Agenda Item I.4.a
Supplemental NMFS Presentation 1
September 2019

NOAA FISHERIES

West Coast Region

Agenda Item I.4

National Marine Fisheries Service (NMFS) Report on Preliminary Draft EIS for Authorization of Deep-Set Buoy Gear

September 16, 2019

Overview

- Introduction
- Alternatives
- Affected Environment
- Impacts
- Sections to be Completed for Draft EIS
- Supplemental Report on Socioeconomic Impacts
- Addressing SSC Review of Biological Analysis

Introduction

- **NMFS has prepared a preliminary draft EIS (PDEIS) to analyze impacts of the Council's ROA for authorizing DSBG under the HMS FMP**
- **Description of the Proposed Action**
- **Purpose and Need**
- **Proposed Action Area**
- **PDEIS also includes a preliminary socioeconomic analysis**

Alternatives

- **Alternative 1: No Action**

- **Alternative 2: Open Access**
  - **Gear Description and Tending Requirements**
  - **Deployment and Retrieval requirements**

- **Alternative 3: Limited Entry in the SCB, open access elsewhere**
  - **5 permit issuance options**
  - **5 qualifying criteria options**

Affected Environment

- **All federal waters (3-200nm from shore) off California and Oregon**

- **Affected environment includes species in the action area, essential fish habitat & critical habitat, and the socioeconomic environment**

- **Species are categorized according to their status (target fish, non-target fish, prohibited fish, and protected species) and relationship to the Proposed Action (likely to be affected, may be affected, not likely to be affected)**

Affected Environment (continued)

- **Species likely to be affected**
  - **Based on those which have been caught so far in DSBG EFP trials**

Table 3-1. Summary of Reported DSBG Trials Catch, in Number of Individuals

	2015	2016	2017	2018	2019*	TOTAL
Swordfish	136	474	556	640	19	1825
Bigeye thresher shark	66	57	35	35	0	193
Pelagic thresher shark	0	0	0	2	0	2
Common thresher shark	0	0	0	1	0	1
Shortfin mako shark	0	1	0	2	0	3
Blue shark	3	4	2	3	0	12
Common mola	0	0	0	1	0	1
Opah	2	1	0	0	0	3
Escolar	4	4	3	4	0	15
Humboldt squid	0	0	1	0	0	1
Giant squid	0	0	1	0	0	1
Yelloweye rockfish	0	0	1	0	0	1
Northern elephant seal	1	0	0	1	0	2
Loggerhead sea turtle	0	0	0	1	0	1
Total Days Fished	132	280	326	606	30	1374

** Only includes January & February 2019*

Affected Environment (continued)

- **Species which may be affected are included based on technical discussions with NMFS Protected Resources Division (PRD).**
  - **These species dive deep and/or feed on squid like those used as bait in DSBG fishing, have been documented entangled by other fisheries that employ vertical lines, or are ESA-listed pinnipeds that have been caught by longline fishing near the action.**

- **Prohibited fish species, and other HMS species in the action area which are overfished or subject to overfishing, are not likely to be affected by the Proposed Action**

Affected Environment (continued)

- **Essential Fish Habitat (EFH)**
  - **EFH consists of the epipelagic and mesopelagic zones of neritic and oceanic waters**
  - **The Proposed Action is not likely to affect EFH**

- **Critical Habitat**
  - **The Proposed Action is not likely to affect Steller sea lion critical habitat because DSBG fishing is not likely to occur within 3,000 feet of rookeries**
  - **The Proposed Action is also not likely to affect leatherback sea turtle critical habitat, as it is highly unlikely that jellyfish bycatch would occur**

Affected Environment (continued)

- **Socioeconomic Environment**
  - **Other fisheries in or near the action area**
    - **DSBG EFP fishing trials**
    - **Other swordfish fisheries (DGN, harpoon, longline)**
    - **Recreational fisheries**
  - **The price of DSBG caught swordfish is a key indicator of socioeconomic impacts**
    - **Evidence from landings data suggest that DSBG price is higher on average than the price of DGN or longline, comparable to the price of harpoon**
    - **Also some evidence that DSBG price tends to fall over the course of a fishing season**
    - **Price analysis suggests a small but negative impact on DSBG price as the quantity of DSBG landings increases**
  - **Fishers and fishing communities**
  - **Processors, restaurants and consumers**

Impacts

- **No Action Alternative**
  - **No biological or socioeconomic impacts expected relative to baseline**
  - **Council may continue to recommend EFPs**

Impacts

- **Alternative 2 (Open Access)**
  - **Biological Impacts**
    - **Most likely swordfish catch in a given year is 6,635 individuals**
    - **Impacts not likely to affect species at a population level**
    - **Most likely number of protected species interactions in a given year is 5 northern elephant seals and 0 loggerhead sea turtles**
  - **Socioeconomic Impacts**
    - **Expected average swordfish price is $5.58 per pound**
    - **Estimated $5.7 million in total annual revenues, if swordfish CPUE remains at the levels seen so far in EFP trials**

Impacts

- **Alternative 3 (Limited Entry)**
  - **Biological Impacts**
    - **Most likely swordfish catch in a given year is 4,030 individuals**
    - **Impacts not likely to affect species at a population level**
    - **Most likely number of protected species interactions in a given year is 2 northern elephant seals and 0 loggerhead sea turtles**
  - **Socioeconomic Impacts**
    - **Expected average swordfish price is $5.67 per pound**
    - **Estimated $3.5 million in total annual revenues, if swordfish CPUE remains at the levels seen so far in EFP trials**

Sections to be Completed for Draft EIS

- **Cumulative Impacts**
- **Applicability with Other Laws & Regulations**
- **List of Acronyms, Indexes, etc.**

Supplemental Report on Socioeconomic Impacts

- **Analyze a scenario where CPUE declines with increasing effort**
- **From 2017 to 2018, active vessels rose from 5 to 26, and swordfish CPUE declined from about 1.7 per day to 1.1 per day**
- **Findings indicate that, if CPUE remains at 2018 levels after authorization, total revenues may be around 24% lower than if we see the average CPUE from all DSBG EFP fishing**
- **Profitability at the vessel level may constrain participation**

Addressing SSC Review of Biological Analysis

- **NMFS has been working on a number of sensitivity analyses based on the recommendations of the Council's SSC from their review of our methodology in June.**

- **Overall, no drastic change in the results presented in the PDEIS resulting from these sensitivity analyses. However, some of the approaches proposed by the SSC do reflect a higher degree of uncertainty in the predictions**
  - **Use of negative binomial model for swordfish**
    - **Negative binomial model fits source data better**
    - **Resulting annual catch predictions have a wider range, lower median and mode, and similar mean**
  - **Using distribution of effort estimates rather than a point estimate introduces more uncertainty in the predictions**