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The version of this application in the advanced briefing book omitted a paragraph on accommodation of observers. In this revised version the relevant paragraph is called out in ***bold italics***.

Dr. Donald McIsaac, Executive Director PFMC
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Dear Dr. Donald McIsaac,

I am interested in applying to Pacific Fishery Management Council for a preliminary Exempted Fishing Permit for a two to five-year term to commence in September of 2016 and terminate by December 31, 2021. I am currently a commercial fisherman/educator fishing primarily Southern California waters based out of San Diego. Current species in which I target are Spiny Lobsters, Sea Urchins, Sea Cucumbers (dive), White Seabass, **Swordfish (harpoon)**, and other marketable migratory species such as shark, tuna, yellowtail, dorado etc. I have two small fishing vessels (24ft. and 33ft.) in which I and my sons operate from. I am seeking to expand the efficiency/knowledge of my fishing efforts by the use of "Exempted Deep-Set Buoy Gear" on both my vessels.

Though the harpoon fishery is the most preferred method of fishing swordfish for overall low bycatch impact/high quality product,

"Why Harpoon?

- *Low bycatch*
- *Long history off CA coast*
- *High product value*
- *Existing market niche*
- *Existing vessels and port infrastructure over the past decade"* - From Sepulveda et al., 2015, Swordfish Workshop 2015

for most fisherman, the local harpoon fishery efforts have resulted in very low productivity and has not been profitable. On our vessel alone, during last three seasons 2013-2015 we have spent 55+ days on the water targeting finning swordfish, seen 10 fish and only landed 2.

"*Commensurate with the decline of DGN operations off California, traditional harpoon fisheries have also dwindled, with effort and landings also reaching their lowest points in over three decades (PFMC, 2013). This decline has occurred despite the open-access nature of the harpoon fishery and the local market void produced by the reduction of DGN operations.*
Several factors account for the decline in the harpoon industry, including the rise in operational costs (i.e., fuel prices), inconsistent catch rates, and the lack of new entrants into the fishery. Because harpoon operations require relatively calm conditions, this fishery has historically been limited to the waters of the SCB with landings." – Sepulveda, C., Heberer, C., Aalbers, S.A. et al. 2015

I am seeking an alternative fishing method which would allow for increased catch that would benefit both fisherman and consumers alike, yet be selective and thus minimal impact on both non target and protected species. From my research and observations, Deep Set Buoy Gear is the preferred method.

Proposed Method

My proposed method of fishing is the same as what has already been tested in west coast DSBG trials as conducted by the Pfleger institute. "DSBG was designed to augment harpoon fishery" – Sepulveda 2011-15.

Each vessel will use 10 sets of Deep-Set gear consisting of 2 hooks per set. Each vertical down line will have a 10lb weight at the bottom and 2 leadered baited hooks attached to it. One hook will be higher in the water column 200-250m range and the other will be in the bottom at 300-350m range. Both hooks will be fishing below the thermocline (where many non-targeted and protected species live). "*Further, the ratio of target to non-target catch suggests the trial gear to be relatively selective for swordfish*" – Sepulveda, C. et al., 2015, Swordfish Workshop 2015

Each vertical down line will have a set of floatation buoys and markers at the top, one of which being a "strike indicator" float. A strike indicator is used so that each vessel can continually monitor and identify when a set of gear is hooked to a fish. This will increase the chance of timely retrieval of a "live" species in order for success of fresh harvest or vibrant release of unmarketable non-targeted species.

Monitoring

Each vessel will deploy 10 sets of gear and continually monitor the gear for strike indication while conducting traditional harpoon fishery practices, looking the possibility of swordfish finning on the surface as well. By "fishing" the gear and timely monitoring help ensure fresh harvest of marketable species and vibrant live release of non-marketable species. Additionally, by using only 10 sets of gear per vessel, monitoring of the gear and recording of failures and success will be ongoing and continually updated. Each time gear is set and retrieved observable data of but not limited to: time, location, surface conditions, SST, bottom depth, and depth of baits will be recorded in a computer based program/table. By continual monitoring data can be analyzed and evaluated for patterns of optimal conditions for targeted species thus reducing the chance of by-catch or unmarketable species. As with all fisheries, any logbook documentation will also be recorded and submitted as per requirements of associated management agencies.

Environmental/Economic Impacts

This will be a far contrast and much more selective process than two of the current methods (Drift Gillnet and Longline) of swordfish and pelagic species. 2 hooks per set x 10 sets = 20 fish maximum potentially, but realistically an average harvest might be one-fourth of that which will hopefully be enough to sustain both a small fishing vessel and the fishery as well due to a smaller more selective harvest. This will allow for a low environmental impact and sustainable economic viability for small fishing operations.

As indicated by current DBSG trials conducted by the Pfleger institute and reported by OCEANA – "Recent experiments with deep-set buoy gear targeting swordfish demonstrate it is a far cleaner gear type compared to drift gillnets or pelagic longlines. Buoy gear can be profitable, can be fished in combination with harpoon gear, and provides a valuable solution in a transition from indiscriminant drift gillnets to a clean U.S. West Coast swordfish fishery. Recent experiments with deep-set buoy gear off California, have confirmed that:

• Swordfish can be selectively targeted at depth during the day.

• Non-target catch (i.e. shark) rates are significantly lower than with drift gillnets or pelagic longlines.

• There were few discards, no sea turtle takes, and only one marine mammal interaction.

• There were no interactions with species of concern like whales, dolphins, or sea turtles.

• The gear is actively tended—strikes are detected immediately— and all catch is retrieved in a matter of minutes. This allows a quick release of non-marketable species, avoiding long-term or serious injury, and allows the marketable product to be landed more quickly in a fresher and pristine condition.

• 94 percent of fish caught with buoy gear from 2011-2014 off California were marketable fish species.

<u>According to the Pfleger Institute of Environmental Research (PIER):</u>

Based on trip expenses calculated in 2014, swordfish fishers using a two-person operation (captain and one crew member) had average trip expenses around $500/day. With the capture and sale of one average sized swordfish (200-pound dressed weight) at the average market price of 2014 ($8.75), the 2-person operation could result in a net gain of $1,250/day. Given that PIER and cooperative fisher catch rates ranged from 0.6 to 1.75 swordfish/day in 2014, we propose that deep-set buoy gear can be profitable." – OCEANA November 2015

Additionally, though the DSBG trials have proven to be very low impact on non-targeted species, independent observer coverage can be accommodated if need be in order to conduct monitoring activities of possible protected specie interaction. If observer coverage is required, then daily cost could increase by upward of an estimated $500 per day unless grant funding is available and factored in which could help offset those costs. By including observer cost to the daily expenses, this factor could lead to lower margin of potential profitability. Yet, with this in mind the pursuit for an EFP still exists with the hopes that over time DSBG continues to prove to be an economically viable, environmentally sound method to target swordfish.

Participant Selection

Selection of the vessels will be based upon ones in which operate routinely within 100 miles of shore and are limited to no more than 5 days away from port, but normally 1-2 day trips. These vessels will have a 2 to 3-person crew. One vessel will be a bit larger and of the standard inboard propulsion non-trailerable type, while the other will be an inboard/outdrive trailerable type. By having two different types of vessels a comparison can be made as to which might be more effective in its efforts. What is more efficient, less efficient or no significant difference from one that is slower with a greater range per trip that can stay work in an area longer to one that is faster and has the ability to move up and down the coast from one port to another on a frequent basis in order to follow shorter range migratory fish. Additionally, using small short range vessels would ensure high quality catch for local market consistency.

Summary

Please consider my application for an EFP for the following reasons:

- I'm specifically interested in learning more about the migratory and feeding habits of swordfish and other migratory species
- I want to use gear that is more efficient, cost effective, and focusses on targeted species thus reducing bycatch
- I want to increase the potential profitability of fishing effort for swordfish and marketable pelagic species
- Participate in the continued expansion of the DSBG alternative fishing method that was started by the Pfleger Institute
- Proven low-impact, target specific fishing method supported/endorsed by multiple conservancy and sport fishing groups (eg. PEW foundation, OCEANA, San Diego Fish and wildlife Advisory Commission, Greenfish Movement, Nature Conservancy, Oceanside Anglers Club, Avalon Tuna Club)
- Given I have been previously applied, past 18 mo., for EFP and was not selected while others were I would like to be part of the 2016 selection

  "In 2015, the National Marine Fisheries Service approved three Exempted Fishing Permits enabling seven vessels to commercially use deep-set buoy gear to catch swordfish in both the current season and next season to provide additional information on the economic viability of the gear and to inform future management." – OCEANA 2015

Thank you for consideration of my proposal/application for an EFP. If you have questions about my request, please contact me by phone at 760-207-7504 or by email at elmodave69@gmail.com.

Sincerely,

David Stephens

References

Sepulveda et al. Testing Modified Deep-Set Buoy Gear to Minimize Bycatch and Increase Swordfish Selectivity. BREP 1 (2014) pp.27-32. http://www.nmfs.noaa.gov/by_catch/docs/brep_2014_sepulveda.pdf

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