



NATIONAL COALITION FOR MARINE CONSERVATION
4 Royal Street, S.E., Leesburg, VA 20175

May 27, 2009

Mr. Donald K. Hansen, Chairman
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220

RE: NS1 Guidelines and Coastal Pelagic Species Management

Dear Chairman Hansen,

The National Marine Fisheries Service (NMFS) issued new Guidelines effective February 17, 2009 for implementing annual catch limits consistent with the Magnuson-Stevens Act's National Standard 1 and new provisions of the Act as reauthorized in 2006. Each Regional Fishery Management Council is responsible for revising its existing Fishery Management Plans to specify annual catch limits consistent with the Guidelines, by 2010 for fisheries experiencing overfishing, and by 2011 for all others.

The Pacific Council is currently engaged in amending the Coastal Pelagic Species (CPS) Fishery Management Plan (FMP) to comply with the NS 1 Guidelines as they pertain to establishing overfishing levels (OFLs) and annual catch limits (ACLs) for actively managed species, namely Pacific sardine and Pacific (chub) mackerel.

Of particular relevance to the CPS FMP, the NS1 Guidelines for the first time provide the councils with specific guidance on considering ecological factors in specifying the Optimum Yield (OY) from a fishery. OY is established to provide the greatest benefit to the Nation, which now specifically identifies benefits to the marine ecosystem resulting from "maintaining adequate forage for all components of the ecosystem." [600.310(e)(3)(iii)(c)]

Among the ecological factors to be considered in setting ACLs are impacts on forage fish stocks and predator-prey interactions. According to the new Guidelines, these factors are to be "quantified and reviewed in historical, short-term and long-term contexts. Even where quantifications of...ecological factors is

not possible, the FMP still must address them in its OY specification.”
[600.310(3)(iv)]

Further, “(s)pecies interactions that have not been explicitly taken into account when calculating MSY [maximum sustainable yield] should be considered as relevant factors for setting OY below MSY. In addition, consideration should be given to managing forage stocks for higher biomass than B_{MSY} to enhance and protect the marine ecosystem.” [600.310(e)(3)(iv)(C)]

Based on the above cited changes to the NS1 Guidelines, we are requesting that the Pacific Council review and evaluate its CPS FMP and identify needed changes to comply with the new guidance. These changes should be adopted into the FMP through the Council’s ongoing ACL amendment process.

* * * * *

In reviewing the Coastal Pelagic Species FMP, including its biological reference points and ABC control rules, we note several actions that should be considered for implementation by the Council.

First of all, we commend the Council for employing what are relatively conservative harvest control rules for Pacific sardine and Pacific mackerel, and we acknowledge that this approach may indirectly provide some benefit to the ecosystem. The CPS FMP’s primary focus on biomass, rather than catch, and on maintaining a biomass “at least as high as the MSY stock size,” recognizes that these species are “very important in the ecosystem for forage.”¹

The current harvest control rules, however, do not conform to the new NS1 Guidelines because the forage needs of the ecosystem are not explicitly taken into account in the specification of MSY (OFL), ABC or OY (ACL). Even in the absence of a quantifiable determination of predator demands, the Guidelines require that the Council demonstrate *how* it is addressing these ecological factors in its specification.

- Recommendation #1. The Council should amend the CPS FMP to explicitly account for the needs of predators in its ABC/ACL specification.

The CPS harvest guidelines ($HARVEST = (BIOMASS-CUTOFF) \times FRACTION \times DISTRIBUTION$), in that they do represent a more conservative approach to setting catch limits for the actively managed forage species, are a precautionary interim step toward an ecosystem-based approach to fisheries management. But the Council cannot maintain that they explicitly account for the forage needs of the ecosystem. They do not. It is not at all clear how forage needs are accounted for, if indeed they are, beyond the use of relatively conservative control rules, none of which explicitly deals with forage and

¹ Amendment 8 to the Coastal Pelagics Fishery Management Plan. December 1998. p. 4-1.

predation. The CPS FMP and SAFE Reports must clarify how forage is accounted for in the harvest control rules.

For instance, we note that the Council seems to view the use of CUTOFF as serving multiple purposes for which it was not designed, a kind of catch-all for addressing conservation requirements. CUTOFF is variously portrayed as providing a forage set-aside, a buffer for scientific uncertainty, and a reserve of spawning stock to protect against overfishing.²

But in fact, as the FMP states³, and staff has reiterated as recently as March 2009⁴, the purpose of the CUTOFF is to provide a buffer of spawning stock that is protected from fishing and available for use in rebuilding if the stock becomes overfished. The CUTOFF value is not meant to account for scientific uncertainty⁵ nor is it an “allocation” to the ecosystem to protect the role of CPS as forage. Characterizing it as such misrepresents its purpose, how it is calculated, and its usefulness in addressing the conservation needs of coastal pelagic species.

The Council, with advice from its Scientific and Statistical Committee (SSC), should review how forage needs are considered in the current CPS harvest control rules and recommend ways to make a biomass set-aside for forage more explicit in the rule, by:

- Re-evaluating and clarifying the role of CUTOFF. Is it the overfishing limit, a forage reserve, a precautionary spawning stock biomass for rebuilding, an uncertainty buffer, all of the above? The FMP should clearly state what value is being used to quantify an allocation to the ecosystem as forage, and how that value is factored into the harvest control rule, distinct from other factors.
- Quantifying the difference between B_{MSY} and $B_{CONTROL\ RULE}$ as a “forage allocation”. The FMP objective of “providing adequate forage for dependent species” recognizes the need to maintain stock biomass above B_{MSY} and the control rule is designed to maintain it at that level. However, fishing is allowed to continue until the stock reaches CUTOFF, a small fraction of the long-term average stock biomass, at which point any reserve available for predators has long since disappeared. The difference between B_{MSY} and $B_{CONTROL\ RULE}$ under healthy stock conditions should be

² “In many ways, the CPS FMP and its harvest control rules utilize ecosystem principles by applying a relatively conservative management strategy through the use of “CUTOFF” values which recognize the importance of CPS species as forage and are designed to buffer against overfishing.” Status of the Pacific Coast Coastal Pelagic Species Fishery and Recommended Acceptable Biological Catches. Stock Assessment and Fishery Evaluation 2008. Pacific Council. June 2008. p. 45.

³ Amendment 8 to the CPS FMP. 1998. p. 4-3.

⁴ Pacific Council Agenda Item C.3.a. Attachment 3. March 2009.

⁵ Summary Minutes. Scientific and Statistical Committee Meeting. Pacific Fishery Management Council. Seattle, Washington. March 7-9, 2009.

quantified and set aside as an allocation as forage, as the FMP intends.

- Distinguishing forage allocation from stock assessment uncertainty. As the SSC has pointed out, current stock assessments do not explicitly account for scientific uncertainty. According to the NS1 Guidelines, scientific uncertainty is to be accounted for in the buffer between the OFL and ABC. Measuring predation mortality on a forage stock is one of the most difficult parameters to estimate when performing a stock assessment⁶. The Guidelines clarify that ecological factors should be taken into account when specifying MSY (the overfishing limit, or OFL) and that scientific uncertainty related to this specification must be taken into account when setting the ABC more conservatively. The allocation of CPS as forage, however, must not simply be subsumed into the buffer for scientific uncertainty. Just as the CUTOFF should not be used as a catch-all for conservation requirements, neither should the uncertainty buffer be used in that manner.

* * * * *

As part of the Council's evolutionary move toward development of an ecosystem fishery management plan, or EFMP, the Council should begin expanding the scope of the CPS FMP to incorporate linkages among the range of important forage species occupying the California Current ecosystem.

- Recommendation #2. Include other forage species not included in the CPS FMP as stocks in the fishery, managed or monitored, or as ecosystem component species.

In addition to the CPS FMP managed species (Pacific mackerel, sardine) and monitored species (anchovy, jack mackerel, market squid), and krill, whose harvest is prohibited under the FMP, important forage species in the California Current ecosystem include: shortbelly rockfish and hake, now managed under the groundfish FMP; and Pacific saury, smelt, sand lance and myctophids, prime candidates for "ecosystem component species" in the CPS FMP, a classification the NS1 Guidelines suggest to encourage an ecosystems approach to fisheries management.

- Recommendation #3. Develop a framework for linking the monitoring and management of CPS and other forage species to maintain an adequate biomass of forage (forage base) in the California Current ecosystem.

⁶ Hewitt, D.A. and Hoenig, J.M. Comparison of two approaches for estimating natural mortality based on longevity. Fishery Bulletin. April 2005.

Overall ecosystem health and productivity depends on preserving the integrity of the food web, in both quantity and diversity. The abundance of mid-trophic level or forage species is influenced by a number of natural and human-induced factors, and their populations can fluctuate dramatically, independent of one another. Reductions in the abundance of prey species or species diversity, making food unavailable to predators where and when they need it, can have profound, long-term impacts on predator populations.⁷ The different responses of different species to changes in environmental conditions, and the lag time between a decline in one species and an increase in another (e.g., sardine and anchovy), requires a more holistic approach to monitoring and managing the forage base.

The evolution of the CPS FMP into a true forage fish conservation plan requires that management measures for single species, including triggers for action, be linked to the status of other species, whether important partners in the prey base or key predators. As a first step, the FMP and SAFE documents should gather and integrate comprehensive data that can be monitored as indicators of ecosystem health: status of forage fish populations; status of major predators (fish, marine mammals and seabirds), including trends such as recovery trajectories; and food web dynamics information demonstrating strong predator/prey linkages.

* * * * *

In summary, we believe implementation of the National Standard 1 Guidelines' new advice with respect to conservation and management of forage fish provides the opportunity, and the Pacific Council's Coastal Pelagic Species Fishery Management Plan provides the conservative base, for building a forward-thinking, ecosystem-based management plan to serve as a model for other forage fish plans.

Thank you for considering our recommendations. Either I or NCMC executive director Pam Lyons Gromen would welcome the opportunity to discuss these recommendations with the Council.

Sincerely,



Ken Hinman
President

⁷ Koepcke, J.M. Ecosystem-Based Management of West Coast Forage Species. Recommendations on how to improve the management and conservation of forage species in the California Current ecosystem. PRBO Conservation Science. January 2009.

Subject: Council to Address a Variety of Fishery Issues - Including Final Action on Issues for the Trawl Rationalization Program

From: Don Heichel <kiheidon@sbcglobal.net>

Date: Sat, 23 May 2009 12:27:04 -0700 (PDT)

To: "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov>

#1. There are no ecological conditions under which Trawl fishing can be Rationalized.

Get rid of it!!!

#2. Why is the abundance of Rock Fish in Alabama never discussed?

Search online "Alabama fish reefs" and open your eyes to the power of building ecosystems underwater to enable the enhancement of marine ecosystems.

<http://www.fhwa.dot.gov/environment/wildlifeprotection/index.cfm?fuseaction=home.viewArticle&articleID=108>

Turning Old Bridges into Coral-Reef Fish Habitat (check the photo!!!)

<http://www.ag.auburn.edu/aaes/communications/highlights/summer00/reef.html>

[Reef Results: AAES Research Studying Effects of Artificial Reefs ...](#)

What does all this mean, concerning the production or attraction question of artificial reefs? These studies show that both mechanisms are working. Clearly, artificial reefs attract fish and some fish may not get any direct benefits. However, the close association of red snapper to reef structure, information from the diets of gray trigger fish and red snapper showing direct feeding on reef invertebrates, and the large numbers of reef fishes in an area that naturally has very little natural reefs, all suggest that the artificial reef system off Alabama has an important **production** component.

<http://cei.org/gencon/030,04421.cfm>

A six-year study at the University of Florida is currently working on these questions by testing the effects of different reef designs and spacing patterns on artificial reef populations. Researchers found...but in each case there were significant increases in the abundance of species around the reefs. Furthermore, by tagging gag grouper (a popular recreational catch), they found that adults tended to stay at or return to a "home patch reef," suggesting **production** over attraction in this case.

Once reef creation was officially permitted, the numbers of reefs skyrocketed. By 1992, with only a fraction of the Gulf Coast shoreline, the recreational catch of red snapper in Alabama was two to five times higher than in the other Gulf states. Alabama has only one and one half percent of the Gulf coastline, yet it produces 38 percent of the red snapper catch

(WANT TO GUESS THE ECONOMIC IMPACT OF THIS FOR ALABAMA?)

<http://www.reason.com/news/show/28175.html>

Read and learn!

<http://www.aquaticcommunity.com/news/lib/268>

[100 pyramids sunk off **Alabama** to promote marine life](#)

- The natural bottom offshore of Alabama is predominately flat sand bottom. This bottom type attracts few fish that are either commercially or recreationally valuable.
- If vertical relief is created on this bottom, many reef fish such as snappers and groupers will be attracted. In fact, artificial reefs can be created that over time will appear as natural reefs with similar communities of encrusting organisms and bait fish.
- As various encrusting organisms such as corals and sponges cover the artificial reef material, small animals take up residence. As these small animals become abundant larger animals are attracted and feed upon these. Yet larger fish are attracted to these and so on until a complete reef food web is created. At that point the ***artificial reef functions as a natural reef.***

My name is Don Heichel

I am a recreational fisher near Monterey Bay which has a huge area of flat sandy bottom and VERY POOR rock fish fishing.

I'm certain you can identify other areas that resemble this too.

I want the PFMCC to:

Promote fish abundance and promote Alabama's reef efforts to the public on the West Coast.

Marine Protected Areas are a ***NEGATIVE APPROACH*** and should only be PART of the solution to groundfish repopulation efforts!!!

Subject: Fwd: Marine environment
From: Jennifer.Gilden@noaa.gov
Date: Tue, 09 Jun 2009 11:10:14 -0700
To: Carolyn.Porter@noaa.gov

Subject: Marine environment
From: kiheidon@sbcglobal.net
Date: Wed, 03 Jun 2009 10:09:08 -0700 (PDT)
To: Jennifer.Gilden@noaa.gov

Hi Ms. Gilden,

The research has shown bottom trawling (is this a redundancy, i.e.; is all trawling done on the bottom?) damages the habitat of reefs and has been going on for a loong time over a wide area of the ocean.

Trawlers also lobby against artificial fish reefs because it damages their gear.

My question to the powers that be:

Since Alabama has less than 3% of the U.S. Gulf Coast and over 34% of that Coast's rock fish landings (because they have been building artificial fish reefs for over 50 years on sandy bottoms), shouldn't we investigate their approach on the West Coast?

Show me any other approach with numbers comparable to Alabama's!

Keep trawlers off reefs for starters!

Are you aware of the research done at Auburn U. on the production component of artificial reefs?

AAES researchers investigated the question of whether or not artificial reefs actually produce food and cause the food chain effect. all suggest that the artificial reef system off Alabama has an important production component.

Szedlmayer is Associate Professor in Fisheries and Allied Aquacultures.

<http://www.ag.auburn.edu/aaes/communications/highlights/summer00/reef.html>

The Lure of the Reefs

AAES Researchers Explore Food Chain Theory

<http://www.ag.auburn.edu/aaes/communications/highlights/fal100/reef.html>

A brief history of Alabama reef building:

<http://www.outdooralabama.com/fishing/saltwater/where/artificial-reefs/reefhist.cfm>

From a human standpoint, reefs bring together two odd bedfellows. Environmentalists creating habitat to help save our oceans and capitalists putting \$131 into the local economy for every \$1 spent on **artificial** reefs

02/13/03 STATUS REPORT

FWC DIVISION OF MARINE FISHERIES

<http://74.125.155.132/search?q=cache:RuRt8IUw-4J:www.reefmaker.net/ppt/What%2520Are%2520Artificial%2520Reefs.ppt+alabama+artificial+reef&cd=14&hl=en&ct=chk&gl=us>

May we please, PLEASE focus on Alabama's success and how we might adapt their success on the West Coast?

Don Heichel
Soquel,

Marine environment.eml Content-Type: message/rfc822

Ryan D. Kapp

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June 2, 2009

Mr. Don Hansen, Chair &
Dr. Don McIsaac, Executive Director
Pacific Fishery Management Council
7700 NE Ambassador Place #200
Portland, OR 97220-1384

RE: Agenda item B.1.b – Open Public Comment

Dear Chairman Hansen, Dr. McIsaac, and Council members,

I am a sardine fisherman from Bellingham, Washington. My vessels have operated out of Astoria, Oregon since 1999. I understand that the Council's workload is heavy but I feel the following issue is important enough to bring to your attention and hopefully you can find time to address it.

I am sure you are aware of the current situation regarding the sardine resource. The HG is decreasing yet the fishermen are seeing more fish available in the ocean. For the sardine industry depending upon this season's HG things will be difficult at best. I am hopeful the collaboration of industry and science in developing a new abundance index will alleviate some of this. However, there is one issue that, if it takes place, would absolutely devastate the sardine industry. The environmental component of the CPS FMP harvest control rule needs to be addressed immediately!

As background, the environmental component of the harvest control rule dictates the harvest exploitation of sardines based on sea surface temperature data from Scripps Pier in La Jolla, CA using a 3 year running average. Once that number is established it gets put into the following formula to arrive at the harvest fraction:

$$FMSY = 0.248649805 T_2 - 8.190043975 T + 67.4558326$$

By rule the harvest fraction cannot exceed 15% and can drop to as low as 5% depending on the temperature (T) input into the formula. The fraction is higher at higher temperatures because it is believed that sardine stock productivity is higher under ocean conditions associated with warm water temperatures. While I do not disagree with this theory I have some problems with how it is used to dictate the HG based on the following reasons

- The use of the sea surface temperature at Scripps Pier may not necessarily reflect the health of the entire sardine region during periods of high abundance.
- The formula which dictates the harvest fraction and the cutoff temperatures have not been evaluated for a long time.
- The steepness of the exploitation curve is a big concern. A drop from 15% to 5% could happen in one year's time and would severely harm the industry. Could there be a way to limit the quickness of the drop?
- Lastly, and most importantly, under this formula it is possible for industry to be held to a 5% harvest rate when expansion and growth in the resource is taking place.

The following spreadsheet models the historic harvest using the CPS FMP. The model uses the average yearly temperatures at Scripps Pier, a three year running average, and a breakdown of what the harvest rate would have been in those years. This model shows the formula would have severely restricted harvest in some years we know were expansion years (1916 – 1936). If the HG Formula is allowed to continue, using the environmental component as is, we could have years of a 5% harvest on a fishery that may still be expanding.

Year	Scripps SST	3 yr. Avg.	15% Harvest < 17.207	Between	5% Harvest 16.846 >
1916					
1917	16.68				
1918	17.35				
1919	16.87	16.967		1	
1920	16.55	16.923		1	
1921	16.55	16.657			1
1922	16.48	16.527			1
1923	17.36	16.797			1
1924	16.55	16.797			1
1925	17.01	16.973		1	
1926	18.07	17.210	1		
1927	16.87	17.317	1		
1928	16.73	17.223	1		
1929	17.18	16.927		1	
1930	17.45	17.120		1	
1931	18.50	17.710	1		
1932	16.31	17.420	1		
1933	15.65	16.820			1
1934	17.52	16.493			1
1935	16.71	16.627			1
1936	17.61	17.280	1		
			6	5	7

As you can see in the above spreadsheet between 1919 and 1936 there would have been 7 years of fishing at the minimum rate during a time period when the resource was now known to be expanding.

For the above reasons I am sure you can see why we should take another look at the environmental component of the harvest control rule. With everything already facing the industry any additional, possibly unjustified, cut in the HG would be disastrous. Again, I know your time is very limited but I am hopeful that you can see this is looked into sooner rather than later.

Thank you for your time and consideration of this matter.

Regards,

Ryan Kapp

June 9, 2009

Dear Council Chairs and Executive Directors:

Thank you for all the work you do in managing our fisheries resources. As you know, the new Administration has set as one of its goals to improve the management of fisheries by better aligning the interests of the Agency with fishermen. Three weeks ago at the Council Coordinating Committee (CCC) meeting in Boston, NOAA Administrator Dr. Jane Lubchenco announced the creation of a Catch Shares Task Force. The Task Force will help NOAA to facilitate the consideration and adoption of catch shares where appropriate as a management strategy in Regional Council and Secretarial fisheries management plans. Dr. Lubchenco has asked me to lead this Task Force, and submit findings and recommendations to her no later than August 1, 2009. Five charges for the Task Force are spelled out below.

Dr. Lubchenco and I understand that there are no one size fits all solutions, and we are committed to making sure we pursue this priority in the right way. We need you as partners to ensure we have the proper ingredients for success. I am writing to request your support in the following four areas:

1. Agenda time at upcoming Council meetings

Each of your Councils will be meeting over the coming weeks. The Task Force has a short window of time to complete its task. It is important to initiate quickly a discussion with each Council on what impediments are in the way of the Councils to fuller consideration or implementation of catch shares (i.e., funding, policy, legal, infrastructure issues - need specifics), and what the Councils and NOAA should do about it. For Councils with catch shares experience, we also want to identify the major lessons you learned, and to identify best practices to craft a national catch shares policy. Efforts are already underway to schedule a short amount of time for one of our Task Force members to discuss these issues at your upcoming Council meeting. I appreciate your support for our request and forbearance for the short notice.

2. Council representation on the Task Force

The Task Force will look at the issues surrounding the implementation of catch shares and provide the NOAA Administrator with recommendations addressing them in federally managed fisheries. Based on feedback and suggestions at the CCC meeting, the Task Force will be comprised of a geographically balanced mix of senior NOAA and Council leaders (members or Executive Directors). We want to announce the Task Force members as soon as possible.

I would like your help in determining the members of the Task Force. Please provide to me by Monday, June 15th a nominee from each Council, from which Dr. Lubchenco will choose three. The nominees from within NMFS are also currently being vetted. A final selection of participants will be made from among all the suggestions to obtain an optimal mix of catch shares expertise, experience and geographic representation.

3. Catch Share Working Group

As a third element of moving forward, NOAA proposes reconstitution of the Council/NOAA Limited Access Privilege Program Steering Committee. That 2006 group successfully steered the creation of the NOAA Technical Memorandum “Design and use of Limited Access Privilege Programs.” The reconstituted group would be a source of expert advice to support the Task Force in the short term, and to help move catch shares programs forward – much like a consulting team – in the long term. There are a great many NOAA and Council staff who are catch shares experts that we can draw upon, and I am requesting each NMFS Office and Council to identify one of them to serve on the Working Group. The Group would assist the Task Force and various Councils as they work through consideration of these programs and respond to specific questions identified by Councils or NOAA. A Terms of Reference for this in-house consultation group will be one of their first orders of business. Please provide your Council staff nominee by Monday, June 22nd.

4. CCC Catch Shares Subcommittee

Since the Task Force is by design only a short-term proposition (reporting its findings and recommendations by August 1st), NOAA is also requesting the CCC to consider establishing a standing *Catch Shares Subcommittee* that NOAA would work with on an ongoing basis. This would serve as our venue to ensure continuity of communication, planning and performance monitoring/follow up action by NOAA and Councils. We hope that you could establish this subcommittee by Monday, June 29th.

This effort to implement catch shares will require a great deal of work within NMFS as well as in the Councils. I am pleased that Dr. Mark Holliday, Director of Policy for NOAA’s Fisheries Service, will serve as the Executive Director of the Catch Shares Task Force and the Catch Shares Working Group. If you have any questions, suggestions or concerns please feel free to contact me but please also copy him. In response to my above requests, please submit to Mark the nominations to serve on the Task Force, as well as the names of individual Council catch share experts who are willing and able to serve on the Catch Shares Working Group.

I look forward to working with all of you and believe this is a great opportunity to help advance our shared stewardship responsibilities. Thanks very much in advance for your support and assistance with this effort. I hope that together we will put many of our struggling fisheries on the path to sustainability and profitability

Very truly yours,

Monica Medina
Senior Advisor to the Administrator

Catch Shares Task Force Objectives

1. To develop a new NOAA policy on catch shares that ensures that catch shares are fully considered when Councils take up fishery management plan amendments.
2. To make sure that Councils who want to move forward with catch shares have the technical and administrative support to move quickly to design a catch share system while empowering local fishermen to be part of the process.
3. To make sure that catch share designs achieve the best possible environmental and economic performance supporting healthy ecosystems, meeting annual catch limits, reducing bycatch and habitat damage and enhancing economic performance.
4. To consider whether any organizational changes are needed within NOAA to provide the best possible communication and support.
5. To provide advice to the Under Secretary on how to allocate resources to the Councils to support this work, and how to create milestones so that we can evaluate our progress.