

Alaska Fisheries Science Center Data-Limited Stock Assessments Working Group

Cindy A. Tribuzio, Jim Ianelli, Kristen Omori (AFSC)

Jason Cope (NWFSC)

Joint Groundfish Plan Team September 2024

The North Pacific Fishery Management Council (NPFMC) Fishery Management Plan (FMP) contains ABC and OFL specifications based on data-availability for stock assessments (termed “Tier system”). The most data-limited stocks fall within Tier 6 (FMP Amendment 56, NPFMC 1998). Tier 6 OFL is set equal to “the average catch from 1978 through 1995, unless an alternative value is established by the SSC on the basis of the best available scientific information” and ABC is $\leq 0.75 \times \text{OFL}$. Many methods for dealing with data limited stocks have been developed in recent years but application of alternative DLM methods to Tier 6 stocks has only recently been attempted, the Bering Sea/Aleutian Islands (BSAI) and Gulf of Alaska (GOA) shark stock complexes, but not used for setting the OFL ([Tribuzio et al. 2022](#), [BSAI PT Nov 2022](#), [GOA PT Nov 2022](#), [SSC Dec 2022](#)). The Groundfish Plan Teams and the SSC therefore requested that the AFSC form a working group to investigate data-limited stock assessment methods:

“The Teams requested the SSC recommend the AFSC (and ADF&G, where appropriate) to consider two proposals for working groups: 1) a WG focused on data-limited/Tier 6 methods.....” Joint Groundfish Plan Teams [November 2022](#)

“After considerable discussion, the SSC supports the proposed work on data-limited/Tier 6 methods but suggests that this work may be sufficiently focused to be conducted internally by the AFSC. The SSC looks forward to this work as it pertains to approaches both for analysis of data-limited groundfish species as well as how and if such species should be elevated out of existing complexes. The SSC emphasizes that there is considerable flexibility within the tier structure to consider innovative alternatives for how to use available catch and biomass time series when determining reference points.” SSC [December 2022](#)

This report notes that a data-limited working group (DLM WG) was formed and met on August 21, 2023. The DLM WG identified three priorities, in order of importance:

- 1) identify Tier 6 stocks or stock complexes that are at a higher risk of being insufficiently assessed using existing Tier 6 methods;
- 2) provide alternative data-limited methods for Tier 6 stocks or stock complexes that still allow managers to set harvest specifications (i.e., calculate an OFL);
- 3) incorporating uncertainty into the OFL to ABC buffer, which may also be applicable to Tier 5 stocks or stock complexes.

The DLM WG will coordinate with the Groundfish Plan Team coordinators and anticipates presenting preliminary results to the September 2024 Joint Groundfish Plan Teams.

Below is a list of Tier 6 stocks or stock complexes which will be evaluated

FMP	Stock	No. Tier 6 Species	OFL Method
BSAI	Sharks	4	Max Complex Catch 2003 – 2015
GOA	Sharks	3	Summed mean of species catch 1997-2007
BSAI	Octopus	5	OFL = M*Biomass, M is predation based, not Tier 5 because survey biomass is not reliable
GOA	Octopus	7	Maximum complex catch 2003 – 2018
GOA	OROX	9	Summed maximum of species catch 2013 – 2015
GOA	DSR	6	Summed maximum of species catch 2013 – 2015
GOA	Atka Mackerel	1	Mean catch 1978 – 1995