

## California Halibut: A High-Priority Fishery for Management Attention

### *Scaled Management Guided by the Marine Life Management Act*

The [Marine Life Management Act \(MLMA\)](#) enacted in 1999 is California's primary fisheries management law. Its primary objective is to ensure the conservation, sustainable use, and restoration of California's marine living resources. This includes the conservation of healthy and diverse marine ecosystems and marine living resources. In essence, the MLMA identifies the elements and objectives required to realize ecosystem-based fishery management and thus ensure the sustainability of California's marine living resources. The [2018 Master Plan for Fisheries \(Master Plan\)](#) is a guide for the implementation of the MLMA. In collaboration with stakeholders, the California Department of Fish and Wildlife (CDFW) amended the original 2001 Master Plan to achieve a more standardized, strategic, and transparent approach to fisheries management that better aligns with the full suite of MLMA objectives. The [2018 Master Plan](#) provides CDFW with a framework to apply new fishery management tools, address ecosystem objectives, consider a changing climate, and integrate socioeconomic and human dimensions into the management framework for supporting healthy marine ecosystems and sustainable fisheries.

The Master Plan includes a framework (see page 4 in Master Plan) for achieving the objectives of the MLMA through prioritization and scaled management. Prioritization (see Chapter 2 in Master Plan) describes the assessment of the productivity of the stock, the risks of fishing to the stock (its susceptibility) and ecosystem (specifically bycatch and habitat), the efficacy of current management in addressing risks, and the consideration of socioeconomic and human dimensions. The end result of prioritization is a list of fisheries that are ranked (from high to low) by their need for management attention.

Scaled management (see Chapter 3 in Master Plan) is the process by which management attention is calibrated to the relative risks, benefits, and complexity of the fishery, and considers CDFW's capacity and stakeholder interests. Scaled management considers a continuum of management responses, from Enhanced Status Reports (ESR) to basic or complex Fishery Management Plans (FMP) to a combination of an ESR and rulemakings. The MLMA-based framework for scaled management enables CDFW to more strategically allocate limited resources on fisheries with the greatest need for management attention and opportunity for resource and ecosystem benefits.

In 2019 and in consultation with stakeholders, CDFW completed prioritization according to the 2018 Master Plan resulting in the first priority list of fisheries for management attention (Master Plan, Appendix E). [California Halibut](#) (*Paralichthys californicus*) was identified as a high priority fishery for management attention, primarily due to the potential risk to the species and habitat from fishing activities, and to other species that may be caught as bycatch in the fishery. A custom [Ecological Risk Assessment \(ERA\)](#) was developed in 2019 in which the productivity, susceptibility, and potential

habitat and bycatch impacts for 27 finfish and four invertebrates in both commercial and recreational fisheries were assessed. Gear type was ranked relative to the potential impact on habitat and bycatch, bycatch species were separated into sensitive and non-sensitive categories, and the magnitude and release mortality of bycatch species were primary factors. Primarily based on the productivity and susceptibility results and the potential for bycatch in the trawl and gill net fisheries, California Halibut rose to the top of the list for commercial species that were in need of possible management attention.

To initiate scaled management of the California Halibut fishery, CDFW will engage with stakeholders in a scoping process to create a shared vision that reflects the diversity of knowledge, priorities, and concerns. Scaled management decisions will be based on available information including the 2020 *stock assessment*, a multi-fleet, multi-stock *management strategy evaluation*, a bycatch evaluation, the California Halibut ESR, and ecosystem and habitat considerations.

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### Definitions of Italicized Terms

Definitions are from the 2018 Master Plan Glossary (page 73) and are listed in the order in which they are referenced above.

- *Sustainability*: "Sustainable," "sustainable use," and "sustainability," with regard to a marine fishery, mean both of the following:
  - (a) Continuous replacement of resources, taking into account fluctuations in abundance and environmental variability; and
  - (b) Securing the fullest possible range of present and long-term economic, social, and ecological benefits, maintaining biological diversity, and, in the case of fishery management based on maximum sustainable yield, providing for a fishery that does not exceed optimum yield.
- *Ecosystem-based Fishery Management*: An environmental management approach relying on credible science that recognizes the full array of interactions within an ecosystem, including humans, rather than considering single issues, species, or ecosystem services in isolation.
- *Productivity*: The birth, growth, and death rates of a stock. A highly productive stock is characterized by high birth, growth and mortality rates, and therefore, high turnover. Such stocks can usually sustain higher exploitation rates and, if depleted, could recover more rapidly than comparatively less productive stocks.
- *Susceptibility*: The potential for a stock to be impacted by a fishery, which includes direct captures, as well as indirect impacts of the fishery (e.g., loss of habitat quality).

- *Enhanced Status Report (ESR)*: A revised approach to Status of the Fisheries Reports. ESRs are proposed to contain sections on the history and socioeconomics of the fishery, the biology and status of target stocks, ecosystem aspects of the fishery, past and current conservation and management measures, essential fisheries information, and monitoring, future research and management needs. This revised format would help ensure a basic standard of MLMA-based management is applied across all fisheries in a consistent and transparent fashion. ESRs summarize all the available essential fisheries information for each fishery and make it readily apparent what is not available. This structure is envisioned to assist the Department in planning both short and long-term research activities and inform external parties about research opportunities that may benefit management through a dynamic web-based platform.
- *Fishery Management Plan (FMP)*: A planning document based on the best available scientific knowledge and other relevant information that contains a comprehensive review of the fishery along with clear objectives and measures to ensure its sustainability. Components of an FMP are described in the MLMA.
- *Rulemaking*: The process of developing regulations which occurs in several steps, including publishing proposed rules, accepting comments on the proposed rule, and publishing the final rule. Rulemaking is used to create specific actions and regulations that are designed to carry out the intent of environmental legislation and policy.
- *Stock Assessment*: A management tool that uses modeling and historic and current population data or trends to determine the status (e.g., productivity, biomass, population size) of a fishery, in order to determine at what level it may be sustainably exploited.
- *Management Strategy Evaluation*: A formal process to evaluate the performance of alternative management procedures for a fishery, prior to any implementation. MSEs vary between fisheries, but typically utilize models to assess the current status of the fishery, as well as assumptions or additional models to determine the effects of potential management actions.