Possible West Coast Swordfish Fishery Policy Questions

Council staff has prepared the following listing of possible questions that have come up in various discussions about policy matters relating to the development and implementation of a West Coast swordfish fishery with improved performance in comparison to the historic drift gillnet fishery, together with limited information relevant to the question. These are simply intended as a possible catalyst to advisory body deliberations, public comment and Council discussion under Agenda Item G.2, and are not intended to cover the full spectrum of possible questions; and are not intended for any other purpose than an aid to begin the discussions.

1. What are some actions the Council has identified for the West Coast swordfish fishery and how do they relate to any stated policy objectives?

Past Council discussion and decisions have identified the following broad sets of actions.

- Reduce bycatch in the large mesh drift gillnet (DGN) fishery through hard caps and performance standards.
- Test new and innovative approaches to past fishing practices and regulations.
    - Develop deep-set buoy gear.
    - Allow DGN vessels access to the Pacific Leatherback Conservation Area (PLCA) with appropriate controls and mitigation measures, including oceanographically triggered fishing and gear modifications.
    - Develop longline fisheries targeting swordfish.
- Consider a Federal limited entry permit program to limit potential fishing effort in the DGN fishery and more effectively manage a multi-gear swordfish fishery under the Magnuson-Stevens Act (MSA) authority of the Highly Migratory Species (HMS) Fishery Management Plan (FMP).

These broad actions are intended to address the following goals:

1. Reduce protected species bycatch in the swordfish fishery through mitigation, gear innovation, and individual accountability.
2. Reduce unmarketable finfish catch in the swordfish fishery through mitigation, gear innovation, and individual accountability.
3. Support the economic viability of the swordfish fishery so that it can meet demand for a fresh, high quality, locally-caught product.

2. What mix of gear types in the West Coast swordfish fishery would best address the Council's goals and objectives, including reducing reliance on imports of foreign-caught swordfish?

There are four gear types used in the U.S. to target swordfish: pelagic longline, large mesh drift gillnet (DGN), deep-set buoy (DSBG), and harpoon. Pelagic longline and DGN gears have had higher impacts in terms of bycatch but also produce a higher volume of landings compared to

DSBG and harpoon. DSBG and harpoon produce low volumes of high quality product, without the same concerns of amount of bycatch associated with the other gear types. These characteristics should be considered when designing the regulatory regime for the West Coast swordfish fishery.

If the Council were to prohibit high volume gear types under the HMS FMP, then West Coast market demand will essentially be met by imports from foreign fisheries (see Table 1), with some limited buffer in some years from Hawaii-permitted vessels landing on the West Coast. Imports may displace negative environmental impacts to other regions. The net global environmental impact could be greater since foreign fisheries are subject to less regulation, although different resources and population segments would be affected. The Council has yet to see a sophisticated analysis of the different bycatch rates and mortality impacts between foreign and domestic swordfish fisheries, partly because of difficulties in verified reporting by some foreign fisheries.

Table 1. Comparison of imports of swordfish to West Coast landings, metric tons, 2008-2012. (Imports: NOAA OST foreign trade statistics by customs region; West Coast landings: HMS SAFE Table 3.)

	2008	2009	2010	2011	2012	Total
West Coast Imports	2,554	1,938	2,321	2,185	2,369	11,367
West Coast Landings	531	409	370	620	403	2,332
Percent Domestic	17%	17%	14%	22%	15%	17%

3. Has the Council adopted a goal to end the DGN fishery at some point in the future and transition fishery participants to a different gear type or close the fishery outright?

No. In November 2014, the Council considered a motion to adopt a policy goal to end the DGN fishery and transition it to a swordfish target fishery that excludes DGN gear time at some point in the future, but voted unanimously to not adopt this as a policy goal[1]. The discussion instead expressed a policy intent to pursue strong management measures designed to improve the target performance of the DGN fishery, while at the same time encouraging alternative gears that can provide for an economically viable commercial fishery with significantly better bycatch performance than the past DGN fishery.

4. What would it take to get DSBG implemented as a legal gear type on the West Coast?

The HMS FMP specifies the legal gear types for harvesting HMS on the West Coast. A vessel must obtain a Federal HMS permit endorsed with one or more of these gear types to land HMS on the West Coast. DSBG is not currently an authorized gear under the HMS FMP. Therefore, the Council would have to amend the HMS FMP to specify DSBG as an authorized gear type. (Conforming state regulations may be required to allow DSBG in state waters, if so desired.)

As noted above, the Council has expressed an interest in establishing a limited entry program for DSBG. The Council could either implement a limited entry permit for this gear type concurrently with making it a legal gear type or allow an "open access" fishery (i.e., only the current Federal

[1] See the Council meeting record http://www.pcouncil.org/wp-content/uploads/2015/06/November_2014_FINAL_CouncilMtgRecord_newFormat.pdf

HMS permit required) to develop and decide later whether a limited entry program is necessary. An open access approach would present few barriers to participation, encouraging development of the fishery. By the same token, the Council would have less control over the growth of the fishery.

5. What should the Council consider when designing a Federal permitting scheme for the West Coast swordfish fishery?

The Council has expressed interest in creating a Federal limited entry permit for DGN vessels and the DSBG fishery once the gear type is made legal. If the Council were to authorize pelagic shallow-set longline (SSLL) gear to target swordfish, a limited entry permit would likely be required for SSLL gear as well. [2]

One approach to addressing the interest in limiting overall use of these gear types is a Federal swordfish limited entry permit with a gear endorsement feature. To use a particular gear, the appropriate gear endorsement would be required. One or multiple gear endorsements could be allowed on a permit. This approach could offer a simpler path to controlling the mix of gear types in the fishery, which could include "transitioning" participants in terms of gear use. It would also allow separate qualification criteria to be applied for the permit itself and the gear endorsements that would be applied to any one permit. An alternative would be to change the current Federal HMS permit so that specified gear endorsements are limited while others (e.g., surface hook-and-line) remain "open."

6. What is the policy connection between the use of pelagic longline gear (both deep-set for tuna and shallow-set for swordfish) inside the West Coast exclusive economic zone (EEZ) versus outside the EEZ?

In terms of ecosystem and habitat, the EEZ boundary is somewhat arbitrary. The prohibitions on pelagic longline gear inside and outside (shallow-set only) the EEZ at the time the HMS FMP was adopted were related to ESA permitting problems outside the EEZ and prohibitions in state waters (in Washington and California) on the use of this gear type. However, since 2004 (when the HMS FMP was implemented), gear improvements have reduced catch and bycatch mortality of sea turtles in the Hawaii SSLL fishery while the single West Coast deep-set vessel has demonstrated methods to reduce bycatch from what was assumed to be the norm when the HMS FMP was approved, and these fisheries achieved ESA coverage based on these changes. Area closures could be implemented more selectively to address state concerns about gear conflicts.

7. Why is it important to coordinate with the Western Pacific Fishery Management Council (WPFMC) on a longline fishery outside the EEZ authorized under the Pacific Council's HMS FMP?

Pelagic longline vessels permitted under the WPFMC's Pelagic Fishery Ecosystem Plan seasonally fish adjacent to the West Coast EEZ and can make landings in West Coast ports. Traditionally, the segment of this fleet targeting swordfish primarily lands their fish in Hawaii; however, bigeye tuna quota restrictions in the Western Pacific have forced these vessels to fish more frequently in the Eastern Pacific. This could prompt an increase in landings on the West

[2] A Federal permit is currently required under the HMS FMP but the number of these permits is not limited nor are the gear endorsements associated with the permit (see 50 CFR 660.707(a)).

Coast by the tuna-targeting segment of the fleet.

Currently, these Hawaii-permitted vessels account for the majority of West Coast swordfish landings, in effect meaning that the bulk of the "West Coast" swordfish fishery is made up of vessels managed by the WPFMC. As the Council considers establishing a longline fishery outside the EEZ under the West Coast HMS FMP, it is appropriate to coordinate regulatory approaches with the other US fleet that could be fishing in the same general area and to discuss any issues that either Council can identify at an early stage in planning activity.

8. What is the connection between potential bycatch in a West Coast swordfish longline fishery based on pelagic longline fisheries in other regions of the US, and bycatch impacts in foreign fisheries?

In March 2015 the HMSMT reported (Agenda Item H.4.b, HMSMT Report) on a study comparing bycatch metrics for U.S. fisheries catching swordfish.[3] This work offers a broad-scale comparison of protected species and finfish bycatch among several longline fisheries. The Hawaii pelagic longline fishery is perhaps the most comparable fishery for assessing bycatch from a pelagic longline fishery off the West Coast, because these vessels operate, at least part of the time, adjacent to the West Coast EEZ and always operate under MSA sanctioned regulations. The figures below illustrate the magnitude of difference in sea turtle impacts in WPFMC managed fisheries and some foreign fisheries.

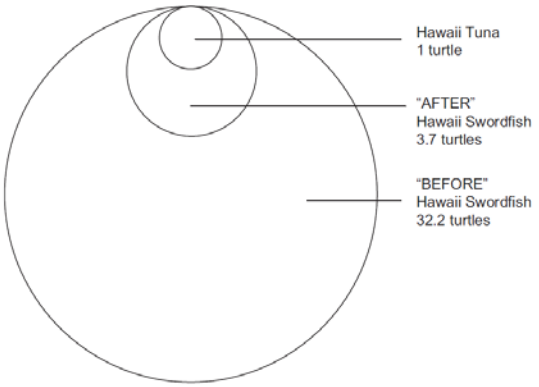

Fig. 1. Sea turtle bycatch to catch ratios in Hawaii longline fisheries (per 190,000 kg of catch). The benchmark of one turtle per 190,000 kg of fish is established by Hawaii's tuna longline sector. B/C ratios are compared before (1994–1999) and after (2004) a suite of management measures were implemented in Hawaii's swordfish longline sector to reduce sea turtle interactions.

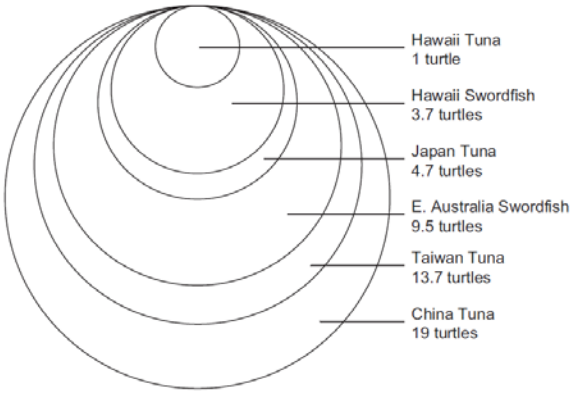

Fig. 2. Comparison of sea turtle bycatch to catch ratios in selected central and western Pacific pelagic longline fisheries (per 190,000 kg of catch). The benchmark of one turtle per 190,000 kg of fish is established by Hawaii's tuna longline sector.

Source: Bartram, P. K., J. J. Kaneko, and K. Kucey-Nakamura. 2010. Sea turtle bycatch to fish catch ratios for differentiating Hawaii longline caught seafood products. *Marine Policy*, 34:145–149.

How could the Council sequence the implementation of management measures for the West Coast swordfish fishery?

Several initiatives for the West Coast swordfish fishery are ongoing or being considered:

[3] The study authors are Heidi Gjertsen (SWFSC contractor), Stephen Stohs (SWFSC), Heidi Dewar (SWFSC), Craig Heberer (NMFS WCR), Chugey Sepulveda (PIER) and Scott Aalbers (PIER).

- Trials of DSBG under an exempted fishing permit (EFP) are currently being carried out.
- National Marine Fisheries Service (NMFS) is reviewing an EFP application to trial pelagic longline gear targeting swordfish inside the West Coast EEZ. This would gather preliminary information on catch and bycatch risks and opportunities.
- NMFS is reviewing an EFP application to test deployment of modified DGN gear inside the PLCA. This would gather information on gear modifications and other methods that could reduce protected species takes (especially of leatherback sea turtles) sufficient to allow the DGN fleet to access the PLCA again through a regulatory change.
- The Pflegler Institute of Environmental Research (PIER) is planning to experiment with a "short set" configuration where a buoy gear string is attached by a horizontal line. The goal of this work is to expand upon the recent DSBG trials to increase effectiveness while maintaining the positive attributes associated with DSBG (i.e., active monitoring, strike detection, and daytime deep-setting). This configuration may be better suited for larger vessels and could produce higher volumes compared to the current DSBG configuration.
- In September 2015 the Council took final action to impose high priority protected species hard caps on the DGN fishery. The Council expects that hard caps will prompt harvesters to adopt more stringent bycatch avoidance practices. NMFS has stated their intent to implement hard cap regulations by the start of the 2016/17 DGN fishing season.
- Scoping for a SSLL fishery outside the EEZ and implementing a Federal limited entry swordfish permit is tentatively scheduled for the March 2016 Council meeting.

It will take some time to assess the risks and opportunities associated with different gear types and mitigation measures based on these actions. The decision and implementation process for swordfish management measures will also take some time. The Council may want to schedule consideration or develop an implementation process that takes these factors into account, working back from specified milestones.