

## 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)<sup>1</sup>, California deep-set longline targeting tuna, California harpoon, Hawaii shallow-set longline, Hawaii deep-set longline targeting tuna<sup>2</sup>, 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 utilizing 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 authorized 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.

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<sup>1</sup> 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.

<sup>2</sup> 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.