_{20%}. F_{current} would also be presented as a reference point, with the selection of a recent base period defining "current" to be completed at some future point. A reference point of F_{target max}, a primary precautionary buffer feature of this approach, would also be discussed in an introductory manner in this section, relative to a fuller description within the Fishery Decision Control Rules section. The draft proposal for primary stock status reference point is SSB_{MSY}.

Fishery Decision Control Rules

The sertion should include introductory narrative that notes the decision control rule is intended to cover the current stock status, considered to be in good condition, as well as situations where the stock status increases, the stock status is declining, and the stock status collapses unexpectedly. The introductory narrative should also include reference to the precautionary target catch buffer concept relative to the limit reference point of $F_{20\%}$.

The graphic below represents a fishery decision control rule for the total aggregate catch, with the Y axis showing SPR fishing rates and the X axis showing stock status. The horizontal dashed line is intended to represent the best available scientific estimate of the biological reference point associated with the aggregate sustainable spawning-adult-equivalent SPR fishing rate, while the vertical dashed line is

intended to represent the maximum yield spawner biomass point. Thus, the diagonal dotted line is intended to represent a limit reference associated with overfishing at spawner biomass levels less than the MSY point. The solid line represents the precautionary fishing target rates to be observed by aggregate CCMs. The target fishing rate intercepts the X axis at zero in recognition of the need for an incidental *de minimis* catch at stock collapse levels.



This section should describe the preclutionary buffer concept in specific detail and what it is supposed to accomplish as a cushion or management and scientific uncertainty. As a seed idea to promote further dialogue, this burner should be considered as a straight percentage, such as 5% or 20%, representing a contemporary estimate of uncertainty, as opposed to a formulaic calculation based on annual or updated issessments of management precision and stock assessment or other scientific variability.

Individual CCN fishery decision control rules are to be based on a similar CCM-specific graph with fishing rates that are a subset of the total aggregate fishing rate. CCM-specific "partial F" fishing rates should be developed at some point reflective of base period data, together with a description of how a CCM specific fishing rate translates to an annual catch via a stock assessment; a three year average catch limit should also be considered. It also would be useful to construct an Appendix showing three hypothetical CCM-specific catch limits associated with three hypothetical stock assessments.

There are no detailed fishery decision rules associated with fishing effort, such as a vessel-day scheme, because this APMA relies on catch control as the essential mechanism. However, there is an overarching management measure described below precluding significant increases in net effort capacity by any CCM directed at NP Albacore.

Fishery Management Measures

This section should describe the use of a total allowable catch (TAC) for each CCM and associated fishery management measures responsive to fishery decision control rule thresholds. It should include the concept that incidental non-target catches are to be accounted for and taken off the top of each CCM's TAC. The following represent some things that could be included at some future point.

Stock Category: Current stock status (good) and if stock status increases

Catch Management Measure

- Insert definition as to what this category is relative to X axis on the control rule graph, and how it translates to an individual CCM catch level, across gear types.
- This section should provide for the flexibility for each CCM to manage for us individual F_{target} catch limit, be it via seasonal closures, area closures, quotas, or other measures it is confident can control total catch.
- At some point in the future, this subsection should address the question of catch management precision, such as consideration of an annual slip tage anowance for F_{target} exceedance with three year averaging; carry-over and over ge payback provisions, etc.

Effort Management Measure

• This section will describe a provision intended to accomplish no net increase in fishing effort or capacity. While this could be viewed as a "no new boats" concept that allows for replacement of vessels lost or decommissioned, effort measurements may be in metrics different than vessel or tonnage capacity, e.g. vessel days fished, hooks deployed, etc. The intent of this effort management measure is to prevent acute increases in fishing effort while relying on catch-based management measures as the primary management measure.

Stock Category: Declining stock status and collarsed stock status

<u>Catch MM</u> Effort MM

Exceptions, Reviews, and Enforcement

This section should describe the principle that full accounting of fishery impacts to NP Albacore, with no exceptions or exclusions such as artisanal fishery exceptions. In the event there is a claim under WCPFC Article 30 from small stand developing States, arrangements for full accounting and compliance with the overall fishery control role need to be assured.

There shall be an effectiveness review of this APMA after every NP Albacore stock assessment, or after five years in the event a stock assessment is delayed for that period of time.

Compliance monitoring reporting and enforcement shall be done in accordance with proposed CMM 2012-2, presuming it is finalized and adopted in a timely manner. However, if there is not clarity within CMM 2012-2, Section VI, paragraph 23 by August, 2014 about a penalty for exceeding the allowable catch limit, insufficiency in reporting directed catch amounts, or the building of new boats directed towards entering this fishery, then the Northern Committee shall develop penalty language to accomplish Goal 3 above regarding (1) insuring equitable treatment for those countries that comply and (2) instituting an obvious disincentive for significant non-compliance.

Assumptions and Attachments

NMFS Report West Coast Regional Office Highly Migratory Species - Regulatory Matters

Temporary Rule to Reduce Risk of Sperm Whale Bycatch in the West Coast Swordfish

Drift Gillnet (DGN) Fishery: On September 4, 2013, NMFS published in the Federal Register a temporary rule (78 FR 54548) for emergency action to modify the DGN fishery for the 2013-2014 fishing season under authority of section 305(c)(1)¹ of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). The purpose of the action was to reduce risk associated with sperm whale bycatch in the DGN fishery for the 2013-2014 fishing season based on recommendations from the Pacific Offshore Cetacean Take Reduction Team (TRT). The temporary rule expired on January 31, 2014, which corresponded with the traditional end of the DGN fishing season. Following discussion of the conservation measures and timelines in the rule at its March 2013 meeting, the Council sent a letter to NMFS requesting renewal of the temporary rule so that sperm whale conservation measures continue to be in place while permanent rulemaking is developed. On May 22, 2014, NMFS published in the Federal Register (79 FR 29377) a second temporary rule renewing the conservation measures implemented under the original temporary rule. The new rule will expire on August 5, 2014.

Status of Permanent Rulemaking: Based in part on the TRT recommendations and recently updated best available science on sperm whale population abundance estimates and DGN fishery annual bycatch estimates, NMFS has initiated proposed-to-final rulemaking under MSA authority. This rulemaking would mandate the use of vessel monitoring systems (VMS) on all active thresher shark/swordfish large-mesh DGN vessels and implement a 48-hour pre-trip notification requirement to facilitate observer placement on the vessels, if so requested. The target date for completing the MSA rulemaking is late-summer 2014 to coincide with the traditional start of the DGN fishing season.

Petition for Rulemaking to Prohibit Pacific Bluefin Tuna Fishing: On April 9, 2014, NMFS received a petition from the Center for Biological Diversity. The seeking amendment of the HMS FMP and promulgation of agency rules to prohibit fishing for Pacific bluefin tuna. Specifically, Petitioner requests an amendment to add Pacific bluefin tuna to the list of

¹SEC 305. OTHER REQUIREMENTS AND AUTHORITY

(c) EMERGENCY ACTION AND INTERIM MEASURES.-

⁽¹⁾ If the Secretary finds that an emergency or overfishing exists or that interim measures are needed to reduce overfishing for any fishery, he may promulgate emergency¹ regulations or interim measures necessary to address the emergency or overfishing, without regard to whether a fishery management plan exists for such fishery.

prohibited species that must be released immediately if caught or as an alternative, an amendment establishing annual catch limits for bluefin tuna and a permanent minimum size requirement to protect age classes 1-2 from fishing mortality. The petitioner requests an FMP amendment to establish reference points for bluefin tuna to guide science-based management.

Finally, the petitioner requests U.S. recommendations for international action including (1) a high seas moratorium on all fishing, (2) a Pacific-wide minimum size for bluefm tuna catch, and (3) a reduction in Pacific bluefin tuna quota for all member countries in order to meet established rebuilding goals.

Under the Administrative Procedure Act (APA), all citizens have the right to petition for the "issuance, amendment, or repeal" of an agency rule. The Assistant Administrator (AA) for NMFS will determine whether the petition contains enough information to enable the agency to consider the substance of the petition. If the AA determines not to proceed further, the petitioner shall be notified in writing of the reasons for the determination. Should the AA decide to proceed, NMFS will publish a notice in the Federal Register announcing its receipt, the name of the petitioner, and a concise statement of the petitioner's request. NMFS will notify the petitioner of its decision to proceed with the rulemaking suggested by the petition within 120 days of the receipt of the petition.

International Update

Inter-American Tropical Tuna Commission: NMFS will host a public meeting of the Scientific Advisory Subcommittee (SAS) and a meeting of the General Advisory Committee (GAC) to the U.S. Section to the Inter-American Tropical Tuna Commission (IATTC) on June 4 and 5, 2014, respectively. Both meetings will be held in the Pacific Conference Room (Room 300) at NMFS, Southwest Fisheries Science Center in La Jolla, CA. The SAS meeting topics will include, but are not limited to, the following: (1) relevant stock status updates, including yellowfin, bigeye, skipjack, North Pacific albacore, and Pacific bluefin tunas; (2) updates on bycatch mitigation measures; and (3) evaluation of the IATTC's recommended conservation measures, U.S. proposals, and proposals from other IATTC members.

The GAC meeting topics will include, but are not limited to, the following: (1) relevant stock status updates, including yellowfin, bigeye, skipjack, North Pacific albacore, and Pacific bluefin tunas; (2) U.S. regulatory changes that could affect tuna fisheries in the eastern Pacific Ocean; (3) the status of U.S legislation to implement the Antigua Convention; (4) receiving input from SAS members; (5) formulation of advice on issues that may arise at the upcoming 2014 IATTC meeting, including the IATTC's recommended conservation measures, U.S. proposals, and proposals from other IATTC members. For further information and to RSVP please see: https://federalregister.gov/a/2014-09958.

The annual meetings of the IATTC and the Agreement on the International Dolphin Conservation Program are scheduled for July 7 – 18, 2014, in Lima, Peru. For additional information, see <u>http://iattc.org/Meetings/Meetings2014/July/IATTC-AIDCP-Annual-Meetings-JUL2014ENG.htm</u>.

Since the March 2013 Council meeting, NMFS has published or will soon publish the following rulemakings applicable to the IATTC Convention Area:

- Final Rule to implement IATTC Resolution C-13-01, *Resolution on a Multiannual Program for the Conservation of Tuna in the Eastern Pacific Ocean during 2014-2016* (79 FR 19487). The rule and supporting documents may be viewed at: <u>http://www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2014-0014</u>.
- Final Rule to implement IATTC Resolution C-13-02, *Measures for the Conservation and Management of Bluefin Tuna in the Eastern Pacific Ocean* (79 FR 28448). The rule and supporting documents may be viewed at: <u>http://www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2013-0119</u>.
- 3) Proposed Rule (will publish soon), to implement the whale shark conservation provisions of IATTC Resolution C-13-04, *Collection and Analyses of Data on Fish-Aggregating Devices*. These provisions include a prohibition on intentional setting of a purse seine on whale sharks. The resolution may viewed at: http://www.iattc.org/PDFFiles2/Resolutions/C-13-04-FADs.pdf.

PFMC 06/05/14



Agenda Item E.1.b Supplemental NMFS Report 2

June 2014

UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration NATIONAL MARINE FISHERIES SERVICE 1315 East-West Highway Silver Spring, Maryland 20910

THE DIRECTOR

MAY 30 2014

RECEIVE WAY 20 2014

D.O. McIsaac, Ph.D. Executive Director Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101

Dear Dr. McIsaac:

Portland, OR 97220

PFMC

Thank you for your cosigned letter regarding recommendations to address Pacific bluefin tuna overfishing. You provided updated information on the Pacific Council recommendations, with which the Western Pacific Council has concurred. You also summarized the international efforts to address the status of this stock and reiterated your support for a coordinated approach in the Western and Central Pacific Fisheries Commission and the Inter-American Tropical Tuna Commission, who now need to develop a credible plan for Pacific bluefin tuna in 2014 with specific rebuilding targets.

I appreciate your pledge to monitor this situation and I call your attention to the recent stock assessment update, which does not appreciably change the status of this stock. I look forward to your continued involvement with us as we pursue rebuilding plans in the two regional fisheries management organizations.

Sincerely,

Eileen Sobeck





NATIONAL MARINE FISHERIES SERVICE REPORT UNITED STATES-CANADA-PACIFIC ALBACORE TUNA TREATY

The U.S. delegation meet on April 16-17, 2014, at the NMFS offices in Portland, Oregon, lead by David Hogan (Deputy Director, Office of Marine Conservation, U.S. Department of State). Representatives from NMFS, NOAA Office of Law Enforcement, U.S. Coast Guard, the Pacific Fishery Management Council, Washington Trollers Association, American Albacore Fishing Association, Western Fishboat Owners Association, American Fishermen's Research Foundation, Oregon Albacore Commission, West Coast Seafood Processors, and a member of Senator Ron Wyden's staff participated.

Agreement was reached on a 3-year regime covering the 2014-2016 seasons that essentially rolled over the terms of the 2013 regime. The fishing seasons remain the same: the fishing season for the United States extends from June 15 to October 31st in Canadian waters; and from June 15th to September 15th for Canada in U.S. waters during each of the three years. Canadian port access for U.S. vessels extends from June 15th to December 31st; U.S. port access for Canadian vessels extends from June 15th to September 15th to September 15th of each year. Canada will limit its vessels accessing the U.S. EEZ to 45, with the same replacement provisions that were used during the 2013 regime. The United States will limit its vessels accessing the Canadian EEZ to historical levels.

The meeting was adjourned with the agreement to finalize the annexes of the new regime. Canada noted that they will likely have to apply the treaty provisionally until the updates are official. The United States noted that it will include in the exchange of letters transmitting the updated annexes its view that this is a phase out regime and, therefore, the United States does not plan to enter into negotiations for another regime under the treaty when the 2014-2016 regime ends. Both sides also agreed to work together to reach out to China and others regarding their shared concerns in the management of albacore tuna in the wider Pacific Ocean.



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration NATIONAL MARINE FISHERIES SERVICE West Coast Region Sustainable Fisheries Division 510 Desmond Drive SE, Suite 103 Lacey WA, 98503

June 13, 2014

D. O. McIsaac, Ph.D. Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220

Dear Dr. McIsaac:

NMFS continues to support the Pacific Fishery Management Council's (Council) efforts to advance a precautionary management strategy for North Pacific albacore. We note especially the direction reiterated by the Council in March of 2013 to continue to advance the concepts in the *Framework for a Precautionary Management Approach for North Pacific Albacore* draft document in both the Western and Central Pacific Fisheries Commission (WCPFC) and the Inter-American Tropical Tuna Commission's (IATTC) regional fishery management arenas.

Concurrent with a delayed pace in the WCPFC arena and some engagement in the IATTC arena, NMFS has been considering a pathway forward that would take advantage of the upcoming IATTC meeting. Please find attached a draft resolution intended for consideration by the IATTC at its meeting in July. The proposed resolution would task the IATTC scientific staff with analyzing the effects of two harvest control rules under a range of reference points and determining whether each scenario would meet performance criteria. The various reference points are intended to represent the range of proposals being considered by Parties to both the IATTC and WCPFC, as well as by the Council. NMFS has presented the proposed resolution to both the Scientific Advisory Subcommittee and the General Advisory Committee members to the U.S. delegation to the IATTC at their June 4-5, 2014 meetings.

We regret the tardiness in providing a draft of the proposed resolution for the June 2014 Advance Briefing Book, but we ask that it be provided for review and comment by the appropriate Council advisory bodies and that the Council considers it together with concepts in the *Framework for a Precautionary Management Approach for North Pacific Albacore* during deliberations under Agenda Item E.1 on Friday, June 20.

Sincerely,

Robert Turner Assistant Regional Administrator for Sustainable Fisheries



Attachment

Candidate Target and Limit Reference Points and Decision Framework for North Pacific Albacore

The Inter-American Tropical Tuna Commission (IATTC) gathered in Lima Peru, Mexico, on the occasion of its 87th Meeting:

Affirming that Article 7.5.3 of the FAO Code of Conduct for Responsible Fisheries that regional fisheries management organizations determine stock specific target and limit reference points and the actions to be taken if the points are exceeded or, *inter alia*, on the basis of the precautionary approach;

Being mindful of Article IV of the Antigua Convention regarding the application of the precautionary approach as described in the relevant provisions of the FAO Code of Conduct as well as the 1995 United Nations Fish Stocks Agreement, for the conservation, management and sustainable use of fish stocks covered by this Convention.

Noting the importance of maintaining the long-term conservation and sustainable catch of North Pacific albacore for supporting the long-term economic and social benefits to the various North Pacific albacore fishery participants of Members and Cooperating Non-Members,

Recognizing that target reference points refer to the level of fishing mortality or level of the biomass which permit a long-term sustainable exploitation of the stocks, with the *best possible catch*; and limit reference points are maximum values of fishing mortality or minimum values of the biomass, which must not be exceeded,

Observing that the stock assessment of North Pacific albacore from the Albacore Working Group (ALBWG) of the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) indicates that the stock is not being overfished nor is it in an overfished state;

Taking into account that the IATTC scientific staff has initiated a discussion on the application of potential harvest control rules (HCRs) incorporating limit and target reference points and their evaluation within a framework of management strategy evaluation (MSE) process,

Acknowledging that continuing dialog between scientists and managers is necessary to define appropriate HCRs and reference points for North Pacific albacore and given that consensus regarding the most appropriate structure and assumptions associated with MSE simulations is key to attaining acceptance of optimal reference points and HCRs suggested by the completed MSE,.

The IATTC therefore resolves that:

1. The Director shall direct the IATTC scientific staff to work with the ISC Albacore Working Group (ALBWG) in assessing the following candidates for fishing mortality (F) target reference points and spawning biomass (SB) limit reference points within the

Target Reference Points	Limit Reference Points
F-target: F _{10%}	SB-limit: SB _{0.5R0} , where $h = 0.75^{1}$
F-target: F _{20%}	SB-limit: SB _{0.5R0} , where $h = 0.75$
F-target: F _{20%}	SB-limit: 14% of unfished SB
F-target: F _{30%}	SB-limit: 20% of unfished SB
F-target: F _{40%}	SB-limit: 20% of unfished SB
F-target: F _{SSB-ATHL}	SB-limit: 20% of unfished SB

framework of the MSE process for identifying the most appropriate reference points taking into account the fisheries exploiting them and various sources of uncertainty.

2. In addition, as part of the MSE, the Director shall direct the IATTC scientific staff to work with the ISC ALBWG in using the most recent North Pacific albacore stock assessment to evaluate the 12 combinations of the six candidate sets of reference points above and the following two potential HCRs based on total allowable catch (TAC) and total allowable effort (TAE) controls. Under TAC management: i) if SB_{curr} \geq SB-limit, TAC for the subsequent three years set to correspond to F-target at B_{curr}; if SB_{curr} < SBlimit, TAC for the subsequent three years set to correspond to (F-target*SB_{curr})/SB-limit at B_{curr}. Under TAE management: if SB_{curr} < SB-limit, TAE for the subsequent three years set to correspond to F-target; if SB_{curr} < SB-limit, TAE for the subsequent three years set to correspond to (F-target*SB_{curr})/SB-limit. (See following illustration.)



3. Each of the alternative management strategies shall be evaluated with respect to the following performance criteria:

¹ R_0 refers to the recruitment under unexploited conditions; S0.5r0: spawning biomass corresponding to that which produces a 50% reduction in recruitment as calculated in a Beverton-Holt spawner-recruit model with steepness (h) of 0.75 See SAC-05-14 for background.

- a. Success in achieving F-target: proximity of F to F-target and degree of variation in proximity
- b. Success in avoiding overfished state: Frequency of, or probability of, breaching Blimit
- c. Success in maintaining relatively high biomass (e.g., to avoid adverse ecosystem effects): average SB and inter-annual variation in SB
- d. Stability in management regime: inter-annual variability in TAC or TAE
- e. Yields: average annual catches, by fishery
- f. Stability of yields: inter-annual variability in catches, by fishery
- g. Catch success: catch per unit of effort, by fishery
- h. Fishing opportunities: average annual fishing effort, by fishery
- 4. The Director and IATTC scientific staff shall work with the ALBWG in vetting the MSE design prior to running the simulations and encourage the ALBWG's review the results of the MSE prior to finalization.
- 5. The IATTC scientific staff shall present the results of the MSE at the 2015 Scientific Advisory Committee meeting. If applicable, the staff should endeavor to recommend reference points in their provision of advice on the status of North Pacific albacore and on recommendations for management measures.
- 6. The Commission shall continue efforts to promote compatibility between the conservation and management measures adopted by the IATTC and the WCPFC in their goals and effectiveness with respect to North Pacific albacore.
- 7. The Director shall communicate this Resolution to the WCPFC Secretariat.

SOUTHWEST FISHERIES SCIENCE CENTER REPORT HIGHLY MIGRATORY SPECIES

International Scientific Committee (ISC) Update

A total of four stock assessments were scheduled by the ISC for the 2013-2014 assessment cycle: 1) north Pacific swordfish (including Eastern Pacific Ocean [EPO] stock; February 11-19, Honolulu); 2) Pacific bluefin tuna (February 17-22, La Jolla); north Pacific albacore tuna (April 14-28, La Jolla); and 4) north Pacific blue shark (June 2-9, Keelung, Taiwan). Due to the poor stock status of Pacific bluefin tuna and need for immediate management action, the ISC Plenary held an intercessional meeting (webinar) on March, 12 to review and endorse the stock assessment of Pacific bluefin tuna. For the other stocks, the ISC Plenary will review the stock assessments during the upcoming ISC Plenary meeting during July 16-21 in Taipei. The Southwest Fisheries Science Center is the U.S. lead for Pacific bluefin tuna, north Pacific albacore and north Pacific blue shark. The PIFSC is the U.S. lead for billfish.

Pacific Bluefin Tuna Update

An update stock assessment was conducted by the ISC PBFWG in La Jolla during February 17-22, 2014 and the ISC Plenary reviewed and endorsed the assessment during an intersessional meeting (webinar) on March, 12. Stock assessment report available at is (http://isc.ac.affrc.go.jp/reports/stock assessments.html) Results were highly similar to the previous full assessment in 2012. In summary, based on reference point ratios, overfishing is occurring and the stock is overfished. The current F (average 2009-2011) exceeds all target and limit biological reference points (BRPs) commonly used by fisheries managers except for F_{loss} . For example, $F_{2009-11}/F_{20\%} = 1.90$. The ratio of SSB in 2012 relative to unfished SSB (depletion ratio) is also low (4.2% of virgin SSB).

In addition, the PBFWG examined future projection scenarios requested by the WCPFC NC. The results of the future projections suggest that "unless the historical average level (1952-2011) of recruitment is realized, increase of SSB cannot be expected under the current WCPFC and IATTC conservation and management measures, even under full implementation (Scenario 1), and "no scenario except for Scenario 6¹, the strictest one, demonstrates increase of SSB assuming the current low recruitment continues. Given the result of Scenario 6, further substantial reduction of fishing mortality and juvenile catch over the whole range of juvenile ages should be considered to reduce the risk of SSB falling below its historically lowest level."

¹ For the WCPO, a 50% reduction of juvenile catches from the 2002-2004 average level and F no greater than $F_{2002-2004}$. For the EPO, a 50% reduction of catches from 5,500 t.

North Pacific Albacore Tuna Update

A full stock assessment was conducted by the ISC ALBWG in La Jolla during April 14-28, 2014. The ISC Plenary will review the stock assessment during the upcoming ISC Plenary meeting during July 16-21 in Taipei. Until the ISC Plenary completes its review and endorses the results of the stock assessment, the stock assessment is considered to be preliminary. Nevertheless, the preliminary results of the assessment suggest that the north Pacific albacore stock is not overfished and overfishing is not occurring.

PFMC 05/30/14

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT REGULATORY ACTIVITIES AND INTERNATIONAL UPDATE

Bluefin Commercial and Recreational Fishery Comments

Eastern Tropical Pacific – Inter-American Tropical Tuna Commission (IATTC)

The HMSAS agrees with the NMFS on the retention of the 500 metric ton (m/t) limit for US commercial harvest.

The HMSAS believes that there should be no other prohibition of all catch (commercial or recreational) of Pacific Bluefin, or the imposition of Pacific Bluefin size limits. These measures will not solve the problem.

Western Pacific – Western Central Pacific Fishery Commission (WCPFC)

The HMSAS supports that part of the WCPFC Conservation Measure 2013-09, namely that the CCMS take further actions to substantially reduce the take of juvenile Bluefin particularly ages 0-2 year.

During the June 5, 2014 meeting of the General Advisory Committee (GAC) to the US Commissioners of the IATTC, the NMFS advised that the Japan's Fisheries Agency has publicly announced a plan to cut the catch of juvenile PBF by half of the annual average harvest in the years 2002-2004, starting in 2015. HMSAS advises the Council to carefully examine the Pacific Bluefin catch statistics of the Japanese Bluefin fishery for the period 2002-2004. Based on Appendix II: Pacific Bluefin Catches, a document provided to the GAC by the NMFS, the Japanese purse seine juvenile Bluefin catch for 2002, 2003, and 2004 was as follows: 8,903 m/t, 5,768 m/t and 8,257 m/t respectively. A 50% reduction of this one of six segments of their harvest is a significant number of removals in trying to rebuild a stock.

A Note on Potential Domestic Action

Any domestic restrictions on recreational Bluefin catch would be premature in the absence of international agreements aimed at managing the stock. The US recreational catch is substantially less than 1% of the total Pacific-wide catch of northern Bluefin tuna. The history of international action on tuna has exempted such catches as inconsequential and unnecessary to the management of these fish. We advise that the Council recommend that this approach be continued.

North Pacific Albacore Precautionary Management Framework

There appears to be considerable confusion on what issues are before the Council concerning how to go forward with North Pacific albacore precautionary management advice. We reference three documents:

1. The US Precautionary Management Concept to the Northern Committee (see Agenda Item K.3.a, Attachment 3, March 2014, also attached)

- 2. The NMFS proposal to the IATTC (Agenda item E.1.b, Supplemental REVISED NMFS Report 4, June 2014)
- 3. The comparison of Council's previous advice to the US delegation to the Northern Committee) and the NMFS proposal to the IATTC on albacore precautionary management (Agenda item E.1.a, Supplemental Attachment 1, June 2014.

The HMSAS advises that The US Precautionary Management Concept Paper (item 1 above) replace the previous Council advice to the US delegation to the Northern Committee in 2013 in this comparison because it has been vetted and replaces the Council's advice.

The HMSAS wants the Council to keep documents 1 and 2 (above) in mind as we go through our report.

From the perspective of the harvesters as expressed by the HMSAS, there are two major concerns with how the precautionary management program is progressing in the ETP under the IATTC and in the western north Pacific under the WCPFC-NC as guided by the ISC and its Albacore Working Group.

1. Need For Closer Consultation between the IATTC and the WCPFC-NC

There seems to be an unexplained disconnect between the IATTC and the WCPFC-NC approach to the precautionary management of north Pacific albacore. This could lead to the disastrous situation with two different management regimes in the Pacific on the same stock.

2. Chinese Albacore Fleet Expansion

One of the most serious problems facing the U.S. albacore fleets, whether troll, pole and line, or longline, is the huge expansion of effort (estimated to be over 400 vessels) of the Chinese fleet of longline vessels that fish for albacore. Industry publications, and even the general press, have been reporting how disruptive this highly subsidized Chinese fleet has been to the resource, the economic return, and the market for albacore. The Western Pacific Fisheries Management Council is meeting this week and having a conference on what can be done to avert the disruption of the American Samoan, Cook Islands, and Fijian longline albacore fleets south of the equator. As this problem may exist or spread to the north Pacific, we request that the Council send a letter to the Secretary of Commerce and Secretary of State about this problem, which needs their immediate attention. The Secretaries should instruct the U.S. Sections to the international tuna RFMOs of which the U.S. is a member to find a solution for the potential Chinese illicit expansion, which will defy at least the IATTC and WCPFC albacore resolutions on effort control. Equally important is for the U.S. Sections to call on the Asian fisheries for all tunas in the Pacific to fully and accurately report their catches and effort in a timely manner.

Lack of Timely and Accurate Effort and Catch Data from Asian Countries

Another area of concern which should be called to the Secretaries' attention by the Council is the greatly increased catch and effort. Specific concerns include:

1. EU (Spanish) fleets that target swordfish in the IATTC Convention area, and may be taking a large bycatch of albacore, which is thought to go unreported.

- 2. Unknown tuna harvests of the Japanese artisanal coastal fisheries.
- 3. Catch and bycatch of the Chinese high seas and domestic fleets of tunas, particularly albacore.
- 4. As mentioned above, the launching of an estimated 400 longline albacore vessels by China.
- 5. Lack of information on albacore bycatch of other Asian fleets in the Pacific.

Biological Reference Points (BRPs), Target Reference Points (TRPs), Limit Reference Points (LRPs), and Harvest Control Rules (HCRs)

The HMSAS commends and supports the paper by the albacore troll and pole and line harvesters' science consultant, Dr. Vidar Wespestad. Dr. Wespestad is a member of the ISC Albacore Working Group and a former member of the Council's SSC. He is intimately familiar with albacore assessments, BRPs and HCRs. His paper (attached) should be read to help explain these complicated concepts in the context of the albacore fisheries. The HMSAS agrees that the current best scientific information is that which has been accumulated by the ISC-AWG, as reported to the WCPFC-NC over the last several years. However, the most important and critical goal of the Council should be to ensure that the WCPFC and the IATTC eventually agree on the same BRPs, TRPs, LRPs, and HCRs. To this end the HMSAS supports the purpose of the NMFS West Coast Region's draft resolution, which is to encourage the IATTC scientific staff, the ISC, and the WCPFC-NC to work together in their research, evaluation, and recommendations of these management tools. The draft contains many technical scientific terms which may need to be clarified (for example the chart at the end of paragraph 1 on page 2, suggests a review of Limit Reference Points where h = 0.75, and yet the ISC Albacore Working Group apparently has utilized h = 0.90). An example of clarification might be the inclusion in the review process of an operating model as suggested by the SSC. The HMS-AS does not believe it is qualified to make such scientific refinements and would suggest the Council obtain the advice of the HMS assessment biologists on the SSC.

Council Focus Should Be On NMFS Proposal and Attachment G to WCPFC-NC 9 Report

The HMSAS sees no rational for returning to the staff paper resulting from the June 2013 Council instructions and comparing it to the NMFS draft resolution. That paper was more than 10 pages long. It was condensed into a 2 page document after many discussions between PFMC representatives, PIRO representatives, the U.S. Section, and harvester representative on the U.S. Delegation to the WCPFC-NC in September 2013. This document was attached to the official report of the WCPFC-NC entitled "Precautionary Management Framework for North Pacific Albacore (USA Concept Paper)" as attachment G. The report of the Ninth meeting of the NC, including attachment G, was approved by the WCPFC in December 2013 and was available to both the ISC and the IATTC-SC. After a review by the HMS-AS of Attachment G and the draft resolution submitted by the West Coast Region of NMFS the two documents do not appear to be in conflict. Important harvest data from other countries as described above is unknown. The US Concept Paper to NC 9 proposed a Harvest Control Rule (HCR). The HCR states that any F-limit that is exceeded for one year or any spawning stock size that decreases below the B-limit at any time will be dealt with at the next NC meeting or intersessionally, if warranted, with

conservation and management measures that will correct the situation. The HMSAS believes the RFMOs are progressing appropriately with regard to albacore conservation and management.

Conclusion

It is the understanding of the HMS-AS that the ISC-AWG preliminary 2014 assessment indicates the albacore stock is healthy and is not currently subject to overfishing. Our advice to the Council is to recommend to the U.S. Sections to the IATTC and the WCPFC that they should:

- 1. Work to obtain better catch and effort information;
- 2. Concentrate on their scientists and scientific advisers working more cooperatively with the goal of establishing a seamless precautionary management across the north Pacific;
- 3. Stop the rampant increase in effort by non-US vessels which ignores existing WCPFC and IATTC resolutions which have been in place for almost 9 years.

North Pacific Albacore Management – Faith or Science Based? – By Dr. Vidar Wespestad

There is a growing debate as to how to best manage albacore in the North Pacific Ocean. The question basically relates to the need for control of fisheries and to what extent and how to institute. For background a U.S. fishermen must understand he is foremost subject to the control of the U.S. government. Secondarily, he falls under the control of two regional fishery management organizations (RFMOs): in the eastern Pacific the Inter American Tropical Tuna Commission and to the west of 150 W the Western and Central Fisheries Commission (WCPFC) and its subunit the Northern Committee. All of these organizations have proposals in place designed to control fisheries within their jurisdiction. The basic items under discussions are biological reference points (BRPs) and Harvest Control Rules (HCRs). A BRP establishes the level of fishing that can occur without impairing the reproductive capacity of a stock, essentially not reducing future amount of fish available for harvest. A HCR establishes the rules that will be followed to not exceed the BRP; this can be either through effort controls such as limiting the length of days at sea, or via catch control - trip limits or quotas. Both BRPs and HCRs are valid and valuable management controls when properly applied. The problem with multiple proposals is which one is the properly applied one. That is a difficult question and one that WFOA members should pay attention too as it is a major controlling factor relative to your future operations.

The situation is that the stock assessment and evaluation of harvest levels has primarily taken place within the Albacore Working Group (AWG) of the International Scientific Committee, which provides stock abundance, and harvest level advise to the two RFMOs (IATTC and WCPFC). The AWG produces a stock abundance assessment every three years, the latest to be released in July, and provides analysis of proposed harvest levels for management. Until recently most of the interaction has taken place with the NC of the WCPFC. After several years of refining information to the NC there are several options for them to select for target harvest level of albacore in the North Pacific. Within the past year the IATTC has come forward with another proposal for a harvest level. It is at the lowest level of those examined by the AWG and when presented to the AWG there were several questions raised on the model used and parameters utilized.

In addition to the RFMOs the Pacific Fisheries Management Council is formulating their own set of measures to control harvest in the U.S. 200 mile zone should it be determined that international management is ineffective. It's not clear who makes the determination, U.S. Government, Environmental organizations, or the courts. So, it's shaping up that there could be three competing sets of rules put in place that one would have to comply with while fishing.

With regard to potential harvest levels, the best available science is the BRPs produced by the AWG and other proposals s have not undergone the same level of rigorous scientific review. I think it would be best for fishermen to realize that with most things in life the best result lies in the middle of the range of potential choices and provides the best long-term alternative.

From my experience there has been great progress in the determination of stock abundance and harvest level and a good understanding of the key parameters governing abundance of albacore, and I'm certain that we will make further refinements to better estimate biological data and stock abundance. At the current time all indications are that stocks are near the MSY level and overfishing is not occurring. That was three years ago, things haven't changed. In a month the assessment document will be released and everyone can examine the information.

The other issue under discussion is Harvest Control Rules (HCR), primarily a socio-economic political choice dependent on societal values. The proposals now being put forward by IATTC and PFMC would produce control rules that would only effect U.S. vessels and could be effected as pointed out above through limiting fishing time or landings.

My argument against unilateral establishment of BRPs and HCRs solely for the eastern Pacific is that they will largely be biologically ineffective. The majority of catch is in the western Pacific Ocean and the majority of spawning fish are there too. The idea of reference points and harvest control rules is to control fishing to insure maximum stable reproductive output. I'm not sure controlling only 15% of the total catch and not having any controls on harvest of spawning population is going to be of much value.

There are lots of questions on catch and effort and governments should be closely monitoring significant changes in effort throughout the Pacific. The U.S. And Canada are pretty bit players in terms of overall catch and effort and people concerned with excess and growing effort should look more to the western Pacific. My concern on the present rush to establish untested proposals is that it will just lead to rushed regulations that will provide more opportunity for lawsuits against NMFS than effective management of a resource largely outside the control of the U.S. And who will bear the brunt of suits to close the fishery for exceeding harvest limits?

I do believe there is adequate time to take all of the information available and do a full and rational assessment of all management options without a rush to judgment as it seems is happening now. I would hope members pay close attention to this issue and actively participate in the political and management process to insure an outcome beneficial for your continuance in the fishery.

Attachment 2

The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

Northern Committee Ninth Regular Session

Fukuoka, Japan 2–5 September 2013

PRECAUTIONARY MANAGEMENT FRAMEWORK FOR NORTH PACIFIC ALBACORE (USA Concept paper)

Introduction

At the Sixth Regular Session of the Northern Committee (NC), Canada submitted a paper (WCPFC-NC6-DP02) on the development of a precautionary fishery management regime for the northern stocks. Building on this paper, NC7 agreed to a three-year work programme to develop a precautionary management framework for North Pacific (NP) albacore.

Important elements of a precautionary management framework including management objectives, limit and target reference points for stock size and fishing mortality, and associated decision rules (e.g. pre-agreed actions that will be taken in the event that a limit reference point is breached). Under the NC's work programme, NC9 is tasked with agreeing on appropriate reference points and decision rules.

In accordance with Convention Article 6, and as set out in the Northern Committee work programme, NC will further develop a precautionary management framework for North Pacific albacore as follows:

1. Management objectives

To build upon the fundamental management objectives for highly migratory fish stocks as set out in the Convention, NC will work to establish specific management objectives for NP albacore fisheries. In doing so, NC will contribute to, and consider the outcomes of, the Commission's "Management Objectives Workshop" initiative.

2. Biological reference points

Following the hierarchical approach adopted by the Commission:

Level	Condition	LRPs
Level	A reliable estimate of steepness is available.	F_{MSY} and B_{MSY}
Level	Steepness is not known well, if at all, but the key	$F_{X\%SPRo}$ and either

	biological (natural mortality, maturity) and fishery	$X\%SB_o$ or
	(selectivity) variables are reasonably well estimated.	$X\%SB_{current,F=0}$
Level	The key biological and fishery variables are not well	$X\%SB_o$ or
	estimated or understood.	$X\%SB_{current,F=0}$

- NP albacore is to be treated as a Level 2 stock.¹
- The limit reference point for the fishing mortality rate, or F-limit, is F_{l_1} //SPR.²
- The limit reference point for the stock size, or B-limit, is [$J\%SB_{current,F=0}$.^{3,4}

NC will work to establish a control rule in which the F-limit decreases with decreasing B, of the type illustrated in Canada's 2010 paper (WCPFC-NC6-DP02).

Once specific fishery management objectives have been adopted, NC will work to establish target reference points for F and/or B, the purpose of which will be to guide the formulation of management strategies such that the fishery management objectives are achieved.

3. Decision rules

NC will develop and recommend management strategies for the stock that ensure that the risk of F exceeding F-limit and of B decreasing below B-limit is very low. With respect to the B-limit, NC will use a risk level of [] percent. With respect to the F-limit, until target reference points are established, NC will account for risk by designing management strategies such that F is unlikely to exceed [] percent of the F-limit. NC will periodically request the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) to evaluate the performance of a suitable range of alternative management strategies with respect to these limits and risk levels.

In the event that, based on information from ISC, the fishing mortality rate exceeds the F-limit for at least one year, NC will, at its next regular session, or intersessionally if warranted, recommend a conservation and management measure that can be expected to reduce F to less than the F-limit within one year of its adoption.

¹ This determination is based on the information provided by ISC (see NC9-IP-03).

² This F-limit replaces the interim F-limit, $F_{SB-ATHL}$.

³ Based on the information provided by ISC (see NC9-IP-03), B-limit should be $X\%SB_{current,F=0}$ (unfished SB) rather than $X\%SB_0$ (initial SB) because the estimate of the latter is highly uncertain.

⁴ The F-limit and B-limit are specified such that the B-limit serves as a second line of defense behind the F-limit, as follows: If the stock were fished at the F-limit, SB would be expected to average about a particular level associated with that level of F, but would vary above and below that level due to variation in recruitment, natural mortality, and other environmental factors. To accommodate such expected natural variation, it is appropriate that SB be allowed to decrease some amount below the level associated with the F-limit before taking the serious corrective action that would be triggered by breaching the B-limit. The greater the stock's expected natural variation, the greater that allowance should be (to a certain point). A stock's natural mortality rate, M, is a crude indicator of the degree of natural variation in SB that would be expected under a constant fishing mortality rate. Therefore, it is appropriate to set the B-limit at (1-M) times the proportion of unfished SB that would be expected, on average, when fishing at the F-limit. For NP albacore, M is estimated to be 0.25, so the B-limit is set at []% of unfished SB.

In the event that, based on information from ISC, the spawning stock size decreases below the Blimit at any time, NC will, at its next regular session, or intersessionally if warranted, adopt a reasonable timeline for rebuilding the spawning stock to at least the B-limit and recommend a conservation and management measure that can be expected to achieve such rebuilding within that timeline. Furthermore, NC will develop management strategies that are consistent with preagreed on levels of F specified in any adopted control rule.

NC will work to establish specific pre-agreed on management measures that would be automatically triggered upon breaching a limit and/or warning reference point.

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON REGULATORY MATTERS AND INTERNATIONAL ACTIVITIES

2014 Pacific Bluefin (PBF) Stock Assessment Results

The current status of Pacific bluefin tuna was recently updated, this information was discussed in the NMFS report. The report estimated that the 2012 biomass level is near historically low levels, and experiencing high exploitation rates above nearly all candidate biological limit reference points. These results are similar to the previous 2012 assessment, which also indicated that the stock is overfished and experiencing overfishing. The only projection that resulted in an increase in the spawning stock biomass, under the assumption that current low recruitment continues, was based a 50 percent reduction to the 5,500 metric ton (mt) catch limit in the EPO, where catch is mainly juveniles, as well as a 50 percent reduction of juvenile catches from the 2002-2004 average level and fishing mortality no greater than 2002-2004 levels in the WCPO.

Advisory Meetings and Conservation Advice

The HMSMT has been represented at a number of Advisory meetings in preparation for the July 2014 annual meeting of the IATTC, in Lima, Peru. At these meetings the IATTC scientific staff provided information and advice regarding the stock status of Pacific Bluefin tuna.

IATTC scientific staff recommended:

- Commercial catch in 2014 be limited to 3,154 metric ton (mt), this is based on the estimated commercial catch in 2013 and corresponds to the remaining portion (3,295mt) of the 2012-2013, 10,000mt quota.
- Recreational catches be limited to 208 mt in the Eastern Pacific Ocean, which is based on the same method that was applied to commercial catch to determine that recommended limit.

The Scientific Advisory Subcommittee (SAS) and the General Advisory Committee to the U.S. section of the IATTC generally agree with the scientific community's advice to further reduce catches of bluefin consistent with the conservation advice in the ISC Pacific bluefin tuna 2014 assessment.

U.S. Position for the Conservation and Management of Pacific Bluefin

NMFS has developed a proposal for the US section to be tabled at the upcoming IATTC meeting. The proposal considers recent IATTC staff recommendations and the ISC's conservation advice to reduce commercial catch limits for 2015 and 2016 with a graduated approach intended to achieve more stringent cuts to the 5,000 mt Commission-wide quota of previous IATTC Resolutions (C-12-09 for 2012 and 2013 and C-13-02 for 2014). These reductions to the 2015 and 2016 Commission-wide catch limits represent a 40 percent and a 50 percent cut, respectively. The NMFS proposal preserves the minimum 500 mt catch limit for

countries—such as the United States—with record of historical catch of Pacific bluefin tuna in the eastern Pacific Ocean.

The HMSMT considered the information presented, supports the IATTC staff's advice, and recommends the following:

- Support the NMFS proposal to limit the Commission-wide commercial catch to 3,000 mt in 2015 and to 2,500 mt in 2016.
- Support access by U.S. fleet to the Pacific bluefin tuna stock in order to maintain an economically viable commercial fishery.
- Reduce recreational fishing mortality domestically through the PFMC process (e.g. a reduction in bag limits).

Albacore Precautionary Management Framework

A full stock assessment of albacore in the North Pacific by the ISC Albacore Working Group was completed in spring 2014, and will be submitted to the ISC Plenary in July. It concluded that there is a low probability that overfishing is occurring and low probability that the stock is overfished. Although the current assessment does not suggest management measures are needed, interest in developing a precautionary management framework exists in the event the situation changes in the future.

At the request of the Council, the HMSMT considered the NMFS proposal (Agenda Item E.1.b., Revised Supplemental NMFS Report 4, June 2014) for an IATTC resolution on precautionary management framework of north Pacific albacore, relative to the Council's recommendations to the U.S. Delegation to the Northern Committee (Agenda Item K.3.a., Attachment 2, March 2014).

The bulleted rationales for the Council's recommendations are below (team comment follows each bullet):

• The management framework should enumerate its objectives, including recognition of the importance of recreational fisheries for North Pacific albacore and the need for improved data collection at the international level.

The NMFS proposal does not specifically address recreational fisheries or the need for improved data collection. The HMSMT recommends that precautionary management in both the WCPFC and the IATTC, incorporate this objective.

• The management framework should include both target and limit biological reference points to guide management responses with respect to excessive fishing mortality (overfishing) and reduced stock status (depletion), in the event they occur.

The NMFS proposal specifically incorporates target reference points for fishing mortality and limit reference points for biomass. It does not incorporate limit reference points for fishing mortality.

• Fishing mortality (F) based biological reference points should be defined with respect to spawning potential ratio (SPR) and not in terms of historical stock biomass as with the current interim reference point, given uncertainty about the stock-recruit relationship and stock size.

The NMFS proposal defines a suite of potential fishing mortality F-based reference points with respect to SPR; it also includes an F-based reference point in terms of historical stock biomass. The Council proposal is silent on the use of SPR-based reference point.

• Biomass based reference points, used to determine stock status, should be chosen with care, recognizing uncertainty in estimates of stock biomass.

The NMFS proposal specifies two potential biomass limit reference points. The choice of one biomass limit reference point over another is an ongoing discussion and depends upon the resilience of the stock. There is uncertainty in the resilience of the stock which is a function of the steepness of the stock recruitment relationship and natural mortality. The SSC has suggested that there may be incompatibility between some B-based and F-based reference points.

• A simple linear sliding scale harvest control rule-similar to the framework elucidated in the Pacific Council's Fishery Management Plan for West Coast Fisheries for Highly Migratory Species-should be considered; under this type of harvest control rule fishing mortality is proportionately reduced when stock biomass falls below the target to allow it to rebuild to the target.

The NMFS proposal includes a simple sliding scale harvest control rule. The Council proposal also includes the precautionary "ACL-below-OFL" buffer concept. The purpose is to provide a cushion for management and scientific uncertainty.

• Catch-based management measures are favored over effort-based measures, because catch can be more directly related to fishing mortality and easier to monitor; however, catch-based measures could trigger a variety of issues related to the allocation of fishing opportunity.

The NMFS proposal contains both effort- and catch-based management measures and does not favor one over the other. Based on information provided to date, the HMSMT believes that a catch-based management measures may be more appropriate.

In additional, the HMSMT would also like to bring to the Councils attention whether potential irreconcilable differences between these proposals may compromise full consideration and/or implementation of either. For example, limit reference points for fishing mortality aren't specified in the NMFS proposal, but are in the Council's proposal; however, to ensure consistency with the MSA they would need to be defined in the future.

The HMSMT concurs with the SSC's comments on Management Strategy Evaluation (MSE) and recommends engaging managers and scientists to define the operating model at the outset and continue collaboration through completion of the MSE. Completing the MSE by spring 2015 deadline in the NMFS proposal will require resolution of complex technical and logistical resource needs and consensus on a work plan by the relevant science and management bodies.

Harvest control rules differ between the Council and NMFS proposals. The Council proposal includes partial F's by fishing nation, as a basis for national TAC's and "ACL-below-OFL" buffers. The HMSMT supports the HCR's in the Council proposal. The biomass based HCRs in the NMFS proposal are more proscriptive. The NMFS proposal identifies a timeline for developing management measures by 2015, whereas the Council proposal includes some additional management measure concepts but no timeline.

Achieving the goal of maintaining long-term conservation and sustainable catch of north Pacific albacore depends on a common understanding of the stock dynamics and implementation of compatible management approaches across RFMOs. For example, adoption of different biological reference points, harvest control rule metrics (e.g, catch- versus effort-based), and other elements of precautionary management by the IATTC and WCPFC could potential compromise the achievement this goal. Therefore, as called for in the NMFS proposal, the HMSMT encourages IATTC scientific staff and the ISC Albacore Working Group to coordinate and collaborate to refine technical elements (including reference points, control rules, etc.) in support of a precautionary management framework. The timeframe should foster coordination and collaboration without unduly delaying adoption of a precautionary management framework. This should be completed in time for implementation of a precautionary management framework prior to the next stock assessment, scheduled for 2017.

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON UPDATE ON REGULATORY MATTERS AND INTERNATIONAL ACTIVITIES

Mr. Mark Helvey briefed the Scientific and Statistical Committee (SSC) regarding the draft of a resolution intended for consideration by the Inter-American Tropical Tuna Commission (IATTC) regarding the *Framework for a Precautionary Management Approach for North Pacific Albacore* (Agenda Item E.1.b, Supplemental NMFS Report 4). The resolution tasks the IATTC scientific staff to work with the International Scientific Committee's Albacore Working Group to develop a Management Strategy Evaluation (MSE). The MSE will analyze the effects of harvest control rules under a range of reference points and evaluate the degree to which each scenario would meet performance criteria.

The SSC notes that the resolution does not mention the operating model to be used in the MSE. The operating model represents the population being managed and is one of the most important and time consuming aspects of developing an MSE. The SSC recommends the resolution describe the process by which the operating model will be developed and reviewed, including who will perform each of these tasks.

The current suite of reference points and control rules is quite prescriptive. The SSC notes that the result of an MSE with these particular reference points and control rules may fail to produce a system that satisfies the performance criteria. In addition, some of the proposed target fishing mortality reference points may be incompatible with the limit biomass reference point with which they are paired. The MSE may identify other strategies that better satisfy the performance criteria than those originally proposed.

PFMC 06/20/14

Agenda Item E.1.d Supplemental Public Comment June 2014

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PETER H. FLOURNOY

June 18, 2014

Ms. Dorothy Lowman Chair Pacific Fishery Management Council 7700 NE Ambassador Place, Ste. 101 Portland, OR, 97220-1384

<u>Re: Historic Background of North Pacific Albacore IATTC</u> and WCPFC Resolutions

Dear Ms. Lowman:

I am writing to the Council to provide the history of the 2005 Albacore Resolutions so that if the Council decides to discuss these resolutions in the context of giving advice to the U.S. Section to the IATTC it may have a better understanding of the concerns which gave rise to their passage. Additionally, at the IATTC-SC a non-paper was presented which seemed to indicate that the U.S. had not abided by the IATTC Albacore Resolution because there had been an increase reported to the IATTC of catch and the number of U.S. vessels in the fishery during 2012. While the U.S. representatives suggested that data from 2013 should be included which showed that 2012 was an anomaly due to the exclusion of Canadian vessels from the U.S. EEZ, the Council may have some concerns about this issue.

In early 2005 the west coast tuna harvesters were told by U.S. representatives that the (as not yet public 2006 assessment could mean that a 20-30% reduction in the albacore fishery might be necessary. U.S. scientists also informed the harvesters that if there was a problem with the status of north Pacific albacore, it probably originated with the Japanese coastal fleet (not pole and line, but rather small trawlers and longline vessels catching 0-2 year old fish and calling it mackerel) catch of albacore because that was the only albacore fleet which had undergone a recent increase.

Given this information, the harvesters consulted with the Department of State Office of Ocean Conservation about putting forth a resolution in the WCPFC-NC to place a cap on
Lowman, June 18, 2014, Page 2

albacore effort in the western north Pacific. The response was that the U.S. could not put forth a resolution there because it was not yet a member of the WCPFC. Nevertheless, the State Department made the suggestion that such a resolution on capping effort on north Pacific albacore could be presented at the upcoming meeting of the IATTC in June of 2005. It was explained that the advantage of this approach would be that when the U.S. was in a position to send a resolution to the WCPFC, the IATTC resolution would prevent increased effort shifting from the west to the east. The important point here is that it was the harvesters which sought the resolution. It was purposely left vague in terms of "current effort" because there was no intention of capping either U.S. or Canadian effort. The purpose of the 2005 IATTC resolution was to keep <u>other countries from entering the albacore fishery in the ETP.</u> The purpose was not to cap U.S. and Canadian effort. People seem to have forgotten this.

Later, the State Department withdrew their previous objection and in September of 2005 the U.S. was able to get a resolution passed in the WCPFC-NC to be submitted to the WCPFC for approval in December of 2005. Even though the resolution as passed by the WCPFC-NC only applied to the north Pacific, the Pacific Island States, Australia, and New Zealand said they would not let the WCPFC approve the resolution as submitted. They demanded a companion resolution that would cap effort in the South Pacific troll albacore fishery, even though there was no scientific evidence to indicate that the U.S. albacore troll fleet fishing in the South Pacific had any impact whatsoever on the resource. Thus the U.S. was forced to accept a resolution that was very specific as to a cap on the number of vessels in the South Pacific in order to get at where it was believed the real problem was – off the coast of Japan in the northern Pacific.

Of course over time with Japan practically running the Northern Committee, they quickly exempted their "artisanal" fisheries. Finely, nine years later, it appears Japan may be getting close to the Federal Government being able to manage their artisanal fleets, as opposed to the provincial governments. This might actually improve the condition of the north Pacific albacore stocks. But it should also be remembered that the 2006 and the 2011 assessments, instead of showing the stock was having problems, actually show the stocks are quite healthy and that fishing is below MSY.

Thank you very much for the opportunity to relate this history to which I was an eye witness as I represented the West Coast albacore harvesters.

Sincerely,

Peter H. Flournoy

DRIFT GILLNET FISHERY TRANSITION ISSUES

At its March 2014 meeting, the Council considered a proposal to modify the southern boundary of the Pacific Leatherback Conservation Area (PLCA) to increase fishing opportunity for the California drift gillnet (DGN) fishery for swordfish and thresher sharks. The PLCA was implemented in 2001 to reduce the take of endangered leatherback sea turtles by the fishery. While the Council rejected the proposal, it prompted a wide-ranging discussion on the status and future prospects for the fishery, informed by NMFS reports, advisory body statements and public testimony.

This discussion occurred in the context of several initiatives affecting the fishery. First, California State Representative Paul Fong introduced AB 2019, which would have prohibited a person from using a drift gill net to take shark and swordfish for commercial purposes in State waters. Second, NMFS had implemented emergency measures in response to the take of two sperm whales in the DGN fishery observed from a single set during the 2010-2011 fishing season. These takes prevented National Marine Fisheries Service (NMFS) from issuing a new Marine Mammal Protection Act (MMPA) 101(a)(5)(E) permit for the fishery unless measures were implemented to reduce the likelihood of future takes. NMFS extended the temporary rule to August 5, 2014 via 79 FR 29377 (see Agenda Item E.2, Attachment 1), and has indicated an intent to follow-up this temporary rule with a permanent regulation (see Agenda Item E.1.b, NMFS Report). Finally, several ideas were brought forward that introduce new concepts for managing the DGN fishery. As part of the NMFS SWFSC under Agenda Item K.1.c, SWFSC Report, Drs. Lewison (San Diego State University) and Maxwell (Stanford University) presented research results on Developing dynamic ocean decision-making applications for Pacific fisheries (Agenda Item K.1.c, Supplemental SWFSC PowerPoint 2), which has applications to time-area management for DGN fisheries. In public testimony under Agenda Item K.5.c, March 2014; Captain Gary Burke made a presentation on the importance of currents and sea surface temperature on determining when swordfish occur in the area north of Cape Mendocino (Agenda Item K.5.c, Supplemental Public Comment PowerPoint), which is currently part of the Pacific Leatherback Conservation Area time/area closure; there were multiple testifiers recommending closing the DGN fishery as soon as possible (for example, see Agenda Item K.5.c, Supplemental Public Comment PowerPoint 2); Melissa Stevens of The Nature Conservancy described the possibility of a private contract buyout of DGN permits and vessels to reduce fleet capacity; and Mr. Steve Marx representing Pew Charitable Trusts advocated consideration of new hard caps and a requirement for a higher level of observer coverage.

Two developments since the March Council meeting have changed the picture somewhat. First, AB 2019 was voted down in committee on April 29, 2014. Second, a new assessment of the affected sperm whale stock and revised estimates of historical takes are currently under review. Although not likely to inform management decisions until later this year, this new information could change the determination under the MMPA.

At its April 2014 meeting under the Agenda Item J.3, Future Council Meeting Agenda and Workload Planning, the Council expressed the need for further policy clarity on fishery transition issues before pursuing a particular pathway forward under the EFP or Biennial Specifications

agenda items. Discussion of the concept of "transitioning" the DGN fishery was discussed in several different contexts, which are not necessarily mutually exclusive. One idea is to create a Federal limited entry permit under Magnuson Stevens Act (MSA) authority for DGN vessels, which would phase out or supercede the current California state permit program, thereby giving the Council and NMFS more control over the number of participants, permit transfer provisions, and other management particulars in the fishery. Another idea is to transition current fishery participants to other gear types or a different DGN management approach that can maintain west coast swordfish landings at historical levels while reducing protected species take and finfish bycatch mortality (fish that are discarded and die from being caught). Another transition idea, as mentioned above, is to identify an eventual date for prohibition of DGN gear, and plan a phaseout process regardless of the ability of different gear types to replace historical landings from the DGN fishery. Lastly, no transition from the contemporary state remains an option.

To help the Council clarify their policy goals with respect to any fishery transition, this agenda item is organized around (1) a full discussion of the complexity of current DGN management; (2) issues associated with transitioning the fishery to fuller implementation under the MSA; and (3) issues associated with transitioning the fishery to a different DGN approach and/or alternative gear, an unconditional DGN fishery phase out, or no transitional change. While a limited discussion of exempted fishing permits (EFPs) may be appropriate under item (3) above, a full discussion of EFPs for HMS fisheries is scheduled for Agenda Item E.3.

1. Current DGN Fishery Management

It is necessary to fully understand the complexity of the current management approach before discussing possible fishery transitioning actions. NMFS has been asked to submit a supplemental report describing the current permitting process. NMFS Protected Resources Division (see Item E.2.b, NMFS PRD Report) submitted a report describing current process of setting protected species protections, such as Potential Biological Removal levels or regulatory caps. NMFS West Coast Region submitted a report on implementation of the current observer program for the fishery (see Item E.2.b, NMFS WCR Report). The California State representative is prepared to speak to current State permit processes and regulations.

2. Transitioning the DGN to MSA Authority

The Council should discuss the pros and cons of transitioning the current fishery to one under full MSA authority targeting swordfish and other healthy HMS populations using various gear types. Status quo management is the default option, with DGN management arising largely from NMFS decisions under ESA and MMPA, rather than a Council process under MSA authority. The NMFS representative is prepared to speak to the process and requirements to transition to a Federal limited entry permit, as well as permit and regulation implementation transitioning options. The California State representative is prepared to speak to implications and issues related to State permitting and regulatory programs.

3. <u>Transitioning the DGN Fishery to a Different Approach and/or Gear Types, or Closure</u>

To clarify any Council intent to transition the DGN fishery through management regulation changes—such as seasons and area closures, hard caps on particular species, or allowable gear—to something different than the contemporary fishery managed under current regulations, the

Council should discuss the pros and cons of the available alternatives. Once a policy intent is clarified, action can be taken toward meeting any objectives identified. Such action could be taken in Agenda Items E.3, E.4, or scheduled for future Council meetings.

The Highly Migratory Species Management Team met May 7-9 in Carlsbad, California and developed the contents of an initial report the Council on transition options for the DGN fishery (Agenda Item E.2.b, HMSMT Report); a supplemental report will be prepared in conjunction with the June Council meeting. The HMS Advisory Subpanel will provide a supplemental report expressing the views of stakeholders on transition options for the DGN fishery.

As of the advanced briefing book public comment deadline the Council received 116 emails asking the Council to ban drift gillnets. These emails are available electronically on the Council website (http://www.pcouncil.org/council-operations/briefing-books/). In addition, printed public comment letters are attached.

As discussed above, at this meeting the Council should clarify its objectives for any transitioning of the DGN fishery and develop a general list and timeline of actions to achieve these objectives.

Council Action:

- 1. Provide Guidance on Transitioning of the DGN Fishery to full MSA Authority.
- 2. Provide Guidance on Transitioning the DGN to a Different Management Approach, Alternative Gear Types, or Closure.

Reference Materials:

- 1. Agenda Item E.2.a, *Federal Register* Notice 79 FR 29377.
- 2. Agenda Item E.2.b, NMFS WCR Report.
- 3. Agenda Item E.2.b, NMFS PRD Report.
- 4. Agenda Item E.2.b, HMSMT Report.
- 5. Agenda Item E.2.c, Public Comment.

Agenda Order:

- a. Agenda Item Overview
- b. Reports and Comments of Advisory Bodies and Management Entities
- c. Public Comment
- d. **Council Action:** Consider Policy, Planning, and Logistical Issues Appropriate to Transitioning the Drift Gillnet Fishery to Full Magnuson-Stevens Act Authority and/or Alternative Swordfish Fishery Methods

PFMC 05/30/14 Kit Dahl



rule also implements the following ABCs for 2015: Summer flounder, 22.77 million lb (10,329 mt); scup, 33.77 million lb (15,320 mt); and black sea bass, 5.5 million lb (2,494 mt). This alternative consists of the quota levels that pair the lowest economic impacts to small entities and meet the required objectives of the FMP and the Magnuson-Stevens Act. The respective specifications contained in this final rule for all three species were selected because they satisfy NMFS' obligation to implement specifications that are consistent with the goals, objectives, and requirements of the FMP, its implementing regulations, and the Magnuson-Stevens Act. The F rates associated with the catch limits for all three species all have very low likelihoods of causing overfishing to occur in 2014 or 2015.

The revenue decreases associated with allocating a portion of available catch to the RSA program are expected to be minimal (approximately between \$300 and \$1,000 per vessel), and are expected to yield important benefits associated with improved fisheries data. It should also be noted that fish harvested under the RSA program can be sold, and the profits used to offset the costs of research. As such, total gross revenues to the industry are not expected to decrease substantially, if at all, as a result of this final rule authorizing RSA for 2014 and 2015.

Small Entity Compliance Guide

Section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996 states that, for each rule or group of related rules for which an agency is required to prepare a FRFA, the agency shall publish one or more guides to assist small entities in complying with the rule, and shall designate such publications as "small entity compliance guides." The agency shall explain the actions a small entity is required to take to comply with a rule or group of rules. As part of this rulemaking process, a small entity compliance guide will be sent to all holders of Federal permits issued for the summer flounder, scup, and black sea bass fisheries. In addition, copies of this final rule and guide (i.e., permit holder letter) are available from NMFS (see ADDRESSES) and at the following Web site: http://www.nero.noaa.gov.

Authority: 16 U.S.C. 1801 et seq.

Dated: May 15, 2014. Samuel D. Rauch III, Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service. [FR Doc. 2014–11665 Filed 5–21–14; 8:45 am] BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 660

RIN 0648-BD57

[Docket No. 130802674-4422-02]

Fisheries Off West Coast States; Highly Migratory Fisheries; California Drift Gillnet Fishery; Sperm Whale Interaction Restrictions

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rule.

SUMMARY: Pursuant to its emergency authority, NMFS renews an emergency action that implemented, among other measures, mandatory monitoring (VMS) and observer requirements (pre-trip notification and a 100% deep water closure zone unless a NMFS-certified observer was on board) in the California thresher shark/swordfish drift gillnet (mesh size ≥14 inches) (DGN) fishery during the August 15, 2013 to January 31, 2014 fishing season, and would have immediately shut down the fishery for the calendar year in the event of a sperm whale interaction in the DGN fishery. This renewing action is necessary to ensure that the conservation measures continue to provide protection for sperm whales until permanent measures are in place. Specifically, per recommendations of the Pacific Offshore Cetacean Take Reduction Team, NMFS is currently developing a rule under authority of the Marine Mammal Protection Act (MMPA) in order to adequately monitor the DGN fishery and reduce the risk of sperm whale interactions.

DATES: This rule is effective from May 22, 2014, through August 5, 2014. Comments must be received on or before June 23, 2014.

ADDRESSES: Requests for copies of documents supporting the temporary rule may be obtained from the West Coast Regional Office, NMFS, 501 W. Ocean Blvd., Ste. 4200, Long Beach, CA 90802.

You may submit comments on the temporary rule, identified by NOAA– NMFS-2013-0131, by any of the following methods:

Agenda Item E.2.a

29377

• Electronic Submission: Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to www.regulations.gov/ #!docketDetail;D=NOAA-NMFS-2013-0131, click the "Comment Now!" icon, complete the required fields, and enter or attach your comments.

• Fax: 562–980–4047; Attention: Craig Heberer.

• Mail: Craig Heberer, Southwest Regional Office, NMFS, 501 W. Ocean Blvd., Ste. 4200, Long Beach, CA 90802.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on www.regulations.gov without change. All personal identifying information (e.g., name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter "N/ A" in the required fields if you wish to remain anonymous). Attachments to electronic comments will be accepted in Microsoft Word, Excel, or Adobe PDF file formats only.

Requests for copies of documents supporting this rule may be obtained from the West Coast Regional Office, NMFS, 501 W. Ocean Blvd., Ste. 4200, Long Beach, CA 90802

FOR FURTHER INFORMATION CONTACT: Craig Heberer, telephone: 706–431–9440 (#303), fax: 562–980–4047, email: craig.heberer@noaa.gov.

SUPPLEMENTARY INFORMATION: The DGN fishery is managed under the Federal Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP). The HMS FMP was prepared by the Pacific Fishery Management Council (Council) and is implemented under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) by regulations at 50 CFR part 660.

Background

On September 4, 2013, NMFS published in the Federal Register a temporary rule (78 FR 54548) for emergency action to modify the California swordfish/thresher shark DGN fishery for the 2013–2014 fishing season under authority of section 305(c)(1) of the MSA. The purpose of

the temporary rule stems from the observed entanglement of two sperm whales by a DGN fishing vessel in 2010 and the need to reduce the risk associated with sperm whale bycatch in the DGN fishery for the 2013-2014 fishing season, in accordance with the MSA, Endangered Species Act (ESA) and the MMPA. Implementation of the temporary regulations allowed NMFS to issue an MMPA 101(a)(5)(E) permit providing coverage for sperm whale takes in the DGN fishery. The temporary regulations implemented, among other measures, mandatory monitoring (VMS) and observer requirements (pre-trip notification and a 100% deep water closure zone unless a NMFS-certified observer was on board), and would have immediately shut down the fishery for the calendar year in the event of a sperm whale interaction. A full discussion of the background and justification for the temporary rule emergency measures was presented in the preamble prepared for that action and is not repeated here.

The temporary rule expired on January 31, 2014, which corresponded with the traditional end of the DGN fishing season. From February 1 through April 30, the DGN fishery is prohibited from operating inside the West Coast Exclusive Economic Zone (EEZ). See 50 CFR 660.713(d). No fishing effort has occurred during this period due to the distance involved in transiting to fishing areas beyond the EEZ, coupled with a lack of swordfish availability. The DGN fishery is allowed access inside the EEZ off the coasts of California and Oregon from May 1 through August 14, but is prohibited from operating within 75 miles of the coast. Very little DGN fishing effort typically takes place during this time due mainly to the lack of swordfish availability. The core of the DGN fishery, and virtually all of the contemporary fishing effort, takes place from August 15 through January 31. NMFS took public comment on the original temporary rule commencing September 4, 2013, and ending on October 4, 2013.

This action is necessary to retain in force the earlier temporary regulations, while NMFS develops a permanent rule to adequately monitor the DGN fishery and minimize sperm whale interactions by the fishery. Without the temporary regulations remaining in place, the DGN fishery may not be properly monitored, and therefore might risk additional negative sperm whale interactions, contrary to the MMPA and ESA.

Classification

The Assistant Administrator for Fisheries, NOAA (AA) finds that providing the public with notice and an opportunity comment on this action would be contrary to the public interest, and therefore waives this requirement of the Administrative Procedure Act (APA).

An owner/operator of a federallypermitted DGN fishing vessel has informed NMFS that he may fish for thresher shark/swordfish on or after May 1, 2014, when the DGN fishery can legally operate within the EEZ, but outside 75 miles from the coast of California. Prohibiting unobserved DGN vessels from fishing in the EEZ off California in waters seaward of the 1,100 fm (2,012 m) depth contour, and setting a limit of one serious injury/ mortality to sperm whales interacting with DGN gear, will protect sperm whales from potential interactions with the DGN fishery, such as occurred in 2010, where two sperm whales became entangled in DGN fishing gear. NMFS long term research vessel sightings of sperm whales in the California Current indicate that 90 percent of sightings occurred in waters deeper than 1,100 fm (2,012 m). Further, NMFS' analyses of DGN observer data indicate that an average of approximately 13 percent of total annual DGN fishing occurred in the deeper water zone in years 2009 through 2011. NMFS' Southwest Fisheries Science Center scientists have suggested that reducing spatial overlap of fishing effort and sperm whale habitat may be an effective means to reduce the risk of sperm whale bycatch. There is no action that NMFS can take through the normal rulemaking process that would enable NMFS to implement the requirement for observer monitoring of DGN vessels in the deeper water area and the cap of one sperm whale serious injury/mortality for the DGN fishery to reduce the bycatch risk of this species before the DGN fishery begins actively fishing in waters inhabited by sperm whales. This emergency action enables NMFS to keep the fishery operating while a permanent rule is under development, thus avoiding unnecessary adverse biological and economic impacts.

Without this rule, sperm whales will be at risk of unauthorized takings, possibly leading to injury or death, which is contrary to the public interest in protecting these marine mammals. Due to the urgent need to protect sperm whales before NMFS issues any final rule, NMFS is waiving the public notice and opportunity for comment under the APA. However although this action is being implemented without notice and request for advance public comment, NMFS is seeking public comment on this rule for purposes of identifying possible measures for long-term management.

For these same reasons stated above, pursuant to 5 U.S.C. 553(d)(3), the AA finds good cause to waive the full 30day delay in effectiveness for this rule. It would be contrary to the public interest if this rule does not become effective immediately, because the DGN fishery can fish within 75 nautical miles of shore starting May 1 through August 14. Without this emergency rule, NMFS would not provide 100 percent observer coverage in the deeper water area with higher concentrations of sperm whales, or be able to close the fishery in the event that there is one serious injury or mortality to a sperm whale in the DGN fishery. These measures are needed to provide adequate protections for sperm whales during the 2014–2015 DGN fishing season while a permanent rule is under development. For these reasons, there is good cause to waive the requirement for delayed effectiveness. The need to implement these measures in a timely manner constitutes good cause under authority contained in 5 U.S.C. 553(d)(3), to make the rule effective immediately upon publication in the Federal Register.

Because notice and opportunity for comment are not required pursuant to 5 U.S.C. 553 or any other law, the analytical requirements of the Regulatory Flexibility Act (5 U.S.C. 601 et seq.) are inapplicable. Therefore, a regulatory flexibility analysis is not required and has not been prepared.

This rule has been determined to be not significant for purposes of Executive Order 12866. A Regulatory Impact Review was completed and is available upon request from the NMFS, Southwest Region.

List of Subjects in 50 CFR Part 660

Fisheries, Fishing, Reporting and recordkeeping requirements.

Dated: May 14, 2014.

Samuel D. Rauch III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR part 660 is amended as follows:

PART 660—FISHERIES OFF WEST COAST STATES

■ 1. The authority citation for part 660 continues to read as follows:

Authority: 16 U.S.C. 1801 *et seq.* and 16 U.S.C. 773 *et seq.*

■ 2. In § 660.713, paragraph (f) is added to read as follows:

§660.713 Drift gillnet fishery.

*

*

* (f) Sperm whale take mitigation *measures.* (1) Drift gillnet (mesh size

≥14 inches) fishing without a NMFStrained observer is prohibited in the portion of the California EEZ bounded by lines connecting, in order, the following points:

Point	North lat.	West long.	
A	42°0′0″ 40°22′12″ 40°22′12″ 38°21′0″ 37°29′24″ 37°29′24″ 37°20′0″ 36°36′0″ 36°16′12″ 35°52′30″ 35°0′0″ 34°54′0″ 34°0′0″ 34°0′0″ 34°0′0″ 31°6′0″ 30°32′31″ EEZ Western Edge	125°10'12" 124°45'0" 125°45'0" 123°52'12" 123°18'0" 123°30'36" 123°30'36" 122°27'0" 122°27'0" 122°31'12" 122°16'48" 121°45'0" 122°0'0" 122°0'0" 122°0'0" 122°0'0" 121°9'0" 120°0'0" 118°45'0" 121°52'1"	Oregon Border at 1100 fm. SW. corner of CA EEZ. 200nm buffer from the U.S. Pacific Coast Shoreline.
A	42°0′0″	129°0'0" 125°10'12'	Finish back at Point A.

(2) As soon as practicable following determination by the Regional Administrator that one serious injury to, or mortality of, a sperm whale has resulted from drift gillnet fishing during the period of this emergency rule, the Regional Administrator will contact the fleet via VMS communication and provide the effective date and time that all fishing by vessels registered for use under a drift gillnet permit are prohibited from swordfish fishing until August 5, 2014. Coincidental with the VMS communication, the Regional Administrator will also file a closure notice with the Office of the Federal Register for publication; notify all permit holders by postal mail, and a

post a notice on the NMFS regional Web site.

(3) Drift gillnet vessel owners/ operators are required to notify the NMFS-designated observer provider at least 48 hours prior to departing on all fishing trips. Vessel owners/operators must provide to the observer provider their name, contact information, vessel name, port of departure, and estimated date and time of departure, and a telephone number at which the owner or operator may be contacted during the business day (8 a.m. to 5 p.m.) to indicate whether an observer will be required on the subject fishing trip.

(4) Drift gillnet vessel owners/ operators must provide NOAA OLE with a declaration report before the vessel leaves port on a trip in which the vessel will be used to fish swordfish with drift gillnet gear in U.S. ocean waters between 0 and 200 nm offshore of California.

(5) Drift gillnet vessel owners are required to install a NMFS OLE typeapproved mobile transceiver unit and to arrange for a NMFS OLE type-approved communications service provider to receive and relay transmissions to NMFS OLE prior to swordfish fishing during the period of this emergency rule. Vessel owners/operators shall perform the same requirements consistent with 50 CFR 660.14.

[FR Doc. 2014-11658 Filed 5-21-14; 8:45 am] BILLING CODE 3510-22-P

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT DIRFT GILLNET TRANSITION ISSUES

Potential Objectives for a California Drift Gillnet Transition Plan

In response to the Council discussions on the future of the drift gillnet (DGN) fishery and assignments to the Highly Migratory Species Management Team (HMSMT) at the March 2014 Council meeting, the HMSMT met May 7-9 in Carlsbad, California, and developed the contents of this report. The purpose of this report is to assist the Council in clarifying its objectives for transitioning the DGN fishery and to decide upon a general list and timeline of actions to achieve these objectives. Initial development of policy targets, performance measures, and alternative gear considerations are outlined below and the HMSMT will provide additional information on these and other elements of a transition plan in a supplemental report. Potential implementation issues (e.g., permit buy-out and transition to federal permits) and management measures (e.g., take caps and observer coverage) will be addressed in a supplemental HMSMT report.

Potential Policy Objectives

A. Fisheries allowed so that bycatch is reduced by some meaningful amount

This objective may be achieved via changes to the DGN fishery alone or in combination with new fisheries using alternative gears demonstrated to meet bycatch targets. Changes to the DGN fishery could include: reducing the number of active vessels/permits; imposing additional time/area or gear/operational constraints; and/or phasing out the fishery.

B. Fisheries allowed so that current bycatch levels are not exceeded

This objective may be achieved with the current level of DGN fishery participation operating with take caps and high levels of observer coverage; reduced DGN fishery participation (potentially through buy-out or shift to federal permits) so that take caps and high levels of observer coverage may not be necessary; or reduced DGN fisheries partially or fully replaced with fisheries using proven alternative gears. Alternative gears may also require take caps and observer coverage.

C. Fisheries allowed that comply with applicable federal statutes

This objective is currently met with the current DGN fishery. Conceivably, the DGN fishery could expand in terms of time/area opportunities, if the potential expansion were evaluated and determined to comply with these federal requirements. Fisheries with alternative gears could also be established dependent upon the same determination. Reductions in the current DGN fishery could also be required in the future to remain compliant with applicable requirements if the status of non-target species changes.

Potential Performance Measures

Based largely on work in progress by Heidi Gjertsen (contractor NMFS-SWFSC) presented to the HMSMT at its May meeting, the HMSMT identified a number of performance measures to characterize the biological and socioeconomic aspects of U.S. swordfish fisheries that use a variety of gear types. Examples of the biological performance measures include the expected number of takes of high priority

protected species per metric ton (mt) of swordfish landed, expected number of takes of blue sharks per mt of swordfish, and finfish discards as percent of total catch. Some examples of socioeconomic performance measures include estimated total revenue per mt of swordfish landed, profit per mt, and variable cost per mt. The gears being reviewed in her report include California DGN, California shallow-set longline on the high seas (historic)¹, California deep-set longline targeting tuna, California harpoon, Hawaii shallow-set longline, Hawaii deep-set longline targeting tuna², Atlantic pelagic longline, and Atlantic buoy gear.

The HMSMT is not presenting the preliminary study results in this report but will describe and discuss this study in a supplemental report to the Council, when Ms. Gjertsen indicated she will be able provide more comprehensive results. Further, the HMSMT identified some additional performance measures and analyses to inform the Council's deliberations about the future of the drift gillnet fishery and potential fisheries using alternative gears. Ms. Gjertsen is including these in her results, within data and time constraints.

Fisheries with Alternative (non-DGN) Gears

Other than DGN gear, only harpoon and hook-and-line gears are currently allowed to fish for swordfish on the US West Coast. Fisheries with harpoon and hook-and-line gears are open-access fisheries with few other restrictions to limit fishing effort. Whereas these fisheries have very low bycatch rates, the comparatively small amounts of swordfish landed by these fisheries cannot replace DGN landings. Expansion of these fisheries to replace DGN landings is unlikely due to operational and economic factors. Consequently, research has been underway to evaluate the performance of two other gears, deep-set buoy gear and deep-set longlines, to determine if either of these gears would support economically viable fisheries for swordfish and have demonstrably lower bycatch rates of species of concern than DGN gear. To date, research results are inadequate to make this determination. In addition, research on buoy gear as a potential artisanal supplement to existing gears is underway, but this gear is not deemed an alternative to DGN gear because, like harpoon and other hook-and-line gears, it may only produce relatively small volumes of swordfish.

More field research (potentially through EFPs) is needed to demonstrate that potential fisheries using these alternative gears can meet bycatch targets requirements. Research results to date utilzing deep-set longline gear are inconclusive largely because research has been conducted on a very limited basis and needs to be conducted on a larger scale and over a broader range of environmental conditions and geographic areas. Shallow-set longline is currently a federally authorzed gear in Hawaii and permitted vessels land swordfish on the west coast. However, the HMS FMP prohibits the use of pelagic longline gear in the west coast EEZ, so there is no history of its use in the area within which the DGN fishery has historically operated.

Because distributions of swordfish and species of concern are strongly related to environmental conditions, research activities generally will need to be conducted for several field seasons covering a variety of environmental conditions.

¹ The California-based swordfish shallow-set longline fishery operating on the high seas ceased in 2004 with implementation of the HMS FMP, but is included because of its relevance for considering shallow-set longline as an alternative gear to California drift gillnet gear. However, it is important to note that that fishery operated without the gear improvements (circle hooks, mackerel bait) that allowed the Hawaii shallow-set longline fishery to reopen in 2004.

 $^{^2}$ Fisheries targeting tuna are included because of their relevance for considering deep-set longline for targeting swordfish.

Similarly, there may be geographic areas that are suitable for swordfish fisheries and others that are not, either due to the abundance of swordfish or the presence of species of concern. For example, under the ESA, critical habitat has been defined for leatherback sea turtles and the Pacific Leatherback Conservation Area closure applies to the DGN fishery. However, healthy stocks of swordfish are distributed along the West Coast EEZ from about central Oregon to the southern boundary of California and far offshore, beyond the EEZ. If fisheries with alternative gears are established, they may be authorized in some or all of these areas, so research should be conducted to adequately cover the likely geographic range of the potential fishery.

Alternative gears are not near-term replacements for some or all of the DGN fishery. Given the time and area considerations noted above, EFPs should be implemented over multiple years to achieve the scale of research results needed to determine if alternative gears are desirable alternatives to drift gillnet gear.

NMFS WEST COAST REGION – PROTECTED RESOURCES DIVISION REPORT ON CETACEAN AND SEA TURTLE PROTECTIONS

Cetaceans: MMPA Negligible Impact Determination Process

Section 101(a)(5)(E) of the Marine Mammal Protection Act (MMPA), provides that NMFS shall allow, for a period of up to three years, the incidental taking of marine mammal species listed under the Endangered Species Act (ESA) by persons using vessels of the United States with valid fishing permits, *if NMFS makes certain determinations*. NMFS must first determine, after notice and opportunity for public comment, that: 1) the incidental mortality and serious injury from commercial fisheries will have a *negligible impact* on the affected species or stock; 2) a recovery plan has been developed or is being developed for such species or stock under the ESA; and 3) where required under section 118 of the MMPA, a monitoring program has been established, vessels engaged in such fisheries are registered in accordance with section 118 of the MMPA, and a take reduction plan has been developed or is being developed for such species or stock.

The MMPA mandates that each commercial fishery be classified by the level of mortality and serious injury of marine mammals occurring incidental to each fishery. The List of Fisheries classifies U.S. commercial fisheries into one of three categories according to the level of incidental mortality or serious injury of marine mammals. This classification is based on the rate, in numbers of animals per year, of incidental mortality and serious injury of marine mammals due to commercial fishing operations relative to a stock's Potential Biological Removal (PBR) level, defined (50 CFR 229.2) as the maximum number of animals, not including natural mortality, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. The DGN fishery is currently categorized as a Category I fishery (annual mortality and serious injury of a stock in a given fishery is greater than or equal to 50 percent of the PBR level) due to interactions with sperm whales in 2010.

In order to make a negligible impact determination, NMFS must consider the total human-related mortality and serious injury to the affected stock of marine mammals. This includes the known or estimated takes from all human sources, such as commercial fisheries and ship strikes. There are five criteria that NMFS adopted in 1999 to make negligible impact determinations for MMPA 101(a)(5)(E) permits (64 FR 28800; May 27, 1999). Criterion 1 is the starting point for analysis. If Criterion 1 is not satisfied, NMFS may use one of the other criteria as appropriate.

- 1. The threshold for initial determination will remain at 0.1 PBR. If total human-related serious injuries and mortalities are less than 0.1 PBR, all fisheries may be permitted.
- 2. If total human-related serious injuries and mortalities are greater than PBR, and fisheriesrelated mortality is less than 0.1 PBR, individual fisheries may be permitted if management measures are being taken to address non-fisheries-related serious injuries and mortalities. When fisheries-related mortality and serious injury is less than 10 percent of the total, the appropriate management action is to address components that account for the major portion of the total.

- 3. If total fisheries-related serious injuries and mortalities are greater than 0.1 PBR and less than PBR and the population is stable or increasing, fisheries may be permitted subject to individual review and certainty of data. Although the PBR level has been set up as a conservative standard that will allow recovery of a stock, there are reasons for individually reviewing fisheries if serious injuries and mortalities are above the threshold level. First, increases in permitted serious injuries and mortalities should be carefully considered. Second, as serious injuries and mortalities approach the PBR level, uncertainties in elements such as population size, reproductive rates, and fisheries-related mortalities become more important.
- 4. If the population abundance of a stock is declining, the threshold level of 0.1 PBR will continue to be used. If a population is declining despite limitations on human-related serious injuries and mortalities below the PBR level, a more conservative criterion is warranted.
- 5. If total fisheries-related serious injuries and mortalities are greater than PBR, permits may not be issued.

The DGN fishery is currently permitted to take humpback whales and sperm whales for a period of up to three years (expiring September 4, 2016) based on negligible impact determinations under Criterion 3 for both species.

Potential Biological Removal (PBR) levels for marine mammals with recent recorded interactions with the DGN fishery:

Species	PBR
Sperm whale	1.5 (under review: Moore and Barlow, in
	prep)
Humpback whale	11
Northern right whale dolphin	48
Common dolphin	3,440
California sea lion	9,200

In instances where fishery related mortality exceeds PBR, an MMPA permit cannot be issued for the fishery. For the DGN fishery, this occurrence has resulted in the convening of the Take Reduction Team to make recommendations on measures to reduce bycatch to levels below PBR. For species also protected under the ESA, incidental take exemption for that species cannot be provided if the MMPA authorization cannot be issued.

Sea Turtles: Summary of 2012 DGN Biological Opinion Sea Turtle Take Estimates and Terms and Conditions

In the 2012 Biological Opinion on the DGN fishery, NMFS estimated the maximum total incidental take and mortality of ESA-listed sea turtle individuals that could be expected.

	Annual Take	5-Year Take Total	Expected Mortalities During 5-Year Period
Leatherback turtle	up to 3	up to 10	up to 7
Loggerhead turtle	up to 3	up to 7	up to 4
Olive ridley turtle	up to 1	up to 2	up to 1
Green turtle	up to 1	up to 2	up to 1

Given the context of less than 100 percent observer coverage of the DGN fishery, NMFS expects the 5 year observer record to reflect the following levels of observed incidental take, which is proportionally consistent with the expected total incidental take and an expectation of observer coverage levels of 20 percent.

	Observed take during 5- year period (20% observer coverage)
Leatherback turtle	up to 2*
Loggerhead turtle	up to 2*
Olive ridley turtle	1
Green turtle	1

* could occur within the same season

NMFS WEST COAST REGION – SUSTAINABLE FISHERIES DIVISION REPORT ON WEST COAST REGION OBSERVER PROGRAM OVERVIEW

The West Coast Region Fisheries Observer Program has placed NMFS trained observers aboard large mesh drift gillnet (DGN) fishing vessels since 1990 primarily to monitor the incidental capture of marine mammals and sea turtles. Observers also record details on fishing activity, gear configuration, and the catch and disposition of target and non- target fish species. Observers collect biological samples for use in life history studies, stock assessments, and much of the information is used in published papers by Southwest Fisheries Science Center scientists. Catch summaries by fishing season are available at: <u>http://www.westcoast.fisheries.noaa.gov/fisheries/</u>wc_observer_program_info/data_summ_report_sw_observer_fish.html.

Observers for the DGN fishery are deployed under the authority of the Marine Mammal Protection Act, (Category I Fishery) and the West Coast Highly Migratory Species Fishery Management Plan. NMFS is responsible for the overall program, implementing national observer policies, and designing the program consistent with regulations and/or recommendations about coverage for individual fisheries. NMFS conducts observer training, initial debriefing, and data management. A NMFS approved contractor, Frank Orth and Associates, (FOA) is responsible for observer recruitment and employment, monitoring vessels activity, observer deployment, logistics, and delivery of observer data to NMFS. Vessel owners and operators are responsible for contacting FOA to make arrangements for mandatory placement of trained observers aboard their vessels (50 CFR 229.7).

Observer coverage in the DGN fishery has varied from 4.4% in 1990 to 37.4% in 2013 with a target of 20% coverage since the implementation of the Pacific Ocean Cetacean Take Reduction Team. For the 2013/14 season and emergency rule mandating 100% coverage in an offshore zone was in effect and NMFS increased observer coverage to 34.2% (see Table 1).

Although the West Coast Region Observer Program has primarily focused on the DGN fishery since 1990, several other fisheries have been observed under the MMPA, ESA and MSA including:

- EPO Purse Seine (1976-1994)
- California Set Gillnet (1990-94, 1999-2000, 2006-07, 2010-13)
- California Small Mesh Drift Gillnet (2006-07, 2010-12)
- Albacore Troll (2004-07), HMS CPFV (2005-07)
- Coastal Pelagic Species Purse Seine (2004-08)
- Coastal Tuna Purse Seine (2004-07)
- Shallow Set Pelagic Longline (2001-05)
- Deepset Pelagic Longline (2005-present)

Calendar Year	Total Sets	Observed Sets	% Observer Coverage
1990	4078	178	4.4
1991	4778	470	9.8
1992	4379	596	13.6
1993	5442	728	13.4
1994	4248	759	17.9
1995	3673	572	15.6
1996	3392	421	12.4
1997	3039	692	22.8
1998	3353	587	17.5
1999	2634	526	20.0
2000	1936	444	22.9
2001	1665	339	20.4
2002	1630	360	22.1
2003	1467	298	20.3
2004	1084	223	20.6
2005	1075	225	20.9
2006	1433	266	18.6
2007	1241	204	16.4
2008	1103	149	13.5
2009	761	101	13.3
2010	492	59	12.0
2011	435	85	19.5
2012	445	83	18.7
2013	470	176	37.4

 Table 1. Observer Coverage and effort in the DGN fishery since 1990:

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL SUPPLEMENT REPORT DRIFT GILLNET FISHERY TRANSITION ISSUES

The Highly Migratory Species Advisory Subpanel (HMSAS) focused its discussions and will key its comments to the directions in the June 4 HMS Committee Memo, page 1, and Agenda Item E.2, Situation Summary.

- 1. Should California's Limited Entry Drift Gillnet (DGN) Permit be converted to a Federal Limited Entry Permit Program?
 - The HMSAS is supportive of converting only the existing California DGN permits to limited entry Federal Permits.
 - The majority of the management of the DGN fishery is already under Federal management with the exception of permitting, and permitting should be a Federal function.
 - The DGN fishery is a sustainable fishery which is not limited off the West Coast to just waters off the coast of California and should be federally managed.
- 2. As described in E.2 Situation Summary at page 3, the HMSAS is asked to provide advice so the Council can provide guidance on transitioning the DGN fishery to a different management approach, including alternate gear types or a complete closure. The Council should clarify its objectives and develop a general list and timeline.
 - A. <u>Complete Closure</u> It makes no sense to close a sustainable fishery which fishes on a clearly healthy stock particularly when the demand for swordfish in the U.S. is high. Also, closure of the fishery would result in a great loss of American jobs and an economic loss of \$14.5 million. A closure would only result in Americans buying more foreign fish. Such action would not provide benefit to marine mammals, seabirds, or marine reptiles.

B. Alternate Gear Types -

- BUOY GEAR: Use of this gear type is quite new and experimental. It initially appears suited only to artisanal or subsistence uses, not commercial.
- HARPOON: This method is not economically viable. This is evidenced by the fact that it is an open access fishery accompanied by a continual strong demand for swordfish, and yet permit requests keep declining.
- LONGLINE: Promising, but transition to this gear from the DGN is complicated.

CONS:

- Larger vessels are needed.
- Money is needed to invest in new gear.
- Continually higher costs for fuel, crew, and bait.
- Current restrictions on the DGN fishery, if maintained, may make any longline fishery economically infeasible.

PROS:

- Successfully operated in Hawaii for many years.
- Fully sustainable Swordfish resource.
- EFPs would provide much needed information on stock structure and life history.
- EFPs will permit further improvements in gear and refinements of fishing procedures which can be shared with other countries.
- 3. Long-term Strategy The HMSAS suggests the Council should give guidance to the Highly Migratory Species Management Team to develop a program of Exempted Fishing Permits to develop a West Coast sustainable swordfish fishery to provide local, fresh, or fresh frozen swordfish to Americans from U.S. flag vessels.

PFMC 06/21/14

Agenda Item E.2.b Supplemental HMSMT PowerPoint June 2014

Comparing U.S. swordfish fisheries: Metrics for bycatch, economics, and commercial volume

HMSMT Agenda Item E.2 Supplemental Report

June 22, 2014

Background

- This HMSMT heard a report by economist Heidi Gjertsen at their May 2014 HMSMT meeting on an analysis to compare U.S. swordfish fisheries in terms of metrics for catch, bycatch and economic performance
- This presentation provides an updated version which includes metrics for commercial volume

Overview

- Fisheries Included
- Methods
 - Bycatch Metrics
 - Economic Metrics
 - Commercial Volume Metrics
- Data Sources and Limitations
- Preliminary Results

Fisheries Included

- California drift gillnet (CA DGN^S)
- Pre-2005 California shallow-set longline (CA SSLL^S)
- California harpoon (CA HPN^S)
- Hawaii shallow-set longline (HI SSLL^S)
- Hawaii deep-set longline targeting tuna (HI DSLL^T)
- Atlantic pelagic longline (ATL LL^{S-T})
- Atlantic buoy (ATL BG^S)
- Post-2004 Hawaii shallow-set longline with landings to California (recent swordfish landings)

EXPERIMENTAL:

- California deep-set longline (CA DSLL^S)
- California buoy gear (CA BG^S)
- * S = swordfish, T= tuna

Methods: Bycatch Metrics

- Ratio of landings per protected species take (L/B)
- "High priority" protected species
 - ESA-listed or strategic stocks (MMPA)
- Other protected species
- Finfish example: blue sharks

Methods: Economic and Commerical Volume Metrics

Economic Metrics

• Ratios of revenues, variable costs and profits (\$2012) to metric tons of landings

Commercial Volume Metrics

- Fleet-level average annual swordfish and total landings
- Vessel-level average annual swordfish and total landings

Data Sources and Limitations

Data sources

- Landings receipt databases (e.g. PacFIN)
- Observer data for catch and bycatch counts
- Cost-earnings studies for costs and profits
- Logbook data are used where needed as a supplement

Limitations

- Finfish bycatch observer data are not currently available for all fleets
- Levels of observer coverage vary across fisheries from no coverage to full coverage
- Profit and cost metrics may not be representative due to short data windows

Preliminary Results: Bycatch Metrics (1)

1. CA swordfish fisheries compare favorably to the Atlantic swordfish fishery in terms of landings relative to high priority protected species bycatch (Figure 1).

2. HI SSLL^s 2005-2012 showed significantly higher SWO production per high priority protected species take compared to the pre-2005 CA SSLL^s fishery.

3. The CA DGN^s and HI SSLL^s fisheries produced the highest landings of swordfish per high priority protected species take among all gears under comparison.

4. The HI DSLL^S fishery had the highest amount of all market species landings per high priority protected species take.

Preliminary Results: Bycatch Metrics (2)

5. HI DSLL^T has the highest total landings relative to bycatch.

6. Only one CA DSLL^T vessel uses similar methods, with 100% observer coverage. The only record of a protected species interaction was one olive ridley turtle in 2006.

7. Comparisons of swordfish landings to bycatch may be misleadingly low for fisheries which land a significant amount of other market species besides swordfish (e.g. CA DGN^S, HI DSLL^T, ATL LL^{S-T}). Total landings are a more relevant measure for these fisheries.

8. Blue sharks are a species with some commercial landings which are not endangered, protected, subject to overfishing or overfished. A more relevant bycatch metric would be to compare landings to bycatch weights rather than to catch counts.

Preliminary Results: Bycatch Metrics (3)

Figure 1. Mt of all market species and swordfish landings per high priority protected species take



Preliminary Results: Economic and Commercial Volume Metrics

Economic Metrics

- 1. Longline fisheries generally produced higher profits than other methods under comparison (Figure 2).
- 2. Average price per pound of swordfish was higher for CA HPN^s and ATL BG^s than for the high volume methods.
- 3. Based on available cost data (2008-2010), CA HPN^s has negative values for the three profit metrics.

Commercial Volume Metrics

- 1. Longline fisheries provided by far the highest commercial volumes of production, both on a fleet and a vessel-level basis (Figure 3).
- 2. The comparison might be confounded by the areas where the fisheries operate.

Preliminary Results: Economic Metrics

Figure 2. Average annual profit (2012 \$1000s) per vessel



Preliminary Results: Commercial Volume Metrics

Figure 3. Average annual total landings (mt) per vessel during period



Preliminary Results: General Conclusions (1)

- The CA DGN^s fishery does not appear to be a high protected species bycatch fishery compared to Hawaii longline or the MSC certified Atlantic longline fishery.
- 2. Buoy gear appears promising due to higher possible landings, high market prices and lower costs, making it a low-bycatch gear that is economically viable; however it is unlikely on its own to supply a large commercial volume of swordfish to the market. Additional research is on-going to determine the potential volume of fish that could be supplied.

Preliminary Results: General Conclusions (2)

- 3. Harpoon is an attractive gear in terms of low bycatch, but does not appear capable of supplying commercial volumes of swordfish during years of low abundance or catchability.
- 4. Pacific longline fisheries rank high in terms of volume of swordfish and all commercial species landings relative to high priority bycatch species, economic measures of revenue and profitability, and production of commercial volumes of landings.

Additional Information on HI SSLL Fishery

Average HI SSLL landings to the West Coast (round r	nts)	
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Period	Annual total	Per vessel-year	Ave # Vessels/year
2005-2009*	66.00	33.00	2
2010-2013	380.75	52.52	7.25

* Excludes 2005 and 2007 from calculations, since no HI

SSLL landings were made to the West Coast those years

Preliminary Results: Bycatch Metrics

Fishery	CA DGN ^S	CA SSLL ^S	CA HPN ^S	HI SSLL ^S	HI DSLL ^T	ATL LL ^{S-T}	ATL BG ^S
Time period	2001-2012	2002-2004	1995-2011	2005-2012	2005-2012	2005-2012	2007-2012
				Loggerhead,	Leatherback,	Loggerhead,	
	Leatherback,			Green turtle,	Loggerhead,	Bottlenose	
	Loggerhead,			Olive ridley,	Green turtle,	dolphin,	
	Sperm whale,			Humpback	Olive ridley,	Humpback	
	Humpback	Leatherback,		whale, Pygmy	Sperm whale,	whale, Sperm	
High priority protected species taken during	whale, Gray	Loggerhead,		sperm whale,	False killer	whale, Killer	
period	whale	Olive ridley	None*	False killer	whale	whale	None
Mt of swordfish landings per number of							
expected takes of high priority protected							
species	61.4	6.7	N/A	63.4	3.9	2.6	<u>N/A</u>
Mt of all market species landings per							
number of expected takes of high priority							
protected species	118.0	7.2	N/A	81.3	147.1	5.4	N/A
Mt of swordfish landings per number of							
expected takes of other protected species	2.5	4.4	<u>N/A</u>	15.6	1.0	10.4	N/A
Mt of all market species landings per							
number of expected takes of other							
protected species	4.7	4.7	N/A	20.1	37.3	21.4	N/A
Mt of swordfish landings per number of							
expected takes of all protected species	2.4	2.7	N/A	12.5	0.8	2.1	N/A
Mt of all market species landings per							
number of expected takes of all protected							
species	4.6	2.9	N/A	16.1	29.7	4.3	N/A
Mt of swordfish landings per number of							
expected take of blue sharks	0.2	0.1	N/A	0.1	0.0	0.1	14.8
Mt of all market species landings per							
number of expected take of blue sharks	0.4	0.1	N/A	0.1	0.2	0.1	15.11

* The harpoon fishery has no observers because it is assumed to have no bycatch. All bycatch rates are presumed to be zero.

Preliminary Results: Economic and Commercial Volume Metrics

Fishery	CA DGN ^S	CA SSLL ^S	CA HPN ^S	HI SSLL ^S	HI DSLL ^T	ATL LL ^{S-T}	ATL BG ^S
	2001-2012,	1999-2004,	1995-2011;		2005-2012;		2007-2012;
	2008-2010	2001-2003	2008-2010	2005-2012;	2008-2009		2009-2012
Time period	for cost	for cost	for cost	2008 for cost	for cost	2005-2012	for cost
Swordfish revenue (2012 \$1000s) per mt of swordfish landings	5.9	4.5	10.5	5.1	5.9	6.9	8.1
Total revenue (2012 \$1000s) per mt of total landings	4.3	4.5	10.4	4.5	7.0	7.1	7.9
Variable cost (2012 \$1000s) per mt of total landings	2.1	2.6	36.6	2.8	4.1	4.5	5.0
Profit (2012 \$1000s) per mt of total landings	2.2	2.0	-26.3	1.7	2.8	2.6	2.9
Average annual fleetwide profit (2012 \$1000s)	1,221.3	3,384.5	-1,743.3	2,536.2	33,997.6	13,409.6	119.3
Average annual profit (2012 \$1000s) per vessel	31.3	95.3	-58.1	93.6	268.5	116.9	2.4
Average price per pound of swordfish over period (2012\$)	2.67	2.04	4.77	2.33	2.66	3.96	5.33 (2013)
Commercial Volume Metrics							
Time period	2001-2012	1999-2004	1995-2011	2005-2012	2005-2012	2005-2012	2007-2012
Average annual swordfish landings (mt) during period	265	1,496.70	65	1,184.40	229.7	2,489.30	93.51
Average annual swordfish landings (mt) per vessel during period	6.8	44.2	2.2	43.7	1.8	21.7	1.9
Average annual total landings (mt) during period	509.3	1,635.70	70.3	1,490.00	8,571.20	5,113.10	95.7
Average annual total landings (mt) per vessel during period	13	47.9	2.3	54.9	67.7	44.6	1.9

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON DRIFT GILLNET FISHERY TRANSITION ISSUES

The Council asked the Highly Migratory Species Management Team (HMSMT) to develop a plan to transition the drift gillnet (DGN) fishery to a yet to be determined suite of fisheries and recommend an appropriate transition timeline. The HMSMT presented in the June Briefing Book Report E.2.b an initial outline of potential policy objectives, performance measures, and alternative gear considerations. This supplemental report focuses on developing specific elements of these policy objectives for Council consideration, including: ensuring that existing and future fisheries are compliant with applicable state and Federal statutes; achieving reductions in bycatch via changes to the existing DGN fishery alone, or in combination with any future fisheries using alternative gears being tested; and maintain commercially viable west coast swordfish landings and participation while transition considerations are being entertained.

Transition Considerations

Existing DGN Fishery

Based on the best available science, the current DGN fishery meets all applicable Federal statutes including Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA) requirements. The fishery has minimized and mitigated protected species bycatch through gear and operational changes recommended through the Pacific Offshore Cetacean Take Recovery Team and under terms and conditions outlined in ESA Biological Opinions. Management of the fishery also addresses several important HMS Fishery Management Plan (FMP) goals and Magnuson-Stevens Act (MSA) National Standards including:

- Prevent overfishing while achieving optimum yield.
- Minimize bycatch or mortality from bycatch.
- Be based upon the best scientific information available.
- Minimize inconsistencies between state and Federal regulations for HMS fisheries.
- Take into account the importance of fishery resources to fishing communities to provide for the sustained participation of, and minimize adverse impacts to, such communities (consistent with conservation requirements).
- Provide a consistent supply of high quality, locally-caught swordfish.

With regard to the policy objective of considering additional management measures in the existing DGN fishery, the HMSMT considered the following measures:

Imposing additional time/area or gear/operational constraints

Additional time/area or gear/operational constraints have been discussed at length by both the Council and the advisory bodies. The fishery is heavily regulated and attrition has occurred over time (Figure 1, Table 1, <u>March 2014 HMSMT DGN report K.5.b</u>). Only 21 vessels made landings in the 2013-2014 season, although this was partially due to a lack of availability of swordfish. Any additional management measures may push the remaining participants out of the fishery. The total number of permits (active and latent) in the fishery as of June 2014 is 65.


Figure 1. DGN swordfish landings and associated permits, 1996-2012

Year	No. Issued	Total No.	No. Latent	Swordfish Landings (mt)
1996	167	191	0	478.5
1997	120	176	0	445.1
1998	148	160	0	585.1
1999	136	99	37	407.7
2000	126	119	7	437
2001	113	109	4	241.9
2002	104	90	14	205.7
2003	99	74	25	136.7
2004	95	58	37	125.6
2005	91	49	42	151.4
2006	88	54	34	292.0
2007	86	59	27	337.3
2008	84	60	24	279.7
2009	83	59	24	174.4
2010	78	47	31	41.7
2011	82	43	39	77.4
2012	78	32	46	81.2
2013*	73	19	54	63.2

 Table 1. Annual swordfish landings and number of permits, 1996-2013 (CFIS), (preliminary data)

 updated June 22, 2014.

*2013 data are preliminary and subject to change

Constraining the fishery by reducing the number of permits

DGN fleet capacity could potentially be reduced through establishing a new control date and qualifying criteria as part of a transition from State to Federal/MSA permit administration; or a buyout of existing latent (and any willing active) permit holders under the current State system (as reported in <u>Agenda Item E.2.b, Supplemental NMFS - CDFW Report, Federal Management of the Large-Mesh Drift Gillnet Limited Entry California Swordfish Fishery: Issues and Solutions for Consideration).</u> The HMSMT is aware of on-

going discussions with members of the DGN fleet and representatives of The Nature Conservancy on a potential private-to-private buyout offer (e.g., permit owner paid to let the permit lapse).

Management under protected species take-caps

The HMSMT previously reported on the application of take caps and linkages to established levels of potential biological removal (PBR) triggers. National Marine Fisheries Service (NMFS) West Coast – Protected Resources Division (PRD) provided a report under this agenda item which discussed <u>PBR</u> projections for cetaceans. Table 2 below combines the information presented in the PRD report with additional PBR's established for other marine mammal species of concern.

Source: drait 2013 Hull 5 Block Assessment Report).				
Species	PBR			
Sperm Whale	1.5/3.2*			
Minke	2			
Short-finned Pilot Whale	4.6			
Humpback Whale	11			
Fin Whale	16			
Northern Right Whale	48			
Common dolphin	3,440			
Northern Elephant seal	4,382			
California sea lion	9,200			

 Table 2. PBR levels for marine mammals with recent recorded interactions with the DGN fishery (source: draft 2013 NMFS Stock Assessment Report).

*1.5 draft value reported in briefing book, 3.2 is the value under final review for 2014 NMFS Stock Assessment Report.

The federally-managed Hawaii shallow-set longline fishery (<u>Pelagics FMP</u>) operates with hard caps for leatherback and loggerhead sea turtles and requires 100 percent observer coverage, and this level of observer coverage has been funded by a Congressional appropriation. No hard caps for marine mammals currently exist in this fishery. The NMFS West Coast Region Sustainable Fisheries Division provided a report on the West Coast Region Fisheries Observer Program under <u>Agenda Item E.2.b</u>, describing goals and objectives of the Program and historic levels of observer coverage for the DGN fishery. Observer coverage during 2013-2014 season was 37 percent while the average coverage during the time period 2009/2010 to 2013/2014 was 19.4 percent (ranging from 12.0 percent - 37.4 percent).

Increasing current observer coverage to achieve 100 percent coverage will require additional dedicated funding. Given NMFS budgetary limitations, an industry funded program to increase observer coverage should be considered. Alternatively Electronic Monitoring (EM) systems could be considered as an alternative/supplement to on-board observers for monitoring bycatch in the DGN fishery. A DGN EM pilot project was completed in 2006/2007 and the results showed promise for use as a viable DGN bycatch monitoring system.

In addition, the choice to manage using hard caps will require NMFS to adopt a mechanism for closing the fishery in-season if caps are reached.

Additional Bycatch Mitigation Research

Regardless of the path forward chosen by the Council, the HMSMT supports continued research towards reducing bycatch in the DGN fishery, including support for the Dynamic Ocean Management (DOM) approach for Pacific fisheries presented under <u>Agenda Item K.1.c, Supplemental SWFSC PowerPoint 2</u>,

Lewison (San Diego State University) and Maxwell (Stanford University). This work is similar in nature to the TurtleWatch program in Hawaii and would provide fishers and/or managers with tools to minimize bycatch while maintaining fishing opportunity.

Phase out the fishery

The HMSMT feels that any selection of a phase out timeline should wait for results from on-going and planned alternative gear research to ensure that such a transition does not jeopardize the ability to maintain commercial volumes of swordfish landings to the west coast, including continued deliveries of swordfish from the Hawaii SSLL fishery.

New fisheries using alternative gears

As with EFPs, new fisheries using alternative gears would need to address several objectives. These objectives should include the following:

- New fisheries should be structured to achieve bycatch limits;
- Qualifications for participation and limited entry considerations should be addressed;
- Potential additional management measures to meet bycatch reduction objectives should be considered (e.g., time/area closures).

The HMSMT recommendations on proposed swordfish workshop

The HMSMT is aware of potential interest in convening a swordfish workshop with the goal of shaping a shared vision for the future of west coast swordfish fisheries. The HMSMT understands that the workshop would address the following objectives:

- 1. Bring public and private interests (e.g., industry, conservation community, state and Federal fishery managers, and Council representatives) together to develop the vision.
- 2. Strive for consensus in shaping the vision.
- 3. Define steps, actions, resources, and timelines needed to achieve the vision (i.e., strategies).
- 4. Prepare a report summarizing these strategies.
- 5. Present to the Council for consideration and adoption in a TBD 2015 meeting.

Goals and objectives of any future workshop need to clearly define action items and outcomes. The previous <u>NMFS-sponsored Swordfish Workshop</u> provided a wealth of information and brought together key stakeholders, however the HMSMT is unaware of any concrete progress on management challenges described at the Workshop. Potential topics and actionable items that could be addressed in a future workshop include:

- 1. Setting qualifying criteria to address latent permits and/or excess capacity in the DGN fishery.
- 2. Defining optimal capacity in future swordfish fisheries with management strategies tailored to that capacity (e.g., bycatch monitoring, market dynamics).
- 3. Consideration of MSC-certified type market strategies for target and marketable non-target species.
- 4. Crafting a plan for research and data needs to support conservation strategies (e.g., Dynamic Ocean Modeling approach) and continued alternative gear research (e.g., fully fleshed out Scientific Research Plan to guide information in support of future management decisions).

HMSMT Recommendations on DGN Transition Policy Objectives

The HMSMT would like to reiterate that selection of a phase out timeline should wait for results from ongoing and planned alternative gear research. If and/or when the Council moves to transition to alternative gears, a timeline should be developed taking into account the analytical and regulatory requirements. This timeline should offer as much notice as possible to the public and affected parties.

As the Council continues to deliberate on this topic, the HMSMT feels it is important to maintain a commercially viable flow of swordfish to the West Coast from existing domestic fisheries, including continued landings of swordfish by the Hawaii SSLL fleet.

In addition, the HMSMT would like to point out that establishing take caps would require a range of additional decisions including:

- methodology for establishing the cap (e.g. incidental take statements in the biological opinion, PBR for marine mammals);
- implementation mechanism (e.g. process for in-season regulatory management);
- monitoring and compliance levels;
- on-going evaluation of caps.

Summary of the attached report

Dr. Stephen Stohs of the SWFSC will present a summary of preliminary results and an update on timeline for completion of the report based on the additional information requests (i.e., finfish bycatch metrics), that were submitted to Ms. Gjersten at the May 2014 HMSMT meeting in Carlsbad, CA.

The HMSMT heard a report by Heidi Gjertsen and colleagues at their May 2014 meeting on the results of an analysis to compare operating characteristics of U.S. swordfish fisheries in terms of catch, bycatch and economic metrics. A revised version of the analysis with added metrics for commercial volume of landings was presented on the June 16, 2014 HMSMT Webinar. A description of methodology and preliminary results of the analysis are presented in an Appendix, including background, a description of included fisheries, methodology and preliminary results.

APPENDIX

Metrics to Compare Alternative Commercial Swordfish Fishing Methods:

Description of Methodology and Preliminary Results

1. Background

Due to concerns about the reduction in vessels and landings the CA drift gillnet (DGN) swordfish fishery and the continuing interest in reducing bycatch, a number of research projects on alternative gear options are ongoing, including those on deep-set buoy gear (DSBG) and deep-set longlines (DSLL). The goals are to find gear configurations that are effective at catching swordfish while maintaining low bycatch rates of turtles and other species. The premise behind both research projects is to exploit the habitat differences between turtles and swordfish and to target swordfish during the day while they are in deep water and the turtles are in surface waters. Currently swordfish are targeted at night when both they and the turtles are in surface waters. The development of an economically feasible/low bycatch gear for swordfish fishing along the U.S. West Coast was identified in the 2010 HMS SAFE Report as a high priority research need (PFMC 2011).

In addition to field trials to develop the methods and document catch, an important component of this research is to examine the two gears in the broader context of all U.S. gears used to target swordfish and in some cases tuna. Different elements of the project include 1) providing a more comprehensive view of bycatch in current and historic U.S. fisheries targeting primarily swordfish, 2) creating standardized metrics across fisheries to allow for more effective comparisons than just looking at bycatch numbers for individual fisheries in isolation, and 3) comparing economic measures across fisheries to examine the economic viability, and 4) measuring the potential for commercial volume of harvest. The specific focus is on U.S. fisheries with available high quality data on bycatch, landings, costs and revenues. This work expands on past efforts of Bartram and Kaneko to compare sea turtle bycatch to swordfish production by adding metrics for profitability and commercial volume and by expanding the scope of bycatch metrics to include landings of other species besides swordfish and bycatch of other protected species besides sea turtles.

2. Fisheries

All U.S. commercial fisheries that commonly catch swordfish as a primary or secondary target were included. While a comparison to international fisheries ultimately is of interest, few nations have observer programs of comparable quality and scope to those of the U.S. This first step makes use of the high quality bycatch and landings data for U.S. fisheries to make comparisons across commercial fishing methods, gear types, time periods and geographic regions.

Fisheries under comparison include CA DGN^S, California shallow-set longline (CA SSLL^S), California harpoon (CA HPN^S), Hawaii shallow-set longline (HI SSLL^S), Hawaii deep-set longline targeting tuna (HI DSLL^T), Atlantic pelagic longline (ATL LL^{S-T}), and Atlantic buoy (ATL BG^S). The superscript at the end indicates the main target of the fishery with S for swordfish and T for tuna. The HI DSLL^T fishery primarily targets tuna, but is included because of its relevance for considering deep-set longline for targeting swordfish. An additional comparison will include the portion of post-2004 HI SSLL^S effort with landings to California when the data become available.

Data used to compute metrics were selected for periods of time when the management regime relating either to gear or time area closures was consistent. For example, for the HI SSLL^S fishery, only data collected after 2004 when circle hooks and mackerel bait were required were used, and in the CA DGN^S fishery only the period after 2001 was included. By contrast, for the CA SSLL^S fishery, the only bycatch and landings

data collected were from when J-hooks and squid bait were used, before the fishery was closed due to not being authorized as part of the HMS FMP in 2004. Research conducted on post-2004 HI SSLL^S observer data subsequently showed this method had much higher sea turtle bycatch rates than if circle hooks and mackerel bait were used. Most programs have some observer coverage, though the percentage of observed effort varies across all fisheries.

3. Methods

Data Sources and Limitations

Data sources include landings receipt databases (e.g. PacFIN), observer data for catch and bycatch counts, and cost-earnings studies for costs and profits. Logbook data are used where needed to supplement observer and landings data, for instance to estimate blue shark catch and to quantify Hawaii non-swordfish catch.

The data at this stage of the project are subject to a number of limitations:

- Finfish bycatch observer data are not currently on hand for all fleets;
- Levels of observer coverage vary across fisheries from no coverage to full coverage;
- Profit and cost metrics may not be representative due to short data windows.

It should further be noted that populations of bycatch species and bycatch rates from different areas are not necessarily directly comparable. The composition and gear vulnerability of bycatch species can vary in the different regions fished. For example, leatherback populations are much more depleted in the Pacific than they are in the Atlantic. Also, the species composition where the HI DSLL^T fishery operates is different from that in the California Current. This highlights the need to conduct experimental fisheries when considering gear modifications or operating in new areas.

Bycatch Metrics

Three main categories of bycatch were considered (Table 3). The first is "high priority" protected species. These are species that are listed under the Endangered Species Act or a strategic stock under the Marine Mammal Protection Act (highlighted in dark grey Table 3). This is to highlight that some protected species are considered to be at higher risk than others (e.g. ESA listed or closer to PBR limits). The second category is other protected species (highlighted in light gray). The third category is non-protected species that are not marketable (where 20 percent or less are retained), are caught in relatively high numbers (the catch in number is 5 percent or greater), and have high dead discards (dead discard to live discard ratio greater than or equal to 0.25). Blue shark is included as an example which fits these criteria, but there may be additional species to include. Total protected species are also included, i.e. "high priority" plus "other."

The bycatch metrics for this HMSMT report are metric tons of swordfish landings and total marketable species landings per take for the three species categories described above (L/B ratios). The unit of bycatch is number of individuals taken. A "take" is defined as an interaction from observer data, regardless of whether the animal was released alive, injured or dead; the full report includes percentage released dead. The number of expected annual takes is estimated by the ratio of observed annual takes to annual effort subject to observer coverage (bycatch per unit of effort, or BPUE). The L/B ratio is calculated as the ratio of landings summed over included years to estimated takes summed over all included years. There are alternative methods for estimating "actual" takes, but as they are still under review, this simple, straightforward estimation method is used. Total marketable species landings are included since for many of the fisheries under comparison, landings of marketable species other than swordfish make up a significant portion of total landings and are economically important.

Economic Metrics

Economic metrics include measures of variable costs and profits, and revenues based on recent prices and market species landings standardized by metric tons of target catch for comparison to bycatch rates. All revenues, prices, and costs are converted to 2012 dollars using the U.S. Bureau of Economic Analysis Implicit Price Deflator for Gross Domestic Product.

Economic measures are summarized in Table 2. Data from cost-earnings studies are used to estimate the variable cost per metric ton of swordfish landings and total landings. Variable costs are those that vary by fishing trip and include fuel, oil, bait, ice, communications, provisions, gear, labor, and maintenance/repairs. Most cost-earnings studies are only conducted over one or two years; thus the period covered by cost data is generally shorter for the fisheries in the study than are the landings or observer data series, as indicated in Table 1. Some years may be more costly than others (e.g. high fuel prices) or fishing may be particularly bad, which adds a degree of uncertainty to comparisons across fisheries; however, the general economic results of interest can still be determined.

Landings receipts data and market prices (or revenue data, where available) from landing receipts data collection programs such as PacFIN are used to estimate the revenue per metric ton of swordfish landings and/or total landings for each fishery. Since revenue is equal to landings multiplied by price received, swordfish revenue per metric ton of swordfish landings should be equal to the price for a metric ton of swordfish which is also reported. Revenue from swordfish only and total revenue from all landings are presented. Subtracting costs from revenues provides estimates of the profit per metric ton of swordfish landings.

Commercial Volume Metrics

The Council asked the HMSMT to provide measures of commercial volume that could be used to compare commercial swordfish fishing methods. Four commercial volume metrics are provided, including average annual swordfish landings at the (1) fleet and (2) vessel levels, and average annual total landings (mt) at the (3) fleet and (4) vessel levels (Table 2).

4. Preliminary Results





Figure 1. Mt of all market species and swordfish landings per high priority protected species take

- 1. HI SSLL^S 2005-2012 showed significantly higher SWO production relative to bycatch compared to the pre-2005 CA SSLL^S fishery. This is likely linked to the mandated use of circle hooks and mackerel bait in 2004 which resulted in a ~90 percent decline in the bycatch of some turtles species in the HI SSLL^S fishery. Area fished or temporary conditions in the fishery that changed over time could have also affected this comparison of methods.
- 2. The CA DGN^S and HI SSLL^S fisheries produced the highest landings of swordfish per number of expected takes of high priority protected species among all gears under comparison (Figure 1) when comparing bycatch to swordfish landings.
- 3. The HI DSLL^T fishery had the highest amount of all market species landings per expected takes of high priority protected species, followed by CA DGN^S and HI SSLL^S.
- 4. The CA SSLL^S and the ATL SSLL^{S-T} had the lowest total landings per expected take of high priority species take. Note again that the CA SSLL^S operated prior to the gear requirements for use of circle hooks and mackerel bait.
- 5. CA swordfish fisheries compare favorably to the Atlantic swordfish-tuna fishery in terms of marketable species landings relative to bycatch of high priority protected species (Figure 1).
- 6. Comparisons of swordfish landings to bycatch may be misleadingly low for fisheries which land a significant amount of other market species besides swordfish (e.g. CA DGN^S, HI DSLL^T, ATL LL^{S-T}). Total landings are a more relevant measure for these fisheries.

7. Since blue sharks are a species with some commercial landings which are neither endangered nor protected, a more relevant metric for comparison to swordfish or market species landings would be based on weights rather than catch counts; this will be included in a later version of the report. Regardless, the buoy gear fishery (ATL BG^S) showed far larger amounts of commercial landings relative to blue shark catch (Table 1). Among other gears, swordfish and all market species landings per blue shark catch count was highest for drift gillnet indicating lower relative bycatch of blue sharks in this fishery.



Economic Metrics

Figure 2. Average annual profit (2012 \$1000s) per vessel

- 1. Longline fisheries produced higher profits than other methods under comparison (Figure 2).
- 2. Average price per pound of swordfish was higher for CA HPN^s and ATL BG^s than for the high volume methods.
- 3. The CA HPN^s fishery, over the years studied, is negative for the three profit metrics (Figure 2, Table 2). This may result from the short periods over which economic metrics were measured and that years with very low catch rates were included in this study (2008-2010). The oceanographic conditions during the time of year when harpooners typically operate were unusual over this time period. While the mt of swordfish landings over the same period for the CA DGN^s fishery was also lower than is typical, this fishery remained profitable over the same period indicating the added challenges of fishing for swordfish using a harpoon.

Commercial Volume Metrics



Figure 3. Average annual total landings (mt) per vessel during period

- 1. Longline fisheries provided by far the highest commercial volumes of production, both on a fleet and a vessel-level basis (Figure 3). CA DGN^S was an intermediate case, while CA HPN^S and ATL BG^S produced low commercial volumes.
- 2. The comparison of production volumes across methods is confounded by the areas where the fisheries operate, as longline fisheries typically occur on the high seas while the other three gear types operate inside the 200 mile EEZ limits.

General Conclusions

- 1. Buoy gear appears promising due to high market prices and lower costs, making it a low-bycatch gear that is economically viable. It could be a valuable component of a west coast swordfish fishery, though it is unlikely on its own to supply a large commercial volume of swordfish to the market. Additional research is on-going to determine the potential volume of fish that could be supplied using this method.
- 2. Harpoon is an attractive gear in terms of bycatch, but does not appear capable of supplying commercial volumes of swordfish. Also profitability is likely variable over time and unprofitable in some years with poor landings. The low swordfish catch per unit of effort and resulting high cost per volume of swordfish caught call into question the consistent economic viability of this method. Given economic viability on an intermittent basis, harpoon could be a useful part of a portfolio type approach, although not on a large scale and continuous basis.
- 3. The CA DGN^S fishery does not appear to be a high-bycatch fishery compared to Hawaii deep or shallow set longline or Atlantic longline (which is Marine Stewardship Council certified).
- 4. Pacific longline fisheries rank high in terms of volume of swordfish and all commercial species landings relative to high priority bycatch species, economic measures of revenue and profitability, and production of commercial volumes of landings.

Table 1. Bycatch Metrics

Fishery	CA DGN ^S	CA SSLL ^S	CA HPN ^S	HI SSLL ^S		ATL LL ^{S-T}	ATL BG ^S
Time period	2001-2012	2002-2004	1995-2011	2005-2012	2005-2012	2005-2012	2007-2012
				Loggerhead,	Leatherback,	Loggerhead,	
	Leatherback,			Green turtle,	Loggerhead,	Bottlenose	
	Loggerhead,			Olive ridley,	Green turtle,	dolphin,	
	Sperm whale,			Humpback	Olive ridley,	Humpback	
	Humpback	Leatherback,		whale, Pygmy	Sperm whale,	whale, Sperm	
High priority protected species taken during	whale, Gray	Loggerhead,		sperm whale,	False killer	whale, Killer	
period	whale	Olive ridley	None*	False killer	whale	whale	None
Mt of swordfish landings per number of							
expected takes of high priority protected							
species	61.4	6.7	N/A	63.4	3.9	2.6	N/A
Mt of all market species landings per							
number of expected takes of high priority							
protected species	118.0	7.2	N/A	81.3	147.1	5.4	N/A
Mt of swordfish landings per number of							
expected takes of other protected species	2.5	4.4	N/A	15.6	1.0	10.4	N/A
Mt of all market species landings per							
number of expected takes of other							
protected species	4.7	4.7	N/A	20.1	37.3	21.4	N/A
Mt of swordfish landings per number of							
expected takes of all protected species	2.4	2.7	N/A	12.5	0.8	2.1	N/A
Mt of all market species landings per							
number of expected takes of all protected							
species	4.6	2.9	N/A	16.1	29.7	4.3	N/A
Mt of swordfish landings per number of							
expected take of blue sharks	0.2	0.1	N/A	0.1	0.0	0.1	14.8
Mt of all market species landings per							
number of expected take of blue sharks	0.4	0.1	N/A	0.1	0.2	0.1	15.11

* The harpoon fishery has no observers because it is assumed to have no bycatch. All bycatch rates are presumed to be zero.

Table 2. Economic and Commercial Volume Metrics

Fishery	CA DGN ^S	CA SSLL ^S	CA HPN ^S	HI SSLL ^S	$HI DSLL^{T}$	ATL LL ^{S-T}	ATL BG ^S
	2001-2012,	1999-2004,	1995-2011;		2005-2012;		2007-2012;
	2008-2010	2001-2003	2008-2010	2005-2012;	2008-2009		2009-2012
Time period	for cost	for cost	for cost	2008 for cost	for cost	2005-2012	for cost
Swordfish revenue (2012 \$1000s) per mt of swordfish landings	5.9	4.5	10.5	5.1	5.9	6.9	8.1
Total revenue (2012 \$1000s) per mt of total landings	4.3	4.5	10.4	4.5	7.0	7.1	7.9
Variable cost (2012 \$1000s) per mt of total landings	2.1	2.6	36.6	2.8	4.1	4.5	5.0
Profit (2012 \$1000s) per mt of total landings	2.2	2.0	-26.3	1.7	2.8	2.6	2.9
Average annual fleetwide profit (2012 \$1000s)	1,221.3	3,384.5	-1,743.3	2,536.2	33,997.6	13,409.6	119.3
Average annual profit (2012 \$1000s) per vessel	31.3	95.3	-58.1	93.6	268.5	116.9	2.4
Average price per pound of swordfish over period (2012\$)	2.67	2.04	4.77	2.33	2.66	3.96	5.33 (2013)
Commercial Volume Metrics							
Time period	2001-2012	1999-2004	1995-2011	2005-2012	2005-2012	2005-2012	2007-2012
Average annual swordfish landings (mt) during period	265	1,496.70	65	1,184.40	229.7	2,489.30	93.51
Average annual swordfish landings (mt) per vessel during period	6.8	44.2	2.2	43.7	1.8	21.7	1.9
Average annual total landings (mt) during period	509.3	1,635.70	70.3	1,490.00	8,571.20	5,113.10	95.7
Average annual total landings (mt) per vessel during period	13	47.9	2.3	54.9	67.7	44.6	1.9

Table 3. List of protected species with takes from included fisheries

	ESA- listed	Strategic stock (Pacific)	Strategic stock (Atlantic)
Leatherback turtle	Y	N/A	N/A
Loggerhead turtle	Y	N/A	N/A
Green turtle	Y	N/A	N/A
Olive ridley turtle	Y	N/A	N/A
Unidentified hardshell turtle	Y	N/A	N/A
Striped dolphin	N	N	N
Bottlenose dolphin	N	N	Y
Spotted dolphin	N	N	N
Atlantic spotted dolphin	N	N	N
Pantropical spotted dolphin	N	N	N
Common dolphin	N	N	N
Short-beaked common dolphin	N	N	N
Long-beaked common dolphin	N	N	N
Risso's dolphin	N	N	N
Northern right whale dolphin	N	N	N
Pacific white-sided dolphin	N	N	N
Rough-toothed dolphin	N	N	N
Unidentified cetacean	N/A	N/A	N/A
Beaked whale	N	N	N
Blainville's beaked whale	N	N	N
Unidentifed beaked whale	N	N	N
Sperm whale	Y	Y	Y
Pilot whale	N	N	N
Short-finned pilot whale	N	N	N

Baleen whale	N	N	N
Humpback whale	Y	Y	Y
Bryde's whale	N	N	Y
Minke whale	N	N	N
Pygmy sperm whale	N	N	N
Gray whale	Y	N	N
Killer whale	Y	Y	N
False killer whale	Y	Y	N
Pygmy killer whale	N	N	N
Unidentified whale	N	N/A	N/A
California sea lion	N	N	Ν
Northern elephant seal	N	N	N
Unidentified marine mammal	N/A	N/A	N/A
Black-footed albatross	N	N/A	N/A
Laysan albatross	N	N/A	N/A
Northern fulmar	N	N/A	N/A
Sooty shearwater	N	N/A	N/A
Greater shearwater	N	N/A	N/A
Unidentified shearwater	N	N/A	N/A
Brown booby	N	N/A	N/A
Red footed booby	N	N/A	N/A
Cassin's auklet	N	N/A	N/A
Northern gannet	N	N/A	N/A
Gull	N	N/A	N/A
Laughing gull	N	N/A	N/A
Herring gull	N	N/A	N/A
Blackbacked gull	N	N/A	N/A

Brown Pelican	N	N/A	N/A
Unidentified seabird	Ν	N/A	N/A

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JOINT NATIONAL MARINE FISHERIES SERVICE AND CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE REPORT FEDERAL MANAGEMENT OF THE LARGE-MESH DRIFT GILLNET LIMITED ENTRY CALIFORNIA SWORDFISH FISHERY: ISSUES AND SOLUTIONS FOR CONSIDERATION

Mark Helvey¹ and Marci Yaremko² June 6, 2014

Background

At its March, 2014 meeting, the Pacific Fishery Management Council (Council) requested that NOAA's National Marine Fisheries Service (NMFS) provide a report to the Council at the June 2014 meeting "on issues and possible solutions to more comprehensively placing a transitioning swordfish fishery under MSA³ authority, including Federal permit options that would replace the current California State permit regime." The request results from the limited entry program for large-mesh drift gillnet⁴ (DGN) permits which continued to be issued under State of California authority even after the Highly Migratory Species (HMS) Fishery Management Plan (FMP) was completed in 2004. Otherwise, the FMP adopted all Federal conservation and management measures already in place under the Marine Mammal Protection Act, Endangered Species Act, and all State of California gear restrictions and time/area closures. The only exception to incorporating pre-existing regulations pertaining to this fishery was California's DGN limited entry permit program. The DGN regulations are codified at 50 CFR§ 660.713.

The commercial fishing gears allowed under the FMP and used in the fishery other than DGN are harpoon and hook and line (other than longline gear). Both the harpoon and hook and line gears operate under an existing open-access permit system also managed by the State of California. With the 2001 implementation of the Pacific Leatherback Conservation Area (PCLA) under federal ESA authority, a precipitous decline in DGN effort and participation resulted since most fishing times and areas where swordfish are most abundant became closed to fishing with DGN gear. However, the PCLA remains open to swordfish harvest with the other two legal gears, yet there has not been an increase in harvest or participation with either of these gears. Because there has been no reason for the HMSMT, NMFS or the Council to consider limited entry for these gears to date due to low catch and effort levels, the scope of this white paper only covers the current DGN thresher shark/swordfish fishery. In addition, while various other state restrictions on gear for HMS targeted fisheries exist in Oregon and Washington, they are also outside the scope of the paper and not discussed here.

Issues and Possible Solutions

Issue 1: State Management of DGN Permits: The State of California legislature established

¹ NMFS – West Coast Region-Sustainable Fisheries Division

² California Department of Fish and Wildlife

³ Magnuson-Stevens Fishery Conservation and Management Act

⁴ Large-mesh drift gillnets use 14 inch (35 cm) inch stretched mesh or greater.

the DGN fishery as a limited entry fishery in 1980, setting a maximum number of issued permits at 150. The number issued today is well below that maximum number and there is no risk the state will issue additional permits up to that number due to other rules on permit acquisitions and transfers. As mentioned above, the Council decided to leave the state's management of the limited entry permit system in place when the FMP was adopted, where it remains today.

California DGN fishery permits are issued to individual fishermen rather than vessels. Permit holders are required to be onboard during fishing operations, and fishermen are required to declare the fishing vessel being operated under the California DGN permit. The permit is only transferable under very restrictive conditions. To keep a permit active, current DGN permit holders are required to renew their permit from one consecutive year to the next but are not required to make landings as a basis for their renewal. In addition, a general resident or non-resident commercial fishing license, a general gill and trammel net permit, and a current vessel registration are required to catch and land fish caught using DGN gear. A gillnet logbook is also required to be kept onboard and completed and submitted to CDFW.

In addition to the California permits required for DGN fishermen, the HMS FMP also requires an HMS permit issued to vessels that recreationally or commercially fish for HMS offshore or land HMS in the States of California, Oregon, and Washington. Permits are issued by NMFS on a biennial term at a cost of \$30, and issued on a rolling basis throughout the year coinciding with the vessel owner's date of birth. There are no eligibility criteria except that the applicant is a U. S. citizen and has not triggered any of actions NOAA uses to sanction or deny a permit at subpart D of 15 CFR §904.301

HMS permits authorize the use of specific fishing gear on the vessel identified by the applicant. Vessels can list more than one gear. In 2013, there were 2,003 HMS permits and 94 of these had DGN gear listed as one or more of the authorized gears. In 2014, the number of valid HMS permits was 1,768 and 76 identified DGN as an authorized gear.

Solution: Should the Council decide to move forward with developing a limited entry program attached to federal HMS permits, an FMP amendment would be required. The HMS FMP notes that implementation of limited entry programs is considered a long-standing (fixed) element of the FMP; fixed elements require plan amendments. If and when the Council decided to move forward with an FMP amendment for a DGN limited entry program, and if NMFS approved the Council's recommendations, NMFS would promulgate new regulations to codify the new permit program. Once a federal limited entry program goes into effect, the State of California would be expected to repeal its large-mesh DGN limited entry permit program as it has with other permit requirements for federally-managed fisheries. In the event California did not repeal its permit program, the state program would most likely be pre-empted under the MSA, at least with respect to fishing in the EEZ.

Issue 2: Defining Excess Harvesting Capacity: In a 2008 report to Congress, NMFS defined "harvesting capacity" as the "maximum amount of fish that the fishing fleets could have reasonably expected to catch or land during the year under the normal and realistic operating conditions of each vessel in the fleet, fully utilizing the machinery and equipment in place, and

given the technology, the availability and skill of skippers and crew, the abundance of the stocks of fish, some or all fishery regulations, and other relevant constraints" (NMFS, 2008).

A concern about latent permits and excess capacity in general is that the issue represents available but unused opportunity for fishing vessels to participate in a fishery. If these latent permits were to suddenly start fishing, it certainly would put pressure on the swordfish population, but more importantly, may pose greater risks to protected species.

Fishing operations that potentially pose unacceptable threats to protected marine species may be subject to other environmental laws, such as the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA) (NMFS, 2008). Measures implemented pursuant to the ESA and MMPA can constrain or even prohibit certain fishing operations, despite what MSA might otherwise authorize. Under these circumstances, some level of fishing capacity⁵ must be deployed elsewhere, reduced, or deactivated (NMFS, 2008).

Excess capacity and overcapacity rates in and of themselves do not determine if capacity should be reduced, by how much to reduce it, how to reduce capacity, or the urgency for reducing it. However, excess harvesting capacity can aggravate certain undesirable management outcomes, including overfishing, poor economic performance, less viable fishing communities, high rates of bycatch, excessive harm to habitats, poor at-sea safety, and a regulatory process that is complicated, contentious and costly (NMFS, 2008).

Currently, the total number of DGN permits issued by the state of California is 72, with approximately around 25 of those actively fishing since 2010. Based on the level of declining DGN fishing activity over the last decade due largely to the constraints imposed by ESA and MMPA that prevent access to the most productive swordfish fishing times and areas, the ratio of active permits to total permits strongly suggests that today's DGN fishery exhibits excess capacity.

Solution: An estimate of excess capacity could be undertaken, taking into consideration the effects of the fishery on species protected under the ESA and MMPA. This analysis might allow use of bycatch management in manners similar to those employed for managing overfished species under the west coast limited entry groundfish program. In its 2008 report, NMFS noted that efforts to assess and address excess harvesting capacity were in most cases measured in terms of "inputs", such as the numbers and sizes of fishing vessels. The agency went on to note its preference to define and measure harvesting capacity in terms of "outputs," specifically, the potential harvest of a fishing vessel or fleet of vessels. However, for assessing capacity in the context of protected species or undesirable outputs (e.g., protected species bycatch), it is difficult to estimate expected performance of a fleet's bycatch when the number of limited entry vessels that will actively participate in the fishery is largely in question - similar to the challenges that come with projecting impacts from fisheries which are open-access rather than limited entry.

⁵ NMFS defines three measures or indicators of excess (i.e., too much) harvesting capacity: (1) excess capacity (the difference between harvesting capacity and actual harvests); (2) overcapacity (the difference between harvesting capacity and the commercial quota, or its proxy; and (3) over harvests (the difference between actual harvest and the commercial quota, or its proxy (NMFS, 2008).

A number of quantitative and qualitative methods have been developed in the economics literature that may be used to estimate various types of fishing capacity (Ward, 2000). In the past, NMFS has selected harvesting data envelopment analysis (DEA) as an appropriate qualitative analytical tool to generate estimates of capacity (NMFS, 2008). The Council may want to explore this option. Further, the Council may want to consider identifying optimal capacity as a range rather than a specific quantity (FAO, 1998). The estimate could be expressed, either in terms of the number of vessels that are issued permits to fish (i.e., should the number of permits be reduced), or if in effort, by permitted vessels might be constrained by other regulatory or non-regulatory means (i.e., limited by observer availability/observer lotteries, trip limits on catch or bycatch, time closures or constraints, fishing platoons, etc.).

Issue 3: Managing Excess Capacity: Only a moderate annual fee is required to renew the annual permit. Consequently, it may be reasonable to assume that many of the inactive or latent permits will remain as such simply because there has not been any economic incentive for those permit holders to become active, and meanwhile, there are no disincentives to not renew except for the \$462 annual fee.

Solutions: In terms of solutions for managing excess permit capacity, three major approaches exist: a permit management program, exclusive quota rights or rights-based management, and a buyback of permits and/or vessels or even the fishing gear.

- <u>Permit Management</u>: A permit management program would entail establishing a maximum number of permits in the fishery and at least two options are available for achieving this:
 - *Control Date*: Control dates are intended to discourage speculative entry into a fishery. Generally, a control date is a date after which those that enter a fishery may not be guaranteed access to that fishery if access to it is limited by regulation. The Council adopted a control date of March 9, 2000, in case a limited entry program was needed in the future under the HMS FMP. Considering that the control date is now almost 15 years old, the Council may be inclined to revise the date in order to better evaluate the level of potential participation in the DGN fishery and address any level of excess capacity. One option would be to set a new control date for potential use in determining historical or traditional participation in the DGN fishery based on the publication date of notification in the Federal Register of the change. Should the Council consider establishing a future date, the risk exists that permit holders previously not actively participating in the fishery could resume fishing activity.
 - *Qualifying Criteria*: The Council could also recommend a management regime such as documentation of landings or fishing effort for determining eligibility for participating in the federal limited access fishery. Qualifying criteria could include such approaches as the number of landings made within a particular timeframe, or within a given period, a number of years where landings were made. In other words, the Council may wish to maintain the control date but

essentially not use it, and instead develop qualifying criteria that would allow fishery participation after the original control date to be evaluated for purposes of permit qualification.

- <u>Rights-based Management</u>: Rights-based management or exclusive quota programs directly address the issue of individual incentives by allowing ownership of quota shares whether those are expressed in terms of catch or effort. Such a program would mostly likely be impractical for the DGN fishery because it depends on the availability and stock status of transboundary species subject to the fishing pressure of many fishing nations. Secondly, no Pacific quotas or allocations have been established for either catch or effort for Pacific swordfish, and the Council would most likely need to first act unilaterally in establishing a national quota in order to distribute quota pounds to owners. Because there has been no interest in the two Pacific tuna regional fisheries management organizations to actively co-manage the Pacific swordfish stock, it may be impractical for the Council to consider acting unilaterally.
- <u>Buyback Program</u>: This program involves the purchase of permits, vessels or gears for the purpose of permanently retiring capacity from a limited-entry fishery. With a buyback program, capacity reduction can be planned and targeted and the mechanism provides probably the most direct and explicit option for removing excess capacity. A buyback program can be designed to permanently remove only active permits, inactive permits, or both. Purchases of active permits could provide incentives for inactive permits to start fishing. Without the purchase of inactive permits or a change in the requirements of a federal limited entry program that removed inactive permits through other means of disqualification inactive permits can potentially start fishing at any time. A buyback program must also specify whether or not to retire a vessel from all U.S. fisheries, all west coast fisheries, or to allow it to continue fishing in another fishery.

The Pacific Council is familiar with buyback programs in its groundfish fishery. Two options exist for a buyback program:

- *Publicly and Privately Funded Buyback*: Section 312(b) of the MSA authorizes NMFS to conduct a fishing capacity reduction program if funds are provided and it is determined that such a program is necessary to prevent or end overfishing, rebuild stocks of fish, or achieve measurable or significant improvements in the conservation and management of the fishery. Most likely, a need to reduce capacity due to fishery risks identified under MMPA and/or ESA would meet this MSA standard, as described in Issue 1 above. Early East Coast buybacks tended to be publicly funded and later West Coast and Alaska programs were financed largely, although not entirely, by industry. However, with the current national budget situation, the trend from publicly funded and towards industry funded programs will probably continue.
- *Private Organization Funded Buyback*: Another approach is the private financing of a vessel or permit buyout from a conservation organization. With this approach, some vessel owners would agree to sell their fishing vessels or permits, and the private entity, agrees to buy and possibly retire those fishing vessels or permits. The Nature Conservancy's (TNC) private purchase of west coast

groundfish permits is an example of private involvement in a fishery.

With regard to the DGN fishery, TNC has conducted exploratory discussions with members of the DGN fleet in determining interest in this approach. An important distinction from the groundfish buyback is that with DGN, TNC is not able to become a permit holder, but would essentially pay latent permit holders to not renew their permits and thereby let them lapse. Additionally, the focus would be on inactive permits that are not making landings and therefore impacts to infrastructure or communities reliant on fishery activity would be unlikely to occur. Based on the current national budget situation, a private entity buyout may be a more practical option moving forward.

Issue 4. Timing in Efforts to Reduce Excessive Capacity: Assuming the Council decides to recommend establishing a federal limited entry permit program, the timing of addressing excess capacity with this program could have considerable impact to its work schedule. That is, the question arises whether a reduction in excessive capacity within a federal permit system is a priority for the Council, considering others.

Solution: Because the workload associated with reducing excess capacity may be high, the Council may want to consider supporting efforts for capacity reduction prior to initiating the FMP process to establish a federal limited entry DGN permit program. The permit management, rights-based management and public buyback options most likely could not be undertaken at the federal level as long as the permit program remained under State of California control. Alternatively, a non-profit entity buyback could take place while the permits were still under state control as the transaction would be considered a private party transaction conducted outside of the permit administration process. This approach would necessitate consideration as to timing of when an FMP amendment to establish federal DGN permits might best proceed.

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May 23, 2014

Ms. Dorothy Lowman Pacific Fishery Management Council, Chair 7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220-1384

pfmc.comments@noaa.gov

RE: Agenda Item E.2- Highly Migratory Species, Drift Gillnet Transition Issues

Dear Ms. Lowman and Council members:

The recent freeing of two whales from crab traps only servers to remind us the important of careful management of the fishing gear we use, as so many other species can be affected in unintended ways. The gill nets create a far more severe environmental impact on many many species of fish than crab pots, but the issue is the same. We can ill afford this collateral damage.

I am the CEO of a company that makes lighting equipment for divers. Our business, like those of the fishing industry, is dependent on healthy oceans. We need to harness technology to dramatically reduce the collateral damage done by gill nets on our oceans. Waste is not acceptable in any business, including the fishing business. The oceans are a resource we all depend on and we need to harvest its bounty responsibly.

I am writing in strong support of the Council's stated "goal of developing a comprehensive plan to transition the current drift gillnet fishery to a fishery utilizing a suite of more environmentally and economically sustainable gear types that can effectively target the healthy West Coast swordfish stock operating under MSA authority" (March 2014 PFMC Decision Document). Based on this public commitment, I urge the Council at its upcoming June 2014 meeting to develop a plan that rapidly transitions the California swordfish fishery away from drift gillnets altogether by establishing a time-certain end date for this gear type, and revitalizing the fishery to only allow the use of clean, and sustainable fishing methods. In this time of ecosystem-based fishery management and sustainably caught seafood, drift gillnets should be prohibited and replaced with gears that are proven to capture swordfish while avoiding bycatch. Harpoons and hand held hook and line are clean and legal gear types that should be promoted by the Pacific Fishery Management Council and experimental gears like buoy gear seem to be a promising alternative on the near horizon. Simply put, a definite sunset period after which drift gillnets are prohibited will both provide incentives to test and innovate cleaner gear types while providing the public with the assurance that the bycatch problem is being addressed.

California's drift gillnet fishery remains among the dirtiest and most wasteful in the world. According to National Marine Fisheries Service observer data (May 2007 to January 2013)¹, 61% of all marine life caught in this fishery was discarded. Furthermore, on average over one hundred marine mammals and thousands of sharks and other unwanted fish are killed each year

¹http://www.westcoast.fisheries.noaa.gov/fisheries/wc_observer_programs/sw_observer_program_info/data_summ_report_sw_observer_fish.html

due to the indiscriminate nature of these mile-long nets. Protected species taken in these deadly nets include endangered leatherback sea turtles, endangered sperm whales, endangered humpback whales, gray whales, minke whales, bottlenose dolphins, long-beaked common dolphins, short-beaked common dolphins, northern right whale dolphins, Pacific white-sided dolphins, California sea lions, Northern elephant seals, Risso's dolphins and short-finned pilot whales. In addition, this fishery inadvertently catches, kills and discards iconic game fish such as striped marlin and blue marlin, impacting valuable California recreational fishing opportunities.

The California drift gillnet swordfish and thresher shark fishery is a failed thirty year experiment. Fraught with concerns over bycatch since this gear was first allowed off California in 1980, the fishery has failed to adequately address the wide suite of bycatch problems for dozens of iconic marine species and current bycatch remains grossly unacceptable. Other fishing gears are available to catch swordfish and participation by fishermen in the drift gillnet fishery is now at a historic low--it is time to revitalize the swordfish fishery by eliminating drift gillnets and replacing them with cleaner gear types. However, we do not support the authorization or experimentation with pelagic longlines which are currently prohibited, as this gear type also has unacceptably high levels of bycatch.

Finally, it is important for NMFS to finalize rulemaking on importation standards to level the playing field and ensure that countries that export swordfish to the U.S. meet or exceed domestic bycatch standards. This should be a top priority for NMFS and the Council as part of the overall transition plan for drift gillnets.

For the benefit of healthy oceans and coastal economies that rely on robust marine life populations and California's reputation as a producer of sustainable seafood, I urge you to initiate a transition plan that rapidly eliminates drift gillnets off the U.S. West Coast with a timecertain prohibition on drift gillnets in the Highly Migratory Species Fishery Management Plan.

Thank you for your time and consideration.

Vanie V.

Daniel T. Emerson CEO Light & Motion Industries 711 Neeson Road Marina, CA 93923 demerson@lightandmotion.com



May 23, 2014

Ms. Dorothy Lowman, Chair Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220

RE: Agenda Item E.2 – Drift Gillnet Transition

Dear Chair Lowman and Council Members:

Oceana, Center for Biological Diversity and Turtle Island Restoration Network are writing to reiterate our request that the Pacific Fishery Management Council amend the Highly Migratory Species Fishery Management Plan (HMS FMP) to prohibit large mesh drift gillnets off the U.S. West Coast. We applaud the Council for moving this issue forward this past March, "toward a goal of developing a comprehensive plan to transition the current drift gillnet fishery to a fishery utilizing a suite of more environmentally and economically sustainable gear types that can effectively target the healthy West Coast swordfish stock operating under MSA authority."¹ The Council and the public have arrived on this goal after considering, and rejecting, multiple proposals to allow the use of drift gillnets in the Pacific Leatherback Conservation Area² and witnessing continued and persistent bycatch and protected marine species issues associated with this fishery throughout its history.

As the Council moves forward with this drift gillnet gear transition, several important issues must be decided, including the timeline for the transition and conservation and management measures during the transition period. During the development of this transition plan, we request the Council:

- 1. Set a one to three year timeline for prohibiting large mesh drift gillnets in the HMS FMP to ensure there is an active and serious incentive for current fishermen to participate in the transition.
- 2. Require 100% observer coverage on all drift gillnet vessels.
- 3. Implement hard caps on all marine mammal takes at 10% Potential Biological Removal (PBR), which if reached, result in closure of the fishery.
- 4. Implement a hard cap of "one" take for threatened or endangered species (e.g. leatherback sea turtle, loggerhead sea turtle, sperm whale, humpback whale), which if reached, result in closure of the fishery.

¹ March 2014 Pacific Fishery Management Council Meeting Decision Summary Document. http://www.pcouncil.org/wp-content/uploads/0314decisions.pdf Accessed on 15 March 2014.

² In June 2007 NMFS disapproved an experimental fishing permit that would have allowed drift gillnets into the PLCA due to concerns over the take of leatherback sea turtles. In March 2013 and March 2014 the PFMC rejected multiple proposals to allow drift gillnets into the PLCA. Further, in April 2009, due to bycatch concerns the Council rejected a proposal to allow for a U.S. West Coast based high seas pelagic longline fishery.

- 5. Consider bycatch caps for individual fish species or assemblages (e.g. non-target sharks).
- 6. Maintain all current conservation areas and gear restrictions designed to minimize the bycatch of marine mammals and sea turtles, specifically including the Pacific Leatherback Conservation Area.
- 7. Maintain the current prohibition on pelagic longline gear in the FMP for the U.S. West Coast EEZ and adjacent High Seas, including for experimental purposes.

We encourage the Council to develop a plan that allows for a sustainable, clean swordfish fishery. We know that swordfish can be harvested with low to zero bycatch using existing and legal harpoon and hand-held hook and line gear, and buoy gear seems to be a promising alternative on the near horizon. Harpoon gear and hook and line are in fact clean commercial gear types that have a proven history on the U.S. West Coast and in other regions. Buoy gear is proven in the U.S. East Coast swordfish fishery.

An 'optimum' West Coast swordfish fishery, that provides for the greatest overall benefit to the nation, is one that does not kill marine mammals or sea turtles and one that avoids the bycatch of other ecologically and economically important fishes. An optimum West Coast swordfish fishery does not include drift gillnets. Rather than using foreign swordfish fisheries as an excuse for inaction, NMFS and the PFMC have the opportunity now to create a new model for swordfish production using wholly different methods proven to be clean.

Bycatch: an unsolved problem with drift gillnets

The California Current, sometimes called the "Blue Serengeti,"³ is a migratory destination for high numbers of animals that come to feed in these rich productive waters. Drift gillnets, however, continue to be a major threat to ocean wildlife migrating and feeding off our coast including threatened and endangered species like sperm whales, humpback whales, and leatherback sea turtles. Fishery data collected by onboard observers from May 2007 to January 2013 proves that drift gillnets continue to discard approximately 61% of all animals caught including sharks, ocean sun fish, bill fish, and others.⁴

Recognizing the environmental costs associated with the fishery, stakeholders have come together over the past three decades to try and solve the numerous bycatch problems inherent to this gear. Despite gear restrictions, time and area closures, and declining participation in this fishery, drift gillnets continue to kill roughly 100 marine mammals each year, plus thousands of sharks, rays and other fishes.⁵ While onboard observers note that some of the discarded fish are released alive, they are still "bycatch."⁶ There are few studies on post-release survivorship for fish caught with drift

³Dybas, C.L. Into the Blue Serengeti: The migrations of Pacific predators resemble those of African wildlife. <u>http://www.naturalhistorymag.com/features/242338/into-the-blue-serengeti</u> (last accessed 19 May 2014).

⁴ National Oceanic Atmospheric Administration (NOAA) Observer Program, total discard rate (number of animals) from May 2007 to January 2013.

http://www.westcoast.fisheries.noaa.gov/fisheries/wc_observer_programs/sw_observer_program_info/data_summ_repo rt_sw_observer_fish.html (last accessed 21 March 2014). ⁵ Id.

⁶ The federal Magnuson Stevens Fishery Conservation and Management Act defines commercial fisheries bycatch as any fish "which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards." 16 U.S.C. § 1802(3)(2). The State of California has an even broader definition of

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gillnet gear and subsequently discarded. Post-release mortality is a growing scientific subject and an area of specific concern, as even though an observer may note a fish was released "alive", it may not be alive for long. Many fish thought to be alive suffer prolonged physiological effects and/or physical trauma, resulting in subsequent post-release mortality.⁷ Until definitive studies of post-release survival on a species and gear type basis are available, all discarded animals should be assumed dead for management purposes (as most are in the groundfish trawl fishery), and this bycatch should be minimized.



Figure 1. A Risso's dolphin (left) and short beaked common dolphin (right) killed in California drift gillnets. Photos: NOAA (2011, 2002)

Ultimately, there is no scientific, technical, or management fix for this fundamentally destructive and wasteful fishing practice. Drift gillnets indiscriminately kill ocean fish and wildlife—no matter where, when, or with what modifications, including acoustic pingers. As long as this gear is allowed, marine mammals, sea turtles, and countless fish species will continue to be incidentally caught and killed in this fishery off California. If the bycatch in this fishery comprised only one or two species, it might be reasonable to use satellite technology and coordinated communications to possibly help fishermen avoid some endangered species takes. However, bycatch in this fishery impacts dozens of different species, so no matter what changes and improvements might be made, drift gillnets in the open ocean will never be a clean, selective method for catching swordfish.

In addition to needlessly killing dolphins, whales, seals, and sea lions each year, drift gillnets are a cruel and inhumane way to kill animals. Some large whales actually break free from the nets but remain entangled with the net wrapped around their flukes and flippers. The gear adds substantial drag, which depletes energy reserves, and in most cases the animal ultimately dies.⁸ Fatally

bycatch, stating: "Bycatch' means fish or other marine life that are taken in a fishery but which are not the target of the fishery. 'Bycatch' includes discards" (FGC Section 90.5).

⁷ Hutchinson, M. Shark bycatch and post-release survival. International Seafood Sustainability Foundation. (accessed from: <u>http://iss-foundation.org/2014/02/10/shark-bycatch-and-post-release-survival/</u> 9 February 2014). And G.B.

Skomal. 2007. Evaluating the physiological and physical consequences of capture on post-release survivorship in large pelagic fishes. Fisheries Management and Ecology. 14, 81-89.

⁸ Moore, M. 2014. Food for Thought: How we all kill whales. ICES Journal of Marine Science. doi:10.1093/icesjms/fsu008 (accessed from <u>http://icesjms.oxfordjournals.org/</u> 4 March 2014).

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entangled whales can take, on average, six months to die as they succumb to disease, infection or starvation.⁹



Figure 2. A gray whale (left) and elephant seal (right) killed in California drift gillnets. Photo: NOAA (2013, 2002)

Some animals that break free with netting wrapped around their necks become increasingly constricted by the entanglement. As the animal grows, the net cuts into the animals' tissue and it slowly lacerates the trachea. Wherever this gear is used, there is a substantial risk of unintended but inevitable whale, dolphin, seal, and sea lion mortality, which is of concern to both welfare and population sustainability. The extent of these impacts is not recorded in the NOAA bycatch estimates, as those estimates only count the animals still entangled in the nets when retrieved and counted by observers. Anecdotal reports indicate this delayed mortality problem is occurring in this fishery.¹⁰

In 2010, two endangered sperm whales were observed in drift gillnets. One was dead and the other broke away seriously injured and entangled in a drift gillnet, and the National Marine Fisheries Service (NMFS) assumed it was not likely to survive given its serious injuries.¹¹ Given observer coverage levels, the two observed entanglements equates to an estimate that 16 sperm whales were taken by the fishery in 2010.¹² NMFS determined that, based on the most recent five year average, 3.2 sperms whales are seriously injured or killed in this fishery per year, which is greater than 213% of the Potential Biological Removal (PBR) level of 1.5 for the endangered sperm whale population.¹³ PBR, defined by the Marine Mammal Protection Act (MMPA) is "the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population."¹⁴ In other

⁹ Moore, M. J., Bogomolni, A., Bowman, R., Hamilton, P., Harry, C., Knowlton, A., Landry, S., et al. 2006. Fatally entangled right whales can die extremely slowly. Oceans'06 MTS/IEEE–Boston, Massachusetts, September 18–21, 2006. <u>https://darchive.mblwhoilibrary.org/bitstream/handle/1912/1505/?sequence=1</u> : 3 pp (last accessed 21 March 2014).

¹⁰ http://www.petethomasoutdoors.com/2012/03/another-entangled-gray-whale-discovered-off-orange-county.html

¹¹ Carretta, J.V., and L. Enriquez. 2012. Marine Mammal and seabird bycatch in California gillnet fisheries in 2010. NOAA Fisheries. Administrative Report LJ-12-01.

 $^{^{12}}$ *Id*.

¹³ 78 Fed. Reg. 23708, 23712 (April 22, 2013).

¹⁴ 16. U.S.C. § 1362 (20).

Ms. Dorothy Lowman Page 5 of 10

words, additional sperm whale takes like these will stop recovery of this endangered population of whales. While NMFS will be updating the sperm whale assessment and is considering average sperm whale takes over a longer time period, current population estimates remain the best available science for management.

As a result of the endangered sperm whale mortalities, emergency regulations were imposed on the California drift gillnet fishery for the 2013/2014 season to allow it to legally operate. Those emergency regulations expired in January 2014 and they were recently reinstated in May 2014. We support these regulations designed to protect sperm whales, however, the need for emergency measures like these is an example of the on-going challenges of managing a fishery that uses indiscriminate gear that takes and kills endangered and protected marine life. It is only a matter of time before the next endangered marine mammal or sea turtle is entangled in these driftnets.

Even if marine mammal takes could be kept just shy of PBR levels, that would be the wrong goal. NMFS and the PFMC must strive to eliminate mortality and serious injury. In fact, the MMPA established a "zero mortality rate goal" where commercial fisheries are required to reduce incidental mortality and serious injury of marine mammals to insignificant levels approaching zero mortality.¹⁵ This is why we support a hard cap on marine mammal takes of no more than 10% PBR.

As a result of the MMPA consumers can buy "dolphin safe tuna," but after over 40 years since the passage of the Act, we don't have dolphin safe swordfish in the drift gillnet fishery off California. The MMPA requires federal fishery managers to issue an annual list of fisheries that take marine mammals and categorize them based on their level of take. The California Drift Gillnet Fishery for swordfish and thresher shark has been ranked a Category I fishery (the most serious level for "frequent incidental mortality or serious injury of marine mammals") 15 out of the past 19 years.¹⁶ It is currently the only Category I fishery on the U.S. West Coast and the only time it was ever downgraded to a Category III fishery was in 2011 – the year after an estimated 16 sperm whales were killed in these nets.

Entanglement of endangered loggerhead sea turtles, endangered leatherback sea turtles, endangered sperm whales and other marine mammals has been driving crisis-based management approaches to the drift gillnet fishery for decades. One could argue the fishery has been in a state of crisis management since the moment it was first authorized in the early 1980s. The prohibition on this fishery is long overdue and the time has come to say enough is enough. We don't need to wait for the next endangered species to be killed, or for hundreds more dolphins, sea lions or sharks to be killed or maimed before finding that this fishery is not in the best interest of the West Coast states or to the Nation. Clearly there are other gears that can be used to catch swordfish that don't come with this level of collateral damage.

¹⁵ 16.U.S.C. § 1387 (b)(1)

¹⁶ NOAA Fisheries Office of Protected Resources. List of Fisheries. (<u>http://www.nmfs.noaa.gov/pr/interactions/lof/</u>)



Figure 3. Total estimated number of marine mammals caught in the California Drift Gillnet Fishery May 2007 to January 2013 (Data from the NOAA Observer Program)¹⁷

Support existing clean gears: harpoon and hand-held hook and line

The harpoon fishery for swordfish is the oldest swordfish fishery on the West Coast and at its peak in 1978, prior the authorization of drift gillnets, the harpoon fishery landed 1,171 metric tons of swordfish.¹⁸ This is comparable to annual swordfish catches by drift gillnets in the 1980s and far greater than any annual swordfish catches with driftnets in the past 18 years. By comparison, in 2013, the drift gillnet swordfish fishery landed approximately 61 metric tons. The biggest disincentive to participating in the harpoon fishery after 1980 was the authorization of more efficient, yet indiscriminate, drift gillnets. A ban on drift gillnets with a transfer to harpoon gear or other authorized experimental gear could spur participation in the existing harpoon fishery and possibly alternative gears as well. While we have heard concerns about the economic viability of harpooning, the fishery has been viable in the past and could be again. In fact, in the 1970s, the State of California had concerns that harpoons were TOO effective at catching swordfish and so the state established measures to reduce harpoon efficiency, such as banning spotter planes. That ban has since been lifted. With focused Council and NMFS attention to address any remaining barriers and consideration of new innovative ways to make harpooning more viable (such as sharing spotter planes across multiple harpoon vessels), it is certainly possible to increase landings of swordfish with harpoons in a profitable manner.

Less discussed so far in this process is the hand-held hook and line fishery for swordfish (aka surface hook and line, including rod and reel, pole and line). From 2003-2011 landings were less than 0.5 metric tons per year; but in 2012, landings by this gear type increased to 10.67 metric

¹⁷ NOAA Observer Program, *supra note* 4

¹⁸ Coan, A.L., M. Vojkovich, D. Prescott. 1998. The California Harpoon Fishery for Swordfish, *Xiphias gladius*. NOAA Technical Report NMFS 142.

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tons.¹⁹ As part of implementing the California Sustainable Seafood Initiative, the California Ocean Science Trust prepared a rapid assessment of the sustainability of the southern California swordfish harpoon fishery and found the harpoon fishery may be a good candidate for certification due to is low ecological impacts and that the hand-held hook and line fishery may also deserve close attention with this recent resurgence in landings.²⁰ Harpoon caught swordfish command a higher price per pound with drift gillnet caught swordfish averaging \$4.34 per pound in 2013 and harpoon caught swordfish averaging \$8.93 per pound.²¹

We highlight these gears because they are demonstrated clean and sustainable methods for catching swordfish, as opposed to drift gillnets. NMFS and the PFMC should consider these gears as part of the portfolio of a sustainable West Coast swordfish fishery. Instead of discounting proven clean gear types, efforts should be made to revitalize these gear types, innovate, and stimulate their use including sustainable seafood certification programs, and technological assistance in locating swordfish (e.g. drones, pooled spotter plane resources).

Pelagic longlines are a dead-end solution

With respect to alternative gears, our organizations support the existing prohibition on pelagic longline gear off the U.S. West Coast and we would oppose proposals to conduct further experiments or authorize this gear type. Because of the frequent take and serious injury of marine mammals, NMFS lists the California drift gillnet fishery as a "Category I" fishery as required by the Marine Mammal Protection Act. The only other Category I fishery in the Pacific is the Hawaii-based deep-set longline fishery,²² and based on current experimental trials with deep set gear off the West Coast and the litany of bycatch associated with this gear, no data has been presented to date that this gear type can be used to selectively target swordfish. Rather than waste valuable time and resources and kill more protected species by trying to improve inherently unsustainable fishing practices like drift gillnets or pelagic longlines, swordfish fishery revitalization efforts must focus on proven clean gears and experiments with new methods.

No evidence for a market "transfer effect"

Proponents of the drift gillnet fishery promote the "market transfer effect" theory to rationalize the killing of iconic marine life in the California Current ecosystem. The transfer effect argument - which suggests that regional regulations to protect sea turtles result in increasing foreign swordfish catch, with overall higher impacts to turtle populations – has several flaws. First, no studies or data have provided sufficient evidence to support a transfer effect argument in the context of the West Coast swordfish fishery. Second, the concept fails to account for the fact that other countries will continue to catch swordfish and find markets despite what the U.S. does. This is a key point. In understanding whether a reduction in California drift gillnet swordfish landings could lead to

¹⁹ *Rapid Assessments for Selected California Fisheries*. California Ocean Science Trust. Oakland, California, USA. August 2013. <u>http://opc.ca.gov/webmaster/ftp/project_pages/Rapid%20Assessments/Swordfish.pdf</u> Accessed on 16 March 2014.

²⁰ Id.

²¹ CDFW 2014. 2014 California Legislative Fisheries Forum. Annual Marine Fisheries Report. California Department of Fish and Wildlife Marine Region. April 2014.

²² 79 Fed Reg. 14448, 14426 (March 14, 2014), 2014 List of Fisheries.

Ms. Dorothy Lowman Page 8 of 10

increased turtle, whale, or other bycatch in other countries, it must be shown that decreases in California swordfish catch lead to increased catches in other areas THAT WOULD NOT HAVE OCCURRED OTHERWISE. Third, the theory fails to recognize that allowing more sea turtles to be killed in the U.S. will only <u>add</u> to global impacts.

The U.S. already has mechanisms in place that could influence destructive fishing practices elsewhere. The Marine Mammal Protection Act directs NMFS to "ban the importation of commercial fish or fish products that have been caught with commercial fishing technology which results in the incidental kill or incidental serious injury of marine mammals in excess of United States standards." 16 U.S.C. § 1371(a)(2). In addition, the Moratorium Protection Act provisions as adopted in the 2006 Magnuson-Stevens Reauthorization Act (16 U.S.C. § 1826k) call on the Secretary to identify nations taking protected living marine resources (e.g. turtles) as bycatch when fishing activities are not being managed consistent with U.S. standards, and if a nation fails to take appropriate action to address the bycatch activities, the U.S. can ban fish imports or port entry from those nations.²³ In other words, the appropriate course of action to control for any transfer effects is to restrict trade with nations not meeting U.S. standards to protect sea turtles and marine mammals.

Federalizing the State of California limited entry permit program does not resolve conservation concerns

When the HMS FMP was first implemented in 2004 it was designed to recognize state restrictions applicable to vessels operating from a state's ports, including state participation restrictions and area restrictions. The HMS FMP adopted "all state regulations for swordfish/shark drift gillnet fishing under Magnuson-Stevens authority except limited entry programs (which will remain under states' authority)."²⁴ Thus, drift gillnet gear is an allowable gear type under the HMS FMP, but the FMP specifically carves out permitting authority and leaves that to the states.

In March 2014, the Council started a discussion of establishing a federal limited entry permit system, theoretically transferring active participants in the California limited entry permit system to a federal limited entry permit program. If anything, this seems unnecessary if the Council is working to phase out and close the drift gillnet fishery. The Council would save money, time and effort by simply committing to a timeline to amend the HMS FMP to prohibit the gear type. This can be done regardless of a state or federal limited entry program. In fact, the HMS FMP states that "existing legal gears may be prohibited using the framework adjustment procedures."²⁵ The California state government and the people of California have a history of involvement and concern regarding this fishery and that should not be diminished by removing state permitting authority.

²³ E.g. In January 2013 NMFS formally "identified" Mexico for the bycatch of North Pacific loggerheads in its report to Congress on IUU fishing and bycatch of protected living marine resources. See: http://www.nmfs.noaa.gov/ia/slider stories/2013/01/msra 2013 report.html

²⁴ Pacific Fishery Management Council. 2011. Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (as amended through amendment 2). PFMC (<u>www.pcouncil.org</u>). July 2011. Pg. 69.

²⁵ PFMC HMS FMP (July 2011), at 50 and 57.

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Conclusion

Oceana, CBD and TIRN encourage the PFMC and NMFS to continue to explore alternatives to drift gillnets. We are opposed to gear types that have demonstrated high levels of bycatch and gear types that kill endangered and protected marine life. We are opposed to the continued use of drift gillnets, as well as pelagic longline gear which is currently prohibited off the U.S. West Coast. We are encouraged by ongoing experimental trials with deep-set buoy gear and we request the PFMC and NMFS focus on incentives for increasing participation and reducing costs in the existing harpoon fishery for swordfish.

The PFMC and NMFS are decades late in banning mile-long pelagic drift gillnets. While some continue to promote the use of driftnets in our "Blue Serengeti," NMFS is currently working with Morocco to transition swordfish drift gillnet fishermen to buoy gear, gillnets are banned on the Mediterranean Sea, and the international community has banned high seas driftnets for over 20 years.²⁶ In 1990, Californians passed Proposition 132 banning drift gillnets in state waters due to bycatch concerns. In 1999 NMFS prohibited the use of driftnet gear in the North Atlantic swordfish fishery with the purpose to specifically "reduce bycatch of protected resources in a manner that maximizes the benefit to the Nation."²⁷ Closer to home, the State of Washington prohibits this gear type for targeting swordfish and thresher sharks, and in 2009 the Oregon Fish and Wildlife Commission revoked all state drift gillnet permits.

In conclusion, we request that the PFMC amend the HMS FMP to prohibit the use of large mesh drift gillnets. Further, we request the Council set a one to three year transition period for phasing and out closing drift gillnets by establishing a definite sunset date at an upcoming meeting. A time-certain end to the use of drift gillnets is necessary both to create appropriate incentives and transition plans, as well as demonstrate to the public that the Council is following through on its stated commitment made in March 2014. During this transition period is imperative that observer coverage be increased to 100% and hard bycatch caps be set on the take of all protected marine life.

Thank you for your time and consideration of these comments.

Sincerely,

Ben Enticknap Pacific Campaign Manager Oceana

attionie

Catherine W. Kilduff, M.S., J.D. Staff Attorney Center for Biological Diversity

Teri Shore Program Director Turtle Island Restoration Network

cc: Mr. William Stelle, Regional Administrator, NOAA Fisheries West Coast Region

att: Map of observed protected marine life takes (Figure 4)

²⁶ NMFS. 2012 Report to Congress. U.S. Actions Taken on Foreign Large-Seas High Seas Driftnet Fishing. Available at, <u>http://www.nmfs.noaa.gov/ia/iuu/driftnet_reports/2012_driftnet_report.pdf</u>

²⁷ 64 Fed. Reg. 4055, Jan. 27, 1999



Figure 4. Locations of observed seabird, marine mammal and sea turtle takes in the drift gillnet fishery plus the Pacific Leatherback Conservation Area and leatherback sea turtle critical habitat.
May 23, 2014

WILDAID

Ms. Dorothy Lowman Pacific Fishery Management Council, Chair 7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220-1384

pfmc.comments@noaa.gov

RE: Agenda Item E.2- Highly Migratory Species, Drift Gillnet Transition Issues

Dear Ms. Lowman and Council members:

I am writing in strong support of the Council's stated "goal of developing a comprehensive plan to transition the current drift gillnet fishery to a fishery utilizing a suite of more environmentally and economically sustainable gear types that can effectively target the healthy West Coast swordfish stock operating under MSA authority" (March 2014 PFMC Decision Document). Based on this public commitment, I urge the Council at its upcoming June 2014 meeting to develop a plan that rapidly transitions the California swordfish fishery away from drift gillnets altogether by establishing a time-certain end date for this gear type, and revitalizing the fishery to only allow the use of clean, and sustainable fishing methods. In this time of ecosystem-based fishery management and sustainably caught seafood, drift gillnets should be prohibited and replaced with gears that are proven to capture swordfish while avoiding bycatch. Harpoons and handheld hook and line are clean and legal gear types that should be promoted by the Pacific Fishery Management Council and experimental gears like buoy gear seem to be a promising alternative on the near horizon. Simply put, a definite sunset period after which drift gillnets are prohibited will both provide incentives to test and innovate cleaner gear types while providing the public with the assurance that the bycatch problem is being addressed.

California's drift gillnet fishery remains among the dirtiest and most wasteful in the world. According to National Marine Fisheries Service observer data (May 2007 to January 2013)¹, 61% of all marine life caught in this fishery was discarded. Furthermore, on average over one hundred marine mammals and thousands of sharks and other unwanted fish are killed each year due to the indiscriminate nature of these mile-long nets. Protected species taken in these deadly nets include endangered leatherback sea turtles, endangered sperm whales, endangered humpback whales, gray whales, minke whales, bottlenose dolphins, long-beaked common dolphins, short-beaked common dolphins, northern right whale dolphins, Pacific white-sided

¹http://www.westcoast.fisheries.noaa.gov/fisheries/wc_observer_programs/sw_observer_program_info/data_summ_report_sw_observer_er_fish.html



dolphins, California sea lions, Northern elephant seals, Risso's dolphins and short-finned pilot whales. In addition, this fishery inadvertently catches, kills and discards iconic game fish such as striped marlin and blue marlin, impacting valuable California recreational fishing opportunities.

The California drift gillnet swordfish and thresher shark fishery is a failed thirty year experiment. Fraught with concerns over bycatch since this gear was first allowed off California in 1980, the fishery has failed to adequately address the wide suite of bycatch problems for dozens of iconic marine species and current bycatch remains grossly unacceptable. Other fishing gears are available to catch swordfish and participation by fishermen in the drift gillnet fishery is now at a historic low--it is time to revitalize the swordfish fishery by eliminating drift gillnets and replacing them with cleaner gear types. However, we do not support the authorization or experimentation with pelagic longlines, which are currently prohibited, as this gear type also has unacceptably high levels of bycatch.

Finally, it is important for NMFS to finalize rulemaking on importation standards to level the playing field and ensure that countries that export swordfish to the U.S. meet or exceed domestic bycatch standards. This should be a top priority for NMFS and the Council as part of the overall transition plan for drift gillnets.

For the benefit of healthy oceans and coastal economies that rely on robust marine life populations and California's reputation as a producer of sustainable seafood, I urge you to initiate a transition plan that rapidly eliminates drift gillnets off the U.S. West Coast with a time-certain prohibition on drift gillnets in the Highly Migratory Species Fishery Management Plan.

Thank you for your time and consideration.

Sincerely,

Kught

Peter Knights Executive Director, WildAid

Drift nets

Messages in thread 1

Sun May 18 2014 14:29:36 GMT-0700 (PDT) ID: 146113d77f07f2a1 From: Melissa Bryan <cedars70@gmail.com> To: pfmc.comments@noaa.gov CC:

Drift nets will prove to have had very high costs for our fisheries in the long term.

Please cease their use and develop alternative methods for swordfish catching amongst others.

Sincerely,

Melissa Bryan 46 Seascape Dr. Half Moon Bay, CA 94019

Swordfish Messages in thread 1

Wed May 14 2014 17:41:25 GMT-0700 (PDT) ID: 145fd5627cac9017 From: Heather Payne <helsimon@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear Pacific Fishery Management Council members, I am writing to request that you keep drift gillnets out of currently protected areas and instead shift the swordfish and thresher shark fishery to sustainable gear types that minimize wasteful bycatch of marine animals. Additionally, I request that you require 100 percent observer coverage on all trips and that you close the fishery completely for the season if a drift gillnet entangles any protected species. Thank you for considering my comments. Regards,Heather PayneChapel Hill, NC

gill nets Messages in thread 2

Fri May 09 2014 08:13:06 GMT-0700 (PDT) ID: 145e18ba3b656b5a From: Chris Vilandry <tophers49@hvc.rr.com> To: pfmc.comments@noaa.gov CC:

The west coats gill nets used to catch thresher sharks and swordfish is doing a good job of catching many other species which are killed in the process. There are alternatives and they must be implemented now.There is no justification for so much wanton destruction. When man has wiped out species after species and there is no turning back,maybe someone will say we were too good at catching and not good enough about understanding the ecosystem. Or maybe they will just say time to go after another species. Someone needs to intervene on the side of the wildlife. The time is now to take action ,please do so before it is too late.

Thank You and Sincerely Yours, Christopher Vilandry

Mon May 12 2014 12:16:16 GMT-0700 (PDT) ID: 145f1dd3160ef849 From: PFMC Comments - NOAA Service Account <pfmc.comments@noaa.gov> To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov> CC:

------ Forwarded message ------From: Chris Vilandry tophers49@hvc.rr.com

Date: Fri, May 9, 2014 at 8:13 AM Subject: gill nets To: pfmc.comments@noaa.gov

The west coats gill nets used to catch thresher sharks and swordfish is doing a good job of catching many other species which are killed in the process. There are alternatives and they must be implemented now.There is no justification for so much wanton destruction. When man has wiped out species after species and there is no turning back,maybe someone will say we were too good at catching and not good enough about understanding the ecosystem. Or maybe they will just say time to go after another species. Someone needs to intervene on the side of the wildlife. The time is now to take action ,please do so before it is too late.

Thank You and Sincerely Yours, Christopher Vilandry

Messages in thread 2

Fri May 09 2014 12:08:20 GMT-0700 (PDT) ID: 145e262e4cad6f16 From: Jean Public <jeanpublic1@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

I am in favor of stopping all of this fishing for swordfish. all of it. Let's Find a Better Way to Catch Pacific SwordfishOther Resource May. 2, 2014Pacific Fish Conservation CampaignContact: Erik Robinson, 503.230.1444Swordfish caught off the coast of California is a prized seafood delicacy. Sadly, the predominant method of catching this abundant fish, called drift gillnetting, kills many species of marine mammals, fish, sharks, and turtles the fishermen never intended to catch. We can do better. It's time to investigate shifting to alternatives – such as deep-set buoy gear – that enable fishermen to catch swordfish while leaving other marine life in the

water where it belongs.

Download the Brief (PDF)

Newer isn't always better

In the early 1980s, the state of California

approved the use of a new tool designed to catch swordfish—gillnets that drift with the ocean current. These nets, stretching as long as a mile and reaching more than 200 feet below the surface, caught two to three times as many of the prized swordfish, compared to traditional gear, with the same amount of effort expended by fishermen. The fishing industry quickly transitioned to the new gear. Unfortunately, it came with a catch: Large numbers of animals besides swordfish were unintentionally entangled and killed.

View the Infographic: Finding a Better Alternative

View the Timeline: Catching Swordfish

Off the West CoastOff the California shore, nets as long as a mile are submerged for hours at a time to catch swordfish and thresher sharks. The problem is that these nets also entangle and kill other animals the fishermen never intended to catch—including whales, turtles, sharks, dolphins, and many species of fish. Thousands of nontarget animals are caught in these impenetrable walls, a problem known as bycatch, including endangered sperm whales, Pacific leatherback turtles, and valuable but severely depleted game fish such as bluefin tuna. In fact, the severe injury and death of two sperm whales in December 2010 prompted federal fishery managers to enact a temporary emergency rule requiring observers on all drift gillnet boats—a fivefold increase from the scant 20 percent observer coverage normally accorded this fishery, as of 2013. Unfortunately, that rule expired at the

end of January 2014.

Observers have recorded thousands of fish tossed overboard such as the mola mola (a large oblong-shaped creature also known as sunfish), striped marlin, and blue sharks, in many cases dead or dying. Observers have accompanied less than 20 percent of drift gillnet trips, so there is no way of fully knowing the full harm caused by this gear.

It's time for West Coast fishery managers to phase out the use of drift gillnets. We can end the discard of nontarget fish ensnared by them and stop the senseless killing of rare animals by simply using alternative fishing methods.

The past and future offer other ways to continue catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric

Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface. These and other alternatives for catching swordfish do not ensnare nontarget animals, such as leatherback sea turtles, whales, and tuna. When it comes to drift gillnets, now should be the end of the line.

Federal fisheries managers should:

 Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.
Support the transition of the fleet to more selective gear.

Take action:

Contact the Pacific Fishery Management Council at pfmc.comments@noaa.gov. Ask the council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

For further information, please visit http://www.pewenvironment.org/pacificfish.

Mon May 12 2014 12:01:05 GMT-0700 (PDT) ID: 145f1cf4cf2023d3 From: PFMC Comments - NOAA Service Account <pfmc.comments@noaa.gov> To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov> CC:

----- Forwarded message ------From: Jean Public jeanpublic1@yahoo.com

Date: Fri, May 9, 2014 at 12:08 PM Subject: To: "pfmc.comments@noaa.gov" pfmc.comments@noaa.gov

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Let's Find a Better Way to Catch Pacific Swordfish - Let's-Find-A-Better-Way-to-Catch-Pacific-Swordfish.pdf

Messages in thread 2

Fri May 09 2014 13:27:48 GMT-0700 (PDT) ID: 145e2ac0f8bff8a2 From: jadeinsf <jadeinsf@gmail.com> To: pfmc.comments@noaa.gov CC:

http://www.pewenvironment.org/uploadedFiles/Let%27s-Find-A-Better-Way-to-Catch-Pacific-Swordfish.pdf The past and future offer other ways to continue catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface. - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=e4e6bea4843c454aad83fd67083 b7580&elqCampaignId=2028#sthash.oGgwbfAl.dpuf

The past and future offer other ways to continue catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface. - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=e4e6bea4843c454aad83fd67083 b7580&elqCampaignId=2028#sthash.oGgwbfAl.dpuf

Mon May 12 2014 12:00:44 GMT-0700 (PDT) ID: 145f1cef80432f93 From: PFMC Comments - NOAA Service Account <pfmc.comments@noaa.gov> To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov> CC:

----- Forwarded message ------From: jadeinsf jadeinsf@gmail.com

Date: Fri, May 9, 2014 at 1:27 PM Subject: Let's Find a Better Way to Catch Pacific Swordfish - Let's-Find-A-Better-Way-to-Catch-Pacific-Swordfish.pdf To: pfmc.comments@noaa.gov

http://www.pewenvironment.org/uploadedFiles/Let%27s-Find-A-Better-Way-to-Catch-Pacific-Swordfish.pdf

The past and future offer other ways to continue catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface. - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=e4e6bea4843c454aad83fd67083 b7580&elqCampaignId=2028#sthash.oGgwbfAl.dpuf

The past and future offer other ways to continue catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface. - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=e4e6bea4843c454aad83fd67083 b7580&elqCampaignId=2028#sthash.oGgwbfAI.dpuf

Swordfish

Messages in thread 2

Sun May 11 2014 07:24:04 GMT-0700 (PDT)

ID: 145ebab66bd8bcbf From: Gigi Spates <gspates@icloud.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please do all you can to move from gill netting with its wasteful by-catch to methods that catch only the target species, in this case swordfish. Human beings have the responsibility to deal with by-catch and as soon as possible!!

Thanks for your consideration of my comments.

Sent from my iPhone

Mon May 12 2014 11:55:32 GMT-0700 (PDT) ID: 145f1ca34e4ed3b7 From: PFMC Comments - NOAA Service Account <pfmc.comments@noaa.gov> To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov> CC:

----- Forwarded message -----From: Gigi Spates gspates@icloud.com

Date: Sun, May 11, 2014 at 7:24 AM Subject: Swordfish To: "pfmc.comments@noaa.gov" pfmc.comments@noaa.gov

Please do all you can to move from gill netting with its wasteful by-catch to methods that catch only the target species, in this case swordfish. Human beings have the responsibility to deal with by-catch and as soon as possible!!

Thanks for your consideration of my comments. Sent from my iPhone

Concern about Collateral Damage in Swordfish Fishing Methods

Messages in thread 2

Sun May 11 2014 12:18:11 GMT-0700 (PDT) ID: 145ecb8d1ae94239 From: Werner Bergman <wernerbergman@frontier.com> To: pfmc.comments@noaa.gov CC:

Dear Sir,

I am concerned about the killing of mammals and other wildlife when using mile-long nets for catching swordfish off the California shore. These drift glints should be phased out and substituted with alternative methods.. I am urging the following steps be taken: (1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. (2) Support the transition of the fleet to more selective gear.

Thank you for your consideration.

Werner Bergman Stanwood, WA 98292

(360) 629-6840

2) Support the transition of the fleet to more selective gear.

- See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=47ec97b702ee46369010016998d 14de6&elqCampaignId=2028#sthash.i4wmBg0I.dpuf

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08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=47ec97b702ee46369010016998d 14de6&elqCampaignId=2028#sthash.i4wmBg0I.dpuf

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08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=47ec97b702ee46369010016998d 14de6&elqCampaignId=2028#sthash.i4wmBg0I.dpuf

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08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=47ec97b702ee46369010016998d 14de6&elqCampaignId=2028#sthash.i4wmBg0I.dpuf

Mon May 12 2014 11:55:19 GMT-0700 (PDT)

ID: 145f1ca042007081

From: PFMC Comments - NOAA Service Account <pfmc.comments@noaa.gov> To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov> CC:

------ Forwarded message ------From: Werner Bergman wernerbergman@frontier.com

Date: Sun, May 11, 2014 at 12:18 PM Subject: Concern about Collateral Damage in Swordfish Fishing Methods To: pfmc.comments@noaa.gov

Dear Sir,

I am concerned about the killing of mammals and other wildlife when using mile-long nets for catching swordfish off the California shore. These drift glints should be phased out and substituted with alternative methods.. I am urging the following steps be taken: (1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. (2) Support the transition of the fleet to more selective gear.

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Werner Bergman

Stanwood, WA 98292

(360) 629-6840

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A Better Way to Catch Pacific Swordfish

Messages in thread 2

Sun May 11 2014 15:27:38 GMT-0700 (PDT) ID: 145ed66104b98ebe From: Barbara Rosenkotter <skye@ucdavis-alumni.com> To: pfmc.comments@noaa.gov CC:

I am requesting that the council keep drift gillnets out of currently protected areas. Instead the fishery for swordfish should be sifted to sustainable gear types that minimize wasteful bycatch of marine animals.

Federal fisheries managers should: 1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. 2) Support the transition of the fleet to more selective gear.

For further information, please visit http://www.pewenvironment.org/pacificfish.

Thank you, Barbara Rosenkotter201 Crest DriveDeer Harbor, WA 98243

Mon May 12 2014 11:55:05 GMT-0700 (PDT) ID: 145f1c9cba46773d From: PFMC Comments - NOAA Service Account <pfmc.comments@noaa.gov> To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov> CC:

------ Forwarded message ------From: Barbara Rosenkotter skye@ucdavis-alumni.com

Date: Sun, May 11, 2014 at 3:27 PM Subject: A Better Way to Catch Pacific Swordfish To: pfmc.comments@noaa.gov

I am requesting that the council keep drift gillnets out of currently protected areas. Instead the fishery for swordfish should be sifted to sustainable gear types that minimize wasteful bycatch of marine animals.

Federal fisheries managers should: 1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

2) Support the transition of the fleet to more selective gear. For further information, please visit http://www.pewenvironment.org/pacificfish.

Thank you, Barbara Rosenkotter201 Crest DriveDeer Harbor, WA 98243

Drift gillnets

Messages in thread 2

Fri May 09 2014 02:57:28 GMT-0700 (PDT) ID: 145e06a996ecd83f From: Nicolas Lubitz <nicolas.lubitz@yahoo.de> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

To whom it may concern, I hereby ask you to remove any drift gillnets from the swordfish industry, since this practise is unsustainable and has a high bycatch rate. Greetings,Nicolas Lubitz

Mon May 12 2014 11:53:50 GMT-0700 (PDT) ID: 145f1c8a7037099b From: PFMC Comments - NOAA Service Account <pfmc.comments@noaa.gov> To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov> CC:

----- Forwarded message ------From: Nicolas Lubitz nicolas.lubitz@yahoo.de

Date: Fri, May 9, 2014 at 2:57 AM Subject: Drift gillnets To: "pfmc.comments@noaa.gov" pfmc.comments@noaa.gov

To whom it may concern,

I hereby ask you to remove any drift gillnets from the swordfish industry, since this practise is unsustainable and has a high bycatch rate.

Greetings, Nicolas Lubitz

Drift gillnets

Messages in thread 2

Fri May 09 2014 03:28:19 GMT-0700 (PDT) ID: 145e086cbfb40fd6 From: Elaine Cook <emhcook@aol.com> To: pfmc.comments@noaa.gov CC:

Dear Council:

I am writing to request that you please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear for types that minimize wasteful by-catch of marine animals.

Our Oceans are in danger of dying. Our entire planet is suffering. Leaders, those in authority, and politicians are in the right place to lead our world toward a sustainable eco-system. Please consider this request seriously.

Thank you very much,

Elaine Cook, CRNP

121 S. Arlington Ave

Baltimore, MD 21223

Mon May 12 2014 11:53:34 GMT-0700 (PDT) ID: 145f1c8684362b87 From: PFMC Comments - NOAA Service Account <pfmc.comments@noaa.gov> To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov> CC:

----- Forwarded message ------

From: Elaine Cook emhcook@aol.com

Date: Fri, May 9, 2014 at 3:28 AM Subject: Drift gillnets To: pfmc.comments@noaa.gov

Dear Council:

I am writing to request that you please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear for types that minimize wasteful by-catch of marine animals.

Our Oceans are in danger of dying. Our entire planet is suffering. Leaders, those in authority, and politicians are in the right place to lead our world toward a sustainable eco-system. Please consider this request seriously.

Thank you very much,

Elaine Cook, CRNP

121 S. Arlington Ave

Baltimore, MD 21223

fish

Messages in thread 2

Fri May 09 2014 04:38:46 GMT-0700 (PDT) ID: 145e0c750af07f68 From: "Meyers, Sarah" <sarmey@med.umich.edu> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Hello,

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you, Sarah Meyers

Electronic Mail is not secure, may not be read every day, and should not be used for urgent or sensitive issues

Mon May 12 2014 11:53:06 GMT-0700 (PDT) ID: 145f1c7fd79ec8d0 From: PFMC Comments - NOAA Service Account <pfmc.comments@noaa.gov> To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov> CC:

----- Forwarded message -----From: Meyers, Sarah sarmey@med.umich.edu Hello,

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you, Sarah Meyers

Electronic Mail is not secure, may not be read every day, and should not be used for urgent or sensitive issues

Swordfish & Thresher Shark Pacific fisheries

Messages in thread 1

Mon May 12 2014 10:47:09 GMT-0700 (PDT) ID: 145f18b9d14fa5e5 From: Randy Monroe <Randy@monroescienceed.com> To: pfmc.comments@noaa.gov CC:

Please heed the advice of the Pew Institute.

Federal fisheries managers should:

1)Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

2) Support the transition of the fleet to more selective gear.

I am asking that the council keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful by-catch of marine animals.

Randy Monroe (925)969-0808 bus/fax (925)788-6910 cell Randy@MonroeScienceEd.com www.MonroeScienceEd.com

Swordfishing on the pacific coast

Messages in thread 1

Sun May 11 2014 06:36:19 GMT-0700 (PDT) ID: 145eb7fbf465b9c9 From: Jack Martinelli <jemartin007@hotmail.com> To: pfmc.comments@noaa.gov CC:

i request that the council keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Dr. Jack Martinelli Ph.D. MIT

Please take these two steps Messages in thread 1

Sat May 10 2014 17:08:59 GMT-0700 (PDT) ID: 145e89c8b3be82d2 From: Sybil Schlesinger <sybil.sch@gmail.com> To: pfmc.comments@noaa.gov CC:

Please take the following two steps to ensure the safety of marine mammals:

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. 2) Support the transition of the fleet to more selective gear.

Sincerely, Sybil Schlesinger22 Rockland StreetNatick, MA 01760

Drift gillnets Messages in thread 1

Sat May 10 2014 13:54:56 GMT-0700 (PDT) ID: 145e7eadbc303a99 From: Dan Rathmann <danr_45215@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Recent articles about "bycatch" have reinforced my resolve never to buy swordfish steaks, and to emphasize this with restaurant managers. Dan Rathmann

"You never change things by fighting the existing reality. To change something build a new model that makes the existing model obsolete." Buckminster Fuller

Gillnets

Messages in thread 1

Sat May 10 2014 11:02:31 GMT-0700 (PDT) ID: 145e74cf7a439d45 From: Brian Fink <bfink@prodigy.net> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear Pacific Fishery Management Council,

Please keep drift gillnets out of currently protected areas, and instead shift the fishery for swordfish and thresher sharks to sustainable gear types, in order to minimize the wasteful bycatch of marine animals.

Thank you,

Brian Fink 1806 Green St. Philadelphia, PA 19130

drift gillnets Messages in thread 1

Sat May 10 2014 07:27:14 GMT-0700 (PDT) ID: 145e688ade651ad6 From: kc28031@usa2net.net To: pfmc.comments@noaa.gov CC:

Hello,

I'd like to ask the council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you.

- See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-fi nd-a-better-way-to-catch-pacific-swordfish-85899544835?utm_ca mpaign=2014-05-08%20Latest.html&utm_medium=email&utm_so urce=Eloqua&elq=f39abf8756104d369e6d97b9d3a86194&elqCa mpaignId=2028#sthash.ybyPNd3P.dpufSincerely, Nicholas Galante drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Messages in thread 1

Sat May 10 2014 02:31:57 GMT-0700 (PDT) ID: 145e57bbc95f4535 From: glhendersonville@yahoo.com To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Sent from Windows Mail

Swordfish Fishery Messages in thread 1

Fri May 09 2014 23:31:01 GMT-0700 (PDT) ID: 145e4d3e94e4daff From: Kenneth Ruby <kennethgem@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

To:Pacific Fishery Management Council

I ask the council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you for your attention. Sincerely,Kenneth RubySalem, NH

Messages in thread 1

Fri May 09 2014 22:45:56 GMT-0700 (PDT) ID: 145e4aaa10f6f1cf From: Carol Blaney <clblaney@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear Council members,

In order to prevent bycatch, please keep drift gillnets out of currently protected areas. Instead, shift the fishery for swordfish and thresher sharks to sustainable gear. Thank you for working to keep our oceans healthy! Sincerely,

Carol Blaney

Please act to stop bycatch from swordfish/thresher shark driftnets

Messages in thread 1

Fri May 09 2014 21:22:44 GMT-0700 (PDT) ID: 145e45ea13b7727f From: Suzanne Jones <suzanne@unwiredltd.com> To: pfmc.comments@noaa.gov CC:

Dear PFMC,

The

terrible toll that driftnets are taking on ocean life must be stopped. Please take action to keep driftnets out of protected areas and transition the swordfish and thresher shark fisheries to sustainable gear that minimizes bycatch which is devastating marine animals.

Thank you,

Suzanne Jones

1285 Bollinger Canyon Rd.

Moraga, CA 94556

Gillnets Messages in thread 1

Fri May 09 2014 17:50:37 GMT-0700 (PDT) ID: 145e39efd25b5c13 From: Robin <tierney_art@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Hello:

Please keep drift gillnets out of protected areas. Please instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you.

Robin and Kevin TierneyDaytona Beach, FL Be the change you wish to see in the world.

Messages in thread 1

Fri May 09 2014 17:45:16 GMT-0700 (PDT) ID: 145e39a05b65d104 From: Robin <tierney_art@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Hello:

Please keep drift gillnets out of protected areas. Please instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you.

Robin and Kevin TierneyDaytona Beach, FL Be the change you wish to see in the world.

drift gill nets Messages in thread 1

Fri May 09 2014 16:59:23 GMT-0700 (PDT) ID: 145e36d5e947c16f From: Ellen Zimmerman <ellen.zimmerwoman@gmail.com> To: pfmc.comments@noaa.gov CC:

Please consider stopping the use of drift gill nets, which have tremendous negative effects of unintended by catch, including endangered marine mammals. Please promote use of smarter methods that do not have such negative, unintended consequences. Thank you.

Ellen Zimmerman

A better way of fishing - not drift gill nets Messages in thread 1

Fri May 09 2014 16:02:37 GMT-0700 (PDT) ID: 145e3396e959eae6 From: Alana Gomez Wagner <agomezwagner@gmail.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

This is an important issue. Just because fishermen *can* catch swordfish easily this way doesn't mean they should.

Thank you for your time and consideration.

Sincerely, Alana Gomez Wagner

No drift gillnets Messages in thread 1

Fri May 09 2014 15:10:11 GMT-0700 (PDT) ID: 145e30962a2aae82 From: Julie Jumonville <jumonvillejulie@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Ask the council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Drift Gillnets Messages in thread 1

Fri May 09 2014 15:00:43 GMT-0700 (PDT) ID: 145e300ab6a3be6d From: bryan iwen <ctn52002@wizunwired.net> To: pfmc.comments@noaa.gov CC:

Dear Pacific Fishery Management Council,

As a very concerned individual who is greatly saddened by the very destructive methods of drift gillnet fishing, I would like to encourage the PFMC to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you very much for your time, Bryan W. Iwen

gillnets Messages in thread 1

Fri May 09 2014 13:32:07 GMT-0700 (PDT) ID: 145e2af9b3fc667a From: Dawn Zelinski <dawnzelinski@yahoo.com> To: pfmc.comments@noaa.gov CC:

Pacific Fishery Management Council,

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful by-catch of marine animals.

Sincerely,

Dawn Zelinski 140 Deepdale Dr. Middletown, NJ 07748

Drift Gillnet Fishing

Messages in thread 1

Fri May 09 2014 12:52:40 GMT-0700 (PDT) ID: 145e28b9061c59ee From: Jon Gmail <jph231@gmail.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

To whom it may concern,

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Our fisheries need help and they need it now.

Thank you, Jon Holstein

Gillnets Messages in thread 1

Fri May 09 2014 11:36:17 GMT-0700 (PDT) ID: 145e245923be2c74 From: Mal Gaffney <malgaff@gmail.com> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you

swordfish Messages in thread 1

Fri May 09 2014 11:32:57 GMT-0700 (PDT) ID: 145e24251910277a From: Kristin Walsh <kmwcnm@optonline.net> To: pfmc.comments@noaa.gov CC:

To who it may concern,

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. - See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=e6a50510c7a748bdb0ffbb78f8de bf51&elqCampaignId=2028#sthash.6EUIMn1C.dpuf Thank you,Kristin Walsh Nyack, NY

Drift Gillnets

Messages in thread 1

Fri May 09 2014 10:53:05 GMT-0700 (PDT) ID: 145e21e1692048c7 From: George Sheridan <learn@jps.net> To: pfmc.comments@noaa.gov CC:

Keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

George Sheridan 4467 Meadowbrook Garden Valley, CA 95633

request

Messages in thread 1

Fri May 09 2014 10:48:56 GMT-0700 (PDT) ID: 145e21a42cd9d910 From: Julia French <chirojules@yahoo.com> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you,Julia

Swordfish Catch Management Messages in thread 1

Fri May 09 2014 10:10:15 GMT-0700 (PDT) ID: 145e1f6c48d4d389 From: Bridgett Heinly <kbmdogs@att.net> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

To Whom it May Concern,

Thousands of nontarget animals are caught in drift nets designed to catch swordfish and thresher sharks. Some of those animals include endangered sperm whales, Pacific leatherback turtles, and severely depleted bluefin tuna. There are better and more sustainable options for catching swordfish.

I urge you to please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Sincerely, Bridgett Heinly

Messages in thread 1

Fri May 09 2014 09:52:52 GMT-0700 (PDT) ID: 145e1e6ec67277b6 From: "Higgins, Patti" <PHiggins@achd.net> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please stop fishermen from using drift gillnets. They are killing many more fish and mammals than they are swordfish.

Gillnet Fishing Messages in thread 1

Fri May 09 2014 08:51:09 GMT-0700 (PDT) ID: 145e1ae5a6ab2ebe From: Caryn Cowin <caryn_cowin@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Caryn L. Cowin caryn_cowin@yahoo.comP Please consider the environment before printing this e-mail

Bycatch Messages in thread 1

Fri May 09 2014 08:40:51 GMT-0700 (PDT) ID: 145e1a51c352d57d From: Lynette Ridder <captain_nerful@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Hello,

I urge you to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Sincerely,

Lynette Ridder

Concord CA

RE: Drift Gillnet Messages in thread 1

Fri May 09 2014 08:18:57 GMT-0700 (PDT) ID: 145e190b3cf73abd From: Maki Murakami <maki@hiokiusa.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC: Maki Murakami <maki@hiokiusa.com>, "Shaw,Dennis" <DShaw@penskeautomotive.com>

Pacific Fishery Management Council,

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful by catch of marine animals.

Thank you.

Sincerely,

Maki Murakami

Maki Murakami
HIOKI USA CORPORATION
6 Corporate Drive
Cranbury, New Jersey 08512
Voice: (609)409-9109
Fax: (609)409-9108
Email:
makim@hiokiusa.com
Website:
www.hiokiusa.com
Р
please consider the environment before printing this e-mail

Swordfish Messages in thread 1

Fri May 09 2014 08:00:58 GMT-0700 (PDT) ID: 145e180786e0ebb1 From: Addie <addiesmock@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

I ask that the Pacific Fishery Management Council keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish to sustainable gear types that minimize wasteful bycatch of marine animals. In this day and age there is no reason to be killing marine animals as bycatch. Thank you, Amanda Smock

Stop using gill nets in protected areas

Messages in thread 1

Fri May 09 2014 07:21:05 GMT-0700 (PDT) ID: 145e15bffe1c8edb From: Vicki L Anderson <gurlcatrider@me.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please make coastal fishermen find a different way to fish for swordfish that doesn't involve the senseless meaningless and endless killing of ancillary species that is associated with use of gill nets

Sent from my iPad

Pacific Coast Fishery Mgt Council Messages in thread 1

Fri May 09 2014 06:19:58 GMT-0700 (PDT) ID: 145e124113f4c5ca From: Jenene Garey <jggarey@icloud.com> To: pfmc.comments@noaa.gov CC:

TO: Federal Fisheries managers Please keep drift gillnets out of areas currently under protection and us sustainable gear types to minimize wasteful bycatch of marine animals. Additonally, put observer coverage on all fishing trips and close the fisheryfor the season if drift gillnets entangle

marine mammals and animals. Thank you,

Jenene G Garey 111 Barrow St, Apt 6E, NY, NY 10014 212-741-6579724 Zlatnik Dr, Two Rivers, WI 54241 920-793-2389

Drift Gillnets Messages in thread 1

Fri May 09 2014 05:22:26 GMT-0700 (PDT) ID: 145e0ef6af8f272f From: Mike Higgins <mhiggins@performcg.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Sent from my IPad.

Keep drift gillnets out of protected areas **Messages in thread 1**

Fri May 09 2014 00:03:56 GMT-0700 (PDT) ID: 145dfcbaeca3d4ca From: Origin Dance Theater <origindance@gmail.com> To: pfmc.comments@noaa.gov CC:

To the Pacific Fishery Management Council: I am asking the council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

The use of drift gillnets should end, and the Federal fisheries managers should:

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected

species, such as a sperm whale or leatherback sea turtle.2) Support the transition of the fleet to more selective gear.

Thank you.

Jo Chen

Gillnets off California Coast Messages in thread 1

Thu May 08 2014 22:04:18 GMT-0700 (PDT) ID: 145df5e2d2e6dbbc From: Michelle MacKenzie <michellehmackenzie@gmail.com> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Bycatch of turtles, whales, tuna, dolphins and other non-target animals is simply unacceptable in this day and age! Thank you

Michelle MacKenzieSan Carlos, CA

We MUST save species for future generations! Messages in thread 1

Thu May 08 2014 21:46:03 GMT-0700 (PDT) ID: 145df4d70a779443 From: Elaine Becker <elainebecker@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals

Let's Find a Better Way to Catch Pacific Swordfish - Let's-Find-A-Better-Way-to-Catch-Pacific-Swordfish.pdf Messages in thread 1

Thu May 08 2014 21:41:58 GMT-0700 (PDT) ID: 145df49b530f276a From: jadeinsf <jadeinsf @gmail.com> To: pfmc.comments@noaa.gov CC:

http://www.pewenvironment.org/uploadedFiles/Let%27s-Find-A-Better-Way-to-Catch-Pacific-Swordfish.pdf

Finding a Better Alternative Deep-set buoy gear, depicted here, is one of the alternative types of gear being explored by researchers and fishermen to catch swordfish and thresher sharks while minimizing harm to other animals.

Messages in thread 1

Thu May 08 2014 21:39:26 GMT-0700 (PDT) ID: 145df4763049cb75 From: jadeinsf <jadeinsf @gmail.com> To: pfmc.comments@noaa.gov CC:

Finding a Better AlternativeDeep-set buoy gear, depicted here, is one of the alternative types of gear being explored by researchers and fishermen to catch swordfish and thresher sharks while minimizing harm to other animals.

A fishery with unintended consequences Off the California coast, nets as long as a mile are submerged for hours at a time to catch swordfish and thresher sharks. The problem is that these nets also entangle and kill other animals the fishermen never intended to catch—including whales, turtles, sharks, dolphins, and many species of fish. Thousands of nontarget animals are caught in these impenetrable walls, a problem known as bycatch, including endangered sperm whales, Pacific leatherback turtles, and valuable but severely depleted game fish such as bluefin tuna. In fact, the severe injury and death of two sperm whales in December 2010 prompted federal fishery managers to enact a temporary emergency rule requiring observers on all drift gillnet boats. Messages in thread 1

Thu May 08 2014 21:38:54 GMT-0700 (PDT) ID: 145df472795e7290 From: jadeinsf <jadeinsf @gmail.com> To: pfmc.comments@noaa.gov CC:

A fishery with unintended consequencesOff the California coast, nets as long as a mile are submerged for hours at a time to catch swordfish and thresher sharks. The problem is that these nets also entangle and kill other animals the fishermen never intended to catch—including whales, turtles, sharks, dolphins, and many species of fish. Thousands of nontarget animals are caught in these impenetrable walls, a problem known as bycatch, including endangered sperm whales, Pacific leatherback turtles, and valuable but severely depleted game fish such as bluefin tuna. In fact, the severe injury and death of two sperm whales in December 2010 prompted federal fishery managers to enact a temporary emergency rule requiring observers on all drift gillnet boats. It's time for West Coast fishery managers to phase out the use of drift gillnets. We can end the discard of nontarget fish ensnared by them and stop the senseless killing of rare animals by simply using alternative fishing methods.

The past and future offer other ways to continue

catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface.These and other alternatives for catching swordfish do not ensnare nontarget animals, such as leatherback sea turtles, whales, and tuna. When it comes to drift gillnets, now should be the end of the line.

Federal fisheries managers should:

 Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.
Support the transition of the fleet to more selective gear.
See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=e4e6bea4843c454aad83fd67083 b7580&elqCampaignId=2028#sthash.oGgwbfAl.dpuf

-gillnets that drift with the ocean current. These nets, stretching as long as a mile and reaching more than 200 feet below the surface, caught two to three times as many of the prized swordfish, compared to traditional gear, with the same amount of effort expended by fishermen. The fishing industry quickly transitioned to the new gear. Unfortunately, it came with a catch: Large numbers of animals besides swordfish were unintentionally entangled and killed. Infographic: Finding a Better Alternative View the Infographic: Finding a Timeline **Better Alternative** View the Timeline: Catching Swordfish Off the West Coast Off the California shore, nets as long as a mile are submerged for hours at a time to catch swordfish and thresher sharks. The problem is that these nets also entangle and kill other animals the fishermen never intended to catch—including whales, turtles, sharks, dolphins, and many species of fish. Thousands of nontarget animals are caught in Messages in thread 1

Thu May 08 2014 21:38:36 GMT-0700 (PDT) ID: 145df4720391ca04 From: jadeinsf <jadeinsf@gmail.com> To: pfmc.comments@noaa.gov CC:

A fishery with unintended consequencesOff the California coast, nets as long as a mile are submerged for hours at a time to catch swordfish and thresher sharks. The problem is that these nets also entangle and kill other animals the fishermen never intended to catch—including whales, turtles, sharks, dolphins, and many species of fish. Thousands of nontarget animals are caught in these impenetrable walls, a problem known as bycatch, including endangered sperm whales, Pacific leatherback turtles, and valuable but severely depleted game fish such as bluefin tuna. In fact, the severe injury and death of two sperm whales in December 2010 prompted federal fishery managers to enact a temporary emergency rule requiring observers on all drift gillnet boats.

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08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=e4e6bea4843c454aad83fd67083 b7580&elqCampaignId=2028#sthash.oGgwbfAl.dpuf It's

time for West Coast fishery managers to phase out the use of drift gillnets. We can end the discard of nontarget fish ensnared by them and stop the senseless killing of rare animals by simply using alternative fishing methods.

The past and future offer other ways to continue

catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface.These and other alternatives for catching swordfish do not ensnare nontarget animals, such as leatherback sea turtles, whales, and tuna. When it comes to drift gillnets, now should be the end of the line.

Federal fisheries managers should:

1)Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

2) Support the transition of the fleet to more selective gear.See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=e4e6bea4843c454aad83fd67083 b7580&elqCampaignId=2028#sthash.oGgwbfAl.dpuf

Gill nets Messages in thread 1

Thu May 08 2014 21:28:10 GMT-0700 (PDT) ID: 145df3d16fdc3b27 From: Flo Sandok <fsandok@charter.net> To: pfmc.comments@noaa.gov CC:

Flo Sandokfsandok@charter.net Dear Sirs;

I request that you switch from gill nets which catch many unwanted species of fish that then are needlessly killed to more sustainable practices that target only the species you require. Its time to stop these wasteful practices.

Florence Sandok1516 13th Ave. N.E.Rochester, Minnesota55906

Better way to catch Pacific Swordfish Messages in thread 1

Thu May 08 2014 21:17:36 GMT-0700 (PDT) ID: 145df336b4a031b7 From: russweisz@baymoon.com To: pfmc.comments@noaa.gov CC:

Federal fisheries managers should:

 Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.
Support the transition of the fleet to more selective gear.

thanks, Russell Weisz 319 Laguna St. Santa Cruz CA 95060 russweisz@baymoon.com

swordfish alternatives Messages in thread 1

Thu May 08 2014 21:15:21 GMT-0700 (PDT) ID: 145df31697691ab7 From: Hope Carr <hopecarr@ix.netcom.com> To: pfmc.comments@noaa.gov CC:

To whom it may concern:

Drift gillnets further endanger the already endangered.

The fishery should require 100% observer coverage on all trips and close the fishery if a drift gillnet entangles a protected species. It should also keep drift gillnets out of currently protected areas and support a transition to more selective gear to minimize wasteful bycatch.

Thank you for your consideration.

Sincerely,

Hope Carr

Drift gilnets Messages in thread 1

Thu May 08 2014 21:09:25 GMT-0700 (PDT) ID: 145df2be64310d29 From: Carrie A <etheric888@gmail.com> To: pfmc.comments@noaa.gov CC:

Please find a better way to fish. Please keep these nets out of protected areas. Thank you.

drift gillnets Messages in thread 1

Thu May 08 2014 20:33:02 GMT-0700 (PDT) ID: 145df0a96ae23379 From: t carlson <aberterry1@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

tl am writing to ask you to please stop the wasteful killing of our marine animals. Keep drift gillnets out of protected areas. Have those fishing for swordfish and thresher sharks use sustainable gear types that minimize the wasting of the lives by unintended catching and killing of other species of marine animals.

Gill nets

Messages in thread 1

Thu May 08 2014 20:26:32 GMT-0700 (PDT) ID: 145df04b2cfbc2ed From: Robin Reinhart <robinreinhart1@gmail.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Keep them out of protected areas please. They are killing too many I intended creatures. Act now!

Sent from my iPhone

Concerns regarding bycatch from drift gillnetting Messages in thread 1

Thu May 08 2014 19:44:09 GMT-0700 (PDT) ID: 145deddd76c071f8 From: Gabrielle Stratton <proutyg@gmail.com> To: pfmc.comments@noaa.gov CC:

Dear Pacific Fishery Management Council,

I am concerned regarding the practice of drift gillnetting, which kills many species of marine mammals, fish,

sharks, and turtles as unintended targets. Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Respectfully,

Gabrielle Stratton

safer swordfish catch Messages in thread 1

Thu May 08 2014 19:14:51 GMT-0700 (PDT) ID: 145dec3760183d8c From: Daren Black <daren@practicalayurveda.com> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Daren Black

please protect against bycatch of whales and turtles **Messages in thread 1**

Thu May 08 2014 18:39:40 GMT-0700 (PDT) ID: 145dea2d617c5252 From: "Ammarell, Gene" <ammarell@ohio.edu> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

I am writing because I am deeply concerned about the wasteful bycatch of marine animals that results from the use of drift gillnets in protected areas. I agree with the PEW Trust that federal fisheries managers should: 1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle, and 2) Support the transition of the fleet to more selective gear, shifting the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you for your attention,

Gene Ammarell Associate Professor of Anthropology Ohio University

gillnets Messages in thread 1

Thu May 08 2014 18:35:12 GMT-0700 (PDT) ID: 145de9efa18edbc2 From: Marianna Tuchscherer <mariannatuchscherer@yahoo.com> To: pfmc.comments@noaa.gov CC:

Please ban drift gill nets in areas that are protected. the drift gill nets which are used to capture swordfish, harm marine mammals and other sea animals. These creatures manage to get caught in the nets and harm or

kill them. Thank you. A concerned world citizen

Please Use Sustainable Fishing Gear Messages in thread 1

Thu May 08 2014 18:32:44 GMT-0700 (PDT) ID: 145de9c991a93b04 From: Alice Polesky <askalice@pacbell.net> To: pfmc.comments@noaa.gov CC:

keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

- See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=27becc5a6dbc41dc9e6765c26e4 169f7&elqCampaignId=2028#sthash.dEb8kA9t.dpuf

Please keep drift gillnets out of protected waters and use gear that doesn't destroy unintended catch and endangered sea creatures.

Thank you,

Alice Polesky

San Francisco, CA

keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

- See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catchpacific-swordfish-85899544835?utm_campaign=2014-05-08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=27becc5a6dbc41dc9e6765c26e4 169f7&elqCampaignId=2028#sthash.dEb8kA9t.dpuf

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 See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=27becc5a6dbc41dc9e6765c26e4 169f7&elqCampaignId=2028#sthash.dEb8kA9t.dpuf

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keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=27becc5a6dbc41dc9e6765c26e4 169f7&elqCampaignId=2028#sthash.dEb8kA9t.dpuf

keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=27becc5a6dbc41dc9e6765c26e4 169f7&elqCampaignId=2028#sthash.dEb8kA9t.dpuf

keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=27becc5a6dbc41dc9e6765c26e4 169f7&elqCampaignId=2028#sthash.dEb8kA9t.dpuf

Close the Fishery for the Season if a Drift Net Entangles ANY Protected Species Such As a Sperm Whale or Leatherback Turtle, Shift the Fishery of Swordfish

and Thesher Sharks to Sustainable Gear, Keep Drift Nets Out of Currently Protected Areas & Require 100% Observer Coverage on All Trips Messages in thread 1

Thu May 08 2014 18:16:09 GMT-0700 (PDT) ID: 145de8d48315ff3e From: Jennifer Muir <jennifersfba@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear Pacific Fishery Management Council:

I writing you now for the Pacific Fishery Management Council to take action concerning the catching of swordfish.

The time has come and is here now for West Coast fishery managers to phase out the use of drift gillnets. We can end the discard of nontarget fish ensnared by them and stop the senseless killing of rare animals by simply using alternative fishing methods. - See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=94de8e3dba5b47e2a4c3ab968e d82f3d&elgCampaignId=2028#sthash.QhUO3eV4.dpuf There are alternative types of fishing gear that reduce the wasteful catch of marine species such as deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface. These and other alternatives for catching swordfish do not ensnare nontarget animals, such as leatherback sea turtles, whales, and tuna. When it comes to drift gillnets, now should be the end of the line. Federal fisheries managers should:

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

2) Support the transition of the fleet to more selective gear.

I emplore the Pacific Fishery Management Council to keep drift gillnets out of currently protected areas and to shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

- See more at:

Let's Find a Better Way to Catch Pacific Swordfish - The Pew Charitable TrustsLet's Find a Better Way to Catch Pacific Swordfish - The...Swordfish caught off the coast of California is a prized seafood delicacy. Sadly, the predominant method of catching this abundant fish, called drift...View on www.pewenvironmen...Preview by Yahoo

ocean conversation Messages in thread 1

Thu May 08 2014 18:14:48 GMT-0700 (PDT)
ID: 145de8bf92d720eb From: Polly Sung <pollysung@msn.com> To: pfmc.comments@noaa.gov CC:

I respectfully ask your council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful by catch. It is important to keep the ocean safe for all life that depends on the ocean for survival, keeping healthy ocean can attract marine mammals such as whales, dolphins to migrate freely and that would produce tourism and help the economy for all. Thank you for your consideration. Sincerely, Pollyana Harmon

Keep gillnets out of our waters - PLEASE! Messages in thread 1

Thu May 08 2014 17:45:08 GMT-0700 (PDT) ID: 145de70f9b906563 From: Jane Fasullo <jfas1@optonline.net> To: pfmc.comments@noaa.gov CC:

Because of the deaths of so many non-target species when drift gillnets are used, it is imperative that they be kept out of our waters, especially protected waters. There are other means to fish for target species that don't result in such a great a threat to our turtles and marine mammals. Thanks, Jane Fasullo Easter Island, the popular example of a civilization that disappeared after using up all available resources, is a harsh yet valuable reminder of what can happen on a global scale if we fail to connect the dots.

Better Way to Catch Swordfish Messages in thread 1

Thu May 08 2014 17:36:49 GMT-0700 (PDT) ID: 145de694108d388e From: Eryn Walsh <eryn.angela@gmail.com> To: pfmc.comments@noaa.gov CC:

Dear Pacific Fishery Management Council,

Please take the necessary actions to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Federal fisheries managers should:

Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

Support the transition of the fleet to more selective gear. Thank you for your attention to this issue.

A Concerned Citizen, Eryn Walsh Pasadena, CA

fishing Messages in thread 1 Thu May 08 2014 17:31:02 GMT-0700 (PDT) ID: 145de63ed6b12d84 From: Karen Clarke <clarkeink@verizon.net> To: pfmc.comments@noaa.gov CC:

legal

catches should only be caught one by one, on a fishing line; we must stop killing 'innocent' fish and mammals we need and should not be molesting. even if it costs a lot more....we must do it.

This email is free from viruses and malware because avast! Antivirus protection is active

Let's find a better way to catch Pacific swordfish

Messages in thread 1

Thu May 08 2014 16:59:05 GMT-0700 (PDT) ID: 145de46bdef1163b From: Michael Miller <michamille@comcast.net> To: pfmc.comments@noaa.gov CC:

Please keep drift gill nets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful by catch of marine animals. Sincerely, Michael Miller Jr. 1512 Spruce St., Apt 809 Phila., Pa. 19102-4551 For further information, please visit httkeep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. - See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=912437bfed3d46e4b638efd9383 98e6e&elqCampaignId=2028#sthash.nKPaLdYI.dpuf

Nets

Messages in thread 1

Thu May 08 2014 16:53:34 GMT-0700 (PDT) ID: 145de418d8b640db From: Bub & Petra Sullivan <bubpetra@comcast.net> To: pfmc.comments@noaa.gov CC:

Dear SIrs/Madams,

Federal fisheries managers

should:

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

2) Support the transition of the fleet to more selective gear.

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Swordfish Messages in thread 1

Thu May 08 2014 16:53:12 GMT-0700 (PDT) ID: 145de4152706b7fb From: Amy <Amyjf1217@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals!!!

Amy Freeman 978-490-8761

Sent from my iPhone

Gill Nets Messages in thread 1

Thu May 08 2014 16:47:44 GMT-0700 (PDT) ID: 145de3c6dba765ad From: Arielle Waters <kendra.bench@gmail.com> To: pfmc.comments@noaa.gov CC:

keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=00c3ec61d6754df0b8eb173de7c 74225&elqCampaignId=2028#sthash.BGuiF2S9.dpuf

Swordfish Catching Comments Messages in thread 1

Thu May 08 2014 16:42:34 GMT-0700 (PDT) ID: 145de379913fdbcd From: Osiel Ruiz <osiel2001@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

To whom it may concern,

I would like to tell you that it is very awful how drift gillnets are used to catch swordfish.Having read that as a consequence dolphins, turtles and other marine species are killed and then discarded as waste is very disheartening.There are better ways to fish for them and minimize this from happening.Make this year the year that we become more careful, ban gilnets and save animals.Sincerely,Osiel Ruiz

Messages in thread 1

Thu May 08 2014 16:41:29 GMT-0700 (PDT) ID: 145de369bfb3cf76 From: Kelly4488 <kelly4488@comcast.net> To: pfmc.comments@noaa.gov CC:

Ask the council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

For further information, please visit http://www.pewenvironment.org/pacificfish. - See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

08%20Latest.html&utm_medium=email&utm_source=Eloqua&elq=26d316f6470d465989ba1e1aac2 b5456&elqCampaignId=2028#sthash.JPHmIjpu.dpuf

drift gillnets Messages in thread 1

Thu May 08 2014 16:33:58 GMT-0700 (PDT) ID: 145de2fcc2bf46f5 From: ERNEST NINNESS <efninness@me.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

It is time to stop allowing drift gill nets in protected areas. Our oceans are generally overfished already. And these nets are killing enormous amounts of so called by catch. It is time to stop this unsound, destructive practice and start stewardship of our oceans. Or our children will find a marine desert is what we've left for them.

Thank you for your attention.

End Gillnet Fishing Messages in thread 1

Thu May 08 2014 16:19:55 GMT-0700 (PDT) ID: 145de22ac3965f0b From: stripeycat@aol.com To: pfmc.comments@noaa.gov CC:

I am writing you today because I would like to urge you to stop gillnet fishing immediately.

This has been a terrible idea from the beginning, and should never have become common practice. Millions of fish and other marine creatures have been wastefully slaughtered in the name of profit.

Surely we are intelligent enough to figure out how to accomplish our objectives without sacrificing the lives of millions of innocent creatures.

Please push for an immediate ban to this barbaric practice, and shift toward sane and sustainable methods of catching target fish.

Thank you for your time and consideration.

Sincerely, V. Calkins

Sent from my android device.

Please find other ways to catch swordfish and thresher sharks Messages in thread 1

Thu May 08 2014 16:14:16 GMT-0700 (PDT) ID: 145de1db06a28cec From: randy_schwartz@agilent.com To: pfmc.comments@noaa.gov CC:

Come on you guys, keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to a better long term methods??

Thank You.

Best Regards, Randy

Comment Messages in thread 1

Thu May 08 2014 16:11:25 GMT-0700 (PDT) ID: 145de1b17c9d322c From: Peg Keough <deepbluewhale81@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Hello,

I am writing concerning the use of drillnets to catch swordfish. Please keep these nets out of currently protected areas and instead shift the fishery of swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine mammals.

Thank you, Peg Keough

Wasteful swordfish fisheries Messages in thread 1

Thu May 08 2014 16:10:03 GMT-0700 (PDT) ID: 145de19d3c5ddd4f From: Larry Thompson <thompson14ster@gmail.com> To: pfmc.comments@noaa.gov CC: Dear Pacific Fishery Management Council:

It's time for West Coast fishery managers to phase out wasteful fishing methods. Please keep drift gillnets out of currently protected areas and shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Immediately, federal fisheries managers should require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

Sincerely yours, Lawrence Thompson

1069 Felicia Court Livermore, CA 4550

a better way to catch pacific swordfish Messages in thread 1

Thu May 08 2014 15:49:57 GMT-0700 (PDT) ID: 145de073088604c0 From: "M. Sims" <menucha65@verizon.net> To: pfmc.comments@noaa.gov CC:

Please

keep drift gillnets out of currently protected areas.

Instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Require 100 percent observer coverage on all trips. Close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

Support the transition of the fleet to more selective gear.

<font face="Helvetica, Arial,
 sans-serif">Sans-serif">Sans-serif">Ms. Millicent Sims, Montclair NJ 07042

the horor of drift gillnets

Messages in thread 1

Thu May 08 2014 15:16:33 GMT-0700 (PDT) ID: 145dde8d341917ff From: Kathi Elwell <kelwell@provide.net> To: pfmc.comments@noaa.gov CC:

Pacific Fishery Management Council I am

asking you to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. I will not eat swordfish until this has been accomplished. I do not eat any meat and will eliminate ALL fish as well if necessary. Absolutely no swordfish until this has been resolved and will get this out through word of mouth far and wide. Sincerely,

Dr. Elwell

Please keep drift gillnets out of currently protected areas Messages in thread 1

Thu May 08 2014 15:06:17 GMT-0700 (PDT) ID: 145dddf77cf80b92 From: Martin Hager <minnowproject@gmail.com> To: pfmc.comments@noaa.gov CC:

Please keep drift gill nets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. I am a sport fisherman who wants nothing more than to see a healthy ocean with abundant fish species! We are all in this together, let's work towards a common goal.

Thanks you for all you do. Marty

gillnets Messages in thread 1

Thu May 08 2014 14:55:31 GMT-0700 (PDT) ID: 145ddd5ef3e887ba From: Susan magdanz <smagdanz1@me.com> To: pfmc.comments@noaa.gov CC:

Hi,

I am writing to ask (beg) you to keep drift gillnets out of currently protected areas, and instead, to shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. This is so important for the health of our planet, and shifting to alternatives, such as deep-set buoy gear, is an effective alternative.

Thank You,

Susan Magdanz

gill net fishing off the California Shore Messages in thread 1

Thu May 08 2014 14:37:07 GMT-0700 (PDT) ID: 145ddc4b5cbab4b2 From: Leonard Jacobs <lenjacobs@optonline.net> To: pfmc.comments@noaa.gov CC:

To Whom it May Concern;

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. To wit-

Off the California shore, nets as long as a mile are submerged for hours at a time to catch swordfish and thresher sharks. The problem is that these nets also entangle and kill other animals the fishermen never intended to catch—including whales, turtles, sharks, dolphins, and many species of fish. Thousands of nontarget animals are caught in these impenetrable walls, a problem known as bycatch, including endangered sperm whales, Pacific leatherback turtles, and valuable but severely depleted game fish such as bluefin tuna. In fact, the severe injury and death of two sperm whales in December 2010 prompted federal fishery managers to enact a temporary emergency rule requiring observers on all drift gillnet boats—a fivefold increase from the scant 20 percent observer coverage normally accorded this fishery, as of 2013. Unfortunately, that rule expired at the end of January 2014.

Observers have recorded thousands of fish tossed overboard such as the mola mola (a large oblong-shaped creature also known as sunfish), striped marlin, and blue sharks, in many cases dead or dying. Observers have accompanied less than 20 percent of drift gillnet trips, so there is no way of fully knowing the full harm caused by this gear.

It's time for West Coast fishery managers to phase out the use of drift gillnets. We can end the discard of nontarget fish ensnared by them and stop the senseless killing of rare animals by simply using alternative fishing methods.

The past and future offer other ways to continue catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface. These and other alternatives for catching swordfish do not ensnare nontarget animals, such as leatherback sea turtles, whales, and tuna. When it comes to drift gillnets, now should be the end of the line.

Federal fisheries managers should:

 Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.
 Support the transition of the fleet to more selective gear.

Sincerely, Len JacobsLattingtown, NY

Find a better way to catch sword fish Messages in thread 1

Thu May 08 2014 14:36:27 GMT-0700 (PDT) ID: 145ddc41e20085a1 From: Brooke Wickham <brookingham@gmail.com> To: pfmc.comments@noaa.gov CC:

Please make decisions that keep drift gillnets out of currently protected areas. Promote policies that instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. -

--

Brooke Wickham

520 O'Farrell Avenue SE Olympia WA 98501-3470 360-352-3675 Brookingham@gmail.com

Gillnets in Protected Areas Messages in thread 1

Thu May 08 2014 14:32:51 GMT-0700 (PDT) ID: 145ddc0dcdbd5595 From: "R. S. Dorsey" <rsd@epud.net> To: pfmc.comments@noaa.gov CC:

Gentlemen/Ladies:

I strongly oppose the use of drift gillnets in currently protected areas. For years, I have seen fishermen destroy major portions of what they catch/kill just for a few desired species. AND THIS IS STILL GOING ON. If better fishing gear (that protects unwanted species from being killed, then dumped) cannot be devised, then I think such fishing should be stopped - not just curtailed. Huge areas of our oceans are now barren of any type of fish and this won't get better until you and governments get serious about protecting the species that have, so far, escaped these horribly wasteful practices.

R. Stephen DorseyDexter, OR

Minimize wasteful bycatch of marine animals. Messages in thread 1

Thu May 08 2014 14:22:01 GMT-0700 (PDT) ID: 145ddb6e6c6b096f From: Joseph Kohn <joseph@weareone.cc> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear Pacific Fishery Management Council Members:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. There is no rational reason to pollute our own environment or destroy ecosystems. www.WeAreOne.cc Joseph Kohn MD1268 W Hiahia PlWailuku, HI 96793-9762Joseph@WeAreOne.cc

A BETTER WAY TO CATCH FISH.... Messages in thread 1

Thu May 08 2014 14:17:17 GMT-0700 (PDT) ID: 145ddb2b2e1ca4db From: Ken Greenwald <ken.filmman@gmail.com> To: pfmc.comments@noaa.gov CC:

I will keep this simple and straightforward:

Keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

gillnets Messages in thread 1

Thu May 08 2014 14:06:25 GMT-0700 (PDT) ID: 145dda8fbc82130b From: Elizabeth <elizabeth.watts@verizon.net> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you.

- Elizabeth Watts Lynbrook, NY

Drift gillnets Messages in thread 1

Thu May 08 2014 13:53:47 GMT-0700 (PDT) ID: 145dd9d18d995e7c From: Gerry & Jim <gerryjim@sbcglobal.net> To: pfmc.comments@noaa.gov CC:

L

support keeping drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Gerald	
Orcholski	
2400 Brigd	en
Rd	
Pasadena,	СА
91104	

drift gillnets

Messages in thread 1

Thu May 08 2014 13:51:55 GMT-0700 (PDT) ID: 145dd9b5c5f654ad From: Jeff White <rogue576@gmail.com> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you, Jeffrey A. White, 42852 SW Dudney Avenue, Forest Grove, Oregon, 97116

Drift Gillnets do not belong in the sea Messages in thread 1

Thu May 08 2014 13:46:26 GMT-0700 (PDT) ID: 145dd96f2f1d8776 From: Jan Salas <jsalas@marinbar.org> To: pfmc.comments@noaa.gov CC:

Federal fisheries managers should: 1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. 2) Support the transition of the fleet to more selective gear Jan SalasAdministrative AssistantMarin County Bar Association101 Lucas Valley Rd., Ste. 326 San Rafael, CA 94903 415-499-1314 Fax 415-499-1614

please protect marine species from drift gillnets Messages in thread 1

Thu May 08 2014 13:41:19 GMT-0700 (PDT) ID: 145dd91d2121cb6a From: "Carroll, Linda L" <lincar@tulane.edu> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

As an American who is deeply concerned about the future of our marine species, I write to urge you to implement important protections from the losses caused by drift gillnets, which catch many fish and other marine animals of species that the fishers are

not interested in and that consequently get thrown away, at a terrible loss to a number of important and dwindling species.

The measures that will solve these problems include:

- 1) Prohibiting the use of drift gill nets in currently protected areas
- 2) Having observers present on all fishing voyages to document the amount and kind of bycatch
- 3) Moving fishing fleets to selective gear

By doing so, you will be protecting the diversity of marine life that is necessary to a healthy ecosystem.

Thank you for your consideration.

Linda Carroll

Drift gill-netting rules Messages in thread 1

Thu May 08 2014 13:39:10 GMT-0700 (PDT) ID: 145dd8fb284ccc79 From: Doug Lenier <dlpmusic@roadrunner.com> To: pfmc.comments@noaa.gov CC:

Off the California shore, nets as long as a mile are submerged for hours at a time to catch swordfish and thresher sharks. The problem is that these nets also entangle and kill other animals the fishermen never intended to catch—including whales, turtles, sharks, dolphins, and many species of fish.Thousands of nontarget animals are caught in these impenetrable walls, a problem known as bycatch, including endangered sperm whales, Pacific leatherback turtles, and valuable but severely depleted game fish such as bluefin tuna. In fact, the severe injury and death of two sperm whales in December 2010 prompted federal fishery managers to enact a temporary emergency rule requiring observers on all drift gillnet boats—a fivefold increase from the scant 20 percent observer coverage normally accorded this fishery, as of 2013. Unfortunately, that rule expired at the end of January 2014.

Observers have recorded thousands of fish tossed overboard such as the mola mola (a large oblong-shaped creature also known as sunfish), striped marlin, and blue sharks, in many cases dead or dying. Observers have accompanied less than 20 percent of drift gillnet trips, so there is no way of fully knowing the full harm caused by this gear.

I believe that it's time for West Coast fishery managers to phase out the use of drift gillnets. We can end the discard of nontarget fish ensnared by them and stop the senseless killing of rare animals by simply using alternative fishing methods.

The past and future offer other ways to continue catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface. These and other alternatives for catching swordfish do not ensnare nontarget animals, such as leatherback sea turtles, whales, and tuna. When it comes to drift gillnets, now should be the end of the line.

Federal fisheries managers should:

 Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.
 Support the transition of the fleet to more selective gear.

I am asking the council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you for considering my comments. Doug Lenier5720 Costello AveValley Glen, CA 91401

Swordfishing Messages in thread 1

Thu May 08 2014 13:38:23 GMT-0700 (PDT) ID: 145dd8efa7c9cb7e From: Donna Sasso <tizzyis@bellsouth.net> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. It's a sensible and responsible thing to do. Thanks, Donna Sasso Gulf Breeze, Florida

Eliminate Drift Gill Nets Messages in thread 1

Thu May 08 2014 13:35:49 GMT-0700 (PDT) ID: 145dd8ccef28f65c From: Christine Holmes <cholmes@baaqmd.gov> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear Pacific Fishery Management Council:

Oregon and Washington have already eliminated drift gill net permits. Unfortunately and obtusely, the state of California is again lagging behind instead of setting the trend in a matter important to the ocean and sea-life health. This

leaves it up to you to correct this problem if it is going to happen anytime soon. History has proven that fishermen will fish something to complete destruction and depletion.

Eliminating drift gill nets must be the goal. The wasteful "bycatch", such an offhand term for something so ugly, is tragic and cruel. If it is necessary to take interim steps, please require the following:

1) Require 100 percent observer coverage on all trips

2) Close the fishery immediately for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

3) Support the transition of the fleet to more selective gear.

Thank you for your consideration,

Christine Holmes

Bay Area Air Quality Management District Human Resources Analyst | Human Resources Office 939 Ellis Street | San Francisco, CA 94109

Office: 415.749.4938 | Fax: 415.749.4992

cholmes@baaqmd.gov | www.baaqmd.gov

preserving swordfish

Messages in thread 1

Thu May 08 2014 13:31:03 GMT-0700 (PDT) ID: 145dd886d4c243df From: Helen L Hays <hlhays@icloud.com> To: pfmc.comments@noaa.gov CC:

Dear government decision maker,

Please help both fishermen/fisherwomen and endangered species. Many plying their trade use gill nets to catch their haul, but quite frequently endangered species are scooped up and sacrificed as well. Instead, all - 100% - trips to fisheries where endangered animals reside MUST include observer coverage; any instance of gill nets entangling an endangered species closes that fishery. Further, people fishing must be phased into using sustainable gear types - already available - when out on the seas.

Thank you, for humans and the oceans that dominate this planet. Helen Logan Hays

Gillnets Messages in thread 1

Thu Nov 21 2013 03:49:39 GMT-0800 (PST) ID: 145dd876c3a0f1a4 From: Wenhua Lu <theconservationagency@cox.net> To: pfmc.comments@noaa.gov CC:

Please outlaw the use of gillnets in swordfish capture. I am a professional biologist with a long career invested in species conservation. Gillnets kill too many other species!

Stop using gill nets for swordfish Messages in thread 1

Thu May 08 2014 13:27:53 GMT-0700 (PDT) ID: 145dd855a0a31514 From: Rose Marie Bertrand <roseber@sbcglobal.net> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

The fact that swordfish are tasty is no reason to be using gill nets that trap and kill all manor of sea creatures both endangered and not endangered. How often do people need to eat swordfish? I am sorry if fishermen like using gill nets better, the creatures of our planet are more important to preserve. Our planet is being much "beaten up" but the human race and its greedy ways. We all of us need to do a better job of preserving what little is left of the wild places and all the creatures and plants we share this planet with.

Rose Marie BertrandBiologist and Historian of Science

Please keep drift gillnets out of currently protected areas!

Messages in thread 1

Thu May 08 2014 13:25:46 GMT-0700 (PDT) ID: 145dd83875a4dfcd From: William Byhower <billb@ad.nmsu.edu> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful by catch of marine animals.

William Byhower

Academic Advisor

College of Health and Social Services

School of Nursing

(1335 International Mall, Ste. 110)

MSC 3185

New Mexico State University

P.O. Box 30001

Las Cruces, NM 88003-8001

575-646-6017, fax: 575-646-4356

billb@nmsu.edu

Drift Gill Netting Messages in thread 1

Thu May 08 2014 13:17:21 GMT-0700 (PDT) ID: 145dd7bbe9c8fd8a From: Bruce Hlodnicki <bruce.hlodnicki@gmail.com> To: pfmc.comments@noaa.gov CC:

I oppose the continued use of drift gill netting. This process increases the bycatch and kills more endangered and protected species compared to more recent technologies. In order to protect these species and our world's oceans you should require 100% observer coverage on all trips and close the fishery for the season if a drift gill net entangles any protected species. And you should support the transition of the fleet to more selective gear.Sincerely,Bruce Hlodnicki, MD.

gill nets

Messages in thread 1

Thu May 08 2014 13:17:05 GMT-0700 (PDT) ID: 145dd7b8b341502a From: "Logan, Toni" <Toni.Logan@madd.org> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize

wasteful by-catch of marine animals. The ocean cannot sustain itself with fishing practice abuses of this vital environment and resource

drift gill nets Messages in thread 1

Thu May 08 2014 13:16:39 GMT-0700 (PDT) ID: 145dd7b2cab0526a From: Michael Hetz <michael@thenoodleshop.com> To: pfmc.comments@noaa.gov CC:

Dear Sir/Madam,

Drift gill nets "fishing" for swordfish are responsible for thousands of deaths of animals a year - leatherback turtles, blue fin tuna, blue sharks even sperm whales. Given all we know about the state of our oceans today, this antiquated and wasteful form of fishing needs to be ultimately banned. For now we need observers on all drift net boats and we need to change to less environmentally damaging equipment.

Please stand up to these commercial fishing companies who abuse and deplete the oceans for their personal gain at our collective expense.

Thank you, Michael HetzEncinitas CA 92024

Change the rules Messages in thread 1

Thu May 08 2014 13:12:14 GMT-0700 (PDT) ID: 145dd77033be7181 From: David Berkshire <dabe@earthlink.net> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

I believe the environment would benefit if you

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. 2) Support the transition of the fleet to more selective gear.

Thank you for your attention to my concerns.

David Berkshiredabe@Earthlink.net

Fishery rules

Messages in thread 1

Thu May 08 2014 13:05:00 GMT-0700 (PDT) ID: 145dd71a22b79130 From: Dave Berkshire <dacbe@earthlink.net> To: pfmc.comments@noaa.gov CC:

I believe it would be best for the environment if you:

 Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.
 Support the transition of the fleet to more selective gear.

Thank you for your attention to my concerns,

David Berkshire dabe@earthlink.net

drift gillnets and by-catch Messages in thread 1

Thu May 08 2014 13:05:21 GMT-0700 (PDT) ID: 145dd70bcf4daade From: "Quentin, Peggy S." <Peggy.Quentin@redcross.org> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you for your attention. peggy!

Swordfish Fishing Messages in thread 1

Thu May 08 2014 13:03:40 GMT-0700 (PDT) ID: 145dd6f47c2e29d4 From: Scott Logan <scott.logan@aonhewitt.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear Management Council, please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you for your consideration.

SL – Miami, Fl

Gillnets Messages in thread 1

Thu May 08 2014 13:03:38 GMT-0700 (PDT) ID: 145dd6f21fe85b36 From: Alec Connah <alec.connah@virgin.net> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. - See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-Thanks,

Alec Connah.

Drift gill nets Messages in thread 1

Thu May 08 2014 12:54:06 GMT-0700 (PDT) ID: 145dd666ddcd89b3 From: David Rowan <drowan2@verizon.net> To: pfmc.comments@noaa.gov CC:

I am writing to request that the use of drift gill nets for swordfishing (or any other kind of open ocean fishing) be reduced, limited in geographical use or, best of all, banned outright. This type of fishing is the marine equivalent of strip mining, wreaking pointless destruction on all manner of marine life in its quest for a particular target. The concept of "efficient" commercial fishing should be recognized for the globally destructive it is. Thank you, David Rowan

David W. Rowan, P.C.P.O. Box 561Accomac, VA 23301757-302-1375drowan2@verizon.net NOTICE: This message and its attachments are confidential and may be protected as attorney work product and/or attorney-client privilege. This message and its attachments are subject to exceptions under the Virginia Freedom of Information Act, Virginia Code Sections 2.2-3705(7) and (8). If you have received this message in error, please notify the sender immediately by email and destroy this message and its attachments. Any unauthorized use or dissemination of this material is strictly prohibited.

Drift gill nets Messages in thread 1

Thu May 08 2014 12:42:35 GMT-0700 (PDT) ID: 145dd5c124611fb4 From: Patzi Trandal <ptrandal@mail.sdsu.edu> To: pfmc.comments@noaa.gov CC:

I am urging that you keep drift gill nets out of currently protected areas and instead shift the fishery for swordfish

Thank you.

Stop the Indiscriminate Use of Drift Nets! Messages in thread 1

Thu May 08 2014 12:41:38 GMT-0700 (PDT) ID: 145dd5b48d1ceb8b From: JolaineGorrilla <jolaine@wildblue.net> To: pfmc.comments@noaa.gov CC:

TO The Attention of the Pacific Fishery Management Council -

"Keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Federal fisheries managers should:

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. 2) Support the transition of the fleet to more selective gear."

"It's time for West Coast fishery managers to phase out the use of drift gillnets. We can end the discard of nontarget fish ensnared by them and stop the senseless killing of rare animals by simply using alternative fishing methods."

The world is watching! These care less practices are UNACCEPTABLE! Jolaine Gorrilla

swordfish Messages in thread 1

Thu May 08 2014 12:38:14 GMT-0700 (PDT) ID: 145dd57e54cd55f6 From: Sandra Joy <stsandrajoy@gmail.com> To: pfmc.comments@noaa.gov CC:

Dear Council Members,

I am writing today to ask that you please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful by catch of marine animals.

Please let me know your thoughts about this.

Thanks Sandy Joy Orono Maine

Messages in thread 1

Thu May 08 2014 12:35:17 GMT-0700 (PDT) ID: 145dd553e9c5848b From: Donna Dilla <Donnad@mosites.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thanks

Donna

End gillnetting techniques for swordfish trolling Messages in thread 1

Thu May 08 2014 08:43:39 GMT-0700 (PDT) ID: 145dc81223c6db34 From: Benjamin Schlau <benjaminschlau@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Hello,

As an ecologist, American, and seafood lover, I urge the PFMC to ban the use of large gillnets to harvest swordfish. These large nets end up killing many non-target species, further degrading already overtaxed marine ecosystems.

As the ocean heats up and acidifies, we will need our coastal waters to be as healthy as we can manage considering the over fishing and runoff pollution.

At the very least, keep these destructive fishing practices out of marine protected waters. Regards x 1000,Benjamin Schlau917.868.4099

Appreciation Messages in thread 1

Thu May 08 2014 05:50:53 GMT-0700 (PDT) ID: 145dbe302b70e8d2 From: Peter Slattery <pslattery@mlml.calstate.edu> To: pfmc.comments@noaa.gov CC:

Thank you Council for your decision to incorporate forage fish into your management plan. That was a wonderful and thoughtful decision. Sincerely

Peter Slattery

thank you so much for supporting the forage fish

Messages in thread 1

Tue May 06 2014 17:45:57 GMT-0700 (PDT) ID: 145d424e9284bf91 From: Francie Mitchell <fmitchell@central.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear PFMC

It was so encouraging to hear that you listened to the voice of the public and made the necessary changes to protect this very important (although not very sexy) fish in the waters off the coast of CA

Regards,

Francie Mitchell Master Data Management Central Garden & amp; Pet / Walnut Creek Phone: 925.948.2821 (Office) 925.997.4734 (Cell)

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destruction of any printed copies. Any views expressed herein are not necessarily those of the Company represented by this e-mail source. No contracts, agreements or legally binding understandings may be entered into solely by an e-mail communication

AB 2019 Messages in thread 1

Mon May 05 2014 19:51:28 GMT-0700 (PDT) ID: 145cf7174a07aceb From: Tamara Morgan <tamaraellen1969@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear Pacific Fishery Management Council Members, Please expedite the phase out of driftnets along the California coast as you review the use of the gear at your June 2014 meeting. Use of driftnet gear should be halted as soon as possible because it is wasteful by capturing and killing more than 100 marine mammals per year as well as thousands of vulnerable sunfish, blue sharks and other non-target fish. The Council should not attempt to replace driftnets with high bycatch longline gear that is already prohibited along the U.S. West Coast. Sincerely, Tamara Morgan

AB 2019

Messages in thread 1

Mon May 05 2014 18:35:52 GMT-0700 (PDT) ID: 145cf2c3e475e20e From: "ilvclyns ." <ilvclyns@gmail.com> To: pfmc.comments@noaa.gov CC:

Dear Pacific Fishery Management Council Members,

Please expedite the phase out of driftnets along the California coast as you review the use of the gear at your June 2014 meeting. Use of driftnet gear should be halted as soon as possible because it is wasteful by capturing and killing more than 100 marine mammals per year as well as thousands of vulnerable sunfish, blue sharks and other non-target fish.

The Council should not attempt to replace driftnets with high bycatch longline gear that is already prohibited along the U.S. West Coast.

I also oppose the federal takeover of the swordfish and shark fishery due to the regulatory history of attempts to put endangered sea turtles, whales and other marine life at risk by expanding driftnets and longlines in conflict with longstanding California state policy and statute.

I have seen first hand marine mammals injured by these nets and in some cases die. There has to be a better way. Please phase these out or ban them totally and protect our marine life. Sincerely,

__

JoAnn Smith

Rescuing one animal may not change the world, but for that one animal its world is changed forever!-Unknown

Driftnets

Messages in thread 2

Thu May 01 2014 15:04:48 GMT-0700 (PDT) ID: 145b9d190a7f53cb From: Jeff Myers <jeffmailhere@icloud.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear Pacific Fishery Management Council Members,Please expedite the phase out of driftnets along the California coast as you review the use of the gear at your June 2014 meeting. Use of driftnet gear should be halted as soon as possible because it is wasteful by capturing and killing more than 100 marine mammals per year as well as thousands of vulnerable sunfish, blue sharks and other non-target fish.The Council should not attempt to replace driftnets with high bycatch longline gear that is already prohibited along the U.S. West Coast.I also oppose the federal takeover of the swordfish and shark fishery due to the regulatory history of attempts to put endangered sea turtles, whales and other marine life at risk by expanding driftnets and longlines in conflict with longstanding California state policy and statute.Sincerely, Jeff Myers Sent from my iPad

Thu May 01 2014 15:22:59 GMT-0700 (PDT) ID: 145b9e22f2e5b640 From: PFMC Comments - NOAA Service Account <pfmc.comments@noaa.gov> To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov> CC: Chuck Tracy - NOAA Affiliate <chuck.tracy@noaa.gov>

From: Jeff Myers jeffmailhere@icloud.com

Date: Thu, May 1, 2014 at 3:04 PM Subject: Driftnets To: "pfmc.comments@noaa.gov" pfmc.comments@noaa.gov

Dear Pacific Fishery Management Council Members,

Please expedite the phase out of driftnets along the California coast as you review the use of the gear at your June 2014 meeting. Use of driftnet gear should be halted as soon as possible because it is wasteful by capturing and killing more than 100 marine mammals per year as well as thousands of vulnerable sunfish, blue sharks and other non-target fish.

The Council should not attempt to replace driftnets with high bycatch longline gear that is already prohibited along the U.S. West Coast.

I also oppose the federal takeover of the swordfish and shark fishery due to the regulatory history of attempts to put endangered sea turtles, whales and other marine life at risk by expanding driftnets and longlines in conflict with longstanding California state policy and statute.

Sincerely, Jeff Myers

Sent from my iPad

--

Thank you for your comments to the Pacific Fishery Management Council. Your comments have been received and will be forwarded to the appropriate staff member for processing.

Pacific Fishery Management Council

7700 NE Ambassador Place, Suite 101Portland, OR 97220Phone: 503-820-2280Toll Free: 1-866-806-7204Fax: 503-820-2299Twitter: http://Twitter.com/PacificCouncil



Fwd: Driftnets

1 message

PFMC Comments - NOAA Service Account pfmc.comments@noaa.gov>
To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>
Cc: Chuck Tracy - NOAA Affiliate <chuck.tracy@noaa.gov>

Thu, May 1, 2014 at 3:22 PM

Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>

------ Forwarded message ------From: **Jeff Myers** <jeffmailhere@icloud.com> Date: Thu, May 1, 2014 at 3:04 PM Subject: Driftnets To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov>

Dear Pacific Fishery Management Council Members,

Please expedite the phase out of driftnets along the California coast as you review the use of the gear at your June 2014 meeting. Use of driftnet gear should be halted as soon as possible because it is wasteful by capturing and killing more than 100 marine mammals per year as well as thousands of vulnerable sunfish, blue sharks and other non-target fish.

The Council should not attempt to replace driftnets with high bycatch longline gear that is already prohibited along the U.S. West Coast.

I also oppose the federal takeover of the swordfish and shark fishery due to the regulatory history of attempts to put endangered sea turtles, whales and other marine life at risk by expanding driftnets and longlines in conflict with longstanding California state policy and statute.

Sincerely, Jeff Myers

Sent from my iPad

Thank you for your comments to the Pacific Fishery Management Council. Your comments have been received and will be forwarded to the appropriate staff member for processing.

Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220 Pacific Fishery Management Council Dorothy Lowman, Chair 7700 N.E. Ambassador Place, Suite 101 Portland, OR 97220

Dear Chair Lowman and Council Members,

We write today as business owners and chefs who strive to provide sustainably caught seafood to the public, including Pacific swordfish and thresher sharks caught off the coast of California. We are concerned that the predominant method of catching swordfish involves the use of drift gillnets, which inadvertently kill non-targeted species of fish and wildlife.

We support the council's decision in March to develop a plan to transition this fishery toward more environmentally sustainable types of fishing gear. Further, we encourage the council to follow through on that commitment during your meeting this month in Garden Grove, California.

The council should move decisively to establish clear criteria for granting experimental fishing permits to fishermen willing to try alternatives that are actively tended and that minimize interaction with non-targeted species of dolphins, sharks, whales and other fish. Too often, these and other species continue to be unintentionally caught and killed in drift gillnets. Despite numerous efforts in recent years to minimize bycatch, the fundamental nature of leaving drift gillnets to soak for hours at a time means that they will continue to entangle non-targeted fish and wildlife – especially in an ecosystem as vibrant and diverse as the California Current.

At a time when imported seafood accounts for the bulk of American seafood consumption, a healthy population of West Coast swordfish affords a rare opportunity to provide a local source of sustainable fish. We also recognize that swordfish are caught elsewhere around the world using practices that are far less environmentally sustainable than our own. However, just because we can do worse does not mean we cannot or should not strive to do better.

It is time to shift this fishery to a more sustainable future. The public should be able to enjoy this prized seafood delicacy with the knowledge that our fishermen are setting the standard for catching swordfish in a way that protects other ocean wildlife.

Sincerely,

Susan Feniger, Executive Chef & Co-Owner Mud Hen Tavern- Los Angeles, CA Dustin Summerville, President Harney Sushi- San Diego & Oceanside, CA

Ricardo Heredia, Executive Chef & Partner Alchemy Cultural Fare & Cocktails- San Diego, CA

Mary Sue Milliken, Co-Chef & Co-Owner Border Grill Restaurants- Santa Monica, CA/Los Angeles, CA/LAX/Las Vegas,NV

Patrice Boyle, President/Owner Soif Wine Bar & Merchants- Santa Cruz, CA

Morgan L'Esperance, Executive Chef Cascade Bar & Grill, Costanoa Resort- Pescadero, CA

Brian Kelleher, Co-Owner The Hook & Plow- Hermosa Beach, CA

McGurrin Leibert, Owner Pier 23- San Francisco, CA

Chad Hendrickson, Executive Chef Hess Collection Winery- Napa, CA

Jin Yank, Executive Chef Bamboo Sushi- Portland, OR

Hank Costello, Executive Chef Andina Restaurant- Portland, OR

Lisa Schroeder, Executive Chef & Owner Mother's Bistro & Bar- Portland, OR Chair Lowman, members of the Council and other interested parties

4

I am Svein Fougner. I am speaking with and on behalf of Pete Dupuy because he is recovering from surgery and his speaking stamina is limited. I appreciate the opportunity to appear before you.

You have the petition that Pete submitted asking the Council to initiate action under the framework procedures of the HMS FMP) to allow fishermen with permits under the FMP to engage in controlled commercial longline fishing for swordfish and tuna in the exclusive economic zone (EEZ) off the West Coast and on the high seas. I will not repeat all the information from that petition. I will try to keep this simple and brief with a few major points:

One: The Council has indicated support for the objective of having a viable and robust West Coast swordfish fishery. This is appreciated, and a first step you can take is to use the framework procedures of the FMP to change the rules to allow longline fishing for swordfish by West Coast vessels. The framework procedures provide for an open and full evaluation of Pete's proposal and alternatives, after which the Council will have a sound basis for a decision to allow longline fishing in the EEZ and on the high seas by West Coast vessels.

Two: When the FMP was first proposed, the Council intended that longline fishing - deep set for tuna and shallow set for swordfish - be permitted for West Coast vessels under the same rules as applicable to Hawaii based vessels. That is still a reasonable objective and can be accomplished with the framework procedures of the FMP. Three: It simply does not make sense to continue to disallow longline fishing by West Coast vessels when Hawaii vessels can land into West Coast ports tuna and swordfish and other species that were caught legally under western Pacific rules. This places West Coast vessels at an unfair disadvantage to that other fleet and does not further the objective of having a viable and robust fishery that will provide locally caught fresh tuna and swordfish for West Coast consumers. It is not good for the fishers and it is not good for the fishing communities that have suffered through the decline of the gillnet fishery.

Four: The Council does not need the results of more "research" or "exempted fishing permits" to provide a basis for starting the framework procedure and making a decision. The Council has available ten years of fishery data from Pete Dupuy plus 10 years of swordfish and tuna fishery data from the Hawaii fleet. Together, these provide a statistically sound basis for predicting with reasonable certainty what is likely to happen if both deep set and shallow set longline fishing are permitted. What the Council needs more than research results is the results of real commercial fishing, the data from which can then be used to determine if additional changes in regulations are needed to further the fishery while still providing necessary protection to fish stocks and to non-fish resources of concern. On this point, please note that Pete's proposal in no way limits the Council's consideration of results from EFPs for other gears that might be effective. However, EFPs are by their nature time demanding, and there is no reason to delay consideration of changes in longline regulations while other gears are being tested.

Five: The record is clear, as documented by 100% observer coverage of the longline fishery as practiced by Pete the past 10 years - this is a clean fishery. There have been zero takes of loggerhead and leatherback turtles; there was one take of an olive ridley, the most abundant sea turtle species in the Pacific. There were zero takes of seabirds. There were zero takes of marine mammals. Finfish bycatch is limited. There have been shark catches, but the primary shark species taken is blue sharks, a species that is healthy as far as is known, and most of these are released alive. The fish stocks are healthy. Further, opening swordfish fishing could take pressure off bigeye tuna, a species which is slightly overfished in the eastern Pacific but is projected to rebuild to above the MSY level at current catch levels. Both the IATTC and the WCPFC have measures in place to maintain that stock at healthy levels.

In short, there is no conservation concern that warrants continued prohibition of longline fishing in the EEZ and on the high seas east of 150°W by West Coast vessels. In this context, it is noted that the Atlantic swordfish fishery is "certified" by the Marine Stewardship Council, an organization that is known for its serious evaluations and difficult-to-meet criteria. There is no reason to expect a different outcome if a West Coast fishery were evaluated against the same criteria as used by MSC.

Pete Dupuy's proposal is an opportunity for the Council to return to its original intent - to allow West Coast vessels to engage in longline fishing under the same regulations as the Hawaii fleet. The framework procedures of the FMP are a vehicle to carry this out, and Pete proposes that the Council use the procedure to consider a regulatory change, fully evaluating all the potential impacts of allowing shallow set as well as deep set longline fishing on the high seas and in a portion of the EEZ and of alternative approaches by which a swordfish fishery can be reestablished off the West Coast. Only then, after documentation of the proposal and alternatives and consideration of all the pros and cons of the proposal and alternatives, would the Council take action and put on the record the reasons for its decision.

And then, if the Council goes through this procedure and ultimately concludes that it is still not open to a longline fishery for West Coast vessels that is managed the same way as the Hawaii fishery, the Council will have a clear record of the information relating to that decision. Pete asks only that this be an open decision with full Council discussion and a clear explanation of the reasons for the rejection so that Pete and his colleagues know why the Council would not want to offer this chance to them to rebuild a swordfish fishery using clean gear that Hawaii based vessels are legally able to use. Again, allowing a fishery would be good for the fishers and the local port communities and the consumers. It is worth noting that the Council can establish controls on such a fishery; it is not expected that the fishery would operate without regulations needed to protect local fisheries and species of concern. But the fishers and the consumers the reasons for that rejection.

On a final note - I will acknowledge that a review of the history of the Council trying to deal with the issue of longline fishing in the EEZ shows that the Council has from time to time seemed receptive to at least the idea of EFPs to allow testing in the EEZ, and that it has been third parties (States, NMFS) that have not been able to go along. This has undoubtedly been frustrating, not only to the Council but to the fishers involved.

Thank you for your consideration of Pete's petition. We hope your decision will allow us to work with the Management Team and the Advisors in development of a regulatory amendment as proposed.

I will try to answer any questions you have.

Submitted for Pete Dupuy by Svein Fougner

Transitioning from Drift Gillnets toward a Clean West Coast Swordfish Fishery



Geoff Shester, Ph.D. Oceana June 22, 2014







Agenda Item E.2.c



Bycatch Mandates

- **MSA-** Definition of Bycatch:
 - "The term 'bycatch' means fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards."
 - All commercial discards are "bycatch", even if released alive
 - National Standard 9:
 - (A) minimize bycatch and
 - (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.
- **MMPA**: Zero mortality rate goal for ALL marine mammals (<10% PBR)
- ESA: Pacific Leatherback Conservation Area and Pacific Loggerhead Conservation Area established to avoid jeopardy due to DGN bycatch

Oceana's "Wasted Catch" Report

NINE OF THE DIRTIEST US FISHERIES

GULF OF ALASKA FLATFISH TRAWL FISHERY

35%

 Morethan 34 million pounds of rish arethrown overboard in one year, including 2 million pounds of halbut and 5 million pounds of cod



CALIFORNIA SET Gillnet Fishery

65% DESCARDED

 More than 30,000 sharks and rays as well as valuable rish were decarded as waste over three years

> CALIFORNIA DRIFT GILLNET FISHERY



*Almost550 marine mammals ware entangled or killed over rive years

SOUTHEAST SHRIMP TRAWL FISHERY



* Thousands of burtles are killed annually

* For every pound of shrimplanded, 1 pound of rinrish is discarded

SOUTHEAST SNAPPER-Grouper Longline Fishery

66%

 More than 400,000 sharts were captured and decarded in one year

NEW ENGLAND & MID-ATLANTIC GILLNET FISHERY



 More than 1,200 enclangered storgeon were captured in one year

 More than 2000 dolphine, porposee and seals were captured in one year

MID-ATLANTIC BOTTOM TRAWL FISHERY



NORTHEAST BOTTOM

TRAWL FISHERY

35%

[•] Morelhan 50 million pounds of ibh

are thrown overboard every year

Amost 200 marine mammale and 350 sea buttles were captured or killed in one year

ATLANTIC HIGHLY MIGRATORY Species Longline Fishery



 Morethan 75 percent of the wasted (b) are highly valuable bura, sword(b) and other billioh

Numbers in yellow represent the present of it doll calch do carded

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	West	Coast	Region	Home
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West Coast Region Hom	e
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West Coast Region

Data Summaries & Reports

ornia/Oregon Drift Gillnet Fishery Catch Summaries 013 🔎 11kb 012 🔎 11kb 011 J. 11kb 010 🔎 52kb 2000 🔎 64kb ornia Set Gillnet Fishery Catch Summaries 12kb

Log into my IFQ account

http://www.westcoast.fisheries.noaa.gov/fisheries/wc_observer_programs/sw_observer_program_info/data_summ_report_sw_observer_fish.html

NMFS California/Oregon Drift Gillnet Observer Program Observed Catch - 2011/2012 Fishing Season May 1, 2011, through January 31, 2012



	Total	Number	Number Returned			Number	Catch per
Species	Caught	Kept	Alive	Dead	Unknown	Damaged	100 Sets
Swordfish	127	126	1	0	0	3	130.9
Albacore	57	52	0	5	0	14	58.8
Bluefin Tuna	156	138	0	18	0	23	160.8
Skipjack Tuna	3	2	0	1	0	0	3.1
Common Thresher Shark	209	172	9	28	0	0	215.5
Soupfin Shark	1	1	0	0	0	0	1.0
Shortfin Mako Shark	100	93	3	4	0	0	103.1
Blue Shark	49	0	21	28	0	0	50.5
Salmon Shark	20	0	2	18	0	0	20.6
Pelagic Stingray	2	0	2	0	0	0	2.1
Common Mola	418	0	393	25	0	0	430.9
Louvar	7	7	0	0	0	1	7.2
Opah	189	187	2	0	0	9	194.8
Pacific Bonito	6	6	0	0	0	0	6.2
Pacific Mackerel	20	0	8	12	0	0	20.6
Bullet Mackerel	4	0	0	4	0	0	4.1
Oarfish	1	0	0	1	0	0	1.0
Jack Mackerel	2	0	0	2	0	0	2.1
Bay Pipefish	1	0	1	0	0	0	1.0
Pacific Pomfret	6	6	0	0	0	0	6.2
Jumbo (Humboldt) Squid	4	0	2	2	0	0	4.1
Short Beak Common Dolphin	4	0	0	4	0	0	4.1
Long Beak Common Dolphin	1	0	0	1	0	0	1.0
Risso's Dolphin	1	0	0	1	0	0	1.0
Northern Right Whale Dolphin	2	0	0	2	0	0	2.1
Minke Whale	1	0	1	0	0	0	1.0
California Sea Lion	18	0	0	18	0	0	18.6


For every 5 swordfish landed in 2011-12 DGN fishery ~ 6 other fish were discarded dead

Iconic Recreational Fish Species

Drift Gillnets discard dead:

- blue marlin
- striped marlin
- sailfish
- bluefin tuna
- albacore tuna
- yellowfin tuna
- opah



Striped marlin killed in DGN NOAA Observer Program



Rare species



Megamouth sharks killed in CA DGN 1999 and 2002 NOAA

Megamouth sharks: 58 individuals ever seen by humans, extremely rare

Bycatch of Marine Mammals in the DGN Fishery over last 6 seasons (2007-2013)







Total estimated catch of marine mammals from May 2007 to January 2013 based on NOAA observer data and observer coverage





Short-finned pilot whale killed in CA DGN fishery, 2003, NOAA

California gray whale killed in DGN fishery in 2013; NOAA observer program

Sperm Whales

- Emergency Regs provided some assurance that sperm whale bycatch is being addressed
- Proposed permanent rule would eliminate sperm whale hard cap and observer requirement
- Stock assessment and revised PBR not finalized, nor updated Negligible Impact Determination
- Council should recommend permanent regulations be at least as strong as emergency regulations





Sperm whale killed in DGN fishery in 2010

Council's Commitment

Goal: "...developing a comprehensive plan to transition the current drift gillnet fishery to a fishery utilizing a suite of **more environmentally and economically sustainable gear types** that can effectively target the healthy West Coast swordfish stock operating under MSA authority." March 2014 Decision Document

Time-certain Phase-out of DGN

- Immediately retire all latent DGN permits
 - Can be done regardless of state vs. federal permitting system
- Establish clear **end date** (1-3 years from now) after which DGN gear is prohibited in HMS FMP
 - Provide assurance to public
 - Provide clarity to fishing community so appropriate transitions can be made, "soft landing"
 - Incentive to develop new gears, EFPs, innovation
 - 1-3 years would strike appropriate balance
- Hard caps on all DGN bycatch with 100% observer coverage during the phase-out
 - Based on incidental take limits, 10% PBRs, recent bycatch levels for fish/sharks

Pelagic longlining is not a cleaner alternative

- Has been prohibited in US west coast EEZ for good reason
- No examples of "clean pelagic longlining"
- Confirmed by data in HMS MT report (Gjertsen et al.)
- Confirmed by recent NMFS experiments with DSLL (2011-2013)
 - 76% of all animals caught NOT marketable (Vetter, March 2014)
 - Shark bycatch likely worse than DGN





Innovations: Buoy Gear



Experimental results are promising thus far Sepulveda 2014



We support buoy gear EFPs

Harpooning



- High price > \$8/lb
- Question: to what extent can harpoon landings be increased?
 - Promote research/technology advances
 - Encouraging harpooning in concert with use of other gear types on same trips
 - Markets, sustainability certification
 - Identify/address barriers to entry



HARPOON-CAUGHT

Imports & International Issues

- No evidence for "Transfer effect" (Scorse letter, 2014)
- Recommend NMFS finalize rulemaking on bycatch standards under MSA & MMPA
- Support consumer labeling initiatives (SB 1138 in CA)
- Support leatherback turtle conservation in Indonesia (US/Indonesia Memorandum of Agreement)







Summary

- Drift Gillnet bycatch remains unacceptably high
- Public wants to see end to DGN gear (>81,000 comments)
- DGN gear has been widely prohibited internationally
- Requests:
 - Retire all latent DGN permits immediately
 - Definitive time-certain prohibition on DGN gear in the HMS FMP (1-3 years max)
 - Hard caps/100% observers during phase out
 - Encourage EFPs and innovation (buoy gear)
 - No pelagic longlines in the west coast EEZ, experimental or otherwise
 - Put resources into making harpooning more viable
 - Directly address imports/international concerns

Public comment received by noon on June 13, 2014. Additional public comment received before 11:59 p.m. will be included in a second supplmental public comment package



Turtle Island Restoration Network • PO Box 370 • Forest Knolls, CA 94933 P: 415.663.8590 • F: 415.663.9534 RECEIVED

May 5, 2014

Ms. Dorothy Lowman, Chair and Council Members Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220

MAY 09 2014

PFMC

Re: California Drift Gillnet Fishery Opens Without Protections for Endangered Sperm Whales – NMFS fails to act on PFMC March 2014 Decision to Extend Emergency Sperm Whale Regulations

Dear Chair Lowman and Council Members,

Turtle Island Restoration Network (Turtle Island) is writing to notify the Pacific Fishery Management Council that National Marine Fisheries Service (NMFS) has failed to reinstate or extend emergency regulations to protect endangered sperm whales from excess take in the California driftnet gillnet fishery for swordfish and thresher shark. The fishery opened May 1 in U.S. West coast waters beyond 75 miles.

The Council at its March 2014 meeting requested that NMFS reinstate the emergency regulations to protect endangered sperm whales that lapsed on January 31 to ensure no gap in application while NMFS implements permanent sperm whale protection regulations in the California drift gillnet fishery.¹

Instead, NMFS has failed to publish any new interim or permanent regulations and is allowing the California drift gillnet fishery to operate in waters beyond 75 miles as usual on May 1, risking a violation of the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA).²

This failure to act to extend the emergency sperm whale regulations not only increases the risk of the fishery violating the MMPA and ESA, but also puts the California driftnet fishery at risk of closure as happened in 2013 until the emergency regulations were finally instituted with a rule published September 14, 2013.³

The emergency fishing regulations required California's drift gillnet fleet for swordfish and shark to stop fishing for the season if a single endangered sperm whale was entangled in a net. All vessels that fished offshore in waters deeper than 6,500 feet were required to carry on-board observers at all times.⁴

¹ DECISION SUMMARY DOCUMENT, PACIFIC FISHERY MANAGEMENT COUNCIL MEETING, MARCH 8-13, 2014, Page 4

² October 4, 2013, comment letter to National Marine Fisheries Service from Turtle Island Restoration Network, Center for Biological Diversity and Oceana, "if operation of the fishery continues without these temporary regulations or similar

permanent regulations in place, it will violate the MMPA and the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531-1544" and "Permanent regulations are necessary in order to grant the more substantive protections Congress intended to give to endangered marine mammals in the MMPA and ESA." Copy of full letter available on request.

³ Taking of Threatened or Endangered Marine Mammals Incidental to Commercial Fishing Operations; Issuance of Permit, 78 Fed. Reg. 54553 (Sept. 4, 2013).



Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>

Supplemental Public Comment, Fwd: Gillnets Out of Currently Protected Areas and Shift the Fishery for Swordfish to Sustainable Gear Types

PFMC Comments - NOAA Service Account pfmc.comments@noaa.gov>
Wed, May 28, 2014 at 12:18 PM
To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>
Cc: Chuck Tracy - NOAA Affiliate <chuck.tracy@noaa.gov>

------ Forwarded message ------From: **Scott Logan** <scott.logan@aonhewitt.com> Date: Wed, May 28, 2014 at 12:14 PM Subject: Gillnets Out of Currently Protected Areas and Shift the Fishery for Swordfish to Sustainable Gear Types To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov>

Dear Council Members,

Thousands of nontarget animals are caught in these impenetrable walls, a problem known as bycatch, including endangered sperm whales, Pacific leatherback turtles, and valuable but severely depleted game fish such as bluefin tuna. In fact, the severe injury and death of two sperm whales in December 2010 prompted federal fishery managers to enact a temporary emergency rule requiring observers on all drift gillnet boats—a fivefold increase from the scant 20 percent observer coverage normally accorded this fishery, as of 2013. That rule is now due to expire on Aug. 5.

Observers have recorded thousands of fish tossed overboard such as the mola mola (a large oblong-shaped creature also known as sunfish), striped marlin, and blue sharks, in many cases dead or dying. Observers have accompanied less than 20 percent of drift gillnet trips, so there is no way of fully knowing the full harm caused by this gear.

It's time for West Coast fishery managers to phase out the use of drift gillnets. We can end the discard of nontarget fish ensnared by them and stop the senseless killing of rare animals by simply using alternative fishing methods.

The past and future offer other ways to continue catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface.

These and other alternatives for catching swordfish do not ensnare nontarget animals, such as leatherback sea turtles, whales, and tuna. When it comes to drift gillnets, now should be the end of the line.

Federal fisheries managers should:

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

Page 2 of 121

6/13/2014 National Oceanic and Atmospheric Administration Mail - Supplemental Public Comment, Fwd: Gillnets Out of Currently Protected Areas and Shift the Fish...

2) Support the transition of the fleet to more selective gear.

PLEASE keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you for your consideration,

SL

Miami, Fl

Thank you for your comments to the Pacific Fishery Management Council. Your comments have been received and will be forwarded to the appropriate staff member for processing.

Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220 Phone: 503-820-2280 Toll Free: 1-866-806-7204 Fax: 503-820-2299 Twitter: http://Twitter.com/PacificCouncil

Monday, June 9, 2014

Pacific Fishery Management Council Dorothy Lowman, Chair 7700 N.E. Ambassador Place, Suite 101 Portland, OR 97220

Dear Chair Lowman and Council Members,

The American Cetacean Society Oregon Chapter is a group that focuses on viewing, education, research and conservation of cetaceans. Our activities and goals rely on healthy eco-systems which support these animals.

As wildlife observer and conservation volunteers, it is worth our precious time advocating for the practice of sustainably caught seafood for public consumption; including Pacific swordfish and thresher sharks caught off the coast of California. We are concerned that the predominant method of catching swordfish involves the use of drift gillnets, which inadvertently kill non-targeted species of marine mammals and other wildlife.

Despite numerous efforts in recent years to minimize bycatch, the fundamental nature of leaving drift gillnets to soak for hours at a time means that they will continue to entangle non-targeted fish and wildlife – especially in an ecosystem as vibrant and diverse as the California Current.

Therefore, we support the council's decision in March to develop a plan to transition this fishery toward more environmentally sustainable types of fishing gear. Further, we encourage the council to follow through on that commitment during your meeting this month in Garden Grove, California.

The council should move decisively to establish clear criteria for granting experimental fishing permits to fishermen willing to try alternatives that are actively tended and that minimize interaction with non-targeted species of dolphins, sharks, whales and other fish.

It is time to shift this fishery to a more sustainable future. The public should be able to enjoy this prized seafood delicacy with the knowledge that our fishermen are setting the standard for catching swordfish in a way that protects other ocean wildlife.

Sincerely,

Joy Primrose ACS Oregon Chapter President marine_lover4ever@yahoo.com (541) 517-8754



Port Orford Ocean Resource Team

PO Box 679 444 Jackson St Port Orford, OR97465 P: 541.332.0627 F: 541.332.1170 info@oceanresourceteam.org oceanresourceteam.org

Monday, June 9, 2014

Pacific Fishery Management Council Dorothy Lowman, Chair 7700 N.E. Ambassador Place, Suite 101 Portland, OR 97220

Dear Chair Lowman and Council Members,

Our organization combines science, education, local knowledge and conservation to address ocean issues. Conservation of ocean wildlife, including whales/cetaceans is important to our work. Our activities and goals rely on healthy eco-systems which support the marine environment, including whales/cetaceans.

We advocate for the practice of sustainably caught seafood for public consumption; including Pacific swordfish and thresher sharks caught off the coast of California. We are concerned that the predominant method of catching swordfish involves the use of drift gillnets, which inadvertently kill non-targeted species of marine mammals and other wildlife.

Despite numerous efforts in recent years to minimize bycatch, the fundamental nature of leaving drift gillnets to soak for hours at a time means that they will continue to entangle non-targeted fish and wildlife – especially in an ecosystem as vibrant and diverse as the California Current.

Therefore, we support the council's decision in March to develop a plan to transition this fishery toward more environmentally sustainable types of fishing gear. Further, we encourage the council to follow through on that commitment during your meeting this month in Garden Grove, California.

The council should move decisively to establish clear criteria for granting experimental fishing permits to fishermen willing to try alternatives that are actively tended and that minimize interaction with non-targeted species of dolphins, sharks, whales and other fish.

It is time to shift this fishery to a more sustainable future. The public should be able to enjoy this prized seafood delicacy with the knowledge that our fishermen are setting the standard for catching swordfish in a way that protects other ocean wildlife.

Sincerely,

Leesa Cibb

Leesa Cobb, Executive Director



Get Inspired! 6192 Santa Rita Garden Grove, CA 92845

6/9/14

Ms. Dorothy M. Lowman, Chair Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220-1384

RE: Agenda Item E.2 Drift Gillnet Fishery Transition Issues

Dear Chairman Lowman and Council Members:

I am thankful for the work the Council does to ensure the healthy balance of our marine ecosystem. The Council has made steady progress by acting in March to develop a comprehensive plan to shift the current fishery for Pacific swordfish away from drift gillnets.

I am a marine biologist who has been working to restore coastal kelp forests for the last 12 years. My efforts have helped to reforest the Coast of Orange County, CA. Taking an ecosystem-based approach to conservation is absolutely crucial to protecting the vast seas on our planet. I work in the ocean, underwater. I get to see the fish that are born each year and see the young of the year migrate through our restored kelp forests. In January, I can observe the plankton booms, upwelling, and the numbers of juvenile fishes and forecast the offshore fishing each year. Through my work, I am constantly reminded that maintaining a healthy, balanced, and productive Pacific Ocean is everyone's responsibility.

I am not a fan of drift gillnet fishing period but I implore you to keep drift gillnets out of currently protected areas. It is necessary to require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. The Council should also look to shift the fishery for swordfish and thresher sharks to more selective, actively fished gear types that minimize wasteful bycatch of marine animals.

I thank you for your hard work and for continuing to push for a sustainable and productive Pacific Ocean.

Sincerely,

Nancy L. Conco

Nancy Caruso, Marine Biologist/Founder Get Inspired! www.getinspiredinc.org 714.206.5147



June 10, 2014

To: Pacific Fishery Management Council and National Marine Fisheries Service

Ms. Dorothy Lowman, Chair Pacific Fishery Management Council 7700 NE Ambassador Place, #101 Portland, OR 97220 pfmc.comments@noaa.gov

Mr. William Stelle Administrator, Northwest Region National Marine Fisheries Service 7600 Sand Point Way, NE, Bldg 1 Seattle, WA 98115-0070 will.stelle@noaa.gov

From: Jason Scorse, Ph.D.

RE: Agenda Item E.2: Transitioning the Drift Gillnet Swordfish Fishery

Dear Chair Lowman and Mr. Stelle:

As Chair of the International Environmental Policy Program and Director of the Center for the Blue Economy at the Monterey Institute of International Studies, I have great interest in issues of marine conservation and natural resource use. For this reason, I was contracted by Oceana to provide my expert opinion on the extent to which the "market transfer effect" is likely to occur if drift gillnets in the California swordfish/thresher shark fishery are phased out. I have a Ph.D. in Environmental & Natural Resource Economics from UC-Berkeley and almost 15 years of experience in environmental consulting, teaching, and research.

Before outlining the conditions under which the market transfer effect could take place and why it is unlikely, it is also important to put the California swordfish fishery in the broader global context. With currently less than 20 fishermen harvesting a very small amount of swordfish (<500 tons over the past decade), the fishery represents at most a tiny fraction of global swordfish production (less than 0.5%), and whatever restrictions or regulations are imposed on this fishery will have very little to no impact on the rest of the world's swordfish fisheries.¹

¹ Global swordfish catch was 114,296 tons in 2012 according to the UN FAO. See <u>http://www.fao.org/fishery/species/2503/en</u>.

The principle rationale in support of transitioning away from drift gillnets to more sustainable fishing gear is that the bycatch produced by drift gillnets is severe, killing hundreds of marine mammals, sharks, and other fish each year, including whales, dolphins, and seals, while also threatening endangered sea turtles. At the same time, only a small relative portion of U.S. swordfish landings are caught using drift gillnets. The proponents of a transition to other fishing gear contend that the fewer than 20 current California drift gillnet fishermen could switch to alternative fishing methods, such as harpoons or hand hook and lines, which significantly reduce or eliminate bycatch altogether.

One of the primary arguments used by proponents of drift gillnetting is that banning the use of California drift gillnets in the swordfish/thresher shark fishery will *not* result in an overall reduction in bycatch because foreign fleets with significantly less stringent bycatch regulations will simply make up the difference and export the product to the U.S. market. Since these countries are believed to kill more mammals and turtles per unit of swordfish landed, proponents of drift gillnetting contend that the overall effect of a California drift gillnet ban will be negative for the affected species.

This is what is referred to in economics as the "market transfer" effect, and it can undermine the ability of any one country to achieve environmental conservation goals when the resource at issue is exploited within an international context by various actors playing by different sets of rules.

It is important to note that the basic theory underlying the market transfer effect is sound, in that in a global economy, a change in a commodity chain in one region will often have ripple effects across other regions, sometimes leading to counter-intuitive outcomes (such as the case where a ban to protect species from bycatch in one country can actually increase total *global* bycatch, and hence make the species worse off). However, demonstrating that the market transfer effect is theoretically possible in any one context does not mean that it will automatically occur, or that it is even likely to occur.

There are three conditions that must be met for the market transfer effect to take place in the California gillnet swordfish fishery, and they are all unlikely.

1. The remaining active California swordfish drift gillnet fishermen all exit the industry and the supply is not made up by other California swordfish fishermen

The market transfer effect can only happen if the California gillnet fishermen exit the industry, and the California swordfish supply is permanently reduced. There is evidence to suggest that alternative swordfish harvesting techniques are viable, particularly hand hook and line and harpooning (although likely in small quantities as the entire U.S. West Coast swordfish fishery has been in decline for many years)². Therefore, it is likely that some or all of the current supply will be procured by other fishing techniques, minimizing any potential market transfer effect.

² See "Understanding Key Issues Facing U.S. West Coast Swordfish fisheries and Consumers". A NOAA National Marine Fisheries Service White Paper prepared by the *Southwest Region and Southwest Fisheries Science Center. Available at:*

http://www.westcoast.fisheries.noaa.gov/publications/fishery_management/hms_program/2011%20swordfish%20workshop%20Background%20 materials/understanding_swo_issues-_whitepaper.pdf.

2. Domestic restaurants and stores currently purchasing the swordfish caught by California drift gillnet fishermen automatically increase their purchases of imported swordfish to make up the difference

Even if some of the gillnet fishermen choose to exit the fishery (and other California fishermen don't increase their swordfish catch), thus reducing the California supply of swordfish, the next question to ask is whether the restaurants and stores currently purchasing this fish would choose to buy the same amount of swordfish as before the closure, or instead switch to selling different species. While the U.S. imports most of the swordfish it consumes, overall U.S. swordfish consumption and imports have actually decreased steadily from the late 1990s.³ Restaurants and stores routinely adjust their seafood offerings based on changes in local supply, and it is possible that they would compensate for the small loss of California swordfish by offering other types of seafood products. There is no evidence to suggest that, for every ton of decreased local swordfish supply, restaurants and stores would automatically turn to foreign swordfish imports. This is especially true since imported swordfish are not as fresh, are known to be harvested in an unsustainable manner, and are labeled as such (The Monterey Bay Aquarium lists imported swordfish as "red" and to be avoided⁴).

3. Foreign swordfish fleets would have to increase their effort and catch more swordfish than they would have if California swordfish production had remained constant

Even if California swordfish fishermen simply exit the fishery and do not switch to alternative fishing methods *and* domestic stores and restaurants decide to substitute pound-for-pound the amount of swordfish that they could no longer buy from California fishermen for imports, this is not sufficient to guarantee the market transfer effect. In order for it to occur, foreign fleets would need to increase their catch by the amount lost in California, thereby increasing their catches above and beyond what they would have been in the absence of a reduction in California swordfish catch. There is no way to know that this would occur without significant scientific evidence showing that the swordfish that were in essence "freed" by the California drift gillnet prohibition would end up in the nets of foreign fishing fleets, *and* that the additional effort required to catch them would make such effort economically viable. It is possible that the foreign fleets would simply shift some of their already existing exports to the U.S. (where they might earn a higher price), without a net increase in overall global catch. In that case, the end result would be no overall increase in bycatch, or that the additional swordfish not harvested off California would simply augment existing populations.

The key point is that in order to determine whether a transition away from on drift gillnets would actually lead to increased bycatch (due to increased production in other countries with less stringent regulation) it must be shown that decreased catch in the California swordfish fishery due to the new regulations would lead to increased catches in other areas *that would not have occurred otherwise*. The reason I put this last statement in bold is that this condition is very hard to prove and unlikely to occur. Perhaps just as important is the fact that, given how relatively small the gillnet swordfish catch is and that the supply is focused almost exclusively on local

³ See "Swordfish Fishery Economics: Transfer Effect and West Coast Fishery Attrition". A presentation by Stephen M. Stohs at NOAA's Southwest Fishery Science Center, September, 2011. Available at: <u>http://www.pcouncil.org/wp-content/uploads/Elb_SUP_SWFSC_ECONOMIC_PPT_SEPT2011BB.pdf</u>.

⁴ See <u>http://www.seafoodwatch.org/cr/seafoodwatch/web/sfw_factsheet.aspx?gid=68</u>.

California markets, it is unclear whether restaurants and stores would not simply switch to alternative seafood choices altogether, thereby making the risk of transfer effect a moot point.

In summary, while a market transfer effect leading to a net increase in bycatch of marine mammals, sea turtles, and other species due to a phase-out of California drift gillnets is theoretically possible, there is currently no evidence to substantiate such a claim. Moreover, any market transfer effect is not something that would occur automatically if a ban on drift gillnets were implemented. Given the very small relative amount of swordfish currently landed by California gillnet fishermen and the fact that most of this is consumed locally in California, it is just as likely that the net changes in swordfish imports would be negligible, and that there would be little to no impact on global swordfish catch in the rest of the world. Therefore, it is my expert opinion that the market transfer effect should not be considered when evaluating the pros and cons phasing out drift gillnets; its impact is likely trivial.

If you have any questions please do not hesitate to contact me.

Sincerely,

Jason Scorse, Ph.D. Associate Professor Chair, <u>International Environmental Policy Program</u> Director, <u>Center for the Blue Economy</u> Graduate School of International Policy and Management <u>Monterey Institute of International Studies</u>, A Graduate School of Middlebury College Office: M102C, McCone Building

CC. The Honorable Paul Fong, California Assemblymember, 28th District The Honorable Mark Stone, California Assemblymember, 29th District Charlton Bonham, Director, California Department of Fish and Wildlife



Wednesday, June 11, 2014

Pacific Fishery Management Council Dorothy Lowman, Chair 7700 N.E. Ambassador Place, Suite 101 Portland, OR 97220

Dear Chair Lowman and Council Members,

My name is Marcus Hinz and I am an owner/operator of a tourism business which relies on the existence of wildlife, natural habitat and the healthy eco-systems which support them. As you may guess, our customers use our services to get a close view at wildlife, such as the migratory Brown Pelicans, which rely on healthy food stocks along the entire West Coast.

As a business owner, it is worth spend a bit of my precious time advocating for the practice of sustainably caught seafood for public consumption; including Pacific swordfish and thresher sharks caught off the coast of California. We are concerned that the predominant method of catching swordfish involves the use of drift gillnets, which inadvertently kill non-targeted species of fish and wildlife.

Despite numerous efforts in recent years to minimize bycatch, the fundamental nature of leaving drift gillnets to soak for hours at a time means that they will continue to entangle non-targeted fish and wildlife – especially in an ecosystem as vibrant and diverse as the California Current.

Therefore, we support the council's decision in March to develop a plan to transition this fishery toward more environmentally sustainable types of fishing gear. Further, we encourage the council to follow through on that commitment during your meeting this month in Garden Grove, California.

The council should move decisively to establish clear criteria for granting experimental fishing permits to fishermen willing to try alternatives that are actively tended and that minimize interaction with non-targeted species of dolphins, sharks, whales and other fish.

It is time to shift this fishery to a more sustainable future. The public should be able to enjoy this prized seafood delicacy with the knowledge that our fishermen are setting the standard for catching swordfish in a way that protects other ocean wildlife.

Sincerely,

Marcus A Hinz, Principal Executive

CALIFORNIA COASTAL COMMISSION 45 FREMONT STREET, SUITE 2000 SAN FRANCISCO, CA 94105-2219 VOICE AND TDD (415) 904-5200

June 12, 2014

Dorothy Lowman, Chair, and Council Members Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220-1384

Re: June 18-25, 2014 Pacific Fishery Management Council (PFMC) Meeting, Highly Migratory Species Management

Dear Chair Lowman and Council Members:

The Commission staff wishes to transmit comments for consideration at your upcoming June 18-25, 2014 PFMC meeting, concerning two of the agenda topics listed under Highly Migratory Species Management, specifically the following agenda items:

E.2 Drift Gillnet Fishery Transition Issues

E.3 Exempted Fishing Permit (EFP) Process

The Coastal Commission has historically expressed interest in fisheries management issues that involve efforts to reduce bycatch of marine mammals, sea turtles, and other non-targeted species. We fully support the goal articulated at the March 2014 PFMC meeting to take several "... actions toward a goal of developing a comprehensive plan to transition the current drift gillnet fishery to a fishery utilizing a suite of more environmentally and economically sustainable gear types." (March 2014 Decision Summary Document (pages 4-5)). We are pleased to see that the Council's first action under this goal (i.e., to request the National Marine Fisheries Service (NMFS) to reinstate its emergency rule which had lapsed) has been successfully achieved.

Concerning the subsequent actions that follow (2-4) under this goal, it is unclear to us how "federalizing" the swordfish fishery and removing State permitting will necessarily reduce sea turtle and marine mammal bycatch, and we would be concerned over any proposal that might result in *increased* amounts of drift gillnet fishing and/or long line fishing off California waters. Before any PFMC decisions are made, we hope to engage in further dialogue with PFMC members representing NMFS and our sister agency, the California Department of Fish and Wildlife (CDFW), so we may better understand how a modified regulatory regime would work to improve protection for species of concern. We would support a modified regulatory regime *if* assurances could be provided that it would be implemented in a manner assuring decreased bycatch.

Along the same lines, we also hope and expect that any future Experimental Fishing Permits that may be considered to assist fishery transition efforts will fully support the above goal articulated by the Council, and will not decrease protection for bycatch species.

If you have any questions, please feel free to call me at (415) 904-5289.

Sincerely,

MARK DELAPLAINE Manager, Energy, Ocean Resources, and Federal Consistency Division

cc: PFMC Staff (Kit Dahl) NOAA Fisheries (Mark Helvey, Craig Heberer, Will Stelle) CDFW (Chuck Bonham, Marci Yaremko) OCRM (David Kaiser, Kerry Kehoe) Ocean Protection Council (Cat Kuhlman) Assemblyman Mark Stone STATE CAPITOL P.O. BOX 942849 SACRAMENTO, CA 94249-0028 (916) 319-2028 FAX (916) 319-2128 DISTRICT OFFICE 2105 S BASCOM AVENUE, SUITE 160 CAMPBELL, CA 95008-3276 (408) 371-2802 FAX (408) 371-2809

E-MAIL Assemblymember.Fong@assembly.ca.gov Assembly California Legislature

ASSEMBLYMEMBER, TWENTY-EIGHTH DISTRICT

加州眾議員 方文忠

COMMITTEES CHAIR: ELECTIONS AND

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CHAIR: ASIAN PACIFIC ISLANDER LEGISLATIVE CAUCUS

June 12, 2014

Ms. Dorothy Lowman, Chair and Members Pacific Fishery Management Council 7700 NE Ambassador Place Suite 101 Portland, OR 97220-1384

Re: Highly Migratory Species Items E.1, 2 and 3, 224th Session of the Pacific Fishery Management Council, June 20-25, 2014

Dear Chair Lowman and Council Members,

As members of the California State Assembly who are invested in the long-term sustainability of California's ocean health and fisheries, we are writing to express our comments and concerns about future management of the California drift gillnet fleet for swordfish and thresher shark.

Specifically, we support the recent commitment by the Pacific Fishery Management Council (PFMC) to take "actions toward a goal of developing a comprehensive plan to transition the current drift gillnet fishery to a fishery utilizing a suite of more environmentally and economically sustainable gear types."

We, the undersigned members of the California State Assembly, urge the PFMC to follow through with this goal by establishing a hard end date after which drift gillnets will be prohibited throughout the U.S. West Coast Exclusive Economic Zone, and a transition plan to more sustainable fishing gears. Setting an appropriate end date for this gear type will provide immediate incentives for innovations with new and existing sustainable fishing gears, while allowing a smooth transition for fishermen currently using drift gillnets.

We also support PFMC decisions over the past two years to deny expansion of the driftnet fishery into the Pacific Leatherback Conservation Area.

However, we remain concerned over new proposals to remove California authority to permit and otherwise jointly manage the driftnet fishery by establishing a limited entry federal permitting system.

Page 14 of 121 Printed on Recycled Paper The state of California has a long history of regulating the California drift gillnet fishery in order to reduce and prevent negative impacts to the marine environment and protected species. While many aspects of the fishery are now primarily managed by federal agencies, the state Legislature initially authorized drift gillnet fishing gear and the state of California continues to issue limited entry permits and determine California fishermen's participation in the fishery. Therefore, the state Legislature has a direct interest in the management of the fishery.

What is more, we appreciate the National Marine Fisheries Service's recent commitment to enforce seafood imports to meet U.S. fishing standards, in response to an inquiry from members of the California State Assembly dated February 4, 2014. This renewed commitment is consistent with Assembly Joint Resolution 8, chaptered in 2009, which requests the United States government restrict swordfish imports until nations seeking to export swordfish can demonstrate that the marine mammal bycatch as a result of this fishery is not in excess of U.S. standards.

The state of California and the Legislature have been assets to management of the fishery over the decades with requirements for time and area closures, gear changes and limiting effort through permit conditions. The state has also acted as a "backstop" to various federal fishery initiatives that have conflicted with longstanding state policies and statutes, such as those that limit the use of driftnets and other high bycatch gear including pelagic longlining.

The Council can better move forward to transition the driftnet fishery in collaboration with the state of California than by removing its authority over permits.

Drift gillnets have been banned on the High Seas and along most of the U.S. West Coast because of high bycatch of marine life including endangered whales, dolphins, sea turtles, shark, tuna and other non-target fish. The California drift gillnet fishery is steadily shrinking and the demand for swordfish in California and the U.S. has steadily declined since the mid-1990s. The U.S. Food and Drug Administration and the U.S. Environmental Protection Agency advise women who are pregnant, women who might become pregnant, nursing women and children to never eat swordfish due to high mercury levels.

Given the continued challenges with managing the California drift gillnet fishery, the indiscriminate nature of the gear, and the direct impacts on California's natural resources, the undersigned Assembly members urge the Pacific Fishery Management Council to:

1. Take immediate actions to set a definitive sunset date on the use of drift gillnets along the California and U.S. West Coast.

2. Allow the fishery to switch to alternative, sustainable gears.

3. Maintain the current prohibition on pelagic longlining along the U.S. West coast EEZ, including for experimental purposes.

4. Deny proposals to remove state authority over permitting and management of the fishery.

We appreciate the ongoing the dialogue between our offices, and we hope to be able to convene a stakeholder meeting soon regarding this very important issue. Should you have any questions, please contact my Capitol office at (916) 319-2028.

Sincerely,

PAUL FONG Assemblymember, 28th District

TOM AMMIANO

Assemblymember, 17th District

MARC LEVINE

Assemblymember, 10th District

NANCY SKINNER Assemblymember, 15th District

MARK STONE

Assemblymember, 29th District

ROB BONTA

Assemblymember, 18th District

ANTHONY RENDON

ANTHONY RENDON Assemblymember, 63rd District

BOB WIECKOWSKI Assemblymember, 25th District



Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>

Fwd: Comments Re: Drift Gillnets in CA waters, from Mr. Naccari, M.B.N.M.S. Consv. Work. Group member.

1 message

PFMC Comments - NOAA Service Account comments@noaa.gov>
To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>
Cc: Chuck Tracy - NOAA Affiliate <chuck.tracy@noaa.gov>

Thu, Jun 12, 2014 at 1:56 PM

------ Forwarded message ------From: Nick Naccari <nick_naccari@yahoo.com> Date: Thu, Jun 12, 2014 at 1:14 PM Subject: Comments Re: Drift Gillnets in CA waters, from Mr. Naccari, M.B.N.M.S. Consv. Work. Group member. To: pfmc.comments@noaa.gov

6/11/2014 Re: Drift Gillnets Dear Pacific Fisheries Management Council;

I wish to add my comment regarding the upcoming meeting discussion to develop a comprehensive plan to transition the current drift gillnet fishery to one utilizing a suite of more environmentally and economically sustainable gear types. The Pacific Fishery Management Council and National Marine Fisheries Service has a vital responsibility to protect our ocean wildlife and ecosystems, including addressing the extensive damage caused to nearby ecosystems by drift gillnets. Drift gillnets benefit such a tiny group of people, at the expense of the much wider and deeper benefit of all the other many sustainable uses of the ecosystem. It seems rather obvious dectructive drift gillnets really should be replaced with much less abusive methods of fishing for the target species. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately, many of the these species are "protected species" for very valid reasons, yet the drift gillnet fishery very obviously violates those protections, and thereby violates the public good.

Considering the crude, and very obvious, destruction drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be in line with modern, clean, responsible fishing methods. Let's not foolishly replace one destructive method with another. In the name of your responsibility to protect the sustainability of the fisheries ecosystems, please do not permit Pelagic longlines, which are similarly harmful to the marine environment due to high bycatch, and have been prohibited off California for decades. There are sustainable fishing gears available to catch swordfish, such as surface hook and line and harpoon gear, that result in much less marine life being harmed.

California has a worldwide reputation as a leader in technology, quality, and environmentally sound methods of doing business. These drift gillnets are crude and barbaric, wasteful, and harmful to much more than just the target species, they randomly destroy the ecosystem and it's inhabitants which are of great value. It is wise to pay a bit more now to keep the fishery and surrounding ecosystem sustainable, rahter than save a few cents and soon loose the fishery, and wastefully injure the ecosystem, because of outdated destructive practices. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife, I respectfully strongly request the Pacific Fishery Management Council does the same, and protect the fishery from these destructive, wasteful, gillnets.

Respectfully yours,

6/13/2014 National Oceanic and Atmospheric Administration Mail - Fwd: Comments Re: Drift Gillnets in CA waters, from Mr. Naccari, M.B.N.M.S. Consv. Work Gr...

Nicholas Naccari Active member of M.B.N.M.S. Conservation Working Group

Thank you for your comments to the Pacific Fishery Management Council. Your comments have been received and will be forwarded to the appropriate staff member for processing.

Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220 Phone: 503-820-2280 Toll Free: 1-866-806-7204 Fax: 503-820-2299 Twitter: http://Twitter.com/PacificCouncil



June 12, 2014

Ms. Dorothy Lowman Pacific Fishery Management Council, Chair 7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220-1384 <u>pfmc.comments@noaa.gov</u>

RE: Agenda Item E.2, Drift Gillnet Fishery Transition Issues

Dear Chair Lowman and Council Members:

On behalf of Defenders of Wildlife and our more than 180,000 California members and supporters, I write in strong support of the decision made by the Pacific Fisheries Management Council in March 2014 to move towards a goal of developing a comprehensive plan for the California drift gillnet fishery. According to the Council's decision, such a plan would transition the fishery to one that utilizes "a suite of more environmentally and economically sustainable gear types that can effectively target the healthy West Coast swordfish stock operating under MSA [Magnuson-Stevens Act] authority."

California's drift gillnet fishery remains among the dirtiest and most wasteful in the world, discarding approximately 61% of its catch.ⁱⁱ Additionally, drift gillnets kill over one hundred marine mammals and thousands of sharks, rays and other non-target fish on average each year. Protected species taken in these deadly nets include endangered leatherback sea turtles, endangered sperm whales, endangered humpback whales, gray whales, minke whales, bottlenose dolphins, long-beaked common dolphins, short-beaked common dolphins, northern right whale dolphins, Pacific white-sided dolphins, California sea lions, Northern elephant seals, Risso's dolphins and shortfinned pilot whales.

Defenders urges the Council at its upcoming June 2014 meeting to develop a plan for the California drift gillnet fishery that transitions it away from drift gillnets altogether in an effort to significantly reduce bycatch and protect marine species including whales, sea turtles, and non-target sharks. While the Council should promote continued research with experimental gear types, harpoons and handheld hook and line are clean and legal gear types that can facilitate this transition. This plan should include 100% observer coverage on drift gillnet vessels during the transition period.

In addition, Defenders supports a prompt and definite sunset period, as determined by the Council and its stakeholders, after which drift gillnets are prohibited. This will provide incentives to develop and test cleaner gear types while providing the public with the assurance that bycatch issues are being addressed.

California Program Office

1303 J Street, Suite 270

Sacramento, CA 95814

Telephone 916-313-5800

Upholding such necessary standards for California's fishery, however, is not sufficient for reducing wasteful bycatch and could lead to increased importation of swordfish from foreign fisheries using destructive gear types. It is important for NMFS to finalize rulemaking on importation standards to level the playing field and ensure that countries exporting swordfish to the U.S. meet or exceed domestic bycatch standards. This should be a top priority for NMFS and the Council as part of the overall transition plan for the drift gillnet fishery.

Drift gillnets continue to pose a significant threat to multiple species throughout California's marine ecosystems. It is time to shift this fishery to a gear type that offers us lower bycatch and reduces the injury or death of our ocean's iconic species such as whales, sea turtles, and sharks. Defenders urges you to initiate a transition plan that eliminates drift gillnets off the California coast and prohibits the importation of swordfish caught using destructive gear types.

Thank you for your time and consideration.

Sincerely,

Haley Stewart

Haley Stewart Defenders of Wildlife Hstewart@defenders.org

ⁱ March 2014 Pacific Fishery Management Council Meeting Decision Summary Document. <u>http://www.pcouncil.org/wp-content/uploads/0314decisions.pdf</u>. Accessed on 9 June 2014.

¹¹ National Oceanic Atmospheric Administration (NOAA) Observer Program. Data Summaries and Reports, available at: <u>http://www.westcoast.fisheries.noaa.gov/fisheries/wc_observer_programs/sw_observer_program_info/data_summ_re_port_sw_observer_fish.html</u>



Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>

Fwd: Drift Gillnet Public Comment Supplemental Deadline

PFMC Comments - NOAA Service Account pfmc.comments@noaa.gov>
To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>
Cc: Chuck Tracy - NOAA Affiliate <chuck.tracy@noaa.gov>

Fri, Jun 13, 2014 at 8:08 AM

------ Forwarded message ------From: **Erich Hoyt** <erich.hoyt@mac.com> Date: Thu, Jun 12, 2014 at 11:06 PM Subject: Drift Gillnet Public Comment Supplemental Deadline To: pfmc.comments@noaa.gov

Thursday, June 12, 2014

To: Dorothy Lowman, Chair Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220

Dear Chair Lowman and Council Members,

My name is Erich Hoyt and I am an author of more than 20 books on whales and sea life; Research Fellow with Whale and Dolphin Conservation (WDC, US and UK); and member of several IUCN commissions and co-chair of the IUCN Task Force on Marine Mammal Protected Areas. I am a US citizen, currently living in the UK, but with longtime connections to the NW. In May 2014, for example, I undertook a 9 city tour of the west coast including northern and central California, Oregon and Washington State in support of The Whale Trail (thewhaletrail.org) a conservation group that promotes the viewing, education, research and conservation of cetaceans along the Pacific coast. It would be an understatement to say that my work, activities and long-time goals depend on the maintenance of healthy ecosystems which support whales and other marine life.

As part of my work, I often advocate the consumption of sustainably caught seafood, but I have some concerns about the Pacific swordfish and thresher sharks which are being caught off the coast of California. On my recent trip through the Northwest, I was depressed, in fact, to realize, that the common method of catching swordfish is to use drift gillnets, which often kill non-targeted species of marine mammals, seabirds and other marine life, especially when they are allowed to stay in the water for hours at a time.

I fully support the council's decision this past March to develop a plan to move this fishery toward more environmentally sustainable types of fishing gear. I sincerely hope and strongly encourage the council to follow through on that commitment in what I understand will be a further meeting later in June on this matter to be held in Garden Grove, California.

I would encourage the council to move toward the establishment of criteria for granting experimental fishing permits to fishermen willing to try alternatives that are actively tended and that minimize interaction with non-targeted species of cetaceans, sharks, and other fish.

I think it's embarrassing and inexcusable, really, that the use of gill nets persists anywhere today in view of all Page 21 of 121
National Oceanic and Atmospheric Administration Mail - Fwd: Drift Gillnet Public Comment Supplemental Deadline

that we know about them, and in view of the well documented overfishing and depletion of our oceans. We owe it to the public, and to ourselves, to have a sustainable fishery that we can all be confident about and to know that it is being well managed.

Thank you very much for your attention.

Best regards,

Erich Hoyt

Senior Research Fellow, Whale and Dolphin Conservation (WDC, US and UK) Head, WDC Global Critical Habitat / Marine Protected Areas Program Invited Member, IUCN Cetacean Specialist Group and World Commission on Protected Areas Co-chair, IUCN SSC-WCPA Marine Mammal Protected Areas Task Force

Thank you for your comments to the Pacific Fishery Management Council. Your comments have been received and will be forwarded to the appropriate staff member for processing.

Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220 Phone: 503-820-2280 Toll Free: 1-866-806-7204 Fax: 503-820-2299 Twitter: http://Twitter.com/PacificCouncil



June 12, 2014

Dorothy Lowman, Chair Pacific Fishery Management Council 1100 NE Ambassador Place, #101 Portland, Oregon 97220

RE: Agenda Item E.2.c. & E.3.c - Public Comment on Drift Gillnet Fishery Transition Issues & the Exempted Fishing Permit (EFP) Process

Dear Chair Lowman and Council Members:

We write in regards to the management of the West Coast drift gillnet (DGN) fishery for swordfish and common thresher shark. At the upcoming June meeting, and throughout the biennial management process, we request the Pacific Fishery Management Council (Council) take action to reduce harmful bycatch associated with the DGN fishery and transition the fishery to more sustainable fishing gear types.

Specifically, we ask the Council to:

- Require the observation of all vessels fishing with DGN gear;
- Establish enforceable caps on the killing of sea turtles, marine mammals, and other protected marine life;
- Construct a management framework to transition the DGN fishery to more selective and actively tended gear including adoption of criteria for the evaluation of Exempted Fishing Permits (EFP); and
- Develop a fishery transition plan for the DGN fishery by establishing firm deadlines for management action.

We are encouraged by the Council actions taken at the March meeting, in particular "[t]asking Council staff, the HMSAS, and the HMSMT with initial development of a fishery transition plan and possible regulations under a typical MSA process."¹ However, we believe the Council intended to go beyond simply improving the existing DGN fishery. By taking the actions above, the Council can minimize and mitigate harmful impacts to marine wildlife from DGN fishing off the West Coast while working to transition the fishery to a more selective and actively tended gear type. The combination of these actions will help to develop a sustainable swordfish and thresher shark fishery while ensuring a healthy and balanced ocean ecosystem.

¹ <u>PFMC Decision Summary Document</u>, March 2014, p. 4.

Require the Observation of All Vessels Fishing with DGN Gear

In order to more accurately account for the incidental catch of protected species and bycatch of other marine wildlife, the Council should request that NMFS require the observation of all vessels fishing with DGN gear for as long as the fishery operates off the West Coast. In a fishery with a demonstrated potential for episodic bycatch of protected species, the observation of all vessels ensures the highest degree of accountability² under any system of take caps (discussed more fully below).

In the late 1990s, the Pacific Offshore Take Reduction Team (POCTRT) recommended and NMFS adopted various management strategies to minimize the level of mortality and serious injury of marine mammals that occurs incidental to fishing operations in the DGN fishery.³ Although a reduction in the catch of some non-target species occurred, the DGN fishery continued to have unacceptably high levels of bycatch⁴ and incidental take of protected species.⁵ As a result, through emergency action, NMFS enacted⁶ and recently renewed⁷ the following rule for the DGN fishery:

- 1. Immediate closure of the fishery for the remainder of the season if one sperm whale is observed killed or seriously injured in DGN gear;
- 2. 100 percent observer coverage on all DGN fishing vessels in areas deeper than the 1,100 fathom (2,012 m) depth contour; and
- 3. Installation and operation of a vessel monitoring system (VMS) on all vessels prior to embarking on a DGN fishing trip.

We are pleased NMFS reinstated the Emergency Rule through August 5, 2014. These measures are necessary for the DGN fishery to maintain compliance with existing federal regulations under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the Endangered Species Act (ESA), and the Marine Mammal Protection Act (MMPA) as the DGN fishery has not substantially changed since the events that precipitated the Emergency Rule. The Emergency Rule includes requirements that

² "The objective of the NMFS Observer Program [is] to record . . . information on non-target fish species and protected species interactions that may not be typically nor accurately reported in the fishing logbooks, due to focus on target species by fishermen or incentives not to report certain species to avoid increased regulation." Biological Opinion on the continued management of the drift gillnet fishery, NMFS, May 2, 2013, p.17.

³<u>Pacific Offshore Cetacean Take Reduction Plan</u>, 50 CFR § 229.31 (62 Fed. Reg. 51805, Oct. 3, 1997 *as amended* 64 Fed. Reg. 3431, Jan. 22, 1999).

⁴<u>National Oceanic Atmospheric Administration (NOAA) Observer Program</u>, total discard rate (number of animals) from May 2007 to January 2013.

⁵ During the 2010-2011 fishing season, an observer recorded two sperm whales caught in DGN gear – one dead and one seriously injured. NMFS determined this incidental take exceeded the Potential Biological Removal (PBR) for the California-Oregon-Washington stock of sperm whales as well as the incidental take statement (ITS) for the DGN fishery, preventing NMFS from issuing a new MMPA 101(a)(5)(E) permit for the fishery under the management regime in place at the time.

⁶ <u>78 Fed. Reg. 54548</u> (Sept. 4, 2013).

⁷ <u>79 Fed. Reg. 29377</u> (May 22, 2014).

are a good interim step. However, these requirements must be made permanent⁸ and broadened in order to properly safeguard protected species.

We urge the Council to support the expansion of the Emergency Rule to require all DGN vessels be observed, not only those vessels fishing in deeper water. Last year, NMFS increased observer coverage to 34.2 percent of the total number of sets in the DGN fishery.⁹ Although this was a marked increase from previous years, the Council will not have a clear picture of the amount of bycatch in the DGN fishery and cannot enforce take caps until every set made by a DGN vessel is observed.

To this end, an effort must be made to observe DGN vessels currently exempted from observer coverage due to size and safety issues. The percentage of unobservable DGN vessels has been increasing over time and some of these unobservable vessels are extremely active participants in the fishery. In recent years, as much as 40-45 percent of the total number of sets in the DGN fishery was made by vessels that are unobservable.¹⁰ NMFS Protected Resource Department (PRD) raised this concern in their May 2013 Biological Opinion on the DGN fishery:

When certain portions of the fishery are never "sampled," in this case boats that are unobservable, it raises questions about whether the fishing effort of unobservable vessels is represented by the observer data gathered from the rest of the fleet and the reliability or accuracy of bycatch estimates produced from data that may not represent the whole fleet.¹¹

Therefore, we encourage the Council to request that the observer program explore the possibilities of observing smaller boats via electronic monitoring (EM) or other platforms. Before consideration of remote or EM technology as an alternative to human observers, the Council should require that any such device be scientifically proven to be as effective in identifying all incidental catch.

Further, NMFS and the Council should maintain the requirement that all DGN vessels operate VMS units in order to facilitate monitoring and enforcement as endorsed by the POCTRT.¹² All active permit vessels installed VMS units for the 2013-2014 fishing season under the Emergency Rule and it is important that they continue to be so equipped. As long as the DGN fishery operates off the West Coast, these additional measures are necessary to adequately monitor the fishery and enforce take caps.

⁸ "NMFS has initiated proposed-to-final rulemaking under MSA authority . . . The target date for completing the MSA rulemaking is late-summer 2014 to coincide with the traditional start of the DGN fishing season." Agenda Item E.1.b, <u>NMFS Report to Council</u>, June 2014, p. 1.

⁹ <u>NMFS WCR Report</u>, June 2014, p. 1.

¹⁰ NMFS, Biological Opinion on the continued management of the drift gillnet fishery, May 2, 2013, p.101.

¹¹ Id.

¹² Pacific Offshore Cetacean Take Reduction Team Meeting Key Outcomes Memorandum, March 28, 2014, p. 11.

Establish Enforceable Caps for Protected Species

We strongly support the implementation of a system of enforceable take caps for the DGN fishery, modeled after the Hawaii shallow-set longline fishery,¹³ and were encouraged by NMFS' recent reinstatement of the sperm whale cap.¹⁴ Take caps establish a limit on the number of protected or vulnerable species interactions that can occur before fishing is prohibited for the remainder of the season. The Highly Migratory Species Management Team (HMSMT) explained the reasoning behind take caps in their March 2014 Report to Council:

Incidental take caps are implemented as a management measure and are intended to prevent the [incidental take statement] numbers from being exceeded, thus reducing the likelihood the consultation will be reinitiated and that a jeopardy determination is made. . . . It is important to keep in mind the logic behind establishing take caps. First, under the ESA, NMFS PRD estimates take levels for the action and makes the jeopardy determination (imposing reasonable and prudent measures or alternatives as necessary). Then fishery managers (i.e. the Council) establish take caps as a management measure to prevent the ITS level from being exceeded. The framework allows a finding that the action will not cause jeopardy.¹⁵

Take caps should be calculated with an abundance of caution allowing for a large buffer between the Potential Biological Removal (PBR) and the cap. A large buffer helps ensure the fishery will not violate the MMPA or the ESA. Precautionary take caps are particularly important due to the high risk of interaction with protected species in the DGN fishery¹⁶ and the uncertainty surrounding some of those species' population estimates.¹⁷ The Council should implement science-based caps for all protected species in the DGN fishery makes and sea turtles.

In regards to sperm whales and other marine mammals, the MMPA mandates that the incidental catch of strategic stocks in commercial fisheries continue to decrease to insignificant levels approaching zero (often called the "Zero Mortality Rate Goal").¹⁸ Given this clear mandate, the council should not increase take levels, even if it will not put the population in jeopardy.

As discussed above, all DGN vessels must be observed in order to allow managers to respond in a timely and accurate manner to the fishery reaching an enforceable cap. We do not support using a probabilitybased methodology to justify the use of take caps without all DGN vessels being observed as this methodology does not produce an accurate number of actual takes when there are varying levels of

¹³ <u>50 C.F.R. § 665.813(2)(i)</u> (requiring the entire Hawaii longline fishery to close if the cap for any species is met or exceeded to prevent the fishery from exceeding the ITS).

¹⁴ <u>79 Fed. Reg. 29377</u> (May 22, 2014).

¹⁵ HMSMT Report, Agenda Item K.5.b., March 2014, p. 13.

¹⁶ The DGN Fishery is classified as a Category 1 fishery (annual mortality and serious injury of a stock in a given fishery is greater than or equal to 50 percent of the PBR level) under the MMPA due to the frequent interaction with marine mammals. <u>NOAA Fisheries Office of Protected Resources, List of Fisheries</u>.

¹⁷ See "NOAA Fisheries, Office of Protected Species: Sperm Whales," last modified November 13, 2013, <u>http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/spermwhale.htm</u> ("Currently, there is no good estimate for the total number of sperm whales worldwide.").

¹⁸ 16 U.S.C. § 1387 (b)(1).

coverage throughout the fishery.¹⁹ For a hard cap to have significance, the actual number of takes must be known with certainty meaning every set made in the DGN fishery must be observed. Through implementation of enforceable take caps, the Council can ensure the DGN fishery does not violate the MMPA or ESA during the transition to alternative gear types.

Support Efforts to Develop Alternative Gear Types

In March 2014, the Council tasked the HMSMT with preparing research protocols to guide the evaluation of exempted fishing permits (EFP) to test alternative gear types.²⁰ We strongly support the use of EFPs to test alternative gears, particularly gear that is fundamentally different in operation from the passive fishing practices used in the DGN fishery. As the Council works to develop a framework for an EFP to experiment with targeting swordfish in U.S. West Coast waters, the Council should adopt criteria by which to evaluate the efficacy of EFP proposals.

Council Operating Procedure (COP) 20 establishes the protocol for consideration of EFPs in HMS fisheries²¹ and provides that applications will be given the highest priority if they "[e]mphasize resource conservation and management with a focus on bycatch reduction."²² In addition to the guidelines for EFP approval outlined in COP 20, we support the Council's effort to develop criteria for judging the performance of EFPs. Establishing these criteria gives potential applicants guidance on how the Council will evaluate a viable EFP and curb any potential efforts to manipulate management decisions during the assessment of research results.

As recognized by COP 20, the primary focus in evaluating the efficacy of EFPs should be the ability of the gear to reduce bycatch and emphasize conservation through a reduction in bycatch mortality. Therefore, when developing criteria to evaluate the viability of EFPs testing alternative gear in the DGN fishery, selectivity and active operation should be defining considerations. This evaluation should include the ability of the gear to target select species including a ratio comparison of target to non-target catch and the ability of the gear to decrease bycatch mortality through a reduction in time non-target species are retained.

Early research on deep set buoy gear is very promising. Like harpooning, this gear is fundamentally different than drift gillnets because it is *actively tended* by fishermen, who can more quickly release non-target species, thereby reducing bycatch mortality. Deep-set buoy gear is successfully used as a viable swordfish gear type in the North Atlantic Ocean²³ and NMFS supported a similar buoy-gear transition program in the Moroccan swordfish fishery.²⁴ On the West Coast, projects currently underway to test

¹⁹ <u>HMSMT Report</u>, Agenda Item K.5.b., March 2013, p. 14.

²⁰ <u>PFMC Decision Summary Document</u>, March 2014, p. 5.

²¹ PFMC, <u>Council Operating Procedure 20</u> (Nov. 2, 2005).

²² *Id*. at 3.

²³ <u>HMS Commercial Compliance Guide, Guide for Complying with the Atlantic Tunas, Swordfish, Sharks and Billfish</u> <u>Regulations</u>, U.S. Dept. of Commerce, NMFS, Dec. 2013.

²⁴ <u>U.S. and Morocco Shake Hands on Sustainable Fisheries</u>, NMFS, Nov. 13, 2012, see also, <u>U.S. Actions Taken on</u> Foreign Large-Scale High Seas Fishing, NMFS 2012 Report to Congress, p.15.

the viability of deep-set buoy gear types show promise in terms of ability to catch swordfish, avoid bycatch, and provide a fresh and sustainable seafood product.²⁵

We recognize that scalability is a factor when evaluating the efficacy of alternative gears. However, scalability should be a broader consideration that takes into account the various ways a fishing gear can be scaled to commercial levels. Simply because a vessel using alternative gear will not precisely match the swordfish landings of a vessel using DGN gear does not mean it's not economically viable. The evaluation of an EFP must also consider the potential for higher value catch and increased fishery participation. Alternative gear types may offer a different economic model, but that alone should not preclude those gears from being a viable option in the West Coast swordfish and thresher shark fishery. We look forward to supporting and participating in the EFP process to begin transitioning the DGN fishery to a gear type that is both ecologically sustainable and economically viable.

Develop a Fishery Transition Plan

In March 2014, the Council "took several actions toward a goal of developing a comprehensive plan to transition the current DGN fishery to a fishery utilizing a suite of more environmentally and economically sustainable gear types."²⁶ We were pleased to see the Council take significant steps toward this goal as it is unlikely gear modification alone will solve the DGN fishery's bycatch issues. Fishery managers already banned fishing for swordfish with DGN gear on the high seas,²⁷ in the Mediterranean,²⁸ and off the coasts of the States of Oregon²⁹ and Washington.³⁰ Given the high levels of bycatch in the DGN fishery, we do not agree that "no transition from the contemporary state remains an option."³¹ We strongly support the Council moving away from DGN gear including, if necessary, a plan for complete phase-out of the DGN fishery regardless of the ability of alternative gear types to replace historical landings.³²

Therefore, in addition to the EFP research protocols and evaluation criteria discussed above, we urge the Council to establish a transition timeline with firm deadlines to begin moving away from discussion and on to actual management action. The Council has many tools at its disposal to smoothly transition the DGN fishery to more selective and actively tended gear types. We realize that the transition to

²⁵ "Development and Trials of Deep-set Buoy Gear in the Southern California Bight," <u>Agenda Item K.5.b,</u> <u>Supplemental SWFSC PowerPoint 2</u>, March 2014. It should be noted that the buoy gear performed very well considering the low swordfish landings across all sectors at the time of fishing trials. *See* 2014 California Legislative Fisheries Forum, <u>Annual Marine Fisheries Report</u>, California Department of Fish and Wildlife Marine Region, April 2014, p. 17.

²⁶ <u>PFMC Decision Summary Document</u>, March 2014, p.4.

²⁷ U.N. General Assembly, <u>Resolution 46/215</u>, "Large-scale pelagic drift-net fishing and its impact on the living marine resources of the world's oceans and seas," Dec. 20, 1991.

²⁸ U.S. Actions Taken on Foreign Large-Scale High Seas Fishing, NMFS 2012 Report to Congress, pp. 13-14. In addition, the European Union (EU) recently proposed a complete ban on all drift net fishing in EU waters. <u>European</u> <u>Union Wants Ban on Drift Nets to Save Dolphins, Tuna</u>, May 15, 2014.

²⁹ 2013 SAFE Report, Chapter 3: Description of Fisheries, PFMC 2014, p. 2.

³⁰ WAC 220-44-035(2).

³¹DGN Transition Situation Summary, June 2014, p.2.

³²*Id*.

alternative gear types cannot happen overnight. Nonetheless, we urge the Council to transition the DGN fishery to more selective and sustainable gear types as quickly as possible. As with any project, firm deadlines will ensure the fishery transition process keeps moving forward while giving certainty to fishermen, managers, potential EFP applicants, and other stakeholders.

Conclusion

We are encouraged by NMFS and the Council's recent actions to safeguard protected species and begin the process of transitioning the DGN fishery to more ecologically sustainable gear. Rather than focusing management attention on prolonging the DGN fishery, the Council and NMFS should focus efforts on developing an ecologically sustainable and economically viable domestic swordfish fishery. For these reasons we offer the recommendations here allowing for the continued use of drift gillnets in the short term – under science-based regulations to minimize and better account for bycatch - while working to transition the fishery to a more selective and actively tended gear type.

We appreciate the Council's attention to the above issues and we look forward to working with the Council and other stakeholders throughout this process.

Sincerely,

Paul Aluc

Paul Shively Manager, U.S. Oceans, Pacific The Pew Charitable Trusts <u>pshively@pewtrusts.org</u>

Ian Bak

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June 13, 2014

Pacific Fishery Management Council Dorothy Lowman, Chair 7700 N.E. Ambassador Place, Suite 101 Portland, OR 97220

RE: Agenda Item E.2 Drift Gillnet Fishery Transition Issues

Dear Chair Lowman and Council Members,

On behalf of Heal the Bay, a non-profit environmental organization with over 15,000 members and almost 30 years dedicated to making Santa Monica Bay and Southern California coastal waters and watersheds safe, healthy, and clean, we are writing to submit comments in support of a transition to more sustainable gear for the drift gillnet fishery, as well as increased observer coverage on drift gillnet fishing vessels. We appreciate the Pacific Fishery Management Council (Council) taking actions towards more sustainable gear types. We urge the Council to continue this work by pressing forward towards a healthy, productive West Coast swordfish stock.

A healthy marine ecosystem serves is critical, both environmentally and economically in southern California, with swordfish and thresher sharks representing an important role in our coastal ecosystem and economy. A growing concern for our marine ecosystem is the non-targeted species of fish and wildlife that are caught and killed along our coast as bycatch. If we are to enjoy abundant and healthy marine wildlife populations in the region, including swordfish, we encourage the Council to advance a transition to more sustainable gear in this fishery, Mechanisms, like experimental fishing permits, can help with the transition to more sustainable gear. Furthermore, we urge the Council to develop criteria for granting experimental fishing permits to commercial fishermen willing to try gear that is actively tended and that minimizes interaction with non-targeted fish and wildlife.

We also encourage the Council to ask the National Marine Fisheries Service to require 100 percent observer coverage on fishing trips using drift gillnets. Much like fisheries regulations for commercial swordfish fisheries in Hawaii, we suggest that each fishing vessel carries observers to record catch and interactions with protected species such as sea turtles and marine mammals. We recognize the challenges with observer coverage on smaller vessels, and we believe technological advancements should be explored to assist with coverage on these vessels. Hawaii also has an annual limit on the number of sea turtles that can be hooked or entangled; if the limit is reached, the fishery is closed for the rest of the year. Off the coast of California, we suggest imposing firm limits on the number of interactions with protected fish and wildlife, such as cetaceans and white sharks, and creating a limit where the fishery is closed for the season if interaction limits are reached.



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Thank you for your consideration of our comments and for taking action in March to transition to a more responsible gear, a solid step forward in the transition to an ecosystem-based approach to fisheries management. These actions have put the Council in an important position to maintain a healthy Pacific Ocean ecosystem while managing sustainable, economically strong Pacific fisheries. We urge the Council to remain steadfast and push forward with the actions mentioned above.

Sincerely,

Sarah Abramson Sikich, MESM Coastal Resources Director

Danitta

Dana Roeber Murray, MESM Marine & Coastal Scientist



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Ms. Dorothy Lowman, Chair Pacific Fishery Management Council, Chair 7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220-1384 *Submitted via: pfmc.comments@noaa.gov*

June 13, 2014

RE: Agenda Item E.2- Highly Migratory Species, Drift Gillnet Transition Issues

Dear Ms. Lowman and Council Members,

On behalf of the members and constituent of The Humane Society of the United States I am writing to support the Pacific Fishery Management Council's (the Council) goal of "developing a comprehensive plan to transition the current drift gillnet fishery to a fishery utilizing a suite of more environmentally and economically sustainable gear types that can effectively target the healthy West Coast swordfish stock operating under MSA authority" (March 2014 PFMC Decision Document). To that end, we urge the Council to develop a strategy at its upcoming June meeting that will transition the drift gillnet fishery to the use of cleaner gear technology that will drastically reduce the current alarming rate of bycatch in this fishery.

The National Marine Fisheries Service (NMFS) has listed the California swordfish and thresher shark large-mesh drift gillnet fishery as a "Category I" fishery. By definition of the Marine Mammal Protection Act (MMPA), this categorization means that the fishery has "frequent incidental mortality or serious injury of marine mammals " and in excess of 50 percent of the statutory Potential Biological Removal (PBR level) set for one or more marine mammal stocks with which it has adverse interactions. The PBR is the maximum level of mortality an individual marine mammal stock can sustain and still continue toward recovery. Among the marine mammal species that are killed in this fishery, the most recent NMFS List of Fisheries for 2013 specifies that the fishery results in incidental mortality of California sea lions, Northern elephant seals, long-beaked common dolphins, bottlenose dolphins, Northern rightwhale dolphins, Pacific, white-sided dolphins, Risso's dolphins, short-beaked common dolphins as well as endangered humpback and sperm whales. [78 Fed. Reg. 53336, August 29,2013]. Endangered sperm whales have been killed in excess of this PBR level.

Gillnets, including drift gillnets, capture by entangling marine animals that are

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snared in the often nearly invisible webbing of the net that is set to capture target fish species. They are non-selective in that they cannot "choose" which animals they capture. Because of this, many non-target species—including marine mammals, birds and endangered turtles—are incidentally snared. In its 30-year history, the drift gillnet fishery has made tragically slow progress in addressing wasteful fish and protected species bycatch. We believe that alternative fishing gear types are available to catch targeted swordfish besides the wasteful use of drift gillnets and longline gear which—although the protected species bycatch rate is lower—itself has unacceptably high levels of protected species bycatch. We encourage the Council to investigate and promote the use of alternative fishing methods that do not result in wasteful fishing practices.

We strongly urge you to initiate a plan that promises to rapidly eliminate the use of drift gillnets off the U.S. West Coast with a time-certain prohibition on drift gillnets in the Highly Migratory Species Fishery Management Plan.

Sincerely,

Sha Bylay

Sharon B. Young Marine Issues Field Director The Humane Society of the United States syoung@humanesociety.org



June 13, 2014

Ms. Dorothy Lowman, Chair Pacific Fishery Management Council 70 NE Ambassador Place, Suite 101 Portland, OR 97220

Re: Agenda Item E.2 – Drift Gillnet Fishery Transition Issues **Agenda Item E.3** – Exempted Fishing Permit (EFP) Process

Dear Chair Lowman and Council Members:

For more than forty years, *Wild Oceans* has always worked for fishing and fishermen, but against indiscriminate and unsustainable types of fishing.

Earlier this year, the Pacific Fishery Management Council agreed to develop a comprehensive plan to transition the current swordfish drift gillnet fishery to a fishery utilizing a suite of more environmentally and economically sustainable gear types that can effectively target a healthy West Coast swordfish stock. We applaud this decision.

In order to successfully transition the fishery, the council needs to develop a vision for the future of our offshore fishery, with a goal of maintaining a healthy and sustainable resource that takes into account the interests of all stakeholders. At the same time, it must take proactive measures to achieve this vision. These measures are arguably the most important part of the transition because they will shape the fishery and fishery management for decades to come.

Wild Oceans recommends that the Pacific Council adopt a Transition Plan, as explained below, that is (1) guided by a vision of a sustainable swordfish fishery, developed with broad stakeholder participation, and (2) fully integrates the EFP process into the transition, (3) with research and review criteria designed to foster the use of selective and sustainable fishing gears and methods that (4) provide a net benefit to the Nation. We are also attaching a copy of our briefing paper, Performance Criteria for Alternative Gear Research.

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1. Develop a Vision of a Sustainable Swordfish Fishery, With Full Stakeholder Participation

What is the Council's vision of a sustainable swordfish fishery off the west coast? The Council and its stakeholders must collectively establish what this fishery should look like and take proactive measures to make the transition, otherwise we risk repeating the cycle of overfishing, bycatch, user conflicts and declining fisheries that indiscriminate fishing such as drift nets in the eastern Pacific and pelagic longlines as used elsewhere have spawned.

The *Code of Conduct for Responsible Fisheries* (FAO 1995) of the Food and Agriculture Organization (FAO) of the United Nations, which was adopted by 80 countries including the United States, provides a good starting point. Among other provisions, the Code calls on States to <u>adopt measures to minimize catch of non-target species</u>, waste, and <u>discards that include</u>, "to the extent practicable, the development and use of selective, environmentally safe and cost effective fishing gear and techniques".

The Protocol for Consideration of Exempted Fishing Permits (EFP) for Highly Migrator Species (HMS) Fisheries, Council Operating Procedure (COP 20), does give priority consideration to EFP applications that emphasize resource conservation and management with a focus on bycatch reduction. But there are no review criteria for evaluating whether an EFP achieves this priority. We do not have any guidance on whether we should measure success of an EFP solely on reducing catch of threatened or endangered species or some other metric of bycatch reduction that includes other vulnerable species. Without such criteria, agreed upon in advance, assessing the results and making management decisions based on those results will be open to interpretation and likely lead to conflict among stakeholders with varying interests and priorities.

As we've stressed numerous times, in order for the public to have confidence in management decisions based on the research, <u>the precise aims and objectives against</u> which those results will be assessed must be developed through a transparent process and then clearly spelled out.

The transition from drift entanglement nets to safer, sustainable fishing gears and methods, including the performance criteria established for assessing alternative gears, should be carried out transparently with participation from all stakeholder groups, commercial, recreational and environmental. The council's HMS EFP Protocol provides only a system of rules that guide and explain conduct. The council and stakeholders have the difficult task of developing a vision for the fishery based on our collective values and evaluating EFPs based on those values.

In order to successfully develop and implement a vision for the swordfish fishery, the council should establish an *ad hoc* panel of stakeholders, from the commercial,

recreational and environmental sectors (not only the HMS ASP), to obtain public investment in the research ahead of time and to review the results against the agreed-upon performance criteria afterward.

2. Incorporate Experiment Fishing Permit Review Into the Transition Plan

The council's research protocols for Experimental Fishing Permits must explicitly support more selective fishing measures that yield greater number of target species and allow for the release and survival of both marketable and non-marketable non-target species.

In March, the council directed the Highly Migratory Species Management Team (HMSMT) to prepare protocols to guide evaluation of EFPs to test alternative gear types. In addition, the Council tasked the HMSMT and Highly Migratory Species Advisory Subpanel (HMSAP) with the initial development of a driftnet fishery transition plan. These two tasks are currently on separate tracks. The EFPs, however, are an important mechanism for transitioning to a sustainable swordfish fishery off the west coast, using safer, sustainable fishing gears and methods, and we urge the council to more fully integrate EFP development and evaluation into the transition plan.

In March, we asked the council to incorporate performance criteria into their evaluation of alternative gear. In May, we presented our briefing paper *Performance Criteria for Alternative Gear Research* (attached) to the HMSMT. The HMSMT incorporated some of our more general suggestions into their report, but the council needs to adopt more specific research criteria in order to effectively transition the fishery.

A research plan designed to determine the feasibility of targeting swordfish using buoy gear, harpoons, deep-set longlines or other modifications/alternatives to shallow-set or surface longlines, must feature criteria for judging the performance of the gears in minimizing bycatch, such as we've outlined in our briefing paper.

3. Choose Gear that Will Achieve the Council's Vision

In 2000, this council began considering phasing out driftnets and replacing them with longlines. And in advance of this meeting, several fishermen have submitted letters to the council expressing their interest in engaging in a longline EFP. But, just as longlines were not the solution in 2000, they cannot be viewed as the solution today.

Our position - dating back to when the council banned longlining in 2004 and re-stated before the Council numerous times, most recently in March - has been to prohibit pelagic longline gear within the west coast EEZ by indefinite moratorium, *with the potential for re-evaluation after completion of a bona fide bycatch minimization research program with pre-established protocols*. Because of the history of high bycatch, waste and regulatory costs associated with conventional longlining, we believe such an approach is absolutely necessary to maximize protection for numerous species of fish and other wildlife. That is, to avoid replacing one problem gear with another. The council's ban should be lifted or modified only if research demonstrates alternative gears, configurations or fishing methods result in minimal impact on non-target, protected and vulnerable species.

The main problem with "longlines" is that the sets are long, in miles and hours, and the gear fishes passively, with the result that longlines hook substantially more non-target fish and other marine animals than target fish with high mortality of incidentally-caught species.

The length of soak time for baited hooks is among the most critical factors related to bycatch, for two reasons. First, animals that are on the line longer have a decreased chance of survival (i.e., higher mortality) and thus a lower live-release rate. Second, animals that weaken or die on the line are more likely to fall off the hook or be scavenged by predators and thus mortality for these species is under-estimated and not counted in stock assessments.

The only way to truly test the ability of pelagic longlines to target swordfish without causing high mortality of other, vulnerable bycatch species (billfish, sharks, marine mammals, turtles, seabirds) is to fish the gear with shorter sets (e.g., 2, 4, 6 hours) and to measure both the catch of non-target species *and* their survival.

4. Assess Net Benefit to the Nation

The HMSMT has identified a number of performance measures to characterize the biological and socioeconomic aspects of U.S. swordfish fisheries that use a variety of gear types, including drift gillnets, longlines and buoy gear. This approach provides some helpful metrics, such as number of takes of high-priority protected species per metric ton of swordfish landed, as well as revenue and profit per metric ton of swordfish landed. But this comparative analysis is incomplete and can be misleading if it does not take into account the management costs associated with a particular gear.

Alternative gears must be assessed in terms of how well they provide a net benefit to the nation. Living marine resources are publicly-owned, and therefore the economic viability of fishing must be considered from a full cost-accounting perspective.

Standard benefit-cost analyses that merely consider the economic return to the fisheries tend to view costs as benefits lost. However, in some cases – and especially in this one, where the costs of managing the fishery and the resource are borne by the public (i.e., taxpayer) and not the fishermen – *benefits are costs avoided*.

Performance criteria for alternative gears must consider the costs to the public relative to the economic return to the fishery. The costs include regulation, management and enforcement of the fishery. Indiscriminate fishing methods with a high rate of bycatch,

discards and waste, require substantially more management, in terms of regulations, catch monitoring (including observers) and enforcement, than other gears. These management costs (negative externalities) should be weighed against the economic return to the fishery.

Likewise, the benefits of *management costs avoided* should be considered when weighing the economic viability of more selective, actively fished gears such as harpoons and buoy-gear.

In this way, we can ensure the optimum use of marine resources and of the capital and human resources applied to the catching of fish. This requires that the council develop a vision that allows for the allocation of fishery resources among competing uses in the way that is most valuable to society. Management of the fishery should seek to improve the performance of the fishery, in economic, environmental and social terms, and support gear that delivers a more valuable fish at a lower cost to society.

Moving Ahead

The council has agreed, repeatedly, that the risks of using drift gillnets, one of the ocean's deadliest gears, are too high. Along the same lines, the council has historically rejected multi-mile longlines because of similar bycatch problems.

It's time to reaffirm that position, establish a vision for what a sustainable fishery in the Pacific should look like, and take proactive measures to foster its development. That means a comprehensive fishery Transition Plan that uses EFPs to advance this vision. It's time to join the rest of the world in banning drift nets – something the council has been talking about doing for at least 15 years now - and replace drift nets with alternative, "greener" methods of fishing.

Finally, we re-iterate that during the council's phase-out of the use of drift net gear in the west coast swordfish and thresher shark fishery, the Council should take the necessary steps to limit the catch of vulnerable species by:

- implementing hard caps on all vulnerable species including marine mammals, turtles, blue marlin and striped marlin, and vulnerable shark species and closing the fishery for the remainder of the season when any hard cap is met; and,
- requiring 100 percent observer coverage on all vessels employing drift net gear in order to enforce the hard caps.

Safe, sustainable fishing for big ocean fish is a win-win; for fishermen who want to fish, consumers want local, fresh seafood caught in an environmentally-responsible way and will pay more for it, and environmentalists that advocate for the protection of threatened and endangered species.

Thank you for your time and attention to conserving and managing our Pacific fisheries for the future of fishing.

Sincerely,

Theresa Labriola West Coast Fisheries Project Director

Performance Criteria for Alternative Gear Research



In March 2014, the Pacific Fishery Management Council "took several actions toward a goal of developing a comprehensive plan to transition the current drift gillnet fishery to a fishery utilizing a suite of more environmentally and economically sustainable gear types that can effectively target the healthy West Coast swordfish stock operating under MSA authority." In addition to maintaining current regulations on the drift gillnet fishery during the transition period, the council tasked the Highly Migratory Species Management Team with developing research protocols for conducting and evaluating research into the use of alternative fishing gears and methods.

Among the alternatives under consideration are deep-set buoy-gear and longlines. *Wild Oceans* has strongly promoted experiments with buoy-gear off the California coast, because this gear has proven environmentally and economically sustainable in other regions. As for pelagic longlines, our position - dating back to when the council banned longlining in 2004 and re-stated before the Council numerous times, most recently in March - has been to prohibit the gear within the west coast EEZ by indefinite moratorium, *with the potential for re-evaluation after completion of a bona fide bycatch minimization research program with pre-established protocols*. Because of the history of high bycatch, waste and regulatory costs associated with conventional longlining, we believe such an approach is absolutely necessary to maximize protection for numerous species of fish and other wildlife. That is, to avoid replacing one problem gear with another. The council's ban would be lifted or modified only if research demonstrates alternative gears, configurations or fishing methods result in minimal impact on non-target, protected and vulnerable species.

A research plan designed to determine the feasibility of targeting swordfish using buoy gear, harpoons, deep-set longlines or other modifications/alternatives to shallow-set or surface longlines, should feature criteria for judging the performance of the gears in minimizing bycatch. Without such criteria, agreed upon in advance, assessing the results and making management decisions based on those results will be open to interpretation and likely lead to conflict among stakeholders with varying interests and priorities. In order for the public to have confidence in management decisions based on the research, the precise aims and objectives against which those results will be assessed must be developed through a transparent process and then clearly spelled out.

For this reason, these criteria need to go beyond the economic viability of catching swordfish and the avoidance of endangered species (i.e., reduced numbers of turtle-

takes as compared with drift nets). Fishing that typically results in the incidental capture of a wide range of species, such as pelagic longlining, causes multiple management problems, among them the difficulty of regulating the catch of incidentally-caught fish – whether through quotas, size limits or prohibitions – without simply creating dead discards.¹ That's why the most effective means of avoiding bycatch or minimizing dead discards by pelagic longlines has been time-area closures.

If the council is to obtain a full and lasting benefit from alternative gear research, it should test a number of options while considering impacts on a broad range of vulnerable species. The research plan or protocol should:

- Foster Transparency and Stakeholder Involvement. Establish an ad hoc panel of stakeholders, from the commercial, recreational and environmental sectors (not only the HMS ASP), to obtain public investment in the research ahead of time and to review the results against the agreed-upon performance criteria afterward.
- Test Ability of Gear to Target Select Species. What is the ratio of target to nontarget catch? Can the proposed gear/gear changes avoid non-target, marketable species (mako shark, opah) that may be subject to future management? If the non-target species are subject to future fishing regulation through quota, size limits, or prohibition, can the gear minimize catch without creating dead discards?
- Test a Range of Alternatives. Include testing of added alternatives concurrent with ongoing experiments; for instance, <u>priority should be given to testing</u> <u>shorter sets and soak-times for longlines</u> and how they might enhance survival of incidentally-caught fish and undersize target fish.² If the research is too narrowly constructed, NMFS and the council will miss an opportunity to test and compare alternative solutions.
- Prioritize Bycatch Minimization. Describe how the proposed gear changes being tested (e.g., deep-set instead of shallow-set longlining, currently being studied by NMFS, and buoy-gear, by PIER) are anticipated to avoid bycatch and/or bycatch mortality of vulnerable fish species, such as billfish and sharks, as well as endangered turtles and marine mammals.
- *Consider Trade-Offs*. Describe the process for addressing trade-offs among alternatives. For example, if deep-set longlining decreases bycatch of some

¹ Over 130,000 square miles of fishing grounds off the Florida, Georgia and South Carolina coasts were closed to pelagic longlining in 2001, not to reduce sea turtle bycatch but to minimize longline bycatch of juvenile swordfish, marlin and sailfish, dolphin-fish and oceanic sharks, each the object of federal conservation measures. ² The original West Coast HMS FMP (2004) stated that NMFS considered reducing the soak time in the longline

fisheries (as an alternative to prohibiting the gear), however, more research was needed.

species, relative to surface longlining, but increases bycatch of others, how will these trade-offs be weighed?³

 Weigh Costs and Benefits. If the economic feasibility of alternative gears is to be considered relevant to assessing research results, so should the management and regulatory costs associated with the gears. For instance, if catching a variety of marketable species because of the non-selective nature of a gear-type is considered a positive, then the difficulty and cost of managing the fishery to avoid, regulate and/or conserve a variety of species, marketable as well as nonmarketable, should be considered a negative. The flipside would be "smallscale," narrowly-targeted fisheries such as buoy-gear and harpoons that carry comparatively minimal regulatory costs.

As we told the Council in March, bycatch minimization research should not be limited to looking for a short-term solution to problems in the drift net fishery, but instead it should <u>explore the full complement of alternatives for creating a sustainable swordfish</u> <u>fishery</u>, with minimal bycatch of all fully-exploited, over-exploited, depleted or protected species, for the long-term.

As fishermen, we believe that "best fishing practices" for offshore fisheries can support smaller-scale, high-yield, locally-supplied fisheries, commercial as well as recreational, using the latest technological developments in sustainable fishing. It is part of a progressive shift away from so-called modern, "efficient" methods of fishing that have proven wasteful and ultimately unmanageable.



This briefing paper was prepared by **Wild Oceans**, an independent non-profit group of anglers dedicated to protecting the ocean's top predators – the billfish, tunas, swordfish, and sharks – while preserving healthy ocean food webs and critical habitats essential to the survival of all fish, marine mammals, sea turtles and seabirds.

For more information visit <u>WildOceans.org</u> or call (541) 490-2411.

June 13, 2014

³ Use of circle hooks, required in Atlantic longline fisheries since 2005, reduced bycatch of sea turtles and incidental mortality of marlins, but bycatch of pelagic sharks, sailfish and bluefin tuna has actually increased.

Drift Gillnet public comment

Messages in thread 1

Fri Jun 13 2014 01:17:15 GMT-0700 (PDT) ID: 146944d64ffb70f7 From: Colleen Weiler <cmweiler77@gmail.com> To: pfmc.comments@noaa.gov CC:

Dorothy Lowman, ChairPacific Fishery Management Council

Dear Chair Lowman & amp; Council Members:

I am writing to comment on the drift gillnet fishery in California waters, which is still an active fishery despite other areas in the US and around the world banning gillnets due to their deadly effects.

Drift gillnets catch marine species without discretion - anything that happens across them becomes caught in their web. By their nature, drift nets are free and uncontrollable, and impact much more than just their target species of swordfish and thresher sharks, They kill non-target fish species, sea turtles, cetaceans, and pinnipeds, and if not found and collected, end up as lost "ghost gear" that continues to harm marine life and adds to the growing collection of garbage in the Pacific Ocean.

The Pacific Fishery Management Council, together with the National Marine Fisheries Service, have a responsibility to protect our oceans and the species within them. The California Current is a unique and highly productive ecosystem, and the devastating effects of drift gillnets are long overdue to be mitigated and replaced with more sustainable fishing practices. Removing drift gillnets from the system will protect marine life within the California Current and maintain its biodiversity.

As a concerned citizen, I urge you to eliminate drift gillnets from the waters off California and replace them with sustainable, responsible fishing methods. We should not go backwards and return to pelagic longlines, a practice that has its own share of high bycatch and has thus been prohibited in California waters for decades, but should instead move forward, and continue the proud West Coast tradition of green, eco-friendly forward thinking.

Drift gillnets wreak havoc on the Pacific's diverse marine life, and it is time they are eliminated from fishing methods. The West Coast needs to be a leader, not a follower, in doing what other regions in the US have already done in banning drift gillnets, and take it further by encouraging responsible fishing methods, and saving the lives of thousands of marine creatures. Thank you for your time, Colleen Weiler

--

MS Marine Resource Management - Oregon State University colleen.weiler@whales.org810-813-1643

Please stop Drift Gillnet fishing Messages in thread 1

Thu Jun 12 2014 23:10:54 GMT-0700 (PDT) ID: 14693da12d5f5415 From: Barbara Cunningham <barbarac73@icloud.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Too many mammals like dolphins and in edible fish are brought up in Gillnets.

Four days ago was Ocean Day. Help fisherman catch only fish !

Dr. Barbara Cunningham Sent from my iPad

Keep drift gillnets out of currently protected areas Messages in thread 1

Thu Jun 12 2014 20:15:53 GMT-0700 (PDT) ID: 1469339667ef09a3 From: Ai McCarthy <aimac@comcast.net> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you.

Ai McCarthy

Swordfish monitoring

Messages in thread 1

Thu Jun 12 2014 17:56:56 GMT-0700 (PDT) ID: 14692ba40b1486a3 From: fishrangerjohn <fishrangerjohn@aol.com> To: pfmc.comments@noaa.gov CC:

To whom,

It has come to the attention of the Board and Membership of the Oceanside Senior Anglers that the current monitoring of Swordfish net boats is soon to expire. We feel that the current process of 100 observer coverage of gillnet boats is the only effective method of significantly reducing byproduct catch. In addition the recent history of excessive byproduct catch demands new and better ways to pursue this extremely valuable commercial and sport caught fish..

Please extend the current monitoring of gillnet boats so that we can feel secure that all species of fish and mammals will have a chance of avoiding a an early demise at the hands of a fishing method that does not and will not select what it can kill.

Sincerely,

John DeWitt

President

Oceanside Senior Anglers and its 700 members

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. 2) Support the transition of the fleet to more selective gear. - See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835#sthash.vofXnCJv.dpuf

A request to end gill netting

Messages in thread 1

Thu Jun 12 2014 11:22:01 GMT-0700 (PDT) ID: 1469150b41668067 From: The Klute <therealklute@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

The Pacific Fishery Management Council has a responsibility this month to act for the good of both the United States AND the fisheries that feed millions of people. Along with the National Marine Fisheries Service, the PFMC is charged with protecting ocean wildlife and ecosystems.

Drift gillnets, which are used by many boats and ships off the coast of the United States directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species. Protecting these upper level predators both helps increase stocks of food fish and provides business opportunities for ecotourism, a rapidly growing market off the Pacific coast. Drift gillnets are the "clear cutters" of the sea, and any short term gain they provide is offset by the long term damage they do. I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnetting should not be supplanted by long-lining neither, as long-lining is equally harmful to the marine environment. Although not entirely analogous, the recent failure of Western Australia's drum-line shark cull should point to the devastation long-lining can do. Bycatch, even when the catch is ostensibly "released alive", kills more than it's share of unintended animals. It should be noted forms of long-lining have been already banned for years.

One only need look to the recent resurrection of

the pole and troll fishing community in San Diego, which provides jobs to the small fisherman AND the small cannery to show that other ways do work better, both for the environment and American jobs.

Other fisheries services around the world, both developed and developing, have banned drift gillnets, and it is my fervent hope that the Pacific Fishery Management Council does the same.

Respectfully, Bernard J. Schober1719 E Catalina DrPhoenix, AZ 85016

No More Gillnets

Messages in thread 1

Thu Jun 12 2014 10:34:22 GMT-0700 (PDT) ID: 1469125107285723 From: "lawrencerosin@yahoo.com" <lawrencerosin@yahoo.com> To: pfmc.comments@noaa.gov CC:

Dear Chair Lowman and Council Members:

I ask you to fight the use of gillnets in fishing. Gillnets catch a lot more than the fish that we want to catch. They catch many fish that are not even going to use. So they're killed for nothing. It's safer to use traditional fishing methods, such as using a fishing pole. If an unwanted fish is caught by a fishing pole, then it can easily be released. Usually a lot of unwanted fish get caught , so in those situations the fisherman will be unable to release all the unwanted fish before they die. That will be several fish that will die for nothing.

Sincerely,

lawrence rosin new york New York

Gill nets Messages in thread 1

Thu Jun 12 2014 09:51:19 GMT-0700 (PDT) ID: 14690fdaef6e6f99 From: Sally Newman <angelfish1@roadrunner.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Why are gill nets being used when they are so harmful to the marine life? I would never buy swordfish knowing now what price is paid by the sea life to catch them. Ban them now, please Sent from my iPhone Phasing out deadly nets will save hundreds of dolphins, whales and other marine animals in waters off California

Messages in thread 1

Thu Jun 12 2014 08:41:40 GMT-0700 (PDT) ID: 14690bde23979476 From: Chris Lish <lishchris@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Thursday, June 12, 2014 Pacific Fishery Management Council

7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220-1384

Subject: Phasing out deadly nets will save hundreds of dolphins, whales and other marine animals in waters off California

Dear Pacific Fishery Management Council Chair Lowman and council members,

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles, and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

"Every man who appreciates the

majesty and beauty of the wilderness and of wild life, should strike hands with the farsighted men who wish to preserve our material resources, in the effort to keep our forests and our game beasts, game-birds, and game-fish—indeed all the living creatures of prairie and woodland and seashore—from wanton destruction. Above all, we should realize

woodland and seashore—from wanton destruction. Above all, we should realize that the effort toward this end is essentially a democratic movement."

-- Theodore Roosevelt

Drift gillnets should NOT be replaced with pelagic

longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gear available to capture swordfish—like surface hook and line and harpoon gear—that result in much less marine life being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise." -- Aldo Leopold

Thank you for your consideration of my comments. Please do NOT add my name to your mailing list. I will learn about future developments on this issue from other sources.

Sincerely, Christopher Lish Olema, CA

ban gillnets Messages in thread 1

Wed Jun 11 2014 19:02:10 GMT-0700 (PDT) ID: 1468dcfa36ef5cab From: kroqcaligirl@aol.com To: pfmc.comments@noaa.gov. CC:

Hi,

I'm writing today to urge you to eliminate gill nets. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles, and other marine species. This must be stopped immediately. I urge you to rapidly eliminate drift gillnet from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. Other regions around the U.S and the world have banned drift gillnets because of the damage they inflict on our ocean's diverse marine life. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed. It is time the Pacific Fishery Managment Council follows other regions and ban gillnets.

Thank you,

Holly McDonough

Public Comment re. Gillnets

Messages in thread 1

Wed Jun 11 2014 16:59:42 GMT-0700 (PDT) ID: 1468d5f82b40d9b2 From: Nell Rando <nellrando@gmail.com> To: pfmc.comments@noaa.gov CC:

The Pacific Fisheries Management Council is responsible for the protection of our ocean wildlife and ecosystem. PFMC must act to ban the use of the mile-long gillnets which are totally indiscriminate in its practice involving the tragic death of countless dolphins, sea turtles, whales and other marine life considered "collateral damage." Pelagic longlines are not a responsible alternative, in fact, these nets are equally harmful to marine life in its bycatch consequences. Alternatives are available and are in use, therefore, the notorious gillnets should be outlawed immediately.

The elimination of the gillnets is long overdue; the PFMC has an obligation to act responsibly in illiminating these brutal nets from further use.

Thanking you in advance for taking action. Nellie Randonellrando@gmail.com20 Lawrence Street, Wakefield, MA 01880 cell 617-984-9691

Gill nets Messages in thread 1

Wed Jun 11 2014 15:42:11 GMT-0700 (PDT) ID: 1468d1888ac4a59c From: "scurran99@yahoo.com" <scurran99@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Hello

I strongly urge you to phase out gill nets in the waters off California. Please do not replace with pelagic long lines which are just as deadly. I am appalled that gill nets are still being utilized in the fishing industry. Gill nets directly harm and kill whales, dolphins, seals, sea lions, sea turtles, and dozens of other marine species. This must be stopped. You have at the responsibility to protect our ocean wildlife and ecosystem.

When will this deadly gill net fishing stop? Hopefully before the fishing industry has depleted the oceans.

Sincerely Stephanie Curran

Drift Gil Nets Messages in thread 1

Wed Jun 11 2014 14:45:57 GMT-0700 (PDT) ID: 1468ce50cf5098b9 From: Michele Bollo <michelebollo@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please strongly consider the ban of drift gill nets. Bycatch is irresponsible to a thriving ecosystem, particularly as marine mammals are threatened by the action of humans on many levels. The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same. Thank you, Michele BolloEncinitas, CA760-840-0414

Sent from my iPad

Ban Drift Gillnets Messages in thread 1

Wed Jun 11 2014 10:25:10 GMT-0700 (PDT) ID: 1468bf64d0a2eaf4 From: Michael Guyette <nomadmic@gmail.com> To: pfmc.comments@noaa.gov CC:

Drift gill nets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

Stop CA coast gill netting!

Messages in thread 1

Wed Jun 11 2014 08:40:02 GMT-0700 (PDT) ID: 1468b962b4a2d581 From: Delinda <delindabriggs@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please please please put a stop to gill net fishing. I have personally witnessed the girdling of a net around a sea lion's neck. We have to put an end to this deadly practice for the following reasons:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.Respectfully,Delinda BriggsBenton, Ca

sent from iPad

MIT PhD student in fisheries management Messages in thread 1

Tue Jun 10 2014 19:51:57 GMT-0700 (PDT) ID: 14688d6d4e3ad5f9 From: Kelly Heber <k_heber1@mit.edu> To: pfmc.comments@noaa.gov CC:

Hello,My name is Kelly Heber. I am a PhD student studying fisheries. I urge you to end the drift gillnet fishery (DGNF). It inflicts undue harm on populations unable to recover from the scale of the DGNF. Longline is also an inadequate replacements. Effort limits such as harpoons and surface lines are ideal.

Allowing communities to meet limit under flexible effort limitations without the DGNF is best, in my opinion.

Thanks,Kelly

-- PhD studentMIT Environmental Policy and Planningwww.kellyheber.com

Eliminate Walls of Death Messages in thread 1

Tue Jun 10 2014 16:14:04 GMT-0700 (PDT)

ID: 14688121f4e0e91c

From: Nastya Iriskina <nkiriska16@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing

methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.Sincerely,Nastassia Palanetskaya

The Banning of Gill Nets

Messages in thread 1

Tue Jun 10 2014 11:55:25 GMT-0700 (PDT) ID: 1468722ac5cd3e42 From: Holland Elder <hollandelder@gmail.com> To: pfmc.comments@noaa.gov CC:

To the Pacific Fishery Management Council,

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Your job is to safe guard precious fishery resources for the future. However, the use of Drift gillnets is directly opposed to these ends. In addition to depleting fisheries that are already over exploited, drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. It is important that Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed as well as a more sustainable fishery. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same. Thank you for your attention to this matter. Sincerely, Page 53 of 121

Holland Elder

Drift gillnets Messages in thread 1

Tue Jun 10 2014 09:10:43 GMT-0700 (PDT) ID: 146868bc64c36f20 From: "ilvclyns ." <ilvclyns@gmail.com> To: pfmc.comments@noaa.gov CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles, and dozens of other marine species and this must be stopped immediately.

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.

There are more sustainable fishing gears available to capture swordfish like surface hook and line and harpoon gear that result in much less marine life being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

I have personally seen the devastation these gillnets cause and the suffering and death of marine life. We need to be respectful of what we are doing to so many just to allow some people to eat swordfish. Lets set the standard that others are already doing for the California coasts and start doing the right thing.

JoAnn Smith

Rescuing one animal may not change the world, but for that one animal its world is changed forever!-Unknown

I support the end of Drift Gillnets off of the coast of California

Messages in thread 1

Tue Jun 10 2014 08:58:39 GMT-0700 (PDT) ID: 1468680a22097553 From: IRENE GILGOFF <IRENEGILGOFF@aol.com> To: pfmc.comments@noaa.gov CC:

I am sending this email in hopes that the Pacific Fishery Management Council will end the use of deadly gillnets off the coast of California. I am an avid whale watcher and I serve as a docent on whale watch boats. I also volunteer to rescue sea lions and seals. In both capacities I have witnessed first hand the deadly reach of gllnets. I have left whale watch boats sickened at the sight of an animal with net wrapped tightly around its neck. I am not the only whale watcher noticing how inhumane we as a species are. It is not a good message that we send out as these people who have come to witness the great ocean off of our coast leave our boats instead thinking of the cruel suffering we are inflicting on the ocean life off our shore. These deadly nets are already illegal off the coast of Oregon and Washington States. Why is California no longer progressive? Why are we now the last to realize that this form of fishing must stop?

As you consider your next step I also would like to point out that the fish that is targeted by this industry, thresher shark and swordfish, is very high in mercury content. We should not be eating the fish that this industry is catching. If not for the ocean, we must stop fishing for these species for the sake of our own species. Mercury poisoning is a real thing. It doesn't happen only in foreign countries. A friend of mine has been diagnosed with mercury poisoning. He is very health conscious, a jogger, and bike rider, and he switched to eating fish instead of red meat. Over the years, he developed mercury toxicity.

The issue of by-catch is perhaps the most important issue. This industry discards "bycatch" that is the staple food source of much of the life that exists in our ocean environment. The amount of by-catch discarded robs our ecosystem of a food source important at many levels of the food chain. In the true nature of the ocean nothing is by-catch. Everything has its purpose. What we discard as waste is the highly regarded prey fish of another ocean inhabitant. By-catch is ruining our ecosystems. It is limiting the biodiversity that has been key to keeping our oceans healthy.

I am attaching a photograph that I took on a whale watch boat of the buoy at the harbor of Dana Point. I had just spent 2 hours absorbing the clean fresh air and the peace of the ocean. The Captain of the boat was marvelous and the crew available to ensure that my trip was the best. It was fantastic until the last moment when I snapped this photograph and then realized this animal's suffering. This was the image that I carried back to shore. The peacefulness, the knowledge of the Captain, the caring of the crew were all forgotten.

For the sake of all of us who love our Pacific coast, for the sake of humane fishing, I ask you to end drift gillnets off our shore. And PLEASE do not replace it with harmful longlines which will solve nothing and only continue our assault upon this ocean and its inhabitants. Thank you for your consideration.

Swordfish drift gillnets

Messages in thread 1

Mon Jun 09 2014 22:00:47 GMT-0700 (PDT) ID: 14684266dea07c32 From: "diakate@mnet-mail.de" <diakate@mnet-mail.de> To: pfmc.comments@noaa.gov CC:

Dear Chair Lowman and Council Members:

Thank you for acting in March to develop a comprehensive plan to shift the fishery for Pacific swordfish away from drift gillnets. Please act decisively at the June 20-25 council meeting to ensure this fishery adopts a more environmentally sustainable alternative.

Drift gillnets indiscriminately capture and kill many species of marine life, including non-target fish, whales, seals, sharks, and dolphins along our coast. During your meeting in June, the Council should establish clear criteria for granting experimental fishing permits to fishermen willing to try alternative gear that is actively tended and that minimizes interaction with non-targeted species.

Further, until the fleet fully shifts to more selective alternatives for swordfish, the existing drift gillnet fishery should be carefully monitored and regulated. The Council should encourage the National Marine Fisheries Service to require observers on all fishing trips when drift gillnets are used, impose firm limits on the number of interactions with living marine resources such as whales and sea turtles, and close the fishery for the season if those limits are reached.

Despite various measures adopted in recent years to minimize harm caused by drift gillnets, the fundamental nature of this gear means that it will continue to cause unacceptable levels of bycatch. Every year spent attempting to make incremental improvements will delay the necessary transition to a cleaner and more sustainable alternative.

We are fortunate to have a robust and healthy population of swordfish along the West Coast. The public should be able to enjoy this prized seafood with the knowledge that our fishermen are catching swordfish while protecting other ocean wildlife.

Sincerely,

Christa Völk Augsburg Germany

Swordfish

Messages in thread 1

Mon Jun 09 2014 21:59:23 GMT-0700 (PDT) ID: 14684252302de29a From: "heivoe@gmx.de" <heivoe@gmx.de> To: pfmc.comments@noaa.gov CC:

Dear Chair Lowman and Council Members:

Thank you for acting in March to develop a comprehensive plan to shift the fishery for Pacific swordfish away from drift gillnets. Please act decisively at the June 20-25 council meeting to ensure this fishery adopts a more environmentally sustainable alternative.

Drift gillnets indiscriminately capture and kill many species of marine life, including non-target fish, whales, seals, sharks, and dolphins along our coast. During your meeting in June, the Council should establish clear criteria for granting experimental fishing permits to fishermen willing to try alternative gear that is actively tended and that minimizes interaction with non-targeted species.

Further, until the fleet fully shifts to more selective alternatives for swordfish, the existing drift gillnet fishery should be carefully monitored and regulated. The Council should encourage the National Marine Fisheries Service to require observers on all fishing trips when drift gillnets are used, impose firm limits on the number of interactions with living marine resources such as whales and sea turtles, and close the fishery for the season if those limits are reached.

Despite various measures adopted in recent years to minimize harm caused by drift gillnets, the fundamental nature of this gear means that it will continue to cause unacceptable levels of bycatch. Every year spent attempting to make incremental improvements will delay the necessary transition to a cleaner and more sustainable alternative.

We are fortunate to have a robust and healthy population of swordfish along the West Coast. The public should be able to enjoy this prized seafood with the knowledge that our fishermen are catching swordfish while protecting other ocean wildlife.

Sincerely,

Bernhard Völk Augsburg Germany
End the use of drift gillnets

Messages in thread 1

Mon Jun 09 2014 17:42:28 GMT-0700 (PDT) ID: 1468339f0cbf56fa From: "L. M." <brooksidepark1@aol.com> To: pfmc.comments@noaa.gov CC:

Please end the use of drift gillnets. They harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately. Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same. The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and

ecosystems. Thank you.

Eliminate drift gillnet fishery

Messages in thread 1

Mon Jun 09 2014 16:06:18 GMT-0700 (PDT) ID: 14682e326aeb999e From: Serena Secor <serena@cmgfi.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

The Pacific Fishery Management Council

• The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to

protect our ocean wildlife and ecosystems.

• Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine

species and this must be stopped immediately.

• With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift

gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

• Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment

due to high bycatch, have been prohibited off California for decades, and should not be allowed.

• There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon

gear, that result in much less marine life being harmed.

• Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife.

It is time the Pacific Fishery Management Council does the same.

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Drift Gillnet Fishing

Messages in thread 1

Mon Jun 09 2014 13:42:09 GMT-0700 (PDT) ID: 146825e2a7f92e0e From: "Bartell, Mendi" <Mendi.Bartell@verizonwireless.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

To whom it may concern at the Pacific Fishery Management Council: I understand the council is meeting this month to discuss the future fate of the drift gillnet fishery. These mile-long nets, meant to catch swordfish and thresher sharks, entangle nearly everything that swims into them, drowning dolphins, whales, large sharks and thousands of unmarketable fish every year. We need to retire this incredibly wasteful and horrifying fishing gear for good. Below are various reasons for retirement of this practice:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean

wildlife and ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and

this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from

waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high

bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result

in much less marine life being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the

Pacific Fishery Management Council does the same.

I urge Pacific Fishery Management Council to do the responsible thing: phase out drift gillnets and replace them with selective fishing methods Thank you for your consideration in this matter.

Mendi Bartell, San Clemente, CA

This e-mail message and any attachments are being sent by Verizon Wireless Legal Department and are confidential and may be privileged. If you are not the intended recipient, please notify us immediately by replying to this message and destroy all copies of this message and any attachments. Thank you.

Drift Gilnets

Messages in thread 1

Mon Jun 09 2014 13:37:51 GMT-0700 (PDT) ID: 146825a045d15aa3 From: Christopher Spanos <spanosmusic@gmail.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

To Whom it May Concern,

I am writing you in regard to the use of Drift Gilnets. In my opinion these type of nets should be banned. Slaughtering some many other fish and mammals in order to make their preferred catch is irresponsible and wasteful. This is not a sustainable form of fishing and should not be allowed to continue. These fishermen should only be catching what they're after instead of scooping up everything in their path.

I can only hope that you make the right decision that favors our environment instead of profit.

Thank you for your time.

Sincerely, Christopher Spanos

Eliminate Drift Gillnets Messages in thread 1

Mon Jun 09 2014 12:39:47 GMT-0700 (PDT) ID: 1468224d49fdb17b From: Laura Ramon <laura.ramon57@gmail.com> To: pfmc.comments@noaa.gov CC:

My e-mail is on the subject of the Pacific Fishery Management Council and National Marine Fisheries Service and the responsibility they have to protect our ocean wildlife and ecosystems. As I understand, Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same. Thank you, Laura Ramon

Drift gillnets

Messages in thread 1

Mon Jun 09 2014 11:37:28 GMT-0700 (PDT) ID: 14681ed63af1cdd5 From: Kristy Rotermund <krotermund@earthlink.net> To: pfmc.comments@noaa.gov CC:

Dear Pacific Fishery Management Council,

With the havoc drift gillnets inflict on our ocean's diverse marine

life (see information below), I urge you to rapidly eliminate drift gillnets from waters off

California and replace them with gears that are demonstrated to be

clean, responsible fishing methods. The Pacific Fishery Management Council and National Marine Fisheries

Service have a great responsibility to protect our ocean wildlife and

ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea

lions, sea turtles and dozens of other marine species and this must be

stopped immediately.Drift gillnets should NOT be replaced with pelagic longlines, which

are equally harmful to the marine environment due to high bycatch, have

been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture

swordfish, like surface hook and line and harpoon gear, that result in

much less marine life being harmed. Other regions around the U.S. and the world have banned drift

gillnets to protect important marine wildlife. It is time the Pacific

Fishery Management Council does the same. Thank you,

Kristy Rotermund

Phase out NETS

Messages in thread 1

Mon Jun 09 2014 09:40:00 GMT-0700 (PDT) ID: 1468180451a2b03f From: "Embree. Michelle" <embreem@saccounty.net> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

aei

kteopjteojgh Please eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Other regions have done this so we can too! Michelle Embree Sacramento. CA

County of Sacramento Email Disclaimer: This email and any attachments thereto may contain private, confidential, and privileged material for the sole use of the intended recipient. Any review, copying, or distribution of this email (or any attachments thereto) by other than the County of Sacramento or the intended recipient is strictly prohibited. If you are not the intended recipient, please contact the sender immediately and permanently delete the

are not the intended recipient, please contact the sender immediately and permanently delete the original and any copies of this email and any attachments thereto.

Outlaw drift gillnets

Messages in thread 1

Mon Jun 09 2014 08:22:56 GMT-0700 (PDT) ID: 146813a35e0bc5a7 From: MC Hagerty <mc@matrixmasters.com> To: pfmc.comments@noaa.gov CC:

It extremely important to the health of the planet and the waters and animal life off California that the phasing out deadly fishing nets to save hundreds of dolphins, whales and other marine animals is accomplished as soon as possible. I urge the Pacific Fishery Management Council to eliminate drift gillnets which are actual "walls of death" as they are an incredibly wasteful and horrifying fishing technique. We need sustainable techniques that respect the lives of the other animals that get caught by accident.

I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with pelagic longlines. These longlines are equally harmful to the marine wildlife due to their high bycatch. They have been prohibited off California for decades, and should not ever be allowed to replace drift gillnets.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

MC Hagerty

mc@matrixmasters.com

Phasing Out Deadly Drift Gillnets

Messages in thread 1

Sun Jun 08 2014 20:02:55 GMT-0700 (PDT) ID: 1467e942748aaee0 From: grauerboy@aol.com To: pfmc.comments@noaa.gov CC:

Hello to The Pacific Fishery Management Council,

I understand that The Pacific Fishery Management Council is meeting this month to discuss the future fate of the drift gillnet fishery. These mile-long nets, meant to catch swordfish and thresher sharks, entangle nearly everything that swims into them, drowning dolphins, whales, large sharks and thousands of unmarketable fish every year. This is not only a wasteful technique but is also short-sighted in that it is contributing to the decline of the health of the oceans and fishing stocks that are needed. The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems and I applaud your efforts to do so. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Thank you for your time,

Dave Grauer

I love creatures, and we need them. Keeps me HAPPY!!!

Messages in thread 1

Sun Jun 08 2014 17:24:04 GMT-0700 (PDT) ID: 1467e02b8a08b8ea From: Jan Neff <janeff55@gmail.com> To: pfmc.comments@noaa.gov CC:

Really I love most creatures, and the ocean and the critters in it. jan

Please phase out drift gillnets

Messages in thread 1

Sun Jun 08 2014 16:31:50 GMT-0700 (PDT) ID: 1467dd2e6e5871a6 From: Steve Rutledge <rutledgesteve@comcast.net> To: pfmc.comments@noaa.gov CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.

Drift

gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There

are more sustainable fishing gears available to capture swordfish, like

surface hook and line and harpoon gear, that result in much less marine life

being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect

important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Thank you for your consideration.

Sincerely, Julie Beer 334 College Ave. Apt. E Palo Alto, CA 94306

Drift Gillnet Fishery Messages in thread 1

Sun Jun 08 2014 11:59:11 GMT-0700 (PDT) ID: 1467cd9593f986d5 From: Mark Bartleman <mbartleman@cox.net> To: pfmc.comments@noaa.gov CC:

Pacific Fishery Management Council: Commenting on drift gillnet fishery – Phasing out deadly drift gillnets will save hundreds of dolphins, whales and other marine animals in waters off California. These mile-long nets, meant to catch swordfish and thresher sharks, unfortunately entangle nearly everything that swims into them, drowning dolphins, whales, large sharks and thousands of unmarketable fish every year. The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species. I urge you to eliminate drift gillnets from waters off California as soon as possible, and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should not be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should continue to not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed. Other regions around the US and the world have banned drift gillnets to protect important marine wildlife. The Pacific Fishery Management Council should do the same. Thank you. Mark Bartleman1984 Del Mar AveLaguna Beach, CA 92651

Drift Gillnets Messages in thread 1

Sun Jun 08 2014 07:53:48 GMT-0700 (PDT) ID: 1467bf89ebb490dc From: "Jean C. Turley-Sinclair" <jcts@usamedia.tv> To: pfmc.comments@noaa.gov CC:

Please stop the use of these barbaric nets. They are brutal and catch many fish and other sea creatures and sacrifice their lives for the fish that are targeted to be catched. There is enough killing in this world without destroying more life. These sea creatures belong to everyone, not just the fisherman for their profits.

Thank you, Jean Turley-Sinclair jcts@usamedia.tv Grass Valley, CA 95949

Drift gill nets Messages in thread 1

Sun Jun 08 2014 07:33:12 GMT-0700 (PDT) ID: 1467be5cf284c318 From: Irene <adolfolopez13@gmail.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

PLEASE!!!!!! Protect our marine wildlife and ecosystems and immediately BAN drift gill nets!!! As well as pelagic long lines like the ban we have in California, it's time you joined the rest of the world !!! I would be most grateful and would appreciate a kind reply:) sincerely Adolfo Lopez

Sent from my iPad

gill nets

Messages in thread 1

Sun Jun 08 2014 06:40:17 GMT-0700 (PDT) ID: 1467bb55721c796b From: apple <terrimac79@gmail.com> To: pfmc.comments@noaa.gov CC:

Please stop the horrifying and wasteful practice. So many needless deaths, mammals and turtles treated like garbage.

Thank you. Terri McIntyre 4788 Clothier Way Sacramento, CA 95841

Gill Nets

Messages in thread 1

Sun Jun 08 2014 00:17:48 GMT-0700 (PDT) ID: 1467a5737cf2da73 From: Steve Crase <AntiochAndy@yahoo.com> To: pfmc.comments@noaa.gov CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Messages in thread 1

Sat Jun 07 2014 22:13:37 GMT-0700 (PDT) ID: 14679e5764e6f420 From: Michael W Evans <mikerain@earthlink.net> To: pfmc.comments@noaa.gov CC: The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Sincerely.

Michael W Evans

This email is free from viruses and malware because avast! Antivirus protection is active. Gill nets

Messages in thread 1

Sat Jun 07 2014 21:44:10 GMT-0700 (PDT) ID: 14679cb431a6df66 From: Melanie King <melanie-king@att.net> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please stop using this fishing method.

It is outdated and unsafe and most importantly kills thousands of dolphins and other marine mammals unnecessarily!!!!!

Sent from my iPhone

Drift Gill Nets = Walls of Death!

Messages in thread 1

Sat Jun 07 2014 21:13:53 GMT-0700 (PDT) ID: 14679ac8de86e9da From: Scott Chapek <scc317@earthlink.net> To: pfmc.comments@noaa.gov CC:

To Whom it May Concern:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.

Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

We can do better.

Thank you for considering my comments. Respectfully,S. Chapek

No drift gillnets or pelagic longlines Messages in thread 1

Sat Jun 07 2014 20:40:32 GMT-0700 (PDT) ID: 146799044ce8b1c3 From: Pavel Skaldin <subpasha@2vega.com> To: pfmc.comments@noaa.gov CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.

Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.

There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Phase out drift gillnets

Messages in thread 1

Sat Jun 07 2014 17:55:39 GMT-0700 (PDT) ID: 14678f960383c5df From: Chris Salcedo <chris@templeofthepaw.com> To: pfmc.comments@noaa.gov CC:

Please by responsible by phasing out drift gillnets & amp; replace them with selective fishing methods! Here are some reasons why:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Thank you.

Walls of Death

Messages in thread 1

Sat Jun 07 2014 17:49:12 GMT-0700 (PDT) ID: 14678f364da57538 From: Montana <amontana7@gmail.com> To: pfmc.comments@noaa.gov CC: Dear Donald McIsaac and Chuck Tracy,

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.

There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Respectfully,Alida Montanez-Salas Norwalk, CA 90650-3405 "The greatness of a nation and its moral progress can be judged by the way its animals are treated." (Gandhi)

562-233-4361 (cell)

Stop Drift Gillnets

Messages in thread 1

Sat Jun 07 2014 17:43:03 GMT-0700 (PDT) ID: 14678edbe82f151f From: Sharon Ellis <sharonfellis@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.

Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited

off California for decades, and should not be allowed.

There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Do the right thing--it protects our ocean food source in the end.

Thank You.

Sharon

RE: GILL NETS Messages in thread 1

Sat Jun 07 2014 17:17:13 GMT-0700 (PDT)

ID: 14678d61cedabd3a

From: LB Nelson <nelsonlb2002@yahoo.com>

To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and

ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea

lions, sea turtles and dozens of other marine species and this must be

stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine

life, I urge you to rapidly eliminate drift gillnets from waters off

California and replace them with gears that are demonstrated to be

clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which

are equally harmful to the marine environment due to high bycatch, have

been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture

swordfish, like surface hook and line and harpoon gear, that result in

much less marine life being harmed. Other regions around the U.S. and the world have banned drift

gillnets to protect important marine wildlife. It is time the Pacific

Fishery Management Council does the same.In other words, please phase out drift gillnets and replace them with selective fishing methods Thearship of your time.

L. B. Nelson

Eliminate "walls of death"

Messages in thread 1

Sat Jun 07 2014 16:20:25 GMT-0700 (PDT) ID: 14678a2196ddf332 From: Tom Pickens <tsrland@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch and have been prohibited off California for decades.There are more sustainable fishing gears available to

capture swordfish, like surface hook and line and harpoon gear, that result in

much less marine life being harmed.Other regions around the U.S. and the world have banned drift

gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Messages in thread 1

Sat Jun 07 2014 16:19:45 GMT-0700 (PDT) ID: 14678a17bd6f8c37 From: Genny Riber <grinerpit@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Hello,I am writing today to urge you to please phase out drift gillnets. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles, and dozens of other marine species and this must be stopped immediately. With

the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with

pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.Thank you.

DriftNets Harm and Kill Others

Messages in thread 1

Sat Jun 07 2014 16:15:51 GMT-0700 (PDT) ID: 14678a06b30094b5 From: YoungImages2000@yahoo.com To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same. Thanku & amp; regards, Ms. A Young - Sent from Windows Mail

eliminate drift gillnets

Messages in thread 1

Sat Jun 07 2014 16:04:19 GMT-0700 (PDT) ID: 14678935d10bd085 From: rbhosmer <rbhosmer@cox.net> To: pfmc.comments@noaa.gov CC:

drift gill nets need to go. and they should not be replaced with longlines either.

there are cleaner ways to fish.

other agencies here & amp; around the world have banned these "kill all" practices & amp; pfmc should too.

Barbara Hosmer

Mission Viejo, ca Gillnets

Messages in thread 1

Sat Jun 07 2014 15:47:12 GMT-0700 (PDT) ID: 1467883b0293ffdb From: Lena Nilsson <Inilsson1@yahoo.com> To: pfmc.comments@noaa.gov CC:

Dear PFMC,

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. It is not too late yet to save our wild dolphins, but it will be soon.

Sincerely, Lena Nilsson Laguna Beach California

Drift Gillnet Fishery

Messages in thread 1

Sat Jun 07 2014 15:39:45 GMT-0700 (PDT) ID: 14678740cd7c7486 From: Arlene Zimmer <crea_tech@earthlink.net> To: pfmc.comments@noaa.gov CC:

We must retire this incredibly wasteful and horrifying fishing gear for good. I am urging the Pacific Fishery Management Council to phase out drift gillnets and replace them with selective fishing methods. Please phase out deadly nets and save hundreds of dolphins, whales and other marine life in the waters off California.

With thanks for your consideration and hopes for your action -

Drift Gillnetting in California Messages in thread 1

Sat Jun 07 2014 15:06:25 GMT-0700 (PDT) ID: 146785e58baa1a04 From: Adam Peden <yathatsmyemail@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Hello my name is Adam Peden, I was informed that gillnets are going to be used to catch sword fish and as a resident of California I'm very disappointed. In the past we believed that the ocean was an endless source of resources, thinking that fish and oil were always going to be abundant. But what we've found is the opposite. Nothing is infinite. And it has become obvious that in order to keep fishing we need to set up responsible fisheries. If we keep using these irresponsible fishing techniques the only thing we are going to do is dig ourselves in a hole. We have countless accounts of this happening, see the Black Sea Bass for example. We fished for them and the fisheries were booming until there were no more and then the fishery plummeted. We need to learn from the past and progress. Please stop using these gillnets

Drift gillnets Messages in thread 1

Sat Jun 07 2014 14:21:59 GMT-0700 (PDT) ID: 146783693f59f60d From: Tom Falvey <tefalvey@gmail.com> To: pfmc.comments@noaa.gov CC:

NOAA,

Drift gillnets are biologically strip mining our oceans. They should be abolished immediately for the following reasons: The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same. Sincerely,

Tom Falvey, Janet Falvey, Rick Stevens, Gilligan Stevens, Paula Thomas and Keith Keith

Ban Gill Nets

Messages in thread 1

Sat Jun 07 2014 14:01:56 GMT-0700 (PDT) ID: 146782ef7d7a1d60 From: Steve Yaffee <steveyaffee@aol.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

I urge you to place a complete ban on gill netting, worldwide. The use of gill nets contribute to the destruction of sustainable fish stocks while causing unacceptable losses to endangered fish communities through "by catch." Additionally, gill nets kill untold numbers of air breathing ocean reptiles and mammals (a humpback whale was saved, June 6, from death in the California Channel Islands). Finally, discarded gill nets contribute to the pollution of our seas.

Ban Gill Nets Now! Steve Yaffee Long Beach, CA 562-626-8040 steveyaffee@aol.com

Sent from my iPhone

drift nets input

Messages in thread 1

Sat Jun 07 2014 14:05:53 GMT-0700 (PDT) ID: 1467826f41972b23 From: Rich Moser <rkmoser@icloud.com> To: pfmc.comments@noaa.gov CC:

Hello,

I used to work for the California Dept. of Fish and Game, and while I was there I worked on the Gill Net Project out of the Long Beach office. I also have a degree in Zoology and understand the basics of marine ecology.

While I was out on commercial fishing boats to monitor their catch, I saw lots of "by-catch." So, by logical extension, I understand better than most people what a drift net is capable of in terms of unintended victims.

Drift netting needs to be banned globally, not just in US waters. It never should have been allowed, it was the turning point in the depletion of many commercial stocks that are now endangered.

I also would encourage a strong enforcement budget given that our oceans are on the brink of total collapse in some areas.

Thank you,

Rich Moser, Santa Barbara, CA, 93101, rkmoser@icloud.com

Phase Out Drift Gillnets and Encourage Sustainable Fishing

Messages in thread 1

Sat Jun 07 2014 12:49:47 GMT-0700 (PDT) ID: 14677e3dec22728f From: Nino Santiago <ninosantiago@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Hi,

As the Pacific Fishery Management Council and National Marine Fisheries Service, you have the big responsibility to protect our ocean wildlife and

ecosystems; allowing the continued use of drift gillnets is irresponsible, as the collateral damage is truly unfathomable.

Drift gillnets are already banned in other states and regions; we need to be leaders in in enacting legislation to protect our ocean wildlife, and lagging behind can be misconstrued as a lack of commitment to the cause.

We also need to encourage fisheries to shift to more sustainable methods of fishing; or our children's children, and their children will never know and enjoy the

beauty of the oceans that we and the generations before us once knew. Thank you in advance for your continued in protecting our oceans for our posterity

Sincerestly, Nino SantiagoFoster City, CA.

drift gill net fishing

Messages in thread 1

Sat Jun 07 2014 12:38:34 GMT-0700 (PDT) ID: 14677d6f8a817cbd From: Andrea Steegmayer <asteegmayer@gmail.com> To: pfmc.comments@noaa.gov CC:

Dear Members of the Council

l urge you to do what you know if right and the better science in fishing and that means eliminating the drift gill net fishing that is so detrimental to marine wildlife. Why do we keep doing that? To satisfy our own greed and disregard for the very environment that in actually feeds and sustains us? Or is it just the shortsightedness that seems to dominate the American landscape? We are long aware that we are in the process to destroy the ocean environment and it is time to stop destructive practices! Sincerely, Andrea Steegmayer 7825 Marilea Road, Richmond, VA 23225

Phase out deadly nets to save California's marine animals

Messages in thread 1

Sat Jun 07 2014 12:33:17 GMT-0700 (PDT) ID: 14677d228af2e3b5 From: CamilleGilbert@aol.com To: pfmc.comments@noaa.gov CC:

To the Pacific Fishery Management Council

You and the National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets inflict havoc on our ocean's diverse marine life, directly harming and killing whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species.

This must be stopped immediately. I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. They should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, and have been prohibited off California for decades. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Sincerely,

Camille Gilbert Santa Barbara, CA

Drift Gillnet Fishing

Messages in thread 1

Sat Jun 07 2014 12:25:18 GMT-0700 (PDT) ID: 14677caf2e966fc2 From: Gail Wagner <wagner0161@comcast.net> To: pfmc.comments@noaa.gov CC:

Drift gillnet fishery, meant to catch swordfish and thresher sharks, entangles nearly everything that swims into the nets, drowning dolphins, whales, large sharks and thousands of unmarketable fish every year.

I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Do not replace the drift gillnets with pelagic longlines - they are equally harmful to the marine environment due to high bycatch. They have been prohibited off California for decades, and should not be allowed.

There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Thank you for keeping California's wildlife safe.

Sincerely,

Gail Wagner

Stop Drift Gillnet Fishing

Messages in thread 1

Sat Jun 07 2014 12:23:03 GMT-0700 (PDT) ID: 14677c8c88e444c8 From: Carl Reid <carlreid00@hotmail.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets directly harm and kill whales, dolphins, seals, sea

lions, sea turtles and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine

life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should not be

replaced with pelagic longlines, which

are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific

Fishery Management Council does the same.

Thank you for your time,

Carl Reid

Please act in favor of reason and nature by eliminating drift nets. Thank you! Dave Wilson

Messages in thread 1

Sat Jun 07 2014 11:58:32 GMT-0700 (PDT) ID: 14677b48f1391b6d From: wilsonhighlander <wilsonhighlander@aol.com> To: pfmc.comments@noaa.gov CC:

Sent from my Galaxy S®III

Writing to comment on drift gillnets

Messages in thread 1

Sat Jun 07 2014 11:53:29 GMT-0700 (PDT) ID: 14677adfa9615e5a From: Stephen Yeh <steveyeh@fastmail.fm> To: pfmc.comments@noaa.gov CC:

Dear Pacific Fishery Management Council,

I am writing to urge an end to the practice of drift gillnets in the Pacific. With sealife on global decline (fisheries, coral ecosystems), it is paramount to adopt more sustainable fishery practices for the good of all - consumers, lovers of the oceans, and the preservation of majestic animals such as sea turtles, cetaceans, and other large mammals such as seals and sea lions. Cetaceans themselves are in a rarefied category of animal taxa quite worthy of protection. They are one of three groups that have achieved a high degree of intelligence, self-consciousness, and social intelligence, as indicated by their evolution of so-called "von Economo cells" or "spindle neurons", a convergent neural adaptation that has independently evolved among three groups (1) primates, including humans, (2) elephants, and (3) cetaceans, indicative of high social intelligence.

Thank you for your consideration of this matter,

Stephen Yeh8153 Surrey Lane, Oakland, CA 94605510-589-5161

Protect our ocean wildlife

Messages in thread 1

Sat Jun 07 2014 11:47:31 GMT-0700 (PDT) ID: 14677a84a63be4ae From: Shari Au <shariauphd@gmail.com> To: pfmc.comments@noaa.gov CC:

Swimming freely, a dolphin will take a breath every five or so minutes. Caught in a drift gillnet and unable to surface for air, it might take an agonizing half hour or longer to drown. This is the result of drift gillnetting, a wasteful method of catching swordfish. Last month, California's deadly drift gillnet fishery opened for business to catch swordfish, allowing fishermen to set out mile-long nets that will entangle and kill an estimated 100 dolphins, whales, and other marine mammals this year, not to mention thousands of other amazing ocean creatures like ocean sunfish that are thrown away as bycatch from these nets. Drift gillnets directly harm and kill whales, dolphins, seals, sea

lions, sea turtles and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.

Please confirm receipt, thanks.

Shari Au, Ph.D., LLC Licensed Clinical Psychologist1019 University Ave., #6AHonolulu, HI 96826 Ph: 808-398-4398

The Voyage of discovery lies not in seeking new horizons, but in seeing with new eyes – Marcel Proust (1871-1922, French novelist).

Drift Gillnets

Messages in thread 1

Sat Jun 07 2014 11:35:42 GMT-0700 (PDT) ID: 146779d76fa9aea9 From: Ron Melin <er2melin@gmail.com> To: pfmc.comments@noaa.gov CC: Dear Pacific Fishery Management Council,

I favor the termination of the use of drift gill nets off the coast of California. Too many species other than swordfish end up as part of the catch. Every year we hear and read of cetaceans dragging around nets. They're the lucky ones. If seen, they can be cut loose of this manmade bondage. What about the ones that are entangled but are never seen? They die a slow painful death. There are many other "denizens of the deep" that end up as "bycatch" as well. Now is the time to end this wasteful method of catching swordfish.

Respectfully Submitted, Ron Melin Torrance Ca. Report of abuse

Messages in thread 1

Sat Jun 07 2014 11:33:11 GMT-0700 (PDT) ID: 146779b700654313 From: Ida Alwin <ida.alwin@gmail.com> To: pfmc.comments@noaa.gov CC:

On the subject of the drift gillnet fishery, we need to retire this incredibly wasteful and horrifying fishing gear for good.

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.

Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.

There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

As a concerned citizen of this planet, I urge the Pacific Fishery Management Council to phase out drift gillnets and replace them with selective fishing methods.

Best regards, Ida Alwin California, 90740

Messages in thread 1

Sat Jun 07 2014 11:16:47 GMT-0700 (PDT) ID: 146778bfcb258502 From: Larry Lapuyade <larrylapuyade@earthlink.net> To: pfmc.comments@noaa.gov CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems. Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately. With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed. Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Need to eliminate drift nets

Messages in thread 1

Sat Jun 07 2014 11:14:30 GMT-0700 (PDT) ID: 146778a0a83474d8 From: Robin Monserrat <rmonserrat33469@gmail.com> To: pfmc.comments@noaa.gov CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility — and a signal opportunity -- to protect our ocean wildlife and ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.Thank you for taking action and for considering my views.

Robin MonserratTequesta, FL — a coastal resident much concerned about the health of the oceans

Request to ban drift gillnets

Messages in thread 1

Sat Jun 07 2014 10:37:39 GMT-0700 (PDT) ID: 14677684912472a5 From: "Lee H. Ayres" <leeayres@awsw-law.com> To: pfmc.comments@noaa.gov CC:

Dear Council Members: As an avid SCUBA diver, I have had the privilege and honor of diving many times in the beautiful Pacific waters off the coast of California. Those opportunities have also enhanced my understanding of the delicate balance of that marine ecosystem. Those same opportunities have also lead me to care very much about the marine life which inhabits those waters. As such, I am writing to encourage you to ban drift gillnets in the Pacific waters off of California's coast. I believe that they are extremely harmful to the environment, and that the collateral damage to marine life and the ecosystem far exceeds any benefit that they would otherwise provide. When the actual and known harm so greatly exceeds any possible benefit, it is incumbent upon those with responsibility to find a better way and to use better methods. Fortunately, there are better methods currently available. I believe that The Pacific Fishery Management Council and National Marine Fisheries Service have that responsibility (i) to protect our ocean wildlife and ecosystems, (ii) to eliminate harmful instruments like the drift gillnet, and (iii) to require the use of better, safer alternatives. The harm caused by drift gillnets cannot be overstated. They and those who use them are directly responsible for their collateral damage, namely the killing of whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species. I respectfully urge you to stop this practice immediately. The drift gillnets can be replaced with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, which have been prohibited off California's coast for decades, and which should not be allowed. As noted already, there are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear. These alternative methods result in much less marine life being harmed. It is my understanding that both Oregon and Washington, as well as other regions around the U.S. and the world, have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same. Accordingly, I respectfully urge you to ban drift gillnets at your earliest possible opportunity. Thank you for your consideration of my request! Lee H. AyresAyres, Warren, Shelton & amp; Williams, LLC14th Floor Regions Tower333 Texas Street (71101)P. O. Box 1764Shreveport, LA 71166-1764318-227-3500 work318-227-3304 direct318-426-7842 mobile318-227-3804 facsimilewww.awsw-law.com IRS Circular 230 Disclosure: To ensure compliance with U.S. Treasury Regulations governing tax practice, we inform you that any U.S. federal tax advice contained in this communication, including any appendices, is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding any penalties under U.S. federal tax law, or (ii) promoting, marketing or recommending to another party any transaction or matter addressed herein. Confidentiality Statement: This electronic message transmission contains information from the law firm of Ayres, Warren, Shelton & amp; Williams, L.L.C. and is confidential or privileged. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of the contents of this information is prohibited. If you have received this electronic transmission in error, please notify us by telephone (318-227-3306).

No drift nets!

Messages in thread 1

Sat Jun 07 2014 10:15:43 GMT-0700 (PDT) ID: 1467754346babd17 From: Lexi <princesscybele7@aol.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

To whom it may concern, Please do not endanger the lives of innocent animals for no reason. Find a better way!!!

Sent from my iPhone

Hi, Please, no drift gillnets. Why do you allow any killing of ocean wildlife and ecosystems?

Messages in thread 1

Sat Jun 07 2014 09:41:09 GMT-0700 (PDT) ID: 14677348d61187b4 From: Marianne Duke <marianneduke@gmail.com> To: pfmc.comments@noaa.gov CC:

Hi Pacific Fishery Management Council, Please:1) Don't allow drift gillnets anywhere; and

2) Do protect ALL ocean wildlife and ecosystems. I send you warm regards and positive decision-making molecules.

Marianne Duke, Age 69

San Francisco, C

Gillnets Messages in thread 1

Sat Jun 07 2014 09:36:12 GMT-0700 (PDT) ID: 1467730093641e38 From: Andrea Bonnett <bonnettae@gmail.com> To: pfmc.comments@noaa.gov CC:

Please replace gill nets with the safer methods available. Gill nets harm turtles, seals, dolphins and other living creatures of the sea. Humankind has a responsibility to protect our oceans and all of our ecosystem.

Thank you.

Andrea BonnettAltadena, CA 91001

GILLNETS ARE HARMFULAND NEED TO BE STOPPED

Messages in thread 1

Sat Jun 07 2014 09:34:58 GMT-0700 (PDT) ID: 146772ecd3e7ff7c From: Joan Marks <joan@4-crs.com> To: pfmc.comments@noaa.gov CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.

Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.

There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same. SO PLESE TAKE THE ACTION TO STOP THIS

Marine Wildlife Messages in thread 1

Sat Jun 07 2014 09:31:14 GMT-0700 (PDT) ID: 146772b7db61bc59 From: Terry Kourda <terry.kourda@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Because drift gillnets and pelagic longlines directly harm and kill whales, dolphins, seals, sea lions, sea turtles, and dozens of other marine life, it is imperative that the Pacific Fishery Management Council and National Marine Fisheries Service protect marine wildlife by ensuring that gillnets and longlines be eliminated. In their place, surface hook and line and harpoon gear should be used.

The Pacific Fishery Management Council should be the leader around the world to protect marine life and the ecosystems. Thank you.

Drift gill nets

Messages in thread 1

Sat Jun 07 2014 09:27:20 GMT-0700 (PDT) ID: 1467725a71cc9414 From: "R. Zierikzee" <inor@earthlink.net> To: pfmc.comments@noaa.gov CC:

Dear Pacific Fishery Management Council,

Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.

There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same. Sincerely,R. Zierikzee

Gill Nets

Messages in thread 1

Sat Jun 07 2014 09:22:57 GMT-0700 (PDT) ID: 1467721a59d738c1 From: Scott Chapek <scc317@earthlink.net> To: pfmc.comments@noaa.gov CC:

To Whom it May Concern:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.

Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Thank you for considering my comments.

Respectfully,S. Chapek

Drift Gillnets

Messages in thread 1

Sat Jun 07 2014 09:20:01 GMT-0700 (PDT) ID: 1467721338317c8c From: Francesca Bolognini <magicalmoon@att.net> To: pfmc.comments@noaa.gov CC:

To Whom it May Concern,

It is not moral or sustainable to use drift gillnets or long lines because they cause mass devastation of life forms in the oceans. We are supposedly n advanced culture here in California and need to behave as such. There is no more important legasy for the future thatn a healthy, biodiverse planet with resources intact and thriving for future generations. Without proper consideration for life and forsight into the consequences of greed and carelessness, we will be leaving behind a collapsing ecosystem and a deadly atmosphere. Not particularly advanced behavior. It is your job to see that such things do not happen. Please DO YOUR JOB.

Namaste

Francesca Bolognini Cambria, Ca.

Stop gillnetting Messages in thread 1

Sat Jun 07 2014 09:15:49 GMT-0700 (PDT) ID: 146771d5d7cb1a9c From: Elaine and Ed <elained@mcn.org> To: pfmc.comments@noaa.gov CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the sameElaine Charkowski19244 Benson LnFort Bragg CA 95437

Messages in thread 1

Sat Jun 07 2014 09:04:38 GMT-0700 (PDT) ID: 146771377ff3e2ef From: katburgess <kburgess77@gmail.com> To: pfmc.comments@noaa.gov CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

End wall-of-death drift gillnetting

Messages in thread 1

Sat Jun 07 2014 08:56:36 GMT-0700 (PDT) ID: 146770bbc9742ec6 From: Jon Longsworth <jon@longsworth.com> To: pfmc.comments@noaa.gov CC:

I am Jon Longsworth and I approve this message:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.

Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.

There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Protect marine life from drift gillnets!

Messages in thread 1

Sat Jun 07 2014 08:22:39 GMT-0700 (PDT) ID: 14676ecaf11decf5 From: Suannesb@aol.com To: pfmc.comments@noaa.gov CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.

Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.

There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.

Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Please do the right thing!

Sue Brooks

Ban drift gilnets

Messages in thread 1

Sat Jun 07 2014 08:12:38 GMT-0700 (PDT) ID: 14676e3fb9d36740 From: Ellen Golden <ellen_n_golden@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.Please stop using Drift gillnets.Thank you,Ellen Golden 93 of 121
drift gillnets

Messages in thread 1

Sat Jun 07 2014 08:06:06 GMT-0700 (PDT) ID: 14676dd8e271cb79 From: Jim Pitts <jimpitts@bellsouth.net> To: pfmc.comments@noaa.gov CC:

Simply put, it's time to catch up with the rest of the world. Eliminate drift gillnets.

Jim Pitts Gainesville, FL

gill nets Messages in thread 1

Sat Jun 07 2014 07:50:39 GMT-0700 (PDT) ID: 14676cf6d3c62268 From: Linda Law <lindallaw@sbcglobal.net> To: pfmc.comments@noaa.gov CC:

Let's please go back to a less dangerous and unnecessary killing method of fishing. Gill nets are a scourge to sea life and are not necessary! Millions of accidental deaths are an ignorant waste of precious life.

Please Messages in thread 1

Sat Jun 07 2014 07:47:00 GMT-0700 (PDT) ID: 14676cc0839fead6 From: Pam Watanabe <pwatanabe@mindspring.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Pacific Fishery Management Council, please stop the gill net fishery. Pam watanabe

Gill nets

Messages in thread 1

Sat Jun 07 2014 07:46:04 GMT-0700 (PDT) ID: 14676cb3c3247aa1 From: Pkolchins <pkolchins@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

It is imperative that safer means of fishing are used in order to not harm other species & amp; fish unintentionally. & nbsp; Please take action to avoid the unnecessary slaughter of these defenseless sea creatures & amp; fish now being killed by this archaic method of fishing! & nbsp; Thank you.

No more nets

Messages in thread 1

Sat Jun 07 2014 07:37:43 GMT-0700 (PDT) ID: 14676c39250b2d1e From: Veronica <vronicas@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Let's see an end to drift gillnets in the oceans! Mrs. Veronica Goode

Sent from my iPhone

Not one more dead marine mammal!

Messages in thread 1

Sat Jun 07 2014 07:27:08 GMT-0700 (PDT) ID: 14676b9dafb858b3 From: lavendula@netscape.com To: pfmc.comments@noaa.gov CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same. Enriching fishers is no good reason to needlessly kill other sea life, particularly marine mammals. Please bring the rules into the 21st century.

Thank you for your consideration.

Netscape. Just the Net You Need.

Drift Gillnets Messages in thread 1

Sat Jun 07 2014 06:55:45 GMT-0700 (PDT) ID: 146769d1cfdac539 From: gherardi2@aol.com To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

To Whom It May Concern:

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.

Sincerely,

Lisa Gherardi

Thank you for ending the use of drift gill nets

Messages in thread 1

Sat Jun 07 2014 06:45:20 GMT-0700 (PDT) ID: 1467698d7cda974a From: caogreenleaf@gmail.com To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

The Pacific Fishery Management Council and National Marine Fisheries Service have a great responsibility to protect our ocean wildlife and ecosystems.Drift gillnets directly harm and kill whales, dolphins, seals, sea lions, sea turtles and dozens of other marine species and this must be stopped immediately.With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods.Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed.There are more sustainable fishing gears available to capture swordfish, like surface hook and line and harpoon gear, that result in much less marine life being harmed.Other regions around the U.S. and the world have banned drift gillnets to protect important marine wildlife. It is time the Pacific Fishery Management Council does the same.

Dangerous gillnets

Messages in thread 1

Sat Jun 07 2014 06:40:02 GMT-0700 (PDT) ID: 146768ecb63276e1 From: Barbara <fosterbarb@gmail.com> To: pfmc.comments@noaa.gov CC:

With the havoc drift gillnets inflict on our ocean's diverse marine life, I urge you to rapidly eliminate drift gillnets from waters off California and replace them with gears that are demonstrated to be clean, responsible fishing methods. Drift gillnets should NOT be replaced with pelagic longlines, which are equally harmful to the marine environment due to high bycatch, have been prohibited off California for decades, and should not be allowed. Thank You, Barbara Foster

Comment

Messages in thread 1

Fri Jun 06 2014 11:50:29 GMT-0700 (PDT) ID: 14672849eb51f0fb From: nick page <nickpage502@hotmail.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Federal fisheries managers should:

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. 2) Support the transition of the fleet to more selective gear.Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thanks

Nick Page5720 WIndgate DriveFerndale WA98248

Commercial Fishing of Threshers and Swords, WE MUST STOP BYCATCH KILLING

Messages in thread 1

Tue Jun 03 2014 13:43:31 GMT-0700 (PDT) ID: 1466378ffc32bb0e From: Sharie Lee Foster <sharie.foster@verizon.net> To: pfmc.comments@noaa.gov CC:

Dear Pacific Fishery Management Council: SUGGESTION:

1) Keep drift gillnets out of currently protected areas.

Require 100 percent observer coverage on all trips, and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.
Shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

4) Support the transition of the fleet to more selective gear. 5) Require selective fishing. Since the 80s swords and threshers have been irresponsibly caught at the cost of the death of billions of other NON-TARGET fish including endangered, and done untold damage to the ocean's ecosystem -- which ultimately affects mankind. No one knows how long this can continue. We've got to steward our ocean resources much smarter going forward -- starting now.

Please consider and take necessary actions immediately, and please keep all existing supportive laws in place. Mankind cannot afford to loosen its grip on this problem until it is resolved. Thank you!

Sharie Lee Foster

Sustainable Gear

Messages in thread 1

Mon Jun 02 2014 17:03:42 GMT-0700 (PDT) ID: 1465f09f22b93b65 From: Henry Kimbell <hankkimbell@yahoo.com> To: pfmc.comments@noaa.gov CC:

Hello PFMC,

I'd like to ask your organization to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thanks for your careful attention.

Henry S KImbellSparks, NV

drift gillnets Messages in thread 1

Mon Jun 02 2014 02:37:43 GMT-0700 (PDT) ID: 1465bf0e995c35cf From: Robert Jenks <mrbeto@embarqmail.com> To: pfmc.comments@noaa.gov CC:

You need to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Gill nets

Messages in thread 1

Sat May 31 2014 17:47:31 GMT-0700 (PDT) ID: 14654e5583fb6df3 From: Celeste Nuttman <cnuttman@sbcglobal.net> To: pfmc.comments@noaa.gov CC:

I am writing to ask you to keep the gill nets, which ensnare all kinds of marine life not intended to be caught, OUT of currently protected areas and shift the type of fishing gear that is used FROM gill nets to some gear that is more selective.

I hope you will be able to accomplish this quickly in order to end the wasteful bycatch of marine animals.

Sincerely, Gertrude Nuttman

San Francisco, CA

Remove drift gillnets

Messages in thread 1

Fri May 30 2014 03:28:16 GMT-0700 (PDT) ID: 1464cac4fbedd3a1 From: Michele <micheledenski@aol.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of protected areas. Thank you.

Please help the marine life:

Messages in thread 1

Thu May 29 2014 21:27:36 GMT-0700 (PDT) ID: 1464b622551cd10e From: Lysandro Sandoval Filho <lysandrosf@gmail.com> To: pfmc.comments@noaa.gov CC:

Pacific Fishery Management Council To whom it may concern:

I beg the council to take action to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Off the California shore, nets as long as a mile are submerged for hours at a time to catch swordfish and thresher sharks. The problem is that these nets also entangle and kill other animals the fishermen never intended to catch—including whales, turtles, sharks, dolphins, and many species of fish.

Thousands of nontarget animals are caught in these impenetrable walls, a problem known as bycatch, including endangered sperm whales, Pacific leatherback turtles, and valuable but severely depleted game fish such as bluefin tuna. In fact, the severe injury and death of two sperm whales in December 2010 prompted federal fishery managers to enact a temporary emergency rule requiring observers on all drift gillnet boats—a fivefold increase from the scant 20 percent observer coverage normally accorded this fishery, as of 2013. That rule is now due to expire on Aug. 5.

Observers have recorded thousands of fish tossed overboard such as the mola mola (a large oblong-shaped creature also known as sunfish), striped marlin, and blue sharks, in many cases dead or dying. Observers have accompanied less than 20 percent of drift gillnet trips, so there is no way of fully knowing the full harm caused by this gear.

It's time for West Coast fishery managers to phase out the use of drift gillnets. We can end the discard of nontarget fish ensnared and stop the senseless killing of rare animals by simply using alternative fishing methods.

The past and future offer other ways to continue catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface.

These and other alternatives for catching swordfish do not ensnare nontarget animals, such as leatherback sea turtles, whales, and tuna. When it comes to drift gillnets, now should be the end of the line.

Federal fisheries managers should:

 Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.
Support the transition of the fleet to more selective gear.

Thank you very much for your time and consideration on such important matter. Sincerely, Lysandro Sandoval Filho (!Fight Global Wanning!) of 121

Fisheries Management

Messages in thread 1

Thu May 29 2014 19:03:55 GMT-0700 (PDT) ID: 1464ade74a8fd078 From: Sabrina Fedel <sabrinafedel@me.com> To: pfmc.comments@noaa.gov CC:

To Whom It May Concern:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals by:

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. 2) Support the transition of the fleet to more selective gear.

Thank you, Sabrina Wojnaroski Sent from iCloud

BAN DRIFT GILL NETS!!

Messages in thread 1

Thu May 29 2014 16:29:59 GMT-0700 (PDT) ID: 1464a519fd7a2076 From: Jill Bittner <jillkb@earthlink.net> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Also, require 100 percent observer coverage on all trips and close the fishery for the season if drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtles amond other endangered or threatened species.

And support the transition of the fleet to more selective gear that promotes the sustainability of sea life. Sincerely,

Jill Bittner

keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Messages in thread 1

Thu May 29 2014 14:30:21 GMT-0700 (PDT) ID: 14649e41d88bdbb7 From: Pat Bryan <harkor@comcast.net> To: pfmc.comments@noaa.gov CC: keep drift gillnets out of currently protected areas² and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Phase Out Use of Drift Gillnets Messages in thread 1

Thu May 29 2014 11:16:17 GMT-0700 (PDT) ID: 146493275c94c635 From: Liz Carroll <ehcarroll@earthlink.net> To: pfmc.comments@noaa.gov CC:

It is time for West Coast fishery managers to phase out the use of drift gillnets. Instead, shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. The National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish while avoiding other animals closer to the surface. These and other alternatives for catching swordfish do not ensnare non-target animals, such as leatherback sea turtles, whales, and tuna. The use of drift gillnets must be phased out as soon as possible. Thank you. Elisabeth CarrollIndian Shores, FL 33785

Swordfish fishery

Messages in thread 1

Thu May 29 2014 09:42:14 GMT-0700 (PDT) ID: 14648dc681943d65 From: Dan Silver <dsilverla@me.com> To: pfmc.comments@noaa.gov CC:

Gentlepersons:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Sincerely,

Dan Silver, Executive Director Endangered Habitats League 8424 Santa Monica Blvd., Suite A 592 Los Angeles, CA 90069-4267

213-804-2750 dsilverla@me.com www.ehleague.org

Better Way to Catch Swordfish

Messages in thread 1

Thu May 29 2014 09:41:10 GMT-0700 (PDT) ID: 14648db5726351bc From: darynne jessler <darynnej@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

I ask the council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Federal fisheries managers should:

 Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.
Support the transition of the fleet to more selective gear.
Sincerely,
Darynne Jessler Valley Village CA 91607

Dalynne Jessier Valley Village CA 91

Pacific Swordfish

Messages in thread 1

Thu May 29 2014 09:21:48 GMT-0700 (PDT) ID: 14648c99b61ee724 From: Kris Pagenkopf <kris_pagenkopf@hotmail.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you. Kris Pagenkopf 7625 SW 7th Place Gainesville, FL 32607

Drift Gillnets

Messages in thread 1

Thu May 29 2014 08:19:38 GMT-0700 (PDT) ID: 1464890ac160df2e From: Joseph Wenzel <josephwenzel@msn.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of protected areas and instead shift the fisheries for swordfish and thresher sharks to sustainable gear types that minimize bycatch of endangered species!

Joseph Wenzel

keep

drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. - See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catchpacific-swordfish-85899544835?utm campaign=2014-05-28%20PFN.html&utm_medium=email&utm_source=Eloqua#sthash.ssDNasef.dpufkeep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. - See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catchpacific-swordfish-85899544835?utm_campaign=2014-05-28%20PFN.html&utm medium=email&utm source=Elogua#sthash.ssDNasef.dpufkeep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. - See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catchpacific-swordfish-85899544835?utm campaign=2014-05-28%20PFN.html&utm medium=email&utm source=Eloqua#sthash.ssDNasef.dpuf

Drift gillnets

Messages in thread 1

Thu May 29 2014 07:59:55 GMT-0700 (PDT) ID: 146487eacffb3ffd From: Jenene Garey <jggarey@icloud.com> To: pfmc.comments@noaa.gov CC:

TO: pfmcRE: Sustainable gear types Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you,

Jenene G Garey 111 Barrow St, Apt 6E, NY, NY 10014 212-741-6579724 Zlatnik Dr, Two Rivers, WI 54241 920-793-2389

fishing

Messages in thread 1

Thu May 29 2014 07:52:55 GMT-0700 (PDT) ID: 146487849d04702d From: Sandra Materi <materi@widcfrontier.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Sandra Materi1600 w. OdellCasper, WY 82604

Swordfish

Messages in thread 1

Thu May 29 2014 07:27:37 GMT-0700 (PDT) ID: 146486113b97714a From: olv415@aol.com To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you!!

Della Oliver

Catching Swordfish Off the West Coast **Messages in thread 1**

Thu May 29 2014 07:01:42 GMT-0700 (PDT) ID: 146484963b182db2 From: Roberta LaFrance <roberta_lafrance@yahoo.com> To: pfmc.comments@noaa.gov CC:

Dear Pacific Fishery Management Council:

I am writing today to ask the council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you for your time.

Roberta LaFranceCitizen

Please Act to Keep Drift Gillnets Out of Protected Areas Messages in thread 1

Thu May 29 2014 06:58:17 GMT-0700 (PDT) ID: 146484639e9cd862 From: Karre Richards <dkrichards15@hotmail.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Pacific Fishery Management Council

Hello,

Please act to keep drift gillnets out of protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank You for your attention!

Deborah Richards

swordfish Messages in thread 1

Thu May 29 2014 05:57:10 GMT-0700 (PDT) ID: 146480e37419f1ab From: "cyn@bavarianstl.com" <cyn@bavarianstl.com> To: pfmc.comments@noaa.gov CC:

it's time for a better alternative to using drift gill nets to harvest fish.

drift gillnets Messages in thread 1

Thu May 29 2014 05:34:04 GMT-0700 (PDT) ID: 14647f9221c7ce01 From: Ellen Zimmerman <ellen.zimmerwoman@gmail.com> To: pfmc.comments@noaa.gov CC:

Dear Sirs:

I have observed drift gillnets and the damage they do as unintended consequences. They appear to be indiscriminate and deadly or harmful to other marine life. Please work to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals

Ellen Zimmerman

Ellen

Drifting gill nets should be banned.

Messages in thread 1

Thu May 29 2014 04:51:04 GMT-0700 (PDT) ID: 14647d1be3486491 From: Tom Cleveland <tgcleve@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear All:

I urge you to revise regulations to ban drift gill nets for the Pacific swordfish fishery. These days we need to be more precise when using ocean resources and the by-catch from these drift nets is too harmful to continue. Regards, Tom Cleveland Cell: 203-981-9040

Please Keep Gillnets Out of Currently Protected Areas Messages in thread 1

Thu May 29 2014 04:16:37 GMT-0700 (PDT) ID: 14647b23be90a793 From: Tracey Eakin <traceyeakin@gmail.com> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you

Tracey EakinPlant-Based Nutrition Counselor 724.469.0693www.traceyeakin.com

Gillnetting of Swordfish & Thresher Shark

Messages in thread 1

Wed May 28 2014 22:36:17 GMT-0700 (PDT) ID: 146467aa2b04353a From: Eric Duggan <duggane@sbcglobal.net> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Dear Council, I am deeply saddened having read about the unnecessary destruction of sealife (bycatch) through the use of gillnets. At the same time, I'm hopeful that safer and just as effective methods can be utilized that don't greatly impact profitability of the fisherman. The great thing about humanity is when faced with a choice to do what is right and just, or the opposite, eventually right and just wins out. So, the question is are you up for the challenge? Sincerely, Eric DugganSacramento, California Less bycatch, more swordfish and shark fishing regulation!

Messages in thread 1

Wed May 28 2014 22:08:59 GMT-0700 (PDT) ID: 1464661a52c8509a From: Greyling Gentry <greyling.gentry@gmail.com> To: pfmc.comments@noaa.gov CC:

Dear NOAA,

I am writing to ask that you work your hardest to keep drift gillnets out of currently protected areas, and to extend the areas in which these indiscriminate killing machines are illegal.

Instead, please shift swordfish and thresher shark fisheries to gear types that minimize wasteful, immoral and unsustainable bycatch of marine animals.

I am so appalled at the abysmal mismanagement of our collective marine habitats that I hardly ever buy ocean fish any more. Between endless radiation leakage, unfettered poaching and scary die-offs, our seas are in very sad shape.

The remaining marine creatures are in mortal danger, and they need those forage fish far more than we do. There's no such thing as sustainable fishing by humans. We're just too greedy and dishonest a bunch to be put in charge of monitoring our own takings.

Frankly, I'd like to see the the Star Wars strategic defense equipment used to blast illegal fishing and whaling concerns to kingdom come. (Kidding, sort of. The oil slicks would be a big problem.)

Anyway, please do whatever you can to protect what's left of our beleaguered planet's wondrous, fragile and irreplaceable marine species.

Gratefully yours,

Greyling Gentry 13508 NE 70th St.Redmond, WA 98052

Sustainable Swordfish

Messages in thread 1

Wed May 28 2014 21:47:07 GMT-0700 (PDT) ID: 146464daaca01614 From: James Shelton <james_shelton32@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

This is the only way to keep from losing more ocean species.

James Shelton 811 Roehampton Ct Richmond Va 23236 Please keep drift gillnets out of currently protected areas

Messages in thread 1

Wed May 28 2014 20:45:43 GMT-0700 (PDT) ID: 14646155634699b8 From: Steve Robey <steve.robey@gmail.com> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Steve Robey

Messages in thread 1

Wed May 28 2014 20:32:31 GMT-0700 (PDT) ID: 1464609613fa0ebc From: Babette B <bbruton3@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

I am writing to ask you to PLEASE keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear type nets that minimize wasteful and needless bycatch of marine animals. Many of which are endangered or near endangerment. Thankyou. Babette Bruton 15921 Linda Ave. Los Gatos, Ca. 95032

please adopt newer, smarter, more humane fishing methods Messages in thread 1

Wed May 28 2014 20:20:56 GMT-0700 (PDT) ID: 14645feb496a33c9 From: Robin Zeplin <leadzeplin@sbcglobal.net> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Keep drift gillnets out of currently protected waters. robin zeplink.c.,mo 64114818-888-457

Gillnets

Messages in thread 1

Wed May 28 2014 19:46:22 GMT-0700 (PDT) ID: 14645df13e4825e0 From: Kelly Beck-Byrnes <kellbex@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Hi there,please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

See more at: Let's Find a Better Way to Catch Pacific Swordfish - The Pew Charitable Trusts Let's Find a Better Way to Catch Pacific Swordfish - T...Swordfish caught off the coast of California is a prized seafood delicacy. Sadly, the predominant method of catching this abundant fish, called drift g...View on www.pewenvironment...Preview by Yahoothank you,kelly byrnesmontecito, ca

dift gillnets Messages in thread 1

Wed May 28 2014 18:49:09 GMT-0700 (PDT) ID: 14645acb3476728f From: tigerneptune <tigerneptune@juno.com> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Thank you for your business. Sincerely, James E. Shifflett Jr552 Cleveland AvenueCharlottesville, Virginia 22903434.293.6236james_shifflett@bigfoot.comDiogenes Solomandiogenes_soloman@bigfoot.comSimple honest wisdom.. 1+1=2 Joyce L. ShifflettJames E. Shifflett, Jr.www.4RentSaint.com4RentSaint@bigfoot.com434.293.6236Honesty is good business.Honesty is good government.

gill nets

Messages in thread 1

Wed May 28 2014 18:46:52 GMT-0700 (PDT) ID: 14645a897e64fd32 From: Vern Griffith <griffs94571@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Bluntly, find another method other than gillnets!

Keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Messages in thread 1

Wed May 28 2014 18:42:53 GMT-0700 (PDT) ID: 14645a5100d23a2a From: stuart phillips <stulips@hotmail.com> To: pfmc.comments@noaa.gov CC:

Keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Drift gillnets out of protected areas.

Messages in thread 1

Wed May 28 2014 17:27:58 GMT-0700 (PDT) ID: 1464560550c8f90d From: peter harriman <socalad@yahoo.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Lets do what we can to care for the world and make it a better place.

Thank you,

Peter F. Harriman

Messages in thread 1

Wed May 28 2014 16:47:53 GMT-0700 (PDT) ID: 146453d257b42877 From: Mary Prubant <mprubant@msn.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Gillnets not for protected areas!

Messages in thread 1

Wed May 28 2014 16:35:58 GMT-0700 (PDT) ID: 1464530be4dbd5a6 From: "Lynch, Erin" <elynch@rpa.com> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you for your consideration!

Erin Lynch V.P., Sr Manager, Regional Marketing RPA ADVERTISING 2525 Colorado Ave. Santa Monica CA 90404 T 310-633-6158 elynch@rpa.com

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SWORDFISH SAFETY

Messages in thread 1

Wed May 28 2014 16:32:35 GMT-0700 (PDT) ID: 146452d6bd7a1fe5 From: Patricia Medeiros <pfoley66@comcast.net> To: pfmc.comments@noaa.gov CC:

Please keep any and all drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank You

Robert L Foley Jr

Drift Gillnets

Messages in thread 1

Wed May 28 2014 16:19:32 GMT-0700 (PDT) ID: 1464521b2d3e1592 From: "Dr. Theresa Gargiulo" <bingo2bosco@gmail.com> To: pfmc.comments@noaa.gov CC:

PLEASE keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you, T. Gargiulo

Phase out the use of drift gill nets

Messages in thread 1

Wed May 28 2014 15:45:09 GMT-0700 (PDT) ID: 14645025e95ff84e From: Sandy Joos <jooss@ohsu.edu> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

I am writing to ask the Pacific Fishery Management Council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful by-catch of marine animals.

Thank you for your attention, Sandra Joos, PhD 4259 SW Patrick Pl Portland, OR 97239

GILL NETS

Messages in thread 1

Wed May 28 2014 15:33:18 GMT-0700 (PDT) ID: 14644f787c81fa85 From: norma campbell <sqrrlady@hotmail.com> To: pfmc.comments@noaa.gov CC:

SIMPLE STOP THE DRIFT GILL NETS ITS NOT WORTH THE "BY CATCH" GO BACK TO THE OLD WAY OF FISHING. GIVE THE OTHER SEA CREATURES A CHANCE TO SURVIVE. Norma Campbell Injured & amp; Orphaned Wildlife (a 501 C 3 non-profit) Campbell, California

"if all insects on Earth disappeared, within 50 years all life on Earth would end. If all human beings disappeared from the Earth, within 50 years all forms of life would flourish." Jonas Salk, Biologist

Drift Gill Nets

Messages in thread 1

Wed May 28 2014 14:50:14 GMT-0700 (PDT) ID: 14644cff0b6693a4 From: Jeane Harrison <jlhggy@gmail.com> To: pfmc.comments@noaa.gov CC:

Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Gillnets

Messages in thread 1

Wed May 28 2014 13:43:01 GMT-0700 (PDT) ID: 146449289adf73e5 From: Elizabeth <elizabeth.watts@verizon.net> To: pfmc.comments@noaa.gov CC:

Off the California shore,

nets as long as a mile are submerged for hours at a time to catch swordfish and thresher sharks. The problem is that these nets also entangle and kill other animals the fishermen never intended to catch—including whales, turtles, sharks, dolphins, and many species of fish.

Thousands of nontarget

animals are caught in these impenetrable walls, a problem known as bycatch, including endangered sperm whales, Pacific leatherback turtles, and valuable but severely depleted game fish such as bluefin tuna. In fact, the severe injury and death of two sperm whales in December 2010 prompted federal fishery managers to enact a temporary emergency rule requiring observers on all drift gillnet boats—a fivefold increase from the scant 20 percent observer coverage normally accorded this fishery, as of 2013. That rule is now due to expire on Aug. 5.

Observers have recorded thousands of fish tossed overboard such as the mola mola (a large oblong-shaped creature also known as sunfish), striped marlin, and blue sharks, in many cases dead or dying. Observers have accompanied less than 20 percent of drift gillnet trips, so there is no way of fully knowing the full harm caused by this gear.

It's time for West Coast fishery

managers to phase out the use of drift gillnets. We can end the discard of nontarget fish ensnared by them and stop the senseless killing of rare animals by simply using alternative fishing methods.

The past and future offer

other ways to continue catching swordfish and thresher sharks. For most of the 20th century, fishermen using harpoons hunted these fish along the West Coast. This fishery produced a fresh and highly valued product, with virtually no bycatch or harm to nontarget animals. Today, the National Oceanic and Atmospheric Administration and other organizations are exploring alternative types of fishing gear to reduce the wasteful catch of marine species, including the use of deep-set buoy gear that drops hooks deep enough to reach swordfish

while avoiding other animals closer to the surface. These and other alternatives for catching swordfish do

not ensnare nontarget animals, such as leatherback sea turtles, whales, and tuna. When it comes to drift gillnets, now should be the end of the line.

Federal fisheries managers should:

 Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.
Support the transition of the fleet to more selective gear.

I ask the council to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Thank you. Elizabeth Watts Lynbrook, NY

Drift Gillnets Messages in thread 1

Wed May 28 2014 13:41:27 GMT-0700 (PDT) ID: 1464491044d0df99 From: Charles Brumleve <ctbrumleve@cox.net> To: pfmc.comments@noaa.gov CC:

Drift gillnets need to be stopped. Too many other marine animals (including endangered species) are being killed. Please have observers be present when these ships go to sea and if any endangered animals get entangled in the gillnets then the fishery needs to be closed. Also the ships using gillnets need to transition to other methods of catching sword fish. Thank you.

drift gillnets Messages in thread 1

Wed May 28 2014 13:20:50 GMT-0700 (PDT) ID: 146447e267595030 From: Anthony Montapert <amontapert@roadrunner.com> To: pfmc.comments@noaa.gov CC:

I ask you to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Sincerely, Anthony Montapert

No gill nets for swordfish

Messages in thread 1

Wed May 28 2014 13:16:15 GMT-0700 (PDT) ID: 1464479e15188e4f From: Rose Marie Bertrand <roseber@sbcglobal.net> To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov> CC:

It is very important to preserve our environment and our creatures of the ocean which we can help to do by keeping drift gillnets out of currently protected areas. We must shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. We cannot keep destroying animals willy nilly in the ocean. How sad to pull up all those dead creature trapped by gill nets and dump their dead bodies back into the ocean. And how very, very wrong. It may enrich the bottom line of those doing the netting but it does our planet no good whatever.

comments

Messages in thread 1

Wed May 28 2014 13:05:16 GMT-0700 (PDT) ID: 146446fd84e08221 From: Mark Rist <mjristah@gmail.com> To: pfmc.comments@noaa.gov CC:

Please keep drift gintlets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

2) Support the transition of the fleet to more

selective gear. - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-28%20PFN.html&utm_medium=email&utm_source=Elogua#sthash.h5EaWKhn.dpuf

Require 100 percent observer coverage on all trips and close the fishery for the season if a grift gillnet entangles any protected species, such as sperm whale or leatherback turtles. Support the transition of the fleet to more selective gear. Thanks

Mark Rist

comment

Messages in thread 1

Wed May 28 2014 12:58:37 GMT-0700 (PDT) ID: 1464469bc1a3b49e From: jristsurfs@comcast.net To: pfmc.comments@noaa.gov CC:

Please keep drift gintlets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

1) Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

2) Support the transition of the fleet to more

selective gear. - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

28%20PFN.html&utm_medium=email&utm_source=Eloqua#sthash.h5EaWKhn.dpuf Require 100 percent observer coverage on all trips and

close the fishery for the season if a grift gillnet entangles any protected

species, such as sperm whale or leatherback turtles.

Support the transition of the fleet to more selective

gear. Thanks

Joanne Rist

swordfish

Messages in thread 1

Wed May 28 2014 12:45:43 GMT-0700 (PDT) ID: 146445df61c40db0 From: Cathleen Kelly <ckelly3737@gmail.com> To: pfmc.comments@noaa.gov CC:

please end the use of gilnets for catching swordfish and sharks; the bycatch is unacceptably high.

Drift Gillnets

Messages in thread 1

Wed May 28 2014 12:42:55 GMT-0700 (PDT) ID: 146445ce596bffed From: Alan Little <acl@leranch.com> To: pfmc.comments@noaa.gov CC:

Dear Council Members, Drift gillnetting is catching and killing marine life it was never intended to harvest. I'm asking you help stop the "collateral damage" by A: Banning them from currently protected areas for swordfish and thresher sharks and replacing them with sustainable gear and methods that do not harm other species, and B:100 reasing observer participation to ensure compliance. Together, we can create a true win-win for marine animals! Sincerely, Alan C. Little

gill nets and Pacific swordfish **Messages in thread 1**

Wed May 28 2014 12:30:53 GMT-0700 (PDT) ID: 14644505fb1b03c9 From: Grace Adams <graceadams830@gmail.com> To: pfmc.comments@noaa.gov CC:

Is there an ocean equivalent to Havahart live traps for catching stray cats, etc. on land? If there is something that will do for sea creatures, what Hava-Hart live traps do for catching stray cats, etc., that is what you need instead of gill nets for catching tuna and sharks.

Gill Nets

Messages in thread 1

Wed May 28 2014 12:24:11 GMT-0700 (PDT) ID: 146444a4c4e65da9 From: Randy Monroe <Randy@monroescienceed.com> To: pfmc.comments@noaa.gov CC:

Please find alternative fishing practices to drift gillnetting that harm and kill thousands of nontargeted species annually. By-catch is simply a waste of life!

Randy Monroe

(925)969-0808 bus/fax (925)788-6910 cell Randy@MonroeScienceEd.com www.MonroeScienceEd.com

Reform Swordfish Industry

Messages in thread 1

Wed May 28 2014 12:14:57 GMT-0700 (PDT) ID: 1464441c71707ec1 From: Larry Thompson <thompson14ster@gmail.com> To: pfmc.comments@noaa.gov CC:

Federal fisheries managers: Please keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. You should require 100% observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.

Lawrence Thompson 1069 Felicia Court Livermore, CA 94550

Catching Swordfish

Messages in thread 1

Wed May 28 2014 12:14:34 GMT-0700 (PDT) ID: 14644416dfb33df3 From: Michael Miller <michamille@comcast.net> To: pfmc.comments@noaa.gov CC:

Please keep

drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals. Federal fisheries managers should:

 Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle.
Support the transition of the fleet to more selective gear. - See more at: http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catchpacific-swordfish-85899544835?utm_campaign=2014-05-28%20PFN.html&utm_medium=email&utm_source=Eloqua#sthash.uwZJgSmN.dpufAlso , Federal fisheries managers should require
percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. Please support the transition of the fleet to more selective gear.
It's time to investigate shifting to alternatives – such as deep-set buoy gear – that enable fishermen to catch swordfish while leaving other

marine life in the water where it belongs.

Sincerely, Michael Miller Jr. 1512 Spruce St., Apt 809 Phila., Pa. 19102

It's time to investigate shifting to alternatives – such as deep-set buoy gear – that enable fishermen to catch swordfish while leaving other marine life in the water where it belongs.

- See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

28%20PFN.html&utm_medium=email&utm_source=Eloqua#sthash.uwZJgSmN.dpuf

1) Require 100 percent observer coverage on all trips and close the

fishery for the season if a drift gillnet entangles any protected

species, such as a sperm whale or leatherback sea turtle.

2)Support the transition of the fleet to more selective gear.

Federal fisheries managers should:

1)Require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. 2)Support

the transition of the fleet to more selective gear. - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

28%20PFN.html&utm_medium=email&utm_source=Eloqua#sthash.uwZJgSmN.dpuf - See more at:

http://www.pewenvironment.org/news-room/other-resources/lets-find-a-better-way-to-catch-pacific-swordfish-85899544835?utm_campaign=2014-05-

28%20PFN.html&utm_medium=email&utm_source=Eloqua#sthash.uwZJgSmN.dpuf

No Gill NEts, Catch less, dredge less...LIFE MORE

Messages in thread 1

Wed May 28 2014 12:04:10 GMT-0700 (PDT) ID: 1464437e8d2ce7f6 From: michael rifkind <rdokarma@earthlink.net> To: pfmc.comments@noaa.gov CC:

Keep drift gill nets out of protected areas of the ocean please! Messages in thread 1

Wed May 28 2014 12:03:28 GMT-0700 (PDT) ID: 146443765250e7ff From: jennifer van zyl <jennifervanzyl@mac.com> To: pfmc.comments@noaa.gov CC:

To Whom it May Concern:

This email is from our family to ask you to keep drift gillnets out of currently protected areas and instead shift the fishery for swordfish and thresher sharks to sustainable gear types that minimize wasteful bycatch of marine animals.

Sincerely, The van Zyl FamilyLos Angeles, California 90068



Agenda Item E.2.c Supplemental Public Comment 3 (Full Version Electronic Only) June 2014 CA Coastal & Marine Program

tel [831] 333-2046 fax [831] 333-1736

nature.org nature.org/california

June 13, 2014

Ms. Dorothy Lowman, Chair Pacific Fishery Management Council 1100 NE Ambassador Place, #101 Portland, OR 97220

RE: Agenda Item E.2 – Drift Gillnet Fishery Transition Issues

Dear Chairman Lowman and Council Members,

At the March 2014 meeting, Council members made clear their interest in a more holistic and proactive approach to restructuring the drift gillnet (DGN) fishery. The Nature Conservancy applauds the Council for taking this path, which includes exploring transferring permits from state to federal authority, encouraging the development of EFPs to test alternative fishing methods, and finally, to initiate the development of a comprehensive fishery transition plan. We would like to take this opportunity to ask for continued guidance on your vision for the future of this fishery and offer the possibility to work in collaboration with both the Council and respective agencies in regards to these matters.

99 Pacific Street, Suite 200G Monterey, CA 93940

As you know, the Conservancy and other research and conservation groups are keenly interested in pursuing a variety of innovative projects that can facilitate and improve the conservation and economic performance of this fishery. We are engaged in the following:

- Continued exploration of a permit buyout to reduce latent effort
- A research partnership with the 'Dynamic Ocean Management' Group to reduce bycatch risk in the DGN fishery through predictive modeling and real time application framework (EcoCast with eCatch).
- A collaborative partnership with SWFSC and the UCSB Bren School to analyze management strategies and trade-offs related to CA-based swordfish fishery
- Scoping opportunities to build upon previous DGN Electronic Monitoring efforts in order to provide a cost effective means of ensuring accountability
- Continuing to cultivate industry, agency, and NGO partnerships and build a coalition working towards a shared future vision for this fishery

With the right set of incentives and management measures in place, we believe that this fishery can demonstrate significantly less bycatch than other sources of foreign caught swordfish that are consumed in the U.S. So that these and other efforts can have maximum impact, we are seeking the Council's guidance and to understand their vision for a future HMS fishery, particularly in the following areas:

- ✤ Applying performance standards to manage bycatch, regardless of gear type
- Desired level of accountability should standards or hard caps be implemented
- Desired level of effort/capacity in a future West Coast HMS fishery
- Support and ideas for technology/spatial applications to improve fishery performance
- Support and guidance for gear improvements/testing via EFPs
- ✤ A timeline and preferred sequence of activities to achieve transition

We ask the Council for a strong and clear vision for a future swordfish fishery off the west coast. The Council has already done this for the groundfish trawl fishery, which underwent a comprehensive re-structuring over the last few years. Just this month, 13 species in this historically troubled fishery were certified as sustainable by the Marine Stewardship Council. The Council family as well as participating stakeholders should be proud of the many years of hard work leading to such recognition. Here is an opportunity to do the same for this highly valuable fishery.

Sincerely,

Melissa Stevens Fisheries Project Director The Nature Conservancy California Coastal & Marine Program <u>melissa_stevens@tnc.org</u> 831-332-0465

Dedicated to Ecosystem Protection and Sustainable Land Use



June 13, 2014

Dorothy M. Lowman, Chair Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220-1384

RE: Agenda Item E.2, Drift Gillnet Fishery Transition Issues

Dear Chairman Lowman and Council Members:

I am writing on behalf of the Endangered Habitats League (EHL), a non-profit organization dedicated to ecosystem protection and sustainable land use. As Southern California's only regional conservation group, EHL has led the way in establishing an unprecedented, interconnected system of nature reserves. By focusing on science-based priorities, we continue the monumental work of preserving our natural heritage for future generations. As a result of our conservation work, we have a deep understanding for the importance of sustainable fishing advocacy and the need to maintain a healthy and productive Pacific Ocean.

I want to thank the Council for acting in March to develop a comprehensive plan to shift the current fishery for Pacific swordfish away from drift gillnets. Drift gillnets indiscriminately capture and kill myriad species of marine life, including non target species of fish, whales, seals, sharks, and dolphins along our coast. Despite various measures adopted over recent years intended to minimize harm caused by drift gillnets, the fundamental nature of this gear means that it will continue to cause unacceptable levels of bycatch.

That is why, as you move forward to establish regulations for the drift gillnet fishery, I encourage you to take responsible action at June's meeting and enact the following:

- Require immediate closure of the drift gillnet fishery for the remainder of the season if any protected species, such as a sperm whale or leatherback sea turtle, is observed killed or injured in drift gillnet gear.
- Require 100% observer coverage on all drift gillnet fishing vessels.
- Support the transition of the fleet to more selective gear types that minimize wasteful bycatch of marine mammals.
- Keep drift gillnets out of currently protected areas.

We are fortunate to have a robust and healthy population of swordfish along the West Coast. The public should be able to enjoy this prized food delicacy with the knowledge that our fishermen are setting the standard for catching swordfish in a way that protects other ocean wildlife.

Thank you for your time and attention to this matter. I appreciate your stewardship of our marine resources and the work you do to maintain sustainable fisheries.

Sincerely,

- Alu

Dan Silver, MD Executive Director

Ms. Dorothy M. Lowman Chair Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220-1384

RE: Agenda Item E.2 Drift Gillnet Fishery Transition Issues

Dear Chair Lowman and Council Members:

Thank you for the work you perform, and for working towards an ecosystem-based approach towards fisheries management. I am writing on behalf of Pacific Environment, an organization whose objective is to protect the living environment of the Pacific Rim. We are aware that California's coast provides vital feeding and migratory areas for endangered whales, and that it is also home to a rich biodiversity of marine life. That is why through direct advocacy, campaigning, and media and policy work, Pacific Environment works to strengthen preventative and protective policies at the regional, national, and international levels that support our oceans and marine ecosystems.

While we understand that swordfish caught off the coast of California are a delicacy, we also know that the predominant method of catching this abundant fish- drift gillnetting- kills many species of marine mammals, fish, sharks, and turtles that the fishermen never intended to catch. We need to start investigating a shift to alternatives- such as deep-set buoy gear- that enables fishermen to catch swordfish while leaving other marine life in the water where it belongs.

As the Council looks toward future regulations of the drift gillnet fishery for swordfish and thresher shark off the west coast, we suggest that you keep drift gillnets out of currently protected areas. It is imperative that you require 100 percent observer coverage on all trips and close the fishery for the season if a drift gillnet entangles any protected species, such as a sperm whale or leatherback sea turtle. We encourage you to also look to shift the fishery for swordfish and thresher sharks to more selective, actively fished gear types that minimize wasteful bycatch of marine animals.

We are encouraged and look forward to the Council taking positive action that ensures us we can rely on a healthy ocean to provide an economic engine for generations to come.

Thank you for your consideration of our comments and for your continued work and commitment to ensuring a productive Pacific Ocean.

Respectfully yours,

Olex Levinson

Alex Levinson, Executive Director Pacific Environment



June 13, 2014

Dorothy Lowman, Chair Pacific Fishery Management Council 7700 N.E. Ambassador Place, Suite 101 Portland, OR 97220-1384

RE: Agenda Item E.2 – Drift Gillnet Fishery Transition Issues

Dear Chair Lowman,

The Pew Charitable Trusts has collected 4,982 comments from the public asking the council to ensure the current drift gillnet fishery for swordfish shifts to alternative fishing gear that is actively tended and that minimizes interaction with non-targeted species.

The petition itself is included with all the names and cities of individual signers that were gathered through June 12. The council may continue to receive additional comments in the days ahead. Please note that many of the individual petitions included here have been personalized or include additional comments.

Thank you,

Erik Robinson The Pew Charitable Trusts Dear Chair Lowman and Council Members:

Thank you for acting in March to develop a comprehensive plan to shift the fishery for Pacific swordfish away from drift gillnets. Please act decisively at the June 20-25 council meeting to ensure this fishery adopts a more environmentally sustainable alternative.

Drift gillnets indiscriminately capture and kill many species of marine life, including non-target fish, whales, seals, sharks, and dolphins along our coast. During your meeting in June, the Council should establish clear criteria for granting experimental fishing permits to fishermen willing to try alternative gear that is actively tended and that minimizes interaction with non-targeted species.

Further, until the fleet fully shifts to more selective alternatives for swordfish, the existing drift gillnet fishery should be carefully monitored and regulated. The Council should encourage the National Marine Fisheries Service to require observers on all fishing trips when drift gillnets are used, impose firm limits on the number of interactions with living marine resources such as whales and sea turtles, and close the fishery for the season if those limits are reached.

Despite various measures adopted in recent years to minimize harm caused by drift gillnets, the fundamental nature of this gear means that it will continue to cause unacceptable levels of bycatch. Every year spent attempting to make incremental improvements will delay the necessary transition to a cleaner and more sustainable alternative.

We are fortunate to have a robust and healthy population of swordfish along the West Coast. The public should be able to enjoy this prized seafood with the knowledge that our fishermen are catching swordfish while protecting other ocean wildlife.

Sincerely,

FIRST NAME	LAST NAME	CITY	STATE	PERSONAL COMMENT
Dan	Esposito	Manhattan Beach	CA	
Samantha	Tabak	Los Angeles	CA	Please find a safer way to fish.
Jaina	Ко	Irvine	CA	
Adam	Sperry	North Hollywood	CA	
myrna	brown	rosemead	CA	
aaron	dickens	spring valley	CA	
Anita	Papassarand	San Diego	CA	
	is			
Maria	Schneider	Sacramento	CA	
VIVIANE	tits	San Francisco	CA	
Rosa	Baeza	Reseda	CA	
Elizabeth	Adan	Carmichael	CA	
Brad	Baier	Fullerton	СА	Isn't it about time to eliminate gill nets entirely? Have we not lost enough of our sea life as by-catch to warranty significant changes before it becomes too late?
Ivan	Womboldt	Palm Springs	CA	This fills me with such sadness that we do not give better care to other species on this planet. They have rights to you know.
IJ	Tanaka	SB	CA	U use of massive gllnets threatens Ur own Jobs & our Oceans. Lack of knowledge & Greed ensure Global Extinction.
Dominick	Falzone	Los Angeles	CA	
darynne	jessler	valley village	CA	
Candice	Barnett	Santa Monica	CA	
Jason	Brock	Los Angeles	CA	
Laurel	Scott	San Diego	CA	I'm sympathetic to the commercial anglers, but there is room for improvement. I'm also a recreational angler, environmentalist, and seafood lover.
Ronald	Maxson	L.A.	CA	
Chris	OMeara Dietrich	San Jose	CA	
Patrick	Cameron	El Cajon	CA	
Ben	Ruwe	Felton	CA	
Marsha	Jarvis	Pinole	CA	
Charleen	Charleen	Topanga	CA	
Randall	Esperas	Cupertino	CA	
Joe	Buhowsky	San Ramon	CA	
Bridgett	Heinly	San Diego	СА	There is no reason that so many other species have to die in these gillnets when there are better options available to reduce the number of bycatch. Please act to preserve our marine life.
Ronald	Warren	Glendale	CA	
Brandon	Chavez	Los Angeles	CA	
Susan	McLaughlin	Foothill Ranch	CA	
John	Pham	Encinitas	CA	
Janice	Gloe	Oakland	CA	
Mark	Cappetta	Rancho Mirage	CA	
Ana	Herold	Pacifica	CA	
Dudley and Candace	Campbell	Valley Glen	CA	
dennis	barrett	sunnyvale	CA	
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Heather	Clough	Ventura	CA	
Michael	O'Niell	Upland	CA	
Rebecca	McDonough	Menlo Park	CA	
Robert	Sullivan, MD	Sacramento	CA	
Bob	Miller	Aliso Viejo	CA	fisheries are in steep decline; something must be done to help
Paul	Vesper	Berkeley	CA	
Ellen	Segal	Palm Springs	CA	
rebecca	koo	san jose	CA	
charlotte	cook	sacramento	CA	
Sudesh	Prasad	San Pablo	CA	
Saran	Kirschbaum	Los Angeles	CA	What use to be common practice in today's world is no longer acceptable or sustainable. Gillnets are a NO NO in today's world.
ROBERT	PARKER STELLATO	REDWOOD CITY	CA	
J	Chen	Los Angeles	CA	
Michelle	Wong	South Pasadena	CA	
Kathleen	Rogers	Paramount	CA	
Јоусе	Johnson	Burbank, CA	CA	There MUST be a better method! Please implement it immediately. Thank you
Sylvia	Cardella	Hydesville	CA	
Nancy	Byers	Berkeley	CA	I truly wish that there was a better way to fish that did not kill whales, dolphins, and turtles. Please try as hard as you can to find a better way!
Urmila	Padmanabh an	Fremont	CA	
Frances	Onesti	Lawndale	CA	
Denise	Dardarian	Los Angeles	CA	
Oscar	Revilla	San Sebastian de los Reyes	CA	
Caryn	Cowin	South Pasadena	CA	
Michael W	Evans	Los Angeles	CA	
Joe	Salazar	Santa Rosa	CA	
Kristine	Andarmani	Saratoga	CA	
Mary Ellen	Strote	Calabasas	CA	Our oceans are under too much stress. Please think of future generations' needs.
Jason	Chin	Portland	CA	
Richard	Mayer	Santa Rosa	CA	We are better than this
Roberta	LaFrance	San Leandro	CA	Let's work together to create a more compassionate way of fishing in our Oceans.
Kristina	Fukuda- Schmid	Culver City	CA	
John	Delaney	Ventura	CA	
Karynn	Merkel	Eureka	CA	
Barbara	Lafaver Gleason	Concord	CA	WE ARE KILLING THE PLANET BY OVER FISHING. THESE PRACTICES MUST BE STOPPED BEFORE ALL SPECIES ARE EXTINCT.!
MaryKay	Rodarte	Phelan	CA	When fishing was done with fisherman and rods and reels, we did not have all of this wasted by catch" and we should return to something along this method. It would be good for employment

Jan	Катра	Soquel	CA	
Lanier	Hines	Redding	CA	
James	Lobdell	Santa Rosa	CA	
Sarah	Hafer	Sacramento	CA	
Edwin	Aiken	Sunnyvale	CA	
James	Patton	Los Altos	CA	
Willa	O'Connor	Kensington	CA	
Gwen	Romani	Castaic	CA	Please, stop destroying the oceans populations with kill-all
				mile-long gillnets. Its just Wrong!
н	GRAY	Hayward	CA	THE OCEANS ARE DYINGNO REALLYDYING!
Richelle	Witt	Camarillo	CA	
Ann	Rennacker	Ft Bragg	CA	Swordfish are at the top of the food chain, so they are terribly polluted with mercury and unsafe to eat. They are also endangered by extinction, so they should not be overfished. No gill nets or trawl nets should ever be used.
Anthony	Stratton	Elk Grove	CA	
Joseph	Lilli	Pacific Palisades	CA	
Judith	Little	Arcata	CA	
Doug	Thompson	Morongo Valley	CA	We must select more sustainable types of fishing gear.
Patrice	Summers	Santa Barbara	CA	A better way to catch Pacific Swordfish: it's time to shift the fleet to more environmentally sustainable types of fishing gear. Unfortunately, these deadly gillnets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released.
Gabriel	Sheets	Merced	CA	
Robert	Mammon	Richmond	CA	
Vladimir	Strugatsky	Sebastopol	CA	
Steve	Robey	Berkeley	CA	Our planet's fish are too important to continue to allow drift gillnets. Please use a more sustainable alternative - Steve
Eli	Kuala	San Diego	CA	
karen	toyohara	La Mesa	CA	
Sandy	Stuhaan	Ridgecrest	CA	
Laura	Kohn	Hillsborough	CA	Please stop killing our wildlife. Don't use these dangerous nets.
Sharon	Laabs	La Jolla	CA	
Jay	Rice	Novato	CA	
steve	lucas	austin	CA	
Carolyn	Pettis	Santa Clarita	CA	
Carolyn	Lilly	San Diego	CA	Work for the good of our people and our future, not special interests.
Ramsey	Gregory	Elk Grove	CA	
Renee	Locks	Mill valley	CA	It is past time to protect all species
Patricia	Cachopo	Santa Clara	CA	
Dean	Frick	San Francisco	CA	
Mitch	Dalition	San Francisco	CA	
Shirley	Wallack	Santa Rosa	CA	
Marguerite	Shuster	Sierra Madre	CA	
Iris	Edinger	Woodland Hills	CA	
dale	riehart	san francisco	CA	

Therese	Ryan	Palmdale	CA	
Gerald	Orcholski	Pasadena	CA	Too many sea turtles, dolphins and other sea species are being killed by long-line gillnets. I will not eat fish caught that way.
Carlos	Nunez	Reseda	CA	
К	Krupinski	IA	CA	
Michael	Tomczyszyn	San Francisco	CA	
Gloria Linda	Maldonado	Redwood City	CA	
george	cornell	nleasanton	CA	
terry	hadger	Paso Bobles		
loan	Moricca	Pinole	CA	There is a better way!
Robert	Reed	Lake Elsinore	CA	
Garv	Carpenter	Pacifica	CA	
James	Haig	San Rafael	CA	
Douglas	McCormick	Trabuco Canvon	CA	
Colleen	Lobel	, San Diego	CA	
diana	kliche	long beach	CA	
Wendy	Wittl	Santa Barbara Ca	CA	
Candace	Rocha	Los Angeles	CA	
Gabriel	Lautaro	Oakland	CA	
Thomas	Rummel	Los Angeles	CA	Shift the fleet to more environmentally sustainable types of fishing gear.
Robert	Bausch	Belmont	CA	
Patrick	Lewis	Emeryville	CA	
Ruth	Ungar	Oakland	CA	
Ann	Bein	Los Angeles	CA	
Steve	Purvis	Santa Monica	CA	
Jeffery	Garcia	Mendocino	CA	
Jill	Blaisdell	La Canada	CA	
Eleanor	Cuevas	Sonoma	CA	
Donna	Kowzan	Moorpark	CA	
Mary	Markus	Garden Grove	CA	I gladly go without swordfish to save the animals that get killed in gillnets
Jennifer	Cartwright	Costa Mesa	CA	
Michael	Mitsuda	Fremont	CA	
betty	winholtz	morro bay	CA	
Robert	Wilkerson	San Diego	CA	
PAT	METSINGER	LENEXA	CA	gilnets are killing much more than fish
dave	anderson	Berkeley	CA	
Patricia	Matejcek	Freedom	CA	Drift gillnets are mass murderers. I urge the Council to encourage NMFS to require observers on all fishing trips when drift gillnets are used, develop and impose firm limits on the number of lwhales, sea turtles, etc. and close the fishery for the season if those limits are reached. Furthermore, the Council should establish clear criteria for granting experimental fishing permits to fishers willing to try alternative gear that is actively tended and that minimizes interaction with non-targeted species.
PAM	TRUSCOTT	REDDING	CA	
Michael	Rotcher	Mission Viejo	CA	
Marisa	Strange	Long Beach	CA	
Evan	Shamoon	LA	CA	

Doug & Karen	Lenier	Valley Glen	CA	
Havdee	Felsovanvi	Pescadero	CA	
	Glaston	Desert Hot Springs		It is pointless to make minor and incremental
		Deservitor springs		improvements to a method of fishing that is fundamentally indiscriminate. Members of the Pacific Fishery Management Council need to hear from you. Remind them of their commitment to shift away from drift gillnets to more selective fishing gear.
Christine	Stewart	Escondido	CA	Stop the horrifying and senseless slaughter of sea turtles, whales, and other non-target marine life with gillnets and driftnets.
Dean	Monroe	No. Hollywood	CA	
Kenneth	Tabachnick	West Hills	CA	
Eric	Ericson	PACIFIC PALISADES	CA	
Gail	McMullen	Los Angeles	CA	
Lisa	Krausz	Tiburon	CA	
Henry	Weinberg	Santa Barbara	CA	
Dr. Mha Atma S.	Khalsa	Los Angeles	CA	As a concerned American citizen and taxpayer I urge you to do what it takes to eliminate drift gillnets.
Brian	Cassidy	Capitola	CA	
Craig	Cook	Santa Rosa	CA	
Gilda	Fusilier	Sacramento	CA	
Celeste	Hong	L.A.	CA	
Kent	Minault	Sherman Oaks	CA	
Camile	Getter	Sacramento	CA	
suzie	stoltz	chula vista	CA	
Charles	Wolfe	Sylmar	CA	
courtney	dubois	san francisco	CA	
Ron	Varasteh	Irvine	CA	
joe and mary	volpe	ventura	CA	
КІМ	TRAN	SANTA ANA	CA	
Donna	Alleyne-Chin	Montara	CA	
Sean	Corrigan	Trinity Beach	CA	
Sandy	Levine	Pasadena	CA	
anne	veraldi	sf	CA	
Anthony	Arcure	Fresno	CA	
Judy	Alter	Los Angles	CA	
Robert	Frcek	Los Angeles	CA	
Dirk	Beving	Los Angeles	CA	
jewels	stratton	San Francisco	CA	
Abraham	Oboruemuh	Riverside	CA	
les	roberts	fresno	CA	
Kachel	Kelley	Santa Monica	CA	
Allen	Royer	San Jose	CA	These technologies in the theory
Fran	tomole	spring valley		mere is always a better way
anay	COMISKY			There is too much downers as include forth to NOT
Elizadeth	Zenker	Arcata	CA	make changes that we can to help diminish this.
Rita	Fahrner	San Francisco	CA	
JOY	SWEENY	Mountain View	CA	

Donna A	Brown	Sausalito	CA	I work in a Seafood restaurant and love eating fish, I just don't want to kill everything that is caught in the nets to put one fish on my table
emily	Feingold	Concord	CA	
Nancy	Kelly	Fresno	CA	
Bonnie	Breckenridg e	San Diego	CA	We must start to pay attention to the damage we are doing to our oceans. What will we do when there are no longer enough fish in the sea because not only are we over fishing the species we want to eat but killing those in the food chain that feed the fish we want to eat. The supposed smartest species needs to use their brains or we too will become extinct.
Patricia	Marlatt	Los Angeles	CA	
eric	duggan	West Sacramento	CA	
Julie	Smith	Los Osos	CA	
John	Montgomer y	San Rafael	CA	
Luke	Asbury	San Buenaventura	CA	We are destroying our planet and its life at an alarming rate. This must STOP if we are to survive.
Bryce	Beal	San Francisco	CA	
Julie	Sasaoka	Concord	CA	
N.	В.	Oakland	CA	
Natalie	Kovacs	San Clemente	CA	
Stanley	Peterson	Los Banos	CA	
Probyn	Gregory	Los Angeles	CA	Remember, if more bycatch fish die now, it will affect negatively your primary catch as well all suffer, including you.
Tim	Maurer	Anaheim	CA	
Larry	Lapuyade	San Anselmo	CA	It would be good if we could get away from gill nets altogether!
Sana	Ahmad	Irvine	CA	
Christine	Hayes	Upland	CA	
Gail	Caswell	San Francisco	CA	Please ban these cruel and wasteful nets!
Maria	Muldaur	Mill Valley	CA	
Amanda	Withrow	Santa Monica	CA	
John	Ashley	danville	CA	
Dylan	Oldenburg	Pacific Palisades	CA	
Kathryn	Brown	Marietta	CA	
Mark	Weinberger	San Francisco	CA	
Mark	Reback	Los Angeles	CA	
Dee	Randolph	Chico	CA	
Ralph	Roug	Lake Forest	CA	
Edward	Sullivan	San Francisco	CA	
MICHAEL	TOOBERT	GRASS VALLEY	CA	
Carol	Taggart	Menlo Park	CA	
Lacey	Kammerer	Milpitas	CA	
Marjorie	Streeter	Alameda	CA	
Valerie	Cameron	Woodland Hills	CA	
Mal	Gaffney	Lompoc	CA	
Eleanor	Thomas	Livermore	CA	
ERNEST	SCHOLZ	SAN FRANCISCO	CA	

Ellen	Gachesa	Napa	CA	As unbridled human overpopulation continues to ravage
				the earth, if we continue overfishing - there will be nothing left for ANYONE to eat . It's basic math
Cheryl	Albert	Freedom	СА	
DonnaMarie	Ayala	San Diego	CA	
Carol	Sawyers	Santa Cruz	CA	
Robert	Krueger	Grass Valley	CA	
Robert	Pann	Los Angeles	CA	
Ray	Bustos	Fullerton	CA	Please find another way to harvest the swordfish, without trapping onther innocent fish, which are needed for the foodchain.
James R	Monroe	Concord	CA	Longlining and gilnetting are inefficient and wasteful practices to ocean fauna. Please change the gear fishermen use and monitor the practices to reduce by- catch.
Tina	Arnold	Oakland	CA	We must ensure that the West Coast fishery managers use environmentally sustainable fishing gear!
Suzanne	a'Becket	Cupertino	CA	
Rhonda	Jessee	Glendale	CA	
George F.	Klipfel II, CLS, MT(ASCP)	Cathedral City	CA	
Sandra	Glover	Malibu	CA	stop this unnecessary depletion of our oceans!
Karyn	Gil	Sacramento	CA	
Dana	Wullenwabe r	Redding	CA	
Wayne	Heckman	Ukiah	CA	
Darrell	Wilson	Hayward	CA	
Lynne	Davies	San Francisco	CA	
victor	carmichael	Pacifica	CA	We must to everything we can to harvest our oceans sustainably. By-catches are incredibly irresponsible.
Michael	Watson	Sonoma	CA	
Isabella	La Rocca	Berkeley	CA	
Christine	Sepulveda	Anaheim	CA	Please ban dangerous and destructive drift gillnets!
Wendy	Oser	Berkeley	CA	
Hollis	Whiting	Pacific Grove	CA	I know there is always a better way to do anything, all one needs is the true desire!
Carolyn	Chris	San Francisco	CA	
jen	bradford	Spring Valley	CA	Drift gill nets are a hazard to ocean life and kill much more than their intended target.
Rhea	Damon	Calabasas	CA	These nets need to be banned. They are a death knell to ocean dwellers.
СТ	Bross	Walnut Creek	CA	Save the marine life for the fish. GO VEGAN!
carolyn	watkinson	atwater	CA	No nets!
Judy	Perry	Fremont	CA	
Cathe	Dietrich	Berkeley	CA	
Mary	Prubant	San Jose	CA	We must do everything we can to stop this. I am totally for protecting all animals from human interference.
Eric	Horwitz	Lake Forest	CA	
Amber	Tidwell	Los Angeles	CA	
Rob	Myers	Anaheim	CA	

Marco	Aguilera	Carlsbad	CA	There is a better way and this is the step that's needed
				now. right now. Thank you.
Meghan	Тгасу	Long Beach	CA	
Jon	Senour	San Diego	CA	
Leigh Ann	DiCarlo	Winchester	CA	
Kathryn	Carroll	Oakland	CA	
Rosalind	Bresnahan	San Bernardino	CA	We need to take the long term view on sustaining fisheries and marine ecosystems, even if this has short-term costs.
Sandi	Covell	San Francisco	CA	
Erica	Johanson	Hopewell	CA	
Persephone	Maywald	Orinda	CA	
Ма	Santora	Takoma Park	CA	
Jorge	De Cecco	Ukiah	CA	
Nikki	Nafziger	Vallejo	CA	
Linda	Riebel	Lafayette	CA	
Jill	Bittner	San Francisco	CA	
Russell	Weisz	Santa Cruz	CA	
Terrell	Rodefer	Van Nuys	CA	The suffering these nets are causing is unconscionable. Please find another method to catch swordfish.
c	S	sdiego	CA	PLEASE END THE HUGELY DESTRUCTIVE USE OF GILL NETS NOW! THANK YOU.
Yuriko	Hazlett	Oxnard	CA	Just be fishermen and go CATCH them with rod and reel, just like everyone else. Don't be a lazy son of a gun and just put out miles of net.
Charles	Warner	Fontana	CA	
Ela	Gotkowska	LODZ	CA	
Junko	Card	Exeter	CA	
chris	seaton	Santa Barbara	CA	
Karl	Koessel	Blue Lake	CA	
Bob	Rosenberg	Kentfield	CA	
Frank	Eichenberg	Santa Barbarar	CA	Humans must reduce the suffering we inflict on most every living thing.
Nona	Weiner	San Jose	CA	
Lynn	Howard	San Diego	CA	Drift gillnets are a hazard to our future fisheries.
Sheila	Silan	Somerset	CA	
Debra	Floyd	Coronado	CA	
Francis	Palmer	Sacramento	CA	
Alicia	Jackson	Vallejo	CA	
Janelle	Chase	San Francisco	CA	
Rudy	Ramp	Arcata	CA	
Nancy	Brenner	Murrieta	CA	
Carolyn	Frazee	Eureka	CA	Our economy depends on healthy fisheries.
Amber	Sumrall	Soquel	CA	
Coverdale	O sh a wa a	N/Lata	<u> </u>	
Jessie	Vouchier	Vista Roverty Lille		
Anita	Potorson			Cill note are a wasteful and tarrible way to fish, killing fish
DIII	Peterson	Los Angeles	CA	whales and dolphins, etc. Believe m , I know from my experience of being a fisherman who used a gillnet back in the 40's & 50's off the coast of Vancouver Island, when I was a pro fisherman
Lawrence	Thompson	Livermore	CA	

mark and susan	glasser	LA	CA	
Sidnay	Poblac	Nana	C A	
Bercy	Severn	Naya Newbury Park		
mary	rojeski	santa monica	CA	This is not the way to save or preserve our oceans and the fish stock and other creatures that live there! Ban the Net!!!
Lauren	Murdock	Santa Barbara	СА	
КЈ	Linarez	Carmichael	CA	We have to be stewards of our planet not butchers.
Brett	Forray	Turlock	CA	
Glenn	Gallagher	Simi Valley	CA	
Alex	Gallipeau	Redondo Beach	CA	
Brian	Mc Credie	1032 S Farragut, Ridgecrest	CA	
Gail	Koza	Half Moon Bay	CA	
nancy	riggleman	tollhouse	CA	
Joanna	Stiehl	San Francisco	CA	
Joan	Breiding	San Francisco	CA	
Steven	Standard	Bellflower	CA	
Paul	Hunrichs	Santee	CA	
Sandy	Commons	Sacramento	CA	
Karen	Ratzlaff	Santa Rosa	CA	
Marjorie	Moss	Del Mar	CA	
Matt	Kline	San Leandro	CA	
J. Holley	Taylor	Penn Valley	CA	
Eric	Carlson	Ventura	CA	Please continue your progressive actions to promote a sustainable West Coast fisheries with closely monitored gillnet fisheries and firm limits on bycatch
Clare	Hooson	Belmont	CA	
Babette	Bruton	Los Gatos	CA	I am writing to urge you to outlaw gillnets that are responsible for indiscriminate killing of marine animals.
Tina	Pirazzi	Long Beach	CA	The dwindling fish and mammal populations of the world's oceans need as many safe guards as possible, and continuing to use drift gillnets is precisely the WRONG decision. Indiscriminately trapping non-target species is criminal and needs to be stopped immediately. I urge you to make the responsible decision in support of the greater good.
Rayline	Dean	Ridgecrest	CA	DO NOT FISH ANYTHING W/THE NET & DO NOT FISH AT ALL.
Rob	Roberto	Santee	CA	
Gemma	Geluz	Fairfield	CA	
Diane	bolman	Novato, CA 94949	CA	
Margaret	Fish	Boonville	CA	
	ERTS	RIVERBANK	CA	
Barbara	Robbin	Studio City	CA	
Alysha	Zgrabik	Thousand Oaks	CA	
Dale	Matlock	Santa Cruz	CA	
George	Hague	Noreno Valley	CA	
Paula	Hawkins	san Diego	CA	
catny	jonnston	sherman oaks	LA	

Bonnie	Thompson	Los Osos	CA	Please take the by-catch into accountit's a loss we cannot afford.
Valerie	Guinan	Cupertino	CA	
Melanie	Dimmick	Los Angeles	CA	
Connie	Stomper	Santa Barbara	CA	
Joseph	Boone	San Luis Obispo,	CA	Save the innocents. No more drift nets.
Martha	Carrington	Santa Cruz	CA	
Misti	Reif	San Francisco	CA	
Clayton	Carr	Berkeley	CA	
Scott	Lape	Chico	CA	Please find a way to catch swordfish without killing turtles, dolphins, and whales!
Susan	McReynolds	San Leandro	CA	Please help our fisheries survive the onslaught of overfishing and unscrupulous practices.
tina	holman	monrovia	CA	
Lee	Eames	Long Beach	CA	Fishing methods are killing ocean wildlife unnecessarily. There has to be a better way of fishing for swordfish and sharks.
Robin	Reinhart	San Diego	CA	Now is the time - we are losing too many of the fish we don't want to catch - please change from drift gillnets to more selective fishing gear! Now! Please!
Amy	Colla	Los Angeles	CA	
Кау	Von Tress	Menlo Park	CA	
Desriee	Kisselburg	Los Angeles	CA	
Jered	Cargman	Banning	CA	
gail	bedinger	Rio Vista	CA	Please take measures to protect other sea as you let people continue to fish.
Corinne	Lambden	Alameda	CA	
Joan	Zawaski	Oakland	CA	
Susan	Hathaway	Pico Rivera	CA	
Celia	Kutcher	Capistrano Beach	CA	
Jeffrey	Horton	Oakland	CA	
Gregg	Sparkman	Palo Alto	CA	
emily	anderson	san jose	CA	
Rebecca	Shirley	Daly City	CA	
Deborah	Cooney	San Diego	CA	
Carolyn	Boor	Rancho Cucamonga	CA	and start using more selective fishing gear.
Valerie	Kosheleff	La Jolla	CA	Our ocean fisheries are endangered from decades of overfishing. It is time you stick to your brave commitment to move away from gillnets and use responsible, selective fishing gear. Many marine organisms are sentient and should never be fished or end their days caught in nets.
Sidney J.P.	Hollister	San Francisco	CA	We have to find better ways to fish commercially. Drift gill nets, bottom trawlers, and long lines 60-miles in length are destroying the ocean's fisheries. There are better ways.
terry	goss	san jose	CA	
Alex	Ballar	Reseda	CA	Please make things right; have empathy.
Karen	Ornelas	San Pedro	CA	PLEASE STOP THESE KILL NETS" they KILL some many other animals are by-catch is costing US and the fishing industry BILLIONS!!"
Scott	Rubel	Los Angeles	CA	

Dan	Silver	Los Angeles	CA	
josephine	coatsworth	berkeley	CA	
Christa	Neuber	W.Hollywood	CA	
Helen	Hanna	Sacramento	CA	
Barbara	g	Santa Cruz	CA	
Mark	Mulder	San Jose	CA	
Judith	Butts	Mountain View	CA	
Arlene	Wiltberger	San Carlos	CA	
Chris	Worcester	Truckee	CA	
Gerald	Stratman	Glen Ellen	CA	Lose the nets!
Nancy	Воусе	San Rafael	CA	
James	Goodwin	Hollywood	CA	The resources of the planet and their survival are necessary for the future of mankind
Tracy	Ewing	Artesia	CA	Please shift away from drift gillnets to more selective fishing gear.
Peter	Corkey	San Francisco	CA	
Patricia	Wilson	Spreckels	CA	All sea life needs to be protected. Nets are indiscriminate and result in the unnecessary death of most things caught in them. Gillnets should not be legal.
david	scott	Ontario	CA	
Jeannine	Bressie	Santa Rosa	CA	
Julia	Russell	Sacramento	CA	
carol	cotton	folsom	CA	
casee	maxfield	los Ãingeles	CA	
sue	davies	philo	CA	
Jim	Domenico	San Francisco	CA	
Alice	Polesky	San Francisco	CA	
Annette	Raible	Petaluma	CA	
Dan	Kuklo	Berkeley	CA	
Stephen	Bohac	Twain Harte	CA	
Marilyn	Jasper	Loomis	CA	
Georgia	Antonopoul os	Pleasant Hill	CA	
k	olson	bodega bay	CA	
Sarah	Lehrer- Graiwer	Los Angeles	CA	It is beyond important that we minimize the damage we do to the environment and wasteful practices are the first thing that must be corrected. The right thing to do is to switch to environmentally sustainable types of fishing gear.
martha	schwartz	santa Cruz	CA	
Rollin	Odell	Orinda	CA	
Mike	Kelly	Huntington Beach	CA	This is NOT fishing! Get these mile-long nets out of MY California oceans.
carol	savary	San Francisco	CA	
Paula	Berry	Los Angeles	CA	
Carolyn	Crow	Burlingame	CA	Please shift away from drift gillnets to more selective fishing gear.
Felicia	Chase	Encino	CA	
James	Provenzano	Los Angeles	CA	Our oceans are dying; please help solve the problem.
ROLLIN	BLANTON	Los Angeles	CA	
Erica	Griffin	San Francisco	CA	
James	Hubbard	Los Angeles	CA	

Audrey	Okubo	San Jose	CA	
Donna	Flade	Beverly Hills	CA	
Lorna	Farnum	Rossmoor	CA	
Heather	Hanly	Oakland	CA	
jayne	Pitchford	santa monica	CA	
craig	kleber	los angeles	CA	
VICTORIA	WIERIG	San Diego	CA	
Michael	Marchessaul	Santa Cruz	CA	
	t			
Don	Casavant	Nevada City	CA	
Olivia	Lim	Davis	CA	
Lucy	Horwitz	L.A.	CA	
AG	Gilmore	Walnut	CA	It is time to innovate!
Priscilla	Rocco	Costa Mesa	CA	
Lisa	Hammermei	Granada Hills	CA	Find a better way of fishing.
	ster			
David	Camp	Burbank	CA	
Ramona	Zulch	Palo Alto	CA	
Joseph	Shulman	San Diego	CA	
Henry	Schlinger	Burbank	CA	
Andrea	Kaufman	Guerneville	CA	
Tom	Rudholm	Modesto	CA	
Arleen	Weiss	San Lorenzo	CA	
Jamie	Castaneda	Sierra Madre	CA	
Cathy	McPeek	Palm Springs	CA	
Barbara	Viken	San Francisco	CA	
Gail	Sabbadini	Lakeside	CA	
Marian	Fricano	San Jose	CA	We must focus on safe techniques and even a total limit
Pamela	Ostood	Grass Valley	CA.	Dease do the right thing and permit only selective gear
rameia	Osgood	Grass valley		and not deadly nets, that kill many more species.
Roberta E.	Newman	Mill Valley	CA	
Sheilagh	Creighton	Fairfax	CA	
Diana	Avlward	Woodland Hils	CA	
Steven	, Hibshman	Foster City	CA	
Jeff	Salvaryn	Redondo Beach	CA	
Linda	Doebel	Marina del Rey	CA	
Samuel	Durkin	Fairfield	CA	
Curtis	Keedy	Riverside	CA	
betty	buchanan	bakersfield	CA	
Julie	Kramer	San Francisco	CA	
Gerald	Meslar	Edgerton	CA	
Jaime	McGrath	Aliso Viejo	CA	
Thomas	Gillespie	La Mirada	CA	
Paul	Bechtel	Redlands	CA	
Daren	Black	Los Angeles	CA	
k.	Winnick	Beverly Hills,	CA	
Norma	Odell	Chico	CA	
Patricia	Pigman	Sausalito	CA	
Scott	Coahran	Los Banos	CA	
Joseph	Hardin	Santa Monica	CA	You can do better
marc	silverman	la	CA	

Diane	Rooney	El Cerrito	CA	
Laurel	Przybylski	Oakland	СА	We are obligated in our care of the planet and preserving it for future living species to be careful about how we harvest from its bounty. We need to learn to do it in a way that doesn't destroy other creatures in the process.
Don	Schwartz	Larkspur	CA	
Ralph	Sanchez	Santa Cruz	CA	
Lee	Miller	Stockton	CA	This is an atrocious way of fishing and should be removed. Let the swordfish live.
Rebecca	Ritter	Healdsburg	CA	
Jen	Rios	San Jose	CA	West Coast Fishery, thank you for your openness and flexibility in considering changing to a more environmentally approach to sustaining our oceans. Only through this effort, will we enable the sustainability and ensuring future generations will reap the benefits of our ocean ecosystem.
Julie	Spickler	Menlo Park	CA	With stocks of many fish species in decline, it makes sense to be selective in what's caught. Drift gillnets are nonelective, and the bycatch depletes forage fish, turtles, and other species we can't afford of lose.
Sondra	Adam	walnut creek	CA	
Cathleen	O'Connell	Boulder Creek	CA	
Angie	Bahris	Santa Monica	CA	
Joseph	Szabo	Los Angeles	CA	
Timothy	Taylor	Los Angeles	CA	
James	Perkins	COSTA MESA	CA	
Gene	Fox	Encinitas	CA	
Valerie	Romero	Quincy,	CA	
nancy	ellestad	el cajon	CA	
Cindy	Tejeda	Los Angeles	CA	
Rene	McIntyre	San Francisco	CA	We should take care not to over-fish swordfish. All fish are now in danger of being over-fished.
James	Ferguson	Fallbrook	CA	
Christina	Nillo	W.Hollywood	CA	
Judith	Graham	Morro Bay	CA	
Barbara	Orr	Northridge	СА	Gillnets are deadly and cause the death of many species. It is wrong to continue using these nets. We must protect other species.
marsha	armstrong	los gatos	CA	
Vic	DeAngelo	San Francisco	CA	
Heidi	Miller	North Hills	CA	
kay	bushnell	palo alto	CA	Because of the terrible damage gill nets do, their use should be prohibited!
John	Rand	Tehachapi	CA	
Joe	Cuviello	Solana Beach	CA	
Christina	Babst	W.Hollywood	CA	
John	Edman	Morgan Hill	CA	please help
Don	Saito	San Jose	CA	It is immoral and evil to continue using gillnet fishing. Stop destroying our planet with your short-sighted greed.
David	Ford	Pasadena	CA	

V and B	Jones	Torrance	CA	
Marjanne	Vangenecht	Stad	CA	
	en			
Lionel	Ortiz	Bayside	CA	
Kathy	Brigger	Nuevo	CA	Stop killing innocent fish. Why do you hate Gods
				animal Kingdom?
Randi	Nielsen	Richmond	CA	
Val	Hongo- whiting	Laguna Niguel	CA	
Rosiris	Paniagua	Altadena	CA	
Beth	Bennion	McKinleyville	CA	
Lynette	Ridder	Concord	CA	
Todd	Fisk	San Diego	CA	
Robert	Gondell	Woodacre	CA	
Greg	Rosas	Castro Valley	CA	
Joel	Meza	San Francisco	CA	
Ed	Lee	Santa Clara	CA	
Antoinette	Wilcox	Sunnyvale	CA	
Colleen	Rodger	San Francisco	CA	Please do what is needed to end the practice of gillnet fishing. We can't afford to loose the non-target species that get caught in these nets. I will stop eating swordfish until you find a better way.
Kelly	O'Donnell	Los Angeles	CA	Please keep your earlier promise to stop using gill nets. This wasteful practice must end. Thank you for your time.
Lauren	Schiffman	El Cerrito	CA	Please change from using drift gillnets to employing environmentally friendly types of fishing gear
Erika	Vadopalas	Moss Beach	CA	
Pela	Tomasello	Santa Cruz	CA	
Elaine	Russell	Long Beach	CA	
Lissa	Coleman	Redwood City	CA	I feel I have to abstain from seafood while there is a bycatch and gill net problem.
kate	woods	Paicines	CA	
Mark	Beckwith	Berkeley	CA	
Iris	Lubitz	Mountain View	CA	
Alyssa	Halcomb	San Diego	CA	
Bret	Smith	Santa Cruz	CA	
Joseph	Razo	Camarillo	CA	
ernest	medeiros	Forestville	CA	
Kim	Stribling	Scotts Valley	CA	We need to stop killing innocent bystanders whales, turtles, manta rays, porpoises, and all other animals/creatures that come in contact with your nets PLEASE !
ian	edwards	woodacre	CA	
Laura	Kaiser	Los Angeles	CA	
Beth	Shafer	Huntington Beach	CA	Lets not throw away precious fish resources!! There is a better way to catch wish without harming other species.
sheila	Moor	San Diego	CA	
Larry	Keller	Santa Cruz	CA	

Cierna	Ritts	Garden Grove	CA	Fish catching practices need to be targeted to specific species to prevent further decimation of the oceans populations of non-targeted marine life!
Regina	DeFalco Lippert	Martinez	CA	The needless deaths of whales, turtles, dolphins, and other marine wildlife in gillnets needs to be stopped! We are decimating our oceans, and they are dying!
William	Callahan	San Rafael	CA	Please, no more deadly nets.
Ted	Cheeseman	Saratoga	CA	
Lisa	Butterfield	Eureka	CA	
Roberta	Navickis Wilkes	Grass Valley	CA	
Bill	Gaffney	Huntington Beach	CA	
kx	bx	lancaster	CA	it is the 21st century it is about time to get with the program
Mija	Gentes	Saratoga	CA	
Russell	Blalack	Cupertino	CA	Sustainably caught is what it ought
John	Essman	Healdsburg	CA	
Sharon	Hamolsky	Solana Beach	CA	
john	contos	n/a	CA	
c	laughon	montara	CA	No reason to cause death to numerous types of sea life. There are better ways to catch swordfish.
Karen	Valentine	Aptos,	CA	
Ron	Schmidt	San Francisco	CA	
Susan	Kurcz-Easom	Pittsburg	CA	
Andrew	Calderella	Valencia	CA	We need more environmental friendly ways of doing things. This is a step in that direction. Please upgrade the systems!
Ronald	Calvisi	Toluca Lake	CA	
Francis	Lee	San Bruno	CA	
Eileen	Massey	Oakland	CA	
Kit	Joel	Santa Barbara	CA	
Rohana	McLaughlin	San Anselmo	CA	
Tenaya	Tabler	Santa Barbara	CA	
Ken	Windrum	Los Angles	CA	
Lissa	McCullough	Los Angeles	CA	Stop using gillnets. They have a horrible impact on marine life.
Grace	Feldmann	Santa Barbara	CA	
LuAnn	Wherry	San Diego	CA	
Linda	Straussburg	El Segundo	CA	
Bernie	Gonzales	Caruthers	CA	
Sharma	Gaponoff	Grass Valley	CA	
AARON	JONES	OAKLAND	CA	
gloria	sall	dana point	CA	
Laura	Overmann	Burlingame	CA	
Steve	Hanion	Los Angeles	CA	Your commitment to shifting away from drift gillnets needs to be fulfilled.
Carlos	Peeler	San Francisco	CA	I strongly support this
Chip	Phillips	LOS ANGELES	CA	
Robin	Blum	North Hills	CA	
Holly	McDuffie	Los Angeles	CA	
judy	stanton	dana point	CA	
Muriel	Kotin	Malibu	CA	

Deanna	Knickerbock	Cupertino	CA	Since I live in California I am especially concerned about
	er			this.
Joyce	Sortland	Grass Valley	CA	
Arlene	Zimmer	Rancho Palos Verdes	CA	
Alicia	Kern	Palos Verdes Peninsula	CA	
Donald	Mackay	South Pasadena	CA	Please stop using drill gillnets.
John	Flitcraft	Cambria	CA	
Vickie	Hershberger	San Pedro	CA	
Robert	Thornhill	Los Angeles	CA	
Lily	Mejia	Ontario	CA	
Martin	Christophers on	Roseville	CA	
Janet	Nace	Saratoga	CA	
Marsha	Malone	Chino	CA	
Mika	Stonehawk	Tustin	CA	
Joan	Hunnicutt	Citrus Heights	CA	It's about time the current method of indiscriminate fishing is totally outlawed and the violaters are really punished for so doing.
jacklyn	loughbom	manhattan beach	CA	Gillnets so unecesssrily cruel & destructive. Please please make change
Zorine	Rinaldi	Santa Monica	CA	
Candace	Hollis- Franklyn	Tiburon	CA	
Maria	Rausis	Mountain View	CA	
David	Bailey	Alhambra	CA	
Kendis	Keeping	Los Osos	CA	This type of fishing is outdated, please help. The future of the ocean is at risk without a healthy balance. Please take action today.
Matt	Woolery	La Jolla	CA	
victor	Afanasiev	La Grange	CA	
Jessie	Root	Oceanside	CA	
Heather	Berk	Fountain Valley	CA	I believe our history of catching and discarding what is not wanted is no longer sustainable. Plummeting fish populations show that our oceans are overstressed. When our bodies are overstressed, and we do not slow down or rest, what happens? They start shutting down and we likely die if we continue to ignore our symptoms. Fish populations plummeting gives us insight to our seas and oceans, and this is telling us we need a better approach. New technologies and new understanding of our planet should make it easier to devise a better plan that is healthier for everyone.
Mark J.	Fiore	San Francisco	CA	
Grant	Foerster	Albany	CA	
Frances	Emanuel	Simi Valley	CA	
Robert	Pound	Concord	CA	Not only is gill net fishing killing indiscriminately but swordfish is now CONTAMINATED with MERCURY so badly it really should no longer be eaten! So requiring a method that would possibly slow the catch would not only save countless marine creatures from a wasted death but it would improve public health as well!
Camille	Cardinale	Los Angeles	CA	All the by-catch caught is unfair and a travesty.

Carolyn	Mone	Woodside	CA	
Lesley	Hudak	Orinda	CA	
Mary F	Platter- Rieger	San Diego	CA	
Kathleen	Jacecko	Redondo Beach	CA	I'm writing to remind you to please remember your commitment to shift away from drift gillnets to more selective fishing gear!
Gerry	Collins	Murrieta	CA	Stop using drift nets. Drift nets are deadly, they catch and kill various types of sharks, whales dolphins, turtles and other species of fish.
Tim	Zemba	Los Angeles	CA	
elizabeth	darovic	Monterey	CA	
sidney	ramsden scott	carmel	CA	
Eric	Bratcher	Hayward	CA	Please work to curb wasteful accidental catches
Mark	Bailey	El Cerrito	CA	We can do better
Karen	Bien	Fresno	CA	
Steven	Henderson	Palm Springs	CA	
steve	holzberg	folsom	CA	
susanna	sorin	helendale	CA	
Deanna	Seagraves	Soquel	CA	I have a sister-in-law who is fond of saying, The oceans are dead." Let's prove her wrong and stop one more destructive process and allow them to come back."
Suzanne	Peña	Fullerton	CA	
Phyllis	Mottola	Bishop	CA	
Michael	Hoover	Los Angeles	CA	
Rachel	Sonnenblick	Santa Cruz	CA	
Barbara	Tacker	Camarillo	CA	
Michael	Garden	Sacramento	CA	
KURT	CRUGER	LONG BEACH	CA	
Kyri	Freeman	Barstow	CA	
Tanya	Baldwin	100 oak rim way #16	CA	
JOHN	PASQUA	Valley Center	CA	end overfishing.
Richard	Puaoi	Novato	CA	
Barry	stelling	sonoma	CA	
Michael	Bailey	Mission Viejo	CA	We need a better way to catch Pacific swordfish than by use of deadly drift nets. Drift nets kill all forms of marine life that gets into them and so should not be used.
Andrew	Bear	San Jose	CA	
Wendy	Frado	Los Angeles	CA	
Lori	Conrad	Davis	CA	
brigette	greener	San Jose	CA	
Carol	Тао	Sallinas	CA	
michael	rifkind	Santa Cruz	CA	
Catherine	Loudis	San anselmo	CA	
Paul	Bulger	Santa Rosa	CA	
Carol	Patton	Kensington	CA	Leaders of West Coast fisheries, find a better way to catch Pacific swordfish. A way that can shift away from drift gillnets to more selective fishing gear.
Ken	Meersand	Shell Beach	CA	
maxine	lewis	oakland	CA	

Stan	Banos	San Francisco	CA	The Seas are Dying- you can help stop the slaughter of what remains
jeri	pollock	Altadena	CA	
Pat	Marriott	Los Altos	CA	
Laurie	Carr	Mira Loma	CA	
Beverly	Poncia	Lower Lake	CA	
Gabriela	Sosa	LA	CA	You can do it!
lance	jordan	san diego	CA	
Heather	DellaRipa	South Lake Tahoe	CA	
James	Noordyk	San Diego	CA	
Frank	Huttinger	Pasadena	CA	
J.	Kerr	Thousand Oaks	CA	
Margaret	DeMott	Sacramento	CA	
Victoria	Brandon	North ridge	CA	Please stop using the nets, the loss to our wildlife is too dear. There is a far better alternative, do the work to make that happen.
Richard	Sherman and family	Berkeley	CA	
Madeline	Wright	Los Angeles	CA	
Bill	Herman	Oceanside	CA	
GA	Hemingway- Proia	Oakland	CA	
William	Wallin	Richmond	CA	
Kevin	Branstetter	Applegate	CA	
Beverly	Farr	Goleta	CA	
Jeannie	Pollak	Oxnard	CA	
Rudy	Stefenel	Milpitas	CA	You need to learn about and promote MSRs (Molten Salt Reactors). They are a totally different than light-water nuclear reactors. They can't blow up because they don't use superheated water. They run at atmospheric temperature. They can't melt down because they use a liquid salt solution instead of solid fuel rods. This old concept was proven at Oak Ridge National Labs in the 1960s with the MSRE (Molten Salt Reactor Experiment). Clean, safe, electric power, cheaper than coal, IS A BIG DEAL and exactly what the world need right now. Check these web sites: www.youtube.com/watch?v=SS2JrWa_Wkc www.ThoriumEnergyAlliance.com http://thoriumforum.com/thorium-nuclear-power- climate-change-killer-21st-century
Rudy	Stefenel	Milpitas San Jose	CA	You need to learn about and promote MSRs (Molten Salt Reactors). They are a totally different than light-water nuclear reactors. They can't blow up because they don't use superheated water. They run at atmospheric temperature. They can't melt down because they use a liquid salt solution instead of solid fuel rods. This old concept was proven at Oak Ridge National Labs in the 1960s with the MSRE (Molten Salt Reactor Experiment). Clean, safe, electric power, cheaper than coal, IS A BIG DEAL and exactly what the world need right now. Check these web sites: www.youtube.com/watch?v=SS2JrWa_Wkc www.ThoriumEnergyAlliance.com http://thoriumforum.com/thorium-nuclear-power- climate-change-killer-21st-century

Greg	Goodman	Concord	CA	
Maurice	Wolf	LAKE FOREST	CA	
enrico	verga	seal beach	CA	Get rid of the "walls of death― net systems.
Scott	Sinclair	San Rafael	CA	
Nina	Sagheb	San Diego	CA	Please let us adopt the suggested before it is too late.
Chris	Dawson	Playa Del Rey	CA	Gill nets need to be discontinued and outlawed if necessary.
Scott	Lindsay	Fair Oaks	CA	
Diane	Knight	West Hiiils, CA 91307	CA	Our oceans and the fish in them need the protection of the fishing industry. I urge you to find a better way o harvesting the species you want ans save the species that are killed needlessly.
Shauna	Bernie	Agua Dulce	CA	
George	Lewis	Los Osos	CA	
Lori	Stayton	SHERMAN OAKS	CA	
Dan	Perdios	Palm Springs	CA	
Susie	Shapira	San Rafael	CA	
Abby	Hamilton	Woodland	CA	Please do what you can to protect our oceans and to find environmentally sustainable way of fishing. We cannot go on treating our oceans as if they were fish production tanks.
Elaine	Bierman	San Diego	CA	
Erin	Lynch	Los Angeles	CA	
Marina	Capella	San Pedro	CA	
Russell	Grindle	Fairfield	CA	It is time to push the fishing industry to target catches more efficiently. I worked in the Alaska fishery in the 1970's and was appalled at was dumped back in to the water dead or turned into fertilizer. Catch what you need and leave the rest alone. Drift gillnets are too indiscriminate and are harming too many species.
Kathy	Balcom	Los Angeles	CA	
Karen	Malley	Anaheim	CA	Gillnets are killing so many life forms needlessly. Maybe it's easy for the fishermen, but that's not a good enough reason.
Jim	Corriere	Brawley	CA	Don't eat fish!
Mary	Able	McArthur	CA	
roz	goldstein	greenbrae	CA	
Norman	Kindig	Yorba Linda	CA	
Megan	Malone- Franklin	Fullerton	CA	
jed	fuhrman	Topanga	CA	
Elaine	Huff	San Francisco	CA	
Regina	Phillips	winnetka	CA	
jamila	garrecht	petaluma	CA	
namita	dalal	la	CA	Please shift away from wasteful drift gillnets to more selective fishing gear.
Dani	Palomino	Altadena	CA	
Donatella	Scabini	El Cerrito	CA	The current methods to fish for swordfish can be dangerous to other species. Please, shift your fleet to a more environmentally sustainable fishing gear. Thank you!
sundae	shields	oxnard	CA	Now is the time. Extinct is too late.
Kevin	O'Brien	Laguna Beach	CA	

G	Pivirotto	Fresno	CA	
Harish	Kavirajan	Costa Mesa	CA	
Damon	Duval	Santa Monica	CA	
Nancy	Sidebotham	Oakland	CA	
Sherry	Vatter	Los Angeles	CA	Please protect resources for future generations.
Andrea	Pellicani	Santa Rosa	CA	
JANINE	STOKES	Riverside	CA	make a differance
maggie	moe	whittier	CA	Please improve the method of fishing before it's too late.
melissa	miller	pleasant hill	CA	
Richard and	Rosenstein	Los Angeles	CA	
Carolyn				
Alexandra	Campbell	Jamul	CA	
allison	jones	San Francisco	CA	
Lorena	Сох	Irvine	CA	
Robert-Harry	Rovin	Woodacre	CA	
Connie	George	San Francisco	CA	I urge you to give humane consideration to a more sustainable method of fishing. No one wins with gillnets and the process will ultimately lead to many consumers opting to drastically decrease or stop entirely eating fish.
carol	soto	san francisco	CA	
Diane	Davenport	San Diego	CA	
Sandra	Nealon	Laguna Beach	CA	PLEASE STOP KILLING MARINE LIFE WITH DRIFT GILLNETS.
Kathleen	Kuczynski	Lake Forest	CA	
Sandra	Sullivan	Orinda	CA	
Joan	Weaver	Chatsworth	CA	
Kim	Forrest	Los Banos	CA	
Gregg	Oelker	Altadena	CA	
pamela	hamilton	sacramento	CA	
Georgia	Brewer	Sherman Oaks	CA	
Bruce	McGraw	San Diego	CA	Please find a better way to catch your fish and not kill other species of fish needlessly. The ocean is an integrated eco-system and if you destroy it, you will eventually be destroying yourselves.
Carol Anne	Fusco	Berkeley	CA	
Jan	Gates	Nana	C ^	
		Ναμα	CA	We will not be buying any fish obtained by gillnet fishing! Please find a better way!
Christopher	Wills	La Jolla	CA	We will not be buying any fish obtained by gillnet fishing! Please find a better way! Please, get rid of these terrible nets!
Christopher John	Wills Permetti	La Jolla Vista	CA CA CA	We will not be buying any fish obtained by gillnet fishing! Please find a better way! Please, get rid of these terrible nets!
Christopher John Maryann	Wills Permetti LaNew	La Jolla Vista San Clemente	CA CA CA CA	We will not be buying any fish obtained by gillnet fishing! Please find a better way! Please, get rid of these terrible nets!
Christopher John Maryann Joseph	Wills Permetti LaNew Valenti	La Jolla Vista San Clemente Laguna Niguel	CA CA CA CA CA	We will not be buying any fish obtained by gillnet fishing! Please find a better way! Please, get rid of these terrible nets!
Christopher John Maryann Joseph Ken	Wills Permetti LaNew Valenti Elie	La Jolla Vista San Clemente Laguna Niguel Cotati	CA CA CA CA CA CA	We will not be buying any fish obtained by gillnet fishing! Please find a better way! Please, get rid of these terrible nets!
Christopher John Maryann Joseph Ken Nanette	Wills Permetti LaNew Valenti Elie Cronk	La Jolla Vista San Clemente Laguna Niguel Cotati Truckee	CA CA CA CA CA CA CA CA	We will not be buying any fish obtained by gillnet fishing! Please find a better way! Please, get rid of these terrible nets!
Christopher John Maryann Joseph Ken Nanette Dee	Wills Permetti LaNew Valenti Elie Cronk Gee	La Jolla Vista San Clemente Laguna Niguel Cotati Truckee Hollywood	CA CA CA CA CA CA CA CA CA	We will not be buying any fish obtained by gillnet fishing! Please find a better way! Please, get rid of these terrible nets!
Christopher John Maryann Joseph Ken Nanette Dee Ken	Wills Permetti LaNew Valenti Elie Cronk Gee Burke	La Jolla Vista San Clemente Laguna Niguel Cotati Truckee Hollywood Hayward	CA CA CA CA CA CA CA CA CA CA	We will not be buying any fish obtained by gillnet fishing! Please find a better way! Please, get rid of these terrible nets! I encourage to take action regarding the unintended problems caused by the use of drift gillnets.
Christopher John Maryann Joseph Ken Nanette Dee Ken	Wills Permetti LaNew Valenti Elie Cronk Gee Burke Hedges	La Jolla Vista San Clemente Laguna Niguel Cotati Truckee Hollywood Hayward Lemon Grove	CA CA CA CA CA CA CA CA CA CA CA	We will not be buying any fish obtained by gillnet fishing! Please find a better way! Please, get rid of these terrible nets! I encourage to take action regarding the unintended problems caused by the use of drift gillnets.
Christopher John Maryann Joseph Ken Nanette Dee Ken Ken Steve	WillsPermettiLaNewValentiElieCronkGeeBurkeHedgesDowning	La Jolla Vista San Clemente Laguna Niguel Cotati Truckee Hollywood Hayward Lemon Grove Santa Barbara	CA CA CA CA CA CA CA CA CA CA CA CA CA	We will not be buying any fish obtained by gillnet fishing! Please find a better way! Please, get rid of these terrible nets! I encourage to take action regarding the unintended problems caused by the use of drift gillnets.
Christopher John Maryann Joseph Ken Nanette Dee Ken Ken Steve Vance	Wills Permetti LaNew Valenti Elie Cronk Gee Burke Burke Hedges Downing Jason	La Jolla Vista San Clemente Laguna Niguel Cotati Truckee Hollywood Hayward Lemon Grove Santa Barbara LIVERMORE	CA CA CA CA CA CA CA CA CA CA CA CA CA C	We will not be buying any fish obtained by gillnet fishing! Please find a better way! Please, get rid of these terrible nets! I encourage to take action regarding the unintended problems caused by the use of drift gillnets.

Verona	Murray	Oroville	CA	The Pacific Fishery Management Council needs to honor their commitment to shift away from drift gillnets to more selective fishing gear to save the environment, the species affected, and the industry.
Bill	Leikam	Palo Alto	CA	
Brad	Steele	Springville	CA	
anne	wolf	santa rosa	CA	
Sherrill	Futrell	Davis	CA	
Jennifer	Muir	La Canada	CA	There is no denying that many people love the taste of swordfish and thresher sharks. Unfortunately, the predominant commercial method of catching these fish off the California coast involves mile-long gillnets left in the water for hours at a time. Unfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. In March, West Coast fishery managers agreed that it's time to shift the fleet to more environmentally sustainable types of fishing gear. t is pointless to make minor and incremental improvements to a method of fishing that is fundamentally indiscriminate.
Debi	Bergsma	Fontana	CA	
Ashlie	Norman	Rialto	CA	
William	Estep	San Diego	CA	
Maria	Gestuvo	San Francisco	CA	
gaile	carr	mtshasta	CA	
Renee	Hutchins	Pittsburg	CA	There has to be a better way and you have to find it! Small changes that have the same overall result are hardly worth the effort. Be innovative and find a way to do it without netting other fish, turtles, whalesetc.
Leslee	Cotlow	San Francisco	CA	
Cathy	Thornburn	Los Angeles	CA	Killing innocent species that get caught in gill nets us not worth it! Ban these nets, and find another, safe way to fish.
Naya	Urla	Los Angeles	CA	
Lori	Caudill	Los Osos,	CA	
Steven	Konopacki	Berkeley	CA	
barbara	poland	la crescenta	CA	
Diana	Bohn	Berkeley	CA	
Bea	Kaplan	ALAMEDA	CA	
Tim	Hayes	El Cajon	CA	I am a heavy fish eater, but until the fishery business eliminates bycatch, my family and I have vowed to quit eating it.
Monica	Wood	Calabasas	CA	
Donna	Khoury	Oxnard	CA	
Gerry	Williams	Thousand Oaks	СА	This horrible drifting gillnets are a threat to all ocean creatures and - in the end - to humans as well! They cause death indiscriminately and unnecessarily. We don't have time to waste to get them out of the oceans forever.

Anne	Kaeser	San Jose	CA	Sword fish belong in the sea and not on my plate, not when they are fished endangering so many other sea lives. We need not only diversity in the sea, but numbers of fish. Both are endangered.
Roberta	Holt	Stockton	CA	Make the right decision: change to truly environmentally safe methods of catching swordfish.
Deborah	Taylor	San Jose	CA	I haven't eaten swordfish for a long time because of the way it is caught. If more humane and sustainable practices were put in place, I would consider eating it again.
Wayne	Brown	Fresno	СА	Don't you know that we have so polluted the water we cannot safely eat swordfishmercury, you know. So why allow commerce to catch them and sell them for food? Are you trying to poison the population? Isn't the ocean enough?
Susan	Lilly	Winnetka	CA	We must use sustainable, humane methods.
David	Osterhoudt	Rancho Santa Margarita	CA	
lan	Turner	Sacramento	CA	
jena	reid	temecula	CA	catch swordfish responsibly.
Dee	Warenycia	Roseville	CA	
Karen	Spiegel	Burbank	CA	
Martha	Dingilian	Santa Barbara	CA	
Herb	Stern	San Diego	CA	I respectfully ask that fish boats change their methods of catch to prevent the deaths of much of the bycatch.
Nancy	Smith	San Diego	CA	
David	Scharf	Los Angeles	CA	Please protect our marine life.
Annika	Miller	Mill Valley	CA	
paula	thompson	san diego	CA	
Sandy	Esque	San Clemente	CA	
Yvette	Doublet- Weislak	Morgan Hill	CA	
Michael	Misquez	Pico Rivera	CA	
Brian	Florian	Beverly Hills	CA	
Dara	Gorelick	Van Nuys	CA	
Roberto	Romo	San Francisco	CA	
mickey	mccarthy	san francisco	CA	
katrina	zaleski	corona	CA	
Кује	Chidester	San Francisco	CA	
Glen	Williams	Weed	CA	
Christine	Fluor	Corona del Mar	CA	Please take every opportunity to engage in safer forms of fishing. The loss of other species because of outdated methods must be terminated.
Jillana	Laufer	Studio City	CA	These miles-long gill nets have GOT TO GO! IT'S UNBELIEVABLE to me that it's OK" to kill so much by- catch typical human gluttony and thoughtlessness "oh
Sylvia	Lewis Gunning	THOUSAND OAKS, CA	CA	if the professional fishermen want to have any fish left in the oceans to catch, it best they start by eliminating gillnet fishing now!!
Lisa	Coffman	Palo Alto	CA	
Joe	Weis	Reedley	CA	
Catherine	McCov	Murrieta	CA	

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jan	jordan	placentia	CA	
miranda	todd	redondo beach	CA	
Ketzia	Jacoby	San Francisco	CA	
Leslie	Williams	El Cajon	CA	
James	Bigger	San Diego	CA	C'mon; what are you going to do when they are all gone? Collect uninsurance?
Brian	Gustafson	Eureka	CA	Nets are not fishing. They are large sections of the ocean swept clean of all life. Find a better way!
Roseanne	Hovey	San Diego	CA	Drift gillnets must be banned. They are killing the other marine life.
jenny	boris	fremont	CA	
Antonio	Buensuceso	Poway	CA	
Lisa	Annecone	Santa Rosa	CA	
stephen	thompson	ben lomond	CA	
Julie	Talbott	Chatsworth	CA	
Michael	Henderson	Huntington Beach	CA	
Kleomichele	Leeds	Santa Barbara	CA	
bita	edwards	woodacre	CA	
Warren	Gold	Mill Valley	CA	
Geoffrev &	Symcox	Pacific Palisades	CA	
Linda	-,		-	
mary	tindukasiri	fullerton	CA	
Chris	Spanos	LA	CA	
Dr. George B.	Kauffman	Fresno	CA	
Angela	Black	Seal Beach	CA	Please don't use these mile-long gillnets that are left in the water for hours. You need to shift to more environmentally sustainable types of fishing gear to catch swordfish. Otherwise, you're killing turtles, dolphins, sharks, whales and other species in the process of catching swordfish.
Andree	Armand	Venice	CA	
samuel	popailo	west hollywood	CA	
Barbara	Frazer	Sacramento	CA	
Karley	Rodriguez	San Francisco	CA	
Phil	Olmstead	San Jose	CA	
KAREN	NILES	REDONDO BEACH	CA	
Gilia	Humrich	FORESTVILLE	CA	
Mark	Feldman	Santa Rosa	CA	
Michele	Coakley	Rancho Cordova	CA	
Alison Dayne	Frankel	Tarzana	CA	
Scott	Rail	San Jose	CA	
w	Lynch	Los Angeles	CA	
GINA	BILWIN	santa barbara	CA	STOP THE GILL NETS.
				FISH SUSTAINABLY. STOP THE SLAUGHTER OF FISH AND ANIMALS FOR GREED, PROFIT AND IGNORANCE
Geoff	Leavell	Fountain valley	CA	
Richard	DeSantis	Palm Desert	CA	
	-			

Jacki	Hunter	Hollywood	CA	
Nancy	Goldberg	Los Angeles	CA	
Stefanie	Sellars	Simi Valley	CA	We can live in harmony with nature if we just put our hearts and minds to it enough to care. We must realize we aren't the only creature on this earth,
Rosanne	Freed	Burbank	CA	
Stephen	Kubick	Santa Monica	CA	
Jed	Holtzman	San Francisco	CA	
Geoffrey	Gallegos	San Francisco	CA	
Laurie	Eisler	Cotati	CA	
Andrew	Olsen	Los Angeles	CA	
Neil	Brydon	San Diego	CA	
Sasha	Martinez	upland	CA	
Arthur	St. Clair	Santa Monica	CA	We have a responsibility to do better, or at least try.
Julia	Vetrie	Canyon Country	CA	
Janice	Austin	Temecula	CA	
Naila	Sanchez	Sacramento	CA	Floating nets slaughter every fish and mammal they must be stopped!! The oceans are death traps!!
John	Lamb	Sierra Madre	CA	Do whats right!
arleen	whitmore	San Anselmo	CA	Your commitment is and must be to shift away from drift gillnets to more selective fishing gear. NOW Your Drift Gillnets are continuing to horribly murder to hundreds of millions of beautiful ocean creatures that you have no right to torture and killSTOP IT PLEASE
Leslee	McPherson	San Mateo	CA	Drift giblets snag more than the targeted fish. Find another way to catch swordfish.
Walter	Ramsey	Oakley	CA	
chris	hagen	sacramento	CA	
Guy W.	Oliver, Ph.D.	Santa Cruz	CA	
Red	Clark	Windsor	CA	
Nancy	Miller	Santa Maria	CA	
Larry	Blood	Santa Cruz	CA	
Marcia	Dale- LeWinter	San Francisco	CA	With our sustainability we will all suffer loss, soon rather than later!
Janet	Seldon	San Francisco	CA	Stop the senseless slaughter!
Joe	Hughes	Willits	CA	
Faith	Herschler	Stanton	CA	
Richard	Jacobel	Oakhurst	CA	Do the right thing!
William	Wollner	Stockton	CA	
Chyrl A.	Russell	Blue Jay	CA	It's essential we find a more humane way to catch Pacific swordfish!
Carol	Hiestand	Chatsworth	CA	Please make changes in order to save whales, seals, sharks and dolphins along our coast.
Cynthia	Pounds	Sacramento	CA	
Gordon	Sabaduquia	Concord	CA	
Robin	Halvorson	El Dorado Hills	CA	
Susan	Hanger	Topanga	CA	
Robert	Thomas	San Francisco	CA	
MARTIN	ANSELL	WEST HOLLYWOOD	CA	
Mildred	Gordon	Oceanside	CA	

carole	Ehrhardt	Pebble Beach	CA	We can fish smarter and it is long past time to require it.
Sarah	Murdoch	Pacific Palisades	CA	
Anne	Kobayashi	San Diego	CA	
carole	shelton	los angeles	CA	
Ford	Greene	San Anselmo	CA	
Brett	Holland	Los Angeles	CA	
Christine	Walker	Stanton	CA	
Tami	Phelps	Redding	CA	
Robert	Duckson	Hemet	CA	
Donna	Murray	Los Angeles	CA	
Laura	Manning	Goleta	CA	Please implement these lifesaving changes.
Charlotte	Vrooman	Los Angeles	CA	
Elizabeth	Taylor	Encinitas	CA	
peter	faure	tarxien	CA	
Patricia	D'Ambrosio	Albany	CA	
Andarin	Arvola	Fort Bragg	CA	THIS SENIOR CITIZEN, RAISED ON WILD FISH ON THE NO. COAST OF CALIFORNIA, SAYS WE HAVE TO STOP WITH THESE PRACTICES! WE MUST PROTECT OUR OCEANS AND THE LIFE WITHIN THEM SO WE CAN SUSTAIN LIFE FOR OUR CHILDREN AND GRANDCHILDREN!
Richard	Burnett	Sunnyvale	CA	Immediately, ongoing business models will implement a norm of near-zero bycatch.
Ernest	Ely	San Francisco	CA	
beth	chaney	galt	CA	
Jennifer	Bass	Venice	CA	
Carol	McInerny	Brentwood	CA	
Nina	Diamante	Los Angeles	CA	
Timothy	Lawnicki	Long Beach	CA	
Cecilia	Brown	Oakland	CA	
Ana	Chavez	Riverside	CA	
Betty	Gaines	Antioch	CA	Stop using the fish gillnets as they are trapping fish and killing the ones that do not belong to be trapped in them.
James	Vollaro	Lake Elsinore	CA	
Zdrava	Sharkov	Los Angeles	CA	
Luis	Н	La Puente	CA	Please Read!
Gerald	McKelvey	Manteca	CA	
Frank	Ortiz	Los Angeles	CA	
Darren	Frale	Los Angeles	CA	
Mary	Tullock	Rohnert Park	CA	
Shoshanah	McKnight	Santa Cruz	CA	
Francie	Mitchell	Alamo	CA	It is time for the PFMC to address the issue of gillnets and ban them off the West coast!!
Charlie	Schaffer	Healdsburg	CA	
Rich	Panter	Bodega Bay	CA	
Jon	Darke	LA	CA	
Philip	Johnston	Scotts Valley	CA	
j	angell	rescue	CA	
Chris	Mills	Needles	CA	
Α	Tung	Newbury Park	CA	
Nikki	Doyle	Oakland	CA	

aeyrie	silver eagle	yorba linda	CA	
Christine	Trela	Whittier	CA	
John	Sutton	Los Angeles	CA	
м	Sanders	Petaluma	CA	
James	Sullivan	Santa Cruz	CA	Please stop the needless killing
John	Kohler	Daly City	CA	We must preserve, I believe, the entire marine system on our planet.
Lynne	Harkins	Cambria	CA	
Valerie	Hill	Long Beach	CA	
Taia	Ergueta	Redwood City	СА	Innovation can help bridge short and long term sustainability objectives.
Haidie	Simonet	Fresno	CA	
A.L.	Hern	Los Angeles	CA	
Brian	Kelly	Fullerton	CA	
Steve	Roth	Santa Rosa	CA	
Kaori	Tomioka	Riverside	CA	
Cindy	Psareas	Irvine	CA	
Laurie	King	San Jose	CA	
Elizabeth	Lynn	Novato	CA	
Ann	Thompson	Crescent City	CA	
Sue	Knight	Long Beach	CA	
Linda	Knight	Kenwood	CA	
Elsie	Main	Perris	CA	
David	Lilly	San Dimas	CA	
Weagnan	Simpson	Fortuna		methods and materials for fishing gear that do not waste by killing other animals caught which is fundamentally indiscriminate awful bad practices! LET US UNITE WITH YOUR COMMITMENT TO REALLY SHIFT AWAY FROM DRIFT GILL NETS TO MORE SELECTIVE FISHING GEAR!
Andy	Philpot	Solvang	CA	
Lisa	McCown	Alta Loma	CA	
Meghan	Schimmel	Fresno	CA	
Mary	Riblett	Culver City	CA	
Erika	Smith	South Gate	CA	
Cathy	Hale	La Mesa	CA	
Erika	Vargas	Castro Valley	CA	
CINTHIA	MEDINA	LOS ANGELES	CA	
Sandra	Walker	Rancho Santa Margarita	СА	
Kalita	Todd	Grass Valley	CA	
Judy	Burris	Calabasas	CA	
Sharon	Ketcherside	Lincoln	CA	
Wendy	Kupsaw	Oakland	CA	
Dave		Dalmdala	CA	
Dave	Wilson	Painuale	CA.	
Ursela	Wilson Rabe	Penn Valley	CA	I hope there will be an end to gill nets, especially as testing has shown that all Pacific Tuna has been proven to be radio active now.
Ursela Maia	Wilson Rabe de Raat	Penn Valley San Francisco	CA CA	 I hope there will be an end to gill nets, especially as testing has shown that all Pacific Tuna has been proven to be radio active now. The current method of catching swordfish is just too detrimental to other species!

Carole	Miller	North Hollywood	CA	
tonya	ivey	sherman oaks	CA	
Miriam	Neff	Dana Point	CA	
lynne	pateman	los Ãingeles	CA	
Richard B	Maselow, CPA, CGMA	Encino	CA	
Patti	Holden	Vista	CA	
Renee	Lusian	Seal Beach	CA	
Jennifer	Will	Morgan Hill	CA	
Kim	Saxelby	Upland	CA	
Deana	Graff	SD	CA	Without a healthy ocean ecosystem, Humans are in danger.
Mari	Howland	Los Angeles	CA	
Gary	Thornbrugh	Kernville	CA	The oceans can not protect themselves. Only humanity can save them. Let's do the right thing and protect the oceans and all life in them. It may even come back around and help us.
Rosalind	Milliken	Indio	CA	
Kathleen	Taugher	Sonoma	CA	Wasting any life is a terrible thing to do.
Lise	Brooke	Felton	CA	
Paul	Jacobson	Willits	CA	With only 10% of historic fish populations remaining it seems about time for rational limits.
Jana	Perinchief	Sacramento	CA	Thank you for considering my comments on the importance of eliminating the use of drift gillnet fishing.
Mary	Sullivan	Aptos	CA	
Ivan M.	Llata	Cudahy	CA	
Hal	Forsen	San Clemente	CA	As a lifelong waterman I find the continued use of gillnets a disgusting and certainly unsustainable practice.
				These indiscriminate killers should be outlawed completely.
vicki	kopinski	menifee	СА	These indiscriminate killers should be outlawed completely.
vicki Robert	kopinski Banever	menifee Duarte	CA	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly	kopinski Banever Kramer	menifee Duarte Garden grove	CA CA CA	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn	kopinski Banever Kramer Haines	menifee Duarte Garden grove Chino Hills	CA CA CA CA	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold	kopinski Banever Kramer Haines Gatti	menifee Duarte Garden grove Chino Hills Livermore	CA CA CA CA CA CA	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis	kopinski Banever Kramer Haines Gatti Erlbaum	menifee Duarte Garden grove Chino Hills Livermore Long beach	CA CA CA CA CA CA CA	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie	kopinski Banever Kramer Haines Gatti Erlbaum r	menifee Duarte Garden grove Chino Hills Livermore Long beach los angeles	CA CA CA CA CA CA CA CA CA	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie Michael	kopinski Banever Kramer Haines Gatti Erlbaum r Kast	menifee Duarte Garden grove Chino Hills Livermore Long beach los angeles Panorama City	CA CA CA CA CA CA CA CA CA CA	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie Michael Judith	kopinski Banever Kramer Haines Gatti Erlbaum r Kast Lihosit	menifee Duarte Garden grove Chino Hills Livermore Long beach los angeles Panorama City La Jolla	CA CA CA CA CA CA CA CA CA CA CA CA	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie Michael Judith Peggy	kopinski Banever Kramer Haines Gatti Erlbaum r Kast Lihosit Loe	menifee Duarte Garden grove Chino Hills Livermore Long beach Ios angeles Panorama City La Jolla Magalia	CA CA CA CA CA CA CA CA CA CA CA CA	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie Michael Judith Peggy Patricia	kopinski Banever Kramer Haines Gatti Erlbaum r Kast Lihosit Loe Trandal	menifee Duarte Garden grove Chino Hills Livermore Long beach los angeles Panorama City La Jolla Magalia San Diego	CA CA CA CA CA CA CA CA CA CA CA CA CA C	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie Michael Judith Peggy Patricia David	kopinski Banever Kramer Haines Gatti Erlbaum r Kast Lihosit Loe Trandal Ross	menifeeDuarteGarden groveChino HillsLivermoreLong beachlos angelesPanorama CityLa JollaMagaliaSan DiegoSanta Cruz	CA CA CA CA CA CA CA CA CA CA CA CA CA C	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie Michael Judith Peggy Patricia David Luis	kopinski Banever Kramer Haines Gatti Erlbaum r Kast Lihosit Loe Trandal Ross Mon	menifeeDuarteGarden groveChino HillsLivermoreLong beachIos angelesPanorama CityLa JollaMagaliaSan DiegoSanta CruzLaguna Niguel	CA CA CA CA CA CA CA CA CA CA CA CA CA C	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie Michael Judith Peggy Patricia David Luis Frank	kopinski Banever Kramer Haines Gatti Erlbaum r Kast Lihosit Loe Trandal Ross Mon Wegscheide r	menifeeDuarteGarden groveChino HillsLivermoreLong beachIos angelesPanorama CityLa JollaMagaliaSan DiegoSanta CruzLaguna NiguelPlacentia	CA CA CA CA CA CA CA CA CA CA CA CA CA C	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie Michael Judith Peggy Patricia David Luis Frank adam	kopinski Banever Kramer Haines Gatti Erlbaum r Kast Lihosit Loe Trandal Ross Mon Wegscheide r beebe	menifeeDuarteGarden groveChino HillsLivermoreLong beachlos angelesPanorama CityLa JollaMagaliaSan DiegoSanta CruzLaguna NiguelPlacentiapetaluma	CA CA CA CA CA CA CA CA CA CA CA CA CA C	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie Michael Judith Peggy Patricia David Luis Frank adam K	kopinski Banever Kramer Haines Gatti Erlbaum r Kast Lihosit Loe Trandal Ross Mon Wegscheide r beebe Ferrall	menifeeDuarteGarden groveChino HillsLivermoreLong beachIos angelesPanorama CityLa JollaMagaliaSan DiegoSanta CruzLaguna NiguelPlacentiapetalumaMountain View	CA CA CA CA CA CA CA CA CA CA CA CA CA C	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie Michael Judith Peggy Patricia David Luis Frank adam K Michael	kopinski Banever Kramer Haines Gatti Erlbaum r Kast Lihosit Loe Trandal Ross Mon Wegscheide r beebe Ferrall Decker	menifeeDuarteGarden groveChino HillsLivermoreLong beachIos angelesPanorama CityLa JollaMagaliaSan DiegoSanta CruzLaguna NiguelPlacentiapetalumaMountain ViewLos Angeles	CA CA CA CA CA CA CA CA CA CA CA CA CA C	These indiscriminate killers should be outlawed completely.
vicki Robert Kelly Trevolyn Arnold Alexis leslie Michael Judith Peggy Patricia David Luis Frank adam K Michael Matthias	kopinski Banever Kramer Haines Gatti Erlbaum r Kast Lihosit Loe Trandal Koss Mon Wegscheide r beebe Ferrall Decker Hildebrandt	menifeeDuarteGarden groveChino HillsLivermoreLong beachlos angelesPanorama CityLa JollaMagaliaSan DiegoSanta CruzLaguna NiguelPlacentiapetalumaMountain ViewLos AngelesLos Angeles	CA CA CA CA CA CA CA CA CA CA CA CA CA C	These indiscriminate killers should be outlawed completely.

Carolyn	Strange	Emerald Hills	CA	No more wanton, wasteful death (aka bycatch")! Please continue your efforts to create a responsible fishery. Thank you!"
Melanie	Cross	Palo Alto	CA	We must harvest seafood sustainably, if we want to leave anything for the future.
Lisa	Piner	Costa Mesa	CA	
Beth	Brenneman	Laytonville	CA	
Kristy	Asao	Monrovia	CA	Those that do this should be dealt jail time.
E. A.	Carden	San Francisco	CA	
James	Miller	Carlsbar	CA	
Laura	Rice	Canoga Park	CA	This is a no-brainer.
Tammy	Hall	San Francisco	CA	
Richard	Sickmen	Richmond	CA	The oceans and the fisheries are in great peril. We need to address these issues including the sword-fishing methodology immediately!!
Reuben	Freed	Burbank	CA	Stop the indiscriminate slaughter! Drift Gill nets must be replaced by gear that is designed to target the species sought.
Linda	Miller	Studio City	CA	
Julia	Schroter	Huntington Beach	CA	
Laila	Haghsheno- Sabet	Davis	CA	
Donna	Mason	Santa Barbara	CA	
Natalie	McMahon	Woodside	CA	
Stephen	Bartlett-Re	San Francisco	CA	
Joe	Myers	Azusa	CA	
Jan	Leath	Glendale	CA	
Dia	Hakinna	Claremont	CA	
Theresa	Bisson	Santa Barbara	CA	What a waste of our ecosystem when using gillnets. Especially Turtles, dolphins, whales who are also captured and die because of it. There are better ways to stop the wasteful deaths of these beautiful ocean species. They depend on the conscience of mankind.
Nancy	Wiest	West Hills	CA	
Madge	Miller	Tustin	CA	Pleas use more selective fishing gear and preserve other fish from unnecessary harm.
Diana	Day	Monterey	CA	Please revise your fishing methods to harm as few species as possible, so as not to catch and destroy indiscriminately. This must change.
April	Biggs	Santa Clara	CA	
Patricia	Savage	Mammoth Lakes	CA	
Robert	Jones	Alameda	CA	
Earl	Kuon	Oceanside	CA	
Ransom	Greeenfield	Ventura	CA	If we must catch swordfish commercially, There has to be a more efficent way than gillnets. Let's find a technique that will eliminate the collateral catch as much as possible. Gill nets are historical relics. We need sophistacated methods that do a better job. Times have changed, let's encourage the use of more selective techniques.
Stella	Gunther	Irvine	CA	
virginia	sharkey	Santa rosa	CA	
Brandon	Jav	San Jose	CA	

miguel	rivera	los angeles	CA	
Alice	Welchert	Los Osos	CA	Gill net fishing must be ended completely. The "by
				catch― is cruel, wasteful and unsustainable.
sherryann	pardee	riverside	CA	
robin	Hernandez	San Jose	CA	Humans are destroying our oceans. Something needs to happen soon.
Ann	М	Berkeley	CA	
Frances	Craig	Paso Robles	CA	
Holly	Photenhaue r	Los Angeles	CA	
Michele	Balk	San Francisco	CA	I'm sure that a better way to fish for these incredible mammals.
Laszlo	Kurucz	Lake Forest	CA	
Janet	Mc Entee	SAN JOSE	CA	Gill net need to be ban for once and for all!
Vidal	Salas	Highland	CA	With the improved knowledge of sea life and the environment why would anyone continue resource wasteful practices? It is time to move to methods that will ultimately benefit all interested parties.
Martha	Colburn	El Cerrito	CA	
Charles	Scheel	San Jose	CA	
Christina	Burton	Apple Valley	CA	Stop KILLING Swordfish!
Ana Paula	Fernandes	Redwood City	CA	
COLIN	LINDSLY	WALNUT CREEK	CA	
Ron	thomas	West Hollywood	CA	Please find a BETTER more HUMANE way of sword fishing
Buckland	Sawyer	Oxnard	CA	
Hilda	Foley	North Tustin	CA	
Greg and Robin	Handgis	Highland	CA	
Judy	Stechert	Laguna HIIIs	CA	My family and I have not eaten Swordfish for several years. Although it was a fish we previously enjoyed I cannot support the current destructive manner of fishing for Swordfish. Please make the move to the proposed alternatives that preserve the health and diversity of oceans.
Carolyn	Weinberger	Berkeley	CA	I am appalled at the needless waste of life due to use of huge gill nets!! It is time to use the more environmentally sustainable types of gear now available.
Willard	Simms	Woodland Hills	CA	Join the 21st century and help protect our ocean life before it's all gone.
Alison	Peper	Los Angeles	CA	
Liz	Redwing	Marina del Rey	CA	
Paul	Penardi	Big Bear Lake	CA	
Sabrina	Luis	Watsonville	CA	
Kathleen	Seeley	Yucca Valley	CA	
Cecilia	McGhee	Bodega Bay	CA	The ocean is damaged almost beyond repair by fishing nets. Please put an end to all harmful practices and begin the work of restoration.
Ben	Cachola	Union City	CA	
Jose	Fremont	Fremont	CA	
elizabeth	watts	richmond	CA	
David	Isaac	Fremont	CA	

Barry	Nichols	San Francisco	CA	Please, please, please, ban drift gill nets!
Sheridan Sonne	Rice	wrightwood	CA	Thank you for making these needed changes in your industry.
Marcia C.	Hackett	Tustin	CA	It's time to shift to more sustainable types of fishing gear.
Jane	Affosno	Redondo Beach	CA	
Sean	O'Day	Corte Madera	CA	
Tristan	Warren	Farifax	CA	
Larry	Lima	Campbell	CA	
Shelley	Alonso	Los Gatos	CA	Save our oceans!
Maureen	Burness	Sacramento	CA	protect our fish!
ana	jude	los angeles	CA	
Carol	McRae	Fairfax	CA	
ν.	Calkins	San Jose	CA	Please eliminate this ridiculously cruel & wasteful method of fishing. It is a disgrace that it is still used, since we know how much damage is done to non target life in the oceans.
Michael	Keough	San Francisco	CA	
teiko	ayers	kensington	CA	
Gretta	Pierret	La Mirada	CA	
Jolene	Yates	Lodi	CA	
Laura	Thornton	Laguna Niguel	CA	
Michelle	Davis	Vacaville	CA	
Barbara	Brodsky	San Francisco	CA	Pacific Fishery Management Council the time is now to honor your commitment to shift away from drift gillnets to more selective fishing gear.
Sher	Sheldon	Novato	CA	
Sarah	Natalini	Los Angeles	CA	
Diane	Glim	Pacific Grove	CA	Delicious swordfish loses its appeal when cetaceans, sea turtles and other fish are inadvertently caught in nets set for swordfish. Eating swordfish is not worth the risk to other sea creatures, and I would rather do without it.
Lorraine	Valdez	Santa Cruz	CA	

Marjolein	Bruinen	Berkeley	CA	Please act decisively on swordfish drift gillnets
				Dear Chair Lowman and Council Momherey
				Dear Chair Lowman and Council Members.
				Thank you for acting in March to develop a comprehensive plan to shift the fishery for Pacific swordfish away from drift gillnets. Please act decisively at the June 20-25 council meeting to ensure this fishery adopts a more environmentally sustainable alternative.
				Drift gillnets indiscriminately capture and kill many species of marine life, including non-target fish, whales, seals, sharks, and dolphins along our coast. During your meeting in June, the Council should establish clear criteria for granting experimental fishing permits to fishermen willing to try alternative gear that is actively tended and that minimizes interaction with non-targeted species.
				Further, until the fleet fully shifts to more selective alternatives for swordfish, the existing drift gillnet fishery should be carefully monitored and regulated. The Council should encourage the National Marine Fisheries Service to require observers on all fishing trips when drift gillnets are used, impose firm limits on the number of interactions with living marine resources such as whales and sea turtles, and close the fishery for the season if those limits are reached.
				Despite various measures adopted in recent years to minimize harm caused by drift gillnets, the fundamental nature of this gear means that it will continue to cause unacceptable levels of bycatch. Every year spent attempting to make incremental improvements will delay the necessary transition to a cleaner and more sustainable alternative.
				We are fortunate to have a robust and healthy population of swordfish along the West Coast. The public should be able to enjoy this prized seafood with the knowledge that our fishermen are catching swordfish while protecting other ocean wildlife.
Pat J	Harris	Redding	CA	
terry	word	Soquel	CA	
DANA	ROSS	SAN DIEGO	CA	We must find ways that encourage preservation and protection of wildlife. Ensuring the least damaging ways to fish is essential.
Nancy	Black	Santa Barbara	CA	
SUSAN	ALPERN	Murrieta	CA	

Cindy	Koch	Long Beach	CA	
Melissa	Davis	Santa Cruz	CA	
michael	levitt	concord	CA	
Jessica	Sheu	Cupertino	CA	
Gary	Patton	Santa Cruz	CA	In 1975, as a newly-elected member of the Santa Cruz County Board of Supervisors, I was urging just this rule. The problems have been clear for a LONG TIME. I hope you will now take action to ban gill netting.
Cheryl	Letson	Fresno	CA	
Maureen	Toth	Los Angeles	CA	
Don	Faia	Aptos	CA	
Judith S	Anderson	Long Beach	CA	
Dennis	Hazen	San Jose	CA	
Robert	Waller	San Diego	CA	Take the fish that you want, but don't kill all the others.
Diana	Hall	Mountain View	CA	Please consider the global effect of fishing methods and how inappropriate methods will decimate many species.
Bob	Mutascio	Venice	CA	
Kathy	Klusky	Rancho Cordova	СА	I am very appreciative of your willingness to move to other means to catch swordfish. Fortunately there is a better way to do this! Drift gillnets are antique and dysfunctional, not to mention pitiful. Keep going in the better direction! Thank you
Ken	Cowan	Los Angeles	CA	
Cat	Allen	LOS OLIVOS	CA	
Laura	Hawkins	Santa Rosa	CA	Those in power must make wise decisions and clearly this is an obvious choice to protect wildlife.
Karen	Pelosi	San Jose	CA	Can't we keep fishing humane? Is more really the important thing when it comes down to how we treat our God given creatures. Come on; do the humane thing. Please!
Holly	Luban	Atascadero	CA	Please find a better way if you must fish for swordfish.
Kelley	Lamke	Santa Rosa	CA	
Rebecca	Jones	Concord	CA	
Gabrielle	Swanberg	Petaluma	CA	
Meredith	Potter	Los Angeles	CA	
Candace	Rocha	Los Angeles	CA	
Mary	McDevitt	Redwood city	CA	
colleen	auernig	folsom	CA	
Vic and Barby	Ulmer	Saratoga	CA	
Kathleen	Martin	Shingle Springs	CA	
Lilith	Rogers	Sebastopol	CA	
Johanna	Scott	Reseda	CA	
Philip	Bouwsma	Guerneville	CA	
Mrs. Sonya M.	Garbutt	Davis	CA	
Alex	Anshus	Escondido	CA	
JOSE	ARTEAGA	LOS ANGELES	CA	
	Taylor	Yorha Linda	CA	

Julie	English	Sacramento	СА	Deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. Itâ€ [™] s time to shift the fleet to more environmentally sustainable types of fishing gear.
Janina	Konopka	Castro Valley	CA	Gillnets do too much harm to our already overfished, overburdened ocean environment.
John	Teevan	Chula Vista	CA	
kendra	bench	campbell	CA	
Robert	Kurz	Laguna Niguel	CA	The time for phasing out the use of gillnets is now. More sustainable measures should be implemented as quickly as possible. Thank you.
Sally	Kurz	Laguna Niguel	CA	
SUZIE	HEMPHILL	Moreno Valley	CA	
craig	cove	homeland	CA	please abolish long line swordfishing
Randy	Miner	Costa Mesa	CA	
Guy	Westgaard	Laguna Beach	CA	Do the right thing, Please. Thank You.
Richard	Weiss	Thousand Oaks	CA	This is precisely the time to push this agenda. To wait is to court calamity.
Melissa	McCormick	Huntington Beach	CA	
Sherri	Gillespie	Los Gatos	CA	Indiscriminate net fishing must be stopped before they kill all marine life.
susan	turmell	sugarloaf	CA	
Maryam	Shansab	Oakland	CA	
Kathy	Humphries	Costa Mesa	CA	Wow! I am stunned to learn about this. Please, find a better and more humane way to fish!
Julie	Jumonville	San Francisco	CA	Say no to gill nets.
Tom	Falvey	San Diego	CA	
Carolann	Johnson	riverside	CA	
Richard	Crawford	Ojai	CA	
Harold	Kinchen	Atwater	CA	Lets stop wastefull practice, so that we do not upset the balance and will continue to have fish in abundance in the future.
Janeen	Velez	El Cacjon	CA	
Gloria	Burd	Sunnyvale	CA	In my opinion, swordfish, or any other fish, should NEVER be caught, but should be allowed to live out their natural lives, wild and free. Animals are not ours to eat, wear, or experiment on.
Yolande	Michaels	Topanga	CA	
Rodger	Scott	San Francisco	CA	Please be more responsible ethical.
Barbara	Britton	Pleasant Hill	CA	
Ana	Claybourne	Sacramento	CA	
Steven	Dale	Sacramento	CA	Restrict fishing for both Swordfish and Thresher Sharks to single line, pole & single man fishing. This would assure other species are not caught by accident the so called secondary catch.
Richard	DiMatteo	San Diego	CA	Stop this useless and harmful slaughter.

Alison	Litton	Los Angeles	CA	There is no denying that many people love the taste of swordfish and thresher sharks. Unfortunately, the predominant commercial method of catching these fish off the California coast involves mile-long gillnets left in the water for hours at a time. Unfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. We believe there is a better way.
Leigh Ann	DiCarlo	Winchester	CA	
Margaret A	Staton	Santa Barbara	CA	Please find a better way to catch Pacific Swordfish!
Lisa	Toliver	Carlsbad	CA	
Kelly	Del Valle	Woodland hills	CA	Please stop the use of gill nets and move strongly to protect and keep the delicate balance of our oceans.
Karen	Taatjes	Lompoc	CA	
Susan	Allen	Livermore	CA	
Debra	Todd	Citrus Heights	CA	
Robin	VanTassell	San Rafael	CA	The fishing industry even knows that these practices need to change. All drift gill nets need to be illegal. I will not purchase fish that have been caught this way. It is detrimental to our entire ocean.
Judith	Kirk	Redwood City	CA	It is pointless to make minor and incremental improvements to a method of fishing that is fundamentally indiscriminate. Gill nets are an appalling waste of precious life and resources.
Land	Wilson	San Rafael	CA	
Rhonda	Rumrey	Sacramento	CA	Gill nets are a danger to sea life and should never be used. While other ways may cost the consumer a bit more, safer ways would ensure the survival of many sea creatures.
Colleen	Kandus	Temecula	CA	Please shift to more environmentally sustainable fishing gear, thank you
Elaine	Moore	Santa Rosa	CA	
Rowena	Finegan	Sausalito	CA	Please act now! It is high time we treat our fellow inhabitants of the planet with the respect that we afford ourselves.
Susan	Cadman	Vista	CA	
Mary	Brennan	Bakersfield	CA	GO VEGAN!!
Tony	Lorenz	Monterey	CA	
Janet	Sarnoff	Los Angeles	CA	
Robin	Reinhart	San Diego	CA	There is no time left to waste! We must act with intelligence immediately!
Sholom	Joshua	Ojai	CA	Net fishing is a moral crime.
John	Seid	Chico	CA	Catch up to the current timesthere's 7 1/2 billion of us on the planettime to think differently.
Anita	Youabian	Beverly Hills	CA	
Gala	Autumn	Granada Hills	CA	Why should so many thousands of ocean life suffer for our dinner plates? Please stop drift gill nets! We are ruining our oceans…and it is inhumane!
Linda	Stock	4558 Chelsea ct.cypress	CA	With more information, people find better ways to do things. It's time for more environmentally sensible ways of fishing.

Chrissy	Hoffman	Berkeley	CA	i know it must be hard to feel forced out of your trade,
				but at least no one is fishing you.
Lorna	Farnum	Rossmoor	CA	
Nicole	Bickel	Antioch	CA	
Darcy	Bergh	San Diego	CA	
Phillip	Hansen	Markleeville	CA	
Nathan	Keller	San Dlego	CA	
anna	williams	San Francisco	CA	fishing shouldn't be indiscriminate, they decimate the ocean. do something about it.
Steve	Asimow	Glendale	CA	
KAREN	WEHRMAN	CASTRO VALLEY	CA	Please find a better, more sustainable, way to catch Pacific swordfish ~ drift gillnets are too indiscriminate in their catch and the toll on our ocean is just too great ~ please do the right thing.
Tina	White	Fillmore	CA	
Wildecy de Fatima	Jury	Oakland	CA	
Jo	Witt	Redwood Valley	CA	Drift or gill nets kill to many fish/mammals in
				out waters. Please do something to outlaw these
				killing devices.
Lourdes	Arvizu	Herald	CA	
peter	snow	modesto	CA	
Diane	Lansing	Santa Monica	CA	
Terry	Skemer	San Jose	CA	
ι.	Thornton	Laguna Beach	CA	The evidence is clear that gill nets are more distructive than productive. The health of our ocean is critical to our survival. Please be responsive to the needs of our last great resource and the welfare of future generations. Thank you.
Louis	Mccarten	Glendale	CA	Swordfish and thresher shark are so succulent I do not want to them to disappear from the marketplace!!. Keep working on a solution to the problem of overfishing of these truly excellent fish species.
Travis	Bushard	San Diego	CA	This fishery is vitally important, I want my kids to have the same or better experience with this west coast fishery that I have.
Patricia	Morris	Santa Cruz	CA	Personally, I love swordfish, but I almost never eat it because of the problems with the way it is caught. Please find a more sustainable fishing method.
James	Pickering	Pasadena	CA	
Nick	Colin	Los Angeles	CA	
susan	nicola	los angeles	CA	TOO MANY MOUTHS to feed and getting to be too few fish. STOP wasting fish lives for financial gain. If allowed commercial fishing will destroy the abundance of fish needed for ecology and for food. STOP this WASTE
Linda N	Reuter	Pasadena	CA	
Arthur	Kennedy	Isla Vista	CA	yes, please
Lori	Atkinson	San Jose	CA	
Nancy	Walker	Arcata	CA	
Brenda	Luebke	Mountain View	CA	
Nancy	Shrodes	Los Angeles	CA	

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Patricia	Becker- Spellman	Stevenson Ranch	CA	
sean	Normandea u	burbank	CA	
Franchesca	Beauregard	Canoga Park	CA	Please stop the rape and destruction of our planet.
Tara	Treiber	Santa Monica	CA	A large catch today is not worth compromising any catch tomorrow. The future health of the ocean is in your hands, please choose to eliminate drift gillnets, one of the most destructive fishing methods, today. Thank you!
Allie	R	Los Angeles	CA	
Charlotte	Pruitt	Los angeles	CA	Please stop killing innocent wildlife
Kathy	Humphreys	San Francisco	CA	
Mark	Biewers	Newport Coast	CA	Thank you in advance for doing the right thing in abandoning the gillnets and safeguarding the ocean from bycatch killings!
Karen	Solheim	Santa Monica	CA	
jAMES	Sams	San Diego	CA	
Bryan	Tucker	Huntington Beach	CA	
Elena	Semper	Sherman Oaks	CA	Please find a more humane way!
krista	Cahill	Venice	CA	VEGAN!!!! Hello people, wake up!
Julia	Bourbois	Charter Oak	CA	As an environmental historian, I can attest to the negative ecological and ultimately economic impact of these nets. These nets undermine the stability of fishery and the welfare of millions of people who are dependent on our oceans.
Liz	Wang	Manhattan Beach	CA	To be honest I would fully support any additional measures to reduce or eliminate all seafood fishing period.
Andrea	Rosenberger	Tustin	CA	Gillnets are a horrific practice!
tammy	osuna	palmdale	CA	Please, please, please make this change! They deserve life as much, if not even more than humans! Sweet and innocent beauty. I plead with you. Not just for this generation but for the generations to come!
James	Hampson	SAN FRANCISCO	CA	
Tammy	Shaver	Los Angeles	CA	Please do what you can to protect the other sea animals
Randy	Schwartz	mountain view	CA	
Mala	Wingerd	San Diego	СА	Our oceans are being depleted and we have known this for YEARS! It is about time to maintain responsible fishery management. It is like The Tragedy of the Commons". No one wants to incur the responsibility for our precious oceans - but everyone want the right to destroy it? Please help to create and maintain a more thoughtful management policy today."
Charles	Milkewicz	Martinez	CA	
Jerry	Peavy	Chico	CA	
Linda	Tabb	North Hills	CA	Please shift from gillnet fishing!! There needs to be a better way to fish.
Lois	Bacon	Freedom	CA	
shawnee	mclemore	san diego	CA	Gillnets pose a hazard to the oceans ecosystem. Please shift fishing practices to other, more sustainable, methods.
	canter	Tiburon	CA	

С	Hawker	San Jose	CA	Please find a better way to catch Pacific swordfish.
V era	Brown	RedwoodCity	CA	
Robert	Chirpin	Northridge	CA	
Dale	Wright	Ramona	CA	
Sam	Romero	Stockton	CA	
john	harris	bay point	CA	
geraldine	teitelbaum	Garberville	CA	
Nerissa	Murin	South Lake Tahoe	CA	
Alex	Munguia	Daly City	CA	We should stop fishing for sword Fish altogether
Daniel	Helsel	Lakeport	CA	Please use the best science to set new fishing regulations to protect this fishery.
Francesca	Bolognini	Cambria	CA	Our oceans are already under excessive duress. It is imperative that we improve our relationship with the planet.
Glenn	Pritchard	Eureka	CA	
Dort	Rothafel	Santa Cruz	CA	Single Line fishing is the only way to go.
tom	simonian	san francisco	CA	
Meg	Goodwin	Ojai	CA	We need to manage our oceans, or reap the consequences.
Pat	Padilla	Porterville	CA	
stephen	josephson	berkeley	CA	
Maxine	Williams- Gboizo	Santa Monica	CA	
Martin	Rapalski	sf	CA	
Steven	Miller	Lakeside	CA	Gill-nets are stupid and indiscriminate for the conservancy of our oceans.
Oliver	Beqaj	Venice	CA	
е	perkins	talmage	CA	Don't eat seafood to begin with
Ron	Stock	Paso Robles	CA	
rob	rondanini	Roseville	CA	
Nancy	Parker	Felton	CA	
Reva	Biers	Tarzana	CA	
christine	raffetto	healdsburg	CA	
Claire	Jones	Hanford	CA	
David	Hammond	Willits	CA	
Kathryn	Santana	Bradbury	CA	
michael	sarabia	stockton	CA	
Claire	Joaquin	Pollock Pines	СА	Drift gill nets are brutal on marine life. The level of waste and species decimation is disgusting and unsustainable. It is more than obvious that this method of fishing is more harmful than effective. Get rid of this killing nets.
Gloriamarie	Amalfitano	San Diego	CA	
Michael	Spadoni	Rail Road Flat	CA	My simple action: I stopped buying gill-net captured fish
Elaine	Benjamin	Alpine	CA	I support a comprehensive plan to shift the fishery for Pacific swordfish away from gillnets. The toll they take on other marine life is too high.
Diana	Goodman	San Francisco	CA	
Dale	Noonkester	Potrero	CA	It is the wise and smart thing to do.
Kira	Schabram	Valley Springs	CA	I strongly oppose drift grillnets and the indiscriminate damage they cause.
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Anne	Tuddenham	El Cerrito	CA	
Gina	Gatto	Castro Valley	CA	
Siamak	Vossoughi	San Francisco	CA	
sharon	lacy	Sebastopol	CA	for the love of life, stop the insanity
Julia	Wellman	Wheatland	CA	
Irina	Clark	San Diego	CA	
Jane	Merkel	Eureka	CA	
Katherine	Nolan	Cupertino	CA	
Alexis	Miller	Santa Monica	CA	
Allen	Rozelle	Santa Cruz	CA	
Nadya	Tichman	Oakland	CA	
Lael	Jackson	Del Mar	CA	
Lil	Judd	Svlmar	CA	
Marcella	Hammond	Spring Valley	CA	
Bob	Atwood	Redding	CA	
Frank	Ackerman	Ackermaniav@iuno.com	CA	
		, including a junior com		
Kathy	Spence	Moraga	CA	
Michelle	Palladine	Palm Springs	CA	
marie	vogel	pasadena	CA	
Antonia &	Chianis	Blue Jav	CA	Please at least try a new way and save the other fish you
Andrew	C incline	2.00000	•	are not after. Thank You
Eithne	Cunningham	Grass Valley	CA	Please use fishing gear that doesn't harm other sea
	0	,		creatures. Thank you.
Alan	Haggard	San Diego	CA	
Lindsay	Muggleston e	Berkeley	CA	
Frank	Hill	North Hollywood	CA	
Tom	Gallagher	Burlingame	CA	
frederique	JOLY	venice	CA	
Michele	Martinez	Hayward	CA	
Andrea	Whitson	San Jose	CA	
Ann-Marie	Murphy	San Francisco	CA	
Jon	Anderholm	Cazadero	CA	
Elaine	Livesey- Fassel	Los Angeles	CA	I loathe GILL NETS and the destruction they cause! I beg and plead that you respect the fish of the sea and if Man is to continue to dine on their flesh then Man MUST learn to fish in a sustainable and wise fashion while we can!
Robert	Ellis	Oakland	CA	We need to stop destroying that which keeps us alive.
Claire	Chambers	Murrieta	CA	
Catherine	Lanzl	Encinitas	CA	There is a better way to catch fish. Stop using drift gillnets! They kill indiscriminately, and waste our ocean resources. PLEASE PLEASE STOP USING DRIFT GILLNETS!!!
Kyle	Bracken	Los Angeles	CA	
gary	hennemuth	San Francisco	CA	More proof that industry won't police itself.
rex	franklyn	tiburon	CA	
Alison	Massa	Novato	CA	
Andrew	Reich	Los Angeles	CA	

Jayna	Williams	Pomona	CA	
Candy	Bowman	Sacramento	CA	
Nancy	Freedland	Big Bear City	CA	
Jeannie	р	Orange	CA	
Marly	Wexler	San Diego	CA	please stop using gillnets
Patsy	Lowe	Simi Valley	CA	Are you going to keep at it until anything that used to move is DEAD?
Clark	Davis	Los Osos	CA	This is evil to do this if there are other good ways to prevent fishermen from killing them.
Judy	Johnson	Hayward	CA	Please shift away from drift gillnets to more selective fishing gear.
Charles	Hochberg	Philo	CA	
June	Abner	San Diego	CA	
Marc	Woersching	Valley Village	CA	Stop the collateral damage. Fishing methods should be changed so that only swordfish are caught.
VANCE	ARQUILLA	LOS ANGELES	CA	
Steve	Sugarman	Malibu	CA	
Martin	Marcus	San Diego	CA	It is time to move away from drift gillnet fishing.
wandis	wilcox	aptos	CA	
anthony	montapert	ventura	CA	
Robin	Fellner	McKinleyville	CA	
michael	schultz	concord	CA	
Bev	Johnson	San Juan Capistrano	CA	
Charles	Beals	Van Nuys	CA	
Paula	Johnson	Thousand Oaks	CA	I love fish and eat them, too. But I want to be sure we are protecting the ecosystem and other species when fishing. Otherwise, I will have to stop eating fish.
D	Butler	Glendora	CA	
Kim	Chamberlain	Fortuna	CA	
Long	Pham	Westminster	CA	
mary etta	moose	San Francisco	CA	
Charles	Winter	Berkeley	CA	
Simone	Oliver	Santa Rosa	CA	
Todd	Snyder	San Francisco	CA	
Jennifer	Toth	Santa Clarita	CA	
William	Lawson	Calimesa	CA	
Allan	Chen	Alameda	CA	
Cathy	Holden	Sacramento	CA	
Joe	Harvey	Twain Harte	CA	
STACIE	CHARLEBOIS	SEBASTOPOL	CA	
Ken	Greenwald	Santa Monica	CA	Though I have not studied the best way to catch fish, there are better ways than with gillnets. Even better would be to not catch and eat fish at all. Live off the land.
Richard	Kuntze	Monterey	CA	
Mir	Bahmanyar	Van Nuys	СА	
Douglas	Gower	San Francisco	CA	
Rodolfo	Scarpati	Castro Valley	CA	
katrina	child	san francisco	CA	
Deborah	Santone	Pleasant Hill	CA	
Robert	Hicks	Long Beach	CA	

Rob	Seltzer	Malibu	CA	
Maria	Bustamante	Albany	CA	
Siavash	Human	Santa Monica	CA	
Shaun	Levin	Redwood City	CA	
Stephanie	Linam	Benicia	CA	Gill nets are murdering thousands of fish other than the intended catch, and mammals too. These must be banned.
Margaret	Rogers	Redwood City	CA	
dinda	evans	san diego	CA	
Maria	Nowicki	San Francisco	CA	Killing all these animals has to stop!
Elizabeth	Jackson	Elk Grove	CA	
Sharon	Nicodemus	Sacramento	CA	
Mich	Chen	Fremont	CA	
Michelle	MacKenzie	San Carlos	CA	Please protect our west coast waters by getting rid of gill nets for good! These dangerous and wasteful fishing techniques endanger whales, sharks, turtles, dolphins and a whole host of unintended targets.
D	Schonfeld	San Diego	CA	
Joseph	Steinberger	San Francisco	CA	
Pec	Indman EdD	San Jose	CA	Please support the use of appropriate ways to catch fish that do not put other ocean inhabitants in danger. We need to keep our oceans alive!
Etta	Robin	Bakersfield	CA	
Gerald	Shaia	Sun Valley	CA	Gillnets are indiscriminate in what they catch. There are more efficient ways to fish without killing sea mammals and other sea life.
Noel	Park	Rancho Palos Verdes	CA	
Grace	Tiessen	Pasadena	CA	SHAME on you
Rebecca	Harper	Los Angeles	CA	
Kelly	McVey	Anaheim	CA	
Alice	Neuhakuser	Manhattan Beach	CA	
Thomas	Conroy	Manhattan Beach	CA	
Sheri	Duren	Anaheim	CA	The time is now to change the fishing gear before we do to much damage to sea life.
Vickie	Chandler	San Jose	CA	
Leanne	Friedman	Davis	CA	
elise	mallove	topanga	CA	
William	Castle	Loomis	CA	
Chris	MacKrell	Long Beach	CA	
John	Steponaitis	San Francisco	CA	
Paul	Ramos	Solvang	CA	DO the right thing!!!
John M	Keefe	South Pasadena	CA	
Deborah	Filipelli, Ph.D.	the sea ranch	CA	
Michael	Stewart	Elk Grove	СА	How long does have to go on ? This is why I've stopped buying fish. It's time for a change!
Richard	Benson	Lawndale	CA	
Elaine	Wilson	Torrance	CA	
Janet	Maker	Los Angeles	CA	

CaroleGarrettFolsomCAJust as 1 an expected to run my busines with minimal impact on the environment, these fishery leaders should be held to the same standard.susanemortensennewport beachCACADamaiVergara- HegiSan Juan CapistranoCACAJoyTurloRedondo BeachCACAIonMillsCulver CityCACAJonathanDirenberge rSan FranciscoCACATimBarrigtonSan JoseCAStop this lazy, greedy, barbaric form of fishing. What makes a few generations of people think they can so ra a ne cosystem that should be protected for all generations?sarawilsonIos angelesCAJoyceEkkundSalinasCAJoyceEkkundSalinasCAJoyceEkkundSalinasCAJoyceEkkundSalinasCAJoyceLickliSalinasCAJoyceLickliSalinasCAJoyceLickliSalinasCAJosephKleinBeniciaCABarbaraCohnCarlsbadCAV. JosephKleinBeniciaCAIarbardCorradiLos AngelesCAIarbardCoradiLos AngelesCAIarbardCoradiLos AngelesCAIarbardCoradiLos AngelesCAIarbardCoradiLos AngelesCAIarbardCoradiLos Ang	Mike	Rolbeck	Placerville	CA	Only when the last tree is cut, only when the last river is polluted, only when the last fish is caught, will they realize that you canâ€ [™] t eat money. – Native American proverb
susannemortensennewport beachCADamaiVergara- san Juan CapistranoCAJayTurloRedondo BeachCARandyMillsCuiver CityCAJonathanDirrenberge rSan FranciscoCACarolBeckerSherman OaksCACarolBeckerSherman OaksCACherylDavisConcordCACherylDavisConcordCAMillsJos angelesCAAndreaBonnettAltadenaCAAndreaBonnettAltadenaCASteveEklundSalinasCAJoyceJeckellSunnyvaleCAJoyceJeckellSunnyvaleCAJoyceJeckellSunnyvaleCAJos anglesCAGillnets are indiscriminate and deadly to many forms of future generations?JoyceJeckellSunnyvaleCAJoyceJeckellSunnyvaleCAJoyceJeckellSunnyvaleCABarbaraCohnCarlsbadCADenaSchwimmerLos AngelesCAJonalSchwimmerLos AngelesCAJonalSandenaCAJonalSentitBerkleyCAJosephalMilisBerkleyCAJosephalMilisBerkleyCAJosephalMondoLos AngelesCAJosephalMendoCanIncidental casualties add	Carole	Garrett	Folsom	CA	Just as I am expected to run my business with minimal impact on the environment, these fishery leaders should be held to the same standard.
Damai HegiVergara- HegiSan Juan Capistrano All CACAJoyTurloRedondo BeachCARandyMilsCulver CityCAJonathanDirrenbergeSan FranciscoCACarolBeckerSherman OaksCACarolBarriginoSan JoseCACherylDavisConcordCASanSon JoseCACherylDavisConcordCASarawilsonIos angelesCAAndreaBonnettAltadenaCAAndreaBonnettAltadenaCAYalyuLongshoreRiversideCASteveEklundSalinasCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyaleCAJoyceJeckellSunnyale <td< th=""><th>susanne</th><th>mortensen</th><th>newport beach</th><th>CA</th><th></th></td<>	susanne	mortensen	newport beach	CA	
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RandyMillsCulver CityCAJonthanDirenbergeSan FranciscoCAJonthanDirenbergeSan FranciscoCACarolBeckerSherman OaksCATimBarringtonSan JoseCACheryiDavisConcordCASarawilsonIos angelesCAAndreaBonnettAltadenaCAAndreaBonnettAltadenaCAAndreaBonnettAltadenaCASteveEklundSalinasCAJoyceJeckellSunnyvaleCAGilletts are indiscriminate and deadly to many forms of marine life. The results are horrid and deadly. Please fin sustainable alternatives.V. JosephKleinBeniciaCABarbaraCohnCarlsbadCAVillyaenliealtadenaCAWillyaenliealtadenaCAWillyaenliealtadenaCAWillyaenliealtadenaCAWillyaenliealtadenaCAWillyaenliealtadenaCANancyMorandeCAIncidental casuaties add up.olewislos angelesCAWillyaenliealtadenaCAMarieSmithBerkeleyCAMariaSonvimmerLos AngelesCAImage and calistogaCAIncidental casuaties add up.olewislos angelesCAJ	Joy	Turlo	Redondo Beach	CA	
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JominicPereiloSan Luis ObispoCAIesliespoonlos ososCAKarenIngenthronOaklandCAAwareness of the environment is a necessity.thomaslavignefremontNicolaGrobeCrescent CityCAJamesBrownLos AngelesCAUnfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. W believe there is a better way.	dean	Weiss	encino Sere Luis Obiene		
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Nicola Grobe Crescent City CA James Brown Los Angeles CA Unfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. W believe there is a better way.	thomas	lavigne	fremont		Awareness of the environment is a necessity.
James Brown Los Angeles CA Unfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. W believe there is a better way.	Nicola	Grobe	Crescent City		
Michele Leschi Monrovia CA	James	Brown	Los Angeles	CA	Unfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. We believe there is a better way.

Jamie	Zazow	Santa Monica	CA	
Raul	Anorve	Los Angeles	CA	
Lorraine	Lowry	Sacramento	CA	
dawn	navis	carlsbad	CA	
Blaze	Bhence	Cypress	CA	
Susan	Porter	Pasadena	CA	
Constance	Sutton	Berkeley	CA	Please enact the proposed changes
Jason	LaBerge	Malibu	CA	
Regina	Flores	Lake Elsinore	CA	
Kristen	Renton	Valencia	CA	
pete	childs	rancho mirage	CA	
Melinda	Burgess	Mission Hills	CA	
Kim	Hanks	Sacramento	CA	By catch is unnecessary and unacceptable, please require targeted sustainable fishing only.
К	R	SF	CA	We have a responsibility to be good stewards of the planet that sustains us that would be Planet Earth and all her inhabitants.
Jere	Springer	Glendora	CA	Don't let this opportunity get away.
Michael	Darling	Frazier Park	CA	
Aline	Zonta	San Marcos	CA	
Chris	Jeske	Canoga Park	CA	Please take action that mandates MEANINGFUL change to current practices.
Carrie	Staton	Santa Cruz	CA	
Janet	Kennington	Los Angeles	CA	
Sharon	Rodrigues	Fremont	CA	
Richard	Olney	San Francisco	CA	THIS METHOD OF FISHING SHOULD BE STOPPED.
Natalie	Hubbard	Folsom	CA	Stop the madness
Natalie Barbara	Hubbard Root	Folsom Merced	CA CA	Stop the madness
Natalie Barbara Edmund	Hubbard Root Wright	Folsom Merced Trinidad	CA CA CA	Stop the madness
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Natalie Barbara Edmund Nabeel Okiyo Hector Vicki Ronit	Hubbard Root Wright Saeed Ososaka Garcia Vincent Corry	Folsom Merced Trinidad san jose Oakland Los Angeles Valencia Santa Barbara	CA CA CA CA CA CA CA CA CA CA	Stop the madness Stop the madness
Natalie Barbara Edmund Nabeel Okiyo Hector Vicki Ronit David	Hubbard Root Wright Saeed Ososaka Garcia Vincent Corry Smith	Folsom Merced Trinidad san jose Oakland Los Angeles Valencia Santa Barbara Irvine	CA CA CA CA CA CA CA CA CA CA CA	Stop the madness Stop and the madness
Natalie Barbara Edmund Nabeel Okiyo Hector Vicki Ronit David Charles	Hubbard Root Wright Saeed Ososaka Garcia Vincent Corry Smith Wardle	Folsom Merced Trinidad san jose Oakland Los Angeles Valencia Santa Barbara Irvine San Clemente	CA CA CA CA CA CA CA CA CA CA CA	Stop the madness Stop the madness Stop the madness In order to maintain a healthy and productive ocean, by- catch must be reduced as much as possible. Given there are other more conventional methods (rod and reel) for catching swordfish, killing non-target species should not be acceptable. Please act quickly to limit the current methods affect on our oceans.
Natalie Barbara Edmund Nabeel Okiyo Hector Vicki Ronit David Charles	Hubbard Root Wright Saeed Ososaka Garcia Vincent Corry Smith Wardle Jeffries	Folsom Merced Trinidad san jose Oakland Los Angeles Valencia Santa Barbara Irvine San Clemente	CA CA CA CA CA CA CA CA CA CA CA	Stop the madness Stop the madness In order to maintain a healthy and productive ocean, by- catch must be reduced as much as possible. Given there are other more conventional methods (rod and reel) for catching swordfish, killing non-target species should not be acceptable. Please act quickly to limit the current methods affect on our oceans.
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Natalie Barbara Edmund Nabeel Okiyo Hector Vicki Ronit David Charles Lynne Marjorie Richard	Hubbard Root Wright Saeed Ososaka Garcia Vincent Corry Smith Wardle Jeffries Dunham Stewart	Folsom Merced Trinidad san jose Oakland Los Angeles Valencia Santa Barbara Irvine San Clemente Laguna Niguel Garden Grove Westminster	CA CA CA CA CA CA CA CA CA CA CA CA CA C	Stop the madness Stop the madness Stop the madness We need to do anything we can to protect our fish. It is protecting our environment also.
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Chris	Gillis	Oakland	CA	
GARY	JONES	SAN MARINO	CA	
Jennifer	Henderson	Arcata	CA	
Kris	Head	Garden Grove	CA	Do what is right for the entire Marine ecosystem.
Dionna	Campbell	Carmichael	CA	
Richard	Sedivy	Los Angeles	CA	
Scott	, Clements	Davis	CA	
Carol	Blanev	Redlands	CA	
ion	siegfus	norwalk		
Patricia	Leads	Carninteria	CA	
Vvette	Dominguez	Hacienda heights		
Cherie		Lincoln		No nets ston being greedyll
Stenhanie	Rui	Alameda		Please find a better way to catch pacific swordfish
George	Goffe	San Jose	CA	We MUST start taking conservation/renewable seriously,
				otherwise we're ALL DOOMED to extension. Monsanto et. al. must NOT change our ecology just to make more money. Humans MUST not exhaust the planet. Once a
				species is extinct, that's it.
alison	merkel	oak park	CA	
james	page	petaluma	CA	
Bernadette	Barberini	Alameda	CA	
Mark	Gotvald	Pleasant Hill	CA	
Tracey	Larvenz	Carpinteria	CA	
myrna	britton	santa cruz	CA	
Julian	Chazin	San Pablo, CA 94806	СА	
	N 4111		<u> </u>	
А. М.	Miller	Sunnyvale	CA	A better way is the only way. No need to kill or be cruel to other living beings whilst gathering only one type for food. That is unacceptable and wrong.
Ronald	Bogin	El Cerrito	CA	
Constance	Franklin	Los Angeles	CA	Intelligent foresight please ! It's unacceptable to continue to use unsustainable and destructive practices when viable alternatives exist. Our survival and the health of our oceans are contingent on our ethical and sustainable practices. Put an absolute end to drift gillnets now and forever.
Kim	King	Nevada City	CA	
Julie	Alley	Long Beach	CA	
celias	scott	santa cruz	CA	
Michael C. Ford and	Dr. Richard B. Marks	Watsonville	CA	To improve the environment and to prevent the horrors of horrible gillnet indiscriminate deaths, fishery people need to fulfill their commitment to shift from the drift gillnets to more effective and selective fishing gear.
Katie	Zukoski	Chico	CA	
Shanna	Brandow	Marina Del Rey	CA	
lain	Cowie	Corona	CA	
Vincent	Messineo	Sacramento	CA	
Andrew	Jones	Fresno	CA	
Barbara	Taps	Laguna Niguel	CA	
Linda	Harrison	Fortuna	CA	Please stop the use of these deadly and wasteful gillnets! I will not eat swordfish until I hear that this practice is over!

CAROL	LONG	Santa Cruz	CA	i don't want and will not eat any unsustainably harvest
				seafood, especially not swordfish
Lindsey	Loperena	santa cruz	CA	
Martha	Lyons	Monterey Park	CA	
barbara	shapiro	SANTA MONICA	CA	
Melissa	Saumur	Temecula	CA	
Maria	Holguin	Alhambra	CA	The time has come to stop or decrease the amount of fishing being done or the amount of fish being netted. There is just to many fish dying needlessly. How many fish spoil in the market or do not get ordered in the restaurants, that is an animal gone to waste including its life.
Adele	Myers	Meadow valley	CA	If the sea dies, we die: Cousteau
Gordon	Cook	Penn Valley	CA	
Daryl and Elizabeth	Lev	Calabasas	CA	
Joette	Snyder	West Hills	CA	The time is now to stop using these nets to fish and kill anything that is trapped in them. You can do better at saving the planet.
Gary	Foote	Riverside	CA	
Amy	Veloz	Van Nuys	CA	It's just terrible that these nets that are being used to catch swordfish are unnecessarily killing whales, turtles, sharks, dolphins and other species of fish. What a cruel waste. Please find a way to put an end to this soon!
Steve, Rachael	Alvarez-Jett	Torrance	CA	Cooperation, joining ideas and resources can happen to help ocean life and humans prosper, humanely.
pam	nelson	warner springs	CA	by-catch is inexcusable in our hi-tech age. stop putting
				catch all methods out in our magne occaris.
Israel	Valdez	San jose	СА	
Israel Julie	Valdez Ostoich	San jose Sacramento	CA CA	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch.
Israel Julie Jeanie	Valdez Ostoich Streit	San jose Sacramento Los Angeles	CA CA CA	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch.
Israel Julie Jeanie Vicki	Valdez Ostoich Streit Wiker	San jose Sacramento Los Angeles San Clemente	CA CA CA CA CA	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends
Israel Julie Jeanie Vicki Gamze	Valdez Ostoich Streit Wiker Kircalioglu	San jose Sacramento Los Angeles San Clemente South Pasadena	CA CA CA CA CA CA	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends Please stop using the mile long gill-nets and destroying the other mammals.
Israel Julie Jeanie Vicki Gamze James	Valdez Ostoich Streit Wiker Kircalioglu Stark	San jose Sacramento Los Angeles San Clemente South Pasadena Berkeley	CA CA CA CA CA CA CA	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends Please stop using the mile long gill-nets and destroying the other mammals.
Israel Julie Jeanie Vicki Gamze James Deborah	Valdez Ostoich Streit Wiker Kircalioglu Stark Hirsch	San jose Sacramento Los Angeles San Clemente South Pasadena Berkeley Palm Springs	CA CA CA CA CA CA CA CA	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends Please stop using the mile long gill-nets and destroying the other mammals.
Israel Julie Jeanie Vicki Gamze James Deborah Barbara	Valdez Ostoich Streit Wiker Kircalioglu Stark Hirsch Greenwood	San jose Sacramento Sacramento Los Angeles San Clemente South Pasadena Berkeley Palm Springs Walnut Creek	CA CA CA CA CA CA CA CA CA CA	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends Please stop using the mile long gill-nets and destroying the other mammals.
Israel Julie Jeanie Vicki Gamze James Deborah Barbara Thomas	Valdez Ostoich Streit Wiker Wiker Stark Hirsch Greenwood Clark	San jose Sacramento Sacramento Los Angeles San Clemente South Pasadena Berkeley Palm Springs Walnut Creek Los Angeles	CA CA CA CA CA CA CA CA CA CA CA	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends Please stop using the mile long gill-nets and destroying the other mammals.
Israel Julie Jeanie Vicki Gamze James Deborah Barbara Thomas Gerald	Valdez Ostoich Streit Wiker Wiker Kircalioglu Stark Hirsch Greenwood Clark Kelly	San joseSacramentoSacramentoLos AngelesSan ClementeSouth PasadenaBerkeleyPalm SpringsWalnut CreekLos AngelesSanta Monica	CA CA CA CA CA CA CA CA CA CA CA CA CA C	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends Please stop using the mile long gill-nets and destroying the other mammals.
Israel Julie Jeanie Vicki Gamze James Deborah Barbara Thomas Gerald will	Valdez Ostoich Streit Wiker Kircalioglu Stark Hirsch Greenwood Clark Kelly gorenfeld	San jose Sacramento Sacramento Los Angeles San Clemente South Pasadena Berkeley Palm Springs Walnut Creek Los Angeles Santa Monica novato	CA CA CA CA CA CA CA CA CA CA CA CA CA C	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends Please stop using the mile long gill-nets and destroying the other mammals.
Israel Julie Jeanie Vicki Gamze James Deborah Barbara Thomas Gerald will JoAnn	Valdez Ostoich Streit Wiker Wiker Stark Kircalioglu Stark Hirsch Greenwood Clark Kelly gorenfeld Gerfen	San jose Sacramento Sacramento Los Angeles San Clemente South Pasadena Berkeley Palm Springs Walnut Creek Los Angeles Santa Monica novato Santa Maria	CA	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends Please stop using the mile long gill-nets and destroying the other mammals.
Israel Julie Jeanie Vicki Gamze James Deborah Barbara Thomas Gerald will JoAnn Frank	Valdez Ostoich Streit Wiker Wiker Stark Kircalioglu Stark Hirsch Greenwood Clark Kelly gorenfeld Gerfen Andrews	San joseSacramentoSacramentoLos AngelesSan ClementeSouth PasadenaBerkeleyPalm SpringsWalnut CreekLos AngelesSanta MonicanovatoSanta MariaSan Rafael	CA CA CA <th>Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends Please stop using the mile long gill-nets and destroying the other mammals.</th>	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends Please stop using the mile long gill-nets and destroying the other mammals.
Israel Julie Julie Jeanie Vicki Gamze James Deborah Barbara Thomas Gerald will JoAnn Frank James	Valdez Ostoich Streit Wiker Wiker Kircalioglu Stark Hirsch Greenwood Clark Kelly Gorenfeld Gerfen Andrews Foley	San jose Sacramento Sacramento Los Angeles San Clemente South Pasadena Berkeley Palm Springs Walnut Creek Los Angeles Santa Monica novato Santa Maria San Rafael Anaheim	CA	Gill net fishing practices capture and kill many other types of species other than intended targeted fish. Switch to a more environmentally responsible method of fishing to eliminate bycatch. Please do your part to keep planet Earth blue, balanced, green, and clean! Thank you~Vicki, family, and friends Please stop using the mile long gill-nets and destroying the other mammals.

amrit	khalsa	Redondo beach	СА	Encourage West Coast fishery leaders to find a better way to catch Pacific swordfish.lease act now. It is pointless to make minor and incremental improvements to a method of fishing that is fundamentally indiscriminate. Members of the Pacific Fishery Management Council need to hear from you. Remind them of their commitment to shift away from drift gillnets to more selective fishing gear.
Lissette	Whitehead	San Ysidro	CA	
Aaron	Norton	Costa Mesa	CA	
Virginia	Stewart- Carton	Orinda	CA	Please do the right thing for the fishfor the environment and this magnificent planet and ultimately this will be the right decision for your livelihood
cynthia	purdue	m.v.	CA	
Richard & Jeanne	Placone	Palo Alto	CA	WE MUST DO EVERYTHING IN OUR POWER TO SAVE THESE ICONIC FISH FROM EXTINCTION WE HAVEN'T EATEN SWORDFISH FOR OVER TEN YEARS
Gabriela	Till	San Diego	CA	
Stephen	Rebello	Los Angeles	CA	
Frank B.	Anderson	San Pedro	CA	
James	Talbot	Granada Hills	CA	Let's please do this!
Phillip	Randall	Woodland Hills	CA	
April	Singh	Fresno	CA	
Michele	Monico	San Francisco	CA	
Tim	Swanson	Torrance	CA	We can't afford to destroy the natural environment in search of high-end seafood.
Phyllis	Krystal	Madera	CA	
vanessa	hemlock	pacifica	CA	
John	Etter	Monterey	CA	
Trish	Tuley	Idyllwild	CA	
Susan	Paulson	Castro Valley	CA	There is too much collateral damage to other fish as well as marine mammals such as whales using gillnets to catch the Pacific Swordfish. A change is overdue. The ocean's bounty is not limitless, and using gillnets is cruel and wasteful. The practice must stop.
lynne	weiske	los angeles	CA	
Joseph	Agnew	Huntington Beach	CA	
Julie	Dunn	Atascadero	CA	Modification of this flawed practice of indiscriminate drift gillnet fishing is NOT what we need! It's time to completely rethink how we harvest the oceans, it's time to shift to sustainable, environmentally friendly practices!!! It's time to take less from the oceans in general, or there won't be ANYTHING left at all!
Donna	Hamer	Santa Paula	CA	
Graciela	Huth	LOS ANGELES	CA	Where has the pride of the fishermen gone? My father loved to fish but he respected the rules. You have been corrupted by profit. Find some other way to fish what you want without destroying everything that gets in your way!
Valeire	Truong	San Diego	CA	
Charles	Almack	Calexico	CA	

Linda	Harrour	Oakland	СА	Please stop the use of drift gillnets that capture and kill many other marine species why are we destroying the ocean habitat. that is very short sighted please consider how the long term of those fishing practcises is very harmeful and detrimental to the whole health of the ocean.
Jolianne	Baum	90/05		
Dr Lindsay	Sharn	Tonanga Canyon		Please adopt these safer more humane fishing practices
	Sharp		<u>с</u> л	asap.
Peter	Stone	Rancho Santa Fe	CA	
Balfour	Gerber	San Francisco	CA	
Holly	Hall	Temecula	CA	Phase out drift gill nets! They are destroying too many other species!
Lori	Pellizzari	Costa Mesa	CA	It is time to stop the endless suffering and death of countless non target animals caught in gill nets used to catch Pacific swordfish. It is inhumane and greatly damaging to marine life and ecosystems. We must do better!
Alexander	Yeung	Clovis	CA	
Robert	Davis	San Diego	CA	
Herschel	Surdam	San Mateo	CA	
Patricia	Cole	San Francisco	CA	Do not wait until all of the sea life is exterminated and then say we should have done something sooner.
Theresa	Sabellico	Foster City	CA	
John	Wiesner	Castro Valley	CA	The health of the ocean demands moving to fishing methods eliminating bycatch. Please find better ways to catch your target species.
Melynda	Quinn	Folsom	CA	
Arlene	Romero	Lincoln	CA	Please find a better way to do your business and stop the indiscriminate killing of many other species.
Gail	McCredie	Aptos	CA	
Sean	Ray	Los Angeles	CA	
Denise	Oliver	Nevada City	CA	I appreciate the market for swordfish, and I wonder what what will happen to the swordfish population if so many other marine creatures in its environment are destroyed? Historically, huge changes in environment tend to mean loss of population. Please consider this in choosing fishing gear.
Tudy	Garrett	Glen Ellen	CA	Find a better safer way to fish
sifredo	galdamez	oakland	CA	
David	Ruger	Los Angeles	CA	
Cleo	Borac	Pacifica	CA	We just recently volunteered at the marine mammal center where hundreds of pups are being treated for starvation. We donated money so they could BUY fish to feed the pups! You guys make a profit by taking the fish out of the ocean so we can BUY it and feed it back to the ocean creatures? How sick a commerce is that?
Hugh	Moore	Hawthorne	CA	
Emilia	Bland	San Diego	CA	
frances	martin	carmel	CA	
Robert	Wallace	Whittier	CA	
Richard	Hartley	Napa	CA	
Karen	Colbourn	SACRAMENTO	CA	

Kirstyn	Кау	riverside	CA	
Chip	Gaylor	Julian	CA	if we must fish, let's do it well
Maria	Corvalan	Redondo Beach	CA	
Peggy	Andersen	Livermore	CA	
Sarah	Forester	Bakersfield	CA	
Theresa	Laura	Redondo Beach	CA	
Aireen	Agbayani	Irvine	CA	
marge	gianelli	San Diego	CA	
Canan	Tzelil	Beverly Hills	CA	
Thomas	Masterson	, Chico	CA	
elizabeth	shore	san anselmo	CA	
MIKE	CLIPKA	LATHROP	CA	
Stephen	Zaharias	Lompoc	CA	06/07/2014
				The oceans are dying! We are overfishing! This greed will result in NO FISH LEFT anywhere! Is this what you want???
IdaJane	DalPino	Corte Madera	CA	Gill nets should have been outlawed a long time ago. They catch everything and decimate populations. , make the bottom of the sea barren, and get lost and drift, killing all sea life they encounter. Please make it unlawful to use them.
Terelle	Terry	Sacramento	CA	The amount of bycatch is not sustainable. We need to protect the creatures we will not eat, while keeping up the population of the cretures we will eat.
Martha	Muller	Long Beach	CA	Change is not easy, but it is extremely important and becoming more so as the numbers of whales, sharks and turtles decline.
Benjamin	Sawicki	Emeryville	CA	
emanuela	sala	los angeles	CA	
James	Mickle	Sacramento	CA	
Faith	Conroy	Calabasas	CA	
Suzy	Hayes-Tripp	Placerville	CA	As our species population grows by leaps & bounds this is the trend of MASS CATCH! When are we going to address the fact that 7.3 BILLION and growing of the self proclaimed superior species" IS TO MUCH!"
Teresa	Edmonds	Carmel Valley	CA	
Brent	Riggs	Inglewood	CA	
ron	kutch	san jose	CA	
Joan	Andersson	Topanga	CA	We don't need bandaids - we need to do away with drift gillnets and move to more selective fishing gear, as your council committed to do.
Monica	Jackson	Laguna Beach	CA	It is Time.
David	Sung	Rancho Palos Verdes	CA	
Marilyn	Shepherd	Trinidad	CA	
Richard	Robinson	Fresno	CA	
Valarie	Welte	San Rafael	CA	
Anne	Young	Carmel Valley	CA	Please find a better way to fish without killing other sea life!
Denise	DeGrazia	Long Beach	CA	
Brad	Rae	Lake Forest	CA	

Joan	Weiner	San Anselmo	CA	gill nets have too much negative impact by catching unfortunate other life forms. Please, it's awful enough that folks feel a need to go after trophy fish - just because their big size stokes their barbaric big male egos - or maybe they are stupid from eating high mercury fish? - well anyway, please come up with a more humane, more environmentally safe way of letting folks bag their trophy fish. And please limit over fishing!!!!
Kathy	Hanson	Huntington Beach	СА	While I enjoy the taste of swordfish, I do not often order it due to the wasteful fishing practices used to catch it. Please work to modify this method so all fisheries remain sustainable.
Heather	Chang	Monterey	CA	Please find better fishing methods than gill nets.
susan	bullen	san rafael	CA	
Leslie	Friedman	Mountain View	CA	There is no benefit to the fishing industry to put off making the change to procedures that will not kill whales, sea turtles, dolphins and other sea life. There is too much public opposition to the drift gillnets. The opposition will keep growing. It will be financially more sensible to make the switch now and avoid continual time, labor and profit wasting minor adjustments over more years. And, while the world waits for the fishing industry to wake up to the tragic murder of important marine life turned into by catch" how many thousands more of these valuable and endangered species will die in the gillnets? It is in the interest of the fishing industry as well as the health of ocean life to make the change to alternative gear now
Kyana	Jones	Berkeley	CA	
Rose-Leslye	Stern	Oxnard	CA	
Rae	Newman	San Diego	CA	
carol	nelson	san rafael	CA	
Alan	Cunningham	Carmel Valley	CA	
HOWARD Miller	MILLER	Ventura	CA	WE ABSOLUTELY OPPOSE EVEN A MODIFIED GILLNET !!!!! WE WANT ALL SEA LIFE PROTECTED FROM EVEN MODERATE ABUSE !!
Mary	Salome	San Francisco	CA	I don't care about fishing, but I care about fish.
Laura	Whitnell	Rancho Cordova	CA	
Junko	Takeya	Diamond Bar	CA	
Nicholas	Hedlund-de Witt	Piedmont	CA	
Stacy	Patyk	Aptos	CA	I am shocked the Pacific Fishery still allows drift gillnets. This is a cruel, unsustainable fishing practice that a developed nation has no business practicing. The Pacific Fishery should be a model example to the rest of the world by abolishing drift gill nets and switching to selective fishing gear immediately.
Kelly	Brannigan	Fresno	CA	Please reconsider to stop using drift gillnets that catch helpless sharks, dolphins, turtles and countless other species which sadly ends in their demise.
Jorge	Velez	san jose ca	CA	Really? There has to be a better way =(
Adriana	Guidi	Sherman Oaks, CA	CA	

Raquel	Guillen	San Francisco	CA	The present system is too obsolete. We are in the XXI
Thoma	Zimorlo	Canta Darbara	<u> </u>	
	Sharp			Please use more selective fishing gear. It not only affects
LEAIIIId	Sharp	LUS Angeles	CA .	the Pacific Swordfish, but the entire ecosystem in the ocean. We must be more conscious. thank you.
Linda	Stock	Cypress	CA	I like swordfish but have discontinued eating them as of now. Please notify me s o I can resume enjoying them at my favorite fish restaurant , Los Alamitos Fish Company. I am also going to ask them to discontinue serving swordfish until gill netting is discontinued.
Benita	Cohen	Desert Hot Springs	CA	
James	Creely	Costa Mesa	CA	
MARTY	BOSTIC	LOS ANGELES	CA	
Alan	Dower	Hayward	CA	
Dan	Larson	Northridge	CA	
nathan	walworth	los angeles	CA	
Dana	Monroe	San Diego	CA	You must shift to less damaging fishing methods than gillnets. We need to protect marine animals from extinction, and that's a good place to start.
LEAH	HERZBERG	Encino	CA	
mike	dopson	san francisco	CA	
Victor	Smith	PLEASANT HILL	CA	
Patricia	Robinson	Garden Grove	CA	please find a better way.
Janice	Dougall	Agoura Hills	CA	This year I've been trying to learn more about the state of fisheries beyond simply carrying a Monterey Bay Aquarium card to refer to when selecting from menus when out to dinner. I'm on my fourth book and have begun to compose a letter that I will send to all the restaurants in the Los Angeles area that I go to with friends and family. I will be urging them all to buy and serve only sustainably harvested seafood because of the current problems with overfishing, unintended bycatch and seafloor habitat destruction from trawling. I'm hoping that some day wait staff in Los Angeles will be as knowledgeable about the sustainability of the menu options they offer as waitstaff in Portland Oregon were when I lived there. Even the fish and chips shop near our house there could tell us where the fish was caught, but what method and could assure me that their offerings were all certified sustainable. I will be asking for the same level of service here in Los Angeles.
Modell	McEntire	San Bernardino	CA	
Lala	Stanley	San Francisco	CA	
Michael	Maharry	Fairfield	CA	
John	Bulger	Walnut Creek	CA	It is time to take greed out of decision making
Judy	Cassada	Capitola	CA	Gillnets MUST GO. We are destroying all marine life and taking ourselves down with them. STOP THE MADNESS! Thank you.
Mignonet	Montez	Oakland	CA	
Dominick J.	Di Noto	Cloverdale	CA	MAY I please Remind you of your commitment to shift away from drift gillnets to more selective fishing gear.
Rodney	Merrill	Berkeley	CA	
Otto	Cache	Glendale	CA	

cathie	lamm	santa monica	CA	Please think about what you have the power to do, and
sheila	WVSP	sherman oaks	۲A	
Richard	Verlasky	San Diego	CA	
Daga	Krackowizer	Laguna Beach		
Catherine	Murty	SanFrancisco		
Stenhen	Shearer			
Phillin	Crinns	Cathedral City		
Richard	Kekule	El Sobrante		
harbara	diaz	la nuente		YES THERE MUST BE A BETTER AND SAFER WAY FOR THE
		in puente		MARINE LIFE. THE OCEANS WERE NOT CREATED SOLELY FOR HUMANS. HUMANS HAVE TO LEARN TO LIVE WITH FELLOW CREATURES INSTEAD OF KILLING THEM OFF CARELESSLY AND GREEDILY. IT IS WRONG IN MANY WAYS TO CONTINUE TO DOMINATE AND HOARD AND KILL AND SLAUGHTER, BUT TO CONTINUE TO DO SO, WE WILL KILL OURSELVES OFF AS WELL.
Rich	Perez	Torrance	CA	
Nancy	Foster	Novato	CA	
Sherry	Meddick	Silverado	CA	
Jenna	Peterson	Inverness	CA	
ROD & VICKI	KASTLIE	SAN DIEGO	CA	
bob	shaw	west scarmento	CA	Please, let's give our world a chance! Greed kills!!
Yvonne	Davis	San Diego	CA	
Daniel	Farr	Simi Valley	CA	
Bruce and Wendla	Duncan	Carmichael	CA	These gillnets are too destructive to marine life to be allowed! They kill species indiscriminately, not just the targeted ones.
Patti	Shea	Bay Point	CA	Please Stop Slaughter & Cruelty to poor innocent fish,whales,seals,sharks,turtles and dolphins along to west coast and east coastThank you!
Shirley	Biscotti	Fairfield	CA	The oceans are dead thanks to factory-style fishing indiscriminately hauling in everything caught in gillnets. It is criminal!
Claudia	Sherman	Westlake Village	CA	
Gerald	Sobel	Santa Monica	CA	Gill nets are not the way a human should be fishing, it's EVIL!
Monique	Lukens	Sunland	CA	
Betty	McDonald	Camarillo	CA	I heard a wildlife official describe while in tears at the devastation of almost 5 miles of gil net in the gulf of Mexico. He said an entire generation of many types of young sharks had been killed because the gill netwhich was abandoned had drifted into a shark breeding area. This is pointless destruction and extremly cruel.
Jo Ann	Herr	Oakland	CA	
Michelle	Schamach	petaluma	CA	
Daniel	Crownover	Lodi	CA	
Brenda	Arson	Glendale	CA	
Richard	Montgomer y	San Francisco	CA	
irene	sriboonwon g	walnut	CA	

Gale	Lederer	El Cerrito	CA	Drift gillnets are indiscriminate and wasteful. Fishers must clean up their act, so soon there will be no more fishing of any type.
Holly	Evans	Studio City	CA	
kaela	gallagher	santa cruz	CA	
gregg	norman	santa monica	CA	
Martin	Firestein	Studio City	CA	As a professional captain and recreational fishermen please ban the use of drift gillnets. Gillnets indiscriminate kill everything that is in their path. If they were banned it would have a major impact on the sustainability of the fishery. This would certainly help in saving this very vital resource. Thanks!
Tami	Petty	Lake View Terrace	CA	please shift away from drift gillnets
Julie	Fisher	Encinitas	CA	I used to eat fish 3x per week (1970's). Over the decades, as fishing resulted in over-fishing, I simply stopped buying fish at all. Gillnets, drift gillnets MUST be OUTLAWED! They are killing non-target species, which is affecting food sources for all fish and damaging the ocean's ecosystem. Line caught should be the manner, with any NON-target species required to be used, even if that takes government ships to gather the excess (non-target) fish. Those NON-target fish are usually good sources of protein for people and/or animals (dog & cat food). Also, perhaps hormonal baits that would attract the target swordfish might work to raise the numbers of desired fish caught, with fewer non-target fish involved in the catch. Our oceans are dying, people are still over-populating the earth, and that over-population is driving highly UN- sustainable fishing techniques that will undermine the fishing industries, as well as the oceans.
karen	hewitt	ventura	CA	
Tawny	McLellan	Ojai	CA	mile-long gillnets left in the water for hours at a time are deadly for so many animals.
Pat	Smith	BOULDER CREEK	CA	These nets devastate marine life in our oceans. Their use must be stopped, not just for Pacific swordfish, but for all the bycatch they kill indiscriminately. They should have been outlawed long ago. Please outlaw them now and prevent these nets from continuing to decimate our oceans.
Kirk	Walser	Modesto	CA	
Jeanne	Johnson	woodland	CA	
Helen	Bierlich	Los Angeles	CA	
Erin	Scott	Menlo Park	CA	Time to grow up and instigate the radical changes necessary to maintain the requisite natural balance for our world. Critical, in all all areas now. Denial and procrastination are no longer options for us.
Walter	Santucci	Los Angeles	CA	
Pere'	Morris	Sherman Oaks	CA	This should be simple make the changes, or face public condemnation. It's your choice ! TAKE NOTE People ARE watching you now.
David	Ruger	Los Angeles	CA	

Jordan-Paige	Borders	Winnetka	CA	
Adriana	Pagano	San Francisco	CA	Please transition away from drift gillnets. Bycatch levels are unacceptably high.
Brian	Fuelleman	Los Alamitos	CA	Keeping the ecosystem, including it's food chain, is more important than me getting a piece of swordfish or thresher shark. It's time to change our ways and help keep the environment strong for all creatures.
Zoe	Huang	Oakland	CA	
AniMaeChi	drabic	Ojai	CA	
Wendy	Monterrosa	covina	CA	Thank you for taking the time to read this message.
Benjamin	Schlau	Los Angeles	CA	Preserve our shared natural heritage, the delicious fish, and the food webs that support them.
Richard	Sudden	Paso Robles	CA	Please save the innocent species they just kill and dump. Please.
patty	lotz	Santa Monica	CA	It is TIME for us to put ENVIRONMENT FIRST.
lorraine			C A	There must be an alternative to establing swordfish
Iorraine	yee	SAN FRANCISCO	CA	without killing turtles, dolphins, whales and other species of fish. Please do not kill any other animals find a better way to keep our sea population healthy
Ken	Statham	Placentia	CA	
Ankine	Antaram	Los Angeles	CA	
Avrum	Harris	Lancaster	CA	
Linda	Currie	Berkeley	CA	
Јау	Bonestell	Los Osos	CA	These fisgh are vulnerable to over harvesting. Please work on a more sustainable means of catching them.
Jaclyn	Friedlander	Los Angeles	CA	
Chris	Prenter	Hermosa Beach	CA	Our oceans are our greatest treasure but they must be managed for sustainability to ensure a healthy and diverse ocean ecosystem.
Heather	Benko	Monterey	CA	The fact that we are still living in the stone ages of drift gillnets is a sad testament to the lack of awareness and development in the fishery world. It is time to take a stand against gillnets and require the use of more selective fishing gear in the pursuit of swordfish and thresher sharks, as was committed to in the past.
Alison	Kramer	Valley Glen	CA	
Nicole	Novelli	Santa Monica	CA	
Emilia	Engelberg	Santa Monica	CA	
Jane	Nichol	Encino	CA	
Virginia	Stover	Fullerton	CA	
Мауа	Armstrong	Culver City	CA	We MUST find more sustainable ways to harvest from the world's oceans. Our own lives depend on it!
Amy	Sherrard	Los Angeles	CA	
Scott	Nixon	Los Angeles	CA	
lilia	Rodriguez	glendora	CA	
gabriela	alatorre	north hollywood	CA	Please find a better way and more humane way
Enel	Woods	Los Angeles	CA	
Christy	Jackson	Los Angeles	CA	
Maryjane	Hursh	Chico	CA	Let us speak for the creatures we can not understand. This cruelty needs to stop
Kimberly	Clifton	Montrose	CA	

Dave	Huff	Long Beach	CA	Gillnet fishing is the marine equivalent of strip mining, it destroys indiscriminately. Please take action to stop this destructive practice.
Barbara	De Pinto	San Francisco	CA	Indiscriminate drift nets should be illegal. This is something that needs to be address by the United Nations and beyond.
Juana	Duarte	Saugus	CA	There has to be a better way to fish than this. This is so destructive. We're supposed to be taking care of this planet, not abusing it. We are not the owner, only the managers.
zia	islam	Winnetka	CA	
HEATHER	FRANKEL	tarzana	CA	
Robin	Dexter- Durham	Redlands	CA	Mile-long gill nets are not a sustainable way to harvest swordfish. The unintended by-catches are completely unacceptable.
Jessica	Beaudry	Petaluma	CA	
laureen	picciani	fort bragg	CA	no gill nets-there are better ways
Cynthia	Cleese	Los Angeles	CA	
Hillary	Melin	Culver City	CA	
Ricardo	Corrales	Heredia	CA	
Rebecca	Good	Placentia	CA	
Alan	Gonzalez	Long Beach	CA	
Nina	Noble	San Diego	CA	
Shanti	Z	San francisco	CA	You are despicable and greedy. A sorry excuse for humanity and desperately need to develop empathy.
Scott	Woker	San francisco	CA	
Patrice	Summers	Santa Barbara	CA	A better way to catch Pacific Swordfish: it,Äôs time to shift the fleet to more environmentally sustainable types of fishing gear. Unfortunately, these deadly gillnets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released.
Eric	Carlson	Ventura	CA	As a former commercial swordfisher with a doctoral degree in evolutionary biology I appreciate your support for scientific fisheries management.
Martin	Grantham	Emeryville	CA	Because swordfish females are believed to take a long time to mature sexually -longer than people- this fishery must be managed with greater care and catch reduced.
Patricia	Matejcek	Freedom	CA	Do the right thing!
David C.	Powell	Pacific Grove	CA	Find a better way to catch Pacific swordfish.
David C.	Powell	Pacific Grove	CA	Gillnets are simply too deadly to non-target species to continue to use them. We can't afford to keep killing everything in the sea just to catch a small number of target species.
Carol	LONG	Santa Cruz	CA	Harpooning was sustainable with zero bycatch. If the population has been depleted perhaps a moratorium is needed let them build up.
Paula	Johnson	Thousand Oaks	CA	i don't want and will not eat any unsustainably harvest seafood, especially not swordfish
Yuriko	Hazlett	Oxnard	CA	It is time to lead. Please stop the harm that is being done to the ocean.
darynne	jessler	Valley Village	CA	
Michael W	Evans	Los Angeles	CA	

Natalie	Alexander	Irvine	CA	
betty	winholtz	Morro Bay	CA	
Lois	Bacon	Freedom	CA	
Paul	Couillard	San Diego	CA	
Mark	Weinberger	San Francisco	CA	
Mark	Weinberger	San Francisco	CA	
wandis	wilcox	aptos	CA	
anthony	montapert	Ventura	CA	
anthony	montapert	Ventura	CA	
Carol	Sawyers	Santa Cruz	CA	
Robert	Krueger	Grass Valley	CA	
Russell	Weisz	Santa Cruz	CA	
katrina	child	San Francisco	CA	
Laura	Walker	San Francisco	CA	
deborah	burckhardt	san rafael	CA	
Barbara	Robbin	Studio City	CA	
Felicia	Chase	, Encino	CA	
stephen	clark	Marina del Rey	CA	
Ronit	Corry	, Santa Barbara	CA	
Neal	King	Oakland	CA	
Ann	Mmover	Westlake Village	CA	
Gloria	Klimczak	Antelope	CA	
amir	niknam	northridge	CA	
Tony	Mierzwicki	Huntington Beach	CA	
Pamela	Gaskill	Alameda	CA	
· ameia	Cusian	, and the da	0, (
Sherry and Ted	Guzzi	Tahoe City	CA	
Sherry and Ted	Guzzi	Tahoe City	CA	
Sherry and Ted	Guzzi Caudill	Tahoe City Los Osos	CA CA	
Sherry and Ted Lori Andy	Guzzi Caudill Philpot	Tahoe City Los Osos Solvang	CA CA CA	
Sherry and Ted Lori Andy Diane	Guzzi Caudill Philpot Doesserich	Tahoe City Los Osos Solvang Redondo Beach	CA CA CA CA	
Sherry and Ted Lori Andy Diane Alan	Guzzi Caudill Philpot Doesserich Cunningham	Tahoe City Los Osos Solvang Redondo Beach Carmel Valley	CA CA CA CA CA	
Sherry and Ted Lori Andy Diane Alan Alan	Guzzi Caudill Philpot Doesserich Cunningham Cunningham	Tahoe City Los Osos Solvang Redondo Beach Carmel Valley Carmel Valley	CA CA CA CA CA CA CA	
Sherry and Ted Lori Andy Diane Alan Alan Danielle	Guzzi Caudill Philpot Doesserich Cunningham HIII	Tahoe City Los Osos Solvang Redondo Beach Carmel Valley Carmel Valley Saugus	CA CA CA CA CA CA CA CA	
Sherry and Ted Lori Andy Diane Alan Alan Danielle Connie	Guzzi Caudill Philpot Doesserich Cunningham Cunningham HIII Rogers	Tahoe City Los Osos Solvang Redondo Beach Carmel Valley Carmel Valley Saugus Gilroy	CA CA CA CA CA CA CA CA CA	
Sherry and Ted Lori Andy Diane Alan Alan Danielle Connie brock	Guzzi Caudill Philpot Doesserich Cunningham Cunningham HIII Rogers cahill	Tahoe City Los Osos Solvang Redondo Beach Carmel Valley Carmel Valley Saugus Gilroy venice	CA CA CA CA CA CA CA CA CA CA CA	
Sherry and Ted Lori Andy Diane Alan Alan Danielle Connie brock Melissa	Guzzi Caudill Philpot Doesserich Cunningham Cunningham HIII Rogers cahill Davis	Tahoe City Los Osos Solvang Redondo Beach Carmel Valley Carmel Valley Saugus Gilroy venice Santa Cruz	CA CA CA CA CA CA CA CA CA CA CA CA	
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Sherry and Ted Lori Andy Diane Alan Alan Danielle Connie brock Melissa michael michael Allyson Eric	Guzzi Caudill Philpot Doesserich Cunningham Cunningham HIII Rogers cahil Davis levitt Ievitt Ievitt Frye- Hendrerson Carlson	Tahoe City Los Osos Solvang Redondo Beach Carmel Valley Carmel Valley Saugus Gilroy venice Santa Cruz Concord Concord Del Mar Ventura	CA CA CA CA CA CA CA CA CA CA CA CA CA C	Please continue your progressive actions to promote a sustainable West Coast fisheries with closely monitored gillnet fisheries and firm limits on bycatch
Sherry and Ted Lori Andy Diane Alan Alan Danielle Connie brock Melissa michael michael Allyson Eric	Guzzi Caudill Philpot Doesserich Cunningham Cunningham HIII Rogers cahill Davis Ievitt Ievitt Ievitt Frye- Hendrerson Carlson Bustos	Tahoe City Los Osos Solvang Redondo Beach Carmel Valley Carmel Valley Saugus Gilroy venice Santa Cruz Concord Concord Del Mar Ventura Fullerton	CA CA CA CA CA CA CA CA CA CA CA CA CA C	Please continue your progressive actions to promote a sustainable West Coast fisheries with closely monitored gillnet fisheries and firm limits on bycatch Please find another way to harvest the swordfish, without trapping onther innocent fish, which are needed for the foodchain.
Sherry and Ted Lori Andy Diane Alan Alan Danielle Connie brock Melissa michael Michael Allyson Erric Ray	Guzzi Caudill Philpot Doesserich Cunningham Cunningham HIII Rogers cahill Davis levitt Ievitt Ievitt Frye- Hendrerson Carlson Bustos	Tahoe City Los Osos Solvang Redondo Beach Carmel Valley Carmel Valley Saugus Gilroy venice Santa Cruz Concord Concord Del Mar Ventura Fullerton	CA CA CA CA CA CA CA CA CA CA CA CA CA C	Please continue your progressive actions to promote a sustainable West Coast fisheries with closely monitored gillnet fisheries and firm limits on bycatch Please find another way to harvest the swordfish, without trapping onther innocent fish, which are needed for the foodchain. Save the marine life for the fish. GO VEGAN!
Sherry and Ted Lori Andy Diane Alan Alan Danielle Connie brock Melissa michael Michael Allyson Eric Ray CT CT Gina	Guzzi Caudill Philpot Doesserich Cunningham Cunningham HIII Rogers cahill Davis levitt Ievitt Evitt Frye- Hendrerson Carlson Bustos Bustos Carollo	Tahoe City Los Osos Solvang Redondo Beach Carmel Valley Carmel Valley Saugus Gilroy venice Santa Cruz Concord Concord Del Mar Ventura Fullerton Walnut Creek San Diego	CA CA CA CA CA CA CA CA CA CA	Please continue your progressive actions to promote a sustainable West Coast fisheries with closely monitored gillnet fisheries and firm limits on bycatch Please find another way to harvest the swordfish, without trapping onther innocent fish, which are needed for the foodchain. Save the marine life for the fish. GO VEGAN! Too much damage and death to other species is caused by fishing with nets - please find another way! You can do it!

Barb	Crumpacker	Coeur D Alene	ID	Please use your clout to shift away from drift gillnets to catch swordfish.
Gloria	D.	Cataldo	ID	
Kenneth	Fisher	Pinehurst	ID	
Richard A	Rusnak Jr	Nampa	ID	Long overdue, as we know enough about the long lasting impacts across many marine ecosystems as to the over jealous destruction of this by-catch practice.
Donna	Trueblood	Post Falls	ID	
RONDA	REYNOLDS	Idaho Falls	ID	
Bill	Ventre	Boise	ID	
gustaf	sarkkinen	moscow	ID	
Marc	Fleisher	Moscow	ID	
Sheryl	Nims	Kamiah	ID	Too many endangered aquatic animals are endangered mostly from this terrible and wastefull practice!
Jill	Hirschi	AF	ID	
Sharon	Mueller	Idaho Falls	ID	
Peter	Brockett	Boise	ID	
Valerie	huerta	Montpelier	ID	Time to respect the ocean life!
Thomas	Rogers	Eagle	ID	
Glenn	Alford	Pocatello	ID	No gillnets.
Carmen	Chacon	Pocatello	ID	
Janeth	Mallory	Lewiston	ID	
Marina	Cappas	Eagle	ID	
Melissa	Sharp	Eagle	ID	
Shelli	Schwasinger	Boise	ID	
denise	simone	bellevue	ID	
Daniel	Hawley	Ketchum	ID	
Linda	Morgan		ID	
Stephen	Насклеу			
Iviark Areanda	Weber	I WIN Falls		
Amanda	Campbell	Kupa		
Kosemane	Norton	Kulla	U	
tom	Kovalicky	Grangeville	ID	Its our future and our quality of life to act on this issue to use selective Fishing GearGill nets are no longer acceptable in a shrinking Ocean
Dian	Berger	Boise	ID	
Rick	Priebe	Pinehurst	ID	
Grace	Himmelberg er	Boise	ID	
Russ	Berger	Boise	ID	
Michael	Dempsey	Boise	ID	
Janelle	Church	Garden Valley	ID	
Harold	Siemer	Hailey	ID	
Vicki	Wright	Priest River	ID	
рера	svn	Portland	OR	
Linea	Anthony	Racine	OR	
Rio	Duke	Newport Beach	OR	
Renee	Lillard	Elgin	OR	

Sharon Anthony	Bodman	Siletz Corvallis	OR OR	Things being harder and slower shouldn't be the determinating factor. Eliminate mile long gill nets as a fishing option from the fishing industry. It will preserve the species not targeted and maintain levels for those species sought.
lan	Shelley	PORTLAND	OR	
Gabriela	Baldaia	Portland	OR	
Jim	May	Depoe Bay	OR	
Robert and	Scheelen	Medford	OR	Pleas shift away from drift gillnets to more selective
Dolores				fishing gear.
Dave	Dunkak	Portland	OR	
Amy	Danielson	Portland	OR	
Martha	Perez	Portland	OR	
Natalie	Van Leekwijck	Beaverton	OR	
Cynthia	Enlow	Albany	OR	
Gerald	Moss	Unity	OR	
Paul	Ordway	Springfield	OR	
1	osborn	west linn	OR	
Dan	Sherwood	Portland	OR	
Bryce	Hutchinson	Rogue River	OR	
Wayne	Kelly	Ashland	OR	
Stephen	Oder	Corvallis	OR	
Heather	Marsh	Lake Oswego	OR	
Zachary	Neims	PORILAND	OR	
James	bernard	portiand	OR	
Harris	Dubin	eugene	OR	
Lora Morulo A	Koode	Barruon	OR	
William	Rizer	Carlton	OR	
	Schnaible	Medford	OR	
sharon	lee	hend	OR	
Scott	Crockett	Florence	OR	
Melanie	Feder	Philomath	OR	
L.	Griffiths	Beaverton	OR	
Maureen	O'Neal	Portland	OR	Gillnet fishing is NOT OKAY, it kills MANY ANIMALS OTHER THAN FISH!
Dana	Bleckinger	Yachats	OR	
Mauria	Mcclay	Portland	OR	
Emilie	Marlinghaus	Bend	OR	We have stood by and watched as ever more efficient and destructive forms of commercial fishing have decimated one supposedly endlessly bountiful population of marine fishery after another. If we are to prevent the vast oceans from ending up as acidic cesspools choked with toxic pollution and plastic trash, their once mind boggling treasure troves of teeming life imperiled or nearly extinct; we must begin now to do all that we can, as quickly as we can, to save what we still can. I'm counting on your full support in this monumental effort of critical importance to the earth and all of its life.
MANUELA	FELKL	Springfield	OR	

diana	kekule	Lincoln City	OR	
Gary	Gilardi	Hood River	OR	
Cassandra	Browning	Salem	OR	
Patty	Bonney	Portland	OR	
Jaedra	Luke	Bend	OR	
Richard	Gorringe, PhD	Portland	OR	It is pointless to make minor and incremental improvements to a method of fishing that is fundamentally indiscriminate. You made a commitment to shift away from drift gillnets to more selective fishing gear.
Cheryl	Fisher	Milwaukie	OR	
Marguery Lee	Zucker	Eugene, OR	OR	The present waste of life is unconscionable: Please get as close to hook and line fishing as humanly possible.
April	Theod	Milwaukie	OR	
А.	Todd	Eugene	OR	
Basey	КІорр	Bend	OR	
Steve	Sheehy	Klamath Falls	OR	
greeley	wells	jacksonville	OR	
Patrick	Grady	Grants Pass	OR	
Sandra	Joos	Portland	OR	
William Lee	Kohler	Eugene	OR	
Marie	Wakefield	Newport	OR	
Laurie	Todd	Portland	OR	
jess	В	portland	OR	
Monica	Gilman	Estacada	OR	
jay	Humphrey	Estacada	OR	
Margaret	Keene	White City	OR	
CHERIE	REEVES	CENTRAL POINT	OR	Deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. I believe there is a better way. Shift away from drift gillnets to more selective fishing gear.
Mark	Wheeler	Portland	OR	
Karen	Sinclair	Grants Pass	OR	
Ed	Davie	FOREST GROVE	OR	
John	Del Signore	Medford	OR	
Ms. Karen	Deora	Portland	OR	
Susan	Lemer	Elmira	OR	
Lars	Jefferson	Albany	OR	
John	Goeckerman n	Grants Pass	OR	YOU PROTECT YOUR JOBS WHEN YOU PROTECT THE OCEAN HEALTH - YOU CAN'T KILL EVERYTHING SWIMMING, AND THEN EXPECT YOUR MONEY CROP TO SURVIVE.
Maria	White	Beaverton	OR	
stu	lip	eugene	OR	
sandy	carter	corvallis	OR	
Philip	Ratcliff	Salem	OR	The bycatch in those swordfish nets is unacceptable. The indiscriminate bycatch is killing endangered species. Also swordfish contains high mercury levels. It shouldn't be eaten in the first place.
Rita	Castillo	Springfield	OR	Waste is hellacious.

Karen	Horton	Independence	OR	If you continue to waste now there won't be any tommorrow
Lauren	Kelley	Portland	OR	
Matt	Freedman	Eugene	OR	
Wendy	McGowan	Eugene	OR	
Jeffrey	White	Forest Grove	OR	
Randall	Nerwick	Milwaukie	OR	
Evan	Jackson	Philomath	OR	
Claudia	Hall	Beaverton	OR	PEOPLE WHO REFER TO INHUMANE TREATMENT OF PEOPLE OR ANIMALS AS THEY ACT LIKE ANIMALS." THAT IS A LIE! IF PEOPLE ACTED LIKE ANIMALS
Susan	Wechsler	Corvallis	OR	We must make a significant & deliberate effort to avoid the indiscriminate killing in our oceans!
Richard	Glass	Eugene	OR	Do not endanger other ocean species when fishing for swordfish.
Edward	Mainwaring	PORTLAND	OR	I do not eat swordfish because of the unsustainable methods used to catch them. If improvements were made, I would consider eating them.
Nicole	Lawless	Eugene	OR	
Rose	Wasche	Lake Oswego	OR	
Amanda	Sloane	Portland	OR	
Mark	Mullbock	Portland	OR	
Lawrence	Yox	Eugene	OR	
Mary	Peterson	Newport	OR	
Rich	InLove	Eugene	OR	If there's a better way, then let's please do it as soon as possible. Thanks!
Anna	Becker	Hillsboro	OR	With the very REAL dangers of global warming and its effect of killing off all marine life via killing the plankton they feed from, why kill even more in these huge mile long nets stretched throughout oceans everywhere?? Theres absolutely NOTHING sustainable about this idea of killing ALL marine life!!
Ben	Earle	Portland	OR	
Rebecca	Kimsey	Sublimity	OR	We need to protect the creatures of the ocean as we do commercial fishing. The drift gillnet has to be banned. Please enact this change.
James	Tyree II	Portland	OR	
Catherine	Dishion	Corbett	OR	Let's protect swordfish before they re gone forever.
michelle	unger	hillsboro	OR	
Karen	Nienkamp	Neskowin	OR	Please stop the use of billnets now. They are inhumane and need to be eliminated. California is such a progressive state. Do the right thing and stop this practice now.
Emlyn	Bruns	Eugene	OR	
Tina	Smith	Corvallis	OR	
Helen Logan	Hays	Oregon City	OR	
Charlie	Graham	Hillsboro	OR	
patricia	misner	cannon beach	OR	
Pamela	Vasquez	Salem	OR	
Susan	delles	rogue river	OR	Please get rid of these gillnets
Diana	Anderson	Roseburg	OR	
David	Saul	Eugene	OR	Please act to minimize unnecessary impacts on ocean ecology.

charles	baughman	bend	OR	
Sharon	Holford	Portland	OR	
James	Gilmore	Portland	OR	
Maggie	Vaughn	Coquille	OR	Waste not, Want not
Pennelloppe	Allee	Beaverton	OR	
Char	Messinger	Portland	OR	
Michael	Tribble	Coos Bay	OR	
Jerrilynn	Nall	Milwaukie	OR	
Deneen	Peckinpah	Ashland	OR	We cannot affords to keep sacrificing other species just for the convenience" of using gillnets. I urge you to upgrade the rules now and protect so many other precious marine creatures. Thank you!"
Wendy	McKee	Corvallis	OR	
Tiffany	McCleary	Portland	OR	
Thomas	Wicks	Portland	OR	
Doe	Tabor	Eugene	OR	
Emily	Vigue	Roseburg	OR	We need to protect these fish and more easier methods.
Ruth	Nelson	McMinnville	OR	
Tasha	Carpenter	Deer Island	OR	
Osalyn	Houser	Albany	OR	I strongly urge you to find a better way to catch swordfish and thresher sharks than using the deadly gillnets that scoop up much more than intended. We must protect turtles, dolphins, whales and other species of fish that are often captured and killed before they can be released.
				The time is now to use more selective fishing gear!
Erin	Marshall	Portland	OR	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!!
Erin sharla	Marshall keith	Portland aloha	OR OR	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!!
Erin sharla Nicholas	Marshall keith Nakadate	Portland aloha Portland	OR OR OR	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!!
Erin sharla Nicholas Evelyn	Marshall keith Nakadate Pietrowski- Ciullo	Portland aloha Portland Salem	OR OR OR OR	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!!
Erin sharla Nicholas Evelyn Gretchen	Marshall keith Nakadate Pietrowski- Ciullo Dennison	Portland aloha Portland Salem Lake Oswego	OR OR OR OR OR	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!!
Erin sharla Nicholas Evelyn Gretchen Lois	Marshall keith Nakadate Pietrowski- Ciullo Dennison White	Portland aloha Portland Salem Lake Oswego Grants Pass	OR OR OR OR OR OR	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!!
Erin sharla Nicholas Evelyn Gretchen Lois Tristan	Marshall keith Nakadate Pietrowski- Ciullo Dennison White Francis	Portland aloha Portland Salem Lake Oswego Grants Pass Portland	OR OR OR OR OR OR OR OR	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!! Refinement is the mark of civilization. We can do better in this day and age than the current shotgun approach to fishing.
Erin sharla Nicholas Evelyn Gretchen Lois Tristan Tara	Marshall keith Nakadate Pietrowski- Ciullo Dennison White Francis Brock	Portland aloha Portland Salem Lake Oswego Grants Pass Portland Portland	OR OR OR OR OR OR OR OR	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!! Refinement is the mark of civilization. We can do better in this day and age than the current shotgun approach to fishing.
Erin sharla Nicholas Evelyn Gretchen Lois Tristan Tara Lindsay	Marshall keith Nakadate Pietrowski- Ciullo Dennison White Francis Brock Nelson	Portland aloha Portland Salem Lake Oswego Grants Pass Portland Portland Portland	OR OR OR OR OR OR OR OR OR OR	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!! Refinement is the mark of civilization. We can do better in this day and age than the current shotgun approach to fishing.
Erin sharla Nicholas Evelyn Gretchen Lois Tristan Tara Lindsay Bruce	Marshall keith Nakadate Pietrowski- Ciullo Dennison White Francis Brock Nelson McCullough	Portland aloha Portland Salem Lake Oswego Grants Pass Portland Portland Portland Estacada	OR OR OR OR OR OR OR OR OR OR OR	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!! Refinement is the mark of civilization. We can do better in this day and age than the current shotgun approach to fishing. Gillnets are bad for marine ecosystems. Humans are terrestrial, bipedal, mostly hairless mammals without fins. Humans have no ecological place as predators on offshore fisheries. Park the fleet.
Erin sharla Nicholas Evelyn Gretchen Lois Tristan Tara Lindsay Bruce	Marshall Marshall keith Nakadate Pietrowski- Ciullo Dennison White Francis Brock Nelson McCullough Siegner	Portland aloha Portland Salem Lake Oswego Grants Pass Portland Portland Portland Estacada	OR OR OR OR OR OR OR OR OR OR OR	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!! Refinement is the mark of civilization. We can do better in this day and age than the current shotgun approach to fishing. Gillnets are bad for marine ecosystems. Humans are terrestrial, bipedal, mostly hairless mammals without fins. Humans have no ecological place as predators on offshore fisheries. Park the fleet.
Erin sharla Nicholas Evelyn Gretchen Lois Tristan Tara Lindsay Bruce Sandra Hoda	Marshall keith Nakadate Pietrowski- Ciullo Dennison White Francis Brock Nelson McCullough Siegner Kiama	Portland aloha Portland Salem Lake Oswego Grants Pass Portland Portland Portland Estacada Portland Estacada	OR OR OR OR OR OR OR OR OR OR OR OR OR O	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!! Refinement is the mark of civilization. We can do better in this day and age than the current shotgun approach to fishing. Gillnets are bad for marine ecosystems. Humans are terrestrial, bipedal, mostly hairless mammals without fins. Humans have no ecological place as predators on offshore fisheries. Park the fleet.
Erin sharla Nicholas Evelyn Gretchen Lois Tristan Tara Lindsay Bruce Sandra Hoda JACQUI	Marshall keith Nakadate Pietrowski- Ciullo Dennison White Francis Brock Nelson McCullough Siegner Kiama GLYDE	Portland aloha Portland Salem Lake Oswego Grants Pass Portland Portland Portland Estacada Portland West Linn PORTLAND	OR OR OR OR OR OR OR OR OR OR OR OR OR O	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!! Refinement is the mark of civilization. We can do better in this day and age than the current shotgun approach to fishing. Gillnets are bad for marine ecosystems. Humans are terrestrial, bipedal, mostly hairless mammals without fins. Humans have no ecological place as predators on offshore fisheries. Park the fleet. DO THE RIGHT THING.
Erin sharla Nicholas Evelyn Gretchen Lois Tristan Tara Lindsay Bruce Sandra Hoda JACQUI Berklee	Marshall Marshall keith Nakadate Pietrowski- Ciullo Dennison White Francis Brock Nelson McCullough Siegner Kiama GLYDE Robins	Portland aloha Portland Salem Lake Oswego Grants Pass Portland Portland Portland Estacada Portland West Linn PORTLAND Lake Oswego	OR OR OR OR OR OR OR OR OR OR OR OR OR O	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!! Refinement is the mark of civilization. We can do better in this day and age than the current shotgun approach to fishing. Gillnets are bad for marine ecosystems. Humans are terrestrial, bipedal, mostly hairless mammals without fins. Humans have no ecological place as predators on offshore fisheries. Park the fleet. DO THE RIGHT THING.
Erin sharla Nicholas Evelyn Gretchen Lois Tristan Tara Lindsay Bruce Sandra Hoda JACQUI Berklee Nancy	Marshall Marshall keith Nakadate Pietrowski- Ciullo Dennison White Francis Brock Brock Nelson McCullough Siegner Kiama GLYDE Robins Carey	Portland aloha Portland Salem Lake Oswego Grants Pass Portland Portland Portland Estacada Estacada Vest Linn PORTLAND Lake Oswego Roseburg	OR OR OR OR OR OR OR OR OR OR OR OR OR O	The time is now to use more selective fishing gear! STOP EATING HIGH ON THE FOOD CHAIN!!!! Refinement is the mark of civilization. We can do better in this day and age than the current shotgun approach to fishing. Gillnets are bad for marine ecosystems. Humans are terrestrial, bipedal, mostly hairless mammals without fins. Humans have no ecological place as predators on offshore fisheries. Park the fleet. DO THE RIGHT THING.

daniel	jones	Lebanon	OR	Haphazard methods of harvesting means haphazard success at maintaining a healthy ecosystem. The marine habitat is hanging on by a thread. We need to take every possible avenue to prevent any more degradation, or the people who depend on fishing for a living will be out of work soon.
Paul	Borcherding	La Grande	OR	
Debbie	Schlenoff	Eugene	OR	On behalf of the Lane County Audubon Society, I urge you to shift away from the use of drift gillnets. Ocean ecosystem health is important to our members and we recognize the harm done through large scale inadvertent by-catch. Please require the use of selective fishing gear.
R. Stephen	Dorsey	Dexter	OR	It's time that the US take a greater interest in the land"fill that we and other nations have made of the Pacific Ocean and to place strong curbs on the indiscriminate
Lauren	Thompson	Oregon City	OR	
Karen	Tressler	Albany	OR	
Daniele	Minock	Ashland	OR	
lill	Taylor	West Linn	OR	Be a good steward of this planet, and ensure the health and balance of ocean life by using selective fishing gear. It will save lives, including human lives someday
Jenefer	Angell	Portland	OR	
Brayden	Criswell	Lincoln City, formerly Roads End	OR	
david	taylor	Corvallis	OR	
Jennifer	Belveal	Sweet Home	OR	
ERic	Ross	sweet home	OR	
Steve	Aydelott	Bend	OR	
Jamie	Fillmore	Beaverton	OR	It's all disgusting to kill and eat any animal, but if you're going to do it anyway, it needs to be done responsibly. Don't harm other animals in the process. Everything deserves the right to live.
Dean	Pryer	Eugene	OR	
Hector	Amaro	SALEM	OR	
John	Sully	Ashland	OR	Amen!!!!
Linda K	Swift	Keno	OR	
Barbara	Arlen	Corvallis	OR	
Bruce	Hellemn	Portland	OR	
David	Wilson	Myrtle Point	OR	Please act decisively! Thank You'!
Eileigh	Doineau	Portland	OR	
Franklin	Kapustka	Aloha	OR	
BOB	hammond	Sisters	OR	
D. Wiese	Jones	Portland	OR	
bruce	bauer	Medford	OR	In many areas of the world, swordfish is illegal!
Kristin	Smith	Portland	OR	
patricia	carcasses	Portland	OR	Please stop gill-net fishingit is decimating the Oceans!
Steven		Solom	OR	
Keelev	Harding	Portland	OR	
Reciey	narung	i oi tianu		

Marceline	Gearry	Portland	OR	Find a better way
Paula	Eppler	Happy Valley	OR	
Gabriel	Sheridan	Portland	OR	We need a better way to catch salmon,,Help us,
Lori	Dennis	Eugene	OR	
Claire	Cohen	Lake Oswego	OR	No more gillnets please
Shirley	White	Springfield	OR	Fishing gear does not mean 'drift gillnets' and taking lives of every species in the ocean as a result! Step up and keep your word - STOP the use of drift gillnets TODAY!
Roger	Kofler	Portland	OR	Our oceans are in trouble. We cannot afford incidental catches of ever more scarce fish. We must use fishing methods that make good use of every fish caught.
Linda	Schwartz	Cannon Beach	OR	Please do away with indiscriminate gillnet fishing!!!! Find a better way that doesn't destroy everything in the sea!!
Shirley	Smith	Veneta	OR	Save innocent ocean creatures from a horrible death and have a 'NO' drift gillnets policy!!!
Satya	Vayu	Portland	OR	
Susanna	Askins	Portland	OR	
Peter	Sergienko	Portland	OR	
J. David	Scott	London Springs	OR	
Hal	Anthony	Grants Pass	OR	If the world were vegan, our transformation would become exponential.
Irene	Mills	Portland	OR	Gillnets are nothing more than animal abuse. Humans should behave more decently. And yes, I am vegan.
John M	Long	Redmond	OR	
Joan	Turner	Portland	OR	We all know it is time to act for a better future.
Setsuko	Maruki-Fox	Grants Pass	OR	Fishing with drift gillnets harvests too many other species besides the target fish. A better way must be utilized or there will be no fish left in the ocean.
John	Flinn	Portland	OR	Barbaric practice should be outlawed.
David	Hermanns	Portland	OR	
Denine V	Heinemann	Portland	OR	
Barry	Oaks	Eugene	OR	
Wade	Stoddard	Portland	OR	
Marlies	Wessbecher	Brookings	OR	Do the honorable, not the economic, thing. Think of environmental sustainability and the plight of these life- forms.
Sondra	Huber	Hillsboro	OR	
Tom	Kane	Hubbard	OR	Indiscriminate killing of marine life is not the way to catch sword fish. It is past time to change the use of gill nets to catch these fish as they gather turtles, dolphins, and even whales into their grip.
Laura	Fleming	Eagle Point	OR	
Audrey	Shepard	Springfield	OR	
Maria	Sause	Newport	OR	
Christine	Kleiman	Ashland	OR	
max	mensing	yachats	OR	The time has come to leave the old method of gill nets behind and find a more efficient way to catch sword fish. The by-catch produced by gill nets leads to a depleation of
				all fish stocks. This is unsustainable.

Barbara	Allen	Eugene	OR	You know you are depleting the ocean of many interconnected life forms, all of which allow swordfish to prosper. Please find a better way.
STEVEN	ADCOCK	PORTLAND	OR	
Doby	Finn	Monmouth	OR	
Jim	Geear	Medford	OR	
Diana	Stout	Portland	OR	
John	Hutchison	Salem	OR	
Brendan	Lee	Portland	OR	
Clyde C	Williams II	Oak Grove	OR	
Linda	Snyder	Salem	OR	
Michele	МсКау	Bend	OR	Gillnets kill too many species! Please stop this deadly and destructive practice!
Diane	Liguori	Phoenix	OR	
Katy	Carey	Portland	OR	
scott	mahood	portland	OR	
Rosalie	Sable	Medford	OR	The world cannot afford this continued wasteful bycatch.""
Lisa Jo	Frech	Hillsboro	OR	I'm a, adjunct professor of environmental studies at 3 universities. This makes perfect sense to me and all of my students, who come from many different backgrounds.
Serena	Wittkopp	Portland	OR	
Veroune	Chittim	Selma	OR	I am afraid we are out of time to save a lot of species due to unsustainable practices. Please do what ever is necessary to rebuild healthy numbers. Thank You.
Melody	Haislip	Portland	OR	
•	· ·		OR	
Robert	Miller	Portland	0	
Robert Lin	Miller DeMartini	Scappoose	OR	Just stop it!
Robert Lin eva	Miller DeMartini thiemann	Scappoose jacksonville	OR OR	Just stop it!
Robert Lin eva Robert	Miller DeMartini thiemann Hinely	Scappoose jacksonville Sheridan	OR OR OR	Just stop it!
Robert Lin eva Robert Joy	Miller DeMartini thiemann Hinely Joy	Scappoose jacksonville Sheridan Corvallis	OR OR OR OR	Just stop it! No more drift gillnets!
Robert Lin eva Robert Joy Pamela	Miller DeMartini thiemann Hinely Joy Brown	Scappoose jacksonville Sheridan Corvallis Grants Pass	OR OR OR OR OR	Just stop it! No more drift gillnets!
Robert Lin eva Robert Joy Pamela Clifford	Miller DeMartini thiemann Hinely Joy Brown Spencer	Scappoose jacksonville Sheridan Corvallis Grants Pass Portland	OR OR OR OR OR OR OR	Just stop it! No more drift gillnets!
Robert Lin eva Robert Joy Pamela Clifford Eva	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll	Portiand Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla	OR OR OR OR OR OR OR OR	Just stop it! No more drift gillnets!
Robert Lin eva Robert Joy Pamela Clifford Eva Wiilliam	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll OBrien	Portiand Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla Beaverton	OR OR OR OR OR OR OR OR OR	Just stop it! No more drift gillnets! Please utilize sustainable fishing methods!
Robert Lin eva Robert Joy Pamela Clifford Eva Wiilliam Sharon	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll OBrien Matticola	Portiand Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla Beaverton Eutgene	OR OR OR OR OR OR OR OR OR OR	Just stop it! No more drift gillnets! Please utilize sustainable fishing methods!
Robert Lin eva Robert Joy Pamela Clifford Eva Wiilliam Sharon debra	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll OBrien Matticola poscharscky	Portiand Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla Beaverton Eutgene portland	OR OR OR OR OR OR OR OR OR OR OR	Just stop it! No more drift gillnets! Please utilize sustainable fishing methods!
Robert Lin eva Robert Joy Pamela Clifford Eva Wiilliam Sharon debra Carrie	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll OBrien Matticola poscharscky Phyliky Rimes	Portland Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla Beaverton Eutgene portland Ashland	OR OR OR OR OR OR OR OR OR OR OR OR OR	Just stop it! No more drift gillnets! Please utilize sustainable fishing methods!
Robert Lin eva Robert Joy Pamela Clifford Eva Wiilliam Sharon debra Carrie Brandon	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll OBrien Matticola poscharscky Phyliky Rimes Haslick	Portiand Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla Beaverton Eutgene portland Ashland Hiens	OR OR OR OR OR OR OR OR OR OR OR OR OR	Just stop it! No more drift gillnets! Please utilize sustainable fishing methods!
Robert Lin eva Robert Joy Pamela Clifford Eva Wiilliam Sharon debra Carrie Brandon Randy	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll OBrien Matticola poscharscky Phyliky Rimes Haslick Harrison	Portiand Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla Beaverton Eutgene portland Ashland Hiens Eugene	OR OR OR OR OR OR OR OR OR OR OR OR OR O	Just stop it! No more drift gillnets! Please utilize sustainable fishing methods!
Robert Lin eva Robert Joy Pamela Clifford Eva Wiilliam Sharon debra Carrie Brandon Randy Faye	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll OBrien Matticola poscharscky Phyliky Rimes Haslick Harrison Bennett	Portiand Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla Beaverton Eutgene portland Ashland Hiens Eugene Portland	OR OR OR OR OR OR OR OR OR OR OR OR OR O	Just stop it! No more drift gillnets! Please utilize sustainable fishing methods!
Robert Lin eva Robert Joy Pamela Clifford Eva Wiilliam Sharon debra Carrie Brandon Randy Faye Karen	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll OBrien Matticola poscharscky Phyliky Rimes Haslick Harrison Bennett DeBraal	Portiand Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla Beaverton Eutgene portland Ashland Hiens Eugene Portland Springfield	OR OR OR OR OR OR OR OR OR OR OR OR OR O	Just stop it! Just stop it! No more drift gillnets! Please utilize sustainable fishing methods! Just stop it! Just
Robert Lin eva Robert Joy Pamela Clifford Eva Wiilliam Sharon debra Carrie Brandon Randy Faye Karen Yvonne	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll OBrien Matticola poscharscky Phyliky Rimes Haslick Harrison Bennett DeBraal Hall	Portiand Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla Beaverton Eutgene portland Ashland Hiens Eugene Portland Springfield Elmira	OR OR OR OR OR OR OR OR OR OR OR OR OR O	Just stop it! Ju
RobertLinevaRobertJoyPamelaCliffordEvaWiilliamSharondebraCarrieBrandonRandyFayeKarenYvonneChad	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll OBrien Matticola poscharscky Phyliky Rimes Haslick Harrison Bennett DeBraal Hall Hallsey	Portiand Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla Beaverton Eutgene portland Ashland Hiens Eugene Portland Springfield Elmira	OR OR OR OR OR OR OR OR OR OR OR OR OR O	Just stop it! Just stop drift gillnets! Just Stop
RobertLinevaRobertJoyPamelaCliffordEvaWiilliamSharondebraCarrieBrandonRandyFayeKarenYvonneChadDavid	Miller DeMartini thiemann Hinely Joy Brown Spencer Kendoll OBrien Matticola poscharscky Phyliky Rimes Haslick Harrison Bennett DeBraal Hall Halsey Maceira	Portiand Scappoose jacksonville Sheridan Corvallis Grants Pass Portland Molalla Beaverton Eutgene portland Ashland Hiens Eugene Portland Springfield Elmira Salem	OR OR OR OR OR OR OR OR OR OR OR OR OR O	Just stop it! Just stop it! No more drift gillnets! Please utilize sustainable fishing methods! Please utilize sustainable fishing methods! This is a travesty, that should not be legally sanctioned. They need to find another way to not endanger sea turtles and marine mammals.

Susan	Alaine	Beaverton	OR	Be more selective in your gill nets so they don't catch up intended creatures.
Terri	McFarland	White City	OR	It's 2014, time for change.Fishing with these deadly, wasteful nets should have been outlawed a long time ago.We are smarter than this, and I am sure that the Pacific Fishery can come up with a new plan.We can no longer look the other way on these issues,
J	Estep	Portland	OR	
Jackie	Henry	Portland	OR	
Terry	Hodgin	Elmira	OR	
John	Rose	West Linn	OR	
Michael	Nelson	Monroe	OR	
Nancy	Schroeter	Lake Oswego	OR	
Linda	Jenkins	Dallas	OR	Eliminate the netting of non-target fish. We are a smart species right? Then let's use our brains to find a better way to catch the food we want and waste-not.
Donna	Dooney	Hillsbor	OR	
Sufi	Olsen	Eugene	OR	
Bob	Askey	Newberg	OR	I am not involved with this type of Pacific Gillnetting but know it is deadly. Kills everything that gets in it. Many fish that are protected end up dying in gillnets. Like I said I am not knowledgeable of this method of harvesting fish in the ocean but know it is non selective. In a modern world methods being used should protect the
Sulvia	Casillas	Springfield		fish that are not being harvested or targeted.
Sylvia	Casillas	Springheid	UK	have anything but tiny fish in the Sea, overrun with algae blooms. We need to discriminate, in order to keep the variety for fishing alive! Sincerely, Sylvia Casillas
Sandra	Oliver-Poore	Salem	OR	Swordfish must be fished very sustainably, there's no excuse not to! Drift gill nets should not be tolerated anywhere in the oceans
Kelly	Wieber	Portland	OR	
Blaine	Ackley	Hillsboro	OR	Please protect the swordfish
Robert	Tull	Medford	OR	
Marlies	Wessbecher	Brookings	OR	I'm vegan so have no skin in the game - I don't profit from from sea food in any way (\$'s or taste). Take the interests of these sea-lifeforms to heart! - Or at least prioritize environmental protection!
Тад	Howland	Portland	OR	
damian	kullmann	estacada	OR	I think the West Coast fishery managers are way behind in making choice/decisions to better keep up with the idea of sustained fisheries. they can do better
nancy	Smith	Beaverton	OR	Please stop using these killing nets. They are ruining our oceans.
Roy	Wessbecher	Harbor	OR	I'm vegan, so all sea-life matters to me. I choose to leave it all alone. You, in your capacity, ought to, at a minimum, do what is most environmentally sustainable. Drift gillnets are not.

Tim	Holt	Portland	OR	
BARBARA	TAYLOR	NORTH BEND	OR	Driftnets are not just killing non-targeted species-they also drown hope for sustainable fisheries. Step up, PFMC- support the necessary transition to a cleaner and more sustainable alternative to catching for swordfish.
Ann	McMann	Coos Bay	OR	I support a fisheries program which will ensure sustainable and long-term management of our oceans. Regulations which help minimize impact on non- target fish and marine mammals will benefit all ecosystems.
Doris	Olson	North Bend	OR	Please treasure the species needlessly wasted with drift gillnets and make an important change now.
FELIPE	OLARTE	Portland	OR	
Michael	Gross	Cascadia	OR	Many species of marine life, including endangered and threatened animals are trapped and killed indescriminatlely in these mile-long gillnets. Please use a more selective method for the sake of our ocean wildlife.
Patty	Bonney	Portland	OR	
Russell	Archer	Portland	OR	
Patrick	Grady	Grants Pass	OR	
Patrick	Grady	Grants Pass	OR	
David	Hermanns	Portland	OR	
David	Wilson	Myrtle Point	OR	Please act decisively! Thank You'!
tim	hunovice	Portland	OR	this is an unacceptable and completely irresponsible way to catch fish of any kind. i will no longer buy fish that are known to be caught in this manner.
Gabriel	Sheridan	Portland	OR	We need a better way to catch salmon,,Help us,
talila	stan	Seattle	WA	
BERNADETTE	Mancuso	Elyria	WA	
Yoko	Senesac	Torrance	WA	END THIS ! SAVE SEA LIFE
James	Keeley	Vancouver	WA	we share the planet. Let's do it respectfully.
Trina	Cooper	Federal Way	WA	
Eleanor	Dowson	Mill Creek	WA	
Emily	Owens	Bainbridge Island	WA	As a conservation biologist, educator, and advocate for all marine life, I urge you to please end the use of drift gillnets. These indiscriminate, and dangerous methods are affecting not only target species, but many other important animals. It is time to begin preserving as much diversity in our oceans, and move away from dangerous fishing methods. Thank you~ Emily Owens, M.S.
Jeffrey	Panciera	Seattle	WA	Strip mining the ocean has the same effect as on land: devastation, waste, lost habitat.
Nathaniel	Harrison	Seattle	WA	
Waltraud	Usahanun	Seattle	WA	AUTHORITIES AROUND OUR GLOBE HAVE TO PLACE IMMEDIATELY A BAN ON ATROCITIES, ON KILLINGS TO ALL LIVING CREATURES BY APPLY STRONGEST JUSTICE TO PERSONS RESPONSIBLE AND PLEDGE FOR SPECIES- APPROPRIATE HUSBANDRY !
Nick	Page	Ferndale	WA	
David	Arntson	Bothell	WA	
Filip	Wuyts	Seattle	WA	

Elizabeth	Dawson	Port Hadlock	WA	done
Robert	Gabriel	Olympia	WA	
Nick	Barcott	Lynnwood	WA	
Ardeth L.	Weed	Edmonds	WA	
Laura	Geiger	Maple Valley	WA	
Chad	Evans	Seattle	WA	
Brandie	Deal	Bothell	WA	
Antoinette	Bonsignore	Kirkland	WA	
Jack	Stansfield	Stanwood	WA	
Thomas	Swoffer	Ravensdale	WA	
Douglas	Risedorf	Concrete	WA	Drift gillnetting should be illegal
Gill	Fahrenwald	Olympia	WA	
Ai	McCarthy	Redmond	WA	
kathv	kestell	Spokane	WA	
Ronlyn	Schwartz	Langley	WA	
Laura	Ackerman	Spokane	WA	
Marguerite	Winkel	Spokane	WA	
Patricia	Meeks	White Salmon	WA	
Luther E.	Franklin	Issaguah	WA	With the OBVIOUS rapid disappearance of marine life.
	-			continued use of nets like this is Criminal Madness!
Mr.Shelley	Dahlgren,	Issaguah	WA	
	PhD			
Scott	Cecile	Everett	WA	Please change the methods allowed for catching pacific
				swordfish. The gillnet is an indiscriminate killing wall and
				should be banned!!
Linda	Ellsworth	Eastsound	WA	
Jennifer	Svenson	Vashon	WA	
Jamie	Сауа	Vancouver	WA	
Mike	Smith	Seattle	WA	
Karen	Peralta	Kenmore	WA	
Carolyn	Eden	Bainbridge Island	WA	
dan	stabel	aberdeen	WA	I am a Pacific sportfisherman
Marie	Weis	Fox Island	WA	Start NOW!
Danny	Dwinell	Shoreline	WA	
John B	Pearce Sr	Seattle	WA	
Barbara	Bonfield	university place	WA	
Alice	Tobias	Seattle	WA	
Marsha	Osborn	Tacoma	WA	
Lozz	Кау	Seattle	WA	
Melissa	Rees	spokane valley	WA	
Rick	Romito	Bellingham	WA	
Ardith	Arrington	Seattle	WA	
Becky	Anderson	Bellingham	WA	
Gene	Lawson	Lynnwood	WA	
marilyn	evenson	tacoma	WA	
John	Bremer	Bellingham	WA	
Teresa	Allen	Deming	WA	
Scott	Marckxviolin	Port Townsend	WA	
	S			
Teri				
Terr	Breitenbach	Carnation	WA	
Saab	Breitenbach Lofton	Seattle	WA	

Betsy	Pendergast	Port Townsend	WA	
Elaine	Green	Belilngham	WA	
k	g	orting	WA	
Tim	Durnell	Rice	WA	
James	Roberts	Palouse	WA	
Baker	Smith	Burien	WA	
Mark	Redmond	Seattle	WA	
Јоусе	Grajczyk	Kent	WA	We need to protect these turtles, dolphins, etc. from irresponsible net fishing
Scott	Widdas	Silverdale	WA	
Summer	Kozisek	Bonney Lake	WA	
Lura	Irish	Lakebay	WA	
Michael	Lyman	COLVILLE	WA	This is important
James	Mulcare	Clarkston	WA	
Hal	Glidden	Bellingham	WA	Species-specific fishing gear should be developed and used to minimize by catch damage to the fishery stock.
Emily	Willoughby	Tukwila	WA	You do know that you need to shift from drift gillnets to more selective methods of fishing and more selective fishing gear. So make the rules that way.
madelaine	moir	sequim	WA	There is no denying that many people love the taste of swordfish and thresher sharks. Unfortunately, the predominant commercial method of catching these fish off the California coast involves mile-long gillnets left in the water for hours at a time. Unfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. We believe there is a better way. Reminding your of your commitment to shift away from drift gill nets to more selective fishing gear. Time is of the essence for those innocents caught in these net - please act now to help them.
Noryne	Chappelle	Vancouver	WA	
Α	Н	p.t.	WA	Irresponsible fishing is inexcusable.
WILLIAM	ULICH	seattle	WA	
jennifer	wheeler	gold bar	WA	
Helena	Fantin	Snohomish	WA	
Steve	Serbousek	Bremerton	WA	
Brian	Baltin	Seattle	WA	
Lora	Lehner	Port Orchard	WA	
Eileen	Deutsch	Port Townsend	WA	
Del E.	Domke	Bellevue	WA	
Clayton	Jones	Shoreline	WA	
Roger	Darden	Vancouver	WA	
Robert	Lohmann	Seattle	WA	
Michaelene	Manion	Port Orchard	WA	
Michelle	Hamilton	Marysville	WA	
Glen	Anderson	Lacey	WA	Respect the concept of sustainability.
meris	untalan	lynnwood	WA	
Gloria	Skouge	Shoreline	WA	
Lynne	Bannerman	Seattle	WA	our oceans and fish are in too much trouble not to do the right thing

Penny	Derleth	Deer Park	WA	
nate	marino	bellingham	WA	
Donna Darcey Linda Adam Patrick	Hanson Snow Massey Blumenthal Conn	Pullman Spokane Seattle Seattle Kent	WA WA WA WA	Please do the right thing for the ocean fishes that are the by-catch of the current method of catching swordfish and sharks. Please don't make the changes piece-meal fashion, please make the major change in fishery regulations now. Since the overwhelming scientific evidence must be considered indisputable there is no longer a valid excuse for not taking direct and immediate action to STOP current fishing techniques. I am confident that fishing industry administrators and seafarers are intelligent enough to implement viable alternative methods if
				adamantly encouraged to do so. So PLEASE IMMEDIATELY LEAD THEM in this transition.
Devon	Van Alyne	west richland	WA	
Stephen	Friedrick	Steilacoom	WA	
Gayle	Janzen	Seattle	WA	Small, incremental steps will do little to keep whales and other marine mammals from being caught in the deadly driftnets. It's the 21st century so one would think that humans could find a less destructive way to catch their intended target. If something isn't done to reign in the drift nets, many species will be well on their path to extinction because they already face so many human caused perils like pollution, lack of food and acidification. And really, there are plenty of other things humans can eat besides swordfish. Time to quit being so selfish and greedy.
Tina	Brown	Anacortes	WA	Long gill nets damage the marine ecosystem, and what's bad for the marine ecosystem is bad for all creatures, including humans. Find a better way.
James	Day	Lyle	WA	
Winfield	Hutton	Shoreline	WA	
Barbara	МсКее	Vancouver	WA	
Carole	Huelsberg	P.T.	WA	
Wayne	Haegele	Hansville	WA	
Joe	Neumann	Seattle	WA	
June	MacArthur	Port Orchard	WA	
Ronald	MacArthur	Port Orchard	WA	
Elyette	Weinstein	Olympia	WA	
Holly	Delphinidae	Bainbridge Island	WA	Please, please, please do everything in your power to eliminate all use of gill nets. Thank you
Sharon	Fetter	Puyallup	WA	
Steve	Uyenishi	Seattle	WA	Don't be wasteful!
Susan	Bechtholt	Port Orchard	WA	
Tara	Hunt	Waterville	WA	
Mary	Guard	Friday Harbor	WA	

mollie	smith	chehalis	WA	
Mandy	Weeks	Olympia	WA	
Johni	Prinz	Ocean Shores	WA	
Lael	Bradshaw	Camano Island	WA	
Julie	Laidlaw	Friday Harbor	WA	
nora	Regan	port townsend	WA	These HUGE nets are markedly destructive to the ocean's ecosystem, with far too much collateral damage to other species including marine mammals. A methodological change in fishing technique is needed NOW!
Marla	Smith	Vashon	WA	Gillnets are no longer a sane way to catch fish in this time of dwindling populations of fish worldwide. Will we fish the oceans empty?
Cami	Cameron	Vancouver	WA	
jeri	ichikawa	renton	WA	
ali	mosa	Poulsbo	WA	
Beth	Dannhardt	Zillah	WA	This action needs to happen.
tonya	stiffler	shoreline	WA	
isabela	duncan	Kirkland	WA	
Alexandra	Tufnell	Bothell	WA	Drift gillnets are creating too much damage. There is a better way to fish.
Tony	Buch	Seattle	WA	
Larry	Franks	Issaquah	WA	
Rachael	Bigham	Seattle	WA	
Michael	O'Neill	Tacoma	WA	
Scott	Species	Seattle	WA	
eve	chen	seattle	WA	
Wesley	Banks	Vancouver	WA	
Anita	Gwinn	Amboy	WA	
Dorothy	Jordan	Lynden	WA	
Amy	Heyneman	Bainbridge Island	WA	
g	g	orting	WA	
Debbie	Thorn	Kirkland	WA	
Mike	Conlan	Redmond	WA	
joanne	luongo	Kettle Falls	WA	
Rand	Guthrie	Snohomish	WA	
Nancy Enz		Spokane	WA	
Karen	Rogers	Vashon	WA	
Jenny	Сагк	Bothell	WA	
Ken	DODFOW	Walla Walla	WA MA	
iviai America	Hermann		WA	
Amanua	Rudisiii	Vanaauwar		
Robert	Brown	Fircrost		
Adam	Lovino	Soattlo		
Carol	Whitehurst	Tacoma	W/A	
Rosemary	Donaghue	Seattle	WA	This is an important issuel
lo	Walters	Sprague	WA	nis is an important issue:
John	Gordon	Port Townsend	WA	
Debi	Aldrich	Covington	WA	
Florence	Harty	White Salmon	WA	Find a better way!
Lisa	Taylor	Olympia	WA	

Barb	S	Redmond	WA	Drift gillnets that capture other species are just wrong!
				Please move the fishery away from their area!
Maria	Trevizo	Olympia	WA	
Paula	Shafransky	Sedro Woolley	WA	We need to be concerned about environmentally
				sustainable fishing practices for future generations.
Hugh	Lentz	Olympia	WA	
Jan	Rettig	Woodinville	WA	
Roberta	mcBride	Edmonds	WA	
JILLIAN	SHEA	Vancouver	WA	
Angela	Anderson	Snohomish	WA	Surely there are ways to catch swordfish than gillnets! Profit should not be the only consideration - empty oceans hurt everyone!
JoAnn	Polley	Poulsbo	WA	
Mark	Simpson	Shelton	WA	your desire for ease is having a very negative impact upon our environment, let alone our citizen's fishing opportunities.
Brian	Lewis	Marysville	WA	
Greyling	Gentry	Redmond	WA	Our taste for swordfish and thresher sharks is systematically wiping the Pacific clean of turtles, dolphins, whales, other shark species, and countless inedible but biologically important fish. Pacific fisheries already face deadly threats from warming, nuclear fallout, and whatever is annihilating sea stars, sardines and sea lions. Please do the right thing by ending hundreds of years of intentional mass murder of precious, inedible species by banning drift gill netting now!
Austin	Boese	Wenatchee	WA	
Elisabeth	Perrin	Seattle	WA	
john	sailer	port townsend	WA	
Evan	Guest	Spokane	WA	
Blair&Carol	Hopkins	Kennewick	WA	
Kerry	Moore	Toledo	WA	
yuliya	gorbanyova	seattle	WA	
Gerry	Martin	University Place	WA	Please find a better way to catch Pacific swordfish. Thank you.
Veronica	McClaskey	Camas	WA	
Stephen	Ekholm	Bainbridge Island,	WA	
john	seeburger	lakewood	WA	
mary pat	larsen	concrete	WA	
Jana	Hobbs	Kirkland	WA	
Pamela	Larsen	Camano Island	WA	
Jack	Zektzer	Seattle	WA	
Harriet	Allen	olympia	WA	
Joan	Peter	GIG HARBOR	WA	
Kathleen	Malley	Tacoma	WA	
Glenn	Eklund	Oak Harbor	WA	
ROD	Farrell	Seattle	WA	

James	Ranstrom	Vashon	WA	
Sarah	Sloane	Ocean Park	WA	Please devise better ways to catch Pacific Swordfish
Kari	Wilson	Mill Creek	WA	
К.	Youmans	Roslyn	WA	
Laurie	Black	Seattle	WA	
james	rechetnick	Everett	WA	AS a former commercial fisherman who gillneted salmon in alaska we often had bycatch fish and crabs that were tangled in our nets.
Mare	Wahosi	Gig Harbor	WA	The ocean needs respectful management that focuses on sustainability !
Ashley	Fowler	Seattle	WA	
PATRICK	ALLEN	Poulsbo	WA	
Reuben	Yancey	Olympia	WA	Stop destroying the ocean you idiots.
Don	Thomsen	Spokane	WA	
Sally	Vogel	Lacey	WA	Please, our oceans are being depleted of their diversity and numbers of creatures. Stop the awful practice of long gill-netting. Figure out a way to catch your target fish without all the bycatch and death.
Don	Johnson	Kent	WA	
KIMBERLY	SHAFER	DES MOINES	WA	
sally	eastey	bellevue	WA	
John	Vinson	Olympia	WA	
Jean	Waight	Bellingham	WA	Show some leadership.
Anita	Woodruff	Seattle	WA	The health of our oceans depends on preserving their biodiversity.
Fred	Karlson	Ferndale	WA	We can catch fish better in terms of sustainability of the seas.
Colin	Hermans	Friday Harbor	WA	
Ted	Grudowski	Seattle	WA	Commercial fishing for one species should not include mass killings of other species.
Kevin B	Willson	Port Angeles	WA	
Candace	Beardslee	Duvall	WA	
том	DEVINE	OLYMPIA	WA	
Donna	Scheff	Pullman	WA	indiscriminate fishing is a horrible waste of resources.We have ti be able to sustain what we have left imm!ediately
Lisa	Thomas	Issaquah	WA	Environmentally friendly fishing gear!
Laura	Craig	Lakewood	WA	
Marianne	Larkins- Strawn	Vancouver	WA	
Philip	Chanen	Seattle	WA	
Pamela	Bendix	Bainbridge Island	WA	Thank you for your consideration.
Lisa	Hammer	Oak Harbor	WA	
david	Ludden	Seattle	WA	
Carol	Smith	Olympia	WA	
Anne	Elkins	Anacortes	WA	We need to be careful not to over fish our oceans.
Marjorie	Ando	Seattle	WA	Anything we can do to make fishing more 'humane' for the sea animals would be wonderful.
Deborah	Rush	Spokane	WA	This message says it all. Stop this insane by catch.
Linda	Andersson	Medina	WA	Other countries have improved ways of fishing. Why don't we?
Jennifer	Ternan	Chehalis	WA	
Susanne	Scott	Sequim	WA	

Laurie	Nightingale	auburn	WA	
Veronique	de la Poterie	South Bend	WA	
Jeanie	Taylor	Seattle	WA	the predominant commercial method of catching these fish off the California coast involves mile-long gillnets left in the water for hours at a time. Unfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. There is a better way. It is pointless to make minor and incremental improvements to a method of fishing that is fundamentally indiscriminate. Please stick to your commitment to shift away from drift gillnets to selective fishing gear.
Sybille	Vital	Rainier	WA	
Max	Jones	Bellingham	WA	Please stop wasting life.
lan	Сох	Seattle	WA	
Tim	Burns	Federal Way	WA	
Patricia A	Lenzen	Vancouver	WA	
Bev	Deerimg	seattle	WA	
Juliette	Brush- Hoover	Seattle	WA	I really care about this issue! Please do the right thing and help protect species that are inadvertently killed using gillnet fishing.
Martin	Rollins	Everett	WA	
Herbert	Secreti	Seattle	WA	
Donna	Shaver	Vancouver	WA	
				Marking in the commercial fiching for many years l
Sergey	Galustiko	Editionus	WA	Working in the commercial fishing for many years I can not understand the reluctance of the industry to be more guided by the common sense and not by the greed when people try to squeeze every penny from the sea. It must be changed. Otherwise such attitude will destroy the ocean and you'll only get plastic trash instead of fish in your gear.
Jane	Finch	Seattle	WA	Working in the commercial fishing for many years I can not understand the reluctance of the industry to be more guided by the common sense and not by the greed when people try to squeeze every penny from the sea. It must be changed. Otherwise such attitude will destroy the ocean and you'll only get plastic trash instead of fish in your gear. Please, contribute to making sure all marine species have a chance to thrive. You can make that difference!
Sergey Jane Gwenna	Finch	Seattle Richland	WA WA WA	Working in the commercial fishing for many years I can not understand the reluctance of the industry to be more guided by the common sense and not by the greed when people try to squeeze every penny from the sea. It must be changed. Otherwise such attitude will destroy the ocean and you'll only get plastic trash instead of fish in your gear. Please, contribute to making sure all marine species have a chance to thrive. You can make that difference!
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Sergey Jane Gwenna GALE Patricia shannon	Finch Carlson LURIE Johnson gregor	Seattle Richland SEATTLE Sequim Mill Creek	WA WA WA WA WA	Working in the commercial fishing for many years I can not understand the reluctance of the industry to be more guided by the common sense and not by the greed when people try to squeeze every penny from the sea. It must be changed. Otherwise such attitude will destroy the ocean and you'll only get plastic trash instead of fish in your gear. Please, contribute to making sure all marine species have a chance to thrive. You can make that difference! I know this will be expensive at first for Fishers but in the long run sustainable fishing practices are more cost effective and benefit everone
Sergey Jane Gwenna GALE Patricia shannon Jerry	Finch Carlson LURIE Johnson gregor Johannes	Seattle Richland SEATTLE Sequim Mill Creek Bellevue	WA WA WA WA WA WA	Working in the commercial fishing for many years I can not understand the reluctance of the industry to be more guided by the common sense and not by the greed when people try to squeeze every penny from the sea. It must be changed. Otherwise such attitude will destroy the ocean and you'll only get plastic trash instead of fish in your gear. Please, contribute to making sure all marine species have a chance to thrive. You can make that difference! I know this will be expensive at first for Fishers but in the long run sustainable fishing practices are more cost effective and benefit everone
Sergey Jane Gwenna GALE Patricia shannon Jerry P.E.	Finch Carlson LURIE Johnson gregor Johannes Crawford	Seattle Richland SEATTLE Sequim Mill Creek Bellevue Stevenson	WA WA WA WA WA WA WA	Working in the commercial fishing for many years I can not understand the reluctance of the industry to be more guided by the common sense and not by the greed when people try to squeeze every penny from the sea. It must be changed. Otherwise such attitude will destroy the ocean and you'll only get plastic trash instead of fish in your gear. Please, contribute to making sure all marine species have a chance to thrive. You can make that difference! I know this will be expensive at first for Fishers but in the long run sustainable fishing practices are more cost effective and benefit everone
Sergey Jane Gwenna GALE Patricia shannon Jerry P.E. Richard	Finch Carlson LURIE Johnson gregor Johannes Crawford Stoll	Seattle Richland SEATTLE Sequim Mill Creek Bellevue Stevenson Poulsbo	WA WA WA WA WA WA WA WA WA	Working in the commercial fishing for many years I can not understand the reluctance of the industry to be more guided by the common sense and not by the greed when people try to squeeze every penny from the sea. It must be changed. Otherwise such attitude will destroy the ocean and you'll only get plastic trash instead of fish in your gear. Please, contribute to making sure all marine species have a chance to thrive. You can make that difference! I know this will be expensive at first for Fishers but in the long run sustainable fishing practices are more cost effective and benefit everone The environment knows nothing about politics or economics interests. PFMC needs to do the right thing for these fisheries, not solely for the constituents. Lets have FMPs that work for fish as well.
Sergey Jane Gwenna GALE Patricia shannon Jerry P.E. Richard Carol	Finch Carlson LURIE Johnson gregor Johannes Crawford Stoll Rolf	Editionus Seattle Richland SEATTLE Sequim Mill Creek Bellevue Stevenson Poulsbo Colville	WA WA WA WA WA WA WA WA	Working in the commercial fishing for many years I can not understand the reluctance of the industry to be more guided by the common sense and not by the greed when people try to squeeze every penny from the sea. It must be changed. Otherwise such attitude will destroy the ocean and you'll only get plastic trash instead of fish in your gear. Please, contribute to making sure all marine species have a chance to thrive. You can make that difference! I know this will be expensive at first for Fishers but in the long run sustainable fishing practices are more cost effective and benefit everone The environment knows nothing about politics or economics interests. PFMC needs to do the right thing for these fisheries, not solely for the constituents. Lets have FMPs that work for fish as well.

Christy	Papadakis	Bellevue	WA	We just cannot kill indiscriminately anymore. We must develop sustainable ways to do almost everything in order to leave a livable earth for us and for the next generations.
kim	dickey	leavenworth	WA	
martha	shade	seattle	WA	I won't eat swordfish!
Dr Jay	Sullivan	Gig Harbor	WA	
Raymond	Smith	Bremerton	WA	It is time to fix the problem of overfishing and fishing in a wasteful manner, please shift the fishing fleet regulations to require more environmentally sustainable types of fishing gear.
Susan	Nelson	Seattle	WA	What a waste. Cannot adult humans with supposedly bigger brains do better? How about doing right?
Michael	McLeod	Federal Way	WA	
David	Nelson	Ritzville	WA	
Dan	Morris	Seattle	WA	These magnificent creatures need rigorous protection from drift gill nets.
Nanci	Morris	Mill creek	WA	I love swordfish but haven't bought it in a very long time because of the way they are caught and killing other sealife at same time. Please consider finding other ways to get swordfish without killing dolphin, whales, turtles etc. Thank you!
Geri	Kromminga	Vancouver	WA	Fish are a great food, but we must be responsible consumers and make sure that the fisheries eliminate or at least cut back on the bycatch of other ocean inhabitants.
JC	Bower	Sumner	WA	No Drift nets period!
Ashley	Sullivan	Lacey	WA	
Barbara	Parks	Pasco	WA	
Jerry	Chilson	Enumclaw	WA	
Randall	Parks	Pasco	WA	
Susan	Morse	17404 SE 15 th. Way	WA	Actually I thought gill nets had been banned decades ago. It is a destructive and indiscriminate way of killing and such a waste of life meaning non targeted species. Gill nets need to be banned once and for all!!!
Patricia	Raven	Swansea	WA	Please find safer and more humane methods of fishing for swordfish without the risk of killing turtles whales and other animals.
Randy	Kilmer	Seattle	WA	
Betty	Chan	Shoreline	WA	
margaret	hashmi	BELLINGHAM	WA	
Richard	Johnson	Bellingham	WA	
Denee				Changing the satch methods now will provent an
	Scribner	Ellensburg	WA	emergency later, which is sure to affect fishing businesses negatively.
Linda	Scribner Swan	Ellensburg Snohomish	WA	emergency later, which is sure to affect fishing businesses negatively.
Linda kay	Scribner Swan mueller	Ellensburg Snohomish seattle	WA WA WA	emergency later, which is sure to affect fishing businesses negatively.
Linda kay Charlene	Scribner Swan mueller Lauzon	Ellensburg Snohomish seattle Lynnwood	WA WA WA WA	emergency later, which is sure to affect fishing businesses negatively.
Linda kay Charlene Albert	Scribner Swan mueller Lauzon Bechtel	Ellensburg Snohomish seattle Lynnwood Seattle	WA WA WA WA WA	Why should whales and turtle and other sea life have to die just because people want to eat swordfish. It's not just cruel. It's wasteful

Tom & Patricia	Moreland	Port Townsend	WA	Killing indiscriminately is not smart nor sustainable for our ecosystems. With increasing numbers of people, it is becoming critical to consider long range views rather than shortsighted ones.
Zandra	Saez	Spokane	WA	These nets should be outlawed worldwide.
Dale	Birdsell	Bothell	WA	
William	Howald	Marysville	WA	
Lloyd	Marshall	Seattle	WA	
Shary	В	Seattle	WA	
Elena	Rumiantsev a	Seattle	WA	
Robert	Lindberg	Vancouver	WA	
April	Atwood	Seattle	WA	Gillnets are the most wasteful and destructive method of fishing I know, other than dynamiting!
Patricia	Layden	SeaTac	WA	Dolphins, turtles, even whales are at risk when gillnets are used. We need to find ways to fish that targets only the fish we are looking to catch, not other vulnerable citizens of our oceans.
ERIKA	DAVIS	LOPEZ ISLAND	WA	It's wasteful and irresponsible to continue using drift gillnets when more selective fishing gear is available and effective. Please shift to the more environmentally sustainable gear. In the long run it will help the fishermen as well as the sea life population.
Hiroko	Patterson	Silverdale	WA	
G	Washburn	Seattle	WA	
Nancy	White	Spokane Valley	WA	
Carla	Alzuro	Seattle	WA	
Connie Rena	Childs	University Place	WA	Humans are the most dangerous of animals as they have to eat everything and be greedy and careless about it too.
Bill	Leyrer	Seattle	WA	
Paul	Talbert	Seattle	WA	
Stephen	Eichelberger	Tacoma	WA	Please shift away from drift gillnets to more selective fishing gear to catch Pacific Swordfish. Gillnets capture and often kill other species of fish as well which is not good.
Buzz	Marcus	Langley	WA	North Pacific fishermen and regulators have been trying to deal with the devastation caused by Taiwanese drift nets for years; let's not use the same destructive gear in our fisheries. The resource must always come first.
Norman	Baker	Sequim	WA	Gillnets are an abominable way to fish. We need to develop selective fishery methodologies as soon as possible.
Amy	Collins	Seattle	WA	
Jan	Weisel	Woodinville	WA	Please find new ways to catch Pacific swordfish instead of using deadly nets that kill them inadvertently.
Julie	Leavenwort h	Indianola	WA	
David	Daniels-Lee	Ocean Shores	WA	
Тоby	Allphin	Ellensburg	WA	
Seth	Snapp	Bellingham	WA	
Katherine	Nelson	Kent	WA	
Keith	Fabing	Seattle	WA	
reb	ferrell	kirkland	WA	the oceans are dying our over use is resulting in a sterile
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				world stop it for gods sake!
Blair	Kangley	Seattle	WA	
Randall	Collins	Seattle	VVA	
Dam	Sanm		VVA	
	UDSt	Seattle	VVA	
JU	Blake	Pacific	VVA	
Sucon	Milcon	Sedille		
Susan	Troat	Chohalis		We cannot afford to continue raning our oceans. We will
Lynne	fieat	Chenalis	WA	decimate our ocean wildlife and have no fish to harvest. We must develop a more humane method for fishing.
Carolyn	Hall	Renton	WA	
Roy	Conner	Puyallup	WA	Please stop this cruelty ASAP
Robyn	Cleaves	Tacoma	WA	
Stephen	Green	Mount Vernon	WA	
Jenn	Hudson	Tacoma	WA	
zoi	encinas	kenmore	WA	
Julie	Holtzman	Snohomish	WA	
Nancy	Jacques	Bainbridge Island	WA	
Jonathan	Raney	Bellingham	WA	Given the seriously depletion of pelagic predator species over the past quarter century gillnets have no place outside the coastal anadromous fisheries.
Renee	Milkie	Mercer island	WA	Please use an alternative to gillnets. thank you for consideration of my comment. Renee Milkie
Raymond	Ballweg	Bellingham	WA	Stop the indiscriminate killing of other species when fishing for swordfish. It only desecrates other valuable animals.
Leslie	Kentor	Buckley	WA	
Lola	Schiefelbein	Richland	WA	
preston	wheaton	olympia	WA	won't eat swordfish or go to establishment that serve swordfish
Kathleen	Wolfe	Des Moines	WA	
Esmeralda	Espinaco	Redmond	WA	
WALTER	Hoesel	Duvall	WA	Saving and protecting any endangered species is vital to preserving the earth.
Douglas	Yearout	Lake Stevens	WA	
Gregry	Loomis	Seattle	WA	
Samantha	Rich	Seattle	WA	
Kristin	Jensen	Seattle	WA	
Diann	MacRae	Bothell	WA	I hope that drift gillnets will be abandoned soon for much more environmentally sound fishing gear.
marya	shapiro	port townsend	WA	
Dr. James L.	Rowland, Ed.D.	Pullman	WA	
Tamara	Turner	Seattle	WA	The drift gill nets are responsible for a devastating amount of by catch. You have the opportunity as well as the responsibility to change this outcome. Please think of the future rather than allowing this situation to continue its deadly results.
Diana	Covington	Tacoma	WA	
Robin	Hirsch	Orcas	WA	

William	Sneiderwine	Vancouver	WA	
Shelley	Shelton- Wilson	Friday Harbor	WA	
David	Jackson	Mukilteo	WA	
Mark	Wirth	Seattle	WA	Why are we fishing for these fish and sharks which have the highest Mercury content of any seafood anyway?
pamela	wimp	lacey	WA	
judith	cohen	seattle	WA	stop using gill nets
Sandra	Carr	Edmonds	WA	
Dayna	Yalowicki	Bothell	WA	
Fay	Payton	Carnation	WA	Bycatch is unacceptable. All the species are needed if our oceans are to stay healthy and continue to produce food for us for many years to come. Changing how we catch fish will have a profound impact on our eco-system in the sea.
Faye	Bartlett	Bellingham	WA	Prevention is less costly and much more effective than trying to correct situations after the fact.
kelly	ragsdale	longview	WA	
Maggie	Rose	Seattle	WA	We're losing our wild animals at such a fast rate! Please be careful.
Gordon	Wood	Seattle	WA	
Shari	Hamilton	Port Angeles	WA	You are our hope for the future.
James	Wayrynen	Entiat	WA	
Gloria	Sting	Burien	WA	I'm so sick of wildlife having to suffer just so someone can line their pockets with money. Do what you're supposed to do to minimize damage to innocent creatures!!
Thomas	Libbey	Seattle	WA	
Тгасу	Hendershott	Kirkland	WA	Gillnets have caused so many slow deaths to marine mammals, reptiles and sea life that they should never have been allowed. It is time to ban them completely no modification just banned. These are walls of non- selective netting. Even the fish and swordfish caught in gillnets are dying in a cruel manner. We need least cruel fishing methods and no by-catch. Thank you.
Don	Syverson	Seattle	WA	
Sandra Kersten	Chalk	Seattle	WA	Gilnets are NOT an efficient way to harvest the vast riches of our oceans! We must maintain the diversity of our seas and carefully harvest only what we can use - not waste valuable species captured in these gillnets.
Yael	Dragwyla	Seattle	WA	Please don't use the gillnets any more, at all. Many of the species found as bycatch in those nets are in danger of extinction because of overfishing and wasteful ways of catching marine life. Sharks, which first came into existence in the Devonian Period of the Paleozoic Era, long before mammals evolved, are among those species that are threatened by this and other wasteful practices.
				The same is true for many other fish. Please don't do this any more.
Jeannie	Park	Seattle	WA	The same is true for many other fish. Please don't do this any more.
Jeannie Maria	Park Magana	Seattle Burlington	WA WA	The same is true for many other fish. Please don't do this any more.

Julie	Lawell	Seattle	WA	Bycatch is a repulsive waste and a horrible fate for animals who don't deserve it. Humans seem to think the supply of everything, whether it is fish, trees, air or water, is infinite. Unfortunately, all of these things are finite, and when they're gone, they may be gone for good. Be the stewards of our resources that we expect you to be. Thank you.
Dae	Kim	seattle	WA	
David	Bart	Tacoma	WA	
Donna	Stonecipher	Seattle	WA	
Cara	Friang	Seattle	WA	
Anne	Chapple	Point Roberts	WA	Please do what you can to improve our fishing practices and protect swordfish from overfishing
Doug	Gemmell	Everett	WA	
bruce	miller	Shelton	WA	the new technology can save you money in the long run. if not for the fish at least do it for your pocketbook!
Janice	McLaughlin	Bellingham	WA	With all the threats to our Ocean from so many different places and events, I think we should take whatever relatively easy" measures we can to give the fisheries a chance. Relatively speaking
Delphi	Locey	Seattle	WA	
Sonja	Richter	Seattle	WA	Why do we have to kill every thing that moves to kill the one thing we want to kill?
Billy	Snook	Vancouver	WA	Save our ocean creatures!!
kayley	campbell	olympia	WA	Respect the animals that nourish your body. Respect the animals that lose their lives to bring you a night of delicacy and self involvement. Respect life that is beyond you that makes your life possible. By implementing better fishing practices we can maintain a harmonious cohabitation with other life on this planet.
Nadine	LaVonne	Seattle	WA	Every creature, land, sea, air, is critical to the whole and healthy environment, and our own future on this planet. Indiscriminate killing, not for food, is one more unnecessary little murder. DON'T DO IT. Find a better way.
Cheryl	McAtee	Vancouver	WA	
Laura	Martinez	lakewood	WA	
marilyn	evenson	Tacoma	WA	
Beatrice	Calame	Bothell	WA	
Jessica	Schiffman	Seattle	WA	
Donald	Munn	Everett	WA	
Cynthia	Holm	Kirkland	WA	Please revise your fishing methods to a specific specie, and eliminate painful and devastating by-catch of other species. Otherwise, who wants to eat Swordfish at this disgusting cost to wildlife?
Irene	Alexakos	HAINES	AK	
Brenda	Martin	NORTH POLE	AK	
Gillian	Brown	JEFFERSON	AK	Unfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. We believe there is a better way.
Susan	Vogt	FAIRBANKS	AK	no more indiscriminate killing

Geraid Brookman KENAI AK Andrej Ignjatovic BELGRADE AK Audy Waltowa ANCHORAGE AK Rudy wittshirk WILLOW AK Stop wasting our ocean resourceschange! Ivan Stoyanov ANCHORAGE AK Intermediate deirdre downey FAIRBANKS AK Intermediate deirdre downey FAIRBANKS AK Intermediate Deborah Voves ANCHORAGE AK Intermediate Kaytiin Crawford ToK AK Intermediate Deborah Voves ANCHORAGE AK Intermediate Kaytiin Crawford ToK AK Intermediate Deborah Voves ANCHORAGE AK Intermediate Caraa Nanore RANCHORAGE AK Intermediate Intermediate Deborah Vares NIGNORA AL Intermediate Intermediate Intermediate <t< th=""><th>ic tissue! As ing until the ."</th></t<>	ic tissue! As ing until the ."
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Please stand by your commitment to shift away devastating drift gillnets to more selective fishing immediately. The massive negative impact these	
Stephanie Llovd WAKIKI AUS have on marine life is disgusting and I'm shocked are only considering moving away from this arch practice now! Well done though for finally makin commitment to change, thank you :) Please, pleat honour this commitment and immediately stop to drift gillnets and change to more selective fishing Just modifying the nets is not good enough. Pleat dies explored that dies explored the un-targeted marine life that dies explored the unstant of the unstant	way from the shing gear hese nets ocked that you archaic naking the , please now top using the shing gear. Please think es every day

				due to these nets, what a terrible waste of life! And
				fishing now needs to be done sustainably otherwise there
				will not be any fish left before long! Also, people now are
				much more aware of what they eat and are looking to
				can be in that category if you change to more selective
				fishing gear.
Phillip	Schaffer	KINGMAN	AZ	
Suzette	Armenta	TUCSON	AZ	There is a more humane way!
Terry	Tedesco-	PHOENIX	AZ	
	Kerrick			
Judith	Tuck	TUCSON	AZ	Find a better way!
Ashley	Schutt	SURPRISE	AZ	Please stop using drift gillnets and move to a more
				friendly so the turtles dolphins whales etc. are not
				caught and often die before they can be released.
Teresa	Mays	GLENDALE	Δ7	
Richard	Arthur IV	PHOFNIX	A7	
Mark	Dorsten	PRESCOTT	AZ	
Richard	Skinner	TUCSON	AZ	
Toni	Thomas	TUCSON	AZ	
Mireya	LandinErdei-	BULLHEAD CITY	AZ	The way we are fishing is depleting the ocean of marine
				creatures. It's criminal and cannot continue at this
				abusive pace.
Vernon	Cullum	PRESCOTT VALLEY	AZ	There is no economy on a dead planet.
Hunter	Williams	CHANDLER	AZ	
Gary	Henderson	APACHE JUNCTION	AZ	
Denise	Romesburg	PHOENIX	AZ	
Kelly	Hurlbut	FLAGSTAFF	AZ	
Patricia	Orlinski	SUN CITY	AZ	Please remember your commitment to shift away from
				drift gillnets to more selective fishing gear. It will make a difference for our fish nonulation
Carolyn	Donton	ΜΕςΑ	47	Diagonal stratic for our hist population.
Anthony	Tripp	DINE	ΑZ Δ7	Please act quickly on this to prevent further bycatch.
Kathy	Sweany		Δ7	
lim & Norma	Lightcan	SCOTTSDALF	Δ7	Any time we find out anything is caught in those awful
	Lightcap	JCOTTIDALL		gilnets we stop eating itwish we could boycott al that
				awful method of fishing. Trawling isn't fishing.it's
				wholesale slaughter.
collette	novak	MESA	AZ	
Dale	Mattes	BULLHEAD CITY	AZ	
Joani	Kirchgessner	PHOENIX	AZ	
Ingrid	Carp	CLARKDALE	AZ	
Rick	Easton	CORNVILLE	AZ	
Georgia	Braithwaite	COTTONWOOD	AZ	Thank you!
Dianne	Douglas	PHOENIX	AZ	
Evelyn	Verrill	PRESCOTT	AZ	
Wendy	Morris	PHX	AZ	
Richelle	Kogan	PHOENIX	AZ	
Carolyn	501		AZ	
nernan	alzuro	SCUTISDALE	AZ	
James	ivioran	GLENDALE	AZ	
Julia	French	SEDUNA	AZ	

Lyn	Burns	SCOTTSDALE	AZ	
Brenda	Mason	PHOENIX	AZ	Our oceans must provide a great deal of our food. The natural system that exists for predator/prey fish needed be interrupted by drowning whales, sharks, etc. Please us better fishing gear. Nets do more harm than good.
Roxana	Huggins	TUCSON	AZ	
Thierry	Deshayes	SCOTTSDALE	AZ	
Miriam	lverson	PHOENIX	AZ	
Bettina	Bickel	GLENDALE	AZ	
Bobbie	Howard	SCOTTSDALE	AZ	Today's fishing methods are like using an atomic bomb to kill a mosquito.
Duncan	Brown	TUCSON	AZ	
Marcella	Crane	PHOENIX	AZ	
Karen	Christian	VAIL	AZ	I will NOT buy swordfish UNTIL you develop a sustainable catch program!
Robert	Racine	MESA	AZ	
Drena	LaPointe	SCOTTSDALE	AZ	
Manny	Martinez	BISBEE	AZ	
Melvin	Bautista	PHOENIX	AZ	
hadiah	Continue	DEODIA	47	The slaughter of innocent sea life in order to catch swordfish and thresher sharks is unacceptable. Changes have to happen now and in a meaningful way! The Pacific Fishery Management Council made a COMMITMENT to begin using other fishing gear and MAKE A SHIFT FROM DRIFT GILLNETS. Please make good on that commitment
Judith	Castiano		AZ	and stop the senseless deaths of innocent sea life!
Steven	Prchai	TUCSON	AZ	indiscriminate killers.
Linda	Mooney	FLAGSTAFF	AZ	
R-Laurraine	Tutihasi	ORACLE	AZ	
Dennis	Yee	SCOTTSDALE	AZ	
Susan	Garcia	PHOENIX	AZ	
JILL	SMITH	MESA	AZ	
Kyle	Schmierer	PHOENIX	AZ	
Carrie	Darling	PHOENIX	AZ	
Brad	Jarvis	PHOENIX	AZ	
Bruce	Switzer	TUCSON	AZ	
Annabelle	Herbert	TUCSON	AZ	
Linda	Bescript	TUCSON	AZ	
				It is pointless to make minor and incremental improvements to a method of fishing that is fundamentally indiscriminate. Please make the commitment to shift away from drift gillnets to more selective fishing gear.
Wendy	Morris	РНХ	AZ	
Chris	Bihler	PHOENIX	AZ	
wes	k	ARIVACA	AZ	
Eric	Gebhard	CHANDLER	AZ	
Ruth	Bescript	TUCSON	AZ	

Liana	Moran	GLENDALE	AZ	
Peter	Curia	SCOTTSDALE	AZ	
Sandra	Stock	TUCSON	AZ	
Renee	Jacobs	DEWEY	AZ	
Marvin	George	SIERRA VISTA	AZ	
AMALIA	BENSON BODKIN	TUCSON	AZ	Let's REPAIR some of the damage we've done to our oceans!
Sarah	McLean	SEDONA	AZ	
Lillian	Anderson	SUN CITY	AZ	
Noel	Crim	SUN CITY WEST,	AZ	With all of todays technology there has to be a way to drastically reduce or eliminate animals being caught that aren't wanted.
Maxann	Kasdan	PHOENIX	AZ	lets save many types of fish by not using gill nets
Chetan	Kumar	CHANDLER	AZ	
Carrie	Darling	PHOENIX	AZ	
Lorenz	Steininger	HOHENWART	BA	
Tracey	Tomtene	VANCOUVER	BC	
Szymon	Surma	VANCOUVER	BC	
Rodger	Ricker	VANCOUVER	BC	Selective fishing is Sportsmanship. Drift netting is slaughter. Collateral damage from driftnetting is extreme and demonstrates irresponsible destructive of a of a diminishing natural resource that cannot be renewed. Please consider this as a prominent factor in your concerns.
Margaret	Mccullough	VICTORIA	BC	
Jackie	Phelan	GIBSONS	BC	
Carmen	Santos	RIO DE JANEIRO	BRASIL	
Amie	King	DENVER	CO	
Eloise	Nelson	BOULDER	CO	
Terri	Winter	FAIRPLAY	CO	
John	Pinezich	LONGMONT	CO	
Janeene	Porcher	GOLDEN	CO	
Nancy	Kosnar Hartman	LOUISVILLE	СО	
Ingrid	Rochester	ELBERT	CO	
Kristyn	MacPhail	LITTLETON	СО	
Mary	Kosnar	LOUISVILLE	СО	
George	Hartman III	LOUISVILLE	СО	
Sharon	Balzano	WHEAT RIDGE	СО	Stop needless killing of all species.
Katherine	Kautz	NORTHGLENN	со	Please adopt a more environmentally sustainable alternative.
Alice	Green	WHEAT RIDGE	СО	
Richard	McKee	LONGMONT	СО	
Jean	Bevsek	COLORADO SPRINGS	СО	
the	wojos	FT COLLINS	СО	
Bobbie	Knight	DENVER	СО	
Shannon	Milhaupt	DENVER	со	
Stephanie	Huntington	DENVER	со	
Mary	Keithler	ENGLEWOOD	со	
William	Barrett	BOULDER	СО	
Eric	Polczynski	PAGOSA SPRINGS	со	
Andi	Shotwell	WHEAT RIDGE	СО	
Janine	Kondreck	DENVER	CO	

susan	peirce	LYONS	CO	
Lawrence	Crowley	LOUISVILLE	со	
Bill	Little	DENVER	СО	
Trent	Balzer	LITTLETON	со	
Michelle	Sewald	DENVER	со	
Christine	Boisse	COLORADO SPRINGS	со	I hope you will develop a policy to minimize the catching of non-target fish. Smart fishing will help the fisheries be sustainable.
Holly	Kennedy	ARVADA	CO	
Ralf	Schuetz	LONGMONT	CO	
Athena	Huff- Sandstrom	ARVADA	СО	There is a better way to catch swordfish!
Stuart	Weiss	DENVER	со	It's past time to to shift away from drift gillnets to more selective fishing gear.
Eldridge	Hardie	DENVER	CO	
Nathaniel	Hammerli	VAIL	CO	
Chelo	Ludden	TRINIDAD	CO	
Bonnie	Kenny	LAKEWOOD	СО	PLease consider staying away from drift gilnets in favor of more selective fishing gear.
Tatyana	Stevens	23264 TWO RIVERS	CO	
Lysandro	Sandoval Filho	PUEBLO	СО	
Deborah	Ahlers	WINDSOR	CO	
Troy	Gillespie	HIGHLANDS RANCH	со	For the future sustainability of our oceans, of the fishing industry, and for the future of our children and theirs, please reconsider the current methods employed for this fishery, and whole heartedly change the approach to a sustainable method that eliminates wasteful killing of other sealife!
Robert	Burnett	CRESTED BUTTE	CO	
Eric	Lane	DENVER	CO	
Sandy	Grandcham p	DENVER	СО	
Reb	Babcock	BUENA VISTA	CO	
Cynthia	Small	GOLDEN	CO	
Sue	Holtz	BOULDER	CO	
Jen	Wittlinger	STEAMBOAT	CO	
Teresa	Collins	LOUISVILLE	СО	
Sonya	Hodge	MONTE VISTA	СО	
James	Stone	ASPEN	со	Come on, people, we humans have to see the big picture. We should cherish sea life. Find a better way that doesn't have the killing impact of mile-long gillnets. Please.
Kelly	Carlson	LAKEWOOD	CO	
John	Cort	BOULDER	СО	
Emily	Meyer	AVON	CO	
Julie	Stamper	WESTCLIFFE	со	
Donald	Beardshear	FORT COLLINS	CO	
Мауа	Kurtz	GLENWOOD SPRINGS	со	Please act now to protect marine life from being killed in gillnets. This type of net fishing is very wasteful. This issue is very important to me.
Joyce	STevens	WESTMINSTER	СО	
Natalie	Tennison	CASTLE ROCK	CO	Please find a better way.

Sally	Cumine	DENVER	со	Mainly, we are asking just for humane treatment for these
				magnificent creatures.
Martha W D	Bushnell	BOULDER	CO	
Kathy	Durrum	AURORA	CO	
robert	levitt	FORT COLLINS	CO	
Dean	Dearborn	WESTMINSTER	CO	
Linda	Smith	ASPEN	CO	
С. К.	Cunningham	BOULDER	CO	
Mary	McQuiston	BOULDER	CO	
David	Ellenberger	WHEAT RIDGE	СО	
David	Katz	WESTMINSTER	CO	
Lynn	Wilsey	CENTENNIAL	CO	
Georgia	Mattingly	LONGMONT	CO	
Adam	Sloan	DENVER	CO	
weslie	phillips	GOLDEN	СО	STOP KILLING EVERYTHING WITH THESE HORRIBLE NETS!!! Also you need to give fish enough time to reproduce or you will be out of a job!!!!
James	Thrailkill	LONGMONT	СО	Drift gill nets are cruel.
Lorraine	Kirk	NEDERLAND	СО	
Cameron	Coffman	DENVER	СО	
LOUIS	PALAZZINI	AURORA	CO	
Michael	Rees	LAKEWOOD	CO	
Douglas	Nelson	BROOMFIELD	CO	
Susan	Williams	LAKEWOOD	СО	Eliminate bycatch." It's the moral equivalent of collateral damage."
Margaret	Lohr	COMMERCE CITY	CO	
Mel	Apodaca	DENVER	CO	
Richard	Steele	RIDGWAY	CO	
Michael	Parsons	AGUILAR	СО	Drift gillnets kill everything they are in contact with, turtles,dolphins, sharks, whales, and other species of fish. Its time to shift away from drift gillnets to more selective fishing gear.
Erin	Stark	DENVER	СО	
Lanelle	Lovelace	CRESTONE	CO	
Debbie	Brush	CASTLE ROCK	CO	
Dawn	Ayers	WALSENBURG	СО	
Ginny	Griffin	BRECKENRIDGE	СО	
Bruce	Cratty	DENVER	СО	
Rosalyn	Rohloff	GOLDEN	СО	
Elliot	Mason	LOVELAND	CO	
Peter	Tegstad	FORT COLLINS	CO	
willis	gravelle	CARBONDALE	CO	
Judith	Blackburn	LONGMONT	CO	
Hilary	Penner	PALMER LAKE	CO	
Marisa	Williams	DURANGO	CO	
Michele	Page	DENVER	СО	Please find a better way to catch swordfish in the pacific
Joyce	Wood	BAYFIELD	СО	Because if the deleterious effects of the present prevailing practices, I will not buy Pacific swordfish.
Charles	Steele	COLORADO SPRINGS	СО	I'd far rather have whales, dolphins and turtles than swordfish.
Destine	Robertson	CONIFER	СО	
Wilder	Kingsley	COLORADO SPRINGS	CO	

Joe	Gillespie	THORNTON	CO	
Tamara	Berdofe	BETHEL	СТ	
Corey	Pane	WEST HARTFORD	СТ	
sharron	laplante MD	TOLLAND	СТ	
Bill	Martens	VERNON	СТ	
Patrick	Vingo	NORWALK	СТ	
Randall	Piazza	TRUMBULL	СТ	
Wesley	Meeker	SHELTON	СТ	
Stephanie C.	Fox	BLOOMFIELD	СТ	This situation is ridiculous. We need the other species that live in the ocean, not just the ones we want to harvest. Without them, the food chain will collapse. Think long- term!
Michael	Rosa	WEST HARTFORD	СТ	
Cynthia	Opderbeck	STORRS	СТ	I beseech you to act on swordfish drift gillnets for the sake of the precious species of marine life that suffer and are destroyed. This is unacceptable, from an environmental- resource point of view and from a humane one. Thank you for your anticipated actions to find alternatives to drift gillnets that will be more selective for the target catch.
Joann	Koch	LEBANON	СТ	
Joel	Blumert	SALISBURY	СТ	There are serious long-term consequences to wasteful practices. Wake up!
Alicia	Wayland	LEBANON	СТ	
Kevin	Hughes	NEWTOWN	СТ	
Thomas	Klepacky	SHELTON	СТ	
gary	robertson	CLINTON	СТ	Something MUST BE DONE!!!
Tammy	Nogles	FARMINGTON	СТ	
shirley	mccarthy	BRANFORD	СТ	
Marianne	Corona	MIDDLEFIELD	СТ	More selective gear is available! And, hopefully you are motivated to safe guard the fish population for future generations, including our children.
Debbie	Kearns	EAST HARTFORD	СТ	
Heather	Files	STRATFORD	СТ	
Beverlee	Goynes	RIDGEFIELD	СТ	
Melene	Rose	RIDGEFIELD	СТ	
Francine	Ungaro	SOUTHINGTON	СТ	
Jill	Badyrka	STRATFORD	СТ	
Chris	Sanders	MANCHESTER	СТ	
norman	hines	SIMSBURY	СТ	
ken	martin	NEWTOWN	СТ	
Sara	Dodson	CHESTER	СТ	
leona	klerer	STAMFORD	СТ	Stop using drift gill nets!
Rick	Angelone	WALLINGFORD	СТ	
Samuel	Matos	WILLIMANTIC	СТ	Gillnets are indiscriminate killers
Linda	Gilbert	MANCHESTER	СТ	PLEASE do something before it's too late!
Karen	Baouche	ELLINGTON	СТ	
Charles	Dunn	SOUTHPORT	СТ	
LISA	HEY	WINSTED	СТ	
Carol	Greenberg	ROWAYTON	СТ	
David	York	STEVENSON	СТ	
G.	simmons	MERIDEN	СТ	please stop the use of gill nets immediately .
Emma	Bragg	ENFIELD	СТ	

Drew	Cucuzza	NEW HAVEN	СТ	
Trisha	Sherman	DANIELSON	СТ	
Joan	Cummings	SOUTH WOODSTOCK	СТ	Do the right thing.
Marlene	Tendler	BETHEL	СТ	
C.A.	Rose	TRUMBULL	СТ	Either you do what's right and start protecting ocean life or you'll kill them all. Until you show evidence of stewardship based on science rather than greed, I will boycott all fish.
mardi	hanson	HIGGANUM	СТ	stop gillnets.
John	Hazuka	BERLIN	СТ	
Lucinda	Hannon	AVON	СТ	
Sharyn	St Clair	BRIDGEPORT	СТ	
brigitte	ballouard	VILLEFRANCHE SUR MER	СТ	
Radha	Shenoy	CROMWELL	СТ	
Suzanne	Bores	TRUMBULL	СТ	
Anthony	Graziosa	EAST CANAAN	СТ	
Louisa	Piccione	CANTERBURY	СТ	
Diane	Houle	WATERBURY	СТ	
Mary	Germano	WASHINGTON	DC	
Evelyn	Fraser	WASHINGTON	DC	
Michael	Evans	WASHINGTON	DC	
Paul	Emerson	WASHINGTON	DC	
Emma	Miniscalco	WASHINGTON	DC	
Nina	Black Reid	WASHINGTON DC	DC	
Clair	Woolley	WASHINGTON	DC	
Shel	Grove	WASHINGTON	DC	
Michael	Balitsaris- Fortier	WASHINGTON	DC	
Caryn	Brock	WASHINGTON	DC	
Steve	Smith	WASHINGTON	DC	
Mary	Carrick	WASHINGTON	DC	
azza	elsherbini	ALEXANDRIA	DC	
Gail	Yborra	WILMINGTON	DE	
Ramsay	Kieffer	MILFORD	DE	
jim	black	WILMINGTON	DE	
Kristine	Cassar	NEWARK	DE	
Leon	Green	MILFORD	DE	Do what farmers learned from the dust bowl years: rotate your crops, and harvest smarter.
Clara	Thomas	SEAFORD	DE	
Kathleen	Eaton	MIDDLETOWN	DE	
Maryann	Wardach	WILMINGTON	DE	Really? We're in the 21st century and you're still catching fish using methods from the dinosaur days? Good grief! Welcome to the new millennium!
Ruth	Panella	WILMINGTON	DE	This recommendation seems sound, and I am urging your problem-solving by employing the change as soon as possible.
Gail	Heath	WILMINGTON	DE	
carol	collins	DOVER	DE	
Jared	Cornelia	WILMINGTON	DE	
Eva	Schmelzer	DUESSELDORF	DEUTS CHLAN D	

Keith	Rick II	ORLANDO	FL	
Richard	Rothstein	LAKEWOOD RANCH	FL	
Lenn	Neff	ST. PETERSBURG	FL	No more lifewasting gillnetting.
Angela	Кпарр	TALLAHASSEE	FL	
Maureen	Burke	PALM BEACH GARDENS	FL	Drift gillnets cause far more harm than any economic good. It's time for balance in order to stop biting the hand that feeds us. Without a healthy ocean with sustainable resources in symbiosis, it's more than one industry at stake. Please act responsibly while there's time.
Martha	Milne	FORT MYERS	FL	please honor your commitment to shift away from deadly drift gillnets!
Kathy	Behl- Whiting	PLANTATION	FL	
sylvia	r	LAUNDERHILL	FL	
Babs	Marchand	NAPLES	FL	
A Lynn	Raiser	SAINT JOHNS	FL	
Christeen	Anderson	CRESTVIEW	FL	
Yvonne	Kupersmit	LOXAHATCHEE	FL	
Tirso	Moreno	АРОРКА	FL	
Robert	Veltkamp	JUPITER	FL	
Nicholas	Pappas	DELRAY BEACH	FL	
Carole	Hartleb	LAKE HELEN	FL	
Mary	Reilly	VALRICO	FL	
James	Brunton	ТАМРА	FL	
David	Knight	WINTER HAVEN	FL	
Dolores	Parra	LAND O LAKES	FL	
Troy	grant	POMPANO BEACH	FL	Demand for swordfish will subside with increasing Fukushima radiation in the fish. Let them live.
Michael	bogle	DELRAY BEACH	FL	
Mark	Grzegorzews ki	LARGO	FL	
Jennifer	Cuadra	MIAMI	FL	
Nick	Galante	TAVARES	FL	
David Arthur	Weinstock	DAVIE	FL	
david	hollister	ST PETE BEACH	FL	They might try Hook and line"!"
Р	NUNEZ	SUMMERFIELD	FL	STOP THE SLOW AGONIZING DEATHS!!!!
Beverly	Lane	PALM BAY	FL	
dave	delson	BOCA RATON	FL	protect swordfish from gill nets.
Val	Marjoricastl e	INVERNESS	FL	
James	Miles	W. PALM BCH.,	FL	
Doug	Landau	ST PETERSBURG	FL	
Elizabeth	Scherbak	VENICE	FL	
Roger	Vaughan	ТАМРА	FL	
Lisa	Mazzola	ΤΑΜΡΑ	FL	I would actually prefer that no swordship or any other living beings be captured for human consumption; however, since that's not going to happen, an safe alternative would be better than nothing.
Rob	Tierney	DAYTONA BEACH	FL	
Paul	Schmalzer	TITUSVILLE	FL	
gail	larkin	BOCA RATON	FL	

Irena	Franchi	SUNNY ISLES BEACH	FL	
Kate	Mullan	PANAMA CITY	FL	Gillnets are a cruel and inappropriate way to catch fish
				since they have a damaging impact on other ocean
				species. Please stop this method of fishing. Thank you
Suzy	Siegmann	TEMPLE TERRACE	FL	
Kris	Pagenkopf	GAINESVILLE	FL	
Keth	Luke	NEW PORT RICHEY	FL	
Erica	Сосо	PALM BAY	FL	
Janet	Kalman	BOCA RATON	FL	
Joanna	Stalker	MARGATE	FL	
V	L	OVIEDO	FL	
Robert	O'Brien	DELRAY BEACH	FL	
Janet	Robinson	BOCA RATON	FL	
Hilary	Capstick	HKCAPSTICK@YAHOO.C	FL	
	·	OM		
Meg	Торра	FORT LAUDERDAEL	FL	
Jim	Hanson	WINTER PARK	FL	
Karen	Burroughs	ORLANDO	FL	
allie	tennant	FT MYERS	FL	
Cathy	King-	ST.CLOUD	FL	
	Chuparkoff			
Benjamin	Joannou Jr	PINECREST	FL	
Llovd	Haig	TARPON SPRINGS	FL	
Suzanne	Saunders	ST. PETERSBURG	FL	
Diane	Gentile	LIGHTHOUSE POINT	FL	We humans can certainly do better than the primitive
				grillnets! How sophisticated are we?
Melissa	Judge	ТАМРА	FL	
Randy	Corbin	MARGATE	FL	
kent	driskell	LAKE WORTH	FL	
Peter	Bromer	MIAMI	FL	
Andre	Meaux	WEST PALM BEACH	FL	
Wavne	Harris	BRADENTON	FL	
Dave	McGowan	SARASOTA	FL	
Carolyn Kiel	Kiel	PORT ORANGE	FL	
Ouida	Jacobs	MIAMI BEACH	FL	
Edith	Martin	PUNTA GORDA	FL	
suzanne	valencai	WEST MELBOURNE	FI	
Diana	Fisher	NICEVILLE	FI	
John	Dieffenbach	BOYNTON BEACH	FI	
Carmen	Plaza		FL	
Richard	Krygowski	PONTE VEDRA BEACH	FI	
Barry Eshkol	Adelman		FL	
Burry Estikor	Adelman	VERO BEACH		
Karin	Shea	PORT RICHEY	FI	It is time to stop the madness of killing everything in a gill
	51104	. Star hadden	· -	net. I have stopped eating swordfish and thresher shark
				due to these practices.
William	Claiborn	VENICE	FL	
sheri				
	cutright	ST AUGUSTINE	FL	PLEASE STOP FISHING WITH GILLNETS!
Krista	cutright Lohr	ST AUGUSTINE SARASOTA	FL FL	PLEASE STOP FISHING WITH GILLNETS!
Krista Lina	cutright Lohr Poskiene	ST AUGUSTINE SARASOTA DELRAY BEACH	FL FL FL	PLEASE STOP FISHING WITH GILLNETS!

Elizabeth	Horvath	CRAWFORDVILLE	FL	surely there must be a better way to catch these fish
				process
Kelley	Charnas	ТАМРА	FL	
Ruth	Serra	CLEARWATER	FL	
Pauline	Nivens	MIAMI BEACH	FL	
Millie	O'Connor	COCOA	FL	
S	lowe	SEBASTIAN	FL	
Linda	Ashton	JACKSONVILLE	FL	
Steven	Blauer	COCONUT CREEK	FL	
Eric	Hensgen	ТАМРА	FL	Please help to reduce the bycatch and improve the life of the oceans.
Duane	Sebesta	WESTON	FL	
James	Sorrells	GROVELAND	FL	This is clearly a turning point for the future of our planet and the legacy we leave behind for future generations. Considering the damage that already has been done, we need radical, unprecedented action to begin the healing process. Our greatest hope should be that it is not already too late. We are the most dangerous species of life on the planet
Valerie	Friedman	ORLANDO	FL	It is shameful to waste this much food in a world where many go hungry!
Sandra	Boylston	SANFORD	FL	
kay	cummings	TALLAHASSEE	FL	
Bruce	Blackwell	GAINESVILLE	FL	
Shari	Yudenfreun d-Sujka MD	WINTER PARK	FL	
Lucy	Paschke	BONITA SPRINGS	FL	
Stephen	Edinger	SAFETY HARBOR	FL	
Marjorie	Hacker	BOYNTON BEACH	FL	
Ρ.	Hays	WINTER PARK	FL	This earth and the life upon it is at a critical point. Humans are using up resources and endangering, even causing the extinction of, many species of wildlife at an alarming rate. Do what is right, change your method of fishing!
adrianne	burnikel	ΤΑΜΡΑ	FL	Please use the newer solution so that we can all feel better when we crave swordfish.
Rev. Elizabeth	Dodd	BOCA RATON	FL	
Kevin	Bickers	ATLANTIC BEACH	FL	
Virginia	Mendez	MIAMI	FL	
Janis	Sawyer	SANTA ROSA BEACH	FL	
R.J.	Williams	HOLLYWOOD	FL	
Susan	Preston	LA CROSSE	FL	
Leticia	Malagon	SEMINULE	FL	
Bradley	Smith	CAPE CORAL	FL	
Deborah L	Born		FL	
	Jacobson	BOYNTON BEACH	FL	
Theresa H	Deery		FL	
Frank	Perez		FL	
A	vvindle		FL	
Ату	Dellinger	HULLY HILL	FL	

Margaret	Timmerman	BROOKSVILLE	FL	Make a difference ,please. You are smart enough to come up with environmentally friendly ways to land your catch. Thanks, Margaret
Georgia	Kakaroukas	ST PETERSBURG	FL	
Kim	Godwin	JACKSONVILLE	FL	
Vinny and sandy	vanacore	PALM BEACH GARDENS	FL	
Kerry	McNeil	PANAMA CITY	FL	
Michael	Richardson	ТАМРА	FL	
Gloria	Chiodo	BOCA RATON	FL	I see the oceans being depleted at such a rapid rate. We must change the way we fish, and establish more conservation for the seas to replenish their stocks, if it is not too late alreDy.
Ismail	Al Ahmad	LOS ANGELES	FL	
Robin	Peterson	JACKSONVILLE	FL	
Eric	Wettberg	MIAMI	FL	
J	Rey	BOCA RATON	FL	
mary	kugler	BOCA RATON	FL	We can be better!
Robert	Parkinson	FORT LAUDERDALE	FL	All forms of 'Gill netting floating walls' should be eliminated, they are too indiscriminate. If the vessel can not stay attached to the net, it should be banned! Long Liners is not the answer, unless they are also required to be attached to the boat! i.e.: one set per boat.
Bonnie	Preston	HAINES CITY	FL	
Lynn	Ponto	FELLSMERE	FL	
David	Marshall	NEW PORT RICHEY	FL	The ocean eco system needs all of it's species protected from bycatch. It makes no sense to kill species that add to the diversity and balance of the food chain.
Colonel	Meyer	NORTH PORT	FL	Use more environmentally sustainable types of fishin gear.
Steven	Combes	ST AUGUSTINE	FL	STOP THE GLUTTONY!!
Patsy	Shafchuk	NEW PORT RICHEY	FL	
Charles	Davids	DAYTONA BEACH	FL	
Susan	Schlessinger	PORT ST. LUCIE	FL	
Alexis	Fernandez	MIAMI	FL	
Robin	Banks	CASSELBERRY	FL	
јоусе	schwartz	ALTAMONTE SPRINGS	FL	
Jennifer	Scott	FORT MYERS	FL	
Elisabeth	Carroll	INDIAN SHORES	FL	I was dismayed to discover that swordfish fishing is done indiscriminately at the expense of marine life. Until this situation is resolved, I will stop purchasing swordfish and encourage my friends and family to do the same.
Patricia	McDonald	WINTER PARK	FL	
Harriet	Damesek	ORMOND BEACH	FL	
SID	JENNINGS	OCALA	FL	
Marilyn	Dempsey	JUPITER	FL	Find a better more humane way to catch Pacific Swordfish.
frederick	sall, esq.	MIAMI BEACH	FL	
sherree	ward	ST. MARKS	FL	

darlene	wolf	NAPLES	FL	This is so cruel to innocent marine life. Use fishing gear rather than gill nets!
robert	wolf	NAPLES	FL	Gillnets are deadly to all marine life. This by-catch is unacceptable. Selective fishing gear is the only answer.
Silvia	Hall	BOCA RATON	FL	
Andrea	Chisari	TITUSVILLE	FL	
S	Logan	MIAMI	FL	Stop the destruction of everything else in order to catch one species! We need to regulate or remove the use of mile-long gill nets!!!
Lorna	Wallach	BOYNTON BEACH	FL	
Susie	Tealdo	MIAMI	FL	
Virginia	Utt	MELBOURNE	FL	
Linda	Anderson	PUNTA GORDA	FL	
Diane and Jerry	Tabbott	JACKSONVILLE	FL	
Т	HOlliday	OVIEDO	FL	
Anne	Winicki	PC BEACH	FL	
Donna	Pemberton	COCOA	FL	
Judith	King	VERO BEACH	FL	Enough is enough! We need this to stop now. There should be no more drift gillnets allowed!
Dianna	Anderson	NAPLES	FL	
Katherine	Langa	DORAL	FL	
Renee	Madera	S.W. RANCHES, FT.LAUDERDALE	FL	
PATRICIA	STEVENS	PORT CHARLOTTE	FL	
Michael	DeLoye	BOYNTON BEACH	FL	
Don	Margeson	ST. PETERSBURG	FL	
Jane	Schnee	SEBASTIAN	FL	
David	Gregersen	PINELLAS PARK	FL	
Catherine	McNamara	ORLANDO	FL	
Scott	Finamore	CITRUS SPRINGS	FL	
Vanessa	Carbia	GAINESVILLE	FL	
Stanley	Pannaman	TAMARAC	FL	West Coast fishery managers Must find a better way to catch Pacific swordfish. Mile-long gill-nets left in the water for hours at a time is a barbaric and outdated practice, and must stop.
joan	rubin	PEMBROKE PINES	FL	
kelly	byrnes	SANIBEL	FL	
Robin	Hudson	TARPON SPRINGS	FL	
frank	depinto	PANAMA CITY	FL	
Claire	Jackson	ТАМРА	FL	
Lanette	Rapp	LEESBURG	FL	
Marian	Rees	JACKSONVILLE	FL	
adria	villaverde	MIAMI SPRINGS	FL	
Carol	Rosas	ТАМРА	FL	
Laura	Guttridge	VERO BEACH	FL	
Carol	Drabin	JUPITER	FL	
Gaby	Monge	DORAL	FL	
Lizbeth	Simpson	PINELLAS PARK	FL	
Susan	Dorchin	DELRAY BEACH	FL	

Kim	Lines	FT LAUDERDALE	FL	Neither we nor the oceans can any longer afford this wasteful method of fishing. It's time to clean up our act and fish responsibly and that means finding less destructive ways of catching our dinner.
Patrizia	Gestro	COCONUT CREEK	FL	
Nicole	Wilke	ΜΙΑΜΙ	FL	Drift gillnets are like clear cutting. Please find a fishing gear that is more selective.
paula	hensel	MARCO ISLAND	FL	Please just do the right thing and rid us all of gillnets.
Vaughn	Anderson	ST. PETERSBURG	FL	The terrible waste must be stopped.
Virgilio	Ciullo	VENICE	FL	When there is nothing left, it's too late
Bruce	Morris	BRADENTON	FL	As a former commercial fisherman. bi catch is a real problem.
Paul	Kripli	PALM BAY	FL	
Jeffrey	Bains	THE VILLAGES	FL	
Virginia	Anderson	COCONUT CREEK	FL	Please shift away from gill nets and use more selective fishing gear to catch Pacific Swordfish. Too many other animals are dying as by-catch.
Carol	Malott	VENICE	FL	
Leonora	Xhrouet	DAVIE	FL	The methods for catching must be changed. There are too many other species being caught in these nets as well and this is unacceptable and wrong!
Judith	Costello	ST. PETERSBURG	FL	We must preserve our oceans and the fish and turtles that inhabit them. Please do the right thing and make meaningful changes that don't needlessly kill our precious fish and turtles. Make the needed changes and preserve our oceans for our children and grandchildren.
alan	kardoff	PALM BAY	FL	Please eliminate the drift guilnets and use traditional methods or more selective fishing gear.
William	Loftus	VERO BEACH	FL	As a professional fishery scientist, I ask that you honor your commitment to switch from the indiscriminate method of drift gillnetting to targeted methods that will catch the species of interest.
MARIA	RODRIGUEZ	MIAMI	FL	
Walter	Graue	PANAMA CITY	FL	Beyond being a delicacy, these species are an important environmental link already threatened by pollution.Ã
Christina	Roman	WEST PALM BEACH	FL	
Steve	Schildwacht er	WINTER GARDEN	FL	Drift gillnets are mass murderers. I urge the Council to encourage NMFS to require observers on all fishing trips when drift gillnets are used, develop and impose firm limits on the number of lwhales, sea turtles, etc. and close the fishery for the season if those limits are reached. Furthermore, the Council should establish clear criteria for granting experimental fishing permits to fishers willing to try alternative gear that is actively tended and that minimizes interaction with non-targeted species.
ron	silver	ATLANTIC BEACH	FL	
margaret	silver	ATLANTIC BEACH	FL	
Christie	Castan	MIAMI	FL	
Ana	Arguelles	HOLLYWOOD	FL	
Jodi	Hitchcock	PORT ST. LUCIE	FL	

Thomas	Hutton	BOYNTON BEACH	FL	Please stop using huge gillnets to catch swordfish or sharks in the Pacific ocean. Those nets unintentionally cause the deaths of large numbers of other species. Please implement a better method to catch swordfish that causes less damage to other marine species.
betty	almand	AVONDALE EST.	GA	
Dameon	Torrey	ATLANTA	GA	
marci	de sart	BRUNSWICK	GA	
Jeffrey	Luther	ROSWELL	GA	
Frank	McCraw	SAVANNAH	GA	
Sharon	Byrd- Mackbee	SNELLVILLE	GA	
Alexis	Nixon	ATLANTA	GA	
Melissa	Bauer	WOODSTOCK	GA	
Kyle	Embler	ATLANTA	GA	
gerald	gouge	ATHENS	GA	
Eugene	Elander	DAHLONEGA	GA	
Thomas	Lewis	ATLANTA	GA	
Sandra	Ashmore	HINESVILLE	GA	
Amy	Hiley	FORT VALLEY	GA	
Roy	Higgins	VILLA RICA	GA	
Ben	Goggins	TYBEE ISLAND	GA	It's like killing every animal in the forest when you are deer hunting.
Edward	Cammann	ROSWELL	GA	
liu	wai ling	N.T. HONG KONG	GA	It is pointless to make minor and incremental improvements to a method of fishing that is fundamentally indiscriminate , please change , fishery managers are now considering the possibility of merely modifying the current wasteful method , Please remind them to shift away from drift gillnets go more selective fishing gear , Thank you
Barbara	Sears	ATLANTA	GA	Please consider changing your fishing methodseliminate drift gill nets to more selective fishing gear. Barbara Sears
dawn	chipps	RIVERDALE	GA	
will	Scruggs	ATLANTA	GA	
Robert	Sanders	TEMPLE	GA	
Don B.	Meriwether	ATLANTA	GA	Stop using Drift Gillnets now,
jennifer	see	GAINESVILLE	GA	
Danna	Williams	ATHENS	GA	
christine	schneebeli	GENEVA	GA	
stephanie	granada	BUFORD	GA	
Norman	Hoffman	MARIETTA	GA	Gill net fishing is a disaster to the marine ecosystem. If a fisherman doesn't know how to catch fish, they should choose a different career path.
Jenny Barbara	Lincoln	CLAYTON	GA	Very bad that other animals die in the deadly nets!

Sue	Stoudemire	ATLANTA	GA	Please educate yourself. We're killing our oceans! Just one example is that every species of sea turtle is endangered!! PLEASE PLEASE PLEASE BE RESPONSIBLE! PLEASE DO EVERYTHING YOU CAN TO LIMIT THE SEA LIFE YOU CURRENTLY TRAGICALLY KILL IN YOUR NETS! PLEASE CARE ABOUT SOMETHING OTHER THAN \$\$\$\$. PLEASE HELP TAKE CARE OF THE ONE AND ONLY WORLD WE HAVE. PLEASE LET OUR GRANDCHILDREN ENJOY THE WONDER AND DIVERSITY OF THE CREATURES WE STILL
				HAVE LEFT. THEY'RE GOING GOING GOING FAST!
Dan	Magee	WATKINSVILLE	GA	Do the right thing.
Elaine	Eudy	EAST POINT	GA	
Natalie	Schrey	TOWNSEND	GA	
Gina	Gilberto	ATLANTA	GA	
Woody	Thomas	CLARKSTON	GA	
Laura	DeHaven	ATLANTA	GA	
Drew	Kramer	ATHENS	GA	Please consider the wider effects of these fishing methods.
Diane	Watson	DULUTH	GA	
Beth	Severance	COVINGTON	GA	The WASTE must STOP!
Rebecca	Jaffe	DECATUR	GA	
pamela	clutts	JACKSON	GA	
Gizell Holliday	Winkler	JOHANNESBURG	GAUTE NG	
Michele	Nihipali	HAUULA	HI	
Alex	Oshiro	HONOLULU	ні	
Kathy	Shimata	HONOLULU	ні	By-catch" is wasted sealife."
Paul	Deeter	KEAAU	HI	
Ruthie	Bernaert	HONOKAA	HI	
noenoe	barney- campbell	HONOLULU	HI	
Donna	Thelander	KAILUA-KONA	ні	
Joseph	Kohn MD	WAILUKU	HI	There is no rational reason to pollute our own environment or destroy ecosystems. And poisoning the water supply is criminal! There are more sustainable/ecofriendly profitable projects waiting for good workers. www.WeAreOne.cc
Elizabeth	Oconnor	HONOLULU	HI	
L	Р	CAPTAIN COOK	HI	
Javier	Mendez	HONOLULU	HI	
tia	Pearson	WAHIAWA	HI	
Stewart	Wiggers	HONOLULU	ні	
Fred	Luke	HONOLULU	HI	It's an abomination to kill non-target species.
Eric	Voorhies	КАРАА	HI	
Margaret	Hanson	КАРАА	HI	
Ann	Szaur	KEAAU	HI	Please protect our marine life. No more gllnets. Use fishing gear specific for swordfish.
Nina	Monasevitc h	LIHUE	HI	
dirk	francis	LAUPAHOEHOE	ні	let's be sustainable.
Cindy	Lance	HONOLULU	н	

Maritza	Madrigal	KEAAU	HI	
Julie	Mitchell	KURTISTOWN	ні	
Bobbi	Lempert	PAIA	ні	
Phyllis	O'Reilly	WAILUKU	ні	
Lucia	You	KAILUA	ні	
Harvey	Arkin	HONOLULU	ні	
L	Osterer	KOLOA	ні	
Janette	Shablow	КАРАА	ні	Do you know what overkill means?
frank	belcastro	DUBUQUE	IA	а
James	Sliney	ROBINS	IA	
Bernardo	Alayza mujica	SURQUILLLO	IA	
Deke	Gliem	DAWSON	IA	There is no need to use these old unsustainable methods to catch fish when there is a better way.
Mary	Larson	MADRID	IA	
Symone	Ma	CEDAR FALLS	IA	
Molly	Moriarty	COUNCIL BLUFFS	IA	
Jean	Allgood	IOWA CITY	IA	
Marie	Socarras	IOWA CITY	IA	
Jo Anna	Hebberger	DES MOINES	IA	There are too many non-targeted ocean species killed because of fishing methods. This needs to change, as some of these not-targeted species are threatened or endangered. A healthy ecosystem retains all of its species, and we need healthy ecosystems for all of us to survive.
Merle	Dockendorff	FAIRFIELD	IA	
John	Moellers	AMES	IA	
Douglas	Lass	DE WITT	IA	
Chuck	Mitchell	KEOKUK	IA	Pacific coast swordfish should be caught Nova Scotia style, harpooned one at a time. Gill netting is a lousy way to catch swordfish
Margo	Vanderhill	ALTON	IA	The current use of gillnets causes too much by-catch. With our fish stocks at such low levels, we cannot afford to use gillnet methods any longer!
Mary	Brady	DUBUQUE	IA	
Niki	Beldin	LARCHWOOD	IA	
Robert	Linzmeier	PALATINE	IL	
Georgia	Shankel	CHICAGO	IL	Must human endeavors continually distort so much in pursuit of money?
Steven	Bates	EVANSTON	IL	
dina	frigo	NAPERVILLE	IL	
carolyn	massey	QUINCY	IL	
Ellen	Domke	CHICAGO	IL	
valentina	halliday	SKOKIE	IL	
Brad	Bornstein	WILMETTE	IL	
Nayeem	Aslam	VILLA PARK	IL 	
Robert	Lichtenber	CHICAGO	IL II	
NICK	Salerno		IL II	
Bret	Sner			
Steve	schueth			We need to take better and affinited this almost all
oiga	adella	KORINZON	IL	We need to take better care of what this planet gives us. What good are profits if there is nothing left to eat.
Caroline	Mead	GLENVIEW	IL	Care about the fish. Be good to the environment.

Mary Davidson	Stanton	OAK PARK	IL	
Stanhan	Anderson		11	
Wendy	Burgess			
Mooso	Gustafson			This is an babalf of at least 45 children: grades 2 to 9
widose	Gustaison		11	You owe them this.
Patricia	Pruitt	OAK PARK	IL	
ANDRA	ADDIS	CHICAGO	IL	
Ed	Gould	CHICAGO	IL	
Sergio	Rivera	CHICAGO	IL	
Cara	Ammon	CHICAGO	IL	
Melodie	Huffman	DANVILLE	IL	
Steven	Taylor	CHICAGO	IL	
J	Beverly	URBANA	IL	
Barrett	Goldflies	CHICAGO	IL	
Dan	McCurdy	SPRINGFIELD	IL	
Patricia	Chelmecki	ELBURN	IL	Please act responsibly and not short-sightedly.
Jennifer	Cunningham	AURORA	IL	
Julie	Griffith	ST. CHARLES	IL	
Pauline	Thomas-	BLOOMINGDALE	IL	
	Brown			
Barbara	McIntosh	ROCKFORD	IL	
Jeffery	Biss	ELGIN	IL	As a vegetarian, I don't support the fishing industry but if we're going to fish then the industry must not be allowed to kill whales, turtles, etc. Indiscriminate methods must not be allowed.
Sandra	Franz	CHICAGO	IL	
Danielle	Gutelius	ELWOOD	IL	
mary	camardo	LAKE VILLA	IL	
Rachel	Krucoff	CHICAGO	IL	It is heartbreaking the number of fish that are caught and killed needlessly in drift gillnets. Please act swiftly and strongly to implement an environmentally safe alternative so that more of our precious marine life can be spared.
Karen	O'Brien	WESTMONT	IL	
Tina	Enza	ROCKFORD	IL	
Philip	Kritzman	CHICAGO	IL	
joe	swierkosz	PALATINE	IL	catch only what is needed, not other species
Marianne	Flanagan	DES PLAINES	IL	Fishing practices need to be reformed to keep other species healthy.
John A	Beavers	CHICAGO	IL	
Marie	Foley	VERNON HILLS	IL	
Thomas	Bauer	CHICAGO	IL	
jeffrey	sanders	GLENVIEW	IL	
Ira	Abrams	CHICAGO	IL	We all know a change in this type of fishing needs to happen, so I urge you to make it happen at your meeting this June so that we do not continue to kill so many marine creatures, including endangered creatures, needlessly.
bradley	adams	PEORIA	IL	

Heidi	Bresilge	PLANO	IL	With all of the perils ocean life faces due to humans, it is our responsibility to do everything to help protect them. Ridding the oceans of gill nets is on good step to help!
Monica	Randell	CHICAGO	IL	
Steve	Drucker	SHERRARD	IL	IT'S TIME TO FISH MORE WISELY, BEFORE THERE ARE NO FISH LEFT FOR ANYONE TO CATCH.
Jan	Barshis	WILMETTE	IL	
James	McConkey	DEKALB	IL	
lee	kivi	NORTHBROOK	IL	
V	Evan	CHICAGO	IL	
Susan	Barrons	ADDISON	IL	
Amy	Lippert	CHICAGO	IL	
Zoe	Willet	CHICAGO	IL	
Kathy	Ruopp	CHICAGO	IL	
Mary	Mathews	LAKE FOREST	IL	
Debbie	Neimark	CHICAGO	IL	
jung	hwang	NILES	IL	Please preserve the ocean and its creatures
КАҮЕ	AURIGEMM	WESTCHESTER	IL	
	A			
Carol	Jurczewski	RIVERSIDE	IL	Please change to a more sustainable way of fishing without destroying bycatch!
Christy	Kurtz	BARTLETT	IL	
Jennifer	Romans	LIBERTYVILLE	IL	
Christine	Austin	MARION	IL	
Colin	Кау	TINLEY PARK	IL	
John	Weber	PARK FOREST	IL	Wasteful??? How about CRUEL ! It doesn't matter if they're target species or not. But that's something no one is ever going to do anything about; isn't it.
Lindsey	Walters	WEST PEORIA	IL	
Kenton	Масу	CHARLESTON	IL	
s.	Carlson	EVANSTON	ΙL	Will we be able to obtain fish to eat, turtles to play their role in creation, view whales and their magnificent moves if we kill all these creatures indiscriminately through bycatch on gillnets? please change your fishing habits.
John	Moore	CHICAGO	IL	
Doug	Blazer	ROCKFORD	IL	Let's please try to find a more humane option of catching these species.
Margaret	Alsaraf	ROUND LAKE	IL	
Dean	Peerman	CHICAGO	IL	Please do use more selective fishing gear rather than just modify the current method.
рау	marz	DARIEN	IL	
Aaron	Turkewitz	CHICAGO	IL	Maintaining ocean biodiversity must be an absolute priority for sustainable development. Gillnets have no place in a sustainable environment.
Barbara	Zaha	ST. CHARLES	IL	
Lorna	Paisley	EAST DUBUQUE	IL	
Peter	Tijerina	CHICAGO	IL	
Cody	Langlois	PLAINFIELD	IL	
Richard	Laubhan	GALENA	IL	Gillnets should come under the heading, Cruelty to Animals
Eric	Edwards	WEST CHICAGO	IL	

Cornelius	Devlin III	EAST PEORIA	IL	
sonja	chan	KANKAKEE	IL	The ocean is not limitless and I am deeply concerned that many species will be pushed to extinction by unsustainable fishing practices.
rhonda	Lawford	SOUTH WILMINGTON	IL	
rick	canning	AURORA	IL	
Cary	Моу	OAK PARK	IL	
Brad	Walker	SWANSEA	IL	
Diana	Stokes	CHICAGO	IL	
Carol	Johnson	WINFIELD	IL	Please find a more sustainable way to catch the Pacific Swordfish by shifting away from drift gillnets to more selective fishing methods.
Lenore	Reeves	MOKENA	IL	
Cordale	Brown	CALUMET PARK	IL	
Karen	Peterson	NORTHBROOK	IL	Please put sustainability first.
Barry	Rabichow	OAK PARK	IL	
Linda	Zager	DEERFIELD	IL	preserve our oceans and what lives in them for our future and for the many living creatures that survive in their natural habitat. Fisheries need to be humane and sustainable without killing all the other ocean life in these mile wide nets.
vicki	ginoli	SPRINGFIELD	IL	
Michael	Stuart	WONDER LAKE	IL	
Ann	Siegel	HIGHLAND PARK	IL	
Janet	Kuncl	COLLINSVILLE	IL	
Amy	Park	CHICAGO	IL	
Bill	Brady	WEST CHICAGO	IL	
MC	Kubiak	BMI	IL	
Craig	Figtree	CHICAGO	IL	
john	koperczak	WORTH	IL	
Gary	Kolb	CARBONDALE	IL	Thanksbut works not done yet!
John	Meeks	CHICAGO	IL	
Margaret	Waltershaus en	URBANA	IL	
Cindy	Moczarney	ELMWOOD PARK	IL	
Theodore	Steck	CHICAGO	IL	
jeff	wendler	ST. JACOB	IL	
Pamela	Spacek	CHICAGO	IL	
Keri	Jensen	ADDISON	IL	
Carolyn	Andre	CHICAGO	IL	
Keith	Chiarugi	ELGIN	IL	
Laura	МсСоу	ARLINGTON HEIGHTS	ιL	As an industry you agreed that there's a better way, than using nets that are deadly to not only Pacific swordfish. I am encouraging your industry to honor and preserve other sea life by moving to selective fishing gear as quickly as possible. I know that as fishermen and women that you value the ocean's ecosystem and understand the value of it. Now is the time to come together to make the changes that you promised to make. Thank you.
Ann	Mallow	EVANSTON	IL	Please find a way to stop the terrible losses caused by these nets.

Matthew	Alschuler	WARREN	IL	From time to time, we are able to see thoughtful people rescuing trapped sea life in nets. It just seems that it would be a better planet, if they didn't have to do this in the first place. Fish responsibly please.
Angie	L	WHEELING	IL	
Eric	Luu	WILMETTE	IL	
Alicia	Paravola	CHICAGO	IL	
Stephanie	Seed	HIGHLAND PARK	IL	
Cynthia	Linton	CHICAGO	IL	
Jo Ann	McNaughto n-Kade	EFFINGHAM	IL	
Jessica	Cresseveur	NEW ALBANY	IN	
Mark	Hallett	BLOOMINGTON	IN	
Keelan	Smith	INDIANAPOLIS	IN	
Pamela	VourosCalla han	GRANGER	IN	
Ricki	Newman	NEWBURGH	IN	
Nancy	Goodness	INDIANAPOLIS	IN	
Mark W.	Mehl	LOWELL	IN	
Kevin	Popeck	CLARKSVILLE	IN	
Karisha	Kirk	BLOOMINGTON	IN	
kim	english	LOGANSPORT	IN	
Liz	Garratt	INDIANAPOLIS	IN	
Sandra	Miller	SOUTH BEND	IN	
William	Ryerson	INDIANAPOLIS	IN	
Marcia	Ouellette	LAFAYETTE	IN	
Russ	Cross	LADOGA	IN	
Kevin	Brown	CLARKSVILLE	IN	Please act with future generations in mind. Your choices now, perhaps going beyond convenience and short-term gain, can promote the overall health of the fisheries.
Gertrude	Hammons	RICHMOND	IN	This is cruel please find a better way !!!
David	Motz	EVANSVILLE	IN	Please make the changes required to reduce the killing of bycatch.
Carla	Happel	INDIANAPOLIS	IN	
Daniel E.	Chase	PORTLAND	IN	
Michael	McCsartin	FT WAYNE	IN	
Eugene	ODonnell	FISHERS	IN	Do not destroy endangered species as 'by-catch'. You can do better. You must. Your children and grandchildren deserve it.
ol	Hewitt	INDIANAPOLIS	IN	
Bruce	Hlodnicki	INDIANAPOLIS	IN	Hang up the gill nets!
Rachel	Leep	INDIANAPOLIS	IN	Let's take the logical step and fully chNge this method.
Rita	Boone	AVON	IN	
Janice	Jones	LAFAYETTE	IN	
Sally	Flood	INDIANAPOLIS	IN	
Maura	Buckley	INDIANAPOLIS	IN	
Susanna	Hinant	BEAN BLOSSOM	IN	
Joseph	Hoess	WALKERTON	IN	
Matthew	Baucco	BLOOMINGTON	IN	
Tricia	Hart	INDIANAPOLIS	IN	
Rosemarie	Overstreet	INDIANAPOLIS	IN	The nets kill too many innocent creatures depleting species along the food chain. Enough is enough!

Elaine	Berg	DEMOTTE	IN	
Richard D	Alley	ELWOOD	IN	
Nina	Krause	BLOOMINGTON	IN	
William	Quance	FORT WAYNE	IN	
anna maria	bini	VARESE	ITALY	yes,let's go aheadwith the nature. To eat but also to respect and dont destroy OUR planet
Robert	Rutkowski	ТОРЕКА	KS	
Mike	Vanlandingh am	SHAWNEE	KS	
Michael	Ribordy	WELLINGTON	KS	
Toni	Caldwell- Clark	KANSAS CITY	КS	
William	fast	OZAWKIE	KS	
Charles	Brumleve	MANHATTAN	KS	It is proven that drift gillnets are bad so why continue using them? There are other methods that can be used. Thank you.
brad	higgs	WESTMORELAND	KS	
Melinda	Barnett	LAWRENCE	KS	
Margaret	Sweeton	WICHITA	KS	
Debra	Gakeler	OVERLAND PARK	KS	
Ardis	Pierron	SPRING HILL	KS	
Eddie	McKinney	HOLTON	KS	
Ronald	Kestler	LOUISVILLE	KY	
Jane	Норе	LOUISVILLE	KY	please help do this
Stephen	Dutschke	LOUISVILLE	KY	
Patricia	Nazzaro	UNION	KY	
Kathleen	Smaluk-Nix	LOUISVILLE	KY	
Robert	Mitchell	LEXINGTON	KY	
John	Markham	PRINCETON	KY	
Bobbiejo	Winfrey	LOUISVILLE	КҮ	Please consider new methods for catching fish that do not result in such loses of other species. This is changing the environment of the fish that are being caught as well such that this could ultimately affect them, thus a negative outcome for all.
Barb	Watts	LOUISVILLE	KY	
David	COLLINS	LOUISVILLE	KY	
Donna	Blue	LEXINGTON	KY	
Michael	Wohlleb	LOUISVILLE	KY	
John	Jumonville	BATON ROUGE	LA	
Tony	Medlin	BATON ROUGE	LA	
Russel	Deroche	GRAMERCY	LA	Gill nets kill as much as they catch.
Nicholas	Sherman	SCHRIEVER	LA	
James	Caldwell	SHREVEPORT	LA	
John	Benschoter	RUSTON	LA	
Diane	Lewis	MANDEVILLE	LA	There has to be a better way to catch swordfish.
Joseph	Vincent	HARVEY	LA	Nobody needs to eat mercury-packed swordfish, either!
Max	Magbee	BATON ROUGE	LA	
melissa	fleming	NEW ORLEANS	LA	
Chris	Hunter	MONROE	LA	
Chantal	Buslot	HASSELT	LI	
Sarah	Stewart	CAMBRIDGE	MA	
William	Parr	WEYMOUTH	MA	

Andrew	Woitkoski	PITTSFIELD	MA	
Donald	Cronin	SOMERVILLE	MA	
Lisa	D'Ambrosio	LANCASTER	MA	
david j.	lafond	HOLYOKE	MA	
Sharon	Koogler	BOSTON	MA	
John	Hess	ROSLINDALE	MA	
paul	goyetche	ATHOL	MA	
mully	music	EASTON	MA	
Walt	Luerken	SEEKONK	MA	
Susan	Spilecki	BRIGHTON	MA	
Vafa	Ansarifar	FRAMINGHAM	MA	
Carole	Smudin	BRIDGEWATER	MA	No drift gillnets, Period
Bonnie	Faith-Smith	CAMBRIDGE	MA	
Ken	МсКау	SPRINGFIELD	MA	
Dawn M.	Bertelli	LENOX DALE	MA	
Sid	Cholmar	BECKET	MA	
Nilah M.	MacDonald	SCITUATE	MA	
Paul	Henry	STONEHAM	MA	
Barry	De Jasu	MONTAGUE	MA	
Holly F.	Malarney	CHELSEA	ΜΑ	The time is long overdue to change the methods for catching fish off the California coast. Modifying the current method is not adequate. The fishing must be done with environmentally sustainable types of fishing gear and a commitment to change up to this must be made and put into place immediately.
Eleanor	Jones	SOMERVILLE	MA	
Јоусе	Andrews	MARLBOROUGH	MA	
Jane	Luu	LEXINGTON	MA	
Domenico	Mastrototar	BOSTON,	MA	
	0			
Kate	Hilts	BROOKLINE	MA	
Ryan	Hammond	LOWELL	MA	
Joseph	Nelson	BRIGHTON	MA	
Jean	Phillips- Calapai	MILFORD	MA	
susan	earle	CAMBRIDGE	MA	
Pilar	Quintana	METHUEN	MA	
Christine	Roane	SPRINGFIELD	MA	
Julie	Kennie	WEST DENNIS	MA	
Cynthia	Tracy	CANTON	MA	
Marian	Scena	SOMERVILLE	MA	
mindy	maxwell	BOSTON	MA	
Stephanie	Marco	WEST NEWTON	MA	
Vidya	Sivan	BOSTON	MA	
LOUIS	Drinkwater	CHELSEA	MA	
Leslie G	Baker	LENOX	MA	
Brenda	Troup	BOLTON	MA	
James K	Hadcroft	N. FALMOUTH	MA	I am a Veteran, Active Voter and TaxPayer. As a Veteran I put my life on the line for Democracy.
Paul	Ezust	BOSTON	MA	
john	schaechter	CANTON	MA	

Gail	Skinner- Brassard	DRACUT	MA	
lohn	Meserve	DEMBROKE	MA	
	CUTTING		MA	
JOANNA	BRADY	DIACOT		
Susan	Blain	GARDNER	MA	Please hasten your transition from drift gillnets to more selective ways of catching swordfish.
Kristopher	Kvenvold	HARVARD	MA	
Nancy	Woolley	STOUGHTON	MA	
Priscilla	Shade	BOSTON	MA	Unconscionable!
So	ALLEN	CHARLESTOWN	MA	
Danya	Kuperstein	LYNNFIELD	MA	
susan	magdanz	CAMBRIDGE	MA	Thank you so much for shifting away from drift gillnetsl am hoping that you take strong action regarding this issue thank you
Lawrence	Walker	HANOVER	MA	
Mitchell	Alperin	TOWNSEND	MA	If we make it financially worth you while, will you do it? How much would that cost us? Please don't tell me you would do it for altruistic reasons, because you haven't so far, so, how much money will it cost?
Carol	Walker	WINTHROP	MA	You can & should get better fishing gear; for economic as well as health reasons (a healthier ecosystem) it's necessary to stop using drift gillnets.
elana	katz rose	SHARON	MA	
Marianne	Vesey	NEWBURYPORT	MA	
Francene	Amari- Faulkner	CONCORD	MA	Gillnets are irresponsible.
Maureen	McCarthy	MARBLEHEAD	MA	
Colleen	Kvenvold	HARVARD	MA	
Karen	Vayda	SOUTHAMPTON	MA	
Victoria	Coleman	PEPPERELL	MA	Gillnets are no longer needed to catch the targets and kill many other species. They need to be regulated now and eventually eliminated.
Jennifer	Salhus	NORFOLK	MA	
Dorothy	Anderson	WEYMOUTH	MA	protect these beautiful fish
ELIZABETH	SHUMAN	MAYNARD	MA	Please stop using nets
Nicole	Robinson	WESTMINSTER	MA	
claire	nivola	NEWTON HIGHLANDS	MA	
CINDA	LAUTENSCH LEGAR	WEBSTER	MA	Indiscriminate fishing practices are cruel, wasteful, and deplete the fishery resources. Please enact common sense fishing metods snd everyone wins. Thank you.
sherry	weiland	SUDBURY	MA	Using gillnets is a wasteful and inhumane method of fishing
John	Templeton Sr.	AMHERST	MA	
Susan	Anderson	BOSTON	MA	
Linda	Waine	TAUNTON	MA	
Nancy	Schechterle	WILBRAHAM	MA	
Richard	Savoy	BOSTON	MA	Please take steps to end the use of drift gillnets. The earth's resources are dwindling sufficiently quickly without our aid.

Leslie	prouty	WEST HYANNISPORT	MA	Please choose a humane way of fishingor just don't fish
				at all
John	LaRochelle	PITTSFIELD	MA	
patricia	bliton	WINTHROP	MA	
Mark	Lainer	ORLANDO	MA	
Dave	Paquette	LOWELL	MA	
d	muraco	NEEDHAM	MA	
Abigail	Howes	BERKLEY	MA	
Herbert	Korn	LEXINGTON	MA	
Gary	Thaler	REVERE	MA	Please do the morally correct action to modify the method of catching swordfish so that many other species of aquatic life in our planet-protecting ecosystems are not needlessly sacrificed. Thank you on behalf of all of our lives.
Robert	McConnell	ARLINGTON	MA	
Greg	Sanchez	MARSHFIELD	MA	
Joan	Reynolds	WEYMOUTH	MA	
Janet	Ruggiero	BELLINGHAM	MA	
Sandra	Sobek	CONWAY	MA	
toni	siegrist	BOSTON	MA	
Ying	Cooper	CONCORD	MA	
Brian	Gagnon	FRANKLIN	MA	
Deborah	Spencer	BILLERICA	MA	
Roxy	Gray	CANTON	MA	
Dennis	Rogers	HUBBARDSTON	MA	
Wendy	F	BRIGHTON	MA	
Oliver	Deex	LONGMEADOW	MA	We are already over-fishing the sea. Let us not do so wastefully.
Robert	Foley Jr	ATTLEBORO	MA	STOP CATCHING THESE MAJESTIC FISH AND LET THEM LIVE IN PEACE ALREADY.
Patricia	Medeiros	ATTLEBORO	MA	STOP CATCHING SWORDFISH ALTOGETHER
Laurie	Conroy	WELLESLEY	MA	Find a better way to catch Pacific swordfish.
Jennifer	Kundrot	BELMONT	MA	
Bethanie	Petitpas	TEWKSBURY	MA	
Richard	Warren	HALIFAX	MA	
Allyssa	Kvenvold	HARVARD	MA	
Michael	Rivard	JAMAICA PLAIN	MA	
Julie	Guarino	EAST BOSTON	MA	
Lynn	Bengston	BELCHERTOWN	MA	
Peter	Kahigian	HAVERHILL	MA	
Devin	Griffiths	BELCHERTOWN	MA	
Dalit	Rabinovitch	JAMAICA PLAIN	MA	
Eric	Fournier	WATERTOWN	MA	
Mariana	Ovalle	JAMAICA PLAIN	MA	
Eve	Curtis	WABAN	MA	
Angie	Wildman	FRAMINGHAM	MA	I also love swordfish, but I do NOT want any whales, birds,.sea turtles or other innocent bystanders to be slaughtered during fishing! Switching to sustainable fishing gear isn't a can: It is a MUST!
Linda	Bessom	CAMBRIDGE	MA	
Steve	Ollove	SOUTH HAMILTON	MA	

Christopher	Geraghty	HANOVER	MA	It is nothing short of unacceptable to continue to
				recourse for human consumption.
Jack	Martinelli	DUXBURY	MA	
Marcia	Benes	PLAINVILLE	MA	Please act to protect endangered sea life.
Molly	Hauck	KENSINGTON	MD	
Kelly	Allison	BERLIN	MD	There is certainly a better way. Just ask Atlantic
				fishermen. The Threshers are there as well. The marlin
				may be a little different from the swordfish, but they are similar. There is no reason to use such a destructive
				method of fishing as gillnets. Give it up.
lames	Snively	SMITHSBURG	MD	
BIANCA	BENINCASA	BETHESDA	MD	
linda	redding cpa	LAPLATA	MD	We MUST be smarter.
natasha	salgado	TORONTO	MD	
Jody	Schulman	ELLICOTT CITY	MD	
Edward	Bielaus	ROCKVILLE	MD	
Omar	Siddique	ELLICOTT CITY	MD	
Douglas	Sedon	BEALLSVILLE	MD	
lucia	shorts	CHURCH HILL	MD	
Gayle B.	Rosenberry	BALTIMORE	MD	
Nicole	Weber	PASADENA	MD	
Frank	Wilsey	BALTIMORE	MD	
Tracey	Smallwood	WALDORF	MD	
jodi	wick	SILVER SPRING	MD	
linda	hunt	NORTH EAST	MD	such a small thing to make a big difference
јоусе	robinson	GLEN BURNIE	MD	
Benjamin	Allen	CROFTON	MD	
stephanie	smedley	PRESTON	MD	
David	Elfin	BETHESDA	MD	
Susan	Kern	SPARKS	MD	
Jessica	lucker	WESTMINSTER	MD	
Alan	wojtalik			
Shoona	Loon			
SONIA	franz		MD	
Rhiannon	Pimentel	BALTIMORE	MD	
Carolyn	Ricketts	EDGEWATER	MD	
P. D.	Waterworth	SEABROOK	MD	
Leigh	Sands	DENTON	MD	
Tara	Huber	ROCKVILLE	MD	
David	Land	SILVER SPRING	MD	
Dixie	Mullineaux	BALTIMORE	MD	
Gary	Herwig	BALTIMORE	MD	
Lee	Bonini-Koch	WARWICK	MD	
Megahn	Dudzinsky	RANDALLSTOWN	MD	There has to be a better way so no more sea mammals have to die in vain.
Lise	Emond	PASADENA	MD	
Robert M.	Brown	BALTIMORE	MD	
James	Togashi	SILVER SPRING	MD	Thanks
john p	depetris	BALTIMORE	MD	what good is money ,when life sustainable ,non sustainable is gone these are our times be a pioneer .

Joan	Fratantuono	LUSBY	MD	
James	Bell	CALIFORNIA	MD	
Juliette	Moore	HAVRE DE GRACE	MD	
Waltraud	Bolton	SEVERN	MD	
Ted	Knight	EDGEWATER	MD	
mary	Bunting	BALTO	MD	
Peter	Korolkoff	NORTH POTOMAC	MD	
wanda	Canino	GAITHERSBURG	MD	find a better way to catch Pacific swordfish. it's time to shift the fleet to more environmentally sustainable types of fishing gear. Be reminded of your commitment to shift away from drift gillnets to more selective fishing gear.
Douglas	McNeill	GREENBELT	MD	
becca	Gardner	DARLINGTON	MD	
Dorothy	Tartaglia	SILVER SPRING	MD	
Sean	King	MT. AIRY	MD	
April	Kohles	ANNAPOLIS	MD	
Virginia	Woolridge	ANNAPOLIS	MD	No nets!
Sirina	Sucklal	LAUREL	MD	
Russell	Donnelly	BALTIMORE	MD	
Nicole	Price	TAKOMA PARK	MD	
karen	stickney	LEWISTON	ME	
Brian	Schrader	BIDDEFORD	ME	
Abigail	Gindele	SOUTH BERWICK	ME	
Yvette	Pratt	SOUTH PORTLAND	ME	
Colleen	McKenna	BRUNSWICK	ME	
Patti	Blevins	PHILLIPS	ME	
Doris	Luther	HOLLIS	ME	
Donna	Milbourne	SANFORD	ME	
Lawrence	Fischman	YARMOUTH	ME	
Michael	Haskell	SCARBOROUGH	ME	Please act now to find a better way to catch Pacific swordfish.
Clarissa	Frost	SACO	ME	Please find a better way than the swordfish drift gillnets that are currently used, so that much less living marine resources such as Whales seals, sharks, sea turtles, and dolphins are caught.
Gary	Caldwell	BIDDERFORD	ME	
Ellen	Zimmerman	SOUTH PORTLAND	ME	
James	Melloh	PORTLAND	ME	These practices are wiping out life in our oceans.
Amy	Lindstrom	LANSING	MI	
Art	Hanson	LANSING	MI	
Natalie	Hanson	LANSING	MI	
Carol	Sears	GRAND RAPIDS	MI	
Bill	Weston	HUDSONVILLE	MI	
Julie	Skelton	BELLEVILLE	MI	
Carolyn	Ferrell	ANN ARBOR	MI	
Pamela	Esser	BLOOMFIELD	MI	
John	Rokas	EASTPOINTE	MI	
М	Leszczynski	LAPEER	MI	
laura	kaufman	CHELSEA	MI	
Α.	Br	FOUNTAIN	MI	

Anca	vlasopolos	GROSSE POINTE	MI	I published a historical novel during which I researched extensively the devastation of over-fishing and over- whaling in the latter part of the 19th century. I would urge you not to repeat the same horrendous mistakes 150 years later, when we ought to know better.
Theresa	Kelly	NOVI	MI	
Kyle	Peterson	STERLING HEIGHTS	MI	
John	Harris	LANSING	MI	
Steven	Carpenter	WOODHAVEN	MI	
Dennis	Feichtinger	TRENTON	MI	
llene	Kazak	DETROIT	MI	
Susan	Inman	ELK RAPIDS	MI	
Timothy	Schacht	GROSSE POINTE PARK	MI	
Theresa M.	Campbell	MADISON HEIGHTS	MI	
Tara	Verbridge	WINDSOR	MI	
William	Gardner	CENTRAL LAKE	MI	
Јоусе	Coe	HASTINGS	MI	
IJ	Uchno	SYLVAN LAKE	MI	
Vickie	Wagner	THREE OAKS	MI	
Kara	Norman	LIVONIA	MI	
Christina	Fong	GRAND RAPIDS	MI	
Thomas	Miskovsky	ANN ARBOR	MI	
Lyda	Stillwell	KALAMAZOO	MI	Why would we purposefully kill and then waste the food? Why in the world would we do that? Please do whatever you can to stop this barbaric practice!
Sharon	Malinowski	REDFORD	MI	
Gavin	Bornholtz	GRAND BLANC	MI	
Aubrey	Guilbault	GRAND BLANC	MI	Please remember your commitment to shift away from
-				drift gillnets to more selective fishing gear.
Lilly	Mahaney	LELAND	MI	
Patricia	Ridgley	CEMENT CITY	MI	
Mike	Raymond	SHELBY TOWNSHIP	MI	
Leslie	Kuhn	HASLETT	MI	
Gary	Purcell	МАСОМВ	MI	Please do the right thing
Ann	Hancock	EAST LANSING	MI	I can't bring myself to eat seafood these days. The fish stocks are being depleted and the bycatch is unacceptable to me. Please, won't you help change the way fish are caught so the awful waste of bycatch is stopped?
Pamela	Green	KALAMAZOO	MI	
Sue	Nearing	VASSAR	MI	
Jerry	Bessler	ROYAL OAK	MI	
Herb	Glahn	HARBOR SPRINGS	MI	
Terry	Luke	BELLEVILLE	MI	
Donald	Garlit	CANTON	MI	
Kimberly	Stankiewicz	DETROIT	MI	
Christine	Franks	CEDAR SPRINGS	MI	Why is this hell-bent on harming animals?!

Janet	Peterson	TROY	МІ	As avid scuba divers, we have witnessed the destruction caused by gill nets, so PLEASE adopt sustainable types of fishing.
Jerry	Mawhorter	ROYAL OAK	MI	
Gloria	La Fleur	DEARBORN HEIGHTS	MI	
Jon	Krueger	JACKSON	MI	For an industry exemplary in its laziness, one would think a better solution would have been found by now.
JAN	PAYNE	JACKSON	MI	
fe	ka	KZOO	MI	
nancy	zebracki	TROY	MI	
Marilyn	Carse	ANN ARBOR	MI	Please, no more drift gillnets.
Lisa	Mastalier	STERLING HEIGHTS	MI	
mark	johnsen	COMMERCE TWP	MI	
Meagan	Guertin	ROSEVILLE	MI	
Mary	Tanoury	GROSSE POINTE CITY	MI	
Mary Ann	Baier	DEARBORN	MI	
Bobby	Belknap	FRANKFORT	MI	
Mel	Dickerson	TECUMSEH	MI	There are best practices and bad practices. It's time we try to do our best!
William	Lane	NEWBERRY	MI	
Raymons	Keeling	MILFORD	MI	
Michael	Bugbee	BATTLE CREEK	MI	
Richard	Han	ANN ARBOR	MI	
Nancy	Taylor	FLUSHING	MI	
Mike	Strawn	WARREN	MI	
Melissa	Shaffer- O'Connell	PICKFORD	MI	
Brice	Grunert	HOUGHTON	MI	
Karen	Hewelt	CHESTERFIELD	MI	
Katherine	Mouzouraki s	WESTLAND	MI	
Rosalie	Pelch	BEULAH	MI	
Kelsey	Herman	FARMINGTON HILLS	MI	
Danielle	Graham	RIVERVIEW	MI	
Virginia	Jones	KALAMAZOO	МІ	The current method of catching these fish wastes the lives of many other species - and should not be allowwed.
Sarah	Meyers	HOWELL	MI	Please shift awawy from using drift gillnets and choose more selective and less harmful fishing gear.
Elizabeth	Leodler	LESLIE	MI	Let's take smart measures to protect fish!
Margaret	Gilhool	WARREN	МІ	Please do not fall back on the momentum you have started toward better protection for non-targeted species.
Jill	Ender	NILES	MI	
Eric	Stordahl	MARQUETTE	MI	
Ramon	Trumbull	GRAND RAPIDS	MI	
Gordon	Smith	GRAND RAPIDS	MI	
margaret	Beck	GROSSE POINTE FARMS	MI	
Twyla	Douaire	LIVONIA	MI	Shift away from drift gillnets to more selective fishing gear before its too late and there is nothing left to fish!
LESLIE	SUTLIFF	ASHLEY	MI	
Ray	Eklund	GRAND RAPIDS	MI	

mary	pagels	TEMPERANCE	MI	
Beaufort	Cranford	DEARBORN	MI	Fish sustainably, not wastefully
Daniel	Solano	DETROIT	MI	
Lynette	Smith	ZEELAND	MI	
David	Rahbari	YPSILANTI	MI	These poor animals really need our help. Thank you.
Judi	Poulson	FAIRMONT	MN	
Wanda	Ballentine	ST. PAUL	MN	
Janet	Draper	DULUTH	MN	
Richard	Olson	MINNEAPOLIS	MN	
Jerry	Klemm	FOREST LAKE	MN	I am glad the members of the Pacific Fishery Management Consul are considering more environmentally safe methods of fishing. As part of the shift towards more environmentally sustainable alternatives, I hope observers are put on the ships to monitor that they safer methods are used.
Alec	Hendrickson	MINNEAPOLIS	MN	
William	Nusbaum	SAINT LOUIS PARK	MN	
Кау	Randall	MOORHEAD	MN	
Duane	Gustafson	СООК	MN	
Matthew	Schaut	MINNEAPOLIS	MN	
Janice	Hallman	SAINT PAUL	MN	
Renee	Keller	COON RAPIDS	MN	
Lori	Blauwet	ROCHESTER	MN	
Steven	Steele	MAPLE GROVE	MN	
Eileen	Levin	MINNETONKA	MN	
Christine	Frank	MINNEAPOLIS	MN	I strongly urge you to ban all drift gillnets and other fishing technologies that take enormous amounts of bycatch that deplete marine fish & mammal populations.
Gretchen	Bratvold	MINNEAPOLIS	MN	
Melissa	Cathcart	MINNEAPOLIS	MN	
drew	hempel	MARINE	MN	
Kim	Kokett	MINNEAPOLIS	MN	
David	Wiley	MINNEAPOLIS	MN	
Denise	Thomas	WEST ST PAUL	MN	
Richard	Fish	MINNEAPOLIS	MN	
Margaret	Klette	MINNEAPOLIS	MN	
Paula	Rusterholz	ROSEVILLE	MN	Please find a better way to fish for swordfish that isn't wasteful of other species. We can't be killing other marine animals needlessly. Thank you in advance for finding a creative solution.
Dean	Borgeson	BROOKLYN PARK	MN	
Т	Moye	IGH	MN	
Juliann	Rule	AVON	MN	
Doug	Westendorp	MINNEAPOLIS	MN	
Raymond	Bissonnette	SAINT PAUL	MN	
John	Fitzgerald	KILKENNY	MN	
Karen	Holt	OAKDALE	MN	
Corinne	Rockstad	ST. PAUL	MN	
Joseph	Wenzel	MAPLEWOOD	MN	
Susan	York	DULUTH	MN	
Bob	Douglas	SAINT PAUL	MN	give the ocean and the fishing industry a future

Wendy	Moylan	SAINT PAUL	MN	Please take this issue seriously. Drift gillnets are
				practically the worst strategy that could be used!
Dina	Osullivan	APPLE VALLEY	MN	Stop abusing animals of the sea.
Michael	Alexander	SAINT PAUL	MN	
cindy	page	SHERBURN	MN	
а	piri	MINNEAPOLIS	MN	
heidi	ahlstrand	OWATONNA	MN	
Elizabeth	Javinsky	ST. LOUIS PARK	MN	
Steve	Kippen	ONAMIA	MN	
Harriet	McCleary	MINNEAPOLIS	MN	Blindly killing other species is destructive and repugnant.
Deborah	Crocker	ALEXANDRIA	MN	This sickens me! This kind of fishing" is VERY destructive to our marine life!
Sheila	Dillon	WILLMAR	MN	
Joe	Renneke	SAVAGE	MN	
Allen	Olson	MINNEAPOLIS	MN	
Paul	Moss	WHITE BEAR LAKE	MN	
Reese	Forbes	SAINT LOUIS	MO	
Chas	Martin	SAINT LOUIS	MO	
kate	grotegut	PLATTSBURG	MO	Please find an alternative to nets that will protect by- catch.
Martha	Jaegers	SAINT LOUIS	MO	
Bobbie	Kuehl	KANSAS CITY	MO	
Larry	Lambeth	SPRINGFIELD	МО	Drift gillnets have no place in fishery management techniques that are allowed. Drift gillnet techniques must be eliminated. Approved methods must be environmentally sustainable and allow only selected species to be harvested and protect other species from being killed as bycatch.
Sandra	Sagitto	ST. LOUIS	MO	Leave the oceans alone!!!
Lanna	Ultican	BLUE SPRINGS	MO	
Erika	Т	ST LOUIS	МО	There need to be drastic, immediate changes to fishing methods. All of the marine animals getting caught in the nets should not be happening. There is no reason or excuse for it.
Shari	Kelts	KIRKWOOD	MO	
John	Crotty	MANCHESTER	MO	
Robin	Rysavy	LAKE WINNEBAGO	MO	Drift nets should ABSOLUTELY BE OUTLAWED. They are horrible. They kill anything and everything they catch.
lopamudra	Mohanty	ST.PETERS	MO	
Joe	Marsala	KNOB NOSTER	MO	
т	Bergeron	SAINT LOUIS	MO	
sharon	moss	ST. LOUIS	MO	
Nicole	Strathmann	FLORISSANT	MO	
Cathie	Schneider	SQUIRES	MO	
Saphira	Rain	RAYTOWN	MO	
Antoinette	Wilcox	WILDWOOD	MO	
Paulette	Zimmerman	ST. LOUIS	МО	Please make good on your commitment to shift away from drift gillnets to more selective fishing gear. We simply cannot continue to indiscriminately cause suffering and death to ocean creatures.
Howard	Masin	MANCHESTER	MO	
Richard	Twillman	KANSAS CITY	MO	

mary beth	first	CHILLICOTHE	MO	
CATHERINE	TIERNEY	SAINT LOUIS	MO	
Terry	Vollmer	MAPLEWOOD	МО	
Donna	Hart	ELSBERRY	MO	No one should be catching swordfish at all!
rich	rapp	FLORISSANT	МО	We need to preserve biodiversity. Please stop the indiscriminate gathering of species.
Kamia	Taylor	PRESTON	МО	You know that drift nets are an environmental disaster and simply repugnant. Don't allow them to continue!
Tracy S	Troth	PEARL	MS	
jeanne	lebow	GAUTIER	MS	
Mercedes	Christian	RIDGELAND	MS	
Rosemary	Ward	GREENVILLE	MS	
susan	pace	PRESTON	MS	if you are going to catch swordfish, do it in a way that will not endanger others.
Julia	O'Neal	OCEAN SPRINGS	MS	
James	Lazell	JACKSON	MS	I am a professional biologist with a long career invested in conservation.
Krystal	Weilage	BUTTE	MT	
Jennifer	Ryan	STEVENSVILLE	MT	
Janet	Dunham	HAMILTON	MT	Please stop using drift gillnets and move to more selective fishing gear.
Robb	Krehbiel	MISSOULA	MT	
Cathy	Ream	CLINTON	MT	Shift to more environmentally sustainable types of fishing gear.
Carl	Clark	GREAT FALLS	MT	
Darryl A.	San Souci	MISSOULA	MT	
Anthony	Sciolino	BOZEMAN	MT	You are using an old, primitive, destructive way to catch fish. With the knowledge and technology we have today there is no reason not to advance onto some other method that doesn't recklessly kill everything in its wake
Robin	vogler	BIGFORK	MT	
Marlene	Miller	BUTTE	MT	
Bradley	Clough	MISSOULA	MT	
Clinton	Sennett	LEWISTOWN	MT	you are killing your future
James	Sweaney	GARDINER	MT	
Ronald	Clayton	ASHEBORO	NC	
Robert	Blackwell	HENDERSONVILLE	NC	
Wynne	Queen	FOREST CITY	NC	
shelley	frazier	DURHAM	NC	
Joseph	Phillips	KERNERSVILLE	NC	
Janice	Phillips	KERNERSVILLE	NC	
Jayne	Boyer	DURHAM	NC	Nature provides a free lunch, but only if we control our appetites. ~William Ruckelshaus, Business Week, 18 June 1990
Martha	Spencer	BREVARD	NC	
Hazel	Poolos	RICHFIELD	NC	Get away from drift gillnets and use more selective fishing gear.
Gavin	Dillard	BLACK MOUNTAIN	NC	
Jessica	Chasteen	CLEMMONS	NC	Thank you for your consideration.
Marie	Michl	ROCKY MOUNT	NC	
Lisa	Neste	HIGH POINT	NC	
Melinda	Scott	GREENVILLE	NC	

George	Neste	HIGH POINT	NC	
sarah	owenby	FAIRVIEW	NC	
Christi	Dillon	MOORESVILLE	NC	Please act now. Make your fleet environmentally sustainable.
Sharon	Mora	WHITTIER	NC	Unwanted bycatch from gillnets is depleting various populations of marine life such as sharks, whales, turtles and dolphins. Please reconsider not using gillnets and save those animals from being wasted.
Joyce	Pusel	DURHAM	NC	
Ruth	Stambaugh	BLACK MOUNTAIN	NC	
John	Herron	CHARLOTTE	NC	
Shereen	Gillette	CHARLOTTE	NC	
Janet	Tice	CHAPEL HILL	NC	Just do it! Make sure gill nets are obsolete, and sooner rather than later. It doesn't need years to implement sustainable practices.
Α.	Gardner	MOUNT AIRY	NC	
Ryan	Draper	CHAPEL HILL	NC	
Judy	Gehrig	DURHAM	NC	Please find a better way to catch Pacific swordfish. Nets are NOT the way!
william	Bailey	ROUGEMONT	NC	Stop killing so indiscriminately. I don't eat swordfish for this very reason.
Donald	Barker	SOUTHERN SHORES	NC	
James	Zizzo	WILMINGTON	NC	
Susan	Brody	MONROE	NC	Find a better way to catch Pacific swordfish!
Kent	Gardner	SWANSBORO	NC	
Sarah	Davis	RALEIGH	NC	
Teresa	Pitts	GLEN ALPINE	NC	This is needed to prevent other species from becoming victims of this horrible death.
Paula	Stober	GREENSBORO	NC	The unintended catch of whales, turtles, sharks and other fishes mandates a change in the way swordfish and thresher sharks are fished. Please switch to a more sustainable and less wasteful method of fishing. Thank you.
Jules	Fraytet	CHARLOTTE	NC	Please establish more sustainable harvest practices.
р	clark	ASHEVILLE	NC	
John	La Stella	CHARLOTTE	NC	You know what needs to be done. Please do it.
michelle	lee	CHARLOTTE	NC	
Zola	Packman	RALEIGH	NC	
Darrell&Carol	Vale	CHARLOTTE	NC	
Carol	Young	DRUHAM	NC	
Helmut	Mueller	CHAPEL HILL	NC	
Sarah	Weil	PITTSBORO	NC	
Gwen	Straub	NEBO	NC	Your method of taking swordfish with drift gillnets is killing other ocean species, fish, sea turtles and and mammals. This is not responsible nor acceptable. Please require fishermen to adopt a more humane and sustainable alternative. I hope you make this change completely away from drift gillnets at your meeting this month.
Linda	Smathers	ASHEVILLE	NC	
Jasmina	Bricic	KINSTON	NC	
Tamara	Abashian	DURHAM	NC	
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Denise	Finck-	CHARLOTTE	NC	
	Rothman			
mae	basye	FUQUAY VARINA	NC	
John	Magee	DURHAM	NC	
Jennifer	Brandon	LEXINGTON	NC	
Evelyn	Coltman	WAYNESVILLE	NC	
Pat	Blackwell	HENDERSONVILLE	NC	
Tony	McCarson	DURHAM	NC	
Dennis	Raines	CURRITUCK	NC	Gillnets are like replacing flyswatters with shotguns.
Kicab	Castaneda-	CHAPEL HILL	NC	
-	Mendez			
Gale	Rullmann	YOUNGSVILLE	NC	
Jeff	Willoughby	CHARLOTTE	NC	
Robert	Smith	DURHAM	NC	
Peter	Reynolds	DURHAM	NC	
Sam	Furgiuele	BOONE	NC	
Paul	Hawkins	BREVARD	NC	Please, no more mile-long gillnets
RICHARD	CURRY	PINEBLUFF	NC	
Willie	Hinze	WINSTON SALEM	NC	
Carolyn	Smith	STONEVILLE	NC	Please do not use drift gillnets. This just harms many of the ocean's inhabitants that are not intended to be
				caught.
Thomas	Trescone	ASHEVILLE	NC	Stop this indiscriminate killing now !!!! PLEASE !!!!!!
Amy	Kellum	DURHAM	NC	
Giana	Peranio-Paz	HENDERSONVILLE	NC	
Gena	Burrows	BUNN	NC	
Tim	Leighton	CHARLOTTE	NC	There is no excuse for not ceasing the wasteful, inhumane and unintelligent use of drift gill nets in fishingamong other types of poorly designed gear. Fishermen who uses this indiscriminate killing gear should be fined (or worse) for the bycatch they kill and the environment that ultimately suffers from the loss of necessary species.
ISABEL	CERVERA	FAITH	NC	
jan	zollars	ASHEVILLE	NC	
Nancy	Sanderson	CHARLOTTE	NC	
Harry	Mauney	WASHINGTON	NC	
Jeffery	Blanton	CHERRYVILLE	NC	
John	Kinsella	FUQUAY-VARINA	NC	
Pamela	Kjono	GRAND FORKS	ND	Once gone, no swordfish for anybody.
Katherine	Meduna	FARGO	ND	
Charles	Barber	MANDAN	ND	
CLAY	BAUMUNG	FARGO	ND	
Ran	Zirasri	BISMARCK	ND	
Jackie	Adam	FARGO	ND	
Sarah	Bauman	LINCOLN	NE	
Renae	McKeon	KEARNEY	NE	The ocean is our lifeblood, but if we continue to kill everything that swims in them indiscriminately, we are all doomed. Each living creature has a purpose and we must respect that and do everything possible to prevent unnecessary deaths to innocent victims of man's destructive ways.

Linda	Gertig	BELLEVUE	NE	Will we wait until the oceans are lifeless to act?
Richard	Snook	LINCOLN	NE	
Yvonne	Wilder	ΟΜΑΗΑ	NE	If you want to have swordfish and other seafood in the future, you should catch them in a sustainable way now.
Heidi	Ludwick	PAPILLION	NE	
Robert	Haile	HAMPTON	NH	We must be more selective with our fishing techniques. Too much of the ocean is at risk.
Jay	Snider	BOW	NH	
Katherin	Alden	PLAINFIELD	NH	
Stanley	Fistick	LITTLETON,	NH	I'm a lobsterman in NH and have never been a fan of swill nets" as we call them. Way too many untargeted species! Get rid of 'em! I love seeing the whales
Jessica	Kaiser	PETERBOROUGH	NH	
Kenneth	Ruby	SALEM	NH	Stop using drift gillnets. They are barbaric and severely destructive.
fairlee	gamble	HANOVER	NH	
Kellie	Smith	DEERING	NH	
Amber	Thompson	GROVETON	NH	frostfire@myfairpoint.net
Robert	Sargent	SALEM	NH	
Mary	Ashcliffe	HENNIKER	NH	
Linda	Xavier	BROOKLINE	NH	
Andrew	Dunbar	PETERBOROUGH	NH	
Grace	Burson	PLYMOUTH	NH	
Dan	Hubbard	ROCHESTER	NH	
Wendy	Walker	EXETER	NH	
Samantha	Driscoll	DERRY	NH	
Amy	Freeman	PELHAM	NH	
carole	arbour	HUDSON	NH	
Ellen	Jahos	ALSTEAD	NH	
June	Bostock	NOTTINGHAM	NH	
Jet	Weisel	KEENE	NH	
Nathanael	Schaefer		NH	
Helen	Schafer	JACKSON	INJ	waste of other species.
Dorothy	Holtzman	LAKEWOOD	NJ	This is an important matter. do the right thing.
Eugene	Gorrin	UNION	NJ	Thank you for considering my comments.
Chuck	Graver	SOUTHAMPTON	NJ	
Anthony	Parisi	HILLSBOROUGH	NJ	
Andrew	Mumford	RED BANK	NJ	
Mark	Yushak	JACKSON	NJ	
Yvonne	Fast	AALBORG	NJ	
Jennifer	Prezant		NJ	where there's a whale i there's a way!
Harriet	Jernquist		NJ	
Anthony	Vaccaro			
Chorul	Vaccaro			
Douglas	Schoollor			
Stoven	Fonster			
Slevell	renster			
Michael	Hamburger	COLLINGSWOOD	NJ	
Jeffrey	Rattner	LAKE HOPATCONG	NJ	

Alice	Mizsak	HILLSBOROUGH	NJ	Please adopt more selective fishing gear so there aren't so many other animals killed needlessly in the process. Thank you.
Dennis	Morley	OLD BRIDGE	NJ	
Mark	Elman	PARK RIDGE	NJ	
Matthew	Franck	NEW BRUNSWICK	NJ	
Roger	Bultot	EDGEWATER	NJ	
jean	publi	FLEMINGTON	NJ	
Stephanie	Falkowski	VOORHEES	NJ	
Diane	Barry	DENVILLE	NJ	
Debra	Berlan	GARFIELD	NJ	
Shirley	Bensetler	CRESSKILL	NJ	
chris	hazynski	BORDENTOWN	NJ	
Carla	Pereira	UNION	NJ	
0.	Ruiz	CLIFTON	NJ	
Jacob	Blaustein	EATONTOWN	NJ	
Kelly	Choi	MADISON	NJ	
Melissa	Saunders	LAWRENCEVILLE	NJ	
Enid	Rosenblatt	MOORESTOWN	NJ	
Joann	Ramos	ISELIN	NJ	
William J	Bolen	BRICK	NJ	
Matt	Lasky	MORRISTOWN	NJ	
Sandra	Kisieleski	W. KEANSBURG	NJ	
Sharon	Boxley	MARLTON	NJ	Please consider alternative methods for fishing of swordfish, halibut, sea bass, etc. The accidental" killing of other species is not an excuse for them being caught in fisherman's gill/drift nets.
Paul	Sanderson	WESTFIELD	NJ	It is unacceptable to expect fisheries to prosper when these driftnets capture & kill everything they encircle. The sheer waste of marine life is terrible and must be stopped!
Clotilda G.	Devlin	BERNARDSVILLE	NJ	I want to protect dolphins and whales, and I like fish, so I do not like to waste them dying in nets.
David	Fisher	PITMAN	NJ	End drift gillnets NOW!
betsy	cousins- coleman	LEONIA	NJ	
steve	zimet	GLEN RIDGE	NJ	
Rui	Moreira	ELIZABETH	NJ	
Scott	Morrison	ANY CITY	NJ	
Carroll	Arkema	POMPTON LAKES	NJ	
chris	carbone	CAMDEN	NJ	
Cori	Bishop	BRIGANTINE	NJ	
Mary	O'Brien	UNION CITY	NJ	
Robert	Veralli	WEST MILFORD	NJ	

ol	Gilbert	PITTSTOWN	NJ	These mile-long gllInets need to be outlawed. It is a terrible death for the swordfish and thrasher sharks, and beyond cruel and wasteful for the by-catch of dolphins, turtles whales and many other sea creatures.
				It is pointless for the fishery community to merely modify
				them, they need to be done away with for good!
				It was our understanding years ago that gillnets were
				being replaced with selective fishing gear". We need to
				act swiftly to see this come to fruition!
jon	rosenblatt	PISCATAWAY	NJ	
Linda	Marticek	HO-HO-KUS	NJ	
Howard	Schwartz	FORKED RIVER	NJ	
Joe	LaRocco	LINDEN	NJ	
Jeaneen	Andretta	FLORHAM PARK	NJ	Please save the Whales, Dolphins and Turtles from drowning in these cruel nets.
Robert	Jones	NEWTON	NJ	Unsustainable methods of fishing are not only morally unjustifiable, they are economically short-sighted and ultimately self-destructive for the very industries that utilize them. In the end, protecting the oceans from unsustainable methods of fishing benefits us all. Not only do we protect important species, but we protect the fishermen whose livelihoods depend upon keeping fish populations healthy and strong.
Takako	Ishii-Kiefer	TINTON FALLS	NJ	
robert	wood	ASBURY PARK	NJ	l agree.
judy	pizarro	MAPLE SHADE	NJ	
M. Cecilia	Correia	ELIZABETH	NJ	
Dottie	Sachs	CHERRY HILL	NJ	
Ellen	McConnell	SAYREVILLE	NJ	Please find a safer & better way to catch Swordfish, Drift gillnets hurt too many other ocean fish. Thanks
Carl	Oerke Jr	RIVER EDGE	NJ	
Jan-Paul	Alon	CHERRY HILL	NJ	
Angela	Plagge	СМСН	NJ	
sue	swiss	HOPATCONG	NJ	
Carole	Hodges	TENAFLY	NJ	
Judy	Fairless	WARREN	NJ	
Jay	Hawkshead	2292 OAKHAM COURT	NJ	
Dr. Scott	Whitener	SOMERSET	NJ	
Morgan	Clark	SOUTH ORANGE	NJ	
Jacob	Shirmer	MORRISTOWN	NJ	
chris	noyes	BLOOMFIELD	NJ	We have to protect our oceans and make fishing safer for future generations
Sean	McFeeley	BROOKLAWN	NJ	
Inge	Jacobsen	NO. BRUNSWICK	NJ	
Shannon	Jacobs		NJ	
Stanley	Pendze		NJ	
Pam	Lynn		NJ	
Patricia	Soteropoulo s	CHATHAM	NJ	
Frances	Mackiewicz	BEACHWOOD	NJ	
William	Van Bel	BRICK	NJ	

Angela	Stuebben	HILLSBOROUGH	NJ	
Teresita	Bastides-	LAWRENCE TOWNSHIP	NJ	
	Heron			
John	Hrebin	CRANFORD	NJ	
Lisa	Swift	KEYPORT	NJ	
GEORGE T.	HARRISON	JERSEY CITY	NJ	
RICHARD	ESPUGA	ROSELLE PARK	NJ	endangered species are dying because of the way you
				conduct business. try a different way
Kathy	Robles	WINFIELD PARK	NJ	
Erik	Hartten	JERSEY CITY	NJ	Continued lax regulation of gillnet fishing practices all but
				nullifies the considerable progress that the Pacific Fishery
				Management Council has made in recent years in
				implementing sustainable marine life policies.
Pat	Dosky	OCEAN GROVE	NJ	
Rita	Raftery	RIDGEFIELD PARK	NJ	
Lynn	Merle	VINELAND	NJ	
Laura	Coates	PARSIPPANY	NJ	
mike	rossa	CARTERET	NJ	
Valeriya	Efimova	JERSEY CITY	NJ	
Daniel	Kurz	MONROE	NJ	
Brian	Moscatello	CAPE MAY COURT	NJ	
		HOUSE		
V.	Euripides	OAKLAND	NJ	
Keith	Vaughn	CLEMENTON	NJ	
David	Valentino	MORGANVILLE	NJ	
Dawn	Zelinski	MIDDLETOWN	NJ	
Alla	Sobel	HOBOKEN	NJ	
Brandi	Hudson	JERSEY CITY	NJ	
Josette	Le Beau	NEPTUNE	NJ	
Ramona	Howansky	ROCKAWAY	NJ	
Martina	Clark	WESTAMPTON	NJ	
Cheryl	Spinelli	MONTCLAIR	NJ	This is old news. Why have we not done anything to
				protect the other species caught in nets not intended for
	Kurnien	VERNON	NU	
Janys	Kuznier		NJ	Disconstant using duith cillages as you had as musiked to do
IVIOE	катка	NEW BRUNSWICK	NJ	Please stop using drift glinets as you had committed to do
				oceans healthy and balanced
natty	coates	ROSELLE PARK	NI	
Rebecca	Mathis	FDGEWATER PARK	NI	
Mary	Levan		NI	
Lance	Michel	JERSEY CITY	NJ	
Raul	Arribas	BARCELONA	NJ	
Joseph	Brigandi	BLACKWOOD	NJ	
Ruth	Kram	WEST ORANGE	NJ	
Jane	Davidson	ENGLEWOOD	NJ	Gillnets should be eliminated altogether.
Christine	Malaroche	MADISON	NJ	
Melody	Erdwein	MONROEVILLE	NJ	
Lawrence	Gioielli	KINNELON	NJ	
Jannice	Colon	LAKE HOPATCONG	NJ	
Rafael	Danaher	PEMBERTON	NJ	
Sharon	Tozzi	YARDVILLE	NJ	
Anita	Knipping	MONTCLAIR	NJ	Please look to the future.

John	Beck	MANAHAWKIN	NJ	
Beverly	Solomon	HADDONFIELD	NJ	
, Dawn	Sink	DOROTHY	NJ	
Linda	Mullaney	LYNDHURST	NJ	A safer alternative to gill nets must be found and utilized before any more vulnerable, non-target marine life is killed.
Michael	Hamburger	COLLINGSWOOD	NJ	
Gina	Megay	MANTUA	NJ	
Rich	Venuti	CLEMENTON	NJ	
Steven	Carter	PISCATAWAY	NJ	
Jordan	Gilruth	LEONARDO	NJ	
Paul	Luehrmann	SANTA FE	NM	
Don	Hyde	GALLUP	NM	
Edward	Lewis	SANTA FE	NM	
Tom	Ruhl	RIO RANCHO	NM	
Dottie	Butler	VALDEZ	NM	
William	Buss	CORRALES	NM	
robert	manna	HOBBS	NM	
Pat	Duncan	LOS LUNAS	NM	
Alan	Arnold	ALBUQUERQUE	NM	
Doris	Vician	ALBUQUERQUE	NM	Be more concerned about the harm you are doing.
Ι.	Engle	VILLAGE OF TULAROSA	NM	
V	Alexander	ALBUQUERQUE	NM	
Teresa	Hammond	ALBUQUERQUE	NM	
Jan	McCreary	SILVER CITY	NM	Please modernize your swordfishing methods so that thousands of dolphins, sea turtles, whales, and other marine animals are not needlessly killed every year in gillnets.
BARBARA	SWYDEN	RIO RANCHO	NM	
cate	clark	ALBUQUERQUE	NM	Peripheral killing is wrong and avoidable.
Rita	Glasscock	SANTA FE	NM	
Todd	Monson	ALBUQUERQUE	NM	
Lori	Hammett	ALBUQUERQUE	NM	I'm writing to remind you of you commitment to shift away from drift gillnets to more selective fishing gear. Please prevent the senseless killing of turtles, dolphins, various types of sharks, whales, and other species of fish who are also captured and often killed before they can be released
Marcia	Walton	ALBUQUERQUE	NM	
Charles	Jetty	ALBUQURQUE	NM	
F.	CAROLA	BOSQUE FARMS	NM	
Reeve	Love	ALBUQUERQUE	NM	
B. Thomas	Diener	ALBUQUERQUE	NM	
Lesley	Jorgensen	SANTA FE	NM	
Gretchen	Byrne	ALBUQUERQUE	NM	Gillnets should be bannned.
R	Elosua	ALBQ.	NM	
Pamela	Bradford	LOS ALAMOS	NM	
dick	hogle	ESPANOLA	NM	
Rebecca	Kraimer	LAS CRUCES	NM	
Patricia	Carlton- McQueen	ABQ	NM	
will	duff	TIJERAS	NM	These are the gems of ocean life. Protect them!

Daniel Samek ALBUQUERQUE NM Thank youthere are more reasonable alternatives	
Eileen Keyes TULAROS NM	
Lynda Goin LAS CRUCES NM I love fish and eat them, too. But I want to be sure protecting the ecosystem and other species when f Otherwise, I will have to stop eating fish.	we are shing.
R. Kirkpatrick ESPANOLA NM	
Liz Porter MAGHERAFELT NONE	
Mike Seyfried BOULDER CITY NV No more drift gillnets!!!	
Janet Walls MINDEN NV	
Georgina Wright NORTH LAS VEGAS NV	
Linda Gillaspy RENO NV	
John Dalla LAS VEGAS NV	
Henry Kimbell SPARKS NV Please with to more sustainable fishing gear. No m indiscriminate methods like gill nets.	ore
Jeanne Stidham LAS VEGAS NV	
Clayton Griffith RENO NV I really don't have words to adequately describe a portion or persons who would destroy other entities to capanother	erson ture
Thelma Matlin RENO NV	
Patricia Baley LAS VEGAS NV Sustainability is enormously critical and we cannot it. Please act to make swordfish fishing safer for by species.	dismiss catch
Catherine Ayoub LAS VEGAS NV	
Howard Booth BOULDER CITY NV	
Bill Macartney RENO NV	
Margaret Jerinic BOULDER CITY NV	
Nancy Atkinson INCLINE VILLAGE NV This needs to change. Indiscriminate use of our oce devestating. Time to come into the 21st century and mindful of the finite use of our planet.	ans are d be
Jessica Nolan- INCLINE VILLAGE NV bowers	
Rikki Hensley- RENO NV Ricker NV	
Jennifer Sumiyoshi NORTH LAS VEGAS NV	
Rosemary French RENO NV Effective fishing techniques that protect the non-ta sea life are extremely important for the fishing indu No more gillnets, better selective fishing techniques no more gillnets, better selective fishing techniques	rgeted stry. and
David Dewenter JEAN NV	
JIII Ransom RENO NV	
Veronica Prince ESSEX NV	
Christy Fermoile RENO NV	
Fiona Roberts LAS VEGAS NV	
Carol Ramo WEST BABYLON NY	
Vicky Brandt NEW YORK NY	
Aimee Arceo EAST AMHERST NY	
Woralma Suarez BROOKLYN NY Mara Deschlar NEW YORK NY	
Iviarc Beschier NEW YORK NY Leure Demotoin HADTSDALE NY	
Laura Bernstein HARTSDALE NY Phode Loving NEW VORK NV	
Niloua Leville NEW TORK NY Douglas Kinnov OTEGO NY Thank yould	
Douglas Nilley Oldo NT Indiff you! Beth Darlington DOUGHKEEDSIE NV	

Ellen	Beschler	NEW YORK	NY	
v	paglia	HOPEWELL JCT	NY	
DoRi	Miles	CROWN POINT	NY	Who can turn down such benefits for all?
Rudolph	Ripp	STATEN ISLAND	NY	
Sibyll	Gilbert	PAWLING	NY	It certainly seems to be timely to take into serious consideration, more selective methods of fishing for swordfish other than the use of drift gillnets. In the meantime, I shall no longer eat swordfish and advise my friends to do likewise.
Steve	Breyman	SCHUYLERVILLE	NY	
Devin	Henry	NICHOLS	NY	
John	Catherine	NEW YORK	NY	Let's use our ingenuity to protect swordfish and eat 'em, too.
Edgar	Tobachnik	YONKERS	NY	
Carolyn	Barrett	NORTH SYRACUSE	NY	
Pritpal Singh	Kochhar	NEW YORK	NY	
Ronald	Lemmert	PEEKSKILL	NY	Although I love Swordfish, I will not eat another one until fishermen learn how to fish responsibly.It looks like more and more I am headed toward a plant-based diet, because I want no part of such cruelty.
Robert	Gunther	ISLIP	NY	
Steven	Kostis	NEW YORK	NY	
Paula	Neville	ROCHESTER	NY	We need to change now.
Jane	Sunshine	WOODSTOCK	NY	
Abraham	Rozman	ALBION	NY	
Edward	Rengers	WOODSTOCK	NY	
Jonathan	Nash	NEW YORK	NY	
April	Plumeri	NIAGARA FALLS	NY	
Ken	Moller	BOLIVAR	NY	
renata	dobryn	ΜΟΝΤΑUΚ	NY	swordfish should not be fished at all, eaten at all, due to their high mercury content
Jennifer	Valentine	MASSAPEQUA PARK	NY	
Edith	Borie	NEW PALTZ	NY	If bycatch is not reduced, fisheries cannot be sustainable. Alternatives to gillnets exist, and should be used. Not using them is stupid.
robert	moeller	EAST NASSAU	NY	For centuries catching fish was difficult with primitive fishing gear, now the fish have little chance. Devise a method that guarantees both fish to catch and a fishing industry.
Janet	Moser	ISLAND PARK	NY	
Cathleen	Kelly	CALVERTON	NY	
Thomas	Bain	WEBSTER	NY	
Linda	Fighera	RHINEBECK	NY	
Roel	Bergema	KOLLUMERZWAAG	NY	
Ken	W		NY	
Elena	Chernyshev a	BROOKLYN	NY	
Daniel	Klein	BROOKLYN	NY	
Elizabeth	Watts	LYNBROOK	NY	Please act now.
Heather	Cross	BROOKLYN	NY	
Fletcher	Cossa	NEW YORK	NY	
Laurie	Puca	NEW CITY	NY	

Rob	Weltner	FREEPORT	NY	givem a break
Donna	Lenhart	POUGHKEEPSIE	NY	
Јоусе	Greenberg	HIGHMOUNT	NY	It is vital to life on Earth that fishing methods be sustainable. We must not waste resources.
Timothy	Dunn	BABYLON	NY	Indiscriminate fishing is not sustainable and does great damage to declining, protected and endangered species that perish as by-catch. Please consider enforcing rules that will allow targeted fish to be caught while minimizing harm to other species.
Lisa	Ramaci	NEW YORK	NY	This is too vital a subject to be forgotten or ignored. We are destroying our oceans and food sources for immediate profit, but once all the fish are gone, what then? Ban drift gillnets immediately!
Barry	Zuckerman	MIDDLETOWN	NY	
Julie	Jensen	NEW YORK	NY	
Tammy	Madera	NEW YORK	NY	
Herbert	Stein	WASHINGTONVILLE	NY	
Pamylle	Greinke	PECONIC	NY	
William	Toner	MCGRAW	NY	Discontinue the use of very long gillnets left in the ocean for hours at a time in the commercial fishing for swordfish and thresher sharks off the California coast.
Peter	Keiser	MANLIUS	NY	
Sandra	Naidich	BROOKLYN	NY	
Harriet	Shalat	FOREST HILLS	NY	
Stephanie	Cuellar	SUNNYSIDE	NY	
Marilyn	Rowland	ΙΤΗΑϹΑ	NY	There must be a better way to be better stewards of the oceans. PLEASE BE GOOD STEWARDS and come up with a strategy that does not include the killing of so many unintended targets of these fishing tactics. It's not acceptable! FIND A BETTER WAY! ACT DECISIVELY TO SHIFT AWAY FROM DRIFT GILLNETS TO MORE SELECTIVE FISHING GEAR!
Judy	Rhee	BROOKLYN	NY	
Sandy	Sobanski	NEW YORK	NY	Please stop using those horrible drift nets that kill so much marine life!!!
Janet	Duran	NEW YORK	NY	Please protect our wildlife from death due to gillnets. They are valuable. Thank you,
Melissa	Bishop	DEPOSIT	NY	
jane	edsall	MT. SINAI	NY	
Kimberly	Wiley	ROCHESTER	NY	
David	Randall	PORT JEFFERSON	NY	Drift gillnets are a lazy and incompetent way of fishing. It is hazardous to all sea life and should be banned!
Richard	Eng	HANCOCK	NY	The problem with gillnets is that they rake in everything, intentional or not. There must be a better way to avoid killing sea life.
Sean	Kilpatrick	NEW YORK	NY	
Danuta	Watola	KALETY	NY	
Nicholas	Prychodko	BRIDGEHAMPTON	NY	
Sylvia	Rodriguez	NEW YORK	NY	You have power to save the oceans and their inhabitants. Please, please, do so.
janet	forman	NEW YORK	NY	
a.l.	Steiner	CORNWALLVILLE	NY	

Edward	Butler	NEW YORK	NY	Do not merely modify the current indiscriminate method of fishing for Pacific Swordfish. Live up to your commitment to shift to more selective fishing gear.
John	Doerich	ROCHESTER	NY	
sherry	schreiber	GREENPORT	NY	
Marie	Garescher	TARRYTOWN	NY	
Eleanor	Fox	NEW YORK	NY	
richie	stoike	ELMHURST	NY	stop the killing of nature
Andrea	Loft	AMSTERDAM	NY	Better ways to catch fish and catch limits, in addition to minimizing indiscriminate 'incidental' killing of other varieties of sea creatures, are important to even have a hope of maintaining a healthy ocean population.
Elizabeth	Grant	ITHACA	NY	Think like an ocean, and do the right thing.
Sarah	Hunnewell	WATER MILL	NY	
Carrie	Cammarano	RYE	NY	
scott	draper	ARMONK	NY	the by catch in these gill nets is extremely wasteful and cruet.
Liz	Kessler	HYDE PARK	NY	
Heather	Forsythe	TRUMANSBURG	NY	
Caitlin	Schneider	SEAFORD	NY	
Barbara	Mintz	NEW YORK	NY	
Arthur	Schurr	BROOKLYN	NY	
Betty	Trentlyon	NEW YORK	NY	The disastrously long gillnets are killing machines for non- target species; use of these nets must stop.
Donna	Knipp	NEW YORK	NY	
Maria	Millar	NEW YORK	NY	
Jen	Plishka	BALDWINSVILLE	NY	
Toni	McCalley	HAMILTON	NY	
Pierre	Schlemel	OLD BETHPAGE	NY	
Cassandra	Treppeda	ELMSFORD	NY	
Ruth	Mendes	POUND RIDGE	NY	We cannot tolerate the collateral damage of thousands of deaths of marine animals while using this inefficient method of fishing for swordfish. It is inhumane and destructive of the environment.
Francine	Brown	NEW YORK	NY	
Linda	Rudman	N.Y.	NY	
Elisabeth	Jakab	NEW YORK	NY	Please fulfill your commitment to change from drift gillnets that kill so many creatures you are not really fishing for. Change to more selective gear, as you had committed to. It's past time to stop indiscriminately destroying everything on this planet. Thank you for your consideration. And please please please do this!!!
Robert	Puca	BROOKLYN	NY	
Michael	Van Riper	PUTNAM VALLEY	NY	
laura	raforth	ROCHESTER	NY	NO MORE FISHING WITH NETS!!
A	SHOUSE	ITHACA	NY	Hold to your commitment to shift away from drift gill nets.
J.	MASSETTI	ASTORIA	NY	
Scott	Levine	ASTORIA	NY	
Patti	Packer	SCOTIA	NY	

Dimitri	Sevastopoul o	NEW YORK	NY	Too many years have passed while both fishermen and consumers have remained silent about diminishing stocks of fish and unnecessary kills resulting from primitive and selfish fishing habits. It is time to correct our mistakes in order to INCREASE stocks of fish - hence protein - and to protect species that fishermen are catching inadvertently.
Patricia	Tripi	BUFFALO	NY	
Kathleen	Sorce	BUFFALO	NY	
maureen	lynch	CLIFTON SPRINGS	NY	nets should have ended years ago
Amanda	Smock	BROOKLYN	NY	
Teresa	Beutel	CONGERS	NY	
Marianne	Mukai	DELHI	NY	Though I live in the hills of New York far from the ocean, I love seafood and I hope we can all work together to keep populations of all fish, including swordfish, healthy and sustainable.
saula	siegel	NEW YORK	NY	You must find a better way, this is cruel and horrific. You cannot modify, you must change and save the other sea creatures from death.
Richard	Biegun	W. SAYVILLE	NY	
Alison	Sky	NEW YORK	NY	
Richard	Egan	BROOKLYN	NY	
Paul	Johnson	LONG ISLAND CITY	NY	Gillnets are cruel and inhuman and should be stopped.
Rob	Fursich	HARTSDALE	NY	
Thomas V.	Connor	WALLKILL	NY	
John	Tissavary	NEW YORK	NY	
MaryAnn	Burch	AURORA	NY	
Lynne	Teplin	BRONXVILLE	NY	
	Gold	BRUNX	NY	
Allce D.	Rosenteid			
Louise	BIKOTT			
Dhilin				
Muhammad	Islam		NY	
Franco	De Nicola	PITTSFORD	NY	Stop the special interest nonsense and turn to more sustainable practices.
steve	retenski	PLAINVIEW	NY	
Laura	Neiman	NEW YORK	NY	
susan	messerschm itt	ROCHESTER	NY	
Cynthia	Raha	SCARSDALE	NY	
Rochelle	Thomas	NEW YORK	NY	
Eric J.	Arroyo	NEW YORK	NY	
valerie	gilbert	NEW YORK	NY	
cave	man	NEW YORK	NY	
Elena	Perez	BRONX	NY	
Elaine	Donovan	HEMLOCK	NY	
Laura	Dame		NY	
LEKOI	Armstead	PUUGHKEEPSIE	ΝΥ	infrastructure. It's wasteful. The only reasons to use them are laziness and greed.
Stephanie	Cruz	JAMAICA	NY	
Francisco	Velez	BRONX	NY	

Edna	Litten	ALTAMONT	NY	It is unconscionable to kill so many non-target animals just because this is a convenient way to catch swordfish. If using a different way to catch swordfish costs more, it would reflect a realistic price for the fish and can be passed along to the consumer. Otherwise the price is borne by whales, seals, sharks and dolphins.
nancy	cataldo	BREWSTER	NY	
Kristen	Murray	GLENVILLE	NY	
William	Sharfman	NEW YORK	NY	
Pamela	Brocious	NEW YORK	NY	We can no longer allow gillnets to be utilized indiscriminately; watch the U Tube of the snorkeling group that find a whale caught in a fishing net and release it. The outcome is heartwarming however I'm sure it happens all too often that it isn't a happy ending.
Susanna	Levin	NEW ROCHELLE	NY	
Christy	Carosella	OZONE PARK	NY	
Fern	Stearney	TARRYTOWN	NY	
Robert	Jacobson	BROOKLYN	NY	
Catherine	DeGraw	NEW YORK	NY	
Amy	Anderson	KINGSTON	NY	We must do everything in our power to protect the fragile ecosystems of our waterways; our survival as a species depends on it!
August	Scheer	ARDSLEY	NY	
William	Sarovec	LAKE RONKONKOMA	NY	
margaret	beresford	MONTREAL	NY	
Andrea	Sreiber	SCHENECTADY	NY	
Harvey	Spears	NEW YORK	NY	
Nyack	Clancy	MANHATTAN	NY	
Elizabeth	Guthrie	WEBSTER	NY	
Melanie	Alexander	STANFORDVILLE	NY	
tyler	harrington	SCHUYLER FLS	NY	
Elizabeth	Ashby	NEW YORK	NY	
Melanie	Mahoney Stopyra	SYRACUSE	NY	
Timothy	Raymond	ROCHESTER	NY	
Katrina	Сох	NEW YORK	NY	
George	Picchioni	BRONX	NY	
Sharon	Intilli	WARWICK	NY	
Karen	Rubino	S. HUNTINGTON	NY	
Cary	Semit	HERKIMER	NY	Indiscriminate fishing methods need to be stopped now. You made a promise to shift away from drift gillnets. Continuing this method of catching fish will, sooner rather than later, result in restrictions that impact the lives of these fishermen in a negative way.
Marian	Meinen	NEW YORK	NY	
Paul	Collarile	YONKERS	NY	
Elisse	Antczak	CHEEKTOWAGA	NY	
Michael	Burgess	ITHACA	NY	
George	Stadnik	ASTORIA	NY	
Alan	Stein	FRESH MEADOWS	NY	
Sarah	Lilley	BROOKLYN	NY	

June	Hurst	NEW YORK	NY	
David	Amrod	LIVERPOOL	NY	
Karena	Wells	BROOKLYN	NY	Please shift to more environmentally sustainable fishing gear to reduce damaging and wasteful bycatch.
Mary	Johnson	MOUNT KISCO	NY	
Andrew	Harwin	NEW YORK	NY	
Elaine	Matheson	DUNKIRK	NY	
Patricia	Amazalorso	CORTLANDT MANOR	NY	It is unconscionable to use these nets for any fishing! Swordfish (and thresher sharks) should be targeted directly so that air breathing mammals and amphibians like turtles, dolphins, whales and others are not killed so cruelly and senselessly!
Mercedes	Armillas	BROOKLYN	NY	
Mark	Sonderskov	BROOKLYN	NY	
jeffrey	marciano	STATEN ISLAND	NY	
Jennifer	Josephy	NEW YORK	NY	
William G	Gonzalez	SUFFERN	NY	To: West Coast Fishery Leaders: Modify a better way to catch the Pacific Swordfish.
Elizabeth	Belasco	MASSAPEQUA	NY	
Isabel M.	Fuica	NEW YORK	NY	
Darren	Showers	BUFFALO	NY	
Jerry	Rivers	RIVERS	NY	
Scott	Korman	GREAT NECK	NY	
Rebecca	Casstevens	BINGHAMTON	NY	
david	prystal	ACCORD	NY	
Edwin	Philbrook	LATHAM	NY	Please honor your commitment to shift away from drift gillnets.
Michelle	Menzer	GLENDALE	NY	
Katherine	Wojciechow ski	ONEIDA	NY	
Kirk	Lawrence	SAYVILLE	NY	
Matt	Stedman	MONTAUK	NY	Let's be smart and respectful of the population so our grand kids can enjoy these fish as well as we have.
Barbara	Charles	NEW YORK	NY	
Susan	Krause	SAINT JAMES	NY	Please do not allow drift gillnets; instead use more selective fishing gear.
juanita	garnett	BRONX	NY	
Shari	Thompson	NEW YORK	NY	I myself do not eat fish but would love to see a boycott of Pacific swordfish as long as drift gillnets are being used.
Robin	Stonebridge	BRONX	NY	
Pete	Klosterman	NEW YORK	NY	
Craig	Kerber	MORAVIA	NY	
Kate	Sherwood	LONG BEACH	NY	
Barbara	Chichester	SOUTH HUNTINGTON	NY	
Jaime	Munera	CORONA	NY	
Constance	George	NEW YORK	NY	
antonina	licastri	NY	NY	Please adopt safer ways to catch swordfish so that many other fish do not die along with them.
marcello	franciamore	BRONX	NY	
allan	yeninas	BROOKLYN	NY	

Elizabeth	Maas	REGO PARK	NY	We need to take responsibility for our actions which
				infringe upon the innocent lives of the creatures that
fav	forman		NV	share this planet so winningly with us.
Katherine	Brow		NY	
Douglas	Brodmerkel		NV	ston killing other sea life
loel	Finley	OGDENSBURG	NY	
Amy	Dozier		NY	
David	Lowe		NY	
Debi	Holt	HOLLEY	NY	
Hubertus	Raben	BROOKLYN	NY	
Leslie	Krygier	BUFFALO	NY	
susan	baxter	NEW YOK	NY	
kathy	haverkamp	GENEVA	NY	
Karen	Fabiane	SCHENECTADY	NY	
karen	pike-roberts	ROME	NY	Please stop using harmful gillnets that kill many species of marine life!
Laura	Pakaln	NYACK	NY	Please keep your commitment to moving away from drift gill nets to more selective fishing gear!
Julie	Takatsch	PORT JERVIS	NY	
Sandra	Costa	NY	NY	
Arlene	Forwand	HUNTINGTON	NY	
Linda	Hartman	GRAND ISLAND	NY	
Jeff	Norton	JAMESTOWN	NY	
William	William	BROOKLYN	NY	Gillnets are wasteful and unsustainable. It is a poor business model that wreaks havoc on the ecosystem upon which a targeted fish depends.
Bernice	Fishstein	BROOKLYN	NY	Fishing with drift gillnets is killing all types of fishthis is not acceptable, when doing so can cause species to become extinct, if that practice continues. Please try to use different, less wasteful methods of fishing.
Melissa	Ebbing	DELMAR	NY	
Courtney	Stefano	NEW ROCHELLE	NY	
Clifford	Press	NEW YORK	NY	This is really important
Lee	Margulies	STONY BROOK	NY	
John	Keiser	NEW YORK	NY	
Kathy	Alter	MUNNSVILLE	NY	
Patty	Gibbons	C. ISLIP	NY	
Laurie	Storm	BUFFALO	NY	
simon	seven	NYC	NY	No long lines in any oceans
Susan	Baldwin	BURDETT	NY	
Elizabeth	Root	TRUMANSBURG	NY	This is so important; we can't afford to lose valuable marine species, some already endangered.
deborah	beck	PEEKSKILL	NY	
Alex	Taylor	NYC	NY	
Ekaterina	Danilova	BROOKLYN	NY	
C	Zawadzki	SCHENECTADY	NY	
Ashley	Мскау	MERRICK	NY	
Deborah	KOSS	CANANDAIGUA	ΝΥ	Drift gillnets are bad idea for a number of reasons, but the accidental catch of endangered species is certainly one of them!
Nicole	Lemaire	NY	NY	
keri	bennett	VALLEY STREAM	NY	

Kevin	Isola	NEW YORK	NY	
Jeffrey	Ward	NEW YORK	NY	
MICHELE	К.	CENTRAL ISLIP	NY	
Dara	Murray	NEW YORK	NY	
Michele	Capra	BRONX	NY	
Carol J.	Painter, Ph.D.	ITHACA	NY	
Enid	Cardinal	BALDWINSVILLE	NY	
Eric	Serxner	BROOKLYN	NY	
Harry	Grace	BUFFALO	NY	
Mildred	Meyer	HIGH FALLS	NY	We've known for a long time that drift gillnets catch more than the desired fish. PLEASE do away with the use of these nets and use more selective fishing gear.
Meredith	Priestley	BEDFORD	NY	Please remember your commitment to shift away from drift gillnets to more selective fishing gear to catch swordfish. Now is the time! Don't make minor changes to the fundamentally indiscriminate, deadly way of fishing; find another way.
James	Sterner	NEW YORK	NY	
Joe	Karr	MIDDLETOWN	NY	TO ALL AND SUNDRY - AN IMPORTANT ANNOUNCEMENT - WE ARE IN THE 21ST CENTURY, WITH 21ST CENTURY TECHNOLOGY THAT IS LAYING IDLEDO THE RIGHT THING, AND USE YOUR HEAD, FOR PETE SAKESHAME ON YOU FOR TAKING SO LONG!!!!!!!!!!!!!!!!!!!
Randall	Paul	JACKSON HEIGHTS	NY	
Anne	Purcell	STATEN ISLAND	NY	
Thomas	Ferrone	DOWNSVILLE	NY	
Joan	Lenny	CORNWALL ON HUDSON	NY	Change is often a difficult thing to accept for many of us but when the we've always done it that way "becomes wasteful and environmentally unsound
Caroline	Thomas	NEW YORK	NY	Put an end to this needless slaughter. Fix the problem. Be humane and preserve animals whenever possible.
Mari	Smet	WOODHAVEN	NY	
elisabeth	guss	NY	NY	
Steve	Kuhl	CALVERTON	NY	Please stop wasteful gill netting now!
Karlene	Gunter	ROCHESTER	NY	
Норе	Schee	ROCKVILLE CENTRE	NY	
Kelley	Scanlon	SYRACUSE	NY	
Renee	Stonebridge	MINEOLA	NY	
Lynne	Gordon- Watson	NEW YORK	NY	
Alisha	BeGell	SAVONA	NY	
Robert	Stillson	BOLIVAR	NY	
Martha	Winsten	GANSEVOORT	NY	It is criminal to keep on allowing gillnets when know many other specie
Joan	Gingeresky	TROY	NY	
JG	Garey	NEW YORK	NY	We know that fishery management when applied sensibly works. Selective fishing gear to ensure that only Pacific swordfish are caught works. Not piecemeal and drift gill nets. Please re-look at what you are catching and how.

Amy	Harlib	NEW YORK	NY	STOP THE TERRIBLE WASTE AND INSANE DESTRUCTION
				FROM GILLNETS!
Leslie	Pinilla	SI	NY	
Brian	Winter	NEW YORK	NY	
Damon	Bishop	NEW YORK	NY	
Sheerya	Shivers	BROOKLYN	NY	
wilson	phillips	BROOKLYN	NY	
Scott	Clark	GREENE	NY	
Michael	Bennett		NY	
Stephanie	Feyne	NEW YORK	NY	Sustainable fishing would allow your livelihoods to continue. Unsustainable fishing would leave you and the world much poorer.
Peter	Sweeny	PLEASANTVILLE	NY	
lawrence	rosin	NEW YORK	NY	
peggy	klee	BUFFALO	NY	
Randi	Gustafsson	PUTNAM VALLEY	NY	
Nancy	Coleman	PORT WASHINGTON	NY	
Lydia	Cannito	DOBBS FERRY	NY	
Teresa	Marcisz	AUCKLAND	NZ	
Gary	Jeffers	LIBERTY TOWNSHIP	ОН	I suppose this is looked at as collateral damage or the cost of doing business." But these are living creatures we're talking about and they do matter. Killing them for no good reason is unacceptable."
Michael	Norden	DEFIANCE	ОН	It is pointless to make minor and incremental improvements to a method of fishing that is fundamentally indiscriminate.
David	Neuendorff	TOLEDO	ОН	Gill nets result in too much by-catch. They need to be outlawed. There are places where the environmental sustainability of the oceans is being destroyed by current fishing practices. We need to set aside large biological preserves within the oceans, where man may visit, but may not stay or remove anything. We through overpopulation are destroying our planet and driving other species, flora and fauna into extinction. My grandchildren deserve healthy sustainable oceans.
Matthew	Burton	CINCINNATI	ОН	
Reed	Oliver	CINCINNATI	ОН	Eliminate bycatch!
Sara	Pandolfi	OBERLIN	ОН	
John	Neal	MOUNT VERNON	ОН	
Lowell	Palm	WASHINGTON COURT HOUSE	ОН	
Dawn	Kosec	AUSTINTOWN	ОН	
Gene	Ammarell	ATHENS	ОН	I'm not eating swordfish until conditions change.
amy	schumacher	BEAVERCREEK	ОН	
mike	krouse	LAKEWOOD	ОН	
Duane	Baker	POWELL	ОН	
Pamela	Unger	COLUMBUS	ОН	
Nelson	Baker	BETHESDA	ОН	
Ed	George	CLEVELAND	ОН	
Daniel	Kozminski	SOLON	ОН	
Debra	Bruegge	WEST CHESTER	ОН	
Robert	Deck	TOLEDO	ОН	
Rhonda	Holt	TROTWOOD	OH	

Tom	Bullock	LAKEWOOD	ОН	Let's take action *now* to reduce bycatch. Why? Because species management is a long-term process, and the sooner we implement improvements, the sooner we'll realize the benefits. Please, no dawdling due to pressure from industry groups who are caught in the trap of their short-term interest, which harms their own long-term interest.
Jayleen	Hatmaker	SPRINGBORO	ОН	
Alice	Petersen	TOLEDO	ОН	
Diane	Wynne	DAYTON	ОН	
Benita	Musleve	AKRON	ОН	
Emma	Shook	CLEVELAND HTS.	ОН	You need to continue to improve the health of our ocean creatures by eliminating drift gillnets.
Daniel	Cottle	PORTSMOUTH	ОН	
James	Lovich	EASTLAKE	ОН	
Tracy	Johnson	BLUE ASH	ОН	
Peggy	Gheta	AVON	ОН	
shannon	horn	MIDDLETOWN	ОН	
Kathi	Ridgway	COLUMBUS	ОН	
R	S	N RIDGEVILLE	ОН	
Christine	Child	TOLEDO	ОН	I would like to be able to buy and eat Pacific swordfish. I won't be able to do this, until the swordfish are fished more responsibly.
Fredde	Hollman	CLEVELAND	ОН	
ED	Bukovinsky	LOWELLVILLE	ОН	
Robin	Craft	PLAIN CITY	ОН	
Lisa	Pace	STOW	ОН	
Warren	Kerrigan	BEREA	ОН	
Paul	Szymanowsk i	CURTICE	ОН	
Earl	Grove	EAST CANTON	ОН	Please be more selective in your fishing methods so that you don't harm cause harm to other fish and animals.
Sandra	Cobb	MORELAND HILLS	ОН	Killing whales in fishing nets, our top ocean predators, seriously damages the sea environment. To have fish to catch we need a healthy sea. This is a small price to pay to ensure healthy catches.
Mark	Cosgriff	LAKEWOOD	ОН	
Chris	Campbell	WINCHESTER	ОН	
Donald	Hyatt	COLUMBUS	ОН	
Wanda	Huelsman	DAYTON	ОН	Please, please commit to a more selective fishing gear.
Toby Ann	Reese	VALLEY CITY	ОН	
Chris	Mendel	COLUMBUS	ОН	I don't eat fish and will not until fisheries start doing a better job in sustainability. If the owners are old, they don't care about the future of others. If they are young then they are greedy and short-term thinkers or non- thinkers and will not have a future in fishing.
Cindy	Wargo	BRUNSWICK	ОН	We have got to find a better way than modifying our current gill nets. We have entirely too much by catch and we are stripping our oceans of life.
George	Marsh	TIFFIN	ОН	If you went hunting for gazelle, you wouldn't bring an elephant gun. Don't use nets that can catch what you don't wantand what the environment of the sea needs.
Lauren	Wade	IRONTON	ОН	

Valerie	Hildebrand	PARMA	ОН	
glynis	boyd	JEFFERSON	ОН	just don't use them
Lori	Stenger	MANTUA	ОН	
Clement	Thurn	COLUMBUS	ОН	
Natalie A.	Carter	NEWARK	ОН	
michael	quillin	PARMA HEIGHTS	ОН	
eric	schickendan tz	AKRON	ОН	
Edward	Roach	CENTERVILLE	ОН	
Mary Ann	Bizzell	WILLOUGHBY	ОН	
John	Schmittauer	CHAUNCEY	ОН	
Jennifer	Hill	WESTERVILLE	ОН	
Shearle	Furnish	CANFIELD	ОН	
Karen	Kindel	CANTON	ОН	We do not have unlimited time to save the ocean and its creatures. Please act soon.
jocelyne	lapointe	TERREBONNE	ОН	
Chris	Byknish	MASURY	ОН	
PS	Naylor	CANTON	ОН	
Robin	Craft	PLAIN CITU	ОН	
Jeff	McCollim	CONCORD	ОН	
Aloysius	Wald	COLUMBUS	ОН	
Lisa	Witham	MENTOR ON THE LAKE	ОН	
Alexa	Ross	NELSONVILLE	ОН	Indiscrimate killing is barbaric, which is what gill nets do. I don't buy shrimp due to bycatch. This inefficient practice must end Imagine being caught yourself. Not pleasant
				We can't afford to inflict this on sea life.
MAX	FRAZIER	COLUMBUS	ОН	We can't afford to inflict this on sea life.
MAX Patricia	FRAZIER Doyle	COLUMBUS GARRETTSVILLE	OH OH	We can't afford to inflict this on sea life.
MAX Patricia Kimberly	FRAZIER Doyle Selvage	COLUMBUS GARRETTSVILLE ASHLEY	ОН ОН ОН	We can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species.
MAX Patricia Kimberly Stephanie	FRAZIER Doyle Selvage Hensley	COLUMBUS GARRETTSVILLE ASHLEY TULSA	ОН ОН ОН ОН	We can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species.
MAX Patricia Kimberly Stephanie Steve	FRAZIER Doyle Selvage Hensley Trammell	COLUMBUS GARRETTSVILLE ASHLEY TULSA MEEKER	ОН ОН ОН ОК ОК	We can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species.
MAX Patricia Kimberly Stephanie Steve Mary	FRAZIER Doyle Selvage Hensley Trammell Price	COLUMBUS GARRETTSVILLE ASHLEY TULSA MEEKER CLEVELAND	ОН ОН ОН ОК ОК ОК	Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species.
MAX Patricia Kimberly Stephanie Steve Mary Iydia	FRAZIER Doyle Selvage Hensley Trammell Price garvey	COLUMBUS GARRETTSVILLE ASHLEY TULSA MEEKER CLEVELAND CLINTON	ОН ОН ОН ОК ОК ОК ОК	Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species.
MAX Patricia Kimberly Stephanie Steve Mary lydia Chrissie	FRAZIER Doyle Selvage Hensley Trammell Price garvey Johnson	COLUMBUS GARRETTSVILLE ASHLEY TULSA MEEKER CLEVELAND CLINTON ELGIN	ОН ОН ОН ОК ОК ОК ОК ОК ОК	We can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species.
MAX Patricia Kimberly Stephanie Steve Mary Iydia Chrissie william	FRAZIER Doyle Selvage Hensley Trammell Price garvey Johnson elliott	COLUMBUS GARRETTSVILLE ASHLEY TULSA TULSA MEEKER CLEVELAND CLINTON ELGIN OKLAHOMA CITY	ОН ОН ОН ОК ОК ОК ОК ОК ОК	We can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species.
MAX Patricia Kimberly Stephanie Steve Mary Iydia Chrissie william John	FRAZIER Doyle Selvage Hensley Trammell Price garvey Johnson elliott Jolley	COLUMBUS GARRETTSVILLE ASHLEY TULSA TULSA MEEKER CLEVELAND CLINTON ELGIN OKLAHOMA CITY TULSA	ОН ОН ОН ОК ОК ОК ОК ОК ОК ОК ОК	We can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species.
MAX Patricia Kimberly Stephanie Steve Mary lydia Chrissie william John DEBORAH	FRAZIER Doyle Selvage Hensley Trammell Price garvey Johnson elliott Jolley SMITH	COLUMBUS GARRETTSVILLE ASHLEY TULSA TULSA MEEKER CLEVELAND CLINTON ELGIN OKLAHOMA CITY TULSA OKLAHOMA CITY	ОН ОН ОН ОК ОК ОК ОК ОК ОК ОК ОК	Ve can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species. IF WE DO NOT KEEP OUR OCEANS ALIVE AND PRACTICE SUSTAINABLE FISHING, THERE WILL BE NO FISH FOR THE FISH THAT HAVE TO DEPEND ON FISH TO FEED AND STAY ALIVE, AND NO FISH FOR HUMANS!!!
MAX Patricia Kimberly Stephanie Steve Mary lydia Chrissie william John DEBORAH	FRAZIER Doyle Selvage Hensley Trammell Price garvey Johnson elliott Jolley SMITH SMITH	COLUMBUS GARRETTSVILLE ASHLEY TULSA TULSA MEEKER CLEVELAND CLINTON ELGIN OKLAHOMA CITY OKLAHOMA CITY	ОН ОН ОН ОК ОК ОК ОК ОК ОК ОК ОК	We can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species. IF WE DO NOT KEEP OUR OCEANS ALIVE AND PRACTICE SUSTAINABLE FISHING, THERE WILL BE NO FISH FOR THE FISH THAT HAVE TO DEPEND ON FISH TO FEED AND STAY ALIVE, AND NO FISH FOR HUMANS!!!
MAX Patricia Kimberly Stephanie Steve Mary lydia Chrissie william John DEBORAH DEBORAH	FRAZIER Doyle Selvage Hensley Trammell Price garvey Johnson elliott Jolley SMITH Blaney Slade	COLUMBUS GARRETTSVILLE ASHLEY TULSA TULSA MEEKER CLEVELAND CLINTON ELGIN OKLAHOMA CITY TULSA OKLAHOMA CITY TULSA	ОН ОН ОН ОК ОК ОК ОК ОК ОК ОК ОК ОК	Indict Child, findighter being edugint yoursen. Not predidint. We can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species. If we be not sustainable and is wasteful, harming many species. IF WE DO NOT KEEP OUR OCEANS ALIVE AND PRACTICE SUSTAINABLE FISHING, THERE WILL BE NO FISH FOR THE FISH THAT HAVE TO DEPEND ON FISH TO FEED AND STAY ALIVE, AND NO FISH FOR HUMANS!!!
MAX Patricia Kimberly Stephanie Steve Mary lydia Chrissie william John DEBORAH DEBORAH	FRAZIER Doyle Selvage Hensley Trammell Price garvey Johnson elliott Jolley SMITH SMITH Blaney Slade Hass	COLUMBUS GARRETTSVILLE ASHLEY TULSA TULSA MEEKER CLEVELAND CLINTON ELGIN OKLAHOMA CITY TULSA OKLAHOMA CITY OKLAHOMA CITY TULSA HARTSHORNE	ОН ОН ОН ОК ОК ОК ОК ОК ОК ОК ОК ОК	If WE DO NOT KEEP OUR OCEANS ALIVE AND PRACTICE SUSTAINABLE FISHING, THERE WILL BE NO FISH FOR THE FISH THAT HAVE TO DEPEND ON FISH TO FEED AND STAY ALIVE, AND NO FISH FOR HUMANS!!!
MAX Patricia Kimberly Stephanie Steve Mary lydia Chrissie william John DEBORAH Thomas Kenneth Marjorie Victoria	FRAZIERDoyleSelvageMensleyTrammellPricegarveyJohnsonelliottJolleySMITHBlaneySladeHassPitchford	COLUMBUS GARRETTSVILLE ASHLEY TULSA TULSA MEEKER CLEVELAND CLINTON ELGIN OKLAHOMA CITY TULSA OKLAHOMA CITY OKLAHOMA CITY TULSA I OKLAHOMA CITY	ОН ОН ОН ОК ОК ОК ОК ОК ОК ОК ОК ОК ОК	Indict Child, findighte being edugint yoursen. Not predidint. We can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species. Is wasteful, harming many species. IF WE DO NOT KEEP OUR OCEANS ALIVE AND PRACTICE SUSTAINABLE FISHING, THERE WILL BE NO FISH FOR THE FISH THAT HAVE TO DEPEND ON FISH TO FEED AND STAY ALIVE, AND NO FISH FOR HUMANS!!!
MAX Patricia Kimberly Stephanie Steve Mary lydia Chrissie william John DEBORAH Thomas Kenneth Marjorie Victoria Suneet	FRAZIERDoyleSelvageHensleyTrammellPricegarveyJohnsonelliottJolleySMITHBlaneySladeHassPitchfordSrivastava	COLUMBUS GARRETTSVILLE ASHLEY TULSA TULSA MEEKER CLEVELAND CLINTON ELGIN OKLAHOMA CITY TULSA OKLAHOMA CITY TULSA OKLAHOMA CITY TULSA I OKLAHOMA CITY TULSA	ОН ОН ОН ОК ОК ОК ОК ОК ОК ОК ОК ОК ОК ОК ОК ОК	We can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species. IF WE DO NOT KEEP OUR OCEANS ALIVE AND PRACTICE SUSTAINABLE FISHING, THERE WILL BE NO FISH FOR THE FISH THAT HAVE TO DEPEND ON FISH TO FEED AND STAY ALIVE, AND NO FISH FOR HUMANS!!!
MAX Patricia Kimberly Stephanie Steve Mary lydia Chrissie william John DEBORAH DEBORAH Thomas Kenneth Marjorie Victoria Suneet Jenni	FRAZIER Doyle Selvage Hensley Trammell Price garvey Johnson elliott Jolley SMITH SMITH Blaney Slade Hass Pitchford Srivastava Kerteston	COLUMBUS GARRETTSVILLE ASHLEY TULSA TULSA MEEKER CLEVELAND CLINTON ELGIN OKLAHOMA CITY TULSA OKLAHOMA CITY TULSA OKLAHOMA CITY TULSA I TULSA COKLAHOMA CITY TULSA COKLAHOMA CITY TULSA COKLAHOMA CITY TULSA	ОН ОН ОН ОК ОК ОК ОК ОК ОК ОК ОК ОК ОК ОК ОК ОК	Indict charactering cought yourself, not predomit. We can't afford to inflict this on sea life. Please find a more creature-friendly way to catch swordfish. The current methods are not sustainable and is wasteful, harming many species. If we do not keep our oceans alive and practice sustainable fishing, there will be no fish for the Fish that have to depend on fish to feed and stay alive, and no fish for HUMANS!!!

Veerle	Roelandt	ZOTTEGEM	OOST-	We need a better way of fishing than gillnets !
			VLAAN	
			DEREN	
			-	
			BELGIU	
Dava	Mattozzi			
M				
Grogory	Skutchos			
Gregory	Och			
Evelyn	Uch		PA	A Detter Way to Catch Desifie Guardfish. There is no
Errikka	Jordan	PHILADELPHIA	РА	A Better Way to Catch Pacific Swordfish. There is no denying that many people love the taste of swordfish and thresher sharks. Unfortunately, the predominant commercial method of catching these fish off the California coast involves mile-long gillnets left in the water for hours at a time. Unfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. We believe there is a better way. Encourage West Coast fishery leaders to find a better way to catch Pacific swordfish. In March, West Coast fishery managers agreed that it's time to shift the fleet to more environmentally sustainable types of fishing gear. However, change doesn't come easily. Fishery managers are now considering the possibility of merely modifying the current wasteful method.
Craig	Martin	ΝΕΨ/ ΣΤΛΝΤΩΝ	DA	
Doul	Dalla		PA	WE CAN'T KEED USING UD THE DIANET FASTED THAN IT
Paul	Palla	WAYNESBORD	РА	CAN REPLENISH ITSELF!! DO YOU EVEN CARE?
Wilford	Vaulx-Smith	INDIANA	PA	
William	Anderson	PHILADELPHIA	PA	
Julie	Schampel	MCKEESPORT	ΡΑ	Mile long gillnets are killing more than they are catching. You must shift away from drift gillnets to more selective fishing gear immediately!!
david	levin	HAVERFORD	PA	
Michael	Balsai	PHILADELPHIA	PA	
Donna Rose	Sherman	BUTLER	PA	
Christine	Catania- Rachlin	EAST STROUDSBURG	PA	
Lana	Fishkin	BALA CYNWYD	PA	
Anthony	Capobianco	BETHEL PARK	PA	
Kimberly	Seger	KITTANNING	PA	
Nicola	Nicolai	CHESTER SPRINGS	PA	
Judith	Marvin	LEWISBURG	PA	
Alison	Gray	STROUDSBURG	PA	
Juliann	Pinto	PHILADELPHIA	PA	
Barry	Stover	SOUDERTON	PA	
gwenn	meltzer	WOODLYN	PA	
Thomas	Nelson	LANSDOWNE	PA	
George	Mostoller	PHILADELPHIA	PA	
Carol	Dewees	POTTSTOWN	PA	
Jennifer	Zielinski	NEW PROVIDENCE	PA	

Jeanne	Held-	JHELDWARMKESSEL@Y	PA	
	Warmkessel	AHOU.COM		
Michael	Heller	MEDIA	PA	
E	Robbins	CHESTERBROOK	PA	
Judy	Buchsbaum	PHILADELPHIA	PA	
k	danowski	PITTSBURGH	PA	
Michael	Miller Jr	PHILA	PA	
Tracey	Eakin	MCMURRAY	PA	
Mary Ann	Leitch	PHILA	PA	
sterling	showers	YORK	PA	
craig	conn	PITTSBURGH	PA	
John	Ferguson	BLUE BELL	PA	
Pat	Butler	LIGONIER	PA	
Emile G.	llchuk	N. CATASAUQUA	ΡΑ	The Planet's in bad enough shape as it is. We don't to be killing it's creatures senselessly. There has to be a better way.
Carol	Thompson	SOUTH PARK	PA	
Bill	Roseberry	LEVITTOWN	PA	
Diane	Krassenstein	PHILADELPHIA	PA	
Daniel	Mink	HARRISBURG	PA	
Barbara	Hegedus	PARKESBURG	PA	REMOVE DEADLY, CRUEL, GILLNETS. HOW WOULD YOU LIKE TO DROWN IN A FISHING NET???
Jeffrey	Coulter	COATESVILLE	PA	Please.
Mark and Nancy	Wolfe	PITTSBURGH	PA	I hate these nets. They are cruel.
William	Montgomer v	POTTSTOWN	РА	
Libby J.	Goldstein	PHILADELPHIA	РА	
Bruce	Sadowskas	READING	PA	
Raymond	Mlynczak	HORSHAM	PA	
tina	horowitz	PHILADELPHIA	PA	
Bruce	Kiesel	SOUTHAMPTON	РА	
Patricia	Rossi	LEVITTOWN	PA	
chris	costanzo	DOWNINGTOWN	PA	
William	Bader	BETHLEHEM	PA	
Reuben	Wade	PHILADELPHIA	PA	
Dennis	Ober	SHAMOKIN	PA	
Tina	Herzog	SLATINGTON	РА	
George	Erceg	NATRONA HEIGHTS	PA	
Gwen	Carlson	PENFIELD	РА	
Cairns,	John	PLYMOUTH MEETING	PA	
Elizabeth	Seltzer	PARKSIDE	РА	
Joanne	Kellar	SPRINGFIELD	PA	
joe	shaw	QUAKERTOWN	PA	
Dawn	Grib	DILLSBURG	PA	
Donna D	Varcoe	STTE COLLEGE	PA	SHAME On Hurting Whales etc!
Barbara	Franck	PHILADELPHIA	PA	
Walter	Margie MD	BETHLEHEM	PA	Stop raping the oceans.

Benita J.	Campbell	BURGETTSTOWN	ΡΑ	Please do right by all the magnificent speciesbe they mammals, fish, plant, or whatever. They all have their place in important ecosystems. Eventually, it has to do with our long-term survival. And please don't depend on future technology to solve these problems, when fishing sustainably will solve the problem.
Connie	Conaway	WASHINGTON	PA	
Jay	McCahill	LANSDOWNE	PA	Please - Find a solution that works!
David	Guleke	CHESTER	PA	
Susan	Babbitt	PHILADELPHIA	PA	The harm that drift gillnets cause is inherent in their use.
Linda	Schmidt	GIBSONIA	PA	
David	Greene	NORTH HUNTINGDON,	PA	
David	Tilli	LEVITTOWN	PA	
MICHAEL	ABRAMS	PARKESBURG	PA	
Patricia	Greiss	CARLISLE	PA	
Wayne	Almond	MORRISVILLE	PA	
Eileen	Shupak	PHILADELPHIA	PA	No reason to kill more ocean dwellers than anyone needs. Use more selective methods.
Rande	Mandelblatt	PHILADELPHIA	PA	
Ali	Haines	NOTTINGHAM	PA	
Kathy	Stack	MUNHALL	PA	
Henry	Berkowitz	SABINSVILLE	PA	
Helen	Syen	PHILADELPHIA	PA	
John	Leonard	PITTSBURGH	PA	Please look at this with the long run in mind.
Melissa	Katterson	SOUTH HEIGHTS	PA	
H. Dennis	Shumaker	MARIETTA	PA	Please stop the use of drift gillnets & the indescriminate bycatch harm they cause.
Francine	Cohen	HAVERTOWN	PA	
Robert	Emory	В	PA	
Sari	Steuber	SPRINGFIELD	PA	
Melissa	McSwigan	PITTSBURGH	PA	
Sheri	DeOrio	PITTSBURGH	PA	
Adam	Zion	PHILADELPHIA	PA	
Jackie	Cramer	PITTSBURGH	PA	
Renee	Zuba	PLYMOUTH	PA	
Jacqueline	Barron	BUTLER	PA	
Susan	Luckowski	WEST CHESTER	PA	Take the moral high road and make the change to better equipment for catching swordfish. Ocean life is precious and should not be destroyed for corporate profit.
nicholas	mosunic	POCONO PINES	PA	
William	Smith	BLUE RIDGE SUMMIT	PA	
Jon	Deutschland er	NEW PROVIDENCE	PA	
Jeff	Schmitt	MEDIA	PA	Find a new way!
Gary	Curtis	TOBYHANNA	PA	
Helene	Rosen	IVYLAND	PA	
Stephen	Smith	BETHLEHEM	PA	
Anita	Cartwright	NEW CASTLE	PA	
Jim	Vogt	SAYLORSBURG	PA	

Richard	Van Aken	HOLLAND	ΡΑ	The continuing unsustainable depletion of species that inhabit our oceans by the practice of longline fishing must come to end before the ecosystem itself collapses from the loss of biodiversity. There's no doubt we are well on our way to such a collapse.
Edward	Velazquez	FREEMANSBURG	PA	
Bryn	Hammarstro m, RN	MIDDLEBURY CENTER	PA	Save our earth's oceans!!!
Dennis	Hartenstine	BIRDSBORO	PA	
valerie	smith	LANSDALE	PA	
Carol	Teodori	MCMURRAY	PA	
Sidne	Baglini	MALVERN	PA	
Priscilla	Delaney	WYNNEWOOD	PA	
Marlene	Knight	WYALUSING	PA	
James	Johnston	DUBOIS	PA	
Michael	Lawrence	HARRISON CITY	PA	
Karen	Vasily	NORRISTOWN	PA	
Laura	Horowitz	PITTSBURGH	PA	
Anne	Pinkerton	PHOENIXVILLE	PA	
Edmund	Weisberg	PHILADELPHIA	PA	
Merry	Guben	BRYN MAWR	PA	
Frank	Fredenburg	MILFORD	ΡΑ	We better change a lot of things about the way we treat our oceans. If we don't we are looking at the depletion of all sea life.
Alyssa	Webb	PERKIOMENVILLE	PA	
Charlotte	Kramer	TELFORD	PA	
KL	Paul	ACME	PA	
Glenn	Gawinowicz	ORELAND	PA	
Bob	Hamburg	GLENSIDE	PA	
Kathleen	Lawless	HARLEYSVILLE	PA	
Garry	Taroli	WILKES BARRE	PA	End this practice now. Thank youGST.
Harold	Denenberg	LANGHORNE	PA	
Kathleen	Doctor	KITTANNING	PA	
W. Andrew	Stover	CHAMBERSBURG	PA	
Linda	Huber	HANOVER	PA	
Eric	Fistler	HELLERTOWN	PA	
Patrick	McCloskey	HAVERTOWN	PA	
Susan	Lowe	PITTSBURGH	PA	
Michelle	Schramm	PLAINS	PA	
Kristin	Okeefe	PITTSBURGH	PA	
Ann	Kuter	WARRINGTON	PA	
Kris	Brinsky	BETHEL PARK	PA	Please shift away from drift gillnet and use more selective fishing gear. Please!
Jeffrey	Solow	ELKINS PARK	ΡΑ	I have been a scuba diver since 1965 and I have personally witnessed the decline of the marine environment off of both our Pacific and Atlantic coasts. In addition, new research shows that non-coastal marine life removes a huge amount of carbon dioxide from the atmosphere. For both of these reasons I strongly support more specifically targeted and sustainable fishing methods.
Dianne	Moore	NARBERTH	PA	Find alternatives to Drift Gillnets
john	gibson	STATE COLLEGE	PA	

Robin	Scherr	QUAKERTOWN	PA	
Gary	Roberts	MOUNT WOLF	ΡΑ	Fish and marine animals are under way too much pressure to allow such collateral damage" to continue unabated. Changes need to be made before it's too late for a recovery to occur."
Marcia	Godich	TRAFFORD	ΡΑ	As long as so much fishing is NOT sustainable, my family stays away from seafood, although we really like it. Minor changes aren't really enough - and they are too easy to get around. Please maks substantive changes so that people like me and my family can eat fish again.
ashley	heffner	BRADFORD	PA	
Barbara J	Spiegelberg	PEQUEA	ΡΑ	I avoid fish that are caught in an environmentally harmful way.
Samantha	soracco	MONACA	ΡΑ	It's very important we as a society do what we can to make sure the oceans are here for future generations. I strongly urge you to take a look at your practices and make them more sustainable.
Carol	Miller	MACUNGIE	PA	
Michael	Schmotzer	YORK	PA	
Paul	Kalka	CONSHOHOCKEN	PA	
Dana	DeRogatis	PHILADELPHIA	PA	
Gabrielle	Taylor	WEST GROVE	ΡΑ	PLEASE consider discontinuing the use of gillnets- surely humans, supposedly the most intelligent animal, can use a different method to catch swordfish and thresher sharks. Please end the indiscriminate killings.
Gabrielle	Taylor	WEST GROVE	ΡΑ	PLEASE consider discontinuing the use of gillnets- surely humans, supposedly the most intelligent animal, can use a different method to catch swordfish and thresher sharks. Please end the indiscriminate killings.
Bryan	Brunner	MARICAO	PR	Please stop killing non target species, it is a totally unsustainable way to harvest fish.
Sheila	Ward	SAN JUAN	PR	We need to maintain Pacific coast marine resources
Anna Louise E.	Fontaine	LANTIER, QC	QC	
Sylvain	Thibault	ST-EUSTACHE	QC	
David	Mauros	QUV©BEC	QUé BEC	
Felix	Lavoie	MONTREAL	QUEBE C	Please help find a better way!
Michael	Dutton	NEWPORT	RI	
Joel	Maguire	PRUDENCE ISLAND	RI	Long lining isn't much different from fishing with dynamite. Indiscriminate killing is unacceptable.
Janet	Handford	WEST WARWICK	RI	
deb	doolittle	WAKEFIELD	RI	
Frances	Harriman	CUMBERLAND	RI	
Marie	Schopac	CHARLESTOWN	RI	Don't use gill nets to catch swordfish, they catch and gill other species.
Deborah	Lipman	PROVIDENCE	RI	Stop using gillnets. They kill too many other sea creatures. It's time to start using more sustainable fishing gear.
Anish	Dube	PROVIDENCE	RI	
James	Marsden	PROVIDENCE	RI	Please do the right thing for our marine creatures.
Jesse	Marsden	PROVIDENCE	RI	

jill	kotch	WAKEFIELD	RI	so wasteful, shame, shameconsidering?? it should
				already have been made better
Kenneth	Rosenblad	PROVIDENCE	RI	Please protect the West Coast fishery by promoting a shift to more environmentally sustainable types of fishing!
Michael	Langlais	WEST WARWICK	RI	will you stop before you've destroyed it all?
Nancy	Fowler	FOSTER	RI	
Barry	LeBeau	PROVIDENCE	RI	Our Oceans are becoming depleted because of Over- Fishing. We can't continue to wastefully take all the other species along with the swordfish & thresher sharks when using old gill-net methods. It's an opportunity to improve the process while creating a more sustainable supply of fish
Ellen	Goodman	EAST PROVIDENCE	RI	
Sonya	Gendron	EAST PROVIDENCE	RI	This is disastrous. Please rethink.
John	Doucette	PROVIDENCE	RI	
w	bolcon	NEWPORT	RI	
Nancy	James	LADSON	SC	I am counting on you to make a healthy decision for the future. Thank you
Melody	Stevens	AIKEN	SC	
Lisa	Goldman	MOUNT PLEASANT	SC	
Kathy	Lindler	CHAPIN	SC	
Stanley	Charles	FORT MILL	SC	
kristi	dunn	CLEMSON	SC	
bill	brabson	GEORGETOWN	SC	
Suzanne	Barns	BATESBURG	SC	
Bert	Corley	HANAHAN	SC	
Jeanne	Robinson	MT PLEASANT	SC	The appalling waste that gillnet bycatch represents has been known to since the 70's when I watched fishing boats trucks hauling in catch off of the Outer Banks of NC. It was sickening then, and fishing methods are worse now. We have got to find a better way!! Thank you
Lisa	Scharin	SUMMERVILLE	SC	I personally have stopped eating seafood all together. After reading and seeing the effects we are having on ocean life, I cannot contribute to this decimation and enormous death toll! The sacrifice" is WELL worth it and I really don't miss it much
Hannah	Blakeman	MYRTLE BEACH	SC	
Ginger	Hill	LYMAN	SC	
Shane	Cassidy	SIMPSONVILLE	SC	
Christy	Borriello	CHARLESTON	SC	
John	Witmer	CLEMSON	SC	
John	Pugzles	BLUFFTON	SC	
Amber	Davidson	COLUMBIA	SC	Please find a more responsible way to fish or at least monitor the nets 24/7 to ensure an innocent animal isn't killed.
Ronald	Ratner	SIOUX FALLS	SD	
Charles	Wirth	HURLEY	SD	
Dennis	Fahey	RAPID CITY	SD	
Aaron	Gayken	SIOUX FALLS	SD	
Dianna	Torson	BROOKINGS	SD	These are cruel and depleting our oceans.
deborah	van damme	VERMILLION	SD	
Kathy	Bergquist	SIOUX FALLS	SD	

Scott	Hed	SIOUX FALLS	SD	
Ana	Mesner	LJUBLJANA	SL	
Kevin	Vaught	ANTIOCH	TN	
Marianne	Bentley	NASHVILLE	TN	Please take whatever action is necessary to implement better ways to catch swordfish so the other marine life doesn't become 'collateral damage'!
Veronica	Brummer	KNOXVILLE	TN	
Larry	Olivier	CHATTANOOGA	TN	
Jeff	Martin	KNOXVILLE	TN	
Libba	Miller	NASHVILLE	TN	
Teresa	lovino	MEMPHIS	TN	
Cheryl	Dare	MEMPHIS	TN	
Mary	Reed	LANCING	TN	
Ruth	Kaczmarek	SPRINGVILLE	TN	
Dr. Ed	Slack	NASHVILLE	TN	This is important.
Jason	Nichols	MARYVILLE	TN	
Jay	Armbruster	KNOXVILLE	TN	The resources of our planet is not endless though it appears that the greed and cruelty of some people is. I'm glad to learn that you are working for all people and the health of our planet.
Sherry	Wens	MEMPHIS	TN	
Hiedi	Tan	KNOXVILLE	TN	
Rhonda	Bradley	CROSSVILLE	TN	
Connie	Dunn	SPRINGVILLE	TN	
Perry	Chapdelaine	ASHLAND CITY	TN	There are more environmentally friendly ways to fish than using drift gillnets.
James	Graham	NOLENSVILLE	TN	
Laura	Nevins	BURNS	TN	Most unfortunately fish and other animals die for our consumption. If we are to do so, then we should be as kind, compassionate and humane in the way this happens. We can't thoughtlessly kill and maim additional fish and animals in the process. Please set a precedent of kindness and compassion. Without it we are nothing.
Mike	Larrivee	MEMPHIS	TN	
Ann	Coz	NASHVILLE	TN	
Debra	Fox	OLIVER SPRINGS	TN	The current method of net fishing is so indiscriminate that it catches everything in its path, this must be done away with and a humane fishing practice installed.
J	Petrilla	NASHVILLE	TN	
Darrel	Easter	BARTLETT	TN	
Robert	Fingerman	MONTEAGLE	TN	
Logan	Mulford	KNOXVILLE	TN	
Michelle	Semaan	EL PASO	ТΧ	
Ed	Fiedler	AUSTIN	ТΧ	
Lisa	Stone	HOUSTON	ТХ	
Lorelei	Stierlen	PLANO	ТΧ	
Pamela	Evans	KEMP	ТΧ	
Thomas	Nieland	ALAMO	ТХ	
Martin	Bernard	FORT WORTH	ТΧ	
Evelyn	Adams	MCKINNEY	ТΧ	
Christopher	Dowling	AUSTIN	ТΧ	
Christiaan	Siano	AUSTIN	ТΧ	

Brant	Kotch	HOUSTON	ТХ	
rebecca	marshall	GAINESVILLE	ТΧ	
Barbara	Dahms	FLINT, 75762	ТΧ	Don't fish with gillnets.
Annette	Pieniazek	HOUSTON	ТΧ	
val	brumby	SAN ANTONIO	ТΧ	
Hiroe	Watanabe	DALLAS	ТХ	
Anne	Vrba	AUSTIN	ТХ	Let's do an even better job of protecting the lives of the species that are threatened by drift gillnets.
Joel	Perkins	DENTON	ТХ	
Debra	Bradford	SAN MARCOS	ТΧ	
Karen	Kawszan	SPRING	ТΧ	
Cynthia	Curtis	GARLAND	ТΧ	
Av	harville	BENBROOK	ТΧ	
Bethany A.	Dusenberry	SAN ANTONIO	ТΧ	
Patrice	Johnson	LUBBOCK	ТХ	
christopher	tuch	NEW BRAUNFELS	ТΧ	
Carolyn	Riddle	AUSTIN	ТХ	In order to protect fishing of all species for the future and avoid further reducing populations of vulnerable and endangered species, it is necessary to restrict the use of gill nets and move to more sustainable technology.
Kevin	Rolfes	AUSTIN	ТХ	
Gloria	Morrison	PECOS	ТХ	
Ralph	Ward	COMMERCE	ТХ	
Marilyn	Mick	SAN ANTONIO	ТХ	
David	Berkshire	HOUSTON	ТХ	
Nancy	Lowe	MANOR	ТХ	Please be responsible and stop this archiac practice.
Sandra	Breakfield	DALLAS	ТХ	
Kathy	Newman	SAN ANTONIO	ТХ	
D.A.	ROY	HOUSTON	ТХ	
Н.	Guh	ADDISON	ТХ	
Jackie	Demarais	GRANBURY	ТХ	
DM	Degenhart	FREDERICKSBURG	ТХ	
Peggy	Соре	AUSTIN	ТХ	
Dallas	Windham	DALLAS	ТХ	
Frank	Blake	HOUSTON	ТХ	
Sylvia	Duncan	PLANO	ТХ	
jennifer	anderson	AUSTIN	ТХ	
Lindsey	McMahan	HOUSTON	ТХ	
Linda	Heagy	ARLINGTON	тх	We must be good stewards of our precious ocean and how we fish. Please keep trying to adopt a more environmentally sustainable alternative.
Kenneth	Loafman	PLANO	ТХ	
Luke	Foster	AUSTIN	ТХ	
te	logan	AUSTIN	ТХ	
Crystal	Mitchell	BERTRAM	ТХ	
Bruce	Burns	AUSTIN	ТХ	
Gina	Obrien	BASTROP	ТХ	Stop with the gillnets already and employ the improved techniques available. Thank you.
Christen	Morris	DALLAS	ТХ	
Amy	Peloza	КАТҮ	ТХ	
Ronald	Shenberger	DENTON	TX	

Joyce	Faulk	AUSTIN	ТΧ	Please shift away from drift gillnets to more selective
				fishing gear.
Patricia	Brooks	HOUSTON	ТΧ	
Mary	Cato	ARLINGTON	ТΧ	
Victor	Delgado Jr	EL PASO	ТХ	Don't fisheres realize that what they do is working against them and against their livelihood? It is really too bad that they don't seem to care for themeselves.
Steve	Sivley	AUSTIN	ТΧ	
Kimberly	Locke	AUSTIN	ТΧ	
Gail J.	Reams	AUSTIN	ТΧ	
S	w	SAN ANTONIO	ТΧ	
ma	wilkinson	LUBBOCK	ТΧ	
Joshua	Seff	MCKINNEY	ТΧ	
Donna	Charter	ARLINGTON	ТΧ	
Erica	Anthony- Benavides	AUSTIN	тх	
Tara	Lulla	HOUSTON	ТΧ	
Rick	Ilgin	IRVING	ТХ	
Brent	Bray	PFLUGERVILLE	ТΧ	There has to be a better way of doing this.
Kathy	Spera	TYLER	ТХ	
Greg	Holt	HOUSTONQ	ТΧ	
Grace	Payne	AUSTIN	ТΧ	
Thomas	Windberg	SPICEWOOD	ТΧ	
Pat	Bowen	BASTROP	ТΧ	
Judy	Landress	CORPUS CHRISTI	ТΧ	It's time to start protecting sea life.
Beverly	Walker	KINGSLAND	ТΧ	
Janell	Jenkins	GARLAND	тх	You can find a better way to fish without being wasteful of the animals you don't want to capture. You're smart. I know you can do it!
apryl	ν	AUSTIN	ТΧ	
Stephen	Courim	BROWNWOOD	тх	Acting in a humane way is good for sustainability, and good for all our souls.
Geri	Cade	PLANO	ТΧ	
Sherry	Bobick	ROUND ROCK	ТΧ	
Everly	Keenan	HOUSTON	ТΧ	
Maria	Blaszczyk	AUSTIN	тх	Please protect marine animals! There is a better way, and I would applaud you for helping to make fisheries more ethical and sustainable.
Lori	Alaniva	SOUTH PADRE ISLAND	тх	
Anita	Faulkner	CARROLLTON	ТХ	
Margaret	Zoch	SPRING	ТХ	
Denie	English	UVALDE	ТΧ	
amanda	collins	DALLAS	ТΧ	
chris	archer	FORT WORTH	ТΧ	
Leigh	Fabbri	PLANO	ТΧ	
Greg	Sells	AUSTIN	ТΧ	
Cindy	Sims	DALLAS	ТХ	
Gary	Binderim	KINGWOOD	ТХ	
Victoria	Randall	HOUSTON	ТХ	
daniel	mcgary	TEXAS CITY	ТХ	
Alex	Herrera	AUSTIN	ТХ	
Stacey	Francis	AUSTIN	ТХ	

Charlotte	Flynn	AUSTIN	ТΧ	
Bob	Rankin	AUSTIN	ТХ	There is no denying that many people love the taste of swordfish and thresher sharks. Unfortunately, the predominant commercial method of catching these fish off the California coast involves mile-long gillnets left in the water for hours at a time. Unfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. We believe there is a better way.
Matt	Griffith	AUSTIN	ТΧ	
Stacie	Wooley	CYPRESS	ТΧ	
melissa	russo	SAN ANTONIO	ТΧ	
Margery	Race	AUSTIN	ТΧ	
H. Wayne	Washburn	PLANO	ТΧ	Gill nets are mass murder.
Mary Lorna	Greenway	HOUSTON	ТΧ	
Malva	Mcintosh	GEORGETOWN	ТΧ	
Eren	Giles	AUSTIN	ТΧ	
Mel	Templet	POTTSBORO	ТΧ	
jean	colombo	IRVING	ТΧ	
Beverly	Boling	HOUSTON	ТΧ	
Ronald W.	Hull	HOUSTON	ТΧ	
Ann	Harlan	HOUSTON	тх	There is no justification for killing animals that are not the target of your catch. NONE. Gillnets are wasteful, cruel and damaging to the ecosystem. My consumer dollars do not support this kind of fishing. Find a way of catching what you mean to catch and leaving the rest alone.
AnaLisa	Crandall	ADKINS	ТΧ	
Romula	Navarro	HOUSTON	ТΧ	
Elizabeth	Schlein	HOUSTON	ТΧ	
JULIE	WADE	CARROLLTON	ТΧ	
Izabella	Dabrowski	AUSTIN	ТΧ	
Sherry	Blackshear	GRAPEVINE	ТХ	It is pointless to make minor and incremental improvements to a method of fishing that is fundamentally indiscriminate. Please find a better way. We can't continue to decimate the ocean's wildlife @ this rate.
Angyl	Wisemessen ger	ARLINGTON	тх	
Lisa	Hamilton	SCHERTZ	ТΧ	
Sherry	Janetzke	LEANDER	ТХ	Surely in this day and age there's got to be a better way to catch these fish without killing other species of underwater life. If not, do we really need swordfish on the market at the expense of so many other species.
Roberto	von Ellenrieder	SAN ANTONIO	тх	
Mary	Rhoads	DALLAS	ТΧ	
Hillery	Earl	JOSHUA	ТΧ	
Trigg	Wright	SPRING	ТΧ	
Јау	Morren	DALLAS	ТХ	It's 2014. Can we stop this antiquated version of fishing and come up with a modern alternative?
Crystal	Schuh	DUNCANVILLE	ТΧ	

Hollee	Martin	DALLAS	ТХ	Please protect the swordfish.
Hiroe	Watanabe	DALLAS	ТΧ	
Franklin	Platizky	DENTON	ТΧ	
james	solley	DALLAS	ТΧ	
Dan	Refsdal	SANDY	UT	
Jaime	Perez	ST. GEORGE	UT	Just stop eating meat of any kind. Leave the animals alone!!
Ann	McMullen	SANDY	UT	
Karina	Dansie	SANDY	UT	
Richard	Perkowski	BLUFF	UT	
Keven	Johansen	SALT LAKE CITY	UT	
Carla	L	DRAPER	UT	
Connie	Curnow	BOUNTIFUL	UT	
Jason	Burch	SLC	UT	
Tom	Vosik	CHRISTIANSBURG	VA	
Becky	Daiss	ARLINGTON	VA	
Gary	Austin	WINCHESTER	VA	
Blake	Bentley	ROANOKE	VA	
Amy	Biggs	VIRGINIA BEACH	VA	
Adam	D'Onofrio	NORTH DINWIDDIE	VA	
charles	shelton	GROTTOES	VA	
Michael	King	STAUNTON	VA	
Melissa	Peters	HENRICO	VA	
Robert	Duke	CHARLOTTESVILLE	VA	
Damon	Phillips	ALEXANDRIA	VA	
John	McPeek	FAIRFAX	VA	Generating by-catch is a grossly inefficient way to harvest swordfish and/or thresher sharks. Wasteful!
Karen	Murphy	NEWPORT NEWS	VA	
Anka	Jhangiani	RESTON	VA	
Shirley	Millican	SPRINGFIELD	VA	
Tim	Lank	SPRINGFIELD	VA	
Judith	Shematek	SEAFORD	VA	
Clara	Eder	VIENNA	VA	
brian	pappas	VIRGINIA BEACH	VA	
Barbara	Lester	NORFOLK	VA	Thank you for considering my concerns about gill nets. There is no denying that many people love the taste of swordfish and thresher sharks. Unfortunately, the predominant commercial method of catching these fish off the California coast involves mile-long gill nets left in the water for hours at a time. Unfortunately, these deadly nets catch more than swordfish and thresher sharks. Turtles, dolphins, various types of sharks, whales, and other species of fish are also captured and often killed before they can be released. We believe there is a better way. Thank you again. Our hope for these wonderful creatures lies in part in your ability to make a difference!
POLLY	HAYNES	BARBOURSVILLE	VA	We need you to initiate sustainable fishing methods to protect innocent species from death in mile-long gillnets. It's time to change! The world will listen!
monica	barrios	VIRGINIA BEACH	VA	

Diane	Clark	WOOLWINE	VA	We have known for a long time that drift gillnets are
				deadly to more than swordfish. Please do the right thing and use other methods of barvesting fish
Benita	Crow	CHESADEAKE	VΔ	
Steven	Kranowski		VA	
Robert	Shinnee	RICHMOND	VA	
Willard	Barry	RICHMOND	VA	
Cate	Harrison	RICHMOND	VA	
Nadia	Payne	WOODBRIDGE	VA	We cannot afford to loose any more sea creatures
itaaja	ruyne	WOODDINDGE	•7.	unnecessarily just by our indifference. We need to change
				our approach quickly, time is running out.
Jill	Hunt	ARLINGTON	VA	I'm proud of not eating ANY meat, considering what the
				industry of it is doing to our future. But if some people
				still have to eat animals, we can try to provide it to them a
				little less earth-rapingly, no?
Theo	Giesy	NORFOLK	VA	
Leslie	Calambro	HENRICO	VA	
Scott	Burger	RICHMOND	VA	Please fish differently to protect the ocean.
Anne	Richards	ASHLAND	VA	
Murphy	Thibodeau	BARBOURSVILLE	VA	
Sarah	Propst	NEWPORT NEWS	VA	
Нар	Hagood	CLOVER	VA	
Mark	Alexander	FREDERICKSBURG	VA	I have already quit eating swordfish because of gillnet
				practices and I know I am not alone. It's my favorite fish
				way to catch them and I'll come back to eating them
				way to catch them and the come back to cathing them.
James	Hartley	ARLINGTON	VA	
MARC	FELTON	WARRENTON	VA	
David	Savige	PORTSMOUTH	VA	
tim	gabbert	WILLIAMSBURG	VA	
Elliot	Daniels	ARLINGTON	VA	
Jim	Traweek	SPRINGFIELD	VA	
Enrico	Pelausa	MANASSAS PARK	VA	
Brent	Hepner	NORFOLK	VA	Despoiling our environment and abusing our fellow
				creatures are disgusting acts below the dignity of our
				species.
Victor	Escobar	MIDLOTHIAN	VA	
Stephanie	Brancaforte	ARLINGTON	VA	Please radically rethink the current methods of fishing
				swordtish and thresher sharks ocean species are under
				wasteful fishing methods continue without drastic
				modification to eliminate by-catch.
Sharon	Wimer	CHURCHVILLE	VA	·
Amanda	Yoder	CHESAPEAKE	VA	
Edie	Sears	SALEM	VA	
rio	valencia	MIDLOTHIAN	VA	
Christine	Payden-	LYNCHBURG	VA	
-	Travers			
Thane	Harpole	HAYES	VA	
Loralee	Clark	WILLIAMSBURG	VA	
С.	Bernardeau	FC	VA	

Pamela	Jiranek	EARLYSVILLE	VA	
orv	lehman	LINVILLE	VA	
Tracey	Aquino	VIRGINIA BEACH	VA	
Deborah	Perrero	POTOMAC FALLS	VA	
steve	piku	SPRGFLD	VA	
Peggy	Gilges	CHARLOTTESVILLE	VA	There is too much bycatch associated with drift gillnets. This is unforgivable. We need to act on this. It is irresponsible not to change this dangerous and wasteful means of fishing as soon as possible.
Holly	Angel	SOUTH BOSTON	VA	
Carson	Martin	RICHMOND	VA	
Caitlin	Archambaul t	RICHMOND	VA	
DJ	Wagner	HENRICO	VA	
Suresh	Ramalingam	ALEXANDRIA	VA	
Louise	Perini	SPRINGFIELD	VA	
margaret	childers	LYNCHBURG	VA	please find a better way so that others do not die.
Erin	Parker	BLACKSBURG	VA	
Lawrence	Cromwell	WOODBRIDGE	VA	The incredible waste of marine life from the use of gillnets is unforgiveable in this age where existing sea life is already fragile. The unacceptable greed that drives the use of gillnets should be ended immediately.
Sue	D'Onofrio	KEYSVILLE	VA	Gillnets should NEVER be used. They kill more than the targeted species. This is called BY CATCH" and it should NOT be allowed to continue. I have been under the impression that you had made a commitment to "shift away from drift gillnets" and to use "more selective fishing gear" insteadWHAT HAPPENED AND WHY DID YOU CHANGE YOUR MIND?"
Gina	Stiff	WILLIAMSBURG	VA	
Fred	Lavy	HARRISONBURG	VA	
James E	Shifflett Jr	CHARLOTTESVILLE	VA	
Тгасу	Brophy	ROUND HILL	VA	
Gerard	Lehman	ALEXANDRIA	VA	
Yuri	Sobolev	ARLINGTON	VA	
Susan	Antoniewicz	YORKTOWN	VA	PLEASE!!!! Be SMART about this!!! It's a no-brainer!!!
Jackie	King	STAUNTON	VA	
sandy	rader	FREDERICKSBURG	VA	
michael	rader	FREDERICKSBURG	VA	
amber	hayes	SPOTSYLVANIA	VA	
sonny	lester	FREDERICKSBURG	VA	
marilyn	gray	FREDERICKSBURG	VA	
Helen	Torosian	FREDERICKSBURG	VA	Please ban gillnets.
Mimi	Hodsoll	FALLS CHURCH	VA	I urge the banning of drift gillnets.
Dick	Reiss	LEXINGTON	VA	
Wayne	Teel	KEEZLETOWN	VA	Perhaps it is time to go back to catching swordfish without nets. We must be more selective in how we catch fish so that bycatch is minimized.
Carrington	Petras	VERONA	VA	
cheron	carlson	ARLINGTON	VA	
lois	lommel	RICHMOND	VA	
Michael	LaBrecque	AMISSVILLE	VA	In the 21st Century we can be smarter. Now is the time!
	Vaughn	ONLEY	VA	

Barbara	Oleksa-Reiss	LEXINGTON	VA	
Patricia	Quinn	NORFOLK	VA	
Elaine	Becker	ROANOKE	VA	We MUSt save species for fuure generations!
Kathy	Day	RICHMOND	VA	
Michael	Stumpf	RICHMOND	VA	For pete's sake, it's hard to believe we're still having to send letters like this. Common sense and compassion must be even more rare than I thought.
Shirley	Millican	SPRINGFIELD	VA	
Tanya	Cowperthwa ite	ANNANDALE	VA	
Gabriella	Nunez	ALEXANDRIA	VA	
William	Anderson	ST. THOMAS	VI	
Dorian	Sarris	CRAFTSBURY	VT	We must CHERiSH what is left of what we have destroyed!!!!
Andre	Cavalier	WINOOSKI	VT	
Phyllis	Erwin	GUILFORD	VT	
Sue and John	Morris	MARSHFIELD	VT	
Jack	Zeilenga	EAST MONTPELIER	VT	
charles	parent	HINESBURG	VT	
Jim	Snee	CENTER RUTLAND	VT	
Ralph	Palmer	BRATTLEBORO	VT	
Alan	Podber	BRATTLEBORO	VT	We as a civilized people must rise above cruelty, insensitivity and torture for profit. Such behavior can no longer be tolerated.
Nicholas	Sherman	BURLINGTON	VT	
Chad	Wawrzyniak	NORTHFIELD	VT	
Nancy	Bor g	STOWE	VT	
Russell	Se	WRJ	VT	
margo	lovejoy	MORRISVILLE	VT	
Dave	Searles	BRODHEAD	WI	
Russell	Skinner	KIMBERLY	WI	
Laura	Stewart	MADISON	WI	
Amy	Holt	FITCHBURG	WI	Until fish are commercially caught without by-catch, we will not buy it.
Carol	Held	MIDDLETON	WI	
Stafford	Kramer	MUSKEGO	WI	
Randolph	Schoedler	MILWAUKEE	WI	
Patricia	Finder- Stone	DE PERE	WI	
Cathy	White	HAGER CITY	WI	
G Allen	Daily	WAUWATOSA	WI	
April	Strohmeyer	MAUSTON	WI	
Nancy	Moore	MADISON	WI	
Carol	Steinhart	MADISON	WI	Our marine ecosystem is too vulnerable and too important to endanger by unsustainable fishing practices. Please switch to the most environmentally friendly method possible.
С	К	LAKE GENEVA	WI	
Jackie	Tryggeseth	GRAND MARSH	WI	
Judith	Savard	LAONA	WI	

Sharon	Gaskill	BLACK EARTH	WI	It is time to use the better, more selective fishing equipment in West Coast fisheries. I urge you to move boldly forward and reject small, incremental moves that will not solve the problem, nor quell the complaints of those who are resistant to change.
Mary Chaisting	Neumann		VVI	
Christine	Worrissey	APPLETON	VVI	
Terry	Gunning		VVI	
Dameta	Robinson			
Dep	Saeger	MADISON		
Iviichaei An draw	litis			
Andrew	Pagel	WAUWATOSA	VVI	
Rose	vvood		VVI	
wary	Jones- Giampalo	NEW LISBON	VVI	
Jan	McCall	WEST BEND	WI	
Nancy	Florsheim	MILWAUKEE	WI	Please eliminate the use of drift gillnets that kill many non-target species.
Mark	Rowe	ABRAMS	WI	
Marco	Tonelli	MADISON	WI	
Delene	Hanson	HALES CORNERS	WI	
Rachel	Scott	WHITEWATER	WI	
Mary	Junek	MUKWONAGO	WI	If diverse species are to survive we all need to change the way we think and the way we do things. I hope that the fishermen can adapt to new ways of bringing in their catch without killing other creatures.
David	Brultz	MILWAUKEE	WI	
Gary	Overby	MADISON	WI	
Mark M	Giese	RACINE	WI	
Bruce	Krawisz	MARSHFIELD	WI	
Bryan	lwen	ALGOMA	WI	The indiscriminate by catch of mile long drifting gill nets is not only irresponsible, but it is definitely not sustainable. Please Institute stricter measures on users of this practice, so hopefully one day drifting gill nets will be a thing of the past.
roger	schmidt	MADISON	WI	
Lisa	Frey	MADISON	WI	
Sarah	Foster	MADISON	WI	
Donald	Kosak	MENOMONEE FALS	WI	
Jessica	Burlew	BURLINGTON	WI	
Cynthia	Virnig	LODI	WI	
John & Martha	Stoltenberg	ELKHART LAKE	WI	
Frank	Myers	MIDDLETON	WI	
Kelly	kilishek	APPLETON	WI	
Jim	Pech	MADISON	WI	
Paul	Gasser	GRAFTON	WI	
Greg	Brown	DELAVAN	WI	
Bonnie Jean	Brown	MORGANTOWN	WV	
Bert	Lustig	BERKELEY SPRINGS	WV	The harmful effects of gill net methods of sword fishing are obvious. Change them.
James	Dixon	TERRA ALTA	WV	
Whitney	Metz	MANNINGTON	WV	

Peter	Abbrecht	SHEPHERDSTOWN	WV	
Rita	Lewis	NEWTON	WV	
Diane	Verna	ALTA	WY	Let's do the best we can to manage our marine fisheries.
Deborah	Richards	BURNS	WY	Please honor the commitment to shift away from drift gillnets to more selective fishing gear. Fidshing must be sustainable and senseless wasteful deaths are not! Thank You!
Mary	Lohuis	JACKSON	WY	
Reid	Larimore	CHEYENNE	WY	
Pamela	Kritner	SHERIDAN	WY	

Pacific Fishery Management Council Dorothy Lowman, Chair 7700 N.E. Ambassador Place, Suite 101 Portland, OR 97220

RE: Agenda Item E.2 Drift Gillnet Fishery Transition Issues

Dear Chair Lowman and Council Members,

As a member of the Los Angeles Rod & Reel Club, I consider myself a leader in promoting sportfishing and conservation.

I've committed to helping to provide funding for various worthy causes, such as a disadvantaged kids' fishing trip mentors' fishing trips, fellowship grants and scholarships, construction of artificial reefs, marine research and studies and hatchery programs. We are very proud of our work and know the importance of conservation of our beloved past time.

I write to encourage the council to follow through on your commitment to transition the current commercial fishery for swordfish and thresher sharks to a more environmentally sustainable alternative. We acknowledge that the public should be able to enjoy an abundant and healthy population of Pacific swordfish along our coast. However, we are concerned that nontargeted species of fish and wildlife continue to be caught and in many cases killed by drift gillnets.

We believe swordfish fishermen should be encouraged to catch swordfish. The Pacific Fishery Management Council should act decisively at your meeting this month and develop criteria for granting experimental fishing permits to commercial fishermen willing to try gear that is actively tended and that minimizes interaction with nontargeted fish and wildlife. Actively tended gear types will allow fishermen to safely release animals that aren't the target of this fishery – including economically valuable species such as tuna and opah as well as nonmarketable but no-less important species like dolphins and whales.

While the transition to more actively tended gear occurs, we encourage the council to ask the National Marine Fisheries Service to require 100 percent observer coverage of fishing trips using drift gillnets, impose firm limits on the number of interactions with protected fish and wildlife, and close the fishery for the season if those limits are reached.

Sincerely,



Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>

Fwd: Agenda Item E.2 Drift Gillnet Fishery Transition Issues

PFMC Comments - NOAA Service Account pfmc.comments@noaa.gov>
 Mon, Jun 16, 2014 at 7:50 AM

 To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>
 Cc: Chuck Tracy - NOAA Affiliate <chuck.tracy@noaa.gov>

------ Forwarded message ------From: <JDSBIGGAME@aol.com> Date: Fri, Jun 13, 2014 at 6:10 PM Subject: Agenda Item E.2 Drift Gillnet Fishery Transition Issues To: pfmc.comments@noaa.gov Cc: kyle@24connect.net

JD's Big Game Tackle

406 So. Bayfront ♦ Balboa Island, CA 92662 ♦ USA Phone (949) 723-0883 ♦ Fax (949) 723-0810 jdsbiggame.com / jdsbiggame@aol.com

Pacific Fishery Management Council Dorothy Lowman, Chair 7700 N.E. Ambassador Place, Suite 101 Portland, OR 97220

Dear Chair Lowman and Council Members,

J.D.'s Big Game Tackle has been in the sportfishing industry for over 40 years. Located here in Newport Beach Southern California, our customer base is private sportfishing vessels, big game angling for marlin, tuna etc. We cover retail, wholesale, export, import, mail order and e-commerce. As the owner and an avid fisherman, I am very invested in the productivity of our oceans. I support conservation of the fisheries resource we've worked hard to maintain, both through catch-and-release ethic and directly by raising White Sea Bass in pens.

I write today to encourage the council to follow through on your commitment to transition the current commercial fishery for swordfish and thresher sharks to a more environmentally sustainable alternative. I acknowledge that the public should be able to enjoy an abundant and health population of Pacific swordfish along our coast. However, I am concerned that nontargeted species of fish and wildlife continue to be caught and in many cases killed by drift gillnets.

I believe swordfish fishermen should be encouraged to catch swordfish under regulations that will maintain a Page 152 of 153
National Oceanic and Atmospheric Administration Mail - Fwd: Agenda Item E.2 Drift Gillnet Fishery Transition Issues

healthy resource. The Pacific Fishery Management Council act decisively at your meeting this month and develop criteria for granting experimental fishing permits to commercial fishermen willing to try gear that is actively tended and that minimizes interaction with nontargeted fish and wildlife. Actively tended gear types will allow fishermen to safely release animals that aren't the target of this fishery – including economically valuable species such as tuna and opah as well as nonmarketable but no-less important species like dolphins and whales.

While the transition to more actively tended gear occurs, I encourage the council to ask the National Marine Fisheries Service to require 100 percent observer coverage of fishing trips using drift gillnets, impose firm limits on the number of interactions with protected fish and wildlife, and close the fishery for the season if those limits are reached.

Sincerely,

Thank You for your Assistance John Doughty JD's Big Game Tackle



Thank you for your comments to the Pacific Fishery Management Council. Your comments have been received and will be forwarded to the appropriate staff member for processing.

Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220 Phone: 503-820-2280 Toll Free: 1-866-806-7204 Fax: 503-820-2299 Twitter: http://Twitter.com/PacificCouncil

EXEMPTED FISHING PERMIT (EFP) PROCESS

According to <u>Council Operating Procedure 20</u> (COP 20), the Council annually reviews applications for exempted fishing permits (EFPs) at the June and September meetings. At the March 2014 meeting (Agenda Item K.5) the Council discussed soliciting EFPs to test gear types that could serve as an alternative to using drift gillnet (DGN) to catch swordfish in the west coast Exclusive Economic Zone (EEZ), or to test different approaches to contemporary DGN fishery management practices. Based on public testimony recommending that the Council develop research protocols for evaluating alternative fishing gear types and methods, the Highly Migratory Species Management Team (HMSMT) was directed to develop criteria for evaluating EFP proposals to supplement the criteria found in COP 20. The HMSMT met May 7-9 in Carlsbad, California, and drafted a report with recommendations on supplemental evaluation criteria (attached as Agenda Item E.3.b, HMSMT Report).

At the April 2014 Council meeting under the agenda item dealing with future meeting planning and workload, the Council decided to suspend the June-September EFP process as described in COP 20, to allow for the policy discussion scheduled for Agenda Item E.2 to have occurred and to first adopt evaluation criteria before soliciting and/or reviewing EFPs. Therefore, the Council needs to decide on a revised schedule for considering and adopting EFP proposals. The Council also may wish to circulate a call for EFP proposals specifically to test alternative gear types. As an example, the Council solicited EFP proposals to test electronic monitoring methods in the groundfish fishery through an announcement circulated to fishery participants and posted on the Council website (Agenda Item E.3.a, Attachment 1).

Letters have been received from Mr. John D. Hall, Zephyr Fisheries LLC and Mr. Frank Crivello III expressing interest in participating in any test of pelagic longline gear in the west coast EEZ that may be authorized under an EFP. These letters are attached as Agenda Item E.3.c, Public Comment. A letter from Oceana is also attached under Agenda Item E.3.c, Public Comment, with recommendations on criteria for evaluating EFPs.

Council Action:

Confirm Process, Intent, Schedule, and Evaluation Criteria for Current Cycle EFPs

Reference Materials:

- 1. Agenda Item E.3.a, Attachment 1: Example EFP Solicitation Notice Letter.
- 2. Agenda Item E.3.b, HMSMT Report.
- 3. Agenda Item E.3.c, Public Comment.

Agenda Order:

- a. Agenda Item Overview
- b. Reports and Comments of Advisory Bodies and Management Entities
- c. Public Comment
- d. **Council Action**: Confirm Process, Intent, Schedule, and Evaluation Criteria for EFPs beginning in 2015

PFMC 05/29/14

Kit Dahl



Agenda Item E.3.a Attachment 1 June 2014

Pacific Fishery Management Council

7700 NE Ambassador Place, Suite 101, Portland, OR 97220-1384 Phone 503-820-2280 | Toll free 866-806-7204 | Fax 503-820-2299 | www.pcouncil.org Dorothy M. Lowman, Chair| Donald O. McIsaac, Executive Director

December 12, 2013

RE: Special Exempted Fishing Permit for Electronic Monitoring

Dear Interested Participant in the Groundfish Trawl Catch Share Program:

The purpose of this letter is to provide notice and guidance regarding the development of Exempted Fishing Permit (EFP) proposals for electronic monitoring and provide a deadline for EFP submission to the Pacific Fishery Management Council (Council).

At the November 2013 Council meeting, the Council announced that at its April 2014 meeting it will consider EFP proposals submitted for the purpose of allowing the use of electronic monitoring (EM) in place of observers for vessels participating in the trawl rationalization program. In April, the Council and its advisory bodies are currently scheduled to review and consider making recommendations on applications that include EM for fishing vessels that are willing to fish under maximized retention requirements. The Council is scheduled to take up preliminary approval of applications at the April meeting. If the Council moves the EFPs forward, final approval for EFP applications advanced for further consideration is scheduled for the Council's June 2014 meeting.

The Council is considering a regulatory change for all vessels required to take human observers in accordance with the groundfish trawl catch share program. However, full fleet regulatory changes, if any, adopted by the Council are not expected to be implemented prior to January 1, 2016. Thus, the Council is considering EFPs for possible use in 2015 and beyond, depending on final implementation of new regulations providing for EM, should the Council approve any EM regulations.

The Council Operating Procedures (COP) provide guidance in the qualification, submission, purpose and content, review, and approval of EFP proposals (Go to COP 19 at: http://www.pcouncil.org/wp-content/uploads/cop19.pdf). Normally, applications are required by the November 2013 meeting; however, an exception was made for EFPs submitted for the purpose stated above. The Council encourages applicants to consider consolidating interested vessels or parties using the same gear type and proposed protocols into a single application. This will increase the efficiency for Council review. Rather than just providing an exemption from using human observers and relief from the future economic burden on the industry to pay for human observers, the use of EFPs should allow testing and refinement of the overall fishery management approach for EM that has been drafted to date for the Council. For example, EFPs could assist evaluation of discard monitoring methods, individual vessel monitoring plans, and

the data capturing and processing techniques, as well as providing an opportunity to test the fishery monitoring, assessment, and management system.

For an example of information to be included in an EFP, please visit the website at: <u>http://www.pcouncil.org/groundfish/trawl-catch-share-program-em/</u>.

In considering formal recommendations for issuance of EFPs, the Council will evaluate the impact of EFP applications on the existing workload of the National Marine Fisheries Service (NMFS). Several priority matters are currently scheduled for NMFS in 2014, such as the full fleet EM regulatory process, the groundfish 2015-2016 biennial regulatory process, the sablefish permit stacking review process, and other trawl trailing actions. A significant amount work may be necessary to implement EFPs by January 2015. At the November meeting, NMFS indicated the need for additional time to assess how processing EFP applications would affect existing timelines for completion of other matters the Council has identified as high priorities. At this time, NMFS has provided the following statement on this matter.

Exempted Fishing Permits require analysis and review that is similar to a regulatory process. Any new EFP recommended by the Council in June will have a substantial impact on NMFS' workload, depending on the complexity of the requested regulatory exemptions, the need for any new NEPA analyses, and the need to divert staff time from other duties. Because of this, NMFS will work with the Council and Council staff to balance the workload among the numerous important competing tasks.

The Council encourages applicants to provide draft EFP proposals to the Council's Groundfish Electronic Monitoring Technical Advisory Committee (GEMTAC) before submission of a complete EFP application to the Council. The GEMTAC may provide feedback to the applicants regarding completeness of the study design, feasibility of implementation, or other elements of the application that might be considered for adjustment. The GEMTAC is scheduled to meet on January 23, 2014 in Portland, Oregon; therefore, the deadline to submit draft EFPs to the GEMTAC for review is January 17, 2014. The Council encourages applicants to attend the GEMTAC meeting in person to hear any feedback that may be forthcoming. Applicants are not required to provide a draft EFP application to the GEMTAC (See <u>COP 19</u>).

If you would like the GEMTAC to review your *draft* EFPs, send your completed draft application by January 17, and include your intent to attend the GEMTAC meeting in person to:

Dr. Donald McIsaac, Attn: GEMTAC Review Pacific Fishery Management Council 7700 NE Ambassador Pl. Suite, 101 Portland, OR 97220 **Or to <u>Brett.L.Wiedoff@noaa.gov</u>** By this letter, the Council announces an EFP submission deadline of 11:59 p.m. March 12, 2014. Applications will be included in the Council's Briefing Book material for the April 2014 meeting. Applications submitted after March 12 may not be considered by the Council. Submit completed *proposed* EFP applications to:

Pacific Fishery Management Council 7700 NE Ambassador Pl. Suite, 101 Portland, OR 97220 Or via e-mail to <u>pfmc.comments@noaa.gov</u> Or to <u>Brett.L.Wiedoff@noaa.gov</u>

In the event your proposed EFP is advanced for further consideration at the June 2014 Council meeting, a final EFP application must be submitted in early June, on a specific date to be determined.

Should you have any questions on this matter, please contact <u>Brett.L.Wiedoff@noaa.gov</u> or 503-820-2424.

Sincerely,

Som par

D. O. McIsaac, Ph.D. Executive Director

BLW:kam

C: Council Members Groundfish Management Team Groundfish Advisory Subpanel Scientific and Statistical Committee

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON THE EXEMPTED FISHING PERMIT (EFP) PROCESS

Exempted fishing permits are a mechanism to test new fishery gear or operational approaches which would otherwise be prohibited under existing rules and regulations. The Pacific Fishery Management Council (Council) reviews applications for EFPs on the US West Coast and provides recommendations to National Marine Fisheries Service (NMFS) on moving forward with documentation and clearance for approval.¹ The Council requested that the Highly Migratory Species Management Team (HMSMT) consider criteria the Council can use to judge the merits of HMS EFP applications. At its meeting May 7-9, 2014, in Carlsbad, California, the HMSMT held productive conversations with stakeholders from industry (current longline and drift gillnet fishermen), the conservation community (Oceana, Wild Oceans, PEW), and researchers to identify a range of questions and criteria that should be addressed in EFP applications. Potential time, area, gear, operational, and bycatch interaction measures were discussed in detail. The HMSMT will be meeting in joint session with the HMSAS at the June Council meeting to continue the discussions with a broader cross-section of stakeholders on the EFP criteria development that commenced in Carlsbad. The HMSMT plans to submit a supplemental report with any suggested modifications to the Council's current EFP requirements (COP 20) that incorporates, among other elements, some research questions and associated considerations that are relevant to drift gillnet fishery transition task (Agenda Item E.2).

Summary of Existing HMS EFP Protocols

According to the HMS EFP <u>Council Operating Procedure</u> (COP 20), the purposes of EFPs include but are not limited to: a) promoting increased utilization of underutilized species, b) realizing the expansion potential of domestic HMS fisheries, c) increasing the harvest efficiency of HMS fisheries consistent with the MSA and management goals of the FMP, d) exploring ways to encourage innovation and efficiency in the fisheries, e) measuring bycatch associated with different fishing gears or fishing strategies (e.g., during certain times or in certain areas), and f) evaluating current and proposed management measures. Furthermore, COP 20 prioritizes applications that meet the following criteria, some of which also are required under the NMFS National EFP Guidelines:

- a. Emphasize resource conservation and management with a focus on bycatch reduction (highest priority);
- b. Encourage full retention when possible of fishery mortalities;
- c. Involve data collection on fisheries stocks and/or essential fish habitat;
- d. Encourage innovative gear modifications and fishing strategies to reduce bycatch;
- e. Encourage the development of new market opportunities; and
- f. Explore the use of incentives to increase utilization of underutilized species while reducing bycatch of non-target species and/or interactions with protected species.

¹ Submitted EFPs will be evaluated by NMFS for consistency with applicable elements of federal statutes including ESA, MMPA, and NEPA statutes.

The HMSMT discussed further considerations that the HMSMT, Highly Migratory Species Advisory Subpanel and Scientific and Statistical Committee should take into account in reviewing EFP applications. To aid understanding of these considerations they are divided into three categories: 1) statutory, 2) operational, and 3) experimental.

- 1) Statutory considerations include how the proposal satisfies legal, regulatory and administrative requirements, including:
 - a. Completeness of application
 - b. Alignment with the goals and objectives of the West Coast HMS FMP
 - c. Consistency with Council HMS EFP priorities listed above
 - d. Guidance on how the data might be integrated into management, if relevant
 - e. Existence of infrastructure to monitor the fishery, process data and administer the EFP
 - f. At-sea monitoring (observers, vessel monitoring systems, electronic monitoring) and potential source of funding to cover monitoring
 - g. Compliance with applicable Federal and State laws, as well as regulatory measures, which could include take caps or other limits on interactions with species of concern
- 2) Operational aspects include the potential for the proposed activity to succeed under realistic circumstances, including:
 - a. Reflect characteristics of actual commercial operations as much as practicable
 - b. Provide access to the fishery at times and in areas expected to be productive, taking into consideration potential impacts to protected species and species of concern
 - c. Avoid or mitigate conflicts with existing gears and fishing activities
 - d. Address expected capital requirements to enter the exempted fishery (new gear, vessels, electronic equipment, etc.)
 - e. Consider potential scale of the exempted fishery (in terms of number of vessels, jobs, fishery yield, etc.)
 - f. Reflect what is known about the marketability of the catch
- 3) Experimental aspects relate to how research questions are posed and the proposed approach for answering them:
 - a. Are research questions which the EFP proposes to answer clearly defined?
 - b. What are the experimental 'controls' and 'variables' if applicable?
 - c. What (if any) sampling stratification is needed (vessel, location, year, etc.)? Has randomization been considered in sampling design? (if randomization is a realistic expectation)
 - d. What information about survivorship of discards is already available, or can be collected?
 - e. What level of observer coverage or at-sea monitoring would be required to meet the research goals and objectives and to address compliance with EFP terms and conditions?
 - f. How will data collected be used to address research questions?
 - g. If appropriate, what are the anticipated statistical thresholds and associated sample sizes needed to answer the research questions?
 - h. Has the EFP design adequately considered the impacts to bycatch species of concern, e.g. billfish, sea birds, non-target fish?
 - i. Does the EFP include measures to increase survivorship and minimize mortality or injury to non-target species?

PFMC 05/29/14

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT EXEMPTED FISHING PERMIT (EFP) PROCESS

The Highly Migratory Species Advisory Subpanel (HMSAS) advises that during the last 15 years, the increase in restrictive regulations has created the reduction in active drift gillnet (DGN) permits. DGN fishermen need access to waters that have been diminished to the situation that we have today. That situation is that there is only a small area available only off the Southern California Coast that has space for a limited number of vessel to realistically operate. Given the presentation under Agenda Item E.2.b, Supplemental Highly Migratory Species Management Team Report, and the experience of the West Coast DGN fishermen, the proposal of harpoon gear is not economically feasible. The experimental use of buoy gear/mousetraps for the last three years has not been proven to be economically sustainable. The only proven alternative for an economically feasible and potentially less bycatch fishery is a pelagic longline fishery in the Exclusive Economic Zone. If an exempted fishing permit is approved to compare bycatch between two different gear types, then both gear types need to operate in the same area at the same time for accurate comparison. If the longline fishery is successfully permitted, the HMSAS suggests that the current DGN permitted license holders should have first option to the permitted licenses.

PFMC 06/21/14

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON EXEMPTED FISHING PERMIT PROCESS

Exempted fishing permits (EFPs) are a mechanism to test new fishery gear or operational approaches which would otherwise be prohibited under existing rules and regulations. The Pacific Fishery Management Council (Council) reviews applications for EFPs on the US West Coast and provides recommendations to National Marine Fisheries Service (NMFS) on moving forward with documentation and clearance for approval.

Initial scoping of EFP considerations was conducted by the HMSMT during the first half of 2014 and included in the June 2014 Council Briefing Book (<u>Agenda Item E.3.b, HMSMT Report</u>). Public forum discussions with fishing industry (current longline and drift gillnet fishermen), the conservation community (The Nature Conservancy, Oceana, Wild Oceans, PEW), and researchers (NOAA, academia) contributed substantially to the process. Considerations were further refined through additional consultation with stakeholders during the June 2014 Council meeting, and are described below.

<u>Balancing operational flexibility and EFP data requirements</u>. EFPs have dual purposes, including collection of data to answer specific questions while providing as much flexibility as possible for fishers to operate under realistic conditions. To accomplish this, experimental controls and variables should be defined. The definitions of, and amount of, effort (e.g. vessels, gear types, seasons, etc.) will have bearing on the power of the data to answer the questions defined in the EFP. EFPs which include approaches to phasing in increasing effort levels (i.e. number of vessels, etc.) over time could allow them to begin as pilot-like projects with effort increasing through time if the initial data justify it. If feasible, side-by-side comparison of gear performance would also be desirable. For example, a single longline EFP might aim to follow a deep-set (DSLL) with a shallow-set (DSLL) to demonstrate differences in gear performance under similar conditions like season and location.

It will be equally important for fishers to have sufficient operational flexibility to test the gear using their experience, knowledge and ability to innovate. Fishing success will vary with changes in environmental conditions through time (e.g. El Nino/La Nina), so fishing outcomes might be better or worse than expected in the short-term, but revert to more 'average' outcomes over longer terms.

<u>Time-area considerations</u>. The spatial and temporal extent of fishing activity should be clearly defined in each EFP. Not all time-area considerations would apply to all EFPs in the same ways. For example, applications to test buoy gear (e.g. vertical longlines) within a portion of the Pacific Leatherback Conservation Area (PLCA) could be taken into consideration under current regulatory schemes and desired transition goals, but applications to test modifications to DGN gear would be unlikely to be considered within the PLCA. Conflict with existing gears and within critical habitat (e.g. Pacific Leatherback critical habitat) would not be permitted.

Distance buffers from land have previously been useful definitions for the limits of allowed fishing effort. Some examples of buffers to clarify spatial extent include, 1) 100 miles from land constrains fishing outside known offshore banks in California, 2) a maximum of 75 miles from

land during February 1 – August 14 currently limits DGN fishing, 3) longline fishing is currently not permitted within 50 miles of shore in Hawaiian waters, 4) no fishing within 30 miles of the coast was specified in Mr. Dupuy's 2006 SSLL EFP application. Potential conflicts of these spatial constraints with current Federal and State regulations would need to be taken into consideration as well.

<u>Gear and/or operational configurations</u>. Intended gear setup, deployment, monitoring and retrieval would also need to be defined within an EFP. Physical length and depth of gear deployment (e.g. for longlines: mainline length, hooks-per-float, basket depth range, bait-type) would impact the expected species catch composition, and soak times have important implications for survivorship of released bycatch. Time-of-day would also need to be defined as this relates to the distribution within the water column of both target and non-target species. For example, daytime DSLL experiments conducted by the Southwest Fisheries Science Center (SWFSC) used short soak times (6 hours) and 250-350 hooks to mitigate risks to bycatch and maximize survivorship of tagged and released fish. Actively monitored gears would likely draw increased interest (such as strike indicators with buoy gear), so information to clarify the intent for active vs. passive gear monitoring would help inform EFP applications. Gear types which have been previously disallowed would be unlikely to be reconsidered (e.g., EFPs that propose reverting to longline J-hooks and squid bait would not be considered).

<u>Catch composition and species of concern</u>. Definition of the time-area and gear configurations within an EFP should enable an estimation of expected catch composition. Information about the current abundance of 'target' species (e.g. swordfish) should be considered. Likewise, information regarding potential catch ratios of marketable catch (e.g. opah) vs. non-marketable catch (e.g. blue shark) should be taken into consideration. Implications for existing fisheries and fleets (e.g. albacore, thresher shark) should be examined. Takes of quota species (e.g. bigeye and bluefin tuna) would count towards established limits.

The possible impacts on Protected Species (e.g. leatherback turtles) and species of concern (e.g. striped marlin) should be taken into account as well. Take caps on protected species would apply to EFPs. Existing information about the survivorship of discarded catch (e.g. striped marlin) should be provided; otherwise collecting this information in the EFP would be desirable. The probability of encountering some species of concern (e.g. striped marlin) might change with oceanographic conditions (e.g. El Nino/La Nina, climate change) and these changes should be acknowledged, wherever possible.

<u>Observed effort</u>. It would be necessary to provide confidence in catch compositions (including 'target' species, 'marketable' species, and protected species) through independent observation. Achieving this might be accomplished through on-board observers, electronic monitoring (EM), or both. Given the proposed amount of effort (e.g. number of vessels and sets), the feasibility of achieving adequate observer coverage should be considered. Facilities to accommodate observers on EFP vessels would be required, and the existence of Vessel Monitoring System (VMS) or ability to install it on EFP vessels should be stated in applications.

The costs of on-board observers can be substantial, so fiscal conditions may not always allow for 100% on-board coverage. However, some gears might not require 100% coverage due to lower bycatch concerns (e.g. only 20% coverage in buoy fishery vs. 100% in longline fishery). If some

or all of the effort observation needed can be achieved with approved EM methods, this should be pointed out. EFPs proposing to test or develop new EM methods should be encouraged.

Recommendations of the HMSMT

The dual objectives of collecting useful data for answering specific research questions while also allowing significant operational flexibility to EFP applicants should be balanced when considering each EFP proposal. It would not meet an EFP's objectives to either collect inadequate data or to be overly prescriptive on applicants. If the Council decides to move forward with a request for EFP applications, the HMSMT makes the following recommendations.

- Existing permit holders (e.g. current DGN permit holders) should be given priority over outside fishers (e.g. Hawaiian operators) to ensure preservation of opportunity for local operators.
- Consideration of viable gear should include DSLL and SSLL, as well as buoy gear.
- Longline proposals should meet standards comparable to those applied to Hawaiian longline fishers (e.g. use circle hooks and mackerel baits).
- Longline mainline length and number of hooks in proposals should be comparable to current swordfish industry standards.
- Proposals which include longline gear should consider defining coastal distance buffers (30, 50 miles, etc.).
- Applications to use DGN gear that operate within existing constraints (e.g. time-area closures, gear configurations, etc.) and aim to reduce bycatch should also be considered.
- Applications proposing new gear innovations should be considered.
- The number of permitted EFP vessels should be a function of the ability to provide adequate observer coverage.
- Restrictions on fishing in sensitive habitat areas should be considered.
- EFPs should meet state and federal laws and regulations (including future take caps).
- Striped marlin retention should remain prohibited.
- Data collected under EFPs should be made publically available.

PFMC 06/22/14

Agenda Item E.3.c Public Comment June 2014

Mr. Kit Dahl Pacific Regional Fisheries Management Council 7700 N.E. Ambassador Place Suite 110 Portland, OR 97220

Re: Letter of Intent

Dear Mr. Dahl,

I am writing to you today to express my intent to participate in an experimental pelagic longline fishery off the West Coast of the United States and operating inside the US EEZ.

I was born and raised in San Diego, California and am a third generation California commercial fisherman. I participated in the drift gillnet fishery off California from 1978 to 2001 with F/V Roberta Grace and have made landings in California of HMS taken by my current commercial fishing vessel, Laura Ann (ON:672662). My current boat has also participated in the pelagic longline fisheries in Am. Samoa and Hawaii and it is my intent to return to California and to make pelagic longline landings in California.

I am very interested in participating in an experimental pelagic longline permit program, if one is developed by the PRFMC.

Thank you for your consideration.

Sincerely,

Frank Crivello

Frank Crivello III Crivello Fishing Inc.

ZEPHYR FISHERIES LLC

242 Rosa Corte Walnut Creek, CA 94598 925.937.9251(fax) 925.989.4701(cell) dex1007@sbcglobal.net



May 19, 2014

Mr. Kit Dahl Pacific Regional Fisheries Management Council 7700 N.E. Ambassador Place Suite 110 Portland, OR 97220

Re: Letter of Intent

Dear Mr. Dahl,

I am writing to you today to express my intent to participate in an experimental pelagic longline fishery off the West Coast of the United States and operating inside the US EEZ.

I am a lifelong resident of California and was educated at Humboldt State University and the University of California, Santa Cruz. I began fishing for HMS off Baja California, Mexico in 1948 and have been a commercial fisherman since 1977, fishing in California, Alaska, American Samoa and Hawaii.

My current commercial fishing vessel, Zephyr (ON 1101877) has been home ported in San Francisco since she was delivered in 2001, and my former CFV, Ladysmith, also home ported in San Francisco and had longline and troll landings in California during the 1990's. If an experimental pelagic longline experimental permit program is developed by the PRFMC I would like to be included in the program.

Thank you for your consideration.

Sincerely,

John D. Hall

John Hall Zephyr Fisheries LLC Coastal & Offshore Pacific Corp.



Protecting the World's Oceans

99 Pacific Street, Suite 155-C Monterey, CA 93940 USA +1.831.643.9267 oceana.org

May 23, 2014

Ms. Dorothy Lowman, Chair Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220

RE: E.3 HMS Exempted Fishing Permit (EFP) Process

Dear Chair Lowman and Council Members:

The Pacific Fishery Management Council has a great responsibility to protect our ocean resources and the California Current large marine ecosystem. Exempted Fishing Permits (EFPs) can be useful tools to support research and test experimental gears but should not, and cannot, be used to avoid conservation measures and allow applicants to benefit financially. As you know, we are opposed to the continued authorization of large mesh drift gillnets for targeting swordfish off our coast and we support the Council's goal of transitioning the current drift gillnet fishery toward a fishery utilizing a suite of more environmentally and economically sustainable gear types that can effectively target swordfish.

As stated in our letter under agenda item E.2, Oceana supports the current prohibition on pelagic longlines due to serious bycatch concerns associated with pelagic longline gear. The baseline for an environmentally sustainable gear for targeting swordfish ought to be the existing harpoon fishery that has already demonstrated, from decades of use, that this gear can be used to selectively target swordfish without bycatch. We support continued experimentation with buoy gear and we support ideas to help the existing harpoon and surface (hand-held) hook and line fisheries expand and innovate. Before considering any EFPs, however, the Council must establish performance standards and criteria for which proposals and ultimately success can be evaluated. We offer the following recommendations for proposals designed to catch swordfish and the subsequent ten principles for the EFP process in general.

- Before any EFP is issued to test the use of hooks to target swordfish, it must be demonstrated that the proposed gear is fundamentally different than existing pelagic longline gear used out of Hawaii and on the Atlantic, with a high likelihood of having significantly lower bycatch rates and amounts across all species.
- If the gear is likely to take any species other than swordfish, 100% observer coverage must be required to document all animals caught, bycatch caps must be pre-established for all species (particularly protected species) and the experiment must be immediately ended if any cap is reached.
- If the experimental gear cannot meet pre-defined performance standards for bycatch e.g. a minimum percentage of the catch must be swordfish, a minimum percentage is retained marketable species and bycatch mortality of non-target, protected and vulnerable species is fully minimized–the experiment should end and the gear must not be allowed to go forward.

Ms. Dorothy Lowman Page 2 of 2

Further, to ensure that the Council's Highly Migratory Species EFP process contains appropriate standards to guide the Council, the agency, and applicant, the process and criteria must include the following ten principles:

- 1. EFPs must provide for ecosystem-based management and the precautionary approach;
- Prior to the issuance of an EFP, all required analyses and consultations must be completed, including, but not limited to, those required under the National Environmental Policy Act, Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act, the Endangered Species Act (ESA), and the Marine Mammal Protection Act;
- 3. EFPs may not be subject to categorical exclusion from NEPA review;
- 4. NMFS may issue an EFP only if it will not detrimentally affect an ESA-listed species;
- 5. NMFS may issue an EFP only if it will not cause detrimental impacts to the critical habitat of an ESA-listed species;
- 6. The public must be allowed full and meaningful participation in the EFP consideration process, meaning that all environmental analyses and consultations should be completed for public review and comment opportunities prior to final action, approval and issuance, and that the public is given the opportunity to provide written comments to the PFMC and the agency;
- 7. The PFMC and NMFS must ensure that fishing under an EFP does not exceed a bycatch cap or total allowable catch cap set by regulations;
- 8. EFPs must include detailed descriptions of experimental or sampling designs that adhere to accepted scientific standards including an explicit statement of testable hypotheses, a statistical power analysis and rationale for sample sizes, and a critical assessment of the validity of all assumptions. These designs and their attending results must be anonymously peer-reviewed by at least three qualified independent scientists who are not affiliated with NMFS, the PFMC, or any commercial concern having a direct interest in the results, and must obtain the approval of at least two of the reviewers. The experiment must be conducted to produce non-conflicted scientific results and all data produced pursuant to an EFP must be made available to the public;
- 9. EFPs must comply with fishery observer or bycatch reporting requirements; and
- 10. An EFP shall not be issued if economic allocation is its sole purpose.

Thank you for your consideration on this matter. We look forward to working with you on experimental fishing that will protect our nation's fishery resources and the California Current marine ecosystem.

Sincerely,

2 Stest

Geoff Shester California Campaign Director

INITIAL SCOPING OF BIENNIAL SPECIFICATIONS AND MANAGEMENT MEASURES

Chapter 5 in the Fishery Management Plan (FMP) for U.S. West Coast Fisheries for Highly Migratory Species (HMS) describes the biennial management cycle. Under this process, Council decision-making occurs at the June, September, and November Council meetings to establish or adjust harvest specifications and management measures for a two-year period beginning on April 1 of the following year—the start of the next fishing year. This agenda item commences the fifth biennial management cycle since FMP implementation, with any regulations proposed by the Council becoming effective on or after April 1, 2015. Such regulations continue in effect for at least two years unless subsequently modified through the Council process. The FMP also authorizes the use of the biennial process to identify, adopt, and review revised estimates of maximum sustainable yield, optimum yield, and any related status determination criteria, based on the best scientific information.

On April 8, 2013, the Council received notification from National Marine Fisheries Service (NMFS) that Pacific bluefin tuna continues to be subject to overfishing and is now overfished (see <u>Agenda Item D.4</u>, <u>Situation Summary</u>, <u>June 2013</u>). As part of its response, the Council said they would consider recreational bag limits for Pacific bluefin tuna during the next biennial management cycle. The HMS Management Team (HMSMT) has prepared a report providing background information on commercial and recreational catch of bluefin in west coast fisheries. As part of the first biennial process in 2006, the Council considered alternatives for recreational fishery bag limits for albacore and bluefin tuna in Federal waters off of California (see <u>Agenda Item C.2</u>, <u>Situation Summary</u>, <u>November 2006</u>). The Council adopted bag limits for albacore but not bluefin at that time. The Council received letters from Pew Charitable Trusts, detailing both domestic and international actions to end overfishing of Pacific bluefin, and from the Center for Biological Diversity advocating a ban on all catch of Pacific bluefin. As of the advanced briefing book deadline, the Council had also received 30,999 emails with the same message advocating the ban of all fishing for Pacific bluefin tuna.

At the March 2014 Council meeting, NMFS Office of Law Enforcement recommended increasing the "ping rate" (number of transmissions) for vessels required to operate a vessel monitoring system (VMS) unit when participating in the groundfish fishery. In the past year, two separate VMS requirements have been developed for west coast vessels fishing for HMS. First, an emergency/temporary rule (78 FR 54548, September 4, 2013, since renewed, 79 FR 29377, May 2, 2014) requires California drift gillnet vessels to install and operate a VMS unit. Second, Inter-American Tropical Tuna Commission (IATTC) Resolution C-04-06 requires "tuna-fishing vessels 24 meters or more in length operating in the eastern Pacific Ocean and harvesting species for which the Commission has established conservation and management measures" to install and operate a VMS unit. On February 6, 2014 (79 FR 7152) NMFS published a proposed rule to implement domestic regulations for this second requirement. Because there is a question as to whether there is a need to increase the VMS ping rate for HMS vessels as well as groundfish vessels, it is mentioned as part of the Council action as a potential enhancement.

Pete Dupuy submitted a letter (Agenda Item E.4.c, Public Comment) notifying the Council of his intent to petition the Council to issue him a shallow/deep set commercial pelagic longline fishing

permit for all waters under the jurisdiction of the Council HMS FMP. The letter states that the petition will be submitted supplementally. When implemented, the HMS FMP was partially disapproved so that the portion allowing fishing with shallow-set longline gear was not implemented, based on the Endangered Species Act (ESA) Section 7 consultation Biological Opinion for the FMP (see Agenda Item G.2.a, Attachment 1, April 2004). In the disapproval letter and subsequently, NMFS has encouraged the Council to consider management measures that would allow a shallow-set longline fishery to operate in a manner addressing the requirements of the ESA. The HMS FMP also prohibits the use of pelagic longline gear to target HMS within the U.S. Exclusive Economic Zone (EEZ; implemented at 50 CFR 660.712(a)). As part of the biennial process, the Council could consider regulatory changes that would allow a shallow-set longline fishery to operate. Implementation of limited entry programs and allowing a longline fishery in the EEZ (other than through approved activities under an EFP) are identified as fixed elements of the HMS FMP that can only be changed through an FMP amendment (FMP Section 2.4). Therefore, the Council would also have to amend the FMP if it wanted to establish a limited entry permit for this activity and/or change the current prohibition on using the gear in the EEZ.

Council Action:

Identify Issues for Consideration in the Biennial Process, Including Bluefin Tuna Bag Limits and Vessel Monitoring System Enhancements.

Reference Materials:

- 1. Agenda Item E.4.b, HMSMT Report.
- 2. Agenda Item E.4.c, Public Comment.

Agenda Order:

a. Agenda Item Overview

Kit Dahl

- b. Reports and Comments of Advisory Bodies and Management Entities
- c. Public Comment
- d. **Council Action**: Identify Issues for Consideration in the Biennial Process, Including Bluefin Tuna Bag Limits and Vessel Monitoring System Enhancements

PFMC 05/29/14

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON INITIAL SCOPING OF BIENNIAL SPECIFICATIONS AND MANAGEMENT MEASURES

For initial scoping the Highly Migratory Species Management Team (HMSMT) provides information on one topic, recreational catch limits for bluefin tuna, as potential management measures to be implemented during this biennial process. The HMSMT may produce a supplemental report should new topics arise regarding other HMS fisheries, such as swordfish fisheries, which may warrant consideration during this biennial management process.

In response to notification that the stock of Pacific bluefin tuna is overfished, the Council reported to NMFS in its letter dated April 1, 2014 that it would evaluate current catch limits for west coast recreational fisheries as part of its biennial management process beginning in June 2014. A year ago, the Council requested information to inform its discussion on their response to the notification (Agenda Item D.4.b, HMSMT Supplemental Report 2, June 2013; <u>http://www.pcouncil.org/wp-content/uploads/D4b_SUP_HMSMT_RPT2_JUN2013BB.pdf</u>). Specifically, the Council requested information on:

- Applicable recreational regulations and international conservation measures,
- U.S. catches by sector, and
- Recreational catches for the three West Coast states.

This report provides updates, as available, and supplements information the HMSMT provided in June 2013.

Current conservation objectives regarding Pacific bluefin tuna

Pacific bluefin tuna (PBF) is managed through catch controls in the eastern Pacific Ocean (EPO) and through effort controls and juvenile catch controls in the western and central Pacific Ocean (WCPO). Consistent with Inter-American Tropical Tuna Commission (IATTC) Resolutions C-12-09 and C-13-02, the United States has undertaken rulemakings (78 FR 1810) to implement catch limits for U.S. commercial vessels fishing in the EPO. These limits included a Commission-wide limit averaging 5,000 mt per year and a minimum limit of 500 mt, notwithstanding the Commission-wide limit, for each member nation with historical catches in the EPO. Resolution C-12-09 was based on the results of the 2008 International Scientific Committee for Tuna and Tunalike Species in the North Pacific Ocean (ISC) PBF stock assessment, which indicated that the stock was experiencing overfishing. Resolution C-13-02 extended the catch limits through 2014, and was based on a full assessment conducted by the ISC in 2012 (using data through 2010). Since the institution of these limits in the EPO. Mexico continues to account for the vast majority of PBF catch under the Commission-wide limit. In December 2013, the Western and Central Pacific Fisheries Commission (WCPFC) adopted CMM 2013-09 specifying that "total fishing effort by their vessels fishing for PBF in the area north of the 20 degrees north shall stay below the 2002-2004 annual average levels for 2014¹. Such measures shall include those to reduce all catches of

¹Japan's Fisheries Agency publicly announced its plan to cut its catch of juvenile bluefin tuna by half of its annual average in the years 2002 to 2004, starting in 2015. The plan was set by the agency to help protect the declining stocks

juveniles (age 0-3 (less than 30 kg)) [at least by 15 percent less than] the 2002-2004 annual average levels." This measure is the similar to the CMMs adopted in 2012 and previous years, but is more constraining in requiring the 15 percent reduction in juvenile catches.

The ISC's PBF Working Group, with contributions from NMFS scientists, updated the 2012 assessment of PBF in March 2014 with results very similar to their previous analysis indicating that the stock is still experiencing overfishing and remains severely overfished (spawning stock biomass (SSB) estimated to be about 4 percent of unfished SSB). Although no target or limit reference points have been established for the PBF stock under the auspices of the WCPFC and IATTC, the current fishing mortality rate exceeds all target and limit biological reference points commonly used by fisheries managers (except for F_{loss}^2). Additionally, the assessment estimated that recruitment in 2012 was the eighth lowest in 61 years and the average recruitment level for the last five years may have been below the historical average level. Based on projection results, the ISC advises that current WCPFC and IATTC management measures for 2014, if continued, are not expected to increase the SSB if recent low recruitment continues.

Current recreational catch limits for Pacific bluefin tuna

The current conservation measures for Pacific bluefin tuna do not apply to recreational fisheries; however IATTC scientific staff recently recommended that in 2014 the Commission adopt a commercial catch limit below 3,154 mt, which was the estimated commercial catch in 2013, and that the non-commercial catches be limited below 208 mt.

At the Federal level, daily bag limits for bluefin tuna in the U.S. Exclusive Economic Zone (EEZ) apply off California and are twice as high as those in neighboring Mexico (10 fish per angler per day versus 5 fish in Mexico waters), although the effort and catch in the U.S. EEZ is significantly lower than effort and catch in the Mexico EEZ. Daily catch limits (bag limits) and possession limits also differ among all three west coast states (Table 1).

Regulatory Area	Daily Catch Limit	Possession Limit
Mexico EEZ	5 bluefin	15 bluefin
U.S. West Coast EEZ	10 bluefin off California	30 bluefin off California
California	10 bluefin	30 bluefin
Oregon	Up to 25 in an aggregate	Up to 50 in an aggregate offshore
	offshore pelagic species limit	pelagic species limit
Washington	2 bluefin	No limit

 Table 1. Current maximum catch limits for recreational fisheries for Pacific bluefin tuna.

Commercial and recreational landings of Pacific bluefin tuna in the North Pacific Ocean

The U.S. accounts for a relatively small percentage (<5 percent) of bluefin catches in the North Pacific Ocean. Annual landings of Pacific bluefin tuna in the North Pacific Ocean by country and by U.S. commercial and recreational gears for 2000 through 2012 are provided in Appendix Table A, excerpted from Table 14-2 in the ISC plenary report for 2013. Data from this ISC table are summarized below to compare commercial landings patterns among countries during the most

of tuna in the Pacific Ocean. The agency is planning to submit the proposal to a subcommittee meeting of the WCPFC in September.

² The fishing mortality corresponding to the lowest observed spawning stock and associated recruitment.

recent decade and to show the relative magnitude of U.S. fisheries. These data show that landings by both the U.S. commercial and recreational sectors are relatively low, compared to most other nations, and each fishery has landed less than 700 mt annually during 2000-2012, often much less. Note that U.S. fishery landings reported in Table 1 (and in Appendix Table A) represent combined landings for the U.S. West Coast and Hawaii.

Table 2. Range in annual commercial landings (mt) of Pacific bluefin tuna by nation during 2000-2012 and in2012, the most recent year these statistics were available.U.S. recreational landings (mt) are also shown inthe last row. (Source: ISC Plenary Report, Table 14-2, July 2013).

Landings Range (mt)	Landings (mt)	
during 2000-2012	in 2012	
213 - 2,782	213	
6,283 - 24,579	6,283	
670 - 2,601	1,422	
863 - 9,927	$6,668^{1}$	
1 - 754	43 ¹	
14 620 20 106	$14,629^{1}$	
14,029 - 29,100		
14 - 654	6171	
	Landings Range (mt) during 2000-2012 213 – 2,782 6,283 – 24,579 670 – 2,601 863 – 9,927 1 – 754 14,629 – 29,106 14 – 654	

¹ provisional estimate

For the U.S. West Coast, annual commercial landings have been less than about 200 mt since 2001, except during 2009, when they reached 415 mt (see Appendix Table B).

West Coast recreational landings of bluefin tuna

California, Oregon and Washington have dockside sampling programs for recreational fisheries. Recreational landings into California ports come from U.S. anglers fishing from private boats or commercial passenger vessels, fishing either in U.S. waters or off Mexico. Private recreational vessels returning from Mexico are sub- sampled through intercept surveys as part of the general random sampling frame. However, landings estimates for anglers fishing from private vessels off Mexico are not generated because sampling coverage is not sufficiently comprehensive to produce reliable estimates of landings. State sampling programs for Oregon and Washington recreational fisheries show that recreational landings of bluefin tuna off both states have been negligible. Since 2003, the highest catch by Oregon anglers (private and charter vessels combined) was an estimated 40 bluefin tuna taken during more than 12,000 trips targeting albacore in 2009 (see Appendix Table C).

Based on available information for 2001-2013, anglers fishing from California-based commercial passenger vessels (CPFV) commonly account for the majority of West Coast recreational landings of bluefin tuna. Landings into California from U.S. and Mexico waters ranged from a low of 1,030 fish in 2007 to a high of 63,588 fish during 2013 (Table 4). If these fish averaged approximately 30 pounds (13.6 kg) [Mr. Buzz Brizendine, personal communication], then anglers from commercial passenger vessels landed about 867 mt of bluefin tuna in 2013. Most of these fish were caught in waters off Mexico, as is typical. In most years since 2001, over 80 percent of annual landings from commercial passenger vessels were taken in waters off Mexico (Table 4). The higher U.S. landings of bluefin in Mexico waters in 2012 and 2013 may be attributed in part to the decreased Mexican purse seine effort in those years due to quota limitations imposed by IATTC resolution (C-12-09). The resolution established a Mexico flag quota for bluefin that was

fully exploited by the Mexican purse seine fleet in 2012 and 2013. The Mexican fleet ceased fishing when the quota was filled which resulted in increased opportunity by the U.S.-based CPFV and private vessels fishing in Mexico and the U.S. Favorable ocean conditions continued late into the summer and fall in both years and possibly due to these factors there were increased catches in northern Baja California and in the Southern California Bight.

Year	Landings from U.S. waters	% from U.S.	Landings from Mexico waters	% from Mexico	Total Landings
2001	3,937	18%	18,416	82%	22,353
2002	13,269	40%	20,323	60%	33,592
2003	2,894	13%	19,803	87%	22,697
2004	506	15%	2,937	85%	3,443
2005	724	13%	5,064	87%	5,788
2006	1,356	18%	6,143	82%	7,499
2007	187	18%	843	82%	1,030
2008	3,245	31%	7,092	69%	10,337
2009	2,794	23%	9,357	77%	12,151
2010	327	4%	8,310	96%	8,637
2011	2,743	9%	28,830	91%	31,573
2012	5,689	14%	34,757	86%	40,446
2013	6,587	10%	57,001	90%	63,588

Table 4. Annual landings (number of fish) in California and Mexico waters by U.S. charter vessels during2001-2013. (Source: California Fisheries Information System (CFIS), Commercial Passenger Fishing Vessel(CPFV) logbook data, extracted April 15, 2014).

In addition to landings by anglers fishing from commercial passenger vessels, private anglers also landed bluefin tuna. Since 2004, annual estimates for private angler landings into California taken from U.S. waters only have typically totaled a few hundred fish, ranging from 2 fish in 2010 to almost 400 fish in 2008 (Table 5). The number of bluefin tuna caught by private anglers in waters off Mexico and brought back to the U.S. West Coast is not known.

Table 5. Estimated recreational landings (number of fish) of Pacific bluefin tuna by California private/rental vessels fishing in U.S. waters, 2004-2013.² (Source: California Recreational Fisheries Statistics (CRFS); extracted April 29, 2014).

Year	Number of Fish
2004	106
2005	91
2006	217
2007	6
2008	399
2009	244
2010	2
2011	57
2012	29
2013	243

²Data prior to 2004 are not provided because estimates from RecFIN during 2003 and prior federal sampling estimates are not directly comparable to data collected 2004 and later (California Recreation Fisheries Survey, CRFS) due to changes in sampling methods.

Based on information from 233 angler bags with bluefin tuna during 2007-2013, most anglers (95 percent) landed five or fewer fish per day (Table 6). Of these 233, nine anglers bagged between six and ten fish (the maximum daily bag limit in Federal and state waters off California). For this bag analysis, data were extracted for bluefin tuna landed with a bag limit of 10 fish (all subregions and fishing modes). Fish that were actually observed dockside by the sampler and fish reported by anglers (as distinguished from fish released alive) were included in the analysis.

Bag Size	Bag Frequency (number)	Bag Frequency (percent)	Cumulative Frequency (percent)
1	184	47%	47%
2	20	16%	64%
3	7	16%	80%
4	9	10%	90%
5	4	5%	95%
6	4	1%	96%
7	2	2%	98%
8	1	1%	99%
10	2	1%	100%

 Table 6. Frequency of occurrence for bluefin tuna in angler landings on the West Coast during 2007 - 2013.

 (Source: RecFIN, extracted May 14, 2014).

Appendix Tables

	Commercial Landings (mt)						United	CDAND
Year	Japan	Korea	Taiwan	United States	Mexico	TOTAL	States Recreational	TOTAL
2000	24,579	2,401	2,782	754	3,118	33,634	342	33,974
2001	14,211	1,186	1,843	340	863	18,443	356	18,800
2002	14,186	933	1,527	62	1,710	18,418	654	19,073
2003	10,406	2,601	1,884	40	3,254	18,185	394	18,580
2004	14,100	773	1,717	11	8,894	25,495	49	25,543
2005	21,668	1,318	1,370	208	4,542	29,106	79	29,186
2006	14,178	1,012	1,150	2	9,927	26,269	96	26,365
2007	14,706	1,281	1,411	44	4,147	21,589	14	21,603
2008	17,715	1,866	981	1	4,407	24,970	93	25,063
2009	14,598	936	888	415	3,019	19,856	176	20,032
2010	8,287	1,196	409	1	7,746	17,639	122	17,761
2011	13,787	670	316	120 ¹	2,731 ¹	17,624 ¹	499 ¹	18,122 ¹
2012	6,283 ¹	1,422	213	43 ¹	6,668 ¹	$14,629^1$	617 ¹	$15,246^{1}$

Appendix Table A. Annual landings (mt) of Pacific bluefin tuna in the North Pacific Ocean by country and by U.S. gears, 2000-2012. (Source: Table 14-2 in International Scientific Committee Plenary Report, July 2013).

¹provisional estimates

Appendix Table B. West Coast commercial landings (mt) of Pacific bluefin tuna, 2001-2013 (all gears). (Source: 2013 HMS SAFE, Table 4, unpublished, PacFIN, extracted April 26, 2014).

Year	Landings
	196
2001	
2002	10
2003	36
2004	10.1
2005	207
2006	1
2007	45
2008	1
2009	415
2010	1
2011	118
2012	43
2013	10

Appendix Table C. Estimated recreational catch (numbers) of Pacific bluefin by all tuna anglers in Oregon. (Source: Oregon Department of Fish and Wildlife).

Year	Estimated Number of Tuna Angler Trips	Estimated Number of Bluefin Caught
2003	2,248	0
2004	1,359	2
2005	3,023	0
2006	4,068	0
2007	2,456	15
2008	3,333	2
2009	12,029	40
2010	7,105	0
2011	10,353	38
2012	11,311	27
2013	9,434	11

PFMC 05/30/14

ENFORCEMENT CONSULTANTS REPORT ON INITIAL SCOPING OF BIENNIAL SPECIFICATIONS AND MANAGEMENT MEASURES

The Enforcement Consultants (EC) has reviewed the documents and attachments pertaining to Agenda Item E.4. The EC also received a briefing on this agenda item from Ms. Heidi Taylor of National Marine Fisheries Service (NMFS) and has the following comments.

Regarding applicability of increased vessel monitoring system (VMS) ping-rate, as is being considered under this meeting's Groundfish Omnibus Regulation Changes agenda item, the EC recommends increased VMS ping-rate be applicable to the California drift gillnet (CGDN) fishery. This is consistent with the EC's statement in support of the NMFS Office of Law Enforcement report at the March 2014 PFMC meeting. The EC does not recommend the increased VMS ping-rate be applied to vessels equipped with VMS under the Inter-American Tropical Tuna Commission (IATTC) resolution requiring VMS on tuna-fishing vessels over 24 meters operating in the eastern Pacific Ocean. Vessels equipped with VMS pursuant to the IATTC requirement are not subject to time and area closure and continuous transit requirements that would be enforced from the increased ping rate.

PFMC 06/22/14

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT ON INITIAL SCOPING OF BIENNIAL SPECIFICATIONS AND MANAGEMENT MEASURES

Potential Domestic Action on Pacific Bluefin Recreational Bag Limits

The Highly Migratory Species Advisory Subpanel (HMSAS) opposes restrictions on recreational catch of bluefin tuna at this time for the following reasons:

- 1. Any restrictions would be premature in the absence of future international agreements aimed at managing the stock. The US recreational catch historically has been less than 1 percent of the catch of northern Pacific bluefin tuna. The history of international action on tuna has exempted such catches as inconsequential and unnecessary to the management of these fish. We advise that the Council recommend that this approach be continued. Domestic management is highly preferred for recreational catch.
- 2. Inseason management would be very difficult due to slow reporting of recreational catches by the Commercial Passenger Fishing Vessel (CPFV) fleet and questionable accuracy of the private vessel survey for offshore fish.
- 3. The economic effects would be far-reaching beyond the actual value of the fish caught including tax revenues, tourism, jobs, and contributions to local infrastructure.
- 4. The CPFV fleet would be disproportionally impacted by any regulatory action on Bluefin tuna. This fleet effectively supplies the only affordable access for most US citizens to participate in this fishery.
- 5. Unilateral or separate action by the Council should not be taken on recreational catch of bluefin tuna. Any action taken should be a necessary element of implementing an international agreement. Only in this way can the economic impacts on recreational fishing be assured of being both fair and minimized.
- 6. Based on a recommendation by the Sportfishing Association of California (SAC) regarding the reported decline of the North Pacific bluefin tuna stock, the HMSAS recommends that, if necessary, the daily catch limit of North Pacific bluefin tuna by recreational fishermen be limited to five fish per day. This is a 50 percent reduction from the current limit of ten fish per day per angler.
- 7. Due to the difficulty of safely handling bluefin tuna for the purpose of measuring the fish, the HMSAS recommends that size limits not be considered.

Shallow Set Longline Permit Request for Mr. Pete Dupuy

The HMSAS kindly reminds the Council that in 2006 the Council approved an exempted fishing permit for Mr. Pete Dupuy to test shallow-set longline (SSLL) inside the west coast Exclusive Economic Zone. That approved permit had many restrictions including the following:

Alternative 3 incorporates all of the terms and conditions imposed in alternative 2 including, among other things:

- No fishing within 30 miles of the coastline
- No fishing within the Southern California Bight
- Compliance with existing highly migratory species fishery management plan protected species conservation measures
- Mandatory 100 percent observer coverage
- A cap on total fishing effort
- Fishing conducted between September and December
- Use of 18/0 circle hooks with 10° offset
- Use of mackerel bait and light sticks."

Source: Agenda Item J.2.c, Supplemental HMST Report, April 2006

Similar conditions are proposed for the fishery that Mr. Dupuy is requesting his permit. These conditions reflect or exceed regulatory requirements of the current Hawaiian longline fishery.

The proposed fishing based on the 2006 permit was thoroughly analyzed by the HMS Management Team for potential encounters on species of concern as well as potential bycatch. The HMSAS suggests that issuing a similar permit for the 2015 fishing season is an opportunity to create equality for West Coast fishermen that the Atlantic and Hawaiian longline fishermen are currently experiencing. Currently Hawaiian longline swordfish vessels are delivering into west coast ports while west coast fishermen are unfairly denied this opportunity. Also, allowing this west coast fishery will reduce the quantity of imported swordfish that is currently supplying the market by unregulated foreign fisheries.

Please allow this described permit request to go forward under this agenda item, *Initial Scoping of Biannual Specifications and Management Measures*.

Drift Gillnet VMS Ping Rate

It was brought to the attention of the HMSAS that the Enforcement Consultants are proposing increasing the ping rate on the vessel monitoring system from one hour to 15 minutes for drift gillnet (DGN) vessels. The HMSAS wants to bring to Council's attention that it takes 45 minutes to set a large mesh drift gillnet and it takes a minimum of three hours to recover a drift gillnet, regardless of the soak time.

The HMSAS sees no advantage of increasing the required ping rate from one hour to 15 minutes from an enforcement standpoint, because there is no way that the fishermen can move in and out of a closed area in less than one hour. This proposed ping rate change has no practical use and will be another increase in expense for the DGN fishermen.

The HMSAS highly encourages Council to retain the ping rate at its current rate of one hour and not proceed under this agenda item, *Initial Scoping of Biannual Specifications and Management Measures*.

Pacific Bluefin Tuna Conservation

- Overfished status & overfishing occurring
- Catch controls in EPO & effort/catch controls in WCPO
- IATTC scientific staff recommendations:
 - Reduce commercial catch limits
 - Reduce mortality on juveniles
 - Set a recreational catch limit (~208 mt)

Pacific Bluefin Tuna Recreational Bag Limits

Regulatory Area	Daily Catch Limit	Possession Limit	
Mexico EEZ	5	15	
U.S. West Coast EEZ	10 off CA	30 off CA	
California	10	30	
Oregon	Up to 25 in aggregate limit	Up to 50 in aggregate limit	
Washington	2	No limit	



US West Coast Recreational Landings



Numbers of Fish

4

California Bag Limit Analysis



CPFV Bluefin Landings



Data Limitations



- Lack estimated landings for the Mexican recreational fishery
- RecFIN estimates of landings (CRFS) for charters and private vessels do not include landings of fish caught in Mexico
- Limited sampling to obtain representative fish size information

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON INITIAL SCOPING OF BIENNIAL SPECIFICATIONS AND MANAGEMENT MEASURES

The Highly Migratory Species Management Team (HMSMT) provides supplemental and revised information on the recreational fishery for bluefin tuna previously provided in the HMSMT Report under this agenda item. Information is provided on two additional topics for management measures to be potentially implemented under the biennial process:

- 1) Mr. Pete Dupuy's request to establish a longline fishery in the Exclusive Economic Zone (EEZ) for swordfish and tuna (Supplemental Public Comments 1 and 2, Agenda Item E.4.c), and
- 2) 2) Enforcement Consultants' request to change Vessel Monitoring System (VMS) requirements for the Drift Gillnet (DGN) fishery.

Recreational Fishery for Bluefin Tuna

Estimates of recreational landings by the anglers on California charter vessels in Table 4 of the HMSMT Report were revised and presented in Table 1 below. The annual estimates of total landings decreased very slightly, ranging from 2 to 446 fish. In addition, the estimates are subdivided into landings from U.S. waters, Mexico waters, and U.S.-Mexico waters. The landings into California from U.S.-Mexico waters are from statistical reporting blocks that straddle the U.S.-Mexico border. In addition, the estimated annual total number of angler days targeting tuna fishing from charter vessels is provided. During 2001-2013, angler effort ranged from over 200,000 angler days during 2001 and 2002 to below 75,000 angler days during 2010 and 2011.

Table 1. Annual landings (number of fish) in California and Mexico waters and number of tuna –targeted angler days for U.S. charter vessels during 2001-2013. (Source: California Fisheries Information System (CFIS), Commercial Passenger Fishing Vessel (CPFV) logbook data, extracted April 15, 2014.)

Year	Landings From U.S. waters	% From U.S.	Landings from U.SMexico waters	% From U.S Mexico	Landings from Mexico waters	% From Mexico	Total Landings	Total Number of Tuna Angler Days
2001	3,796	17%	33	0%	18,078	83%	21,907	223,511
2002	12,266	37%	979	3%	20,153	60%	33,398	212,648
2003	2,733	12%	125	1%	19,433	87%	22,291	192,773
2004	438	13%	47	1%	2,906	86%	3,391	197,334
2005	686	12%	37	1%	5,034	87%	5,757	133,731
2006	1,271	17%	78	1%	6,124	82%	7,473	153,356
2007	185	18%	2	0%	841	82%	1,028	105,104
2008	2,800	27%	359	4%	7,028	69%	10,187	153,573
2009	2,718	22%	70	1%	9,350	77%	12,138	145,879
2010	150	2%	156	2%	8,153	96%	8,459	63,629
2011	2,305	7%	438	1%	28,751	91%	31,494	72,635
2012	5,485	14%	142	0%	34,386	86%	40,013	147,446
2013	5,419	9%	1,054	2%	56,877	89%	63,350	140,947

The bag limit analysis presented in Table 6 of the previous HMSMT Report under this agenda item is also revised as shown in Table 2 below. Based on information from 466 angler bags sampled during 2007-2013, most bluefin tuna landed, an estimated 95%, were taken in bags of 5 fish or fewer. Approximately two-thirds of bluefin landings were taken in bags of 1 or 2 fish. This analysis includes bag samples of fish from U.S. and Mexico waters, landed by anglers from charter and private vessels into California. To estimate the percentage of landings by bag size, sample records are expanded to the estimated total number of bluefin tuna landed in California based on year, month, subregion, and fishing mode strata.

Table 2. Frequency of occurrence for bluefin tuna in angler landings^{*} into California during 2007-2013. (Source: Recreational Fisheries Information Network (RecFIN), extracted June 21, 2014).

Bag Size	Bag Frequency in Sample	Bag Percentage of Sample	Percentage of Fish (Expanded)	Cumulative Percentage of Fish (Expanded)
0	303	63.7%	0	0
1	125	26.3%	46.0%	46.0%
2	19	4.0%	16.7%	62.7%
3	7	1.5%	16.6%	79.2%
4	9	1.9%	10.7%	90.0%
5	4	0.8%	5.0%	95.0%
6	4	0.8%	0.7%	95.6%
7	2	0.4%	2.3%	97.9%
8	1	0.2%	0.9%	98.8%
10	2	0.4%	1.2%	100.0%

^{*} Type A+B1 data were weighted by catch estimates: Type A are fish actually observed by the sampler and type B1 are fish reported by anglers (as distinguished from fish released alive). Limit of 10 bluefin tuna from all areas, all subregions, all fishing modes. Bag Analysis Tool: <u>http://www.recfin.org/data/sample_data/angler-bag-frequency-plots-and-size-analysis</u>.

In Appendix Table 1 of the HMSMT Report, annual estimates of U.S. recreational landings in metric tons are provided for 2000-2012, as reported by the International Scientific Committee for Tuna and Tuna-like Fishes. These estimates represent only the CPFV landings into California and do not include the comparatively minor estimated landings by anglers fishing from private vessels. Using the same estimation methods, the HMSMT, in consultation with National Marine Fisheries Service staff, provides a preliminary estimate for 2013 of 985 mt. The overall average weight of bluefin landed during 2013 was 15.5 kg, based on Inter-American Tropical Tuna Commission (IATTC) sampling data from 2011.

Estimates of U.S. recreational landings by weight are based on CPFV logbook numbers of bluefin landed into California, and fish size information from IATTC sampling data¹. IATTC sampling. Estimates of recreational landings from U.S. waters are also available from RecFIN, although these estimates do not include landings of fish caught in Mexico and landed in California. Juvenile bluefin comprise the majority of recreational catch.

¹ United States Catch Time Series for Pacific Bluefin Tuna in the North Pacific Ocean, A.L. Coan, Jr., and J.F. Childers, Dec. 2007. A Working document submitted to the sixth meeting of the Pacific Bluefin Tuna Working Group of the International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC), 11-19 December 2007, Shimizu, Japan. Document not to be cited without author's permission.
The HMSMT notes the following important data limitations regarding the information presented to characterize the U.S. recreational fishery for bluefin tuna:

- a. RecFIN estimates of recreational landings by anglers fishing in Mexico from private boats and returning to land in California are not available.
- b. Estimates of recreational landings by anglers fishing and landing in Mexico are not available.
- c. IATTC sampling for size of bluefin tuna was discontinued in 2011. IATTC sampling was limited in geographic coverage and time of day, and this may result in a bias toward sampling long-range trips with larger average sizes of tuna.
- d. California Department of Fish and Wildlife CRFS sampling is also limited, and may result in a bias toward sampling short-range trips.

Vessel Monitoring System

A member of the HMSMT was briefed by the Enforcement Consultants (EC) with regard to their recommendation on ping rates for VMS on HMS vessels for DGN vessels. The HMSMT notes that if VMS is addressed under the biennial process, it could not be implemented in time for the upcoming DGN season.

Longline Fishery Establishment

Referring to supplemental public comment 2, submitted by Pete Dupuy, dated June 9, 2014, the HMSMT understands Mr Dupuy's request as a petition to the Council allowing him a shallow/deep set commercial pelagic longline fishing permit for all waters under the jurisdiction of the Council HMS Fishery Management Plan (FMP). As noted in the Situation Summary, as part of the biennial process, the Council could consider regulatory changes that would allow a shallow-set longline fishery to operate. Implementation of limited entry programs and allowing a longline fishery in the EEZ (other than through approved activities under an EFP) are identified as fixed elements of the HMS FMP that can only be changed through an FMP amendment (FMP Section 2.4). Therefore, the Council would also have to amend the FMP if it wanted to establish a limited entry permit for this activity and/or change the current prohibition on using the gear in the EEZ.

The HMSMT would like to bring to the Council's attention information from the April 2007 Council meeting where the Council recommended NMFS issue an exempted fishing permit (EFP) to allow a single vessel to fish in the West Coast exclusive economic zone targeting swordfish in 2007 (<u>http://www.pcouncil.org/bb/2007/0407/J1.pdf</u> and <u>http://www.pcouncil.org/wp-content/uploads/0407decisions.pdf</u>). The EFP applicant was Mr. Dupuy. The purpose of the EFP was to gather preliminary information to help determine whether longline fishing could be an economically viable alternative to the current drift gillnet fishery with less environmental impact. NMFS and Council staff, with assistance from the HMSMT, prepared a draft EA to support the Council's final decision. In the end the applicant withdrew his EFP application.

With regard to Mr. Dupuy's proposal to finalize the HMS FMP to permit longline fishing on the high seas, the HMSMT sees the consideration of this action complementary to efforts already underway regarding the potential DGN transition and should be part of the suite of options considered for a viable swordfish fishery. The Council may want to consider tasking the HMSMT with updating the analysis preformed in 2009 that would have amended the HMS FMP to permit shallow-set longlining on the high seas. The HMSMT acknowledges that the

discussions regarding amending the HMS FMP at the April 2009 meeting were unfavorable <u>http://www.pcouncil.org/wp-content/uploads/0409decisions.pdf</u> however; an updated analysis could inform future discussions related to DGN transitioning. Finally, amending the FMP to permit shallow-set longlining on the high seas would level the playing field given that Hawaii fishermen are permitted to shallow-set longline in the same area that Mr. Dupuy is not.

HMSMT recommendations

In conclusion, the HMSMT provides the following recommendations and seeks guidance on the range of alternatives for analysis of topics the Council approves for further consideration of management measures:

- a. Harmonize recreational bag and possession limits for bluefin tuna with Mexico.
- b. For conservation purposes, the Council should evaluate more restrictive bluefin tuna bag limits (i.e. less than 5 fish/day). An analysis of conservation benefits to the stock relative to the economic costs to the recreational fishery should be included.
- c. The HMSMT notes that typical types of management measures for recreational fisheries may include limitations on bag size, fish size, times, areas, or gears.
- d. Encourage increased sampling of bluefin tuna recreational fisheries by their respective management bodies, especially to obtain representative fish size information.
- e. Consider amending the FMP to authorize a shallow-set longline fishery for swordfish on the high seas.

PFMC 06/22/14

Agenda Item E.4.c Public Comment (Full Version Electronic Only) June 2014

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PFMC

Ocean Pacific Seafood

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May 22, 2014

Ms. Dorothy Lowman, Chair PACIFIC FISHERY MANAGEMENT COUNCIL 7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220-1384 DMLowman01@comcast.net

Madame Chair, Dorothy Lowman

Please accept this letter as advance notice of my intent to petition the Council to issue me a shallow/deep set commercial pelagic longline fishing permit for all waters under jurisdiction of the Council's HMS FMP. I will submit, for distribution at the Council's June meeting, a fully rationalized formal petition for issuing me this permit. However, understanding the history and past discussions that this topic has generated, I wanted to give advance notice of my intent to the Council's larger HMS family.

As some in the Council family are aware, I have extensive engagement with this issue. I was forced out of my shallow set longline fishery in 2004 due to the implementation of restrictions aimed at regulating the Hawaii shallow set longline fishery. Consequently, I was forced to travel additional hundreds of miles offshore in order to develop an alternative tuna fishery. Then, in order for this venture to have a chance at succeeding economically, I had to develop a direct-to-consumer self-marketing strategy which further tax the resources available to me. Recently, I lost at least \$300,000 in expected revenue because the 2013 tuna fishery was closed when the quota was filled early by Hawaiian longline fishermen. The injustice that resulted is that Hawaiian fishermen were able to switch to shallow set gear and fish for swordfish that was then marketed in the California market. Meanwhile, I, a California fisherman, was forced to tie up my boat, and pay the ongoing overhead without being able to offset that expense with fishing revenue.

Sea turtle conservation concerns that formed the basis for the 2004 shallow set restrictions have long since been mitigated. In the 10 years that I have operated this tuna fishery, with 100% observer coverage, there has been zero takes of marine mammals, zero takes of seabirds, only 1 sea turtle, and olive-ridley, and negligible finfish bycatch.

I am a native Californian, family fishing small-business owner, and operator. I am confident the Council will recognize that I have pioneered a remarkably clean HMS fishery that has achieved much of what national commercial fishery management standards strive to implement. My expectation, that the soon to be submitted petition will fully support, is that the Council will act in a forthright manner to issue the requested permit.

Sincerely.

Pete Dupuy



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May 5, 2014

Ms. Dorothy Lowman, Chair Pacific Fishery Management Council 1100 NE Ambassador Place, #101 Portland, OR 97220

RE: Agenda Item E.3 – Highly Migratory Species Routine Management Measures-Pacific Bluefin Tuna Management and Conservation

Dear Chair Lowman and Council Members:

In early 2013, the National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) determined that Pacific bluefin tuna (PBFT) is overfished, with overfishing occurring.¹ The designation was prompted by the first conclusive, publicly released stock assessment of the species, which found the PBFT population has been severely reduced to less than 4% of its unfished level.² An April 8, 2013 letter from NOAA Fisheries to the Pacific Fishery Management Council (PFMC) noted that "(i) the overfished and overfishing condition of Pacific Bluefin is due to excessive international fishing pressure and (ii) the Inter-American Tropical Tuna Commission (IATTC) and Western and Central Pacific Fisheries Commission (WCPFC) have inadequate measures in place to correct the problem."³ Accordingly, Section 304(i) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) applies. Under MSA section 304(i)(2), the PFMC is required to develop domestic regulations to address the relative impact of the domestic fleet on PBFT. Section 304(i)(2) also requires the PFMC to develop recommendations to the Secretary of State and to Congress for international actions to end overfishing and rebuild PBFT, taking into account the relative impact of vessels of other nations and vessels of the United States on the stock.⁴

A year later, a February 2014 updated stock assessment confirmed PBFT's grim status at approximately 4% of historic levels and the fragile outlook for the future of the population.⁵ Of the seven management scenarios analyzed in the assessment, only the most conservative one predicted growth of the population, and it is unclear whether the predicted growth would be enough to fully rebuild the species. In a joint letter to NOAA Fisheries dated April 1, 2014, the Western Pacific Fishery Management Council (WPFMC) and the PFMC responded that the PFMC would soon "evaluate current catch limits for Pacific

¹ Federal Register Volume 78, Number 131 (Tuesday, July 9, 2013), 41033

² ISC. 2013. Stock Assessment of Pacific Bluefin Tuna in 2012. 118 pp.

³ Letter from Rodney McInnis, Regional Administrator, to Dan Wolford, Chairman, Pacific Fishery Management Council, April 8, 2013.

⁴ Magnuson-Stevens Fishery Conservation and Management Reauthorization Act (P.L. 109-479)Sec 304(i)(2)

⁵ ISC. 2014. Stock assessment of Pacific bluefin tuna, 2014 – Executive Summary. 19 pp.

bluefin in West Coast recreational fisheries" and encouraged the U.S. government to advocate for "catch curtailments" and "a creditable rebuilding plan" internationally.⁶

Pew is pleased to see that the PFMC has scheduled this issue for consideration at their June meeting. We ask that the following recommendations be adopted by the Council where applicable, and recommended to the NOAA Fisheries where required:

- Reduce the recreational daily bag limit from 10 to a sliding scale of 0-5.
- Develop an improved reporting system for the commercial fishery and a landings tag census program to track recreational catch.
- Advocate at the 2014 meetings of IATTC and the Western and Central Pacific Fisheries Commission (WCPFC) for a rebuilding plan designed to recover the population to 25% of unfished levels by 2024. Further details are below.

US Fishery for PBFT

While historically the balance of commercial and recreational catch by US fishermen has fluctuated, currently the majority of US landings of Pacific bluefin are made up of recreational catch. Recreational landings were particularly high in 2012 at 617 mt, which exceeds the 500 mt commercial allowance allocated to the US through the Inter-American Tropical Tuna Commission (IATTC). Presently, the only restriction on the recreational fishery is a daily bag limit of 10 fish per angler per day, which has been in effect since November 2007.⁷

Importantly, all PBFT caught by US fishermen, both commercial and recreational, are juveniles. There is only one stock of PBFT, and they all spawn in the western Pacific. A small proportion (<20%) of juvenile bluefin tuna migrate 6000 miles to the eastern Pacific during their first or second year.⁸ They feed in the California Current for several years before returning to the western Pacific to spawn. Once they return to the western Pacific, there is no evidence that they return to the eastern Pacific. Scientists have determined that the high take of juveniles in PBFT fisheries is the major contributor to the dire status of the species.⁹

Current International Management is Inadequate

As noted by NOAA fisheries¹⁰, as of April 2013, "the IATTC and WCPFC have inadequate measures in place to correct" the overfished and overfishing condition of Pacific bluefin. The most recent management measures instituted by the two RMFOs failed to correct this situation, and thus international management remains inadequate to end overfishing and reverse the overfished state of

⁶Letter from D.O. McIsaac, Executive Director of the PFMC, and Kitty M. Simonds, Executive Director, WPFMC, to Eileen Sobeck, NOAA Fisheries Service, April 1, 2014.

⁷ Federal Register Volume 72, Number 198 (Monday, October 15, 2007), 58258

⁸ It is thought that the percentage of PBFT that leave the western Pacific Ocean is linked to sardine abundance in the western Pacific. [Polovina, J.L., 1996. Decadal variation in the trans-Pacific migration of northern bluefin tuna (Thunnus thynnus) coherent with climate-induced change in prey abundance. Fisheries Oceanography 5:114–119.] 9 ISC. 2014. Stock assessment of Pacific bluefin tuna, 2014 – Executive Summary. 19 pp.

¹⁰ Letter from Rodney McInnis, Regional Administrator, to Dan Wolford, Chairman, Pacific Fishery Management Council, April 8, 2013.

Pacific bluefin. IATTC Resolution C-13-02 simply converted the two-year 10,000 mt commercial catch limit into a one-year 5,000 mt commercial catch limit, leading to no change in the annual allowable catch. Similarly, while WCPFC Conservation and Management Measure (CMM) 2013-09 instituted a 15% reduction in juvenile catch from 2002-04 levels, because of the baseline chosen, the measure will actually allow *increases* in juvenile catch in 2014.

The projections run in the 2014 update assessment are also very clear that *status quo* management will not allow the PBFT population to grow.¹¹ Indeed, the only scenario that allowed growth included 50% reductions in juvenile mortality Pacific-wide. Another new analysis conducted by IATTC scientists found the situation to be similarly grave, leading them to state: "The goal of management for Pacific bluefin should be to reduce the fishing mortality so that juveniles can make it through to the spawning biomass without being caught. It is important that any reduction in fishing mortality on the very young fish is not offset by these fish being caught in the other fisheries that catch them at an older age and hence there should be reductions in all fisheries."¹² They also cautioned that the bulk of the spawning stock is comprised of a single cohort that will soon reach the end of its natural lifespan, leaving even more concern for the future of PBFT and increasing the urgent need for action now.

Response to the Overfished Designation

As noted above, following the NOAA Fisheries determination of an overfished state for PBFT, and the declaration that the IATTC and WCPFC have not implemented adequate management measures to end overfishing, the PFMC and WPFMC are required to develop domestic regulations to address the relative impact of the domestic fishing fleet, and to develop recommendations to address international actions to end overfishing and rebuild Pacific bluefin tuna.¹³ Although the Councils should be commended for submitting a timely response, the latest science indicates that the actions committed to in the April 1st letter are insufficient to address the conservation needs of the species. Moving forward, the PFMC and NOAA Fisheries should partner to adequately address the relative impact of the US recreational fleet, end international overfishing of PBFT and contribute to the rebuilding of the species. Therefore, Pew strongly encourages the PFMC to revisit its response and work with the WPFMC, NOAA Fisheries, and the Secretary of State to take the following management actions:

US Domestic Actions:

- Reduce the recreational bag limit to a sliding scale of 0 to 5 fish per angler per day. A 5-fish bag limit could be the default, but the limit would be easily modifiable by in-season action if landings were determined to be too high. This would maximize both fishing opportunity and management flexibility, while creating a mechanism to reduce catch in the event of catches in excess of the scientific advice, like those that occurred in 2012.
- In order to allow weekly reporting of landings to be in compliance with IATTC Resolution C-13-02, create a new reporting system for the commercial fishery and a landings tag census program to track recreational catch.

¹¹ ISC. 2014. Stock assessment of Pacific bluefin tuna, 2014 – Executive Summary. 19 pp.

¹² Maunder, MN, KR Piner, A Aires-da-Silva. 2014. Stock status of Pacific bluefin tuna and the urgent need for management action. SAC-05-10a.

¹³ Federal Register Volume 78, Number 131 (Tuesday, July 9, 2013), 41033

International Actions:

- Advocate at the 2014 meetings of IATTC and the Western and Central Pacific Fisheries Commission (WCPFC) for a rebuilding plan designed to recover the population to 25% of unfished levels (25%SSB_{recent, F=0}) by 2024. The rebuilding plan should minimally include:
 - a. Enforceable catch limits that account for all mortality, including that of minor harvesters, recreational fisheries and dead discards. The scientifically recommended catch limit for the eastern Pacific that will begin population rebuilding is 2,750 mt/year.¹⁴ The catch limit for the western Pacific still needs to be determined by the scientists. Scientists have recommended a 50% reduction in juvenile catch from the 2002-04 level and limiting effort to the 2002-04 level,¹⁵ but these effort restrictions should be converted to a hard catch limit for adoption by the WCPFC.
 - b. Minimum size limit to protect the youngest fish: Fishery impact studies have concluded that fisheries targeting the youngest year classes have the most adverse impact on the population.¹⁶ A recent study found that a minimum size limit of 20 kg (approximately 100 cm) would maximize yield per recruit, allowing the population to increase to the point that current yield would be restored within three years, and yields would double from the current level within seven years.¹⁷
 - c. Improved monitoring of the fishery, especially of ranching operations, including development of an electronic catch documentation scheme (eCDS) and increased observer coverage.

With domestic jurisdiction over PBFT and a Commissioner seat on the US delegation to WCPFC, the PFMC is uniquely positioned to advance conservation and management measures for this severely overfished species. Projections indicate that the species can rebuild relatively quickly with resolute management intervention.¹⁸ The PFMC should propose the aforementioned domestic management measures and recommend that the US push for the necessary additional protections in the international arena. We ask that these actions be discussed at the upcoming meetings of the PFMC Highly Migratory Species Management Team (May 7-9, 2014) and Council (June 19-25, 2014).

We look forward to working with you, the WPFMC and NOAA Fisheries to contribute to rebuilding Pacific bluefin tuna in accordance with the requirements of the MSA and relevant international fishery agreements. Thank you for your consideration of these comments.

¹⁴ ISC. 2014. Stock assessment of Pacific bluefin tuna, 2014 – Executive Summary. 19 pp.

¹⁵ ISC. 2014. Stock assessment of Pacific bluefin tuna, 2014 – Executive Summary. 19 pp.

¹⁶ Maunder, MN, KR Piner, A Aires-da-Silva. 2014. Stock status of Pacific bluefin tuna and the urgent need for management action. SAC-05-10a.

ISC. 2014. Stock assessment of Pacific bluefin tuna, 2014 – Executive Summary. 19 pp.

¹⁷ Gedamke T. 2013. Preliminary Analyses of the Potential Impacts of Minimum Weight Regulations for Pacific Bluefin Tuna. Western and Central Pacific Fisheries Commission Scientific Committee Ninth Regular Session, WCPFC-SC9-2013/SA-WP-15. http://wcpfc.int/node/4798

¹⁸ ISC. 2014. Stock assessment of Pacific bluefin tuna, 2014 – Executive Summary. 19 pp.

Gedamke T. 2013. Preliminary Analyses of the Potential Impacts of Minimum Weight Regulations for Pacific Bluefin Tuna. Western and Central Pacific Fisheries Commission Scientific Committee Ninth Regular Session, WCPFC-SC9-2013/SA-WP-15. http://wcpfc.int/node/4798

Sincerely,

Amanda Nickson Director, Global Tuna Conservation

Paul Alug

Paul Shively Manager, U.S. Oceans, Pacific

 CC: Mr. David Hogan, Deputy Director, OMC, DOS Mr. Russell Smith, Deputy Assistant Secretary for International Fisheries, NOAA Mr. Samuel D. Rauch, III, Deputy Assistant Administrator for Regulatory Programs, NOAA Dr. Jean-Pierre Ple, Director of Office of International Affairs, NOAA Mr. Mark Helvey, Fishery Management Officer, West Coast Region, NOAA Dr. D. O. McIsaac, Executive Director, PFMC HMSMT Members HMSAS Members Mr. Peter Flournoy, Chair IATTC GAC Mr. Svein Fougner, Chair WCPFC PAC Dr. Kit Dahl, West Coast Region, NOAA



Sent via Email

May 23, 2014

Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220-1384 pfmc.comments@noaa.gov

Dear Chair Lowman and Council Members,

Thank you for the opportunity to comment on behalf of the Center for Biological Diversity ("Center") on domestic management measures for Pacific bluefin tuna, specifically Agenda Item E.4. Initial Scoping of Biennial Specifications & Management Measures including Bluefin Tuna Bag Limits. For the reasons discussed below, we believe that the Pacific Fishery Management Council ("Council") should propose regulations to institute a moratorium on Pacific bluefin tuna fishing immediately.

The Center requested rulemaking to add Pacific bluefin tuna to the Highly Migratory Species Fisheries Management Plan's list of prohibited species (Center for Biological Diversity 2014). By this letter we make the same request of the Council and provide recent information in support. Should the Council act at this meeting, a final rule could be in place before the end of 2014. Further delay means the Pacific bluefin tuna population will continue to decline and neglects the Council's duty to take action. *See* 16 U.S.C.§ 1854(i) (requiring a recommendations for domestic regulation within a year of the Secretary's determination, or April 8, 2014). Therefore we urge the Council to act at once.

Recent Science Underscores the Need for Immediate Action to Reduce Fishing

Since we submitted our petition, science has shown the Pacific bluefin tuna population is even more imperiled than we thought. First, the most recent stock assessment for Pacific bluefin tuna – released April 18, 2014 – concludes that current international conservation measures will not increase adult abundance if recent recruitment trends continue (PBTWG 2014). In other words, without additional measures Pacific bluefin tuna abundance is likely to continue to decline from the current abundance of 26,324 mt, which indicates a decline of more than 94% relative to unfished abundance (*id.*).

Second, Maunder et al. (2014) reveal that Pacific bluefin tuna are on the brink of collapse and note an urgent need for management action. The authors of this paper, including a National Marine Fisheries Service scientist, conclude that "the spawning biomass is supported by a single cohort that is nearing the end of its life" (*id*.). Any recommendation

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from the Council – both in timing and degree of cuts – must reflect this science. Therefore the Center requests the Council recommend a moratorium at the June meeting.

The National Park Service Has Requested Consideration of a Moratorium

The National Park Service's recent request for a moratorium on bluefin tuna fishing in all waters within Park Service jurisdiction is the latest in a series of government requests expressing concern for the bluefin tuna status and calling for action (Port 2014). The Center's petition lists official requests to cut Pacific bluefin tuna. First, in 2008 from the California Legislature requested assistance in imposing and enforcing bluefin tuna catch limits within U.S. waters (Sen. Conc. Res. No. 85, Stats. 2008 (2007-2008 Reg. Sess.) res. ch. 106.) Second, the National Marine Fisheries Service twice has made determinations under the Magnuson-Stevens Fishery Conservation and Management Act that triggers the duty for the Council to make domestic recommendations to address international overfishing. 16 U.S.C. § 1854(i). Now the National Park Service has requested consideration of "a moratorium on harvest of Pacific Bluefin tuna within NPS boundaries" (Port 2014). This marks the third time since 2008 in which state or federal governmental bodies have requested reductions in the California fishery for Pacific bluefin tuna.

CONCLUSION

The Pacific Fishery Management Council has both the expertise in fisheries management and the statutory mandate required to tackle the current crisis. Every fishery management plan must include measures "necessary and appropriate for the conservation and management of the fishery to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery" (16 U.S.C. § 1853). This applies to Pacific bluefin tuna, managed under the Highly Migratory Species Fisheries Management Plan. The Council also has world-renowned scientists serving on its scientific and statistical committee. With these scientific and legal tools the Council must act in accordance with the science to limit fishing for Pacific bluefin tuna. Based on the information above and enclosed with this letter, the Center requests the Council add Pacific bluefin tuna to the list of prohibited species.

Thank you for your consideration of this issue. Please feel free to contact me at ckilduff@biologicaldiversity.org or 415-632-5312 with any questions.

Sincerely,

Catherine Lible

Catherine W. Kilduff, M.S., J.D. Staff Attorney Center for Biological Diversity Attachments available online at http://www.pcouncil.org/council-operations/briefing-books/ Encl.:

- Center for Biological Diversity (2014). Petition for rulemaking to prohibit Pacific bluefin tuna fishing. April 9, 2014. 33 p. http://www.biologicaldiversity.org/species/fish/Atlantic_bluefin_tuna/pdfs/Petitio n_for_rulemaking_to_end_Pacific_bluefin_tuna_fishing.pdf.
- Maunder, M. N., Piner, K. R., and A. Aires-da-Silva (2014). Stock status of Pacific Bluefin Tuna and Urgent Need for Management Action. *Inter-American Tropical Tuna Commission*, Document SAC-05-10a, Fifth Meeting of the Scientific Advisory Committee Meeting, May 12-16, 2014.
- Pacific Bluefin Tuna Working Group ("PBTWG") (2014). Stock Assessment of Pacific Bluefin Tuna. *International Scientific Comimttee for Tuna and Tuna-like Species in the North Pacific Ocean.* 110 p.
- Port, P. (2014). Letter from P. Port, Regional Environmental Officer, to the National Marine Fisheries Service, regarding Proposed rule, request for comments, National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), 50 CFR Part 300; [Docket No. 130722647-3647-01][RIN RIN 0648-BD55] Specifications and Management Measures, International Fisheries; Pacific Tuna Fisheries; Fishing Restrictions for Pacific Bluefin Tuna in the Eastern Pacific Ocean, dated Feb. 20, 2014.
- Senate Concurrent Resolution No. 85—Relative to the Pacific bluefin tuna. Sen. Conc. Res. No. 85, Stats. 2008 (2007-2008 Reg. Sess.) res. ch. 106.

PETITION FOR RULEMAKING TO PROHIBIT PACIFIC BLUEFIN TUNA FISHING



Photo Credit: NOAA

BEFORE THE NATIONAL MARINE FISHERIES SERVICE

APRIL 9, 2014

Notice of Petition

Penny Pritzker, Secretary of Commerce U.S. Department of Commerce 1401 Constitution Avenue, N.W., Rm 5516 Washington, D.C. 20230 TheSec@doc.gov

Eileen Sobeck, Assistant Adm. for Fisheries National Oceanic and Atmospheric Administration 1315 East-West Highway Silver Springs, MD 20910 Eileen.Sobeck@noaa.gov William W. Stelle, Regional Administrator NOAA Fisheries West Coast Region 7600 Sand Point Way NE, Bldg 1. Seattle, WA 98115 will.stelle@noaa.gov

Right to Petition

The right of an interested party to petition a federal agency is a freedom guaranteed by the first amendment: "Congress shall make no law ... abridging the ... right of people ... to petition the Government for redress of grievances."¹

Under the Administrative Procedure Act (APA), all citizens have the right to petition for the "issuance, amendment, or repeal" of an agency rule.² A "rule" is the "whole or a part of an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy."³

Petitioner seeks amendment of the highly migratory species fishery management plan ("FMP") and promulgation of agency rules to prohibit fishing for Pacific bluefin tuna (*Thunnus orientalis*). Specifically, Petitioner requests an amendment to add Pacific bluefin tuna to the list of prohibited species that must be released immediately if caught. 50 C.F.R. § 660.711(a). In the alternative, Petitioner requests that an amendment establish annual catch limits for bluefin tuna and a permanent minimum size requirement to protect age classes 1-2 from fishing mortality. Finally, Petitioner requests an FMP amendment to establish reference points for bluefin tuna to guide science-based management. *See* 50 C.F.R. § 600.310(h)(2)(ii) (requiring status determination criteria).

¹ U.S. Const., amend. I; see also *United Mine Workers v. Illinois State Bar Ass'n*, 389 U.S. 217, 222 (1967) (right to petition for redress of grievances is among most precious of liberties without which the government could erode rights).

² 5 U.S.C. § 553(e).

³ 5 U.S.C. § 551(4).

In addition, Petitioner requests U.S. recommendations for international action including (1) a high seas moratorium on all fishing, (2) a Pacific-wide minimum size for bluefin tuna catch and (3) a reduction in Pacific bluefin tuna quota for all member countries in order to meet established rebuilding goals.

The National Marine Fisheries Service (NMFS) has the authority to take the requested actions under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).⁴ Thus, the petitioner has the right to petition for revision of these rules. NMFS is required to respond to this petition: "Prompt notice shall be given of the denial in whole or in part of a written application, petition, or other request of an interested person made in connection with any agency proceeding."⁵ The APA further requires that "within a reasonable time, each agency shall proceed to conclude a matter presented to it."⁶

Further, the APA provides for judicial review of a final agency action.⁷ The scope of review by the courts is determined by section 706 of the APA.⁸ The APA also permits courts to compel agency action unlawfully withheld or unreasonably delayed.

Petitioner

The Center for Biological Diversity is a nonprofit environmental organization dedicated to the protection of imperiled species and their habitats through science, education, policy, and environmental law. The Center's Oceans Program aims to protect marine life and ocean ecosystems in United States and international waters. The Center has over 675,000 online activists and members. The Center submits this petition on its own behalf and on behalf of its members and staff with an interest in protecting the ocean environment.

The Center for Biological Diversity's contact information is:

351 California Street, Suite 600 San Francisco, CA 94104 Tel: 415-436-9682 Fax: 415-436-9683

Respectfully submitted,

Catherine Ware Kilduff, J.D., M.S. Staff Attorney, Center for Biological Diversity

⁴ 16 U.S.C. §§ 1801-1884.

⁵ 5 U.S.C. § 555(e).

⁶ *Id.* § 555(b).

⁷ Id. § 704.

⁸ *Id.* § 706.

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A. Executive Summary

Currently, the Pacific bluefin tuna (*Thunnus orientalis*) faces irreversible and irreparable harm from ongoing overfishing. Overexploitation threatens this fish's future, due in large part to an extremely high economic value and expanding global marketplace demand. Best available science indicates that spawning stock biomass levels have dropped to 3.6 percent of unfished levels, and are at or near the historic low. In the United States, small, sporadic landings have become the norm in contrast to early reports of regular bluefin appearances throughout the eastern Pacific.

NMFS recently classified Pacific bluefin tuna as "overfished," triggering specific duties under the Magnuson-Stevens Act. Because NMFS also determined that international management measures in place are inadequate to control overfishing, the Magnuson-Stevens Act section 304(i) requires the Pacific Fishery Management Council recommend national management measures to NMFS by April 8, 2014, one year after receiving the notification.

The Center formally petitions NMFS to take the following actions amending the highly migratory species fishery management plan and implementing regulations:

(1) Prohibit fishing for Pacific bluefin tuna under 50 C.F.R. § 660.711(a).

In the alternative, establish annual catch limits for bluefin tuna and a permanent minimum size requirement to protect age classes 1-2 from fishing mortality.

(2) Identify specific values for reference points used to determine if overfishing is occurring or if the stock is overfished, such as maximum fishing mortality threshold and the minimum stock size threshold. 50 C.F.R. § 600.310(h)(2)(ii).

The Center also requests that NMFS make recommendations to the Secretary of State and Congress regarding international actions to end overfishing in the fishery and rebuild Pacific bluefin tuna populations that include all of the below:

(1) A high seas moratorium on all fishing,

(2) A Pacific-wide minimum size for bluefin tuna catch, and

(3) A steep reduction in Pacific bluefin tuna quota for all countries to meet rebuilding targets based on established reference points.

While U.S. catch represents only a small portion of Pacific bluefin tuna caught worldwide, NMFS still has a duty to take the steps it can to slow or reduce overfishing. The drastic potential consequence of failing to act – here, failing to stop the decline or prevent

extinction of Pacific bluefin tuna – makes it more urgent to act now. Rebuilding of Pacific bluefin tuna populations is uncertain and will likely take a long time, but that is all the more reason to take action as soon as possible.

B. Background

1. Pacific bluefin tuna

The Pacific bluefin tuna is a highly migratory pelagic fish, primarily distributed through the North Pacific Ocean, from the East China Sea to the Pacific coasts of the United States and Mexico (Bayliff 1994, ISC 2013).



Figure 1. General distribution and migration of Pacific bluefin tuna. Darker areas indicate the main distribution areas. (Source: ISC 2013 Fig. 2-2.)

While many Pacific bluefin tuna remain in the western Pacific (the spawning areas), some migrate east to the western coasts of the United States and Mexico (Bayliff 1994). Even with the great distance between eastern and western Pacific fish, experts believe that only one population of Pacific bluefin tuna exists (Bayliff 1994, Rooker et al. 2001). Eastern Pacific fish travel along the coast of North America, following seasonal peaks in algae and sardines (Domeier et al. 2005, Kitagawa et al. 2007, Boustany et al. 2010). As Pacific bluefin tuna only

spawn in the western Pacific Ocean, most of the bluefin tuna in the eastern Pacific are juveniles, who spend a few years growing, before making the return migration to spawn (ISC 2013).

Climate change may disrupt Pacific bluefin tuna spawning patterns because bluefin spawning is particularly vulnerable to temperature changes, which can affect fish migration and larval survival (Kimura et al. 2010). Pacific bluefin tuna spawn between Japan and the Philippines, in the Sea of Japan south of Honshu (Chen et al. 2006; Tanaka et al. 2007). With spawning success closely linked to water temperature, Pacific bluefin tuna prefer areas with low variability in inter-annual temperatures. Even small variations in egg and larval survival and growth rates could cause significant impacts to populations (Kimura et al. 2010). This is a serious concern for the future success of Pacific bluefin tuna because an ocean model simulation under a climate warming scenario predicts a 3° C increase in temperature by 2100 and, when considering a spawning season between April and June, results in a predicted 36% decline in larval survival due to exposure to lethally warm temperatures (*Id.*). Although research on ocean acidification's effects on tuna is in its infancy, preliminary experiments hatching yellowfin tuna eggs in ocean water of varying pH including current and predicted near future ocean pH (6.9, 7.3, 7.7, and 8.1) showed that decreasing pH – acidification – significantly increased hours until complete hatching (Bromhead et al. 2013).

Age of maturity has a large impact on the ability of populations to recover from overexploitation. Pacific bluefin tuna reaches sexual maturity at approximately 5 years of age and can have a maximum lifespan of 25 years (Tseng and Smith 2012). Species that take several years to reach sexual maturity, like the Pacific bluefin tuna, become particularly vulnerable as many fish are caught before they can reproduce (Hutchings and Reynolds 2004). Ninety percent of eastern Pacific landings occurred on fish between 60 and 100cm, or 1 to 3 years of age, therefore, most fish never had an opportunity to reproduce (IATTC 2010). Furthermore, the fish's overall age affects its reproductive output. As with many fish species, the Pacific bluefin's reproductive output is positively correlated with its overall size. For example, a fish measuring 190 cm would likely produce 5 million eggs, but a fish 250 cm in length would produce 25 million eggs (Sawada et al. 2005; Chen et al. 2006). Accordingly, these older, larger fish have a proportionately greater contribution to overall species productivity than one might imagine.

Pacific bluefin tuna migrate to the California Current System most likely in search of food, reducing migration in years when sardines are abundant off Japan (Polovina 1996). The California current's nutrient-rich waters support sardine, anchovy and small squids which feed predators such as tunas, billfish, seabirds, pinnipeds, sharks and cetaceans. Bluefin tuna movement patterns coincide with seasonal and interannual peaks in upwelling and productivity in the California current (Boustany et al. 2010). During periods where bluefin tuna's presence in the California current is not consistent with upwelling, bluefin tuna may be feeding on prey other than sardines or anchovies, such as squid and pelagic red crabs (*id.*, Madigan et al. 2012). Future research to identify feeding hotspots in the California current will compare a model to estimate energy intake in Pacific bluefin tuna using oceanographic data to predict foraging success in the

California current (Whitlock et al. 2013).

Pacific bluefin tuna migrate to the coast of Mexico and the United States, posing a challenge to management and recovery. While Pacific bluefin tuna seem to be a single genetically mixed stock throughout the Pacific (Tseng and Smith 2012), a portion of the population spends from one to four years in the eastern Pacific Ocean (figure 2, Madigan et al. 2014, Boustany et al. 2010, Block et al. 2011). Because of the repeating and predictable nature of the juvenile bluefin tuna migrations of to the eastern Pacific, bluefin tuna may be more susceptible and vulnerable to fishing pressure than anticipated (Boustany et al. 2010). The 2012 stock assessment assumes the stock is fully spatially mixed and cannot account for regional depletion in the eastern Pacific Ocean (Carruthers 2013).

Failing to account for the impacts of excessive fishing in the eastern Pacific bluefin tuna on immature fish could have undesirable consequences. For example, using a Fukushima-derived radiotracer and isotope analysis Madigan et al. (2014) found that the majority of Pacific bluefin tuna migrate to the eastern Pacific Ocean when ages 1 to 2. Consequently, most larger fish had been in the eastern Pacific Ocean for more than a year (figure 2, Madigan et al. 2014). In other words, fewer large fish were recent migrants. Thus protecting small fish in the eastern Pacific may be the most effective way to increase availability of larger fish in the eastern Pacific. High fishing mortality in the eastern Pacific Ocean also prevents an unknown proportion from spawning, reducing the recovery potential for Pacific bluefin tuna.



Figure 2. Estimates of time in the eastern Pacific Ocean for 130 Pacific bluefin tuna. Dashed line (--) indicates year-class 1-2, solid line (-) indicates year-classes 2-3 and 3-4. Most migrants were small tuna rather than various ages/sizes. Most large fish had been in the eastern Pacific Ocean more than a year. (Source: Madigan et al. 2014, Fig. 3.)

High fishing mortality could wipe out migration behavior altogether if migrating to the eastern Pacific Ocean is learned or heritable. Anecdotal and archeological evidence exists that large (> 160 cm total length (TL), 80 kg) adult bluefin tuna were harvested in the northeastern Pacific until the late 19th century (fig. 3, Crockford 1997). The majority of fish (83%) found in archeological samples were at least 6 years or older, ranging between 160 and 240 cm TL and between approximately 96 to 293 kg in weight, with the youngest fish estimated at 4 years (120 cm TL) and the oldest between 9 and 10 years (240 cm TL) (*Id*.). Crockford concluded from the archeological evidence spanning almost 5,000 years that the occurrence of adult bluefin tuna off the British Columbia coast was longstanding (Crockford 1997).



Figure 3. Map showing the locations of archeological sites in the Pacific northwest coast of North America from which bluefin tuna remains have been recovered. (Source: Crockford 1997, figure 1.)

The average length of Pacific bluefin tuna caught in purse seines and in the sport fishery

in the eastern Pacific Ocean ranges between 75 cm (1-year old fish) before the mid-eighties and 85 cm (2-year old fish) in the late 1990s and 2000s (ISC 2013 at 25). In the late 1980s, very large fish around 150-200 cm were caught in the eastern Pacific Ocean (Aires-da-Silva and Dreyfus 2012). This time period also coincided with some of the lowest fishing mortality in the eastern Pacific Ocean because of the decline in the U.S. purse seine fishery (*id*.). The largest recent reported U.S. catch of giant bluefin tuna in the eastern Pacific was made in 1988, when seiners caught an estimated 987 adult bluefin tuna off southern California, including many over 100 kg, some more than 250 kg, and one that broke California records at 458 kg and 271.2 cm TL (Crockford 1997 (citing Foreman and Ishizuka 1990)).

While environmental changes may cause changes in the annual distribution of bluefin tuna, the contribution of overfishing to decline in adult bluefin tuna off the British Columbia coast cannot be ignored. Large declines in the range of pelagic predators like the Pacific bluefin tuna tend to correlate with declines in abundance (Worm and Tittensor 2011). Between 1960 and 1999 – well after significant declines in Pacific bluefin tuna's population (see figure 5) – the range of Pacific bluefin tuna decreased 25 percent (*Id.*). A spatial dynamic model has shown that for social fish like bluefin tuna, removal of knowledgeable individuals or decreasing individual's preference for a particular destination can cause abrupt changes in migratory patterns (De Luca et al. 2014). Thus, fishing mortality likely has contributed to both Pacific the decline in bluefin tuna's range in the eastern Pacific Ocean and truncation of size structure.

i. Status of Pacific bluefin tuna

Pacific bluefin tuna are severely overfished – the most recent stock assessment estimates a decline of 96.4% of unfished levels (ISC 2013) – and undergoing overfishing. Scientists estimate unfished adult Pacific bluefin tuna biomass to be about 633,468 mt and the current adult biomass to be 22,606 mt, far below the biomass that could produce maximum sustainable yield (124,498 mt) (McInnis 2013). Bluefin tuna has a long history of high commercial value; currently, bluefin tuna rank among the world's most expensive fish due to the expanding international sushi trade (Collette et al. 2011). This has led to consistent exploitation above sustainable levels.

The Magnuson-Stevens Act – as implemented in accordance with National Standard 1 guidelines (50 C.F.R. § 600.310) and the west coast Highly Migratory Species Fishery Management Plan ("FMP") – provides the framework by which to establish stock status thresholds and fishing control rules. The National Standard 1 guidelines state that FMPs should include a variety of quantitative stock indicators:

<u>Maximum sustainable yield (MSY)</u>: MSY is the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological, environmental conditions and fishery technological characteristics (e.g., gear selectivity), and the distribution of catch among fleets. <u>MSY fishing mortality rate (F_{MSY})</u>: The fishing mortality rate that, if applied over the long term, would result in MSY.

<u>MSY stock size (B_{MSY}) </u>: The long-term average size of the stock or stock complex, measured in terms of spawning biomass or other appropriate measure of the stock's reproductive potential that would be achieved by fishing at F_{MSY} .

<u>Status determination criteria (SDC)</u>: Quantifiable factors or their proxies that are used to determine if overfishing has occurred, or if the stock or stock complex is overfished. "Overfished" relates to biomass of a stock or stock complex, and "overfishing" pertains to a rate or level of removal of fish from a stock or stock complex. SDC are:

<u>Maximum fishing mortality threshold (MFMT)</u>: The level of fishing mortality (F), on an annual basis, above which overfishing is occurring. The MFMT or reasonable proxy may be expressed either as a single number (a fishing mortality rate or F value), or as a function of spawning biomass or other measure of reproductive potential.

<u>Overfishing limit (OFL)</u>: The annual amount of catch that corresponds to the estimate of MFMT applied to a stock or stock complex's abundance and is expressed in terms of numbers or weight of fish. The OFL is an estimate of the catch level above which overfishing is occurring.

<u>Minimum stock size threshold (MSST)</u>: The level of biomass below which the stock or stock complex is considered to be overfished.

<u>Optimum yield (OY)</u>: The amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems.

(FMP 2011, see also figure 4).

While the FMP adopts a precautionary approach to setting reference points for Pacific bluefin tuna, it assigns no specific values for the identified thresholds. The FMP adopts an optimum yield control rule for vulnerable species for bluefin tuna and striped marlin, set at 0.75 MSY to be precautionary and "because of uncertainties concerning total catches and stock structure" (FMP 2011 at 32-33, see also figure 4). Despite stating the general rule for the reference point, the FMP fails to identify specific values for bluefin tuna optimum yield or any other reference point (FMP 2011; McInnis 2013).

Because no thresholds were applied in the 2012 stock assessment, international scientists and NMFS's stock assessment peer reviewers could not provide management advice. The 2012 stock assessment stated that the "ISC requires advice from the WCPFC regarding which

reference points managers prefer so that it can provide the most useful scientific advice" (ISC 2013). Similarly, without stated values for reference points or even direction as to which reference points to use, peer reviewers of the 2012 Pacific bluefin tuna stock assessment were unable to determine how overfishing and overfished stock status are defined for Pacific bluefin tuna (*see, e.g.*, Carruthers 2013 at 20). The assessment provides the foundation for domestic management decisions by the Pacific Fishery Management Council, but without specific reference points fails to provide recommendations "for acceptable biological catch, preventing overfishing, maximum sustainable yield, and achieving rebuilding targets . . ." 16 U.S.C. § 1852(g)(1)(B). Notwithstanding the lack of reference points, the extremely poor status of Pacific bluefin tuna allowed scientists to conclude fishing mortality (F) to be above all target and limit biological reference points commonly used by fisheries managers (ISC 2013, see also figure 4).



Figure 4. General model of maximum sustainable yield and optimum yield control rules, according to Restrepo et al. (1998) (Source: Figure 4-1, FMP 2011.) The star (\checkmark) in the upper left hand area of the plot represents the estimated placement of Pacific bluefin tuna in 2010 (*see* Carruthers 2013, Table R1, F₂₀₁₀/F_{MSY} = 1.55, B₂₀₁₀/B_{MSY} = 0.18).

Pacific bluefin tuna has a long history of exploitation. The current stock status – overfished and subject to overfishing – has characterized Pacific bluefin tuna for the majority of the years since 1952 (figure 5, Carruthers 2013). The ISC assessment estimated that even in 1952 the stock was in an overfished state and subject to overfishing (Carruthers 2013, fig. R2). Pacific bluefin tuna landing records from coastal Japan date back to as early as 1804 and to the early 1900s for U.S. fisheries in the eastern Pacific Ocean, with peak catches of approximately 59,000 mt in 1935 (ISC 2013). By the start of modern record-keeping in 1952, the population was about a third of the size of unfished population (Powers 2013).





Because Pacific bluefin tuna abundance is at an all time low, the potential for recovery is uncertain. The 2012 stock assessment assumes stock sizes have not declined to a level at which recruitment is impaired, meaning that given the right conditions (lower fishing mortality and a favorable environment), Pacific bluefin tuna could recover (ISC 2013). On the other hand, the benchmarks of overfished and undergoing overfishing by definition mean that recruitment might be impaired, presenting an internal inconsistency in the assessment (Carruthers 2013 at 6). In the past the stock size has also been very low and the fishing mortality very high (1970s-80s), and the population still responded to fishing mortality reductions, which offers some hope for recovery (Carruthers 2013 at 5).

ii. Pacific bluefin tuna fisheries

Pacific bluefin tuna fishing methods include purse seine, pole and line, and longline. Landings occur year-round, with most of the catch from the western Pacific Ocean taken during May-September and most from the eastern Pacific Ocean taken during May-October (Tseng and Smith 2012; Bayliff 1994). The recent trend in the global bluefin fisheries has transitioned to purse seine fleets, which supply live fish for ranching operations to meet sashimi market demand. With sashimi prices exuberantly higher than that of canned tuna, the globalization of this market has encouraged overexploitation. Eastern Pacific Ocean commercial fisheries have focused on small fish (less than 100cm), mostly caught by purse seines (Hanan 1983). Landings greatly expanded through the 1960s, peaking in 1965 at 18,000 mt, before declining in the 1980s and early 1990s (Bayliff 1994). Eastern Pacific landings vary greatly year-to-year, with 5000 mt variations between years common (Hanan 1983). In the late 1990s, the eastern Pacific fisheries followed market trends by beginning to catch live fish for ranching operations (IATTC 2010). This resurgence peaked in 2007, with landings reaching 10,000 mt. (ISC 2008).





Japan's catch of young of year bluefin tuna in the western Pacific Ocean comprises most of the landings, followed by the Mexican fleet (figures 6 and 7). The increase in Mexico's catch in the past fifteen years is consistent with increasing fishing pressure on eastern Pacific Ocean bluefin tuna age 1 (figure 7).



Figure 7. Historical annual catch-at-age of Pacific bluefin tuna in 1952-2011 (source: ISC 2013, figure 3). Note that the catch on the y-axis is in number of fish, not metric tons as in figure 6.

U.S. Commercial and Recreational Fishing

Commercial harvest in the United States occurs primarily by purse seiners, but gillnets, longlines, and the albacore troll and pole-and-line fishery also take some smaller amount of bluefin tuna (NMFS 2012; *see also* Carruthers 2013 at 26 (giving background on the U.S. Pacific bluefin tuna fishery)). Average annual U.S. commercial Pacific bluefin tuna catch from 2007 to 2011 represents only two percent of the average annual landings for all fleets fishing in the eastern Pacific Ocean during that period (79 Fed. Reg. 1810, 1811).

Year	Commercial	Recreational	U.S. Total	% of Reported
	(mt)	(mt)	(mt)	Pacific-wide landings
1987	881	34	915	6
1988	974	1	975	11
1989	1,067	112	1,179	11
1990	1,472	65	1,537	18
1991	416	92	508	3
1992	1,989	110	2,099	15
1993	684	298	981	9
1994	965	89	1,054	6
1995	706	258	964	3
1996	4,609	40	4,650	20
1997	2,372	156	2,528	10
1998	2,051	413	2,464	16
1999	368	441	809	3
2000	756	342	1,097	3
2001	338	356	694	4
2002	61	654	715	4
2003	40	394	434	2
2004	11	49	60	0
2005	206	79	285	1

2006	2	96	98	0
2007	88	28	116	1
2008	103	93	196	1
2009	566		566	3
2010	1	122	123	1
2011	117	456	573	3

Table 1. U.S. commercial and recreational annual landings of Pacific bluefin tuna for the past 25years (1987-2011). (Source: ISC, Fisheries statistics, reported total annual landings,http://isc.ac.affrc.go.jp/fisheries_statistics/annual_landings_20121015.xls).

In the last decade, recreational catch has become more important, accounting for 64 percent of the total (note that U.S. charter recreational vessels are permitted to fish in Mexican waters while commercial vessels are not) (figure 8, Pacific Fishery Management Council 2011). In Washington, bluefin tuna catch is negligible. Oregon's estimated annual recreational catch ranged from zero to 40 fish from 2003 through 2012 (PFMC 2013b at table 5).



Figure 8. U.S. catch (mt) of Pacific bluefin tuna by fishery, 2000-2010 (Source: Pacific Fishery Management Council 2011, figure 1).

2. Magnuson-Stevens Act

Congress enacted the Magnuson-Stevens Act in 1976, "to take immediate action to conserve and manage the fishery resources found off the coasts of the United States." 16 U.S.C. § 1801(b)(1). The Act requires conservation measures "to prevent overfishing, to rebuild overfished stocks, to insure conservation, to facilitate long-term protection of essential fish habitats, and to realize the full potential of the Nation's fishery resources." 16 U.S.C. § 1801(a)(6). Congress recognized that "[i]nternational fishery agreements have not been effective

in preventing or terminating overfishing of these valuable fishery resources. There is a danger that irreversible effects from overfishing will talk place before an *effective* international agreement on fishery management jurisdiction can be negotiated, signed, ratified, and implemented." 16 U.S.C. § 1801(a)(4) (emphasis added).

While the Magnuson-Stevens Act implements a national program to manage federal fisheries, it balances the protection of state interests by establishing eight Regional Fishery Management Councils. 16 U.S.C. § 1852; *C & W Fish Co. v. Fox*, 931 F.2d 1556, 1557 (D.C. Cir. 1991). Each Council has management authority over its respective region. The Secretary of Commerce appoints Councils, members of which include federal officials, state officials, and private parties. Their authority covers federal waters within the United States' exclusive economic zone, extending from 3 miles to 200 miles offshore. 16 U.S.C. § 1801(b)(1). Each Council becomes responsible for developing a fishery management plan. *Id.* Plans must include conservation and management measures that prevent overfishing and rebuild overfished stocks, while protecting, restoring, and promoting the long-term health and stability of the fishery. 16 U.S.C. § 1853(a)(1)(A); *see Flaherty v. Bryson*, 850 F. Supp. 2d. 38, 43 (D.C. Cir. 2012).

To implement the fishery management plans, NMFS must approve the plans and promulgate implementing regulations that comply with the Magnuson-Stevens Act's ten National Standards and other applicable law. 16 U.S.C. § 1854(a)(3); *Flaherty*, 850 F. Supp. 2d at 45. National Standard 1 requires that "[c]onservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery . . . " 16 U.S.C. § 1851(a)(1). National Standard 1 Guidelines ("Guidelines") specify that "National Standards 2 through 10 provide further requirements for conservation and management measures in FMPs, but do not alter the requirement of [National Standard 1] to prevent overfishing and rebuild overfished stocks." 50 C.F.R. § 600.310(1).

The sustainable fishery management and conservation goals are achieved through the Secretary's power to regulate overfished fisheries. 16 U.S.C. § 1854(e). If the Secretary determines a fishery has reached overfished levels, "the Secretary shall immediately notify the appropriate Council and request that action be taken to end overfishing in the fishery and to implement conservation and management measures to rebuild affected stocks of fish." *Id.* § 1854(e)(2). Once notified, the Council has two years to prepare and implement an FMP, amendment, or regulation. *Id.* § 1854(e)(3). Section 1854 specifies that the action must "end overfishing immediately in the fishery and rebuild affected stocks." If the Council fails to act within the 2-year period, the Secretary "shall prepare a fishery management plan or plan amendment and any accompanying regulations to stop overfishing and rebuild affected stocks of fish within 9 months." *Id.* § 1854(e)(5).

In 2007, Congress enacted the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act to add a section addressing fish overfished "due to excessive international fishing pressure." Pub. L. No. 109-479, 120 Stat. 3575 (2007). For these stocks, the Secretary must determine whether the fish: (1) are being overfished "due to excessive international fishing pressure," and (2) there are no management measures to end overfishing under an international agreement to which the United States is a party. Upon such a determination:

(1) the Secretary, in cooperation with the Secretary of State, [shall] immediately take appropriate action at the international level to end the overfishing; and

(2) within 1 year after the Secretary's determination, the appropriate Council, or Secretary, for fisheries under section 1852(a)(3) of this title shall—

(A) develop recommendations for domestic regulations to address the relative impact of fishing vessels of the United States on the stock and, if developed by a Council, the Council shall submit such recommendations to the Secretary; and

(B) develop and submit recommendations to the Secretary of State, and to the Congress, for international actions that will end overfishing in the fishery and rebuild the affected stocks, taking into account the relative impact of vessels of other nations and vessels of the United States on the relevant stock."

16 U.S.C. § 1854(i).9

National Standard 1 guidelines provide that the "relative impact" of fishing vessels of the United States – as used in paragraph (2) above – may include consideration of factors such as (1) domestic and international management measures already in place, (2) management history of a given nation, (3) estimates of a nation's landings or catch (including bycatch) in a given fishery, and (4) estimates of a nation's mortality contributions in a given fishery. 50 C.F.R. § 600.310(k)(3).

In addition to the above requirements specific to overfished internationally managed stocks, all stocks subject to management under an international agreement must have reference points like status determination criteria and maximum sustainable yield in each fishery management plan. *Id.* § 600.310(h)(2)(ii). Status determination criteria mean quantifiable factors or their proxies used to determine if overfishing has occurred or the stock is overfished. *Id.* § 600.310(e). These management measures must be based on the best scientific information available. 16 U.S.C. § 1851(a)(2) (National Standard 2).

The Pacific Fishery Management Council adopted the FMP in 2004 and most recently amended it in 2011. The FMP prohibits retention of certain species (great white sharks, basking sharks, megamouth sharks) and allows catch of other "prohibited species" only under certain

⁹ So in original. Two subsections (i) have been enacted.

conditions (Pacific halibut and salmon) (FMP 2011; 50 C.F.R. § 660.711(a).) The list of prohibited species was created to protect rare animals, like the low productivity sharks, and prevent Pacific halibut and salmon from becoming targets of fisheries covered by the FMP that have incidental catch. (FMP 2011; 50 C.F.R. § 660.711(a).)

3. Tunas Conventions Act of 1950

The Tunas Conventions Act of 1950, 16 U.S.C. §§ 951-62, requires the Secretary of Commerce to promulgate regulations to carry out recommendations of the Inter-American Tropical Tuna Convention (IATTC) upon approval by both the Secretary of State and the Secretary of Commerce. 16 U.S.C. § 955(c).

4. **Regulatory History**

NMFS has determined both that Pacific bluefin tuna is undergoing overfishing and is overfished. First, in 2011, NMFS determined that

[a]lthough both regional fisheries management organizations [the IATTC and the Western and Central Pacific Fisheries Commission] have internationally agreed upon management measures in place for [Pacific] bluefin tuna, these measures are inadequate to end overfishing for purposes of the [Magnuson-Stevens Act] and its implementing regulations. Therefore, the Councils . . . must undertake action under [Magnuson-Stevens Act] section 304(i)(2).

Fisheries of the Pacific Region; Western Pacific Region, Notification of determination of overfishing or an overfished condition,76 Fed. Reg. 28422, 28422 (Apr. 7, 2011). The Pacific Fishery Management Council and the Western Pacific Fishery Management Council responded jointly to NMFS's 2011 section 304(i) determination in a March 26, 2012, letter (PFMC 2012). The Councils did not recommend new domestic management measures to address relative impact of U.S. fishing vessels on the Pacific bluefin tuna stock and instead found current regulations "adequately address the very low impact of U.S. fisheries on the stock of Pacific bluefin tuna" (PFMC 2012).

Second, on April 8, 2013, NMFS notified the Pacific Fishery Management Council that even though the highly migratory species fishery management plan does not identify biological reference points, NMFS had "determined that Pacific bluefin tuna (*Thunnus orientalis*) continues to be subject to overfishing and was now overfished." (McInnis 2013; *see also International Fisheries; Pacific Tuna Fisheries; Fishing Restrictions in the Eastern Pacific Ocean*, 78 Fed. Reg. 33240, 33241 (Apr. 16, 2013) ("Based on a 2013 stock assessment, NMFS determined Pacific bluefin tuna was not only experiencing overfishing but was also overfished."). The Pacific Fishery Management Council directed its Executive Director to respond with a letter recommending no new domestic management measures and recommending the U.S. government advocate for a higher level of protection in international fisheries (PFMC 2013a; *see also* PFMC 2014 (transmitting the final response)). The Council decided to evaluate current catch limits in West Coast recreational bluefin tuna fisheries as part of the biennial process beginning in June 2014 (PFMC 2013a; *see also* PFMC 2014).

i. Commercial Catch Limits

On June 4, 2013, NMFS implemented IATTC recommendations capping commercial bluefin tuna annual catch for 2012 and 2013 at 500 mt – an amount above any U.S. catches in the past decade. 78 Fed. Reg. 33240 (codified at 50 C.F.R. § 300.24(u) and § 300.25(h)). NMFS promulgated the catch limits solely under its Tuna Convention Act authority to implement IATTC recommendation, and therefore considered "[t]his action . . . not subject to the Magnuson-Stevens Act." *Id.* at 33241-42; *see* 16 U.S.C. §§ 951-962 (Tuna Conventions Act of 1950). On January 10, 2014, NMFS published a proposed rule to set 2014 annual catch at the same levels as in 2012 and 2013, but has not finalized that rule. *See Proposed Rule for International Fisheries; Pacific Tuna Fisheries; Fishing Restrictions for Pacific Bluefin Tuna in the Eastern Pacific Ocean*, 79 Fed. Reg. 1810; *see also* Kilduff 2014 (providing the Center's comments on the proposed rule).

In 2008 – years before the IATTC recommended catch limits – the California Legislature requested Pacific bluefin tuna catch limits because of concern over the status of the stock (S.C.R. 85 (2008)). California Senators Kuehl, Migden, and Wiggins introduced Senate Concurrent Resolution 85 to request the assistance of state, federal, and international management agencies to achieve, among other things, "the imposition and enforcement of catch limits for Pacific bluefin tuna in the United States Exclusive Economic Zone" (*id.*) The findings of the resolution include concerns over the potential collapse of Pacific bluefin tuna, associated economic losses, ecosystem effects of fewer Pacific bluefin tuna, and the failure of national and international regulatory structure to manage and protect Pacific bluefin tuna. The California Assembly and Senate adopted the resolution in July and August 2008, respectively. Many agencies and non-governmental organizations, but neither the Pacific Fishery Management Council nor NMFS took action to set catch limits in response.

Harvest for the aquaculture industry is an ever-present threat to Pacific bluefin tuna. Between 2002 and 2008, NMFS almost yearly published notices and requests for comments on applications for Mexican vessels to receive transfers of live tuna from U.S. purse seiners for the purpose of transporting the tuna alive to an aquaculture facility located in Baja California, Mexico. *See* 73 Fed. Reg. 17326 (Apr. 1, 2008); 72 Fed. Reg. 37731 (July 11, 2007); 70 Fed. Reg. 44326 (Aug. 2, 2005); 69 Fed. Reg. 25882 (May 10, 2004); 67 Fed. Reg. 40277 (June 12, 2002). The Center submitted comments opposing the transshipment permits under Magnuson-Stevens Act section 204(d) in 2007 and 2008 (Sakashita 2007, Sakashita 2008). To our knowledge NMFS issued no authorizations for this activity. NMFS also has studied ranching bluefin tuna in U.S. waters. Hannesson and Herrick¹⁰ (2013), conducted an economic study of potential species suitable for California aquaculture and concluded that "California halibut and bluefin tuna for the Japanese market appear expensive enough to unambiguously justify fish farming." The high prices paid for sushi-grade bluefin tuna drive ideas to develop the bluefin tuna industry despite the decimated population.

ii. Recreational Catch Limits

On October 15, 2007, NMFS established a recreational daily bag limit of 10 bluefin tuna in federal waters off of California. *Fisheries off West Coast States; Highly Migratory Species Fisheries*, 72 Fed. Reg. 58258 (Oct. 15, 2007). This bag limit is so high that it will not limit fishing for Pacific bluefin tuna. *See* 72 Fed. Reg. 35213, 35213 (June 27, 2007) ("from 1997 through 2005 . . . approximately 98 percent of sampled catches that contained albacore tuna landed less than 10 total fish per day"). During the rulemaking process, NMFS rejected comments requesting a lower bag limit and application to federal waters off all three west coast states. 72 Fed. Reg. at 58259. At that time NMFS was operating under the conclusion that bluefin tuna populations in the North Pacific Ocean were not experiencing overfishing or overfished, but NMFS "will, in conjunction with the Pacific Council, take necessary steps in the future to implement appropriate conservation measures if warranted, including the potential for additional regulations to address both commercial and recreational fisheries impacts." *Id*.

NMFS determined that the federal bag limit – applicable only to waters off California – is consistent with state regulations (72 Fed. Reg. at 58258; 16 U.S.C. 1856). All three west coast states have recreational bag limits for pelagic species on a per angler basis:

- Washington: 2 bluefin per day. W.A.C. 220-56-240.
- Oregon: aggregate of 25 offshore pelagic species per day. O.A.R. 635-011-0100 (incorporating 2014 Oregon Sport Fishing Regulations).
- California: 10 bluefin per day. 14 C.C.R. § 28.38(b).

In practice, these bag limits do little to restrict the catch of bluefin tuna. In California – where an angler is most likely to catch bluefin tuna – state regulations allow, by special permit, retention of up to three daily bag limits for a trip occurring over multiple consecutive days. 14 C.C.R. § 27.15. In other words, for a multi-day trip with a special permit an angler could catch 30 bluefin tuna. In addition, two or more anglers may continue to fish until "boat limits" are reached. A boat limit is "equal to the number of passengers aboard . . . authorized to sport fish in ocean waters off California . . . multiplied by the individual daily bag limit authorized for a species or

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species group." 14 CCR §§ 27.60(c), 195(e)(4); *see* 50 C.F.R. § 660.721(d). Allowing anglers to pool their bag limits in this way can drastically increase daily limits.

C. NMFS must take action to amend the Highly Migratory Species Fishery Management Plan and implement regulations to address overfishing of Pacific bluefin tuna.

As described below, NMFS has the duty to propose regulations to reduce overfishing of Pacific bluefin tuna. This duty was triggered by NMFS's 2011 and 2013 findings that (i) Pacific bluefin tuna continues to be subject to overfishing and overfished due to excessive international fishing pressure and (ii) international management measures in place are inadequate to correct the problem. 16 U.S.C. § 1854(i); 76 Fed. Reg. 28422; 78 Fed. Reg. 33240. The Magnuson-Stevens Act requires that within one year after this determination, the Council shall develop and submit "recommendations for domestic regulations to address the relative impact of fishing vessels of the United States on the stock." *Id.*; *see also* PFMC 2013c (describing the requirements of the Magnuson-Stevens Act). Moreover, because the Council has failed to meet this statutory mandate, NMFS must propose regulations to address domestic impacts on Pacific bluefin tuna.¹¹ With this petition, we request that NMFS initiate formal rulemaking.

Excessive International Fishing Pressure

NMFS has clearly determined that Pacific bluefin tuna are overfished due to excessive international fishing pressure. NMFS has found that Pacific bluefin tuna abundance is close to its historical low due to excessive international fishing pressure (McInnis 2013). As shown in figure 5, for most of the years since 1952, bluefin tuna has been overfished and experiencing overfishing. The major country fishing Pacific bluefin tuna since 1952 has been Japan. Mexico, Chinese-Taipei and Korea have increased fishing in the past 20 years, while the U.S. catch declined at the same time (figure 6). The highly migratory nature of Pacific bluefin tuna – potentially crossing the Pacific Ocean to travel between spawning grounds off Okinawa and foraging in the California Current – makes them susceptible to this international fishing pressure.

In the eastern Pacific Ocean, two major events marked changes in fishing for Pacific bluefin tuna: one causing the decline of the U.S. fishery and the other causing the rise of the Mexican fishery (Aires-da-Silva and Dreyfus 2012). First, beginning in the early 1980s, U.S. purse seine vessels abandoned traditional fishing grounds along the coast of Baja California because of the establishment in 1982 of exclusive economic zones (EEZs) extending 200 nautical miles along the oceanic borders of coastal states. This assigned sovereign powers to coastal states to manage resources within the EEZs and assure they are not subject to

¹¹ NMFS is authorized to prepare a fishery management plan amendment where the Council fails to develop and submit to the Secretary, after a reasonable period of time, any necessary amendment. 16 U.S.C. § 1854(c).

overexploitation (Ostrom 2008). Second, Mexico began targeting juvenile bluefin tuna for farming (pen rearing) to supply the sushi trade in the late 1990s. For stock assessment purposes, scientists divide the history of catch in the eastern Pacific Ocean into three stages: a U.S. target fishery (1952-1982); a transition period dominated by an extinguishing U.S. fishery (1993-1998) and a developing Mexican fishery (1996-s2001); and a fully developed Mexican target fishery for pen rearing from 2002 to present (figure 8; Aires-da-Silva and Dreyfus 2012).



Figure 8. Total catches of Pacific bluefin tuna by flag for the purse seine fisheries in the eastern Pacific Ocean, 1960-2011. (Source: Aires-da-Silva and Dreyfus 2012, figure 1.)

Inadequate International Management Measures

NMFS has determined that international management measures in place are inadequate to correct the problem, i.e. are insufficient to end overfishing (McInnis 2013). Even though Pacific bluefin tuna is considered to be a single Pacific-wide stock, management is split between the Western and Central Pacific Fisheries Commission and the Inter-American Tropical Tuna Commission. While international measures remain important, they are currently inadequate to end overfishing and rebuild populations. As one recent example, at the 2013 Western and Central Pacific Fisheries Commission meeting in Fukuoka, Japan, a majority of the members agreed on a 15 percent cut in fishing mortality only as an interim measure and deferred more significant cuts until the next assessment despite fishing mortality exceeding all potential reference points (*see* WCPFC CMM 2013-09; figure 4). Thus far countries have been unable to reduce the catch of Pacific bluefin tuna as needed to begin recovery.

Similarly, during its June 2013 meeting, the Inter-American Tropical Tuna Commission considered the problems facing Pacific bluefin tuna (*see* Resolution C-13-02). It noted that the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) recently reported 2010 biomass levels were near the lowest in history. Rather than react accordingly and reduce cumulative total limits, the Inter-American Tropical Tuna Commission extended their measures for another year (*see id.*). By extending the 5,000 metric ton per year catch limit, including the 500 metric ton exception for all convention members and cooperating non-members with historic catch records, the Inter-American Tropical Tuna Convention failed to react to the current reality that Pacific bluefin tuna are rapidly disappearing.

NMFS has also recognized that its finding triggered Section 304(i)'s mandate for domestic regulations. 16 U.S.C. § 1854(i). In NMFS's letter dated April 8, 2013, notifying the Pacific Fishery Management Council of the change in status to "overfished," NMFS also acknowledged that "the Council is *required* to develop domestic regulations that address the relative impact of the domestic fishing fleet on Pacific bluefin tuna" (McInnis 2013 (emphasis added)). Once the Council submits proposed regulations, NMFS must initiate an evaluation. 16 U.S.C. § 1854(b). Within 15 days NMFS must make a determination whether or not to publish the regulations. *Id.* Domestic regulations to address the U.S. vessels' impact are now required because NMFS's determination triggered the process in section 1854(i).

The Council has failed to develop recommendations for appropriate domestic regulations or international actions (*see* PFMC 2014). NMFS must now promulgate regulations to address the impact of U.S. fishing vessels and develop and submit recommendations for international actions to the Secretary of State. 16 U.S.C. § 1854(i).

To meet the requirements of the Magnuson-Stevens Act, we formally request that NMFS amend the FMP and its implementing regulations to:

- 1. Add bluefin tuna to the FMP's list of prohibited species to require release immediately if caught. 50 C.F.R. § 660.711(a).
 - i. Alternatively, establish annual catch limits for bluefin tuna and a permanent minimum size requirement to protect age classes 1-2 from fishing mortality.

2. Establish specific values for reference points for Pacific bluefin tuna to guide science-based management.

Without these measures, the FMP and regulations will not be able to slow the decline of Pacific bluefin tuna or even have the tools necessary to translate the dire scientific assessments into management action.

1. NMFS should add Pacific bluefin tuna to the list of prohibited species.

The Council has failed to meet its statutory duty to make the recommendations for domestic regulations in response to NMFS's determinations in 2011 and 2013 that Pacific bluefin tuna was undergoing overfishing and overfished, respectively. The Council response that no new recommendations are necessary does not satisfy Congress's intent in the 2007 Magnuson-Stevens Act amendments to address international overfishing. The combination in section 1854(i) of the deadline – "within 1 year after the Secretary's determination" – and the mandatory language – "the Council shall submit such recommendations to the Secretary" – indicate that this is an enforceable duty.¹² If Congress meant for domestic measures addressing international overfishing to be discretionary, it would have adopted permissive language as it has elsewhere in the Magnuson-Stevens Act. In addition, the Magnuson-Stevens Act has a strong mandate, as evidenced in National Standard 1, to prevent overfishing. To read the mandate for domestic regulations as discretionary would contravene the larger purposes of the legislation and the specific language of 16 U.S.C.§ 1854(i).¹³

At the June 2013 Pacific Fishery Management Council meeting where members considered adopting a response to Magnuson-Stevens Act requirements, the minutes show that little to no concern was given to the statute's requirement for the Council to recommend domestic regulations within a year. Mr. Mark Helvey, NMFS Southwest Region designee to the Council, pointed out that the status of Pacific bluefin tuna had gotten worse since 2012 when the Council responded to NMFS's 2011 notification that Pacific bluefin tuna was subject to overfishing (PFMCd 2013 at 22). He recommended an analysis of the recreational bag limits off California and Oregon and also encouraging that the Western and Central Pacific Fisheries Commission move in the direction of catch limits, like the Inter-American Tropical Tuna Commission (*id.*). But when asked what type of schedule he had in mind, Mr. Helvey replied that the analysis should start in June 2014 – a full two months after the one-year deadline would pass for the Council to recommend domestic regulations under section 1854(i). (*Id.*) The Council brazenly failed to conduct an analysis or consider whether to recommend regulations within the statute's timeframe.

In the absence of Council recommendations, NMFS should act unilaterally to implement domestic regulations to address Pacific bluefin tuna's U.S. fishing mortality. Subsection 1854(i) on international overfishing states that it applies in lieu of subsection 1854(e), which addresses

¹² The word "shall" normally imposes a mandatory duty. *See* 3 Sutherland Statutory

Construction § 77.1 (7th ed.); § 57.2 ("'Shall' is considered presumptively mandatory unless there is something in the context or the character of the legislation which requires it to be looked at differently.").

¹³ See United States v. Begay, 622 F.3d 1187, 1196 (9th Cir. 2010) ("there is nothing novel about reading a statute in light of its legislative purpose; indeed, we have stated that '[t]he language of a statute must be interpreted in its context to effectuate legislative intent.") (citations omitted).
rebuilding overfished fisheries and the timelines required for domestically managed stocks. Subsection 1854(e) contains a requirement that within 9 months NMFS prepare measures to stop overfishing and rebuild affected stocks if a Council does not submit to the Secretary the required fishery management plan, plan amendment, or proposed regulations. 16 U.S.C. § 1854(e)(5). While subsection 1854(i) does not expressly require NMFS to step in once the Council fails to act, NMFS's duty is implied by the structure and purpose of § 1854(i), as well as the agency's similar duties under § 1854(e). Without such a mechanism, Congress's intent to require Council recommendations within one year of notification would be unfulfilled. Therefore NMFS should consider § 1854(i) to contain an implied statutory mandate to make recommendations in a similar timeframe as under § 1854(e).

Because of the extremely depleted status of Pacific bluefin tuna, NMFS should put into place the most protective domestic regulations possible. Like the sharks on the FMP's prohibited species list – great white shark, basking shark, megamouth shark – Pacific bluefin tuna's population is so low as to be extremely vulnerable to fishing mortality, even incidentally. At a 96% decline from unfished population levels, Pacific bluefin tuna cannot sustain additional decreases without inviting irreparable disaster. Further, the U.S. vessels do not target Pacific bluefin tuna, but incidentally catch them and ports fishermen cannot sell Pacific bluefin tuna (WCPFC-NC9 2013a). Thus the economic effect of such listing Pacific bluefin tuna on the prohibited species list would be minimal.

Even though the U.S. fisheries catch only a small percentage of Pacific-wide bluefin tuna catch, a complete moratorium on U.S. fishing is necessary to recover the population to healthy levels nearly unseen after 1952. A strong domestic stance in favor of drastic action can underscore the large reductions in fishing that are necessary internationally. Once the U.S. prohibits the catch of Pacific bluefin tuna, it may be easier to persuade Mexico and Japan to act accordingly until Pacific bluefin tuna have recovered.¹⁴

Prohibiting U.S. catch of Pacific bluefin tuna would be significant because it is not only precedent setting, but it also acknowledges that past fishing effort should confer responsibility on a nation to reduce overfishing. The history of U.S. catch – the biggest bluefin tuna fishing nation in the eastern Pacific Ocean for three decades after 1952 (even while never close to Japan's catch in the western Pacific) – makes a prohibition due to a decline in population even more symbolically powerful.

There are also biological benefits of prohibiting U.S. catch. A prohibition on U.S. catch has the potential to allow some of juvenile Pacific bluefin tuna grow large, return to spawn, and

¹⁴ Japan recently made an independent move to reduce catch levels to fifty percent of 2002-2004 levels (Bangor Daily News 2014). This reduction is arguably not enough to meet potential goals, *e.g.* the reference point $F_{0.1}$, a biologically precautionary target to prevent growth overfishing (see Carruthers 2013 ("fishing mortality rate in the period 2002-2004 was estimated to be 2.5 times $F_{0.1}$...")).

strengthen the migratory pathways to the California Current. The small catch numbers belie the historical presence of large bluefin tuna off the U.S. west coast. The true impact of continuing to heavily fish juveniles in the eastern Pacific Ocean may not be obvious when comparing numbers of bluefin in the entire Pacific Ocean, many of which never come to the eastern Pacific.

As discussed above, the potential benefits of prohibiting U.S. fishing for Pacific bluefin tuna outweigh the burden of doing so. While it could be argued that giving up the opportunity for bluefin tuna catch weakens U.S. negotiating power, the status of the stock is so dire and the U.S. catch so minimal (2% of Pacific-wide landings) that U.S. fisheries have little left to lose. In the case of Pacific bluefin tuna, very depleted and with fishing continuing at levels too high, recovery is uncertain especially in light of predicted reductions in larval survival with climate change (*see* Kimura et al. 2010). The U.S. focus thus should be on implementing every way to achieve recovery as quickly as possible. The small percentage of U.S. catch cannot justify inaction.

Given the enormous uncertainty of climate change's impacts to Pacific bluefin tuna and the potential for recovery of Pacific bluefin tuna even in the best environmental circumstances, the cost of several years of not fishing Pacific bluefin tuna is essentially irrelevant. In those years scientific research regarding the migrations, genetics, and spawning of Pacific bluefin tuna will continue. A decade's worth of scientific insights may completely change the way that we calculate the impact of continued fishing on bluefin tuna in the eastern Pacific Ocean. A reduction in fishing in the eastern Pacific Ocean, no matter what happens elsewhere, increases the odds of halting the population decline and finding answers to questions regarding Pacific bluefin tuna's use of the California Current.

While prohibiting U.S. catch of Pacific bluefin tuna by itself may not reverse the population decline, it does not follow that NMFS does not have a duty to take steps to slow or reduce overfishing. Contrary to the Pacific Fishery Management Council's position (*see* PFMC 2014), the petitioned for actions here can have an important contribution to ending overfishing of Pacific bluefin tuna. The more drastic the potential consequence of failing to act – here, failing to stop the decline and eventual extinction of Pacific bluefin tuna – the more urgent it is to act to reduce the probability. Given the nearly continuously overfished status of Pacific bluefin tuna (figure 5), it is more than likely that U.S. fishing vessels did significantly impact Pacific bluefin tuna populations even though U.S. fishing declined greatly in the past 20 years. Thus, we strongly request that NMFS act quickly to add Pacific bluefin tuna to the list of prohibited species that must be released immediately if caught at 50 C.F.R. § 660.711(a).

The Magnuson-Stevens Act requires that the recommendations for domestic regulations and international actions consider the relative impact of U.S. fishing vessels on the stock. 16 U.S.C. § 1854(i). Because this section applies only when a stock is "overfished or approaching a condition of being overfished due to excessive international fishing pressure," the fact that U.S. vessels are not causing the current overfishing, or even having a large impact on the stock in its already-depleted state, does not excuse the requirement. *Id.* To read it otherwise would provide an exception that would swallow the rule. Further, basing relative impact solely on the United States' percentage of global landings (PFMC 2014) fails to take into account the factors and primary objective established in National Standard 1 Guidelines; specifically, the duty to rebuild overfished stocks. *See* 50 C.F.R. § 600.310(k).

i. Alternatively, NMFS should establish annual catch limits.

While an outright prohibition on fishing for Pacific bluefin is the best way to ensure its rebuilding, NMFS should alternatively put into place annual catch limits for Pacific bluefin tuna and a permanent minimum size to protect year classes 1 and 2. As discussed above, in the absence of Council recommendations for domestic regulations to address the impact of U.S. fishing vessels on Pacific bluefin tuna, NMFS must act to fulfill Congress's intent to address international overfishing. Annual catch limits underpin U.S. success in fisheries management because the limits cannot exceed science advisors' recommendations. 50 C.F.R. § 600.310(b)(2)(v)(D); *Conservation Law Foundation v. Pritzker*, D.D.C. No. 13-821 (Apr. 4, 2014), 2014 U.S. Dist. LEXIS 46543 at *29-30. With annual catch limits, domestic management will be based on scientific advice. U.S. stocks have proven this to be a successful strategy.

While NMFS guidelines do not require annual catch limits for internationally managed stocks, 50 C.F.R. § 600.310(h)(2)(ii), NMFS has said that they are generally recommended for a fishery managed under an international fishery agreement (*Magnuson-Stevens Act Provisions; Annual Catch Limits; National Standard Guidelines, Proposed Rule,* 73 Fed. Reg. 32526, 32530 Table 1 (June 9, 2008).) We urge NMFS to implement annual catch limits if it denies the request to prohibit fishing for Pacific bluefin tuna.

Assuming that Pacific bluefin tuna recovers to the point where annual catch limits allow fishing in the eastern Pacific Ocean, requiring a minimum size will benefit fishermen by allowing small fish migrating to the eastern Pacific Ocean to increase size before capture, thereby increasing yield. Based on the results of Madigan et al. (2014), many of the Pacific bluefin tuna in the eastern Pacific Ocean stay for more than a year before returning west to spawn (see figure 2). Benefits of a minimum size include not only bigger fish for U.S. fishermen, but any fish not captured at a larger size will be able to return to spawn and potentially reinforce the genes and/or behavior that allows eastern migration (*see, e.g., De Luca et al. 2014*).

On NMFS's recommendation, the Pacific Fishery Management Council decided to evaluate current catch limits for Pacific bluefin tuna in west coast recreational fisheries beginning in June 2014 (PFMC 2014). The Center supports the Council's decision to examine the limits in the west coast recreational fisheries, but these limits should be based on best available science regarding the status of the stock, including specific values for reference points. As discussed above in the section on regulatory background, the current recreational limits (state and federal) fail to limit fishing because they are so high, thus providing no benefit to conservation and management of Pacific bluefin tuna.

2. NMFS must amend the FMP to establish reference points for bluefin tuna to guide science-based management.

Establishing biological reference points by which scientists can evaluate the status of the Pacific bluefin tuna has the potential to greatly increase awareness and improve management, thus should be a NMFS priority in amending the FMP. The Magnuson-Stevens Act requires scientific and statistical committees to provide the Council with "scientific advice for fishery management decisions, including acceptable biological catch, preventing overfishing, maximum sustainable yield, and achieving rebuilding targets. . . " 16 U.S.C. § 1852(g). Without reference points, scientific advisors are unable to give this advice. Even stocks subject to management under an international agreement "need to have [status determination criteria] and [maximum sustainable yield]." 50 C.F.R. § 600.315(h)(2)(ii). NMFS highlighted the lack of specific values for Pacific bluefin tuna reference points in its 2013 letter to the Council (McInnis 2013). These benchmarks are critical to determine if overfishing has occurred, or if the stock or stock complex is overfished.

The lack of specific values for Pacific bluefin tuna reference points has already crippled scientists' ability to provide conservation advice. Despite the depleted stock status, the 2012 assessment failed to provide specific conservation advice because the "ISC requires advice from the WCPFC regarding which reference point managers prefer." (ISC 2013.) The peer reviewers also pointed out this as a failing of the stock assessment (*see, e.g.,* Carruthers 2013 at 20 ("The assessment report does not include standard MSY reference points making it difficult to understand the status of the stock in terms of a productive biomass and the expected trajectory of the stock given current fishing mortality rate.").) Without such thresholds, scientists cannot convey management advice with specificity, thereby greatly decreasing the likelihood of science-based fisheries management.

D. NMFS should recommend to the Secretary of State and the Congress the international actions to end overfishing of Pacific bluefin tuna.

The Magnuson-Stevens Act requires that NMFS develop and submit recommendations to the Secretary of State, and to the Congress, for international actions that will end overfishing in the fishery and rebuild the affected stocks, taking into account the relative impact of vessels of other nations and vessels of the United States on the relevant stock. 16 U.S.C. § 1854(i). Here, NMFS should make robust recommendations to end overfishing of Pacific bluefin tuna including (1) establishing a high seas moratorium on all fishing, (2) implementing a Pacific-wide minimum size for bluefin tuna catch, and (3) achieving a steep reduction in Pacific bluefin tuna quota for all countries to meet rebuilding targets that are based on established reference points.

High Seas Moratorium

In order to address some of the fundamental problems plaguing international management of highly migratory species, NMFS should consider recommending that the Secretary of State and Congress encourage international action to close the high seas to all fishing. Recently a published scientific paper and an economist speaking at the World Ocean Summit separately raised the specter of the costs of fishing in the high seas (Crow and Costello 2014, *see* Bland 2014).

While closing the high seas alone may not protect bluefin tuna from overfishing because countries will continue to target bluefin tuna within EEZs, it is worth evaluating as a tool in the toolbox. Japanese fishing grounds are generally costal or near-shore waters, but the distant-water longline fishery also catches relatively small numbers of Pacific bluefin tuna (ISC 2013). Independently of the Western and Central Pacific Fishery Management Commission, this year Japan proposed measures to reduce its catch of bluefin tuna too young to spawn by 50 percent from the average in 2002-04 (Bangor Daily News 2014). Reportedly by taking the lead as the world's largest consumer of tuna and demonstrating its intention to reduce the amount of fish caught, Japan hopes to encourage other nations to strengthen their restrictions as well (*Id.*). On the other hand, Japan claims that the Western and Central Pacific Fishery Management Commission's conservation and management measures are not legally applicable within the territorial or internal waters of Japan (WCPFC-NC9 2013b). The high seas closure would be a measure to foreclose catch in areas undeniably within Commission jurisdiction and could similarly indicate to member countries that measures are immediately necessary.

Scientific support for closing high seas to fishing is growing and includes support for both economic reasons and population dynamics. Crow and Costello modeled governance and biological scenarios to determine effects of high seas closures. They found that for fisheries targeting pelagic, migratory stocks, where some but not all of the fishery occurs in EEZs, closing the high seas nearly always benefited the fishery by increasing profits and may encourage stock rebuilding by protecting a large range of open ocean habitat (Crow and Costello 2014). Martin Stuchtey, with global management consulting firm McKinsey & Company, reportedly presented at the World Ocean Summit results of his analysis showing that closing the high seas would cost every person on earth \$2 but would ultimately give them a return of \$4 (Bland 2014). Based on these preliminary studies, a high seas closure could reduce Pacific bluefin tuna fishing and be politically palatable.

It is imperative given the dire status of Pacific bluefin tuna that NMFS recommend strong international measures to the Secretary of State and Congress, potentially including a moratorium on fishing in the high seas. Other measures tailored specifically to Pacific bluefin tuna should be recommended as well, such as a minimum size to prevent fishing mortality of age classes 1 and 2.

Pacific-Wide Minimum Size

To fulfill the requirements of Magnuson-Stevens Act section 304(i) to make recommendations for international actions that will end overfishing in the fishery and rebuild the affected stocks, NMFS should recommend to Congress and the Secretary of State implementation of a Pacific bluefin tuna minimum size to protect young bluefin tuna from fishing mortality. These recommendations are necessary to begin to rebuild the population of Pacific bluefin tuna and maintain migrations from spawning grounds to the eastern Pacific Ocean. The majority of the catch of Pacific bluefin tuna is currently less than a year old (figure 7). A minimum size has the potential to allow bluefin tuna time to migrate to the eastern Pacific Ocean, potentially reestablishing the historical range. It may also allow quicker recovery if larger tuna escape capture until maturity.

Steep Reductions in Catch

The United States must continue to push the international management organizations to achieve steep reductions in Pacific bluefin tuna quota for all countries in order to meet rebuilding targets that are based on established reference points. At the Western and Central Pacific Fisheries Management Commission meeting in 2013, U.S. recommendations included creating a rebuilding plan (WCPFC-NC9 2013a at ¶ 57.) The Center supports this recommendation and would reemphasize that the basis for the rebuilding targets should be specific reference points. In the case where a Council manages a fish for which no internationally-set reference points exist, "the Council should propose reference points . . . for consideration by the IATTC and the WCPFC" (FMP 2011 at 43). We recommend that the United States suggest a precautionary reference point and recommend the international organizations adopt the FMP's definition of optimum yield as 0.75MSY. A rebuilding plan and the steep reductions in catch necessary to achieve rebuilding targets will follow from setting precautionary reference points.

Without specific reference points and rebuilding targets, managers are unlikely to make the cuts necessary to rebuild Pacific bluefin tuna. As noted in one of the peer reviews of the 2012 assessment, "none of the proposed conservation measures enable the stock to recover by 2030." (Bonhommeau 2013 at 13.) It is alarming that under the most conservative scenario proposed, in 2030 the biomass of Pacific bluefin tuna would only be one third (33%) of what would provide maximum sustainable yield (*id*.). Without firm goals and targets clearly stated in assessments, the ramifications of continuing to fish at too high a level are more obscure.

E. Conclusion

The low population of Pacific bluefin tuna – just 3.6 % of unfished biomass remaining – requires immediate action under the Magnuson-Stevens Act to reduce fishing. NMFS should use

its full authority to protect the Pacific Ocean from these effects and lead the effort for progressive fishery management by prohibiting fishing for Pacific bluefin tuna.

NMFS must promptly respond to this petition and initiate the petitioned-for rulemaking. The provisions of this Petition are severable. If any provision of this Petition is found to be invalid or unenforceable, the invalidity or lack of legal obligation shall not affect the other provisions of the Petition.

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STOCK STATUS OF PACIFIC BLUEFIN TUNA AND THE URGENT NEED FOR MANAGEMENT ACTION

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ABSTRACT

The stock assessment of Pacific bluefin tuna (PBF) by the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) is unsatisfactory because the model does not adequately fit the data, and this problem is only compounded in the updated assessment model. The lack of fit to the main indices of spawning abundance is particularly concerning. Despite these flaws, the model results are robust to a large number of alternative assumptions. Analysis of the data external to the model supports the management advice based on the model. The stock is highly depleted and experiencing overfishing. Although not discussed in the consensus assessment report, our independent analysis of the data shows that the spawning biomass is supported by a single cohort that is nearing the end of its life. Future projections predict that the population will not increase under the low recruitment scenario, which is consistent with recent recruitment estimates, unless catches of juveniles are reduced by 25-50%. Similar cuts are needed to ensure a high probability of reaching 10% of the unexploited biomass in 10 years, assuming average recruitment. In conclusion, urgent management action is needed to ensure the sustainability of the Pacific bluefin fisheries.

1. INTRODUCTION

There is considerable concern about the adequacy of the current Pacific bluefin tuna (PBF) stock assessment model. The model developed by the ISC working group on Pacific bluefin does not produce reasonable fits to the main indices of relative abundance and composition data (Figure 1). Despite inconsistencies in the data, a large number of sensitivity analyses all produced the same stock status designations (overfished and overfishing occurring). This consistency in stock status was used as the basis for management advice.

An update of the model with recent data continues to show a poor fit to the data and conflicts among data sets. In particular, the estimates of current spawning biomass were sensitive to the inclusion of Japanese and Chinese Taipei longline catch-per-unit-of-effort (CPUE) data, which have different trends.

For management advice to be accurate, it is important that the stock assessment model used adequately fit the main data components. Therefore, we conducted an exploratory analysis of the length-composition data for Pacific bluefin from the Japanese and Chinese Taipei longline fisheries to obtain insights into why the ISC model does not fit the data. In the process we developed a method to estimate spawning biomass outside the stock assessment model, and these external estimates are compared with those from

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the model. Finally, we conclude with advice to improve the stock assessment and for managing the stock.

2. COMPOSITION DATA

Length-composition data on the catch of Pacific bluefin are available for a variety of fisheries. These data provide information on the age/length selectivity/availability to the fishery and cohort strength (recruitment), and can also provide information on fishing mortality and abundance (Maunder and Piner in press). However, this latter information can be highly sensitive to model misspecification in processes such as selectivity (Lee *et al.* in press). It is therefore important that the composition data are modelled correctly. We conducted an exploratory analysis of the Pacific bluefin Japanese and Chinese Taipei longline length-composition data to obtain insights into why the assessment model does not fit the data.

2.1. Japanese longline length-composition data

Starting in 2000, a clear mode, likely representing a single very strong cohort, can be seen traversing through the Japanese longline length-composition data (Figure 2). The modal progression can be seen more clearly by truncating the length axis and looking at the last 7 years only (Figure 3). The mode may represent more than one consecutive cohort that are all above average due to correlated environmental conditions; however, the very low coefficient of variation (5%) for the variation of lengths in this mode and a subsequent smaller mode suggests that it is a single cohort (Figure 4). The length-composition data suggest that there is a single strong cohort that is supporting the spawning biomass, although there are some years of composition data that suggest more than one cohort (Figure 5). There are also differences in the sizes of fish caught in different seasons (Figure 6), although the data are scarce. Smaller fish are caught outside the main fishing season, but they do not appear to enter the composition data of the main fishing season as strong modes. It is not clear if the fishery is able to efficiently catch smaller tuna or if there are two different growth patterns. The catch in the off season is small, so the composition data from these seasons may not represent strong cohorts.

The recent large (200-250 cm) Pacific bluefin seen in the Japanese longline length-composition data have not been seen at high proportions in any of the data available for this fishery, which date back to the 1950s (Figure 7). This suggests that the Japanese longline fleet has been targeting the strong cohort and therefore its effective selectivity has changed over time. The clear mode of this strong cohort in the composition data can be used to estimate the growth of the fish in the cohort. They did not appear to grow much between 2008 and 2009 (Figure 8), but in general grew faster, particularly at older ages, than assumed in the ISC stock assessment model (Figure 8) or estimated for males and females by Shimose and Takeuchi (2012) (Figure 9).

The strong cohort seen in the length-composition data is consistent with the CPUE (Figure 10). The CPUE increased starting in 2001 as the strong cohort started to enter the fishery and declined starting in 2005 once the cohort was fully vulnerable to the fishery and there were no other strong cohorts to support the fishery. There appears to be a cohort entering the fishery 2-3 years later (Figure 3) that causes an increase in CPUE, but its effect is short-lived (Figure 10).

2.2. Chinese Taipei

The Chinese Taipei longline length composition data also show some modal progression (Figure 11), but the pattern is not as clear as it is for the Japanese data. Unlike the Japanese fishery, the Chinese Taipei fishery caught large (220-250 cm) Pacific bluefin in the past before the recent strong cohort (Figure 7), but the fish caught in 2005-2007, before the strong cohort moved through the Chinese Taipei fishery, were smaller. It is not clear if the strong cohort is faster-growing due to environmental conditions, if it is from a population with a different growth pattern, or if the Chinese Taipei fishery is also targeting the cohort.

The correspondence between the Chinese Taipei CPUE and its composition data is not clear. The CPUE increases after 2009 (Figure 13), but this is several years after the strong cohort entered the fishery.

3. ESTIMATING SPAWNING BIOMASS

The observation that the abundance of Pacific bluefin in the longline fisheries, which also corresponds to the spawning biomass, is mainly represented by a single cohort provides a unique opportunity to estimate spawning biomass, because the Japanese CPUE-based index of abundance represents this single cohort. Therefore, without additions due to new cohorts, the recent CPUE represents a decline in abundance of the strong cohort that can be used in a catch-curve type of analysis to estimate the total mortality rate (*Z*) (Figure 14). Given an assumed value of natural mortality (*M*), the fishing mortality (*F*) can be calculated (F = Z - M). Consequently, given catch (*C*) in weight from both the Japanese and Chinese Taipei longline fisheries, the spawning biomass (*SB*) can be calculated from the Baranov catch equation, making the assumption that all spawning Pacific bluefin, essentially one cohort, are fully vulnerable to the longline fisheries.

$$SB = \frac{Z}{F(1 - \exp\left(-Z\right))}C$$

The estimate of Z, based on the CPUE data from 2004 to 2010 only (to avoid the early years when the cohort may not have been fully selected, and later years that may have been more influenced by new cohorts as the abundance of the strong cohort decreased), is 0.35. The ISC assessment assumes M = 0.25, resulting in an estimate of F = 0.1 for this cohort by the longline fisheries. The consequent estimates of spawning biomass, in metric tons (t), are as follows:.

Year	Catch (t)	Spawning biomass
2004	3281	38882
2005	3072	36414
2006	2099	24875
2007	3302	39136
2008	1794	21260
2009	2082	24674
2010	1139	13493

Spawning biomass for the years prior to 2004 and after 2010 can be estimated by using the estimates of spawning biomass to scale the Japanese longline CPUE index of relative abundance to absolute abundance. The estimates of abundance for the 2004-2010 period are very similar to those estimated by the stock assessment model (Figure 15). However, the scaled Japanese CPUE index for the other years is not, which is not surprising given the assessment model provides a poor fit to this index. The estimates of spawning biomass are insensitive to the value assumed for natural mortality, but highly sensitive to the value of fishing mortality (Figure 16).

4. CONCLUSIONS

4.1. A plausible story of recent Pacific bluefin dynamics

Our analysis suggests that the recent spawning biomass levels have been mainly comprised of a single strong cohort. The strength of this cohort is supported by an index of recruitment based on the CPUE of the Japanese troll fishery for bluefin (Figure 17). The previous two cohorts were very weak. Subsequent cohorts were of moderate strength, but they failed to persist in the data. About the time that the strong cohort was spawned, a purse-seine fishery for small pelagics developed in the western Pacific that caught large amounts of very young Pacific bluefin (Figure 18). The high exploitation rate of this fishery, in addition to the other fisheries taking small to intermediate-sized Pacific bluefin, may not allow any new cohorts to enter the spawning biomass.

4.2. Stock assessment advice

The relatively poor performance of the current stock assessment model should be considered when providing detailed management advice based on the model results. However, the general conclusion – that the current spawning biomass is very low and substantial cuts in fishing mortality of juveniles are required – is robust to the assessment uncertainties.

4.3. Future research

A substantial effort is needed to improve the stock assessment in a way that would result in a better fit to the data. Our investigations of the data revealed that many, if not all, fisheries target strong cohorts. Therefore, additional time-varying selectivity should be considered for all fisheries, as static model process are responsible for much of the model misfit. The CPUE data for the Chinese Taipei longline fishery do not appear to be consistent with its composition data or with the Japanese longline CPUE data, which is considered a more reliable index of abundance, and therefore should be omitted from the analysis until the reasons for the inconsistencies are identified.

The following changes should be implemented immediately:

- 1. Model time-varying selectivity for all fleets catching juveniles of more than one age-class. One possible approach could be the McCall and Teo (2013) hybrid VPA.
- 2. Create a time block for Japanese longline selectivity starting in 2000 and force the selectivity to be asymptotic, to ensure that information on the strong cohort and the lack of other cohorts is maintained in the analysis.
- 3. Estimate the parameter that determines maximum length, to ensure that the growth is consistent with the length composition modes of the strong cohort.

Longer-term changes include

- 1. Split the Japanese longline fishery data into areas that catch small fish and areas that catch large fish
- 2. Investigate the possibility of time-varying growth or different sub-populations with different growth rates.
- 3. Consider allowing natural mortality to change by seasonal ages rather than annual ages.

4.4. Management advice

The Pacific bluefin stock is at very low levels, and the spawning population is mostly comprised of a single cohort that is coming to the end of its life. This is consistent with the stock assessment results that estimate the population is at a extremely low fraction of its unexploited level (2-5%). The current spawning biomass could be less than 10,000 t, which is about a quarter of the lowest level reached by southern bluefin tuna, and the depletion level is also lower than for southern bluefin tuna (Ana Parma pers. com.). The most recent recruitments appear to have fallen below the historical average. It is unclear if the recent drop in recruitment is related to low spawning abundance, environmental conditions, or is simply variability without trend. The prospects of stock recovery will depend on the level of future recruitment.

Future projections conducted by the ISC PBF working group predict that the population will not increase if future recruitment falls below the historical mean (low recruitment scenario), unless catches of juveniles are reduced by 25-50%. Similar cuts are needed to ensure a high probability of reaching 10% of the unexploited biomass in 10 years, even with recruitment at the historical average. Substantial and immediate cuts in fishing mortality of juveniles are most likely required to ensure the viability of the Pacific bluefin fisheries.

The longline fisheries, which target spawning adults, are estimate to have a very limited impact on the

spawning stock biomass (Figure 19), so the greatest benefit can be obtained by restricting the other fisheries, which target juveniles. However, the longline fleets should not be allowed to increase their catches, to avoid losing the benefits from the reduction in the catch of juveniles. One caveat to the low impact of adult fishing mortality is the extremely low levels of current spawning biomass. At these low levels of spawning abundance, it may be that recruitment will be adversely affected. Some consideration of protecting the limited spawner population may be necessary until cuts in juvenile F allow more bluefin to become spawners.

The eastern Pacific Ocean (EPO) fleets are estimated to contribute only about 20% of the fishery impact on the population (Figure 19), despite recent catches of Pacific bluefin in the EPO being of similar magnitude to those in the western Pacific Ocean (Figure 18). This is primarily for two reasons. First, the analysis evaluates the impact of fishing on the spawning biomass, and the impact of any catch reductions will take several years to appear in the analysis. Second, the impact of a fishery is related to both the amount of catch and the age of the fish caught. The EPO fisheries catch fish older than the WPO small pelagic purse-seine fishery. The relative impact on the spawning biomass of catching a ton of fish of a given age can be calculated by the inverse of the average weight at that age and adjusting for natural mortality between that age and when the fish becomes mature. These calculations were carried out relative to age 5, the age at about which all fish are mature (Figure 20). For example, a ton of age-1 fish has about twice the impact of a ton of age-2 fish, so simply catching the same tonnage a year older could halve the impact. These calculations can help interpret the impact of each fishery based on their estimated selectivity curves (Figure 21). The goal of management for Pacific bluefin should be to reduce the fishing mortality so that juveniles can make it through to the spawning biomass without being caught. It is important that any reduction in fishing mortality on the very young fish is not offset by these fish being caught in the other fisheries that catch them at an older age and hence there should be reductions in all fisheries. It also should be noted that reduced catch does not necessarily mean reduced fishing mortality. If the abundance has decreased, reduced catches may just be a consequence of reduced biomass and not reduced fishing mortality. This is particularly important to consider given the recent low estimates of recruitment (Figure 17).

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FIGURA 1a. Ajuste del modelo de evaluación del ISC a los índices de abundancia basados en la CPUE de la pesquería palangrera japonesa.



FIGURE 1b. Fit of the ISC stock assessment model to the Chinese Taipei longline CPUE indices of abundance.

FIGURA 1b. Ajuste del modelo de evaluación del ISC a los índices de abundancia basados en la CPUE de la pesquería palangrera de Taipei Chino.



FIGURE 1c. Fit of the ISC stock assessment model to the Japanese longline length-composition data.

FIGURA 1c. Ajuste del modelo de evaluación del ISC a los datos de composición por talla de la pesquería palangrera japonesa.



FIGURE 1d. Fit of the ISC stock assessment model to the Chinese Taipei longline lengthcomposition data.

FIGURA 1d. Ajuste del modelo de evaluación del ISC a los datos de composición por talla de la pesquería palangrera de Taipei Chino.



FIGURE 2. Japanese longline length-composition data, 2000-2011FIGURA 2. Datos de composición por talla de la pesquería palangrera japonesa, 2000-2011.



FIGURE 3. Japanese longline length-composition data, 2005-2011.FIGURA 3. Datos de composición por talla de la pesquería palangrera japonesa, 2005-2011.



FIGURE 4. Fit of normal distributions to the 2008 Japanese longline length-composition data. **FIGURA 4**. Ajuste de distribuciones normales a los datos de composición por talla de la pesquería palangrera japonesa de 2008.



FIGURE 5. Japanese longline length-composition data that indicate multiple models. **FIGURA 5**. Datos de composición por talla de la pesquería palangrera japonesa que indican modeles múltiples.



FIGURE 6. Japanese longline length-composition data for multiple seasons (s). The thick lines correspond to the the main fishing season (s4).

FIGURA 6. Datos de composición por talla de la pesquería palangrera japonesa de múltiples temporadas (s). Las líneas gruesas corresponden a la temporada principal de pesca (s4).



FIGURE 7. Proportions of the length-composition data at different lengths over time for the Japanese (upper panel) and Chinese Taipei (lower panel) longline fisheries.

FIGURA 7. Proporciones de los datos de composición por talla en distintas tallas a lo largo del tiempo correspondientes a las pesquerías palangreras de Japón (panel superior) y Taipei Chino (panel inferior).



FIGURE 8. Comparison of mean length-at-age (dots) used in the ISC assessment model and the Japanese length-composition data.

FIGURA 8. Comparación de la talla media por edad (puntos) usada en el modelo de evaluación del ISC y los datos japoneses de composición por talla.



FIGURE 9. Comparison of mean length-at-age estimates for the strong and weak cohorts from the Japanese longline length-composition data, with the growth curve used in the ISC stock assessment model and sex-specific mean length-at-age from Shimose and Takeuchi (2012).

FIGURA 9. Comparación de las estimaciones de talla media por edad de las cohortes fuertes y débiles de los datos de composición por talla de la pesquería palangrera japonesa y la curva de crecimiento usada en el modelo de evaluación del ISC y la talla media por edad por sexo de Shimose y Takeuchi (2012).



FIGURE 10. Comparison of mean length and CPUE from the Japanese longline fishery. **FIGURA 10**. Comparación de talla media y CPUE de la pesquería palangrera japonesa.





FIGURA 11 Datos de composición por talla de la pesquería palangrera de Taipei Chino. Las líneas gruesas representan años tempranos y tardíos que incluyen aleta azul grande.



FIGURE 12. Chinese Taipei longline length-composition data, 2005-2012. **FIGURA 12**. Datos de composición por talla de la pesquería palangrera de Taipei Chino, 2005-2011.



FIGURE 13. Comparison of mean length and CPUE from the Chinese Taipei longline fishery. **FIGURA 13**. Comparación de talla media y CPUE de la pesquería palangrera de Taipei Chino.



FIGURE 14. Catch curve analysis (log-linear regression) based on the Japanese longline CPUE index of relative abundance.

FIGURA 14. Análisis de curva de crecimiento (regresión logarítmica lineal) basado en el índice de abundancia relativa de la CPUE palangrera japonesa



FIGURE 15. Comparison of the spawning biomass estimates from the catch equation with those of the scaled Japanese CPUE index and the estimates from the ISC stock assessment model. **FIGURA 15**. Comparación de las estimaciones de biomasa reproductora de la ecuación de captura con aquellas de índice escalado de CPUE japonesa y las estimaciones del modelo de evaluación del ISC.



FIGURE 16. Contour plot of spawning biomass estimates, in metric tons, for different levels of longline fishing mortality (F) and natural mortality (M), based on average longline catch during 2008-2010.

FIGURA 16. Gráfica de contornos de estimaciones de biomasa reproductora, en toneladas, correspondientes a distintos niveles de mortalidad por pesca (F) palangrera y mortalidad natural (M), basadas en la captura palangrera media durante 2008-2010.



FIGURE 17. Index of relative recruitment of Pacific bluefin tuna based on the CPUE of the Japanese troll fishery.

FIGURA 17. Índice de reclutamiento relativo del atún aleta azul del Pacífico, basado en la CPUE de la pesquería japonesa con curricán.



FIGURE 18. Catches by the main fisheries that catch juvenile Pacific bluefin tuna, 1985-2012. **FIGURA 18**. Capturas de las las pesquerías principales que capturan atún aleta azul del Pacífico juvenil, 1985-2012.



FIGURE 19. Impact of the longline (LL) fisheries, the WPO non-longline fisheries, and the EPO purse-seine and sport fisheries on the spawning biomass of Pacific bluefin tuna (upper panel), and their relative contribution to the fishery impact (lower panel), 1950-2013.

FIGURA 19. Impacto de las pesquerías palangreras (LL), las pesquerías no palangreras del Pacífico occidental (WPO), y las pesquerías de cerco y deportivas del OPO sobre la biomasa reproductora del atún aleta azul del Pacífico (panel superior), y su contribución relativa al impacto de la pesca (panel inferior), 1950-2013.



FIGURE 20. Relative impact on the spawning biomass of a catch of a ton of fish, by age. **FIGURA 20**. Impacto relativo sobre la biomasa reproductora de la captura de una tonelada de pescado, por edad.





FIGURA 21. Curvas de selectividad estimadas para las pesquerías principales que capturan atún aleta azul del Pacífico juvenil.



STOCK ASSESSMENT OF PACIFIC BLUEFIN TUNA

2014

PACIFIC BLUEFIN TUNA WORKING GROUP



International Scientific Committee for Tuna and Tuna-Like Species

in the North Pacific Ocean

1.0 INTRODUCTION

Pacific bluefin tuna (*Thunnus orientalis*) (PBF) is found primarily in the North Pacific Ocean and the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) is responsible for assessing this stock and determining its status. To facilitate the requisite research, the ISC established the PBF Working Group (PBFWG) in 1996, and tasked it with assembling fishing statistics and operational data, conducting biological studies, estimating abundance trends, and conducting regular stock assessments of PBF. Stock status determination and conservation advice resulting from the assessments are provided to Pacific tuna regional fisheries management organizations (RFMOs), namely the Northern Committee of the Western Central Pacific Fisheries Commission (WCPFC-NC) and the Inter-American Tropical Tuna Commission (IATTC), for consideration when establishing possible Conservation and Management Measures (CMMs).

The PBFWG completed the last stock assessment in 2012 (PBFWG 2012) and based on the results, the WCPFC amended the CMM of Pacific bluefin tuna for the Western Central Pacific Ocean (WCPO) in 2013. This CMM entered into effect in 2014 (WCPFC CMM 2013-09). The IATTC also amended its resolution for the Eastern Pacific Ocean (EPO) in 2013, and this resolution came into effect in 2014 (IATTC Resolution C-13-02).

The latest full stock assessment was conducted by the ISC PBFWG in 2012 at Honolulu using fishery data from 1952 through 2010 (PBFWG. 2012b). Model estimates of current biomass are at or near the lowest level. In addition to those stock assessment results, newly available fishery data (CPUE and catch through 2011) suggested the potential risk of further declines in SSB in the coming years. Under these circumstances, the PBFWG proposed to conduct an updated stock assessment with two additional years of fishery data (2011 and 2012) to closely track the stock status by modeling the most recent data and to pay close attention to recruitment trends (PBFWG. 2013). This proposal was approved at the 13th ISC plenary (ISC. 2013). For this updated stock assessment, the PBFWG members provided all required fishery data (catch, CPUE, and size composition) for the most recent two years (Oshima et al., 2014), and updated the stock assessment model generally in accordance with the original work plan as written in below (Fukuda et al., 2014).

1. Conduct model run with an additional two years (2011 and 2012 in fishing
year) of data using the same Stock Synthesis (SS) model (version 3.23b from the 2012 stock assessment) for the stock assessment platform and using the same model structure and parameters as base case run from the 2012 stock assessment.

- 2. The stock assessment time period will be from July 1952 to June 2013 (calendar year).
- 3. The WG will not change the fishery data (quarterly catch, size composition) from 1952-2010 in fishing year (July 1952-June 2011 in calendar year) that was used in the 2012 stock assessment.
- 4. In the case of CPUE time series, due to the nature of the CPUE standardizations method, the whole time series will need to be re-standardized with the additional 2 years data. The statistical method used to standardize CPUE (error structure, etc.) will be the same as that used in the 2012 stock assessment.

In this report, years refer to fishing years unless otherwise specified. 1 July is assumed to be the date of birth for PBF in the models. A fishing year starts on 1 July and ends on 30 June of the following year. For example, the year 2011 refers to the period 1 July 2011 to 30 June 2012. Relationships between calendar year, fishing year and year class are shown in Table 1-1.

For this assessment, four model runs were conducted to evaluate effect of updates of CPUE and size composition data for Japanese longline and Taiwanese longline.

2.0 BACKGROUND ON BIOLOGY, FISHERIES AND PREVIOUS ASSESSMENT

2.1 Biology

2.1.1 Stock Structure

Bluefin tuna in the Pacific and Atlantic Oceans were once considered a single species (*Thunnus thynnus*) composed of two sub-species (*Thunnus thynnus orientalis* and *Thunnus thynnus*, respectively). However, these two groups of bluefin tuna are now considered to be separate species (*Thunnus orientalis* and *Thunnus thynnus*,

respectively) based on genetics and morphometric studies (Collette 1999). This taxonomy is accepted by the relevant tuna Regional Fishery Management Organizations (RFMOs), the Food and Agriculture Organization of the United Nations (FAO), and ISC.

The known spawning grounds for PBF are restricted to the western North Pacific Ocean (WPO), in waters adjacent to the Ryukyu Islands in Japan to the east of Taiwan, and in the southern portion of the Sea of Japan (Schaefer 2001). Based on the available genetics and tagging information (e.g. Bayliff 1994, Tseng & Smith 2012), the PBFWG considers that PBF consists of a single stock. In addition, the relevant RFMOs (WCPFC and IATTC) and regional fisheries organizations (RFOs) (ISC and FAO) also consider PBF to be a single stock. Therefore, this stock assessment and the conservation advice contained hereafter are based on a single stock hypothesis. The PBFWG will continue to investigate the potential for sub-stocks throughout the range of the species.

2.1.2 Reproduction

PBF are iteroparous spawners, i.e. they spawn more than once in their lifetime. Spawning in the area around the Ryukyu Islands and off eastern Chinese Taipei generally occurs from April to July, and in the Sea of Japan from July to August (Yonemori 1989) (Figure 2-1). A recent histological study showed that 80% of the fish of about 30 kg (corresponding to age 3) caught in the Sea of Japan from July to August were mature (Tanaka 2006). Almost all of the fish caught off the Ryukyu Islands and east of Chinese Taipei were above 60 kg (over 150 cm fork length (FL), corresponding to age 5 and older fish) and mature. While there is evidence that fish in the Sea of Japan mature at an earlier age, additional research is required to confirm this.

2.1.3 Distribution and Movements

PBF are mainly distributed between 20° N and 40°N, but are also occasionally found in tropical waters and even in the southern hemisphere (Figure 2-2).

Although there are large interannual variations, ages 0-1 fish tend to migrate north along the Japanese and Korean coasts in the summer and south in the winter (Inagake et al. 2001; Itoh et al. 2003; Yoon et al. 2012). Under certain ocean conditions, a variable portion of immature ages 1-3 fish in the WPO make a seasonal clockwise migration eastward across the North Pacific Ocean, spending up to several years as juveniles in

PBFWG

the EPO before returning to the WPO (Inagake et al. 2001). While in the EPO, the juvenile PBF make seasonal north-south migrations along the west coast of North America (Kitagawa et al. 2007; Boustany et al. 2010).

Adults found in the WPO generally migrate north to feeding grounds after spawning, but there are a limited number of fish that move south or eastwards (Itoh 2006).

2.1.4 Growth

Recent studies examining the annuli from otolith samples have advanced our knowledge of PBF age-and-growth (Shimose et al. 2008; 2009; Shimose and Takeuchi 2012). These studies indicate that young fish grow rapidly until age 5 (approximately 150 cm fork length (FL)), after which growth slows down (Figure 2-3). At age 13, the fish reach 225 cm FL, corresponding to 90% of the maximum FL of this species. Large fish (above 250cm FL) are primarily older than age 20, indicating that this species likely lives longer than 20 years. Fish larger than 300 cm are rarely found in commercial catches.

This stock assessment is based on the growth curve proposed by Shimose et al. (2009). However, this growth curve underestimates the size of the age 0 fish from the commercial catch taken during summer. Therefore, the PBFWG adjusted the expected length-at-age of fish at age 0.125 to a higher value (21.54 cm FL from 15.47 cm FL) (PBFWG 2012a). The difference between the growth curve and the size of fish observed in the summer catch may be attributed to spatial and temporal variation in spawning, and sex-specific growth (Shimose and Takeuchi 2012). The PBFWG recommended continuing research to further improve the growth curve before the next stock assessment. Length and weight of PBF based on the von Bertalanffy growth curve used in this stock assessment are shown in Table 2-1 and Figure 2-4.

2.1.5 Natural Mortality

The instantaneous natural mortality coefficient (natural mortality or *M*) is assumed to be high at a young age, decreasing thereafter as the fish grow. The natural mortality estimate for age 0 fish was based on results obtained from conventional tagging studies (Takeuchi and Takahashi 2006; Iwata et al. 2012a; Iwata et al. 2014). For age 1 fish, natural mortality was based on length-adjusted *M* estimates from conventional tagging studies on southern bluefin tuna (*Thunnus maccoyii*) (Polacheck et al. 1997, PBFWG 2009). Bayliff (1994) estimated natural mortality of PBF at 16-256 cm using Pauly's

equation (Pauly 1980) to be 0.275 per year. Based on this estimate, a value of 0.25 per year was used as M for PBF of age 2 and older (Figure 2-5).

2.2 Review of Fishery

In this section, year corresponds to calendar year. Annual PBF catches from 1952 to 2012 are shown in Figure 2-6 by country and fishing gear. Five countries harvest these fish but Japan catches the majority, followed by Mexico, the USA, Korea and Chinese Taipei. Catches in tropical waters and in the southern hemisphere are relatively low and sporadic.

The fisheries of the main PBF fishing nations are reviewed in this section. However, the input data for the assessment are organized by fishery rather than by country. Therefore, the characteristics of the input data are discussed in detail in Sections 3.3 (fleet/fishery definition), 3.4 (catches), 3.5 (abundance indices), 3.6 (size compositions) and 4.3 (selectivity).

Currently, the most important PBF fisheries in Japan are based on longline, purse seine, troll and set net gear types, but other gear types such as pole-and-line, drift net and hand-line can take considerable catches as well. The fishing grounds are generally coastal or nearshore waters, extending from Hokkaido to the Ryukyu Islands. The distant-water longline fishery also catches relatively small numbers of PBF. Total annual catches by Japanese fisheries have fluctuated between a maximum of 34,000 t in 1956 and a minimum of 6,000 t in 1990 (calendar year). Yamada (2007) provides a general review of Japanese fisheries that catch PBF. Changes in the longline fishery are described in Section 3.5.3, and changes in the purse seine fishery are covered in Section 3.5.4, Section 3.5.7, Section 3.5.8 and, in particular, Section 3.6.9.

In the USA, two main types of fisheries, purse seine and recreational fisheries, catch PBF off the west coast of North America. A US purse seine fishery targeting PBF mainly for canning was fully developed and operated in the traditional PBF fishing grounds off Baja California until the early 1980s. In 1976, Mexico established its Exclusive Economic Zone (EEZ) and by the early 1980s the US fishery had abandoned its traditional fishing grounds in Mexican waters. After 1983, the US purse seine fishery targeting PBF basically ceased operations with only opportunistic catches of this species thereafter (Aires-da-Silva et al. 2007). The US recreational fleet also catches relatively small amounts of PBF, typically while fishing in Mexican waters.

The Mexican purse seine fishery is the most important large pelagic fishery in Mexico. This fishery developed rapidly after Mexico established its EEZ in 1976. This fishery is monitored by an at-sea observer program with 100% coverage, as well as captains' logbooks and Vessel Monitoring Systems (VMS). Most of the purse seine sets target yellowfin tuna (the dominant species in the catch) in tropical waters; PBF are caught near Baja California. The Mexican PBF catch history recorded three large annual catches (above 7,000 t) in the years 2004, 2006 and 2010. The development and changes in this fishery are further detailed in Sections 3.5.8 and 3.6.9.

In Korean waters, PBF are mostly caught by the offshore large purse seine fleet (OLPS) but there is a small amount of catch reported by the coastal troll fleet in recent years. The catch of the OLPS fleet was below 500 t until the mid-1990s, increased thereafter with a peak of 2,601 t in 2003, and fluctuated in recent years from 670 t in 2011 to 1,421 t in 2012. The catch of the coastal troll fleet was 0.1 t in 2011 and 1.1 t in 2012, respectively. The main fishing ground of the OLPS fleet is off Jeju Island, but it occasionally expands to the Yellow Sea and the southeastern waters of Korea (Yoon et al. 2014). For assessment purposes, and because of the similar sizes of fish taken, the Korean OLPS fleet has been combined with Fleet 2 (small pelagic purse seine fisheries) in the East China Sea. However, for future assessments the PBFWG agreed to separate the Korean OLPS from these fisheries. More details are provided in Sections 3.3 and 3.6.3.

Since 1993, the majority of catch by Taiwanese fleets derived from a small-scale longline fleet (<100 gross registered tonnage (GRT)) that targets PBF. Landing records indicate that small amounts (<300 t) of PBF have been harvested by small-scale longline, purse seine, large-scale pelagic driftnet, set net, offshore and coastal gillnet and bottom longline gear since the 1960s. In 1979, the landings started to increase sharply, mostly due to the increased catch by small-scale longline vessels fishing in the eastern spawning grounds from April to June. The highest observed catch of 3,000 t was in 1999 but this declined rapidly to less than 1,000 t in 2008. In 2010, landings of PBF by this fishery fell to their lowest levels of about 300 t.

2.3 Previous Stock Assessment

The ISC completed the previous PBF assessment in 2012 using Stock Synthesis version 3.23 (SS). For the assessment in 2014, there were no differences in the structural assumptions and parameters of the Representative Run (base case) in the 2012

assessment as documented by the work plan agreed by the ISC13 Plenary (see Section 1). Consequently, the model structure, the biological assumptions, and the handling of fishery data, as described in the following sections, were generally the same as the 2012 stock assessment report (PBFWG. 2012b). Small changes to the 2012 base case included the following:

- a. The stock assessment period was extended by 2 years, to cover 1952 to 2012; three CPUE time series, which were used to represent the recent abundance trends, were updated for the entire time series with two additional years of data (2011 and 2012);
- b. The catch for farming by the Japanese troll fishery (ISC13 Plenary Report, Annex 14, Appendix 2, Appendix A) was included in the first quarter catch of that fishery for 1998-2012;
- c. The catch unit of the U.S. recreational fishery fleet was corrected from weight to number of fish;
- d. Two parameters, which represented the size selectivity of fleet, were fixed to relevant values; and
- e. The input sample size of the eastern Pacific Ocean (EPO) commercial fleet was changed to maintain consistency with the past stock assessment.

In order to further explore differences between the previous and the current assessment, the PBFWG conducted four sensitivity runs to compare the influence of the above mentioned modifications. The sensitivity of adding the catch for farming by the Japanese troll fleet, the correction of the catch unit for the U.S. recreational fishery fleet, the fixing of the two size selectivity parameters, and the change of the input sample size for the EPO commercial fleet were tested and the WG confirmed the limited effect of these changes (ISC-PBFWG/14-01/11).

3.0 STOCK ASSESSMENT INPUT DATA

3.1 Spatial Stratification

As discussed in Section 2.1.1, PBF are distributed across the North Pacific Ocean and considered a single stock. Juvenile PBF move between the WPO and the EPO, but the movement rate is unknown and probably varies inter-annually. Given the lack of

information on the movement rate, this assessment did not use a spatially explicit model, but assumed a single area for the model without spatial stratification.

3.2 Temporal Stratification

The time period modeled in this assessment was 1952-2012 (fishing year). Within this period, catch and size composition data were compiled into quarters (July–September, October–December, January–March and April–June). Although fisheries catching PBF have operated since at least the beginning of the 20th century in the EPO and for several centuries in the western Pacific Ocean (WPO), the data prior to 1952, in particular from the WPO, were of relatively poor quality. Thus, the PBFWG set the starting year to 1952 as catch-and-effort data from Japanese longline and size composition data from Japanese longline and EPO commercial purse seine fleets were available from that year onward. Data sources and temporal coverage of the available datasets are summarized in Figure 3-1.

3.3 Fishery Definitions

A total of 14 fisheries were defined as "fleets" for the stock assessment according to gear type, the consistency of the size composition of the catch within a fleet, and the availability of CPUE series (Table 3-1). The 14 fleets are thus: Japanese longline (Fleet 1); purse seine fisheries operating in the East China Sea (Fleet 2), the Sea of Japan (Fleet 3), and off the Pacific coast of Japan (Fleet 4); Japanese troll (Fleet 5); Japanese pole and line (Fleet 6); Japanese set net classified by location and size composition (Fleet 7 to 10); Chinese Taipei longline (Fleet 11); EPO commercial fisheries (Fleet 12); the US recreational fishery (Fleet 13); and Japanese other fisheries (Fleet 14).

Fleet 2 is an aggregation of both Japanese and Korean small pelagic fish purse seine fisheries. The length composition of the Japanese small pelagic fish purse seine fishery was used to represent this fleet.

Fleet 3 and Fleet 4 are Japanese tuna purse seine fisheries in the Sea of Japan and the Pacific, respectively. They were defined as separate fisheries because of differences in the length composition of the catch (Abe et al. 2012b).

Fleets 7, 8, 9 and 10 are Japanese set net fisheries. The fleets were separated based on the availability of length-weight measurements and the locations of set nets that had differences in observed length compositions. Three definitions were proposed at the ISC

PBFWG

PBFWG WS held in January-February 2012. However, because seasonal changes in length compositions caused significant differences between expected and observed length compositions, the original Fleet 9 was separated into two fleets based on season. Fleet 9 in this assessment includes the 1st, 2nd and 3rd quarters, and Fleet 10 includes the 4th quarter.

3.4 Catch

Catch data for the SS3 model were given in tonnes for all fleets except for Fleet 13, for which a unit of 1000 of fish was applied. PBF catches from all fleets fluctuated substantially over time and by gear. The total reported annual catch of PBF peaked at 39,824 t in 1956 and the historically lowest catch of 8,588 t occurred in 1990 (Figure 3-2). The total catch has averaged 21,250 t during the last 10 years (2003–2012). Purse seine fisheries caught a large portion of the PBF throughout the assessment period (1952-2012). The Japanese tuna purse seine fishery operating in the Pacific Ocean (Fleet 4) accounted for a large portion of the catch until the 1990s. However, catches of the Japanese small-scale purse seine fishery operating in the East China Sea (Fleet 2) and Japanese tuna purse seine fishery operating in the Sea of Japan (Fleet 3) have become relatively larger since the mid-2000s. The catch for Japanese troll fishing for farming was included in the Japanese troll fleet (Fleet 5; Oshima et al. 2014). The largest catches in the EPO come from the US and Mexican commercial purse seine fisheries (Fleet 12).

The PBFWG developed time series of quarterly catch data from 1952 through 2012 (fishing year). For some of these fisheries, proportions of quarterly catches in recent years were extrapolated from past catches to estimate quarterly catches from annual catches. For other fisheries (e.g. Japanese troll before 1994, and Japanese purse seine before 1971), quarterly catches were directly derived from logbook or landing statistics.

3.5 Abundance Indices

3.5.1 Overview

Abundance indices (CPUE) available for this assessment are shown in Figure 3-3 and Table 3-2. These series were derived from fishery-specific catch-and-effort data standardized with appropriate statistical methods, except for Series S4 which was not

standardized. Indices S1 to S3 were derived from the Japanese longline fishery (Fleet 1), S4 was derived from the Japanese tuna purse seine fishery in the Sea of Japan (Fleet 3), S5 to S8 were derived from the Japanese troll fishery (Fleet 5), S9 was derived from the Taiwanese longline fishery (Fleet 11), and S10 and S11 were derived from EPO commercial purse seine fishery (Fleet 12). Some abundance indices (S4, S6-S8, S10 and S11) were not used for this stock assessment (see details below). Consequently, this stock assessment used five indices: four longline indices for adults (S2 and S3 for the past periods (1952-1973 and 1974-1992), and S1 and S9 for the recent periods (1993-2012 and 1998-2012, respectively) and one troll index for recruitment (S5 for the recent period 1980-2012).

3.5.2 Input CV for the CPUE Series

Input coefficients of variation (CVs) for the abundance indices are shown in Table 3-3. The input CVs were first estimated by the statistical model used to standardize the index and set to 0.2 if the estimated CV was less than 0.2. For the Japanese coastal longline CPUE (S1), the PBFWG recognized that some vessels may have shifted fishing effort toward the Ishigaki region, while other vessels may have switched from targeting PBF to other species, such as yellowfin and albacore tuna, due to poor PBF catches. These shifts may have changed the observation and process errors in the abundance index, therefore CPUE error was modeled using a linear ramp of increasing CV in the index from 2005 (0.24) to 2010 (0.43) and constant (0.43) thereafter.

3.5.3 Japanese Longline CPUE (S1, S2 & S3)

Until the mid-1960s, PBF longline catches in Japanese coastal waters were made by offshore or distant-water longline vessels larger than 20 GRT. Since the mid-1960s, the coastal longline fleet has consisted of coastal longline vessels smaller than 20 GRT. A logbook system was not established until 1993 for the coastal longline fleet, whereas aggregated logbook data from 1952 onward are available for the offshore and distant-water longline fleets.

Two Japanese longline CPUE time series (1952-1973 [S2] and 1974-1992 [S3]) were developed to span the period from 1952 through 1993 (Fujioka et al. 2012; Yokawa 2008). The time series was split because of major changes in operational patterns that took place in the mid-1970s (e.g. development of the super freezer and a shift from targeting yellowfin and albacore tuna to targeting bigeye tuna). In addition,

hooks-per-basket information, which was used to standardize for these targeting changes, has only been collected since the mid-1970s (Yokawa et al. 2007). Another CPUE series from 1993 to 2012 was developed for the coastal longline fishery as logbook data from this fishery became available from 1993 (Kai et al. 2012; Ichinokawa and Takeuchi 2012; Hiraoka et al. 2014). All three time series were used in the stock assessment: the coastal longline fishery index from 1993-2012 (S1), and the distant-water longline fishery indices from 1952-1973 (S2) and 1974-1992 (S3). The standardized CPUE for S1 showed a continuous decline from 2006 to 2011 and then a slight recovery in 2012. The length and weight frequencies indicated a relatively strong year class which was thought to be the 2007 and/or the 2008 year class(es) (Hiraoka et al. 2014).

3.5.4 Japanese Purse Seine in the Sea of Japan CPUE (S4)

Kanaiwa et al. (2012b, 2014) describe the Japanese purse seine fishery in the Sea of Japan. There were two concerns with this time series: 1) the flat annual trend of CPUE of purse seiners in the Sea of Japan may have reflected specific problems with purse-seine CPUE indices rather than abundance trends, and 2) fishing effort used in the CPUE calculation did not consider search time for the fish schools. Hence, changes in the CPUE might represent only the size of a school of fish, which may not be proportional to the abundance of the stock. Due to these unresolved issues this index was not used in the base case model.

3.5.5 Japanese Troll CPUE (S5, S6, S7 & S8)

Catch-and-effort data for coastal troll fisheries from Kochi, Wakayama and Nagasaki Prefectures have been collected primarily from six, four and five fishing ports in these Prefectures, respectively (Ichinokawa et al. 2012). The units of effort in the catch-and-effort data are the cumulative daily number of troll vessels that unload PBF, which is nearly equivalent to the total number of troll vessel trips because most trollers make one-day trips. Because effort data in Kochi and Wakayama Prefectures include landings without PBF catch (zero-catch data), a zero-inflated negative binomial model was used to standardize CPUE for these prefectures. A log-normal model was applied for Nagasaki Prefecture because effort data in Nagasaki Prefecture did not include landings without PBF catch.

While four indices are available (S5 from Nagasaki Prefecture, S6 from weighted

average CPUE from Kochi and Nagasaki Prefectures, S7 from Kochi Prefecture, and S8 from Wakayama Prefecture) in this fishery, only S5 was fitted in the assessment model due to representativeness (Table 3-1). The updated standardized CPUE for S5 showed a similar trend with the previous CPUE index through 2011, and then greatly decreased in 2012. The CPUE in 2012 is the historically second lowest (Fujioka et al. 2014).

3.5.6 Taiwanese Longline CPUE (S9)

The Taiwanese PBF catch and effort data were derived from landings by individual fishing boats targeting PBF, the number of fishing days, and the number of hooks deployed per day for these boats. The fishing effort of these boats was estimated as the number of hooks per day multiplied by the number of fishing days minus 2 days (assumed to be transit days) (Hsu and Wang 2012). Numbers of days-at-sea data were obtained from the security check stations of the harbors. Catch data were estimated from auction records.

A generalized linear model (GLM) (with three factors: year, month, and vessel type) was used to standardize the annual PBF CPUE for 1999-2013. The annual abundance index time series shows a sharp decline from a high in 1999 to a low in 2002, a steady level in 2003 and 2004, a decline to a low level in 2005 and 2006, a slight increase in 2008, a further two-year decline in 2009 and 2010, and an increase over the 2009 level from 2011 onward. The standardized CPUE was also influenced by a lower abundance of PBF in May and an increase in vessel size in June. Less abundant bluefin tuna in 2002, 2005 and 2006 may be due to declining longline catches. The consistent trend of the abundance index with that of total catch provides evidence that the catch and effort data collected and compiled in this study can be used to develop a representative abundance index of spawning bluefin tuna targeted by the Taiwanese small-scale longline fishery (Wang et al. 2014).

The PBFWG agreed that Taiwanese longline fleet landings by port should be appropriately accounted for in the CPUE standardization models for this fleet. The results of a sensitivity analysis comparing the Taiwanese longline fleet's CPUE from the previous assessment and the new CPUE index presented in Wang et al. (2014) was used to determine which CPUE index should be used in the update stock assessment. The PBFWG agreed that the full Taiwanese longline CPUE series should be used and a sensitivity analysis conducted to examine the effect of excluding the most recent two years' data.

3.5.7 US Purse Seine CPUE (S10)

Standardized catch rates are available for two periods of this fishery: (1) the developed phase of the US fishery targeting PBF (1960-1982); and (2) the extinction phase of the US fishery (post-1982). Jackknifing was used to estimate the CV (Aires-da-Silva et al. 2012). The availability of PBF in the EPO depends on migration of PBF from the WPO at an unknown but likely variable rate. Due to unresolved issues concerning the representativeness of these data to reflect abundance, this index was not used in the assessment.

3.5.8 Mexican Purse Seine CPUE (S11)

Mexican standardized catch rates are available for two periods of the fishery: (1) the Mexican opportunistic fishery (1960-1998); and (2) the Mexican fishery that has targeted PBF since 1999. This fishery supplies PBF for pen rearing operations. Jackknifing was used estimate the CV (Aires-da-Silva et al. (2012) and Section 3.6.9). As mentioned above, the availability of the PBF in the EPO depends on the migration from the WPO at an unknown but likely variable rate. Therefore, this index was not used in the assessment.

3.6 Size Composition Data

3.6.1 Overview and Input Sample Size

Quarterly size composition (both length and weight) data from 1952 to 2012 were used for this assessment. The size composition data for Fleets 4, 6 and 13 were not updated after 2010 (Oshima et al 2014). Length composition data were available for Fleets 1-6 and 8-13, while weight composition data were available for Fleets 7 and 14. Length composition bins of 2, 4, and 6 cm width were used for 16-58, 58-110, and 110-290 cm fork length (FL) fish, respectively. All lengths in the model were FL measured to the nearest cm. Weight composition bins were of variable width, ranging from 1 kg for fish 0-2 kg, to 30 kg for fish >243 kg. The width of the weight bins were set to minimize the misinterpretation of the data. The lower boundary of each bin was used to define the bin.

Figure 3-4 shows the aggregated size compositions of Fleets 1-14 and Figure 3-5 shows the quarterly size compositions of Fleets 1 through 14. For the update stock assessment,

estimated catch-at-size was used for all fleets. Catch-at-size estimation methods were detailed by Mizuno et al. (2012), Oshima et al. (2012a), Kanaiwa et al. (2012a), Fukuda and Oshima (2012), Abe et al. (2012a; 2012b) and Kai and Takeuchi (2012). Table 3-4 summarizes the relative reliability of each fleet's catch-at-size data.

The input sample sizes for the size composition data are shown in Table 3-5. All of the fleets had a maximum input sample size of approximately 12, except for Fleet 3 (Japanese tuna purse seines in the Sea of Japan) and Fleet 12 (EPO commercial purse seines). This was because both Fleets 3 and 12 were considered by the PBFWG to have good sampling programs for the size composition data.

3.6.2 Japanese Longline (Fleet 1)

Length-composition data from the Japanese longline fishery (Fleet 1) are available for the periods of 1952-1968 and 1994-2011. These data were collected mainly from Tsukiji market until the 1960s. Since the 1990s, sampling and market data have been collected at the major PBF unloading ports, e.g. Okinawa, Miyazaki and Wakayama prefectures. Length measurements were relatively sparse from 1969 to 1993, and were not included in this assessment. Monthly length compositions were raised by the landings from corresponding months (Mizuno et al. 2012). The raised length compositions from the appropriate months were then combined to obtain the seasonal length compositions. The length composition data were not prepared for 2012 due to inability in computation of those for the terminal year through the procedure proposed by Mizuno et al. (2012).

3.6.3 Purse Seines in the East China Sea (Fleet 2)

Length composition data from the Japanese purse seiner fishery in the East China Sea were developed from length measurements taken at Fukuoka and Matsuura, which were the major landing ports for this fishery. These length measurements were stratified by market size category because the fish were sorted into market categories prior to measurement. The number of boxes in each market size category (number of fish per box) that were landed at the port was also collected and used to estimate the raised length compositions (Oshima et al. 2012a). Length composition data for this fleet were thus available after 2001.

Length composition data from the Korean purse seiners in the East China Sea were collected at Busan (Yoo et al. 2012; Yoon et al. 2012, Yoon et al. 2014). A preliminary

examination of the data indicated that the size of fish caught was similar to the Japanese fleet fishing in neighboring waters. The stock assessment did not directly use the length composition data from the Korean fleet but instead assumed that it was similar to the Japanese fleet.

3.6.4 Japanese Purse Seine in the Sea of Japan (Fleet 3)

Length composition data for the Japanese purse seine fleet in the Sea of Japan (Fleet 3) were collected by port samplers in Sakaiminato and were available from 1987-2012, except for 1990, when there was no catch. Port samplers obtained length measurements from approximately 50% of the catch on an average. This fleet catches mainly PBF older than age 3 (Fukuda et al. 2012).

3.6.5 Japanese Purse Seine off the Pacific Coast of Japan (Fleet 4)

Size composition data, computed primarily from weight, from Japanese purse seiners operating off the Pacific coast of Japan were collected at Tsukiji market and several unloading ports in the Tohoku region between the 1950s and 1993. Since 1994, length and weight composition data has been collected at Shiogama and Ishinomaki ports (Abe et al. 2012a).

In the 2010 stock assessment, the Japanese tuna purse seine fisheries in the Sea of Japan and the Pacific coast (Fleets 3 and 4) were treated as a single fleet. However, for the current assessment the tuna purse seine fishery was separated into two fleets because of differences in the size composition of the catch in the two fisheries (Abe et al. 2012a; Kanaiwa et al. 2012a). Although length measurements for Fleet 4 have been made since the 1980s, an appropriate method to create catch-at-size data has not yet been established for the entire period. The PBFWG tentatively decided to use the catch-at-size data from this fishery for 1995-2006. The PBFWG recognized that the size composition data for this fishery is highly variable and further research is needed for this dataset.

3.6.6 Japanese Troll and Pole-and-Line (Fleet 5 and Fleet 6)

Comprehensive length composition data have been collected from Japanese troll and pole and line vessels, which were assigned to Fleets 5 and 6, respectively, since 1994 at their main unloading ports. Length measurements were very limited in the number of

sampling ports and number of fish measured before 1994 (Oshima et al. 2007; Fukuda and Oshima 2012). Length composition data from the Japanese troll fishery (Fleet 5) were raised using the catch from each region and month strata. The sampling of pole and line vessels was considered to be relatively poor compared to the more numerous troll vessels. Both fisheries operate in the same area and catch similar-sized fish (primarily age 0 individuals).

3.6.7 Japanese Set Net (Fleets 7-10)

Size composition data from Japanese set net fleets (Fleets 7-10) were available from 1993 to 2012. Fleet 7 size composition data were based on weight composition, whereas the others (i.e. Fleets 8, 9 and 10) were based on lengths (Kai and Takeuchi 2012; Teo and Piner 2012). All fleets' size data were estimated by raising the size measurement data using the catch in the corresponding strata.

3.6.8 Taiwanese Longline (Fleet 11)

Length composition data for the Taiwanese longline fishery (Fleet 11) were collected by port samplers, and are available for 1992-2012. The size sampling coverage is very high for this fleet, with > 90% of landed fish being measured. The Taiwanese longline fishery catches the largest PBF of all the fisheries.

3.6.9 EPO Commercial Purse Seine (Fleet 12)

Aires-da-Silva and Dreyfus (2012) and Dreyfus and Aires-da-Silva (2014) reviewed the PBF size composition data for the EPO purse seine fishery. PBF size composition data were collected by port samplers from IATTC and national sampling programs. For the most recent Mexican fishery targeting PBF for pen rearing operations, size composition samples were also collected at sea by IATTC observers during pen transfer operations.

There is strong evidence that the average size of the purse seine catch has changed over time. While the average length of the catch fluctuated around about 75 cm (age 1 fish) before the mid 1980s when the USA's PBF-targeting fishery was operating, there has been a shift towards larger fish (mean size of about 85 cm; age 2) in the late 1990s and 2000s, as the Mexican purse seine fishery has targeted PBF for farming operations. In 2001, several vessels targeting PBF changed their purse seine nets to deeper nets. Since 2002, all vessels targeting PBF have adopted this fishing method, as this species is

usually found in deeper waters. Under the new method, the depth of the purse seine nets ranged from 240 m to about 315 m, deeper than the nets targeting yellowfin tuna (about 210 m). Mexican PBF farms have recently introduced stereoscopic cameras to obtain size-composition data. Data collected by this method for 2010 and 2011 corroborate the size composition data collected by IATTC observer and port sampler data (Aires-da-Silva and Dreyfus 2012). Mexico provided additional data for 2012-2013 to the PBFWG in Dreyfus and Aires-da-Silva (2014).

3.6.10 EPO Recreational Fishery (Fleet 13)

Size composition data for the US recreational fishery have been collected by IATTC staff since 2002. Due to low sample sizes, these data were not used in the assessment but indicated that the sizes of fish caught were similar to the EPO commercial purse seine fishery. The size composition data for this fleet in the last two years were not provided for the update stock assessment (Oshima et al. 2014).

3.6.11 Other Fisheries (Fleet 14)

This fishery contains a variety of Japanese gear types and fisheries, mainly from Tsugaru Strait (between Honshu and Hokkaido). The size composition data, based on weights, shows a large peak at around 10 kg with a long tail extending to 250 kg (Abe et al. 2012b). Given the model structure, preliminary analysis indicated that poorly fitted size composition estimates from this fleet strongly influenced the estimated population dynamics (see Section 5). The relative contribution of each gear type included in this mixed fleet is unknown but likely varies over time. In the update stock assessment, the size composition data for Fleet 14 were used in a preliminary run to estimate the selectivity for this fleet, but not used in the final model (see Section 4.3.2).

4.0 MODEL DESCRIPTION

4.1 Stock Synthesis

A seasonal, length-based, age-structured, forward-simulation population model was used to assess the status of PBF. The model was implemented using Stock Synthesis (SS) Version 3.23b (Methot and Taylor 2011;

<u>http://nft.nefsc.noaa.gov/Stock_Synthesis_3.htm</u>). SS is a stock assessment model that estimates the population dynamics of a stock through use of a variety of fishery dependent and fishery independent information. Although it has historically been used primarily for ground fishes, it has recently gained popularity for stock assessments of tunas and other highly migratory species in the Pacific Ocean. The structure of the model allows for Bayesian estimation processes and full integration across parameter space using a Monte Carlo Markov Chain (MCMC) algorithm.

SS is comprised of three subcomponents: 1) a population subcomponent that recreates an estimate of the numbers/biomass at age using estimates of natural mortality, growth, fecundity etc., 2) an observational sub-component that consists of observed (measured) quantities such as CPUE or proportion at length/age, and 3) a statistical sub-component that uses likelihoods to quantify the fit of the observations to the recreated population.

4.2 Biological and Demographic Assumptions

4.2.1 Growth

The sex-combined length-at-age relationship was based on reading otolith samples from 1690 fish, ranging from 46.5 to 260.5 cm, and aging them to the nearest fractional year based on an assumed biological birth date of 15 May (Shimose and Takeuchi 2012). This relationship was then re-parameterized to the von Bertalanffy growth equation used in SS (Figure 2-3) and adjusted for the birth date used in SS (1 July, i.e. the first day of the fishing year),

$$L_2 = L_{\infty} + (L_1 - L_{\infty})e^{-K(A_2 - A_1)}$$

where L_1 and L_2 are the sizes associated with ages near the first (A_1) and second (A_2) ages, L_{∞} is the theoretical maximum length, and K is the growth coefficient. K and L_{∞} can be solved based on the length at age and L_{∞} was thus re-parameterized as:

$$L_{\infty} = L_1 + \frac{L_2 - L_1}{1 - e^{-K(A_2 - A_1)}}$$

The growth parameters K, L_1 and L_2 were fixed in the SS model, with K at 0.1574743 y⁻¹ and L_1 and L_2 at 21.5 cm and 109.194 cm for age 0 and age 3, respectively. The CV of the length-at-age for age 0 fish was estimated in the model (approximately 0.26, depending on the run); the CV for age 3 and older fish was fixed at 0.05.

The von Bertalanffy equation growth based on the above parameters is as follows:

$$L_t = 254.413 \{ 1 - e^{-0.1574743(t+0.560689)} \}$$

where

 $L_{\rm t}$ = length at age t;

 $L_{\infty} = 254.413$ cm = theoretical maximum length;

 $K = 0.1574743 \text{ y}^{-1} = \text{growth coefficient or the rate at which } L_{\infty} \text{ is asymptotically reached; and}$

 $t_0 = -0.560689$ (assumed July 1 as birth day, the first day in fishing year) = theoretical age where length is equal to zero.

In 2008, when the SS model was used for the first time to assess PBF, age of A_2 was manually tuned to optimize the model fit ($A_2 = 3$). In the 2008 stock assessment, CV_2 was also manually tuned to optimize the model fit in a preliminary run and fixed to 0.08 in the base case (Ichinokawa et al. 2008). In the current stock assessment, the choice of age 3 for A_2 was re-examined in preliminary runs and found to be optimal again. The value of CV_2 was also re-estimated and 0.05 was found to be optimal for the model fit using the current stock assessment's data.

4.2.2 Maximum Age

The maximum age modeled was age 20, which was treated as an accumulator for all older ages (dynamics are simplified in the accumulator age). To avoid biases associated with the approximation of dynamics in the accumulator age, the maximum was set at an age sufficient to minimize the number of fish in the accumulator bin. Given the M schedule, approximately 0.15% of an unfished cohort remains by age 20.

4.2.3 Weight-at-Length

A sex-combined weight-at-length relationship was used to convert fork length (L) in cm to weight (W_L) in kg (Kai 2007). The sex-combined length-weight relationship is:

$$W_L = 1.7117 \times 10^{-5} L^{3.0382}$$

where W_L is the weight at length L. This weight-at-length relationship was applied as a

fixed parameter in the model (Figure 2-4).

4.2.4 Sex-Ratio

This assessment assumes a single sex. Shimose and Takeuchi (2012) previously estimated sex-specific differences in the growth of male and female PBF. However, given the lack of sexual dimorphism and a near total lack of records of sex in the fishery data, a single sex was assumed for this assessment.

4.2.5 Natural Mortality

Natural mortality (*M*) was assumed to be age-specific in this assessment. Age-specific *M* estimates for PBF were derived from a meta-analysis of different estimators based on empirical and life history methods to represent juvenile and adult fish (Aires-da-Silva et al. 2008; see Section 2.1.5). The *M* of age 0 fish was estimated from a tagging study, as discussed in detail in the Section 2.1.5. Age-specific estimates of *M* were fixed in the SS model as 1.6 year⁻¹ for age 0, 0.386 year⁻¹ for age 1, and 0.25 year⁻¹ for age 2 and older fish (Figure 2-5).

4.2.6 Recruitment and Reproduction

PBF spawn throughout spring and summer (April-August) in different areas as inferred from egg and larvae collections and examination of female gonads. In the SS model, spawning was assumed to occur at the beginning of April, which is the beginning of the spawning cycle. Based on Tanaka (2006), age-specific estimates of the proportion of mature fish were fixed in the SS model as 0.2 at age 3, 0.5 at age 4, and 1.0 at age 5 and older fish. PBF ages 0-2 fish were assumed to be immature (Section 2.1.2). Recruitment was assumed to occur in July-September.

A standard Beverton and Holt stock recruitment model was used in this assessment. The expected annual recruitment was a function of spawning biomass with steepness (*h*), virgin recruitment (R_0), and unfished equilibrium spawning biomass (SSB_0) corresponding to R_0 , and was assumed to follow a lognormal distribution with standard deviation σ (Methot and Taylor 2011, Methot and Wetzel 2013). Annual recruitment deviations were estimated based on the information available in the data. The central tendency that penalizes the log (recruitment) deviations for deviating from zero was assumed to sum to zero over the estimated period. A log-bias adjustment factor was

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used to assure that the estimated mean log-normally distributed recruitments were mean-unbiased.

Recruitment variability (σ : the standard deviation of log-recruitment, see Section 4.6.2 for more detail) was fixed at 0.6. The log of R_0 (virgin recruitment) and annual recruitment deviates were estimated by the model. The offset for the initial recruitment relative to R_0 was estimated in the model and found to be small (approximately 0.075, depending on the run). Annual recruitment deviates were estimated from 1949 to 2011 (recruitment deviations in 1942-1951 represent deviations from a stable age structure corresponded ages 1-10 in 1952, i.e. the first year included in the stock assessment) and expectations of recruitment deviates for the terminal year derived from the stock-recruitment (S-R) relationship. A full bias adjustments are applied to the recruitment estimates prior to 1952. This was determined from preliminary runs using the method described in Methot and Taylor 2011.

Steepness of the stock-recruitment relationship was defined as the fraction of recruitment when the spawning stock biomass is 20% of SSB_0 , relative to R_0 . Previous studies have indicated that h tends to be poorly estimated due to the lack of information in the data about this parameter (Magnusson and Hilborn 2007, Conn et al. 2010, Lee et al. 2012). Lee et al. (2012) concluded that steepness was estimable from within the stock assessment models when models were correctly specified for relatively low productivity stocks with good contrast in spawning stock biomass. However, the estimate of h may be imprecise and biased for PBF as it is a highly productive species. Independent estimates of steepness that incorporated biological and ecological characteristics of the species (Iwata 2012, Iwata et al. 2012b) reported that mean h was approximately 0.999, close to the asymptotic value of 1.0. Therefore, steepness was fixed at 0.999 in this assessment. It was noted that these estimates were highly uncertain due to the lack of information on PBF early life history stages.

4.2.7 Stock Structure

The model assumed a single well-mixed stock for PBF. This assumption is supported by previous tagging and genetic studies (see Section 2.1.1).

4.2.8 Movement

PBF is a highly migratory species known to move widely throughout the Pacific Ocean, especially between the EPO and WPO (Section 2.1.3). In this assessment, PBF were assumed to be well-mixed and distributed throughout the Pacific Ocean, and regional and seasonal movement rates were not explicitly modeled. Although the model was not spatially explicit, the collection and pre-processing of data, on which the assessment is based, were fishery specific (i.e. country-gear type) and therefore contain spatial inferences. Instead of explicitly modeling movement, the model used fishery-specific and time-varying selectivities to approximate changes in the movement patterns of the stock.

4.3 Model Structure

4.3.1 Initial Conditions

Stock assessment models must make assumptions about what occurred prior to the start of the dynamic period. Two approaches describe the extreme alternatives for reducing the influence of equilibrium assumptions on the estimated dynamics. The first approach is to start the model as far back in time as is necessary in order to assume that there was no fishing prior to the dynamic period. Usually this entails creating a series of catches but these can be unreliable. The other approach is to estimate (where possible) initial conditions. Equilibrium catch is the catch taken from a stock for which removals and natural mortality are balanced by stable recruitment and growth. This equilibrium catch can be used to estimate the initial fishing mortality rates (Fs) in the assessment model. Not fitting to the equilibrium catch is equivalent to estimating the catch and therefore the Fs that best correspond to the data during the dynamic period. For this assessment, equilibrium catches (and Fs) for the Japanese longline (Fleet 1) and Japanese troll (Fleet 5) fleets were estimated and corresponding Fs were allowed to match other data during the dynamic period. These two fleets were chosen to estimate initial Fs because they represented fleets that take large and small fish, thereby allowing for model flexibility. In addition, ten recruitment deviations were estimated prior to the dynamic period to allow the initial population to better match size composition information available at the start of the dynamic period.

4.3.2 Selectivity

Selectivity patterns were fishery-specific and assumed to be length-based. Selectivity patterns were used to model not only gear function but availability of the stock (spatial patterns and movement) by spatially and temporally stratifying fisheries. In this assessment, selectivity patterns were estimated using length composition data for all fisheries except for Fleet 14, which was a composite of several different gear types, and Fleet 6, which was poorly sampled relative to a similar fishery (Fleet 5).

4.3.3 Selectivity Functional Forms

Selectivity assumptions can have large influences on the expected length frequency distribution given the relative importance of length frequency data in the total log-likelihood function. Functional forms of logistic or double normal curves were used in this assessment to approximate selection patterns. A logistic curve implies that fish below a certain size range are not vulnerable to the fishery, but then gradually increase in vulnerability to the fishery with increasing size until all fish are fully vulnerable (asymptotic selectivity curve). A double normal curve consists of the outer sides of two adjacent normal curves with separate variance parameters for the left and right hand sides and peaks joined by a horizontal line. This implies that the fishery selects a certain size range of fish (dome-shaped selectivity curve). Although dome-shaped selectivity curves are flexible, studies have indicated that their descending limbs are confounded with natural mortality, catchability, and other model parameters if all fisheries are dome-shaped.

This assessment assumed that one fleet has an asymptotic selectivity curve to eliminate the estimation of "cryptic biomass" and to stabilize parameter estimation (Table 4-1). This assumption meant that at least one of the fisheries sampled from the entire population above a specific size. This is a strong assumption that was evaluated in a separate analysis, whose results indicated that the Taiwanese longline fleet (Fleet 11) consistently produced the best fitting model when specified as asymptotically selective (Piner 2012). This assumption along with the observed sizes and life history parameters, sets an upper bound to population size. Two parameters, both of which were estimated in this assessment describe asymptotic selectivity: the length at 50% selectivity, and the difference between the length at 95% selectivity and the length at 50% selectivity.

All other fleets with length-composition data were allowed to be dome-shaped (Table 4-1) with six parameters describing the shape of the pattern. For most fisheries, the

initial and final parameters of the selectivity patterns were assigned values of -999 or were fixed to a small value (-15). The setting to 0.999 causes SS to ignore the first and last size bins and allows it to decay the selectivity of small and large fish according to parameters of ascending width and descending width, respectively. For some fisheries, the parameter specifying the width of the constant selectivity plateau was often estimated to be very small (-9) and often reached assigned bounds. For these fisheries, the width of the plateau was set to -9. Other parameters describing dome-shaped selectivity were estimated by the model, i.e. the length at which full selectivity is reached, the ascending and the descending width of the length selectivity plateau. Given the data and the model structure, the estimation of ascending and descending width of selectivities for Fleet 8 and Fleet 10 reached the upper limit of the estimation bounds. These parameters were fixed at the values of their upper limits.

4.3.4 Special Selectivities including Fixed, Time Varying and Mirrored

The selectivities of the Japanese pole-and-line fishery (Fleet 6) and the US recreational fishery (Fleet 13) were assumed to be the same as those of the Japanese troll fishery (Fleet 5) and the EPO commercial purse seine fishery (Fleet 12), respectively. This is because both Fleets 6 and 13 had relatively small sample sizes due to the substantially smaller sampling effort relative to Fleets 5 and 12. In addition, Fleets 6 and 13 and Fleets 5 and 12 were similar in terms of fishing areas and sizes of fish caught. The size composition data of Fleets 6 and 13 were not fitted by the model.

Selectivity of the Japanese "other" fishery (Fleet 14), which was a mixed gear fishery, likely varied over time due to the changes in the relative contribution of different gear types. Given the relatively small catches from this fleet and the difficulties in modeling it's selectivity, the selectivity of Fleet 14 was fixed with parameters estimated by a preliminary run with relative weight (lambda) = 0.1. Due to the fixed parameters, the Fleet 14 size composition data were not fitted by the final model. Lambda is the multiplicative weighting factor on the negative log likelihood for that data component.

Time varying selectivity patterns in the form of periods of constant selection were employed for the Japanese longline, Japanese tuna purse seine, and EPO purse seine fisheries (Fleets 1, 3 and 12). Two periods of selection patterns were estimated for the Japanese longline fishery (Fleet 1: 1952-1992 and 1993-2012). These two periods corresponded to a potential change in fishing operations, divergence in the CPUE series, and a seasonal shift in the timing of fishing, however the PBFWG was unable to determine the cause. Two periods of selection patterns (1952-2006 and 2007-2012) were also estimated for the Japanese tuna purse seine fishery (Fleet 3), which corresponded to a change in fishery operations described in Fukuda et al. (2012). Two periods were also assumed for the EPO purse seine fleet (Fleet 12: 1952-2001 and 2002-2012). The second period corresponded to a time when the EPO fleet changed gear types to target larger fish (Aires-da-Silva and Dreyfus 2012). Therefore, for 2002-2012, it was assumed that the selectivity of Fleet 12 was the same as the earlier period, except that the point on the plateau at which fish become fully selected was assumed to be 10 cm larger than the earlier period. This resulted in a 10cm rightward shift of the selectivity curve in the latter period (Section 3.6.9).

The Japanese set net fishery (other areas of Japan) (Fleet 9) was divided into two seasonal fleets (Quarters 1-3 and Quarter 4 of the fishing year) and separate selectivities were estimated for each. The division of Fleet 9 into seasonal fleets was based on examining the data and characteristics of the fleets, which indicated that fish taken in Quarter 4 were larger than could be explained by a single selection pattern (see Section 3.3)

4.3.5 Catchability

Catchability (q) was estimated assuming that each index of abundance is proportional to the vulnerable biomass/numbers with a scaling factor of q that was assumed to be constant over time. Vulnerable biomass/numbers depended on the fleet-specific selection pattern and underlying population numbers-at-age. Potential changes in q were approximated by assuming larger observation errors in the abundance indices (Ichinokawa and Takeuchi 2012; Oshima et al. 2012b).

4.4 Likelihood Components

The statistical model estimates best-fit model parameters by minimizing a negative log-likelihood value that consists of likelihoods for data and prior information components. The likelihood components consisted of catch, CPUE indices, size compositions, and a recruitment penalty. Model fits to the data and likelihood components were systematically checked.

4.4.1 Observation Error Model

The observed total catch data are assumed to be unbiased and relatively precise. They were fitted with a lognormal error distribution with standard error (SE) equal to 0.10. An unacceptably poor fit to catch was defined as models that did not remove >99% of the total observed catch from any fishery.

4.4.2 Recruitment Penalty Function

According to the Methot and Taylor (2011), the true variability of recruitment in the

$$\operatorname{SE}(\hat{r}_{y})^{2} + \operatorname{SD}(\hat{r})^{2} = \left(\left(\frac{1}{\sigma_{d}^{2}} + \frac{1}{\sigma_{R}^{2}} \right)^{-1/2} \right)^{2} + \left(\frac{\sigma_{R}^{2}}{\left(\sigma_{R}^{2} + \sigma_{d}^{2}\right)^{1/2}} \right)^{2} = \sigma_{R}^{2}.$$

population, σ constrains the estimates of recruitment deviations and is not affected by data. When data that are informative about recruitment deviations are available, σ is partitioned into i) variability among the recruitment estimates in the time series (signal) and ii) residual variability of each recruitment estimate:

When there are no data, no signal can be estimated, the individual recruitment deviations approach 0.0, and the variance of each recruitment deviation approaches σ . Conversely, when there are highly informative data on the recruitment deviations, then the variability among the estimated recruitment deviations will approach σ and the variance of each recruitment deviation will approach zero. The value of σ was fixed at 0.6 for the update assessment.

4.4.3 Weighting of the Data

Two types of weighting were used in the model: i) relative weighting among length compositions (effective sample size), and ii) weighting of the different data types (sources of information, e.g. length compositions, abundance indices, and conditional age-at-length) relative to each other.

Except for Fleets 3 and 12, effective sample sizes were determined by two steps: (1) maximum input sample sizes were set to 200 (i.e. the sample size was 200 if the actual sample size was larger than 200); and (2) the effective sample size of each fleet length or weight composition data were scaled by the average sample size of the tuna purse seine fleet in the Sea of Japan (Fleet 3) and the EPO commercial purse seine fleet (Fleet 12) from 1952-2010.

All size composition data, except for Fleets 6, 13 and 14 were fitted by the model with full weight (Section 4.3.4). The CPUE indices for Japanese coastal longline (S1, S2, S3), Japanese coastal troll (S5) and Taiwanese longline (S9) fleets were fitted by the model with full weight (Section 3.5).

4.5 Convergence Criteria

Convergence to a global minimum was examined by randomly perturbing the starting values of all parameters by 10% and refitting the model. This analysis was conducted as a quality control procedure to ensure that the model was not converging on a local minimum.

4.6 Model Analysis

4.6.1 Retrospective Analysis

Retrospective analysis was conducted to assess the consistency of stock assessment results by sequentially eliminating data from the terminal year while using the same model configuration. In this analysis, up to five years of data were removed and the PBFWG examined changes in the estimates of SSB and recruitment. The results of this analysis were used to assess potential biases and uncertainty in terminal year estimates.

4.6.2 Sensitivity to Alternative Assumptions

Sensitivity analyses were used to examine the effects of plausible alternative model configurations relative to the results for the base case.

It was agreed to conduct the following base case and sensitivity runs (Table 4-2):

1. A base case run with both the Taiwanese and Japanese longline CPUE series through 2012; the size composition for the Japanese longline fleet extending through 2011 (fishing year) and the size composition for the Taiwanese longline fleet extending through 2012 (fishing year);

- A sensitivity run removing CPUE data for the Japanese longline fleet for 2011-2012 (fishing year), and removing size composition data for the Japanese longline fleet for 2010 and 2011¹;
- 3. A sensitivity run removing CPUE data for the Taiwanese longline fleet for 2011-2012 (fishing year), and removing size composition data for the Taiwanese longline fleet for 2011 and 2012;
- 4. A sensitivity run with both the Japanese and Taiwanese longline CPUE series for 2011 and 2012 (fishing year) removed, and also removing the Japanese longline size composition data for 2010 and 2011, and the Taiwanese longline size composition data for 2011 and 2012.

For each trial run, trends in estimated SSB and recruitment were compared. In addition, estimates of $F_{2009-2011}$ (current *F*) or $F_{2002-2004}$ (reference year by current WCPFC CMMs) relative to a subset of F-based BRPs (F_{max} , $F_{0.1}$, F_{med} , $F_{10\%}$, $F_{20\%}$, $F_{30\%}$, $F_{40\%}$), the estimated depletion ratio (SSB_{2012} relative to SSB_0), and SSB_{2012} were calculated.

4.6.3 Future Projections

Stochastic future projections were performed using a quarterly age-structured population dynamics model that was identical in model structure to that used in the assessment. The software used for the future projections is distributed as an R-package named 'ssfuture', and is described in Ichinokawa (2012). This software has been validated as being capable of generating highly similar results on numbers-at-age and catch weight by fleets with deterministic future projections generated by SS (Ichinokawa 2012).

The projections were based on the results of the base case. Each projection was conducted from 300 bootstrap replicates followed by 20 stochastic simulations. The bootstrap replicates were derived by estimating parameters using SS and fishery data generated with parametric resampling of residuals from the expected values. Error structure was assumed to be lognormal for CPUE and multinomial for size-composition data. The CVs of abundance indices and input sample sizes of size compositions for

¹ Size composition data in the terminal year (2012) cannot be calculated using the estimation procedure proposed by Mizuno et al. (2012).

the bootstrap replicates were the CVs and 100*input sample sizes from the input data of the base case. The effective sample sizes for the bootstrap replicates were increased by 100-fold in order to provide adequate resampling of the size compositions. These projections included the parameter uncertainties of the stock assessment model because the stochastic simulations were conducted from the bootstrap run, which included estimation of model parameters. Specifically, estimation uncertainty in the population size in the starting year of the stock projection and fishing mortalities-at-age were included.

Future recruitment is randomly resampled from the whole stock assessment period (1952-2011) for the average recruitment scenario, and re-sampled from the low recruitment period (1980-1989) for the low recruitment scenario, without any spawner-recruitment relationship. This was an appropriate assumption because the steepness of the base case was very high (h = 0.999). For the recruitment in 2012-2013 which has already occurred, re-sampling was conducted from recruitment in 1986-1988, which represents the lowest three years of recruitment between 1980-1989. Ishida et al (2014) analyzed the patterns of estimated recruitments of the "preliminarily updated" base case of Fukuda et al (2014). They found that the recruitment in 1980-1993 is significantly lower (P=0.0275) than the historically average recruitments in 1980-1993 can be an alternative candidate for representing the low recruitment period. Nevertheless, this stock assessment continues to identify the period 1980-1989 as representing the low recruitment period. This is because the 1990 year class was estimated as the second strongest year class since 1960.

As for the duration of the low recruitment period, Ishida et al (2014) also found that recruitment in 1980-1993 was significantly lower (p=0.040), than the level of recruitment for the later period in 1994-2008. They also found that the recruitment in 2009-2012 was significantly lower (p=0.0278) than the recruitment in 1994-2008 (Table 5 in Ishida et al 2014). They applied a sequential t-test (Rodionov and Overland 2005) to the same time series of estimated recruitments and found two break points: between the 1993 and 1994 year classes, and between the 2008 and 2009 year classes with significance level of p<0.2. Their finding suggests that the duration of different productivity phases (regimes) may be on the order of 14 or 15 years. Based on these observations, two scenarios of low recruitment were chosen: i) a low recruitment level similar to the period 1980-1989 continues, or ii) 10 years of low recruitment from 2014 assuming low recruitment period actually started from 2009 followed by a period of

historically average level of recruitment.

The terminal year of the 2014 stock assessment is 2012 (fishing year or 1 July 2012 to 30 June 2013 in calendar year). The latest recruitment estimate available from the SS model is the 2012 year class. Similar to the last stock assessment, since the latest recruitment estimate is likely imprecise, it was proposed to use estimated recruitment through 2011 but replace it with randomly resampled recruitment over an appropriate period to represent future recruitment. However, year classes 2012 and 2013 were already born. In particular the ISC13 Plenary paid particular attention to the possible very weak 2012 year class. As for the 2013 year class, currently available information from fisheries targeting age 0 PBF suggest a possible weak 2013 year class, even though its strength might be relatively stronger than the 2012 and 2013 year classes' recruitment may be very weak. This was implemented by generating recruitments in 2012 and 2013 from resampling estimated recruitments in 1986-1988 which are the three lowest year classes in 1980-1989.

 $SSB_{recent,F=0}$ can roughly be defined as the theoretical spawning stock biomass size without fishing assuming recent levels of recruitment. Recent levels of recruitments were chosen based on the fixed size moving window approach which uses a fixed number of years of recent recruitment. In this particular calculation, in order to ensure the projected population has a steady state, a forward projection of 60 years from 2012 was conducted. This resulted in a mean $SSB_{recent,F=0}$ of 620,116 t (median of 616,625 t, standard deviation of 70,586 t) in 2072.

NC9 defined seven candidate harvest scenarios from 2015. Scenario 1 is continuation of management measures for 2014 until 2028 by both WCPFC and IATTC, while the other scenarios considered alternative measures (Table 4-3). In principle, the harvest scenarios represent combinations of constant effort strategies and catch capping for juvenile and/or adult catches for WPO fisheries; and a constant catch strategy for EPO commercial fisheries with no catch cap for the EPO recreational fishery.

The following assumptions were applied:

- i. Fishing effort is interpreted as fishing mortality, i.e. fishing effort at the 2002-2004 level was translated into an average F in 2002-2004;
- ii. Fourteen fisheries in the stock assessment model were reorganized into six fleets, with each fishery approximating one country's fishery;

- iii. If reduction of juvenile catch is required to a certain level, the F for ages 0-2 is assumed to be reduced to meet the necessary juvenile catch reduction requirement; and
- iv. If, in addition, reduction of adult catch is required, F of ages 3 and older is assumed to be reduced.

For the EPO commercial fishery (Fleet 12 of the base case), NC9 requested application of a type of constant catch strategy with maximum F level twice as much as that in 2002-2004. There is no distinction between juvenile and adult catch, despite the fact that the results of the 2012 stock assessment and 2014 base case of Fukuda et al (2014) suggests that the majority of fishing mortality occurs in age classes 1-3. For the EPO recreational fishery (Fleet 13), we simply applied the average partial F in 2002-2004, since IATTC's Resolution C-13-02 as well as NC9's requests do not cover the EPO recreational fishery.

NC9 requested information on "the probability of achieving each of five particular SSB levels (10%, 15%, 20%, and 25% $SSB_{\text{recent,F=0}}$, and historical median SSB) within 10 and 15 years" as well as the "expected average yield over the final three years of the projection". To accomplish this, the PBFWG calculated the probability of future SSB exceeding the specified reference levels of SSB in at least one year from 2014 to 2023 (10 years) or from 2014 to 2028 (15 years). The average expected yield in 2026-2028 was also calculated. In addition, the probability of SSB falling below the historical lowest observed level of SSB (about 18,300 t) at least once within 15 years was also calculated.

4.6.4 Biological Reference Points

The ratio of $F_{2009-2011}$ (current F) or $F_{2002-2004}$ (reference year under the current WCPFC management measure) as compared to a suite of candidate F-based biological reference points (F_{BRP}), i.e. F_{max} , $F_{0.1}$, F_{med} , F_{loss} and $F_{10\%-40\%}$, were contrasted in this assessment. The estimates were expressed as the ratio of $F_{2009-2011}$ / F_{BRP} , which means that when the ratio was more than 1.0, $F_{2009-2011}$ was above the reference point. The F_{max} , F_{med} and $F_{0.1}$ reference points are based on yield-per-recruit analysis while the $F_{10-40\%}$ reference points are spawning biomass-based proxies of F_{MSY} .

5.0 MODEL RESULTS

5.1 Base Case Results

The dynamics of SSB and recruitment during stock assessment period (1952-2012) are shown in Figure 5-1. Point estimates of the base case indicate that the current levels (2012) of stock biomass and SSB are 44,849 t and 26,324 t, respectively. The recent five-year average of recruitment (2007-2011) was 14.8 million fish (Figure 5-1, Table 5-1).

Fishing mortality dynamics during the stock assessment period (1952-2012) are shown in Figure 5-2. Age-specific fishing mortalities for 2009-2011 were estimated to be 19%, 4%, 12%, 31% and 60% higher than 2002-2004 (reference year of the current WCPFC conservation and management measure) for ages 0-4 fish, respectively (Figure 5-2, Table 5-2).

5.1.1 Model Convergence Diagnostics

The update stock assessment converges with maximum gradient of 2.0×10^{-4} and total negative log likelihood of 2412. One hundred runs with randomly generated initial values showed that the model likely converged to a global minimum, with no evidence of further improvements to the total likelihood (Figure 5-3).

5.1.2 Fit to Abundance Indices

The model fit to the abundance indices are shown in Figure 5-4. The abundance trends in most of the abundance indices were well-represented by the model. The Japanese troll index (S5) and both Japanese longline indices before 1993 (S2 and S3) were fit very well (root mean square error (rmse) = 0.22 for S5 and 0.21 for the rest of three). However, the fit for the Japanese longline index for 1993-2010 (S1) and the Taiwanese longline index for 1998-2010 (S9), were relatively poor (rmse = 0.52 and 0.41respectively).

5.1.3 Fit to Size Composition Data

Pearson residuals of the model fit to the quarterly size composition data are shown in Figure 5-5.

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5.1.4 Model Parameter Estimates

5.1.4.1 Recruitment Deviations

A Beverton-Holt relationship based on a steepness value of h=0.999 was used for the base case, and stock and recruitment plots are presented in Figure 5-6. The estimated recruitment deviations were relatively precise for both 1996-2011 and 1960-1988, which indicated that these periods were well informed by data (upper panel in Figure 5-6). The variability of the estimated recruitment deviates appeared to be slightly lower than input recruitment variability ($\sigma = 0.6$). However, the estimated and input recruitment variabilities were close enough that the estimated population dynamics would not be substantially affected.

5.1.4.2 Selectivity

The estimated selectivity curves for the base case are shown in Figure 5-7. Given the model structure, most of the selectivity parameters were relatively well-estimated. In particular, the selectivity parameters for the Taiwanese longline fishery (Fleet 11), which was assumed to have an asymptotic selectivity, were well-estimated. Both the estimated length at 50% selectivity and width of 95% selectivity had small CVs (1 and 11%, respectively). The selectivity for the Japanese "others" fishery (Fleet 14) was also estimated to be asymptotic (in an initial run), although the selectivity was assumed to be dome-shaped (using five parameters). However, it should be noted that the selectivity for Fleet 14 was fixed after the initial run and the size compositions from Fleet 14 were not fitted in the final model due to the large differences for this data component.

All other selectivities were estimated to be dome-shaped. However, the selectivity for the Japanese longline fishery (F1) showed a low level of selectivity even at the largest sizes of fish, especially for the late period. This is expected because this fishery operated on the spawning grounds targeting adult fish. The parameters for the width of the descending limb and the selectivity at the last bins for the late period had large standard deviations comparing with its given range of parameter estimation, indicating not well-estimated (SD = 13.0 and 19.0, respectively). This was likely due to the small number of observations for this fishery at the largest sizes, which suggests that a low level of selectivity occurs at these large sizes but there were not enough observations to provide enough information on the selectivity at large sizes.

The most precise selectivity parameters were generally the parameters for the length at peak selectivity, with CVs ranging from 1% to 10%.

5.2 Stock Assessment Results

Results from the base case were used to determine trends in population biomass, spawning biomass, recruitment and fishing intensity for the PBF stock during the stock assessment period 1952-2012 (i.e. July 1952 to June 2013).

5.2.1 Total and Spawning Stock Biomass

Point estimates of total stock biomass from the base case showed long-term fluctuations (Table 5-1 and Figure 5-1). In 1952, the starting year of the current stock assessment, total stock biomass was 119,400 t. During the stock assessment period, the total stock biomass reached the historical maximum of 185,559 t in 1959, and a historical minimum of 40,263 t in 1983. Total stock biomass started to increase again in the mid-1980s and reached its second highest peak of 123,286 t in 1995. Total stock biomass has been declining since then to around 50,243 t in the last five years and was 44,848 t in 2012.

Spawning stock biomass (SSB) estimates also exhibited long term fluctuations (Table 5-1 and Figure 5-1). SSB relative to unfished SSB has ranged from 0.03 to 0.22 during the assessment period (1952-2012). Estimates of SSB at the beginning of quarter 4 (April-June) in the first five years (1952-1956) of the assessment period averaged approximately 75,000 t. The highest SSB of about 140,148 t occurred in 1961 while the lowest SSB of about 18,807 t occurred in 1984. In the 1990s, SSB reached its second highest level of about 87,258 t in 1995 and declined to about 26,369 t in recent years (average for 2008-2012) with a value of about 26,324 t in 2012, which was approximately 4% of the stock's estimated unfished SSB level. The quadratic approximation to the likelihood function at the global minimum, using the Hessian matrix, indicated that the CV of SSB estimates was about 19% on average for 2008-2012, and 21% for 2012.

5.2.2 Recruitment

Recruitment (age 0 fish on July 1st) estimates fluctuated widely with no apparent trend. Recent strong cohorts occurred in 1990 (29 million fish), 1994 (39 million fish), 2004 (28 million fish) and 2007 (25 million fish) (Table 5-1 and Figure 5-1). The average estimated recruitment was approximately 15 million fish for the entire stock assessment period (1952-2012), and 15 million fish for 2002-2011. Estimates were relatively precise for the initial 12 years of the stock assessment, i.e. 1952-1963 (average CV = 14%), but were less precise for 1964-1980 (average CV = 30%, maximum CV = 42%). Recruitment estimates became more precise (average CV = 12%, maximum CV = 28%) after 1981, when recruitment indices from the Japanese troll fishery became available. In the most recent years (1994-2010), recruitment estimates have further improved in their precision (average CV = 6% or maximum CV = 11%) due to the comprehensive size data collection for Japanese fisheries that began in 1994.

5.2.3 Fishing Mortality-at-Age

Annual fishing mortality-at-age was calculated externally by solving the Baranov catch equation using the estimated numbers of fish-at-age at the beginning of the first quarter and the predicted annual catch-at-age matrix from the base case (Figure 5-2 and Table 5-2). Throughout the stock assessment period (1952-2012), average fishing mortality for ages 0-3 juveniles (0.49) was higher than that for age 4+ fish (0.10). The *F* at age 1 started to increase in 1995. The average *F* of age 1 fish during 1995-2011 was 0.99, while average *Fs* of ages 0, 2 and 3 fish were 0.56, 0.54, and 0.24, respectively. The average *F* of age 4+ fish during the same period was 0.13. In the recent period (2009-2011), average *Fs* of ages 0-4+ fish were 0.59, 0.92, 0.65, 0.33 and 0.10, respectively. During 2002-2004 (the base period for the current WCPFC CMM), average *Fs* of ages 0-4+ fish were 0.50, 0.89, 0.25 and 0.13, respectively. Therefore, the *Fs* at ages 0-6 during 2009-2011 were 19%, 4%, 12% 31%, 60%, 51% and 21% higher than 2002-2004.

5.2.4 Fishing Mortality by Gear

Age-specific fishing mortalities by fishing gear are summarized in Figure 5-8. For all age classes, there is no clear trend in the age-specific fishing mortality from 2000-2011. For ages 2 and 3, rapidly increasing F is confirmed through 2012, however there is

some uncertainty associated with the estimate in the terminal year (2012).

5.2.5 Number-at-Age

The population size in numbers-at-age at the beginning of the fishing year (July 1st) is shown in Table 5-3 and Figure 5-9. Several strong cohorts were apparent (e.g. 1990 and 1994 year classes in recent years). In general, the estimated numbers-at-age reflect the age structure of PBF with fewer old-age fish expected.

5.3 Retrospective Analyses

The retrospective analysis showed no particular tendency of estimation in the SSB for recent 5 terminal years. The SSB between 1993 and 2002 has a tendency of under-estimation except for the one-year-dropped model (Figure 5-10). The recruitments of the terminal year show a tendency of over-estimation in 2009, 2010, and 2011, and a tendency of under-estimation in 2007 and 2008. In addition to those, the recruitments of the year classes from 2000 to 2004 tended to be overestimated (Figure 5-10).

5.3.1 Total Biomass, SSB and Recruitment

All four runs showed similar trends in total biomass and SSB, except after 2005 there was some slight divergence. In the terminal year, the SSB from Run 2was highest, whereas for Run 3 the SSB estimate was the lowest. On the other hand, there were few differences in the recruitment time series among the four runs. In all trial runs, the estimated SSB showed long-term fluctuations with three biomass peaks (Figures 5-11 and 5-12). All four runs showed declining SSB over the most recent decade with an estimated SSB in 2012 ranging from 19,369 t to 33,376 t (-26% to +24% of the base case). The depletion ratio estimated for each run varied from 0.031 to 0.054. Although the ratio of current *F* to the BRPs varied somewhat, all trial runs indicated that the current $F_{2009-2011}$ was above F_{max} , $F_{0.1}$, F_{med} , $F_{10\%}$, $F_{20\%}$, $F_{30\%}$ and $F_{40\%}$ (Table 5-4).

5.3.2 Fit to CPUE and size composition

Results indicated that removing CPUE and size composition data for the most recent two years affected the fit to the S1 and S9 indices (Figure 5-13). The fit to CPUE for Japanese longline (S1) and/or Taiwanese longline (S9) were improved in Runs 3 and

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Run 4, respectively, after 2006, and in parallel the improvements in fit increased (or decreased) the estimates of recent SSB in those runs.

In general, removing CPUE and length composition data did not substantially improve the fit to the observed length compositions (Figure 5-14).

5.4 Future Projections

The historical recruitment and SSB estimated by 300 bootstrapped simulations are shown in Figures 5-15 through 5-17. Point estimates of SSB, especially during 1950s-1970s, and some SSB indicators, such as the historical minimum and median, were generally above the median estimators from the bootstrap. These discrepancies between point estimates and the bootstrap median were also observed in past stock assessments for this and other species, but the cause is not fully understood.

Table 5-5 summarizes the results for the benchmarks for $SSB_{\text{recent},F=0}$ as listed in Section 4.6.3. Figures 5-15 through 5-17 compare the expected performance of the seven harvest scenarios under three future recruitment scenarios. Within the ten year simulation period, all of the scenarios with low recruitment except for Scenario 6 have a low probability of reaching the SSB benchmarks specified by NC9. Under Scenario 6 it is expected that SSB will exceed the benchmark of 10% of $SSB_{\text{recent},F=0}$ and the historical median within 15 years with very high probability (more than 80%). Scenario 7 did not perform as well as Scenario 6, in particular when future recruitment is assumed to be at the average level, and the expected increase of SSB is lower than under Scenario 6. In addition, if future recruitment is assumed to be low, Scenario 7 performs poorly in the sense that SSB only has 10% probability of reaching the benchmark of 10% of $SSB_{\text{recent},F=0}$ within 10 years.

Scenario 1 can be considered as the "status quo" in the sense that regulations in 2014 are assumed to continue in both the WPO and the EPO which assumes full implementation of WCPFC's and IATTC's regulation as well as additional measures adopted by Japan for national waters. The overall result for Scenario 1 is that if future recruitment remains within historically average levels, SSB can be expected to increase steadily and is likely to exceed 15% of $SSB_{recent,F=0}$ within 10 years. On the other hand, if future recruitment is at low recruitment levels as experienced in the 1980s, the SSB is likely to remain at its current very low level. Furthermore, it is very likely (79% in low recruitment scenario) that SSB will decline below the historically lowest observed level (Figure 5-15) at some point in the next ten years. For the other six remaining
harvest scenarios, Scenarios 2-4 have very poor performance under low recruitment conditions. The other three harvest scenarios (Scenarios 5-7) are expected to show an increase in SSB to some extent, but the degree of increase varies under each harvest scenario. In summary, Scenario 6 performs best across the three recruitment scenarios; Scenario 7 is the next best but its performance is not sufficient to increase of SSB and avoid risking further declines in SSB (24% of scenario 6 against 31% of scenario 7), if future recruitment remains low.

As discussed, average recruitment in 2009-2012, and possibly in 2013, may be lower than that observed before 2009. Given the future projection results, the importance of considering the risk of low recruitment in the coming decade is even greater than before.

6.0 STOCK STATUS AND CONSERVATION ADVICE FOR PBF

The update stock assessment model was unable to adequately represent much of the updated data. Poor fit to the two adult indices of abundance and their associated size composition in the last two years indicate results are highly uncertain. Improvements to the model are advisable before re-assessing, and the current results with regard to the recent trends in SSB should be interpreted with caution.

Using the update stock assessment, the current (2012) SSB of 26,324 t is slightly higher than that estimated for 2010 (25,476 t).

Across sensitivity runs in the update stock assessment it was considered that the estimates of recruitment were robust. The recruitment level in 2012 was estimated to be relatively low (the 8th lowest in 61 years), and the average recruitment level for the last 5 years may have been below the historical average level (Figure 5-1). Estimated age-specific fishing mortalities on the stock in the recent period (2009-2011) relative to 2002-2004 (the base period for the current WCPFC Conservation and Management Measure 2010-04) show 19%, 4%, 12%, 31%, 60%, 51% and 21% increases for ages 0-6, respectively, and a 35% decrease for age 7+ (Figure 6-1).

Although no target or limit reference points have been established for the PBF stock under the auspices of the WCPFC and IATTC, the current F (average 2009-2011) exceeds all target and limit biological reference points (BRPs) except for F_{loss} , and the ratio of SSB in 2012 relative to unfished SSB (depletion ratio) is less than 6%. In

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summary, based on reference point ratios, overfishing is occurring and the stock is overfished (Table 5-4).

For illustrative purposes, two examples of Kobe plots (plot A based on SSB_{med} and F_{med} , plot B based on $SSB_{20\%}$ and $SPR_{20\%}$, Figure 6-2) were prepared and presented. The PBFWG noted that because no reference points for PBF had yet been agreed to, these versions of the Kobe plot represent alternative reference points. It was agreed to present the two Kobe plot versions for further discussion.

Historically, the WPO coastal fishery group has had the greatest impact on the PBF stock, but since about the early 1990s the WPO purse seine fleet has increased its impact, and the effect of this fleet is currently greater than any of the other fishery groups. The impact of the EPO fishery was large before the mid-1980s, but decreased after the 1990s until the mid 2000s. The WPO longline fleet has had a limited effect on the stock throughout the analysis period. The impact of a fishery on a stock depends on both the number and size of the fish caught by each fleet; i.e., catching a high number of smaller juvenile fish can have a greater impact on future spawning stock biomass than catching the same weight of larger mature fish (Figures 6-3 and 6-4).

The current (2012) PBF biomass level is near historically low levels and experiencing high exploitation rates above all biological reference points except for Floss. Based on projection results, the recently adopted WCPFC CMM and IATTC resolution for 2014, if continued in to the future, are not expected to increase SSB if recent low recruitment continues.

In relation to the projections requested by NC9, no scenario except for Scenario 6^2 , the strictest one, demonstrates increase of SSB assuming the current low recruitment continues. Given the result of Scenario 6, further substantial reduction of fishing mortality and juvenile catch over the whole range of juvenile ages should be considered to reduce the risk of SSB falling below its historically lowest level.

If the low recruitment of recent years continues, the risk of SSB falling below its historically lowest level observed would increase. This risk can be reduced with implementation of more conservative management measures (Figure 5-15 thorough

² For the WCPO, a 50% reduction of juvenile catches from the 2002-2004 average level and *F* no greater than $F_{2002-2004}$. For the EPO, a 50% reduction of catches from 5,500 t. From the scientific point of view, juvenile catches were not completely represented in the reductions modeled under Scenario 6 for some fisheries although these reductions comply with the definition applied by the NC9.

5-17).

Based on the results of future projections requested by NC9, unless the historical average level (1952-2011) of recruitment is realized, increase of SSB cannot be expected under the current WCPFC and IATTC conservation and management measures³, even under full implementation (Scenario 1)⁴.

If the specifications of the harvest control rules used in the projections were modified to include a definition of juveniles that is consistent with the maturity ogive⁵ used in the stock assessment, projection results could be different, for example, rebuilding may be faster. However no projection with consistent definition of juvenile in harvest scenario was conducted.

Given the low level of SSB and uncertainty in future recruitment, monitoring of recruitment should be strengthened to allow the trend of recruitment to be understood in a timely manner.

³ WCPFC: Reduce all catches of juveniles (age 0 to 3-(less than 30 kg)) by at least 15% below the 2002-2004 annual average levels, and maintain the total fishing effort below the 2002-2004 annual average levels. IATTC: Catch limit of 5000 t with an additional 500 t for commercial fisheries for countries with catch history. (1. In the IATTC Convention Area, the commercial catches of bluefin tuna by all the CPCs during 2014 shall not exceed 5,000 metric tons. 2. Notwithstanding paragraph 1, any CPC with a historical record of eastern Pacific bluefin catches may take a commercial catch of up to 500 metric tons of eastern Pacific bluefin tuna annually. (C-13-02), see https://www.iattc.org/PDFFiles2/Resolutions/C-13-02-Pacific-bluefin-tuna.pdf).

⁴ Although these measures assume F be kept below $F_{2002-2004}$, $F_{2009-2011}$ was higher than $F_{2002-2004}$.

 $^{^5}$ 20% in age 3, 50 % in age 4, 100% in age 5 and older.

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8.0 Table and Figure

Table 1-1.Relationships between calendar year, fishing year and year class.

Fishing year	2010				2011		2012				2013
Quarter	Q1	Q2	Q3	Q4	Q1 Q2	Q3 Q4	Q1	Q2	Q3	Q4	Q1 Q2
SSB				SSB in 2010		SSB in 2011				SSB in 2012	
Day of Birth in SS	Birthday of	2010 year clas	ss		Birthday of 2011 year class	Birthday of	2012 year clas	Birthday of 2013 year clas			
Recruitment	Recruitment	in 2010			Recruitment in 2011	Recruitment in 2012				Recruitment in 2013	
Year class	2010 year c	ass			2011 year class		2012 year c	lass			2013 year class
Calendar year	2010		2011		201	2			2013		
month	7 8 9	10 11 12	1 2 3	4 5 6	7 8 9 10 11 12 1	2 3 4 5 6	7 8 9	10 11 12	123	4 5 6	7 8 9 10 11 12

Age	Length (cm)	Lt + SD	Lt - SD	Weight (kg)
0	21.5	27.1	15.9	0.19
1	55.4	66.0	44.9	3.40
2	84.4	94.6	74.3	12.20
3	109.2	114.7	103.7	26.66
4	130.4	136.9	123.8	45.67
5	148.4	155.8	141.0	67.75
6	163.9	172.1	155.7	91.52
7	177.1	185.9	168.2	115.79
8	188.3	197.7	178.9	139.67
9	198.0	207.9	188.1	162.52
10	206.2	216.5	195.9	183.91
11	213.2	223.9	202.6	203.62
12	219.2	230.2	208.3	221.55
13	224.3	235.6	213.1	237.67
14	228.7	240.2	217.3	252.05
15	232.5	244.1	220.8	264.80
16	235.7	247.4	223.9	276.02
17	238.4	250.3	226.5	285.85
18	240.7	252.8	228.7	294.44
19	242.7	254.9	230.6	301.91
20	244.4	256.6	232.2	308.39

Table 2-1.Length and weight of PBT based on the von Bertalanffy growth curve
use in this stock assessment.

Serial No.	Fleet No.	Short name	Data type	Available Period	Corresponding Fisheries	Other Fisheries	Lambda (*1)	Size data type	Average input sample size or C.V.	Data quality	Document for reference
1	F1	JLL	Fishery	1952-1968, 1994-2011	Japanese longline		1	Length	12.3	Catch at length	ISC/12/PBFWG-1/01
2	F2	SPelPS	Fishery	2001-2012	Purse seinein the East China Sea	Korean small pelagic fish purse seine	1	Length	12.1	Catch at length	ISC/12/PBFWG-1/02
3	F3	TunaPSJS	Fishery	1986-1989, 1991-2012	Japanese tuna purse seine fisheries in the Sea of Japan		1	Length	20.8	Catch at length	ISC/12/PBFWG-1/07
4	F4	TunaPSPO	Fishery	1994-2006	Japanese purse seine off the Pacific coast of Japan		1	Length	5.8	Catch at length	ISC/12/PBFWG-1/03
5	F5	JpnTroll	Fishery	1993-2012	Japanese troll		1	Length	12.1	Catch at length	ISC/12/PBFWG-1/04
6	F6	JpnPL	Fishery	1994-1996, 1998-2004, 2005-2010	Japanese pole- and-line	Japanese driftnet Taiwanese driftnet Taiwanese others	0	Length	12.1	Raw mearsurement	ISC/07/PBFWG-1/05
7	F7	JpnSetNet NOJWeight	Fishery	1993-2012	Japanese set net (northern part of Japan)		1	Weight	12.0	Catch at weight	ISC/12/PBFWG-1/05
8	F8	JpnSetNet NOJLength	Fishery	1994-2008, 2012	Japanese set net (Q1-Q2, Hokuriku)		1	Length	12.2	Catch at length	ISC/12/PBFWG-1/05
9	F9	JpnSetNet OAJLength Q1- 3	Fishery	1993-2012	Japanese set net (other area, Q1- Q3)		1	Length	12.0	Catch at length	ISC/12/PBFWG-1/05
10	F10	JpnSetNet OAJLength Q4	Fishery	1993-2012	Japanese set net (other area, Q4)		1	Length	12.1	Catch at length	ISC/12/PBFWG-1/05
11	F11	TWLL	Fishery	1992-2012	Taiwanese longline	New Zealand Other country	1	Length	12.1	raw measurement (high coverage)	No document
12	F12	EPOPS	Fishery	1952-1965, 1969-1982, 2005-2012	Eastern Pacific Ocean commercial purse seine		1	Length	9.3	Catch at length	ISC/12/PBFWG-3/02 ISC/14/PBFWG-1/04
13	F13	EPOSP	Fishery	1993-2003, 2005-2006, 2008-2011	Eastern Pacific Ocean sports fishery		0	Length	12.1	Raw measurement	No document
14	F14	Others	Fishery	1994-2012	Others	Japanese trawl Japanese other longline	0.1	Weight	12.1	Catch at weight	ISC/12/PBFWG-1/06

Table 3-1.Definition of fleets considered for size composition (rows 1-14) and abundance indices (row 15-25) in the PBF stock
assessment.

Serial No.	Fleet No.	Corresponding Fisheries	Short name	Data type	Available Period	Lambda (*1)	Fleet No. for size data	Average input sample size or C.V.	Data quality	Document for reference
15	S1	Japanese coastal longline conducted in spawning area and season.	JpCLL	CPUE	1993-2012	1	F1	0.26 or 0.20	Standerdized	ISC/12/PBFWG- 1/08 ISC/14/PBFWG- 1/02
16	S2	Japanese offshore and distant water longliners until 1974	JpnDWLLFujioka Revto74	CPUE	1952-1973	1	F1	0.2	Standerdized	ISC/12/PBFWG- 1/10
17	S 3	Japanese offshore and distant water longliners from 1975	JpnDWLLYokawa Revfrom75	CPUE	1974-1992	1	F1	0.2	Standerdized	ISC/12/PBFWG- 1/10
18	S4	Japanese tuna purse seine in Sea of Japan	TPSJO	CPUE	1987-1989, 1991-2010	0	F3	0.2	Standerdized	ISC/12/PBFWG- 1/09
19	S5	Japanese troll in Nagasaki (Sea of Japan and East China sea)	JpnTrollChinaSea	CPUE	1980-2012	1	F5	0.2	Standerdized	ISC/12/PBFWG- 1/11 ISC/14/PBFWG- 1/07
20	S 6	Japanese troll combined with Kochi and Wakayama by catch- weighted average	JpnTrollPacific	CPUE	1994-2010	0	F5	0.2	Standerdized and combined by ad-hoc way	ISC/12/PBFWG- 1/11
21	S 7	Japanese troll in Kochi (Pacific)	JpnTRKochi	CPUE	1981-2010	0	F5	0.3	Standerdized	ISC/12/PBFWG- 1/11
22	S 8	Japanese troll in Wakayama(Pacific)	JpnTRWakayama	CPUE	1994-2010	0	F5	0.2	Standerdized	ISC/12/PBFWG- 1/11
23	S9	Taiwanese longline	TWLL	CPUE	1998-2012	1	F11	0.2	Standerdized	ISC/12/PBFWG- 2/14 ISC/14/PBFWG- 1/01
24	S10	EPO purse seine during US target fisheries	USPSto82	CPUE	1960-1982	0	F12	0.93	Standerdized	ISC/12/PBFWG- 1/18
25	S11	EPO purse seine during Mexico operating	MexPSto06	CPUE	1999-2010	0	F12	0.77	Standerdized	ISC/12/PBFWG- 1/18

(*1) Lambda 1 indicates that size composition or abundance indices are used to tune in the base case run. Lambda 0 indicates that they are not used.

	S 1	S2	S 3	S 4	S5	S 6	S 7	S 8	S 9	S10	S11
1952		0.0140									
1953		0.0126									
1954		0.0112									
1955		0.0085									
1956		0.0058									
1957		0.0067									
1958		0.0160									
1959		0.0263									
1960		0.0197								1.04	
1961		0.0193								1.54	
1962		0.0175								1.40	
1963		0.0123								1.75	
1964		0.0128								1.05	
1965		0.0100								1.20	
1966		0.0128								1.93	
1967		0.0062								1.55	
1968		0.0056								0.58	
1969		0.0065								0.82	
1970		0.0046								0.99	
1971		0.0029								0.92	
1972		0.0028								1.35	
1973		0.0019								0.65	
1974			0.0016							0.61	
1975			0.0011							1.25	
1976			0.0026							0.82	
1977			0.0029							0.51	
1978			0.0035							0.98	
1979			0.0023							0.72	
1980			0.0030		0.66					0.62	
1981			0.0035		1.14		0.82			0.34	
1982			0.0020		0.58		0.25			0.38	
1983			0.0012		0.89		0.21				
1984			0.0013		0.89		1.14				
1985			0.0012		0.83		0.77				
1986			0.0014		0.95		0.28				
1987			0.0014	709.5	0.68		0.16				
1988			0.0016	353.9	0.77		0.58				
1989			0.0024	598.8	0.62		0.32				
1990			0.0024		1.23		0.64				
1991			0.0038	289.1	1.32		0.58				
1992			0.0041	485.5	0.57		0.30				
1993	1.91		0.0051	600.3	0.47		0.51				
1994	1.39		0.0037	2402.0	1.97	2.36	3.20	1.3959			
1995	1.72		0.0059	1169.3	1.07	0.84	1.05	0.7816			
1996	1.80		0.0066	706.3	1.60	0.85	0.90	1.2641			
1997	1.57		0.0053	459.5	0.90	0.46	0.48	0.7082			
1998	1.13		0.0045	550.6	0.82	1.11	1.54	0.5542	0.43		
1999	0.87		0.0039	766.1	1.49	0.25	0.33	0.1826	0.35		20.47
2000	0.68		0.0032	754.8	1.15	0.32	0.32	0.5259	0.21		0.56
2001	0.79		0.0030	438.6	1.16	1.56	2.11	0.9419	0.13		0.55
2002	1.31			459.7	0.73	0.67	0.83	0.6222	0.19		0.24
2003	1.39			474.9	0.65	0.32	0.40	0.2986	0.18		2.38
2004	1.64			752.8	1.29	3.17	3.47	4.3717	0.09		1.64
2005	0.82			856.7	1.36	0.87	0.99	1.0757	0.11		0.51
2006	1.15			388.4	0.71	0.82	0.93	1.0406	0.10		0.29
2007	0.63			865.7	1.38	1.27	1.47	1.5108	0.12		0.27
2008	0.40			751.6	1.44	0.68	0.66	1.2016	0.09		0.41
2009	0.21			585.1	1.11	0.08	0.08	0.127	0.06		1.64
2010	0.21			603.5	1.09	1.35	1.97	0.3975	0.11		3.01
2011	0.14				0.94				0.15		
2012	0.23				0.52				0.16		

Table 3-2.PBF abundance indices (CPUE) available for this stock assessment
(only S1, S2, S3, S5, and S9 were used in the assessment model).

Table 3-3.	Coefficient of variation (CV) of PBF abundance indices (CPUE)
	available for the stock assessment (only S1, S2, S3, S5, and S9 were
	used in the assessment model).

Year	S1(*1)	S2	S 3	S 4	S 5	S 6	S 7	S 8	S 9	S10	S11
1952			0.20									
1953			0.20									
1954			0.20									
1955			0.20									
1956			0.20									
1957			0.20									
1958			0.20									
1959			0.20									
1960			0.20								1.07	
1961			0.20								0.79	
1962			0.20								0.80	
1963			0.20								0.79	
1964			0.20								0.72	
1965			0.20								0.73	
1966			0.20								0.55	
1967			0.20								0.83	
1968			0.20								0.97	
1969			0.20								0.95	
1970			0.20								0.89	
1971			0.20								0.86	
1972			0.20								0.81	
1973			0.20								1.01	
1974				0.20							1.06	
1975				0.20							0.87	
1976				0.20							0.88	
1977				0.20							1.10	
1978				0.20							0.94	
1979				0.20							1.10	
1980				0.20		0.20		o - ·			1.02	
1981				0.20		0.20		0.51			1.32	
1982				0.20		0.20		0.51			1.25	
1983				0.20		0.20		0.58				
1984				0.20		0.20		0.51				
1985				0.20		0.20		0.49				
1986				0.20	0.00	0.20		0.49				
1987				0.20	0.20	0.20		0.46				
1988				0.20	0.20	0.20		0.33				
1989				0.20	0.20	0.20		0.32				
1990				0.20	0.00	0.20		0.28				
1991				0.20	0.20	0.20		0.31				
1992	0.00	0.22		0.20	0.20	0.20		0.31				
1993	0.20	0.23			0.20	0.20	0.20	0.24	0.20			
1994	0.20	0.21			0.20	0.20	0.20	0.20	0.20			
1995	0.20	0.22			0.20	0.20	0.20	0.21	0.20			
1990	0.20	0.20			0.20	0.20	0.20	0.20	0.20			
1997	0.20	0.20			0.20	0.20	0.20	0.25	0.20	0.20		
1998	0.20	0.19			0.20	0.20	0.20	0.22	0.20	0.20		1.00
1999	0.20	0.19			0.20	0.20	0.20	0.21	0.20	0.20		1.90
2000	0.20	0.19			0.20	0.20	0.20	0.21	0.20	0.20		0.77
2001	0.20	0.20			0.20	0.20	0.20	0.20	0.20	0.20		0.93
2002	0.20	0.19			0.20	0.20	0.20	0.21	0.20	0.20		0.75
2003	0.20	0.18			0.20	0.20	0.20	0.23	0.20	0.20		0.63
2004	0.20	0.18			0.20	0.20	0.20	0.23	0.20	0.20		0.60
2005	0.24	0.19			0.20	0.20	0.20	0.20	0.20	0.20		0.64
2006	0.28	0.19			0.20	0.20	0.20	0.21	0.20	0.20		0.58
2007	0.31	0.19			0.20	0.20	0.20	0.20	0.20	0.20		0.59
2008	0.35	0.20			0.20	0.20	0.20	0.23	0.20	0.20		0.61
2009	0.39	0.22			0.20	0.20	0.22	0.25	0.20	0.20		0.68
2010	0.43	0.23			0.20	0.20	0.20	0.22	0.20	0.20		0.60
2011	0.43					0.20				0.20		
2012	0.43					0.20				0.20		

(*1) Two scenarios are proposed to quantify uncertainty of Japanese CPUE in S1. Details were described in 3.5.2.

Table 3-4.	Notes on the quality of input PBF size composition data for each fleet.
Fleet No.	Notation on data quality
F1	Good. The quality has changed historically. The quality in the early and recent periods is high (10-20%), but in the mid-period is low, (i.e. only weight data) and not used for assessment.
F2	Good. Catch-at-size is estimated from stratified sampling data in the main fishing ports, with catch weight by size category. Length composition of Korean PS is not included. As the fishing grounds of Korean and Japanese PS is close to each other, the size composition from Korean PS is assumed to be the same as that from Japanese PS.
F3	Very good, coverage is high.
F4	Fair. Catch-at-size since 1980 were estimated in data the preparatory meeting, but highly time-varying length compositions are observed in the last meeting and more investigation is needed. The data before 1993 were reviewed again and catch-at-size were re-constructed. Based on these results, the length composition for the 1980s are generally similar to those after 1990.
F5	Good, but there are many landing ports. The size data are raised by catch in spatial stratification using appropriate methods.
F6	Fair. Raw length measurements, not measurements raised by catch.
F7	Very good. Coverage is high because this is based on sales slip data.
F8	Western Japan. Good. Size measurements raised by spatial strata.
F9 and F10	Fair. Miscellaneous set net data from various regions. Raised by spatial strata.
F11	Very good. For 1993-2005 about 95%, coverage for 2006- about 100% coverage for length measurements.
F12	Sampling is fair to good, varying over time, better to use estimate average size composition. (In recent period, observer and port samples are mixed.)
F13	Fair. Catch is very small and opportunistic, but the coverage was high in San Diego port from early 2000. Data and share selectivity for early period of EPS PS not fit. In future, take care of this size data.
F14	Fair. Include variety of fisheries mainly from Tsugaru Strait.

year	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14
1952	12.8											5.0		
1953	11.0											3.0		
1954	11.6											4.9		
1955	12.0											5.8		
1956	11.6											9.0		
1957	8.7											20.5		
1958	12.5											17.5		
1959	12.8											15.5		
1960	12.8											14.5		
1961	12.8											14.6		
1962	12.4											14.7		
1963	12.0											19.5		
1964	11.8											11.5		
1965	12.8											25.3		
1966	12.8													
1967	12.8													
1968	12.2													
1969												3.5		
1970												7.0		
1971												3.0		
1972												1.0		
1973												5.5		
1974												3.3		
1975												3.5		
1976												11.5		
1977												4.2		
1978												9.0		
1979												5.0		
1980												6.8		
1981												6.0		
1982												9.8		
1983												2.8		
1984												5.2		
1985												6.6		
1986												8.0		
1987			12.2									2.8		
1988			8.6											
1989			12.5									-		
1990												5.5		
1991			3.0									2.0		
1992			2.5								12.4	0.5		
1993			1.2		10.0		12.4		12.1	12.1	12.4	1.5	13.0	
1994	12.8		51.2		12.2	12.8	11.7	12.9	12.1	12.1	12.4	1.0	13.0	12.6
1995	12.8		7.3	12.2	12.2	12.8	12.4	12.0	12.1	12.1	12.4	3.0	10.6	12.6
1996	12.8		51.2	1.0	12.2	12.8	11.9	12.9	12.1	12.1	12.4		7.4	12.6
1997	12.8		23.2	1.0	12.2	10 -	12.4	12.9	12.1	12.1	12.4		13.0	12.6
1998	12.8		2.6	6.6	12.2	10.7	12.4	11.3	12.1	12.1	12.4		13.0	12.6
1999	12.8		7.9	6.6	12.2	12.8	12.4	12.9	12.1	12.1	12.4		13.0	12.6
2000	12.8	10.1	15.7	4.7	12.2	11.4	12.4	11.2	12.1	12.1	12.4		13.0	12.6
2001	12.8	12.1	51.2	6.6	12.2	12.8	12.4	12.9	12.1	12.1	12.4		13.0	12.6
2002	12.8	12.1	11.4	6.6	12.2	11.5	12.4	12.9	12.1	12.1	12.4		13.0	12.6
2003	12.8	12.1	9.8	6.6	12.2	12.8	12.4	12.9	12.1	12.1	12.4		12.1	10.6
2004	12.8	12.1	13.6	6.6	12.2	11.8	12.4	9.7	12.1	12.1	12.4		12.0	12.6
2005	12.8	12.1	51.2	6.6	10.8	10.0	10.8	10.9	12.1	12.1	12.4	2.2	13.0	12.6
2006	12.8	12.1	41.1	1.0	12.2	12.8	12.4	12.9	12.1	12.1	12.4	2.5	8.3	12.6
2007	12.8	12.1	22.9		12.2	10.0	12.4	12.9	12.1	12.1	12.4	10 -	10.0	10.7
2008	12.8	12.1	35.7		12.2	9.8	12.4	12.9	12.1	12.1	12.4	13.5	13.0	10.5
2009	12.8	12.1	8.9		12.2	12.8	12.4	10.0	12.1	12.1	9.6	3.5	13.0	12.6
2010	12.8	12.1	22.6		12.2	12.5	10.7	12.9	12.1	12.1	12.4	11.3	13.0	12.6
2011	12.8	12.1	23.8		12.2		9.4	12.9	10.1	12.1	12.4	4.5	10.2	12.6
2012		12.1	27.6		12.2		12.4	12.9	12.1	12.1	12.4	10.0		12.6

Table 3-5.Input sample size for PBF size composition data.

Table 4-1.	Description of size composition data and the type of the selectivity
	pattern for PBF fisheries.

Fleet	Selectivity Pattern	Data treatment and time block
F1	Double normal	Eliminate data in q1 of 1956 as outlier, lambda=1. Only q4 after 1993. Time block=1952-1992 and 1993-2012
F2	Double normal	lambda=1
F3	Double normal	Time block=1952-2006 and 2007-2012
F4	Double normal	Eliminate data before1993 and after 2007 Combine q4 in year t and q1 in year t+1.
F5	Double normal	lambda=1
F6	Mirror F5 selectivity	lambda=0
F7	Double normal	lambda=1
F8	Double normal	lambda=1
F9	Double normal	lambda=1, q1-q3
F10	Double normal	lambda=1, q1, q4
F11	Flat top	lambda=1
F12	Double normal	lambda=1,Eliminate data during 1983-2004, 2007. Time block=1952-2001 and 2002-2012
F13	Mirror F12 selectivity	lambda=0
F14	Double normal	lambda=0

Table 4-2.Model configurations for four runs for examination to evaluate
effect of updates of CPUE and size composition data for Japanese
longline (JLL) and Taiwanese longline (TWLL). Run 1 is the
base-case assessment model.

Run	CPU	ĴE	Size composition data				
number	JLL (F15 S1)	TWLL (F23 S0)	JLL (F1)	TWLL (F11)			
Run 1 (Base case)	Extending to 2012	Extending to 2012	Extending to 2011 [*]	Extending to 2012			
Run 2	Removing 2011 and 2012	Extending to 2012	Removing 2010 and 2011	Extending to 2012			
Run 3	Extending to 2012	Removing 2011 and 2012	Extending to 2012	Removing 2011 and 2012			
Run 4	Removing 2011 and 2012	Removing 2011 and 2012	Removing 2010 and 2011	Removing 2011 and 2012			

*Size composition data in terminal year (2012) cannot be calculated using the estimation procedure proposed by Mizuno et al. (2012).

			WPO : catch r country	Catch e ductio	limit (le on(right)	nt of y	EPO : Quota by scenario					
	juvenile catch	adult catch	Japan		Korea		Taiwaı	n	EPO Comm		EPO SPORT	
no1	85% of 2002-2004 average		6549	1156	1220	215	-	-	5500	-	-	-
no2	85% of 2002-2004 average	85% of 2002-2004 average	6549	1156	1220	215	-	-	5500	-	-	-
no3	85% of 2002-2004 average	85% of 2002-2004 average	6549	1156	1220	215	-	-	4675	-	-	-
no4	85% of 2002-2004 average		6549	1156	1220	215		-	4675	-	-	-
no5	75% of 2002-2004 average		5778	2004	1077	359	-		4125	-	-	-
no6	50% of 2002-2004 average		3852	3852	718	718	-	-	2750	-	-	-
no7	75% of 2002-2004 average		5778	2004	1077	359	-	-	4125	-	-	-

Table 4-3.Amount of catch reduction and catch limit by country by scenario.

Table 5-1.	Trends in spawning stock biomass and recruitment of PBF estimated
	by the base case.

	Total	Spawning					
Voor	biomass	stock	StdDev for	CV for	Recruitment	StdDev	CV for P
real	(B in t)	biomass	SSB	SSB	(R in 1000 fish)	for R	C VIOI K
	(1) (1)	(SSB in t)					
1952	119400	90734.3	37992.7	0.42	15696.7		
1953	122244	80705.8	34486.8	0.43	39319.8	4549.8	0.12
1954	132440	71629.4	31122	0.43	19866.5	3450.8	0.17
1955	143229	64236	28448.3	0.44	21898.7	3072.6	0.14
1956	162172	68369.3	28951.1	0.42	32311.1	2871.3	0.09
1957	175910	82727	32492.5	0.39	11160.2	1205.2	0.11
1958	185266	112730	40066.1	0.36	2697.64	622.93	0.23
1959	185559	129867	44233.4	0.34	5356.34	1099.7	0.21
1960	183126	139344	47445.7	0.34	17181.9	2151.7	0.13
1961	174985	140148	49070.9	0.35	22100.9	2416.1	0.11
1962	160224	119425	45496.7	0.38	12833.6	1869.8	0.15
1963	144651	96885.8	40398.3	0.42	22600.4	2361.3	0.10
1964	131575	82242.6	35676.5	0.43	12801.4	2324.9	0.18
1965	123342	72456.9	31752.9	0.44	7985.21	3342.3	0.42
1966	111120	68251.9	29024.8	0.43	9195.24	3752.2	0.41
1967	90680.4	64221.4	26777.5	0.42	10968.9	4344.4	0.40
1968	79569.5	56806.6	25099.1	0.44	15063.4	3990.2	0.26
1969	68134.8	48365.2	22388.5	0.46	7866.19	2702.8	0.34
1970	60849.3	40318.9	19436.1	0.48	12475.1	4713.9	0.38
1971	56411.4	33884.4	16307.3	0.48	14115.1	5098.6	0.36
1972	58250.1	29242.5	13169.5	0.45	20496.2	5255.3	0.26
1973	60146.5	27225.7	10326.6	0.38	20621	4808.8	0.23
1974	65225.3	24620.6	7969.61	0.32	11399.6	2965.9	0.26
1975	69384.3	26621.5	6908.08	0.26	13303.2	2958.1	0.22
1976	76792.7	35776.5	7640.02	0.21	9597.89	3123.8	0.33
1977	79319.2	47624.9	9568.31	0.20	28252.4	5662.9	0.20
1978	83248.4	50332.3	10310.5	0.20	16685.4	5161	0.31
1979	80880.1	43752.2	9658.33	0.22	14485.6	3303.7	0.23
1980	77896.7	41514.4	8660.12	0.21	6714.76	1996.2	0.30
1981	76403.4	32923.6	6218.58	0.19	18681.4	2235.5	0.12
1982	59246.3	26407.6	5009.07	0.19	8473.32	2219.6	0.26
1983	40263.1	19249.4	4275.5	0.22	11590.7	2270.1	0.20
1984	43554.9	18807	4088.92	0.22	8791.11	2225.9	0.25
1985	46125.4	20862.2	4035.65	0.19	11306.2	2158.4	0.19
1986	44947.5	23967.5	4383.08	0.18	12061.9	21/5.8	0.18
1987	41622.9	22210.1	4493.27	0.20	8316.65	2169.3	0.26
1988	45840.8	22507.2	4740.74	0.21	8124.86	1881.7	0.23
1989	51315	23219.2	4844.62	0.21	6413.28	1530.6	0.24
1990	03529	29682	5503.75	0.19	29494.2	1898.0	0.06
1991	80447.5	38980.1	0353.17	0.10	5/1/.01	709.22	0.28
1992	000/1.0	40745.1 50086.5	7084.07	0.13	3934.04	(17.69	0.12
1995	98240.5	39080.3 70058 8	7984.97	0.14	4/9/.52	047.08	0.14
1994	111447	70938.8 87257 7	9463.26	0.15	56/51.5 11822.2	1330.7	0.04
1995	123280	81054.0	11/43.0	0.13	18584.2	002.64	0.11
1990	117246	763/0.8	11410.0	0.14	0361.61	842.35	0.03
1008	112026	76563.6	10756.7	0.14	16021.6	071.87	0.05
1000	105260	70505.0	10641.0	0.14	21816.1	1080.0	0.00
2000	96018.9	64322.7	9881.94	0.15	16558.4	873.12	0.05
2000	83626	58964.9	9020.16	0.15	18579	800.81	0.03
2002	836926	53232.2	8081 59	0.15	14189 7	850.34	0.04
2002	80838.6	50823.3	7275 18	0.15	10292 1	840 49	0.08
2004	79352.5	45447 1	6590 1	0.15	27678 3	947 98	0.03
2005	74369.9	41132.7	6104.5	0.15	13597 5	851.05	0.06
2006	63212.1	37850.1	5743.07	0.15	10699 9	859.28	0.08
2007	58503.5	32452.3	5303.31	0.16	24641.6	1089.3	0.04
2008	57821.5	28789.2	4977.51	0.17	18000.8	994.6	0.06
2009	51849.1	26027.6	4802.98	0.18	7199.54	687.36	0.10
2010	49299.4	25476.4	4725.83	0.19	14679.1	903.02	0.06
2011	47398.5	25227.1	4911.12	0.19	9701.24	1065	0.11
2012	44848.7	26324	5565.52	0.21	7014.6	1405.4	0.20

Year	Age 0	Age 1	Age 2	Age 3	Age 4	Age 5	Age 6	Age 7	Age 8	Age 9	Age 10+
1951	0.04	0.08	0.00	0.00	0.01	0.03	0.08	0.15	0.21	0.24	0.96
1952	0.33	0.45	0.42	0.22	0.14	0.12	0.11	0.12	0.12	0.11	0.52
1953	0.18	0.48	0.46	0.21	0.12	0.10	0.10	0.10	0.10	0.09	0.44
1954	0.23	0.46	0.45	0.22	0.14	0.12	0.11	0.11	0.11	0.10	0.51
1055	0.28	0.20	0.26	0.23	0.10	0.17	0.16	0.16	0.15	0.14	0.60
1955	0.20	0.29	0.20	0.25	0.19	0.17	0.10	0.10	0.15	0.14	0.09
1950	0.19	0.55	0.35	0.25	0.19	0.18	0.17	0.17	0.17	0.10	0.76
1957	0.32	0.41	0.37	0.21	0.14	0.12	0.11	0.11	0.10	0.10	0.48
1958	0.74	0.78	0.41	0.16	0.08	0.07	0.08	0.08	0.09	0.08	0.36
1959	0.52	0.73	0.37	0.14	0.09	0.09	0.11	0.13	0.14	0.14	0.59
1960	0.33	0.87	0.80	0.28	0.13	0.11	0.11	0.13	0.13	0.12	0.55
1961	0.27	0.92	0.99	0.35	0.15	0.12	0.13	0.14	0.14	0.13	0.61
1962	0.29	0.68	0 74	0.32	0.17	0.14	0.14	0.15	0.15	0.14	0.63
1062	0.26	0.70	0.77	0.22	0.17	0.14	0.12	0.12	0.12	0.11	0.54
1905	0.20	0.70	0.77	0.35	0.17	0.14	0.13	0.13	0.12	0.11	0.54
1964	0.29	0.51	0.55	0.28	0.18	0.15	0.14	0.14	0.13	0.12	0.01
1965	0.41	0.78	0.55	0.28	0.19	0.16	0.14	0.13	0.12	0.11	0.56
1966	0.64	1.55	1.40	0.50	0.22	0.17	0.15	0.13	0.12	0.11	0.57
1967	0.67	1.22	0.96	0.43	0.24	0.18	0.15	0.13	0.12	0.11	0.58
1968	0.37	1.46	1.63	0.62	0.28	0.21	0.18	0.16	0.14	0.13	0.67
1969	0.46	1.03	1.04	0.41	0.18	0.13	0.12	0.11	0.10	0.09	0.45
1970	0.36	0.98	0.74	0.34	0.21	0.17	0.15	0.14	0.13	0.11	0 59
1971	0.25	0.83	0.75	0.30	0.15	0.12	0.11	0.10	0.09	0.08	0.45
1072	0.17	0.00	1 1 4	0.50	0.15	0.12	0.12	0.10	0.09	0.00	0.45
1972	0.17	0.98	1.14	0.40	0.17	0.13	0.13	0.13	0.13	0.12	0.57
1973	0.23	0.66	0.75	0.30	0.15	0.13	0.14	0.15	0.15	0.14	0.66
1974	0.32	0.56	0.50	0.31	0.23	0.21	0.21	0.21	0.21	0.19	0.96
1975	0.23	0.67	0.48	0.17	0.07	0.06	0.07	0.07	0.08	0.08	0.36
1976	0.63	0.94	0.76	0.28	0.12	0.09	0.09	0.08	0.08	0.08	0.51
1977	0.29	0.75	0.68	0.36	0.23	0.19	0.16	0.14	0.13	0.11	0.69
1978	0.44	0.84	0.62	0.34	0.23	0.19	0.17	0.16	0.15	0.14	0.80
1070	0.44	0.78	0.51	0.30	0.21	0.17	0.15	0.14	0.13	0.12	0.84
1020	0.44	0.78	0.51	0.30	0.21	0.17	0.19	0.14	0.13	0.12	0.04
1980	0.40	0.75	0.41	0.51	0.24	0.21	0.18	0.10	0.14	0.15	0.95
1981	0.50	0.91	0.65	0.67	0.61	0.55	0.48	0.42	0.36	0.32	1.98
1982	0.27	0.95	1.21	1.07	0.94	0.82	0.71	0.60	0.51	0.44	2.67
1983	0.36	0.56	0.33	0.27	0.25	0.23	0.20	0.18	0.16	0.15	1.51
1984	0.76	0.68	0.34	0.22	0.21	0.19	0.17	0.15	0.14	0.12	0.98
1985	0.44	0.92	0.67	0.39	0.28	0.24	0.20	0.18	0.15	0.14	0.90
1986	0.46	1.02	1.03	0.47	0.27	0.21	0.18	0.16	0.15	0.15	1.47
1987	0.23	0.39	0.40	0.30	0.22	0.19	0.16	0.14	0.13	0.11	0.84
1088	0.34	0.42	0.25	0.10	0.17	0.16	0.15	0.13	0.12	0.12	1.00
1000	0.34	0.42	0.25	0.17	0.17	0.10	0.13	0.13	0.12	0.12	0.80
1989	0.27	0.55	0.22	0.17	0.15	0.14	0.15	0.12	0.11	0.11	0.89
1990	0.16	0.33	0.23	0.13	0.09	0.08	0.07	0.07	0.07	0.08	1.00
1991	0.49	0.57	0.16	0.12	0.11	0.10	0.10	0.10	0.10	0.10	1.30
1992	0.70	0.94	0.18	0.09	0.07	0.07	0.07	0.07	0.08	0.09	1.12
1993	0.30	0.40	0.20	0.12	0.09	0.09	0.09	0.09	0.10	0.11	1.60
1994	0.36	0.42	0.25	0.14	0.10	0.09	0.08	0.08	0.07	0.08	0.92
1995	0.34	1.06	0.30	0.13	0.10	0.08	0.08	0.08	0.08	0.09	1.52
1996	0.56	0.70	0.49	0.17	0.08	0.06	0.06	0.06	0.08	0.10	2.06
1007	0.50	1 10	0.29	0.12	0.00	0.00	0.07	0.00	0.00	0.10	1.00
177/	0.01	1.19	0.50	0.15	0.09	0.08	0.07	0.08	0.08	0.10	1.90
1998	0.56	1.06	0.55	0.22	0.14	0.12	0.11	0.11	0.12	0.14	2.52
1999	0.75	0.96	0.37	0.21	0.18	0.16	0.14	0.13	0.13	0.14	2.26
2000	1.07	1.61	0.62	0.23	0.14	0.12	0.11	0.10	0.10	0.11	1.58
2001	0.55	0.58	0.29	0.13	0.08	0.07	0.07	0.07	0.07	0.08	1.32
2002	0.50	0.70	0.40	0.20	0.12	0.09	0.09	0.09	0.09	0.10	1.49
2003	0.46	1.16	0.56	0.19	0.07	0.06	0.06	0.07	0.08	0.09	1.49
2004	0.53	0.86	0.87	0.40	0.20	0.16	0.15	0.16	0.15	0.15	1 78
2005	0.55	1 30	0.70	0.78	0.18	0.17	0.17	0.16	0.15	0.15	1.70
2005	0.55	1.37	0.77	0.20	0.10	0.17	0.17	0.10	0.15	0.15	2.12
2006	0.51	1.15	0.80	0.34	0.17	0.14	0.15	0.16	0.16	0.17	2.15
2007	0.53	1.10	0.73	0.38	0.24	0.18	0.15	0.12	0.11	0.11	1.57
2008	0.54	1.10	0.66	0.39	0.31	0.25	0.20	0.16	0.13	0.13	1.65
2009	0.64	1.06	0.53	0.27	0.19	0.16	0.13	0.11	0.10	0.09	1.10
2007					0.40		0.10	0.00	0.00	0.07	0.01
2010	0.66	0.73	0.77	0.39	0.18	0.12	0.10	0.08	0.08	0.07	0.91
2010 2011	0.66 0.49	0.73 1.00	0.77 0.67	0.39 0.34	0.18 0.20	0.12 0.15	0.10	0.08	0.08	0.07	0.91

Table 5-2.Age-specific fishing mortality estimates of PBF from the base case.

1952 1953 3932 2268 802 119 70 82 97 295 70 36 100 1954 199867 6609 951 373 246 51 33 40 47 145 107 1956 32311 3335 1607 1704 293 159 33 22 27 32 174 1957 11100 5400 1592 880 1034 188 1044 22 15 18 142 1958 536 259 511 1268 566 697 35 16 108 405 134 146 88 1961 12010 2505 183 30 11 73 273 131 90 185 144 146 83 32 23 131 90 185 144 146 185 148 170 183 170 183 170 185	Year	Age0	Age1	Age2	Age3	Age4	Age5	Age6	Age7	Age8	Age9	Age10+
1954 1957 1958 1958 1958 1959 70 35 100 1955 121899 3173 2850 473 246 51 33 40 47 145 107 1955 3231 333 1607 170 293 218 116 11	1952	15697	1859	233	112	121	139	425	102	51	37	101
1955 19867 60609 951 393 753 48 588 688 208 70 955 1955 32311 3333 1607 1704 293 159 33 22 27 52 174 1957 11160 500 1592 880 1034 188 104 22 15 18 142 1958 536 29 71 15 16 186 32 64 35 16 174 144 180 1961 22344 340 677 53 16 108 435 134 164 88 175 131 160 183 30 11 73 233 131 190 185 196 133 186 164 14 6 22 185 196 113 5 34 128 180 180 175 196 133 197 10 18 71 <td>1953</td> <td>39320</td> <td>2268</td> <td>802</td> <td>119</td> <td>70</td> <td>82</td> <td>97</td> <td>295</td> <td>70</td> <td>36</td> <td>100</td>	1953	39320	2268	802	119	70	82	97	295	70	36	100
1956 321899 3173 2880 1074 293 321 222 15 18 107 1957 11160 5400 1592 880 1034 188 104 22 15 18 142 1958 2698 1641 2443 855 607 129 72 15 18 142 1960 2101 205 183 30 161 586 281 197 242 44 880 1961 22101 205 1175 251 30 11 73 273 131 90 175 1964 12801 3323 654 423 141 20 7 50 187 90 188 1965 7985 1940 1422 217 160 61 9 3 23 233 1966 1995 1501 60 129 248 83 32 233	1954	19867	6609	951	396	75	48	58	68	208	50	99
1956 32311 3335 1607 1704 293 159 33 22 27 28 174 1957 11160 5400 1524 888 1634 129 72 15 18 142 1958 2569 511 1268 566 398 505 95 52 11 94 1961 12101 2505 183 30 161 586 283 197 242 44 88 1962 12843 3406 677 53 16 108 108 190 172 90 178 1964 12201 3523 654 423 144 20 7 50 187 90 189 1965 1995 1071 1602 645 173 160 61 9 3 23 203 1966 9195 1071 622 189 27 10 8 <t< td=""><td>1955</td><td>21899</td><td>3173</td><td>2850</td><td>473</td><td>246</td><td>51</td><td>33</td><td>40</td><td>47</td><td>145</td><td>107</td></t<>	1955	21899	3173	2850	473	246	51	33	40	47	145	107
1957 1160 5400 1928 208 1641 128 1034 188 104 22 15 10 117 1959 5258 259 511 1268 566 398 505 93 52 64 35 76 1961 22101 2505 183 30 161 108 405 195 134 164 88 1963 7985 1940 1442 200 75 34 128 196 123 23 234 1965 7995 1940 1442 209 248 91 13 5 34 128 196 1966 7195 116 130 168 106 41 6 12 183 196 100 110 102 183 196 100 110 102 143 106 11 100 100 110 100 110 1100 100	1956	32311	3335	1607	1704	293	159	33	22	27	32	174
1958 2008 1641 2443 854 556 607 129 72 15 100 11 1959 5356 259 511 1268 566 398 552 11 944 1960 17182 640 85 275 855 404 284 352 64 35 760 1962 1284 306 677 53 16 108 108 195 134 164 188 1964 12801 3523 654 423 141 20 7 50 187 90 178 1966 9195 1071 1602 645 173 160 61 9 3 23 233 1967 10969 977 152 50 16 12 4 83 3 68 1970 12475 107 512 24 83 3 68 1973	1957	11160	5400	1592	880	1034	188	104	22	15	18	142
1990 1356 299 511 1268 566 398 505 93 52 64 35 1961 22101 2505 183 30 161 586 283 197 242 44 80 1963 22600 1939 1175 251 30 11 73 273 131 90 175 1964 12801 3523 664 423 141 20 7 50 187 90 189 1965 7995 1940 1422 259 248 91 13 5 34 128 196 1967 1099 171 154 116 306 108 106 41 62 185 1968 1138 196 46 59 188 70 71 28 43 32 33 90 1970 12475 1007 512 50 16 12 <td>1958</td> <td>2698</td> <td>1641</td> <td>2443</td> <td>854</td> <td>556</td> <td>697</td> <td>129</td> <td>72</td> <td>15</td> <td>10</td> <td>117</td>	1958	2698	1641	2443	854	556	697	129	72	15	10	117
1960 17182 640 85 275 855 404 224 352 64 35 76 1961 22101 2505 183 30 161 586 283 197 242 44 88 1962 1284 3406 677 53 16 108 405 195 107 124 144 164 88 1964 12801 3523 654 423 141 20 7 50 187 90 175 1966 9195 107 160 2645 173 160 61 9 3 23 233 1967 1099 977 154 116 30 119 46 47 19 102 1970 12475 1007 512 50 16 12 24 83 32 33 90 1971 14115 1758 2130 566 129 </td <td>1959</td> <td>5356</td> <td>259</td> <td>511</td> <td>1268</td> <td>566</td> <td>398</td> <td>505</td> <td>93</td> <td>52</td> <td>11</td> <td>94</td>	1959	5356	259	511	1268	566	398	505	93	52	11	94
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1960	17182	640	85	275	855	404	284	352	64	35	76
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1961	22101	2505	183	30	161	586	283	197	242	44	80
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1962	12834	3406	677	53	16	108	405	195	134	164	88
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1963	22600	1939	1175	251	30	11	73	273	131	90	175
1965 7985 1140 1442 295 248 91 13 5 34 128 198 1966 1995 1071 602 645 173 160 61 9 3 23 233 1966 15063 1138 196 46 59 188 70 71 28 4 36 1969 7866 2104 179 30 19 35 16 12 24 83 32 33 90 1971 14115 175 50 16 12 24 83 32 33 68 1973 20621 3493 566 129 49 72 12 5 4 8 88 1975 13303 1671 1282 578 118 46 21 31 5 2 4 39 1974 14400 313 122 104 110 <td>1964</td> <td>12801</td> <td>3523</td> <td>654</td> <td>423</td> <td>141</td> <td>20</td> <td>7</td> <td>50</td> <td>187</td> <td>90</td> <td>189</td>	1964	12801	3523	654	423	141	20	7	50	187	90	189
1066 1015 1042 1042 1044 1044 104 104 104 104 104 105 1045<	1965	7985	1940	1442	295	248	91	13	5	34	128	198
	1966	9195	1071	602	645	173	160	61	9	3	23	233
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	1967	10969	977	154	116	306	108	106	41	6	25	185
	1968	15063	1138	196	46	59	188	70	71	28	4	136
	1969	7866	2104	170	30	19	35	119	46	20 47	19	102
	1970	12475	1007	512	50	16	12	24	83	32	33	90
	1971	14115	1758	256	189	27	10	8	16	56	22	89
	1072	20/06	2215	520	0/	100	18	7	6	11	40	82
	1972	20420	3493	566	129	49	72	12	5	4	+0	88
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	1974	11400	3313	1225	208	74	33	49	8	3	3	68
	1975	13303	1671	1223	578	118	46	21	31	5	2	50
	1976	9598	2130	580	620	380	86	34	15	22	4	30
	1977	28252	1027	564	212	364	261	61	24	11	16	32
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	1978	16685	4271	330	212	115	201	169	40	16	10	35
	1070	1///86	2161	1253	138	123	71	144	110	27	11	30
	1080	6715	1870	673	584	80	78	144	06	27	18	20
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	1981	18681	855	616	347	333	49	50	30	64	50	33
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	1982	8473	2281	233	250	138	140	22	24	16	35	49
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1083	11501	1304	508	54	67	42	18	24	10	55	45
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1984	8791	1637	505	333	32	41	26	31	5	7	35
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	1985	11306	831	562	281	207	20	26	17	20	4	29
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	1986	12062	1472	225	201	1/18	122	13	17	11	14	22
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1987	8317	1532	361	62	108	89	77	8	11	7	25
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1988	8125	1332	706	188	36	68	57	51	6	8	23
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1989	6413	1167	594	429	122	24	45	38	35	4	23
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1990	29494	984	559	371	283	82	16	31	27	24	18
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1991	3718	5099	480	347	203	202	59	12	27	19	30
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1992	5955	459	1954	318	238	178	142	42	8	16	35
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1993	4798	594	122	1271	220	173	129	103	30	6	36
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1994	38732	719	272	78	878	161	124	92	73	21	28
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1995	11822	5428	322	164	53	619	115	89	67	53	36
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1996	18584	1704	1276	187	113	37	443	83	64	48	62
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	1997	9362	2149	575	607	122	81	27	325	60	46	76
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	1998	16022	1023	444	307	416	87	59	20	235	43	84
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1999	21816	1854	242	204	191	281	60	41	14	163	83
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	2000	16558	2083	484	130	128	125	187	41	28	9	164
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2000	18579	1148	284	203	81	87	86	130	20	20	119
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2001	14190	2159	435	166	139	58	63	63	95	20	97
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2003	10292	1735	727	226	106	96	41	45	45	67	81
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2003	27678	1317	369	324	145	70 77	71	30	32	32	103
2006 10700 1579 555 134 71 109 61 34 31 13 75 2007 24642 1301 340 193 74 46 74 41 22 21 57 2008 18001 2923 295 128 103 46 30 50 28 16 53 2009 7200 2118 661 119 67 59 28 19 33 19 47 2010 14679 767 497 302 71 43 39 19 13 23 47 2011 9701 1528 250 180 160 46 30 28 14 10 50 2012 7015 1203 381 99 100 102 31 21 20 10 43	2005	13598	3276	381	120	168	93	51	47	20	22	90
2007 24642 1301 340 193 74 46 74 41 22 21 57 2008 18001 2923 295 128 103 46 30 50 28 16 53 2009 7200 2118 661 119 67 59 28 19 33 19 47 2010 14679 767 497 302 71 43 39 19 13 23 47 2011 9701 1528 250 180 160 46 30 28 14 10 50 2012 7015 1203 381 99 100 102 31 21 20 10 43	2006	10700	1579	555	134	71	109	61	34	31	13	75
2008 18001 2923 295 128 103 46 30 50 28 16 53 2009 7200 2118 661 119 67 59 28 19 33 19 47 2010 14679 767 497 302 71 43 39 19 13 23 47 2011 9701 1528 250 180 160 46 30 28 14 10 50 2012 7015 1203 381 99 100 102 31 21 20 10 43	2007	24642	1301	340	193	74	46	74	41	22	21	57
2009 7200 2118 661 119 67 59 28 19 33 19 47 2010 14679 767 497 302 71 43 39 19 13 23 47 2010 19701 1528 250 180 160 46 30 28 14 10 50 2012 7015 1203 381 99 100 102 31 21 20 10 43	2008	18001	2023	295	125	103	46	30	50	22	16	57
2010 14679 767 497 302 71 43 39 19 13 23 47 2011 9701 1528 250 180 160 46 30 28 14 10 50 2012 7015 1203 381 99 100 102 31 21 20 10 43	2000	7200	2923	29J 661	110	67	40 50	28	10	20	10	55 47
2011 9701 1528 250 180 160 46 30 28 14 10 50 2012 7015 1203 381 99 100 102 31 21 20 10 43	2010	14679	767	497	302	71	43	20	19	13	23	47 47
2011 701 1220 230 100 100 40 30 20 14 10 30 2012 7015 1203 381 99 100 102 31 21 20 10 43	2011	9701	1528	250	180	160		30	28	14	10	50
	2012	7015	1203	381	99	100	102	31	23	20	10	43

Table 5-3.Estimated numbers-at-age of PBF from the base case.

Table 5-4.Ratio of the estimated fishing mortalities $F_{2002-2004}$, $F_{2007-2009}$ and
 $F_{2009-2011}$ relative to computed F-based biological reference points
for Pacific bluefin tuna (PBF), depletion ratio (ratio of SSB in 2012
relative to unfished SSB), and estimated SSB (t) in year 2012 for
four model configurations (runs). Run 1 is the base case assessment
model for the PBF update stock assessment. Values in the first eight
columns above 1.0 indicate overfishing.

	F _{max}	F _{0.1}	F _{med}	F _{loss}	F _{10%}	F _{20%}	F _{30%}	F _{40%}	Depletion Ratio	Estimated SSB(t) (yr=2012)
F ₂₀₀₂₋₂₀₀₄										
Run1	1.70	2.44	1.09	0.84	1.16	1.68	2.26	2.98	0.042	26,324
Run2	1.73	2.47	1.09	0.85	1.16	1.68	2.26	2.99	0.054	33,736
Run3	1.78	2.55	1.16	1.03	1.24	1.79	2.40	3.17	0.031	19,369
Run4	1.77	2.52	1.13	0.89	1.21	1.75	2.36	3.11	0.043	26,952
F ₂₀₀₇₋₂₀₀₉										
Run1	2.09	2.96	1.40	1.08	1.48	2.14	2.87	3.79	0.042	26,324
Run2	1.93	2.74	1.25	0.99	1.34	1.94	2.60	3.43	0.054	33,736
Run3	2.34	3.31	1.54	1.38	1.65	2.38	3.20	4.23	0.031	19,369
Run4	2.11	2.98	1.36	1.07	1.46	2.11	2.84	3.74	0.043	26,952
F ₂₀₀₉₋₂₀₁₁										
Run1	1.79	2.54	1.25	0.97	1.32	1.90	2.55	3.36	0.042	26,324
Run2	1.61	2.30	1.11	0.88	1.19	1.71	2.29	3.02	0.054	33,736
Run3	2.02	2.86	1.37	1.23	1.46	2.11	2.83	3.73	0.031	19,369
Run4	1.77	2.52	1.20	0.95	1.29	1.85	2.49	3.27	0.043	26,952

Table 5-5.Results for the future projections requested by NC9 under seven harvest scenarios and assuming three future
recruitment conditions where $SSB_{recent,F=0}$ is calculated using the most recent ten year's recruitment (2002-2011).

	Future recruit level			Withi	n 10 years fr	rom 2014			With				
NC9's scenarios			Pi	obability achiev	ing reference l	evel at least one	e year	Р	Probability achie	ving reference l	evel at least on	e year	Mean yield in 2026 - 2028
	2014 - 2023 (10years)	From 2024	62KT (10%SSB0)	93KT (15%SSB0)	124KT (20%SSB0)	155KT (25%SSB0)	Historical Median(43KT)	62KT (10%SSB0)	93KT (15%SSB0)	124KT (20%SSB0)	155KT (25%SSB0)	Historical Median(43KT)	
	Low	Low	0%	0%	0%	0%	4%	1%	0%	0%	0%	7%	13664.7
No.1	Low	Middle	0%	0%	0%	0%	4%	3%	0%	0%	0%	14%	16320.9
	Middle	Middle	48%	24%	10%	4%	69%	76%	50%	29%	15%	90%	22932.5
	Low	Low	1%	0%	0%	0%	5%	2%	0%	0%	0%	9%	13455.7
No.2	Low	Middle	1%	0%	0%	0%	5%	4%	0%	0%	0%	17%	15817.9
	Middle	Middle	53%	30%	16%	8%	72%	80%	59%	40%	26%	92%	17572.0
	Low	Low	1%	0%	0%	0%	9%	4%	0%	0%	0%	18%	13380.1
No.3	Low	Middle	1%	0%	0%	0%	9%	8%	1%	0%	0%	29%	15447.2
	Middle	Middle	60%	36%	20%	10%	79%	87%	67%	48%	31%	96%	17019.4
	Low	Low	1%	0%	0%	0%	2%	1%	0%	0%	0%	5%	13186.2
No.4	Low	Middle	1%	0%	0%	0%	2%	2%	0%	0%	0%	9%	15834.0
	Middle	Middle	48%	27%	13%	5%	64%	77%	57%	37%	20%	87%	23565.0
	Low	Low	3%	0%	0%	0%	16%	8%	1%	0%	0%	32%	14195.6
No.5	Low	Middle	3%	0%	0%	0%	16%	16%	2%	0%	0%	46%	16225.3
	Middle	Middle	70%	43%	22%	10%	87%	92%	75%	52%	32%	98%	24219.0
	Low	Low	51%	12%	2%	0%	85%	84%	39%	9%	2%	98%	17055.8
No.6	Low	Middle	51%	12%	2%	0%	85%	90%	51%	17%	4%	99%	18767.5
	Middle	Middle	96%	83%	61%	38%	99%	100%	98%	91%	77%	100%	27453.9
	Low	Low	6%	1%	0%	0%	31%	18%	2%	0%	0%	59%	14453.7
No.7	Low	Middle	6%	1%	0%	0%	31%	30%	4%	0%	0%	73%	16502.3
	Middle	Middle	77%	49%	26%	13%	92%	96%	81%	59%	38%	99%	23316.9



Figure 2-1. Generalized spawning grounds for PBF Red areas represent higher probability of spawning.

PBFWG



Figure 2-2. Generalized distribution of PBF. Darker areas indicate the core habitat.



Figure 2-3. The von Bertalanffy growth curve for PBF used in this stock assessment. Integer age (0,1,2,3,...) is corresponds to the middle of first quarter 1 of each fishing year (i.e., August 15 in the calendar year).



Figure 2-4. Length-weight relationship for PBF used in this stock assessment.



Figure 2-5. Assumed scenario of natural mortality (*M*) of PBF used in this stock assessment.



Figure 2-6. Historical annual catch of Pacific bluefin tuna by country (upper panel) and by gear (lower panel), from 1952 through 2012 (calendar year).



Figure 3-1. Temporal coverage and sources of catch, abundance indices, size composition data used in the 2013 assessment of PBF (for a key to abbreviation see Table 3-1).



Figure 3-2. Annual nominal catch of Pacific bluefin tuna from 1952 through 2013 in calendar year. Catch in first and second quarters of 1952 and third and fourth quarters of 2013 were not included, because these data were derived from input data for the SS3 model. Catch data from all fleets with exception of Fleet 13 were based on weight, whereas a unit of number of fish was applied for Fleet 13. The black dashed line indicates the annual catch in number (1000 fish) from Fleet 13.



Figure 3-3. Abundance indices presented at the PBFWG. The indices of Japanese and Taiwanese longliners were used to represent adult abundance (a), and indices of the Japanese troll fishery were used to index recruitments (b). Other indices presented were not used (c).


Figure 3-4. Aggregated size compositions of PBF for each fleet used in the stock assessment. The data are pooled over seasons and years after being scaled by fleet size (see Section 4.4.3 for explanations). The x-axis is in fork length (cm) for all fleets except for Fleets 7 and 14, which are in weight (kg).



Figure 3-5. Size composition data of PBF in this stock assessment, by fleet and quarter. Larger circles indicate higher proportions at that time.



Figure 3-5. (continued).







Figure 3-5. (continued).





Figure 3-5. (continued).



Figure 5-1. Total stock biomass (upper panel), spawning stock biomass (middle panel) and recruitment (lower panel) of PBF from the base case run (Run1). Thick line indicates median, thin line indicates point estimate, and dashed lines indicate the 90% confidence interval.

PBFWG



Figure 5-1. (continued).

PBFWG



Figure 5-2. Estimated age specific fishing mortality of PBF for 1952-2012. Red lines represent annual fishing mortality. Gray lines represent the three year moving average fishing mortality.



Figure 5-3. Plot of negative log likelihood and the maximum gradient.



Figure 5-4. Observed (line + circles) and expected (line) CPUE, and its residuals (observed minus expected) for Pacific bluefin tuna fleets S1, S2, S3, S5 and S9.



Figure 5-5. The model fits of the length composition data for PBF by fleets. Blue circle indicate observation value < expected value; white circle indicate observation value > expected value.



Figure 5-5. (continued).



Figure 5-5. (continued).



Figure 5-5. (continued).



Figure 5-5. (continued).



Figure 5-5. (continued).



Figure 5-6. Residuals of recruitment deviation. Top: temporal dynamics of observed value (R deviation). The dashed line indicates mean. Dotted lines indicate σ and $-\sigma$. Small dotted lines indicate 2σ and -2σ . Bottom: Stock and recruitment plots. The line indicates the Beverton-Holt relationship based on steepness h=0.999 used for the base case.



Figure 5-7. Estimated length-based selectivity curves of PBF by fleet from the base case.





Figure 5-8. Estimated annual fishing mortality by gear in each age from 2000 to 2012. The fishing mortality of Fleet 2 (small pelagic purse seine) is divided into two gears (JP PS and KOR PS) in accordance with the contributions of catch in each country.



■ Age 0 ■ Age 1 ■ Age 2 ■ Age 3 ■ Age 4 ■ Age 5 ■ Age 6 ■ Age 7 ■ Age 8 ■ Age 9 ■ Age 10+

Figure 5-9. Annual numbers-at-age of PBF estimated by the base case.





Plots of retrospective (five year) analysis for SSB and recruitment for the update stock assessment model.



Figure 5-11. Total stock biomass (TSB, upper panel), spawning stock biomass (SSB, middle panel) and recruitment (lower panel) estimated from four runs. Black, red, green and blue lines indicate Runs 1through 4, respectively.

PBFWG



Figure 5-12. Relative values of total stock biomass (TSB, upper panel), spawning stock biomass (SSB, middle panel) and recruitment (lower panel) estimated from four runs. Black, red, green and blue lines indicate Runs 1through 4, respectively.

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Figure 5-13. Observed CPUE time series and predicted CPUE time series from each sensitivity run and logarithm of residual for each year. Black, red, green and blue lines indicate Runs 1through 4, respectively. Upper panel, S1; Lower panel, S9.



Figure5-14. Fits of predicted quarterly length composition of fourth quarter of 2000 through 2011 and 2000 through 2012 (continuation page) for F1 and F11, respectively, from each sensitivity runs to the observed length composition. Dashed line indicates observed length composition. Black, red, green and blue lines indicate length compositions from Runs 1through 4, respectively.





Figure 5-15. Comparison of future SSB trajectories in seven harvest scenarios under low recruitment conditions. Error bars represent 90% confidence limits.



Figure 5-16. Comparison of future SSB trajectories in seven harvest scenarios under average recruitment conditions (resampling from recruitment in 1952-2011). Error bars represent 90% confidence limits.



Figure 5-17. Comparison of future SSB trajectories in seven harvest scenarios under 10 years (2014-2023) of low recruitment conditions followed by average recruitment conditions after 2024 (resampling from recruitment in 1952-2011). Error bars represent 90% confidence limits.



Figure 6-1. Geometric mean annual age-specific fishing mortalities for 2002-2004 (dashed line), 2007-2009 (solid line) and 2009-2011 (red line).



Figure 6-2. Alternative Kobe plots for Pacific bluefin tuna (*Thunnus orientalis*). A. SSB_{med} and F_{med} ; B. $SSB_{20\%}$ and $SPR_{20\%}$. Citation of these Kobe plots should include clarifying comments in the text. The blue and white points on the plots show the start (1952) and end (2012) year of the period modeled in the stock assessment respectively.



Figure 6-3. Trajectory of the spawning stock biomass of a simulated population of Pacific bluefin tuna (*Thunnus orientalis*) that was unexploited (topmost line) and that predicted by the base case (white area). The shaded areas between the two lines show the proportions of impact of each fishery.



Figure 6-4. The proportion of the impact on the Pacific Bluefin tuna (*Thunnus orientalis*) spawning stock biomass by each group of fisheries.


United States Department of the Interior

OFFICE OF THE SECRETARY Office of Environmental Policy and Compliance Pacific Southwest Region 333 Bush Street, Suite 515 San Francisco, CA 94104

IN REPLY REFER: (ER 14/009)

Filed Electronically

20 February 2014

Subject: Proposed rule, request for comments, National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), 50 CFR Part 300; [Docket No. 130722647-3647-01][RIN RIN 0648-BD55] Specifications and Management Measures, International Fisheries; Pacific Tuna Fisheries; Fishing Restrictions for Pacific Bluefin Tuna in the Eastern Pacific Ocean.

To whom it may concern:

The Department of the Interior has received additional comments on the Proposed rule, request for comments, National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), 50 CFR Part 300; Specifications and Management Measures, International Fisheries; Pacific Tuna Fisheries; Fishing Restrictions for Pacific Bluefin Tuna in the Eastern Pacific Ocean.

The National Park Service (NPS) thanks National Marine Fisheries Service for providing the opportunity to comment on these proposed regulations. Our recommendations are based primarily on review and evaluation from The Natural Resource Stewardship and Science Directorate (NRSS) and Water Resources Division (WRD) of NPS. Comments and suggestions about the scope of issues to be addressed in the Fishing Restrictions for the Pacific Bluefin Tuna in the Eastern Pacific Ocean follow.

NPS manages marine areas in the Eastern Pacific Ocean at Channel Islands National Park, Golden Gate National Recreation Area, Point Reyes National Seashore, Redwoods National Park, and Cabrillo National Monument. The US Congress specified the Secretary of the Interior shall administer these areas in accordance with the provisions of national park laws: Channel Islands National Park 16 USC §410ff–3, Golden Gate National Recreation Area 16 USC §460bb–3, Point Reyes National Seashore 16 USC §459c–6, Redwoods National Park 16 USC §79i. The US Congress specified the Secretary of the Interior may allow fishing within the boundary of Point Reyes National Seashore 16 USC §459c–6.

We support actions to reduce and limit catches of Pacific Bluefin tuna by the Inter-American Tropical Tuna Commission and the National Marine Fisheries Service because this species was found to be experiencing overfishing and to also be overfished.

NPS recommends NMFS also consider: including national park unit boundaries in their management regulations for Pacific Bluefin tuna; working with NPS to monitor fishing effort and catch within

NPS boundaries; continue to allow recreational catch-and release of Pacific Bluefin tuna within NPS boundaries; and institute a moratorium on harvest of Pacific Bluefin tuna within NPS boundaries until individual national park units request a harvest allocation.

In conclusion, National Park Service appreciates the opportunity to comment on the Fishing Restrictions for Pacific Bluefin Tuna in the Eastern Pacific Ocean, and we hope our comments will be helpful. Please contact Karl Brookins (karl_brookins@nps.gov, 970 267-7208) for any additional information, clarification, or consultation regarding these comments

Sincerely,

Sardina Max un

Patricia Sanderson Port Regional Environmental Officer

cc: Director, OEPC OEPC Staff Contact: Shawn Alam Karl Brookins, NPS

Senate Concurrent Resolution No. 85

RESOLUTION CHAPTER 106

Senate Concurrent Resolution No. 85—Relative to the Pacific bluefin tuna.

[Filed with Secretary of State August 7, 2008.]

LEGISLATIVE COUNSEL'S DIGEST

SCR 85, Kuehl. Pacific bluefin tuna.

This measure would seek the assistance of the Governor, the Fish and Game Commission, the Department of Fish and Game, the Ocean Protection Council, the National Oceanic and Atmospheric Administration, the National Marine Fisheries Service, the Inter-American Tropical Tuna Commission, and the Western and Central Pacific Fisheries Council to work with the Pacific Regional Fishery Management Council and other appropriate authorities to achieve the cessation of illegal, unreported, and unregulated bluefin tuna overfishing, the implementation of a robust stock assessment of Pacific bluefin tuna to evaluate and enhance conservation efforts for the status of this highly valuable resource, and the imposition and enforcement of catch limits for Pacific bluefin tuna in the United States Exclusive Economic Zone.

WHEREAS, The Pacific bluefin tuna is rapidly approaching the fate of the collapsed Atlantic bluefin tuna population, which has declined by more than 80 percent since 1975, due to overfishing and the lack of effective conservation and protection efforts; and

WHEREAS, The economic losses for California coastal communities as a result of the diminishing bluefin tuna population in the Pacific Ocean include decreased security of the pelagic (open ocean) seafood market and fishing industry, decreased reliability and productivity of coastal goods and services, and depletion of jobs and income for those communities and stakeholders involved in the pelagic seafood fishing industry; and

WHEREAS, The populations of all other bluefin tuna species, except Pacific bluefin tuna have been declared overfished and have been designated as "endangered" or "critically endangered" by the International Union for Conservation of Nature (IUCN); and

WHEREAS, Complete information on the status of the Pacific bluefin tuna requires further study while emerging data suggests the fishing pressure on this species is likely to increase due to the high worldwide demand for bluefin tuna and the decreased supply from Atlantic and Southern bluefin tuna populations; and

WHEREAS, The commercial catch of Pacific bluefin tuna for California's coast from 1950 to 1998 averaged 11,434,390 pounds per year; however,

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since 1999, the average catch has spiraled down to an average of 294,544 pounds of tuna per year, a devastating drop; and

WHEREAS, Overfishing has caused dramatic shifts in bluefin tuna populations that have pushed the species closer to extinction on a global scale; and

WHEREAS, The potential crisis facing the Pacific bluefin tuna population could portend future oceanic ecological losses because of the loss of habitat and the inability of the ocean environment to recover from a biological disruption of such significance that could adversely affect the sustainability of current marine life; and

WHEREAS, The declining tuna population off California's coast is one of several factors accounting for the rising numbers of its prey, the Humboldt squid (Dosidicus gigas), which can invade and devour marine life in the tuna's absence, thereby drastically altering the composition and structure of the pelagic community for the coast of California; and

WHEREAS, Tuna swim in enormous schools, often numbering in the thousands, which allows the capture of entire schools of bluefin tuna, threatening global bluefin tuna populations and significantly facilitating overfishing of the bluefin tuna; and

WHEREAS, The Pacific bluefin tuna is a slow growing, long-lived endothermic fish that migrates thousands of miles across the open ocean to feed and spawn; and

WHEREAS, The Pacific bluefin tuna is caught by the fishing fleets of nations that capture the tuna at their spawning areas near Japan, Taiwan, and the Philippines before they have a chance to spawn, which further decimates the Pacific bluefin tuna population; and

WHEREAS, Research institutions, agencies, and organizations that support and promote bluefin tuna protection range from local research institutes and state agencies, to federal organizations and nonprofits, to international councils and committees; and

WHEREAS, The current national and international regulatory structure of undeclared fishing stocks is failing to provide prospective management and protection for the Pacific bluefin tuna population against growing pressures due to a lack of sufficient data which would allow full analysis of current and future threats throughout the migratory range of the species and help to prevent the collapse of the Pacific bluefin tuna as has been found in other bluefin tuna populations; now, therefore, be it

Resolved by the Senate of the State of California, the Assembly thereof concurring, That the state Legislature acknowledges the potential devastation to the Pacific bluefin tuna species, and supports efforts to recover and preserve the population; and be it further

Resolved, That the Secretary of the Senate transmit copies of this resolution to the Governor, the Fish and Game Commission, the Department of Fish and Game, the Ocean Protection Council, the National Oceanic and Atmospheric Administration, the National Marine Fisheries Service, the Inter-American Tropical Tuna Commission, and the Western and Central Pacific Fisheries Council to seek their assistance in working with the Pacific

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Regional Fishery Management Council and other appropriate authorities for the cessation of illegal, unreported, and unregulated bluefin tuna overfishing, the implementation of a robust stock assessment for Pacific bluefin tuna to evaluate and enhance conservation efforts for the status of this highly valuable resource, and the imposition and enforcement of catch limits for Pacific bluefin tuna in the United States Exclusive Economic Zone.

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Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>

Fwd: Pacific Bluefin Tuna

1 message

PFMC Comments - NOAA Service Account pfmc.comments@noaa.gov>
To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>
Cc: Chuck Tracy - NOAA Affiliate <chuck.tracy@noaa.gov>

Tue, May 27, 2014 at 8:03 AM

------ Forwarded message ------From: **David Miller** <dpmiller@world.std.com> Date: Sun, May 25, 2014 at 5:35 PM Subject: Pacific Bluefin Tuna To: pfmc.comments@noaa.gov

Dear Chair Lowman and Council Members,

I am writing with concern about the plight of Pacific bluefin tuna. At the next meeting of the Pacific Fishery Management Council, I urge you to bring an immediate end to this highly unsustainable catch.

Pacific bluefin tuna populations have suffered a serious decline in recent years. Scientists now warn that the species is on the brink of collapse. As the last group of adults near the end of their lifespan, there are too few juveniles escaping fishing nets to replenish the population.

For the past six years the council has failed to reduce bluefin fishing in the United States despite calls to action from the California legislature and the National Marine Fisheries Service. Now the case is too clear: Pacific bluefin tuna will go extinct unless the council and fishery managers worldwide move quickly.

Please -- vote to end recreational and commercial fishing for Pacific bluefin tuna now, before it's too late.

David Miller 93 Mozart St. Jamaica Plain, MA 02130 US

Thank you for your comments to the Pacific Fishery Management Council. Your comments have been received and will be forwarded to the appropriate staff member for processing.

Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220 Phone: 503-820-2280 Toll Free: 1-866-806-7204 Fax: 503-820-2299 Twitter: http://Twitter.com/PacificCouncil



Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>

Fwd: Bluefin Tuna not unlike Coal Mine Canary

1 message

PFMC Comments - NOAA Service Account pfmc.comments@noaa.gov>
To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>

Tue, May 20, 2014 at 8:12 AM

----- Forwarded message ------From: John Savlove <john@savlove.com> Date: Tue, May 20, 2014 at 8:02 AM Subject: Bluefin Tuna not unlike Coal Mine Canary To: pfmc.comments@noaa.gov

Dear Chair Lowman and Council Members,

The Pacific Fishery Management Council is exactly the kind of authoritative body needed to address the worldwide scarcity crisis as it applies to bluefin tuna. I am delighted that you are the Chair, only because a woman need not be the "low man" on the decision making chain...

As all women and men in your offices understand, bluefish tuna are terrifyingly over-fished. I use that word because I am sure that aquatic mothers are quite as aware as human parents when conditions obviously indicate a loss of babies. The breeding grounds cannot catch up to the amount of fish caught and made available to consumers, who are in a kind of denial about our feeding frenzy.

Too many people, not enough fish. What is a serious Management Council to do? Clearly the urgency and logic with which we present this case to our fellow members can make a difference. Strict, extinction-saving regulations are not enough. A moratorium sensitive to human needs (the long-term need to enjoy fish, oceans, and the desire to keep Earth from further approaching the uninhabitable conditions of our hot planetary neighbor Venus) must be promoted in a way that really makes sense to people who, until now, seem incapable of connecting the dots.

I thank you for your command of the breadth of information at your disposal, and urge you to find creative ways to make fishermen, council members, and other related decision makers enthusiastic about protecting God's creatures - the tuna, the humans, and so many other voiceless, beautiful specimens of life on this still blue planet.

John Savlove 11 Water St./PO Box 19 North Bennington, VT 05257 US

Thank you for your comments to the Pacific Fishery Management Council. Your comments have been received and will be forwarded to the appropriate staff member for processing.

Specimen Copy of 30,999 Emails Recieved with this Message



Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>

Fwd: Ban Fishing of Pacific Bluefin Tuna

PFMC Comments - NOAA Service Account pfmc.comments@noaa.gov>
To: Kit Dahl - NOAA Affiliate <kit.dahl@noaa.gov>

Thu, May 15, 2014 at 7:35 AM

----- Forwarded message ------From: **Rick Mick** <ricky.mick@gmail.com> Date: Wed, May 14, 2014 at 9:44 AM Subject: Ban Fishing of Pacific Bluefin Tuna To: pfmc.comments@noaa.gov

Dear Chair Loman and Council Members,

I am writing with serious concern about the plight of Pacific bluefin tuna. At the next meeting of the Pacific Fishery Management Council, I urge you all to bring an immediate end to this highly unsustainable catch.

Pacific bluefin tuna populations have suffered a serious decline in recent years, and scientists now warn that the species is on the brink of collapse. As the last group of adults near the end of their lifespan, there are just too few juveniles escaping fishing nets to replenish the population.

For the past six years the council has failed to reduce bluefin fishing in the United States despite calls to action from the California legislature and the National Marine Fisheries Service. Now the case is too clear -- Pacific bluefin tuna will go extinct unless the council and fishery managers worldwide move quickly.

Please -- vote to end recreational and commercial fishing for Pacific bluefin tuna now, before it's too late.

Rick Mick 224 S 3RD AVE Tucson, AZ 85701 US

Thank you for your comments to the Pacific Fishery Management Council. Your comments have been received and will be forwarded to the appropriate staff member for processing.

Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220 Phone: 503-820-2280 Toll Free: 1-866-806-7204 Fax: 503-820-2299 Twitter: http://Twitter.com/PacificCouncil

Ocean Pacific Seafood

Dr. Don McIsaac, Executive Director, Pacific Fishery Management Council

7700 NE Ambassador Pl., Suite 101

18212 Rosita St. Tarzana, CA 91356 (818) 343-9927 Fax (818) 881-5003

June 5, 2014

Agenda Item E.4.c Supplemental Public Comment 2 June 2014

RECEIVED

JUN 9 2014

PFMC

Dear Dr. McIsaac,

Portland, OR 97220-1384

As you might already know, I have advised the Council Chair of my intent to, once again, ask the Council to lift the two longline fishing restrictions that prevent me from using the West Coast HMS permit to fish for swordfish, with longline gear, inside the EEZ, that I have long since been issued.

In any case, I just want you to know that this effort is not because I am a hard-headed, frustrated, old man, that just won't let go. Rather, it is because it seems like the Council has recently turned a corner. The Council seems to be more interested in taking steps to more fully utilize a healthy swordfish resource, and support establishing a more robust west coast swordfish fishery with all the local economic benefits that result. After two extremely knowledgeable and experienced experts on west coast swordfish fishing issues came to me and offered to help me take advantage of this apparent change in the Council's interest, we agree that the Council is in a much better position to answer the questions before it than they would seem to realize.

These two experts are Chuck Janisse and Svein Fougner. I know that you know them both. As I'm sure you also know, both of them, on opposite sides of the table most of the time, have been directly, and fundamentally involved with the development and implementation of the HMS FMP from the time that Chuck rallied local fishermen to oppose the Western Pacific Fishery Management Council's bid for sole authority to manage HMS in the Pacific in 1993, and participated on behalf of the HMS fishing community in every planning and Council meeting that occurred during the following ten year period leading up to the eventual implementation of the HMS FMP in 2004. While, for his part, Svein had the unique perspective of representing the NMFS's policy interests during this same period. He also has been instrumental for helping the Hawaiin longliners to achieve the success of their high pelagic production of today. I think you'll agree that Chuck and Svein have more cumulative HMS FMP experience than all of the current Council members put together. I am fortunate to have this wealth of expertise and experience to draw upon, and hope that the Council recognizes that my actions in this regard are reasoned and appropriate.

In closing, I hope that you also understand that, besides having Chuck and Svein's experience and perspective to draw from, I am the only longline fisherman in existence with ten years of west coast on-the-water HMS longline fishing experience.

Sincerely

Pete Dupuy

PD:dd

18212 Rosita St. Tarzana, CA 91356 (818) 343-9927 Fax (818) 881-5003



TRANSMITTAL

DATE:	June 10, 2014
TO:	PACIFIC FISHERY MANAGEMENT COUNCIL
FROM:	Pete Dupuy, Fisherman
RE:	PROPOSAL

Contents Enclosed:

- 1) Cover letter to Bunny Lowman, Chair, PACIFIC FISHERY MANAGEMENT COUNCIL
- 2) PROPOSAL,
- 3) Signatures of individuals in support of this Proposal; "I thought it would be helpful to show that in a very short time we received 352 signatures of individuals in support of our request." - Pete

Ocean Pacific Seafood

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June 10, 2014

Ms. Bunny Lowman Chair, Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, OR 97220-1384

Dear Madam Chair:

I hereby petition the Pacific Fishery Management Council to initiate action under the framework procedures of the Highly Migratory Species Fishery Management Plan (FMP) to allow fishermen with permits under the FMP to engage in controlled commercial longline fishing for swordfish and tuna in the exclusive economic zone (EEZ) off the West Coast and on the high seas.

The Council has indicated a strong interest in restoring a robust and viable swordfish fishery on the West Coast. My proposal would be a component of the strategy being considered by the Council to achieve such a fishery, which also could target tuna and associated species. The Council took action to start this process at its meeting in March 2014 when it tasked Council staff, the HMS Management Advisory Subcommittee and HMS Management Team with initial development of a fishery transition plan and possible regulations under a typical MSA process, with the transition period being of sufficient duration to maintain a reasonable commercial flow of swordfish to domestic markets during the transition. You advised the subsidiary bodies to include consideration of typical MSA management tools such as seasons, areas, allowable gear alternatives, and integration of EFP results.

As many of the Council members know, I am the only West Coast based pelagic longline fisherman who has spent the last ten years fishing and landing HMS catch in a West Coast port. Currently, I am only allowed to longline with deep set gear targeting tuna. The incidental catch of swordfish is permitted; however, I can operate only on the high seas because the EEZ has been closed, so I am forced to travel hundreds of miles to fish with this gear. My fishing has been totally under observer coverage. I have worked closely with the Council and in the Council process in pursuit of reasonable fishing opportunities that would maintain a viable swordfish fishery and the economic benefits that derive from such a fishery. West Coast ports have been adversely affected by declines in the volume and value of swordfish and other fish landings into those ports. A viable, rebuilt swordfish fishery could arrest this decline and maybe even allow a resumption of some of the economic and social benefits of fishing.

It is important to remember that the Council, when it first proposed the FMP, intended that longline fishing be permitted for West Coast vessels under the same controls as applicable to the Hawaii based longline fishery. The Council proposed that there be a longline fishery on the high seas. This proposal was rejected by NMFS when it partially disapproved the Council's proposal due to concern that the longline fishery the Council would have permitted could have adverse effects on sea turtles. A biological opinion prepared by NMFS at that time concluded that, at the level of longline fishing then contemplated, the fishery would result in jeopardy for loggerhead and leatherback sea turtles. It was

estimated at the time that there would be excessive numbers of leatherback and loggerhead taken in the longline fishery and that the impacts would result in jeopardy for loggerhead turtles. NMFS then partially disapproved the Council's proposal and independently promulgated the regulations prohibiting West Coast vessels from using longline gear to target swordfish on the high seas east of 150° W. longitude. The Council was not prepared to permit longline fishing within the EEZ as it wanted to take a cautionary stance and see first how the fishery might operate outside the EEZ; it would then have a factual basis for determining the benefits and costs of allowing fishing in the EEZ.

Since that time, there have been dramatic and important new developments. First, it has been demonstrated conclusively in both the Atlantic and Pacific that the use of circle hooks and mackerel bait essentially solve the sea turtle take problem without adversely affecting catch of the target species. The adoption of requirements for circle hooks and mackerel bait in the Hawaii longline fishery for swordfish(ironically, these were implemented shortly after the imposition of the "no fishing" regulations by NMFS, which apparently could not independently adopt those gear measures for West Coast fisheries) has resulted in the take levels of loggerheads being reduced by 90%. Further, since hooks are now very rarely if at all ingested, the consequent mortality is estimated to have decreased even more than 90% in the shallow set fishery. Not a single loggerhead mortality has been observed in the Hawaii longline fishery for swordfish since the new measures were imposed. There has been 100% observer coverage, so this is not an estimate; it is an established fact. Similarly, the take of leatherbacks has been reduced, as has mortality. The latest biological opinion from NMFS on the Hawaii longline swordfish fishery concluded that mortality of loggerheads in the fishery would equate to one adult female equivalent each year and would not pose jeopardy. There is no reason to expect a substantially different outcome in a fishery off the West Coast. Restricting the fishery to certain waters in the EEZ may be a reasonable accommodation to local fisheries that may want to use different gear to harvest swordfish, but prohibiting the fishery in the EEZ overall is unnecessary and counterproductive to the desire to restore a West Coast-based fishery for swordfish.

Second, since the implementation of the FMP, the volume and value of swordfish and associated species landed into West Coast ports by West Coast vessels has declined dramatically. West Coast ports and fishermen and related businesses are under serious financial pressure. There are major obstacles to investment in new gear and techniques to revitalize the fishery. The Council can take action to resolve this problem with no substantial risk of economic or ecological harm. This can demonstrate to local fishing communities that the Council is not simply opposed to commercial fishing but is in fact interested in supporting new fisheries where the stocks are sustainable. It can provide an immediate opportunity to fishers who are willing to make the necessary investment in a new fishery with some permanence, rather than having to invest in gear under experimental permits that can be terminated at just about any time. The experimental permit process means that it could be 3, 4, or maybe even 5 years before any new fishing opportunity is actually established. Providing longline fishing opportunities now will promote local fisheries that operate under tightly controlled and monitored conditions to provide fish that otherwise would be obtained from foreign fleets whose activities are not nearly as well controlled or monitored, and whose fishing would likely have much more dire results for species of concern such as sea turtles. To the extent imports are the source of our fish, there is much higher likelihood of adverse environmental consequences.

Third, we have actual experience using longline gear outside the EEZ and have demonstrated that it can work without harm to fish or non-fish resources. After losing our shallow set longline permit in 2004, our fishing vessel was sitting and not producing. Then, we developed a new tuna fishery. As noted above, we are the only West Coast based pelagic longline fishing operation that has spent the last ten

years fishing with longline gear and landing HMS catch in a West Coast port. However, heavy regulations on the fishing industry have impeded our ability to make a profit and make ends meet. With the encouragement of National Marine Fishery Service, we successfully developed a market through a creative marketing strategy by advertising, using eye-catching displays, and unique and innovative merchandising, to sell our fish and value-added fish products at various venues, including a seasonal fresh air fish market in Ventura Harbor and other local farmers markets. This has made our fishing operations profitable. The by-product of this marketing strategy has been an increase in tourism to the harbor, the creation of more jobs, and it has had a positive impact on the local economy while providing fresh domestically caught fish to Southern California consumers. During the years from the time we started this marketing, our list of registered clients has consistently grown to more than 6000 and still growing, demonstrating the abundant demand here on the West Coast for fresh top-quality HMS seafood products. In addition, the fishery over the years has made over 450 sets and deployed about 850,000 hooks over the years, with only ONE observed interaction with a sea turtle - an olive ridley - the most numerous sea turtle species known in the Pacific. There have been NO interactions with loggerhead or leatherback sea turtles. There have been no interactions with marine mammals or seabirds. Almost all the catch has been tuna - bigeye, yellowfin and albacore - with limited numbers of other species, and most of those have been good food fish species as well - like opah and dolphinfish (mahimahi). Incidentally, large numbers of bigeye tuna were measured, adding to the data base that the scientists need for biological studies and analysis. Very few sharks were taken. Of those that were taken, almost all were blue sharks, and hook extraction devices are used to maximize safe release.

In sum, it is a clean fishery! It can be a contributor to local supplies of healthy, fresh seafood, provided by local producers. It should be welcomed and supported!

I will gladly work with the HMSAS and HMSMT in incorporating this action into the planning process consistent with the framework procedures of the Council and the FMP.

appreciate the Council's consideration of this petition.

Pete Dupuy, Fisherman

To The Pacific Fishery Management Council: A Proposal

To use the framework procedures of the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (FMP) to amend the regulations to permit West Coast based vessels to engage in longline fishing (deep set for tuna and shallow set for swordfish) in the exclusive economic zone (EEZ) off the West Coast, subject to conservation and management measures to ensure a well managed, monitored and sustainable fishery and to prevent and mitigate harm to sea turtles, seabirds, and other non-fish species, consistent with the requirements of U.S. law and international convention.

Rationale

The Council submitted the FMP for approval in 2004 with a provision that a limited longline fishery be permitted subject to the same rules under which the Hawaii-based longline fishery operated. That proposal was disapproved due to a finding by NMFS that the fishery as it was expected to occur, with shallow set targeting of swordfish at least some of the year, would result in excessive takes and mortalities of sea turtles, thus resulting in jeopardy to one or more species of sea turtles. This was based on what was known from the results of the Hawaii longline fishery up to its closure in 2001 due to sea turtle take problems. The Council's FMP was otherwise approved.

At the time, it was not known that the use of circle hooks and mackerel bait in the swordfish fishery would reduce sea turtle interactions to very low levels, and would reduce sea turtle mortalities by even a higher proportion as hooks would rarely if ever be ingested. This has been conclusively demonstrated in both the Atlantic and central Pacific Ocean. In fact, NMFS has concluded that, as it currently operates, the Hawaii swordfish fishery (which was closed in 2001 but reopened in 2004) results in the mortality of the equivalent of one adult female loggerhead turtle per year, which does not pose jeopardy for the stock. With respect to leatherback sea turtles, there also are interactions, but they are also rare and the fishery is expected to cause the death of four animals per year, again not posing jeopardy for the stock or species. Prior to this, the fisheries together were estimated to kill hundreds of turtles per year. The new requirements work!! In fact, the gear and bait used by Hawaii vessels are estimated to have resulted in a 90% or greater decrease in interactions and a greater than 90% reduction in mortality of sea turtles compared to the impacts prior to 2004. The latest Biological Opinion under the ESA concludes that the Hawaii shallow set fishery does not pose jeopardy for any species of sea turtle, or any other species listed under the ESA for that matter. Ironically, the reopening of the Hawaii fishery in 2004 under the requirements to use circle hooks and mackerel bait came about at almost the same time as the rejection of the Council's proposal and the NMFS regulations under the Endangered Species Act to prohibit shallow set swordfish fishing outside the EEZ and east of 150° W. longitude.

The current regulations governing fishing for highly migratory species by vessels with permits under the FMP prohibit a West Coast-based vessel from fishing with longline gear in the EEZ, and prohibit shallow set swordfish fishing by vessels based on the West Coast using longline gear outside the EEZ and east of 150°W. longitude. Deep set fishing is allowed outside the EEZ only, and swordfish landings are limited in number by vessels using deep set longline gear to fish for tuna using conventional hooks; swordfish can be landed without limit from deep sets, but only if the vessel is using only circle hooks. However, vessels based in Hawaii can land swordfish into the West Coast EEZ without regard to the prohibitions and limits set for West Coast-based vessels. This stems from the differences in regulations for the two

areas of origin. Fish caught legally by Hawaii vessels can be landed into West Coast ports, including swordfish caught on shallow sets in compliance with the gear and bait requirements.

The Council supports the goal of transitioning to a robust West Coast swordfish fishery, gradually replacing or supplanting the drift gillnet fishery with alternative gears that will not have excessive takes of non-fish species (such as sea turtles, seabirds, and marine mammals). It is noteworthy that the drift gillnet fishery has already been very heavily regulated and is a small fraction of its historic size. It first started in the late 1980s, growing to take about 2,600 mt of swordfish for local markets in 2000 valued at more than \$10 million according to PacFIN data. Landings in 2010 were only 370 mt valued at \$2.2 million. No other fishery has grown to replace the decline in the driftnets' swordfish landings; rather fish have to be imported from other countries, landed into the West Coast by Hawaii vessels, or shipped to the West Coast after being landed by the Hawaii fishery. Further, the decline in the drift gillnet fishery has caused significant declines in the business in small port communities already struggling with declines in other fisheries; port community businesses are under severe economic pressure.

After losing its shallow set longline permit in 2004, the fishing vessel currently active was sitting idle and not producing. Then the owners developed a new tuna fishery, and they are now the only West Coast based pelagic longline fishing operation that has spent the last ten years fishing and landing HMS catch in a West Coast port. Heavy regulations on the fishing industry had impeded their ability to make a profit and make ends meet. With the encouragement of National Marine Fisheries Service, however, they successfully developed a market through a creative marketing strategy by advertising, using eyecatching displays, and unique and innovative merchandising, to sell our fish and value-added fish products at various venues, including a seasonal fresh air fish market in Ventura Harbor and other local farmers markets (see NOAA Fisheries Symposium, "Eat Local, Think, Global: A Case for U.S. Fisheries", at http://www.nmfs.noaa.gov/stories/2013/07/docs/caught_in_the_usa benefits of buying local web .pdf). This has made their fishing operations profitable. The by-product of this marketing strategy has been an increase in tourism to the harbor, and the creation of more jobs, and it has had a positive impact on the local economy while providing fresh, domestically caught fish to Southern California consumers. During the years from the time they started this marketing, their list of registered clients has consistently grown to more than 6,000 and still growing, demonstrating the abundant demand here on the West Coast for fresh top-quality HMS seafood product. This example can be built upon to the benefit of West Coast fishers, consumers, markets, and related businesses.

The current situation is also irrational and unfair to the West Coast. In the fall of 2013, the eastern Pacific bigeye tuna quota for U.S. vessels was filled for the first time because Hawaiian longline fishermen came to fish the area that I had previously fished alone. When the quota was filled, the Hawaiian fishermen switched to targeting swordfish with shallow-set gear. Because the west coast HMS regulations have prohibited the current operator from targeting swordfish with shallow-set gear, he could do nothing but watch the Hawaiians fish as the swordfish migrated to the south where Mexican fishermen would then catch them. In both cases, this swordfish is then shipped back to the west coast market (directly demonstrating the transfer effect). This situation is unfair and unjust. It directly affects the marketing strategies he has worked so hard to put in place. Had he been able to target swordfish, he would have been able, like the Hawaiians, to substitute swordfish for tuna and continue to deliver fresh high-quality HMS to the many west coast consumers that have come to rely on him to do so.

Some claim that a harpoon fishery could rebuild to replace drift gillnet, but this seems unrealistic. In fact, there has been no regulatory obstacle to that happening; the obstacle is likely the high cost of fuel to support fishers and aerial spotters, without which harpoon fishing is likely unsuccessful and

uneconomic. In any event, there is currently no regulatory obstacle to rebuilding of the harpoon fishery, and this proposal would not preclude such an outcome. This proposal also does not preclude efforts to evaluate the effectiveness and effects of alternative gear such as "buoy" gear that has been under discussion by some, but the exempted fishing permit process takes time.

A longline fishery under reasonable controls can alleviate some of the economic stress in West Coast ports. It is known that longline gear can catch fish from a healthy fish stock in a relatively clean manner as long as certain controls are in place. It can provide local markets with domestically caught fish under good regulations and full monitoring. It can provide fishers with a new opportunity at a time when alternatives are very limited. It could provide more certainty than an experimental fishing program that would likely not lead to new opportunities for several years, if at all. It can reduce dependence on imports from fleets that are not comparably controlled and monitored and that likely fish in a manner that is detrimental to resources of concern. It could allow entrepreneurial fishers to establish strong fisherman-to-customer relationships that will foster economically healthy fishing enterprises with a marketing element. This would greatly facilitate up-to-date monitoring of the fishery and detection of any problems. The fishers involved would eagerly cooperate with the Council and the management agencies to ensure that this fishery is a success.

The Council also should note that, to the extent the market demand is filled by foreign sources, there is greater risk of more serious impacts on species such as sea turtles; foreign fleets are not controlled in anywhere near the same degree as U.S. fleets. More foreign fishing simply means more turtles being killed. Some argue that this can't be proven, but this relationship has been fully endorsed by NMFS and U.S. courts.

Again, the Council originally proposed a limited longline fishery off the West Coast; it was only after the ruling by NMFS regarding sea turtles that this proposal was rejected. The Council and NMFS now know that the dire consequences for sea turtles envisioned in 2004 can be prevented with appropriate management measures. The Council has an opportunity to follow through with its original proposal for the establishment of a real swordfish and tuna fishery. This does not preclude the Council from proceeding with a strategy of using an experimental fishing permit process to test unproven gear to foster domestic, West Coast based swordfish fishing. It may be that the "buoy gear" some are proposing could be successful for some participants. This can be tested and proven through various exempted fishing permits. However, it must be recognized that relying on an EFP process takes time. Even assuming that this gear would be viable, it could take 4-5 years to complete the EFPs, evaluate the results, and make the subsequent regulatory changes to allow a new fishery. Further, EFPs tend to be time limited, meaning that permit holders have no certainty of renewal or extension of such permits. A longline fishery can be implemented much more quickly under the framework procedures.

Anticipated Impacts of the Proposal

The proposal would not adversely affect any fish stock off the West Coast. Almost all the catch made by the one active fisher has been tuna - bigeye, yellowfin and albacore - with limited numbers of other species, and most of those have been good food fish species as well - like opah and dolphinfish (mahimahi). Incidentally, large numbers of bigeye tuna were measured, adding to the data base that the scientists need for biological studies and analysis. Very few sharks were taken. Of those that were taken, almost all were blue sharks, and hook extraction devices are used to maximize safe release. Swordfish would be the primary target species and the north Pacific swordfish stock has been determined to be in a very healthy condition; it is not overfished, and overfishing is not occurring. The

yellowfin tuna stock is likely at full utilization, but there is no reason to expect that a limited West Coast swordfish fishery would result in excessive catch of this species. The bigeye stock is slightly overfished according to IATTC, but that Commission has hard caps on catch of this species by the major longline fleets (including U.S. vessels larger than 24 meters in length), and IATTC projects that under current fishing patterns and with average recruitment, the stock will not be overfished within 3 years. The amount of bigeye likely to be taken in a longline fishery within the EEZ is not significant and would be controlled by the IATTC limit in any event. Bluefin tuna is severely overfished, but the catch records from the one person fishing longline gear the past 10 years indicate very few bluefin have been caught. Also, under the IATTC, the U.S. is subject to a catch limit for commercial fisheries and therefore there would be a cap on any such catch by a rebuilt swordfish fishery. Some concerns have been expressed about the impact on sharks, but the principal species of shark taken when targeting swordfish has been blue sharks, and the latest assessment concluded that the blue shark stock is healthy. Most sharks are released alive; only limited numbers of marketable sharks are taken, and these would not be taken close to shore where the concern about shark status seems most pronounced. Other species typically taken are mahimahi (dorado or dolphinfish), opah, and wahoo; none of these stocks is believed to be under stress.

Because the fishery would be permitted a fair distance from shore, there should be no impacts on other fisheries, which are coastal. On the other hand, taken together as a package with market development at the local level, a swordfish fishery can restore (or at the least maintain) some degree of port activity and income. As noted earlier, the Council has already directed its staff to work with the HMS management team and advisors and with NMFS to develop alternatives for a swordfish fishery that will provide fresh fish to markets and consumers on the West Coast.

It is possible that there would be occasional takes of seabirds. However, under U.S. regulations consistent with IATTC action, longline vessels in the area to be fished already are required to use gear and techniques to minimize takes and mortality of seabirds. This has proven to be very effective for the Hawaii fleet, and would be expected to be comparably effective for a West Coast fishery. The current operator has had no interactions with seabirds in 10 years.

It is possible that there would likely be occasional interactions with marine mammals, though the current operator has had no such interactions in 10 years. The species that might be involved cannot be predicted with any certainty. Based on the experience of the Hawaii fleet, these would be very rare events. With observer coverage, there would be good records of any such interactions and data to assess whether these occur at a level that poses a problem for any stock. NMFS conducts annual stock assessments of most species, and data from a longline fishery would be very useful in better determining the range and numbers of various species in the areas fished as well as the potential impacts of a longline fishery.

There might be an occasional take of a sea turtle, but with the use of circle hooks and mackerel bait, the level of take would likely be very low, and consequent mortality would be even more rare. The one person based on the West Coast using longline regularly on a seasonal basis to target tuna with incidental catches of other species has made more than 450 sets and deployed about 850,000 hooks over the years. In that time, he has had ONE observed interaction with a sea turtle - an olive ridley - the most numerous sea turtle species known in the Pacific. There have been no interactions with loggerhead or leatherback turtles.

Thus, there is no conservation reason not to allow a limited longline fishery, as the Council originally proposed in 2004. In fact, there is a good conservation reason. If you want to save sea turtles and other species through well managed fisheries, you should promote U.S. fisheries that are thoroughly managed rather than open U.S. markets to products from fisheries that are not well managed and do not have measures to protect the stocks and the non-fish resources of concern. And there are good economic reasons to allow a domestic fishery too. It will maintain jobs in the fisheries and in the communities, and if publicized well, will demonstrate to the public - including children - that U.S. fishing is good and sustainable and provides healthy food.

In short: The longline fishery to date has been a remarkably clean fishery. That should be recognized and promoted by allowing it to be carried out in the EEZ. Ecologically, economically and socially, it is the right thing to do.

Summary

The Pacific Fishery Management Council has an opportunity to establish a longline fishery out of the West Coast as it intended under the FMP when it was first proposed a decade ago. It is logical and reasonable for the Council to start the process to amend the regulations implementing the FMP to allow a limited longline fishery off the West Coast. It is expected that this would include the same controls as for the Hawaii-based fishery, specifically including: use of circle hooks and mackerel type bait for shallow sets; use of required sea turtle release equipment and techniques for any animals hooked or entangled; seabird take reduction and mitigation gear; and some level of observer coverage. Fishing would be limited to offshore waters some distacne from the coast. This proposal does not include an overall limit on longline effort; as a practical matter, fishery participants likely would not use longline gear throughout the year as they will perhaps switch gear types as target species change over a fishing year. As information becomes available on the fishery as it actually occurs, however, the Council may wish to evaluate the pros and cons of a limit on total effort in the future if necessary.

Finally, the Council can act with certainty knowing that (a) the rationale for the original proposal for a limited longline fishery is still valid and maybe even more so, and (b) the rationale for its rejection by NMFS is no longer valid. A regulatory change now can provide more certainty and confidence to the people who would be able and willing to make the investment for a longline fishery.

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as supporters of the sustainable fishing methods and procedures practiced by that vessel, petition the Pacific Fishery Management Council to lift the existing, outdated, and unnecessary restrictions that prohibit this vessel from longline fishing within western U.S. territorial waters. We the undersigned, as consumers of the deep-sea fish caught, landed, and marketed by the California based longline vessel Ventura II, and

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Pacific Bluefin Tuna and the Pacific Fishery Management Council

Managing the Recreational Pacific Bluefin Fishery Using a Sliding Scale Retention Limit

The latest stock assessment for Pacific bluefin tuna found that the population is severely depleted, reduced to just 4% of its original size by decades of overfishing. Currently, there is no limit on total recreational catch of Pacific bluefin by US fishermen, and recent catch has increased tremendously, from 122 metric tons in 2010 to 984 metric tons in 2013. Scientists have recommended cuts in both the commercial and recreational catch and the IATTC scientific staff has recommended a recreational catch cap in the eastern Pacific of 208 metric tons per year, which will be discussed by mangers in July 2014.

The Pacific Fishery Management Council has the authority to manage the recreational fishery in the US and will be discussing the current regulations during the biennial management cycle that begins in June 2014. Due to the depleted status of Pacific bluefin, the need for more effective management, and the possibility of a recreational catch cap in the near future, the Pew Charitable Trusts recommended in our comment letter dated May 6, 2014 that the Council should consider implementing a sliding scale retention limit for the recreational bluefin fishery in the Pacific. To better explain how a sliding scale can work, we offer the following example.

In the Atlantic Ocean, the US has effectively used a sliding scale daily retention limit to manage catch of bluefin by US commercial handgear fishermen since the early 1990s. Each year, NMFS sets an initial daily vessel limit, which is then adjusted during the season based on landing reports and future catch projections. This management tool allows the maximum utilization of the bluefin allocation over the longest period of time, while still preventing quota overages or excess fishing mortality. As set forth in 50 CFR 635.23, the process in the Atlantic is as follows, with the actual retention limit adjustments from 2013 provided as an example:



A sliding scale of 0-5 fish per angler, per day would be appropriate for the US Pacific bluefin recreational fishery. According to RecFIN data, 96% of anglers landed 5 or fewer bluefin per day during the 2007-2013 fishing seasons. Therefore, a default limit of 5 fish per day would have little negative impact, and an in-season adjustment to 3 fish would still affect less than 10% of trips.



www.californiasportfishing.org

May 29, 2014

Ms. Dorothy Lowman, Chair Pacific Fishery Management Council 7700 NE Ambassador Place, Suite 101 Portland, Oregon 97220-1384

Dear Ms. Lowman,

The Sportfishing Association of California (SAC) is a non-profit organization with membership comprised of the commercial passenger fishing vessel (CPFV) industry in Southern California. A portion of this fleet is engaged in highly migratory species rod and reel fishing during the summer months. With regard to Pacific bluefin tuna, this recreational activity accounts for less than 1% of the total Pacific catch.

As you are aware, the reported current status of the Pacific-wide stock of bluefin tuna has been assessed to be in a depleted state. SAC management have reviewed the reports produced, and have engaged in dialogue with our Board of Directors on the appropriate action to recommend to the Pacific Fisheries Management Council.

It is important to state we recommend that increased scientific research on the Pacific bluefin tuna needs to be conducted to more comprehensively understand the current conditions in the Eastern Pacific. Locally, we have witnessed the largest volume of juvenile fish in several years. This is evidenced by catch records and observations by aircraft and Captains on the water. These first-hand observations are being witnessed locally, and are not consistent with the reported Pacific wide decline of bluefin tuna.

However, based on the reported decline of the Pacific bluefin tuna stock, SAC respectfully recommends that the limit of Pacific bluefin tuna by recreational fishermen be limited to 5 fish per day. This is a 50% reduction from the current limit of 10 fish per day per angler.

Sincerely,

Ken Franke

Ken Franke President