



Overview of a Draft Amended Framework for MLMA-based Management

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The Marine Life Management Act (MLMA) is the guiding statute for ocean fisheries management in California. Enacted in 1999, this progressive law moved the state towards ecosystem-based management of its marine resources. This overview details some of the challenges with the current management approach, and the opportunity that revising the MLMA's work plan, the Master Plan for Fisheries, offers. It lays out a draft framework for prioritizing and scaling the intensity of management to the risks and potential benefits for each fishery, enabling more strategic allocation of limited funds and staff capacity to the fisheries that are in greatest need of management intervention. It also describes how this approach can be used to bring all fisheries in California up to a standardized level of management consistent with the MLMA. It is intended to serve as a road map, linking various information gathering projects that are underway together into a cohesive strategy and vision for the Master Plan amendment.

Before the MLMA, ocean fisheries were managed through adjustments in legislation or in regulation adopted by the Fish and Game Commission (Commission) as problems became evident. However, the MLMA called for comprehensive, proactive management of the state's ocean fisheries to achieve a set of common objectives and to meet certain standards. Since passage of the MLMA, implementation has focused largely on targeted rulemakings and on the preparation of fishery management plans (FMPs) for a few fisheries, often in response to legislative action. Controversy and complexity in these fisheries increased the intensity of FMP efforts and the demands on the California Department of Fish and Wildlife's (the Department) capacity. As a result, most of the state's fisheries have not fully benefited from the provisions of the MLMA.

The draft "Amended Framework for MLMA-based Management" proposed here is designed around advancing the specific objectives listed in Section 7056 of the MLMA. These are intended to ensure that:

- *7056(a): The fishery is conducted sustainably so that long-term health of the resource is not sacrificed in favor of short-term benefits. In the case of a fishery managed on the basis of maximum sustainable yield, management shall have optimum yield as its objective.*
- *7056(b): The health of marine fishery habitat is maintained and, to the extent feasible, habitat is restored, and where appropriate, habitat is enhanced.*
- *7056(c): Depressed fisheries are rebuilt to the highest sustainable yields consistent with environmental and habitat conditions.*
- *7056(d): The fishery limits bycatch to acceptable types and amounts, as determined for each fishery.*
- *7056(e): The fishery management system allows fishery participants to propose methods to prevent or reduce excess effort in marine fisheries.*
- *7056(f): Management of a species that is the target of both sport and commercial fisheries or of a fishery that employs different gears is closely coordinated.*
- *7056(g): Fishery management decisions are adaptive and are based on the best available scientific information and other relevant information that the commission or department possesses or receives, and the commission and department have available to them essential fishery information on which to base their decisions.*
- *7056(h): The management decision-making process is open and seeks the advice and assistance of interested parties so as to consider relevant information, including local knowledge.*

- 7056(i): *The fishery management system observes the long-term interests of people dependent on fishing for food, livelihood, or recreation.*
- 7056(j): *The adverse impacts of fishery management on small-scale fisheries, coastal communities, and local economies are minimized.*
- 7056(k): *Collaborative and cooperative approaches to management, involving fishery participants, marine scientists, and other interested parties are strongly encouraged, and appropriate mechanisms are in place to resolve disputes such as access, allocation, and gear conflicts.*
- 7056(l): *The management system is proactive and responds quickly to changing environmental conditions and market or other socioeconomic factors and to the concerns of fishery participants.*
- 7056(m): *The management system is periodically reviewed for effectiveness in achieving sustainability goals and for fairness and reasonableness in its interaction with people affected by management.*

These objectives are advanced by addressing three basic needs: I) a process for prioritizing future management actions both among and within fisheries; II) a process for scaling those management actions to reflect the needs, risks, and values of each fishery together with the Department’s capacity; and III) a means of conveying up-to-date fisheries information in a way that’s easy for stakeholders, researchers, and the public to navigate and digest. This framework is depicted on Page 5. It is important to note that all components of the framework are still being developed and tested for relevance and feasibility and will be the focus of workshops and other discussions with stakeholders.

I. Prioritization Component

Section 7073(b)(2): A priority list for preparation of fishery management plans. Highest priority shall be given to fisheries that the department determines have the greatest need for changes in conservation and management measures in order to comply with the policies and requirements set forth in this part. Fisheries for which the department determines that current management complies with the policies and requirements of this part shall be given the lowest priority.

The prioritization component is intended to assess the need for management action in individual fisheries in a transparent and consistent fashion by conducting three types of analyses. Besides grouping fisheries as high, medium, or low need for management action, these analyses can also identify high priority actions that can be taken to improve management. These three analyses can be distilled into the following questions: 1) where are there risks?; 2) how well is current management addressing those risks?; and 3) where would confronting those unaddressed risks have the most biological, economic, social, or administrative benefit?

Analysis 1. Risk Assessment - Objectives addressed: 7056(a)(b)(c)(d)

Under the draft prioritization section of the framework, all fisheries go through a risk assessment to identify and evaluate any ecological and/or biological risks posed by fishing. This assessment is composed of two assessments: a Productivity Susceptibility Analysis (PSA), which assesses the risks to a particular stock, and an Ecological Risk Assessment (ERA), which assesses the risk a fishery poses to the ecosystem. California Ocean Science Trust (OST) is currently conducting a PSA on 45 of the state’s most significant fisheries in terms of commercial value and recreational participation. OST will also be adapting an ERA framework for California and applying it to five fisheries as an initial pilot.

The draft prioritization section of the framework would use the results of the Risk Assessment to classify fisheries as being of low, medium, or high concern. Those fisheries classified as medium or high-risk move on to the next steps of the prioritization framework, while those classified as posing a low risk are not an initial priority for additional management.

Analysis 2. Assessing Management Effectiveness - Objectives addressed: 7056(a-m)

The next analysis evaluates a fishery's level of consistency with the MLMA. The first step in this analysis is an assessment of the degree to which management is consistent with the full range of the MLMA's objectives. The second step is a specific assessment of the degree to which risks identified in the Risk Assessment are being addressed by current management. The Center for Ocean Solutions is currently developing the draft MLMA-based assessment framework. If the Department determines the tool is effective, those fisheries that are classified as having low or medium consistency with the MLMA, particularly in relation to the risk areas identified in the Risk Assessment step, would be candidates for additional analysis described below. Those fisheries where management is determined to have high consistency with the MLMA require no additional management actions, although triggers for reconsidering this assessment might be identified.

Analysis 3. Economic Value/Opportunity – Objectives addressed: 7056(i)(j)(g)(l)

All of the fisheries that have achieved this stage of analysis have been deemed to pose medium to high ecological and/or biological risks, and may have related deficiencies in terms of consistency with the MLMA. As a result, these fisheries will likely require additional management actions to address these risks and improve consistency with the MLMA. The last step in the prioritization framework assesses the relative tradeoffs to socio-economic impacts from more active management. Approaches to conducting such an analysis are being discussed, however relevant data are relatively limited.

Under the draft prioritization section of the framework, fisheries would be categorized into three classes of concern, high, medium, and low. Generally, fisheries classified as high priorities for management would be the first to be considered for management action. In the absence of extenuating circumstances, additional management action, beyond preparation of the Enhanced Status Report described below, would be deferred on fisheries classified as medium or low priority.

II. Management Scaling Component

Section 7070: The Legislature finds and declares that the critical need to conserve, utilize, and manage the state's marine fish resources and to meet the policies and other requirements stated in this part require that the state's fisheries be managed by means of fishery management plans.

The fisheries that fall under the scope of the MLMA range widely in complexity, biological characteristics, number of participants, geographic extent, availability of data, management need, and other factors. The process described below is intended to incorporate this variability in the range of approaches to applying MLMA-based management, from expanded and better structured Status Reports to traditional, resource intensive FMPs. The draft management scaling component of the framework seeks to match the scope and intensity of management effort with the needs and complexity of a given fishery.

The Management Continuum – Objectives addressed: 7056 (a)(b)(d)(e)(i)(j)

Fisheries vary significantly regarding the appropriate level of management effort. For example, a small single sector fishery with low ecological and/or biological risk, that is largely consistent with the MLMA, and for which expected benefits from additional management are likely to be low may justify a lower level of response. Alternately, a large-scale, multi-sector fishery with conservation concerns and a high degree of controversy will likely demand a more intensive effort. This may lead to implementation of the MLMA taking place along a continuum ranging from a basic level represented by an Enhanced Status Report, to an intensive, complex FMP process. Broadly, the scale of management may be divided into three basic levels, as described below.

Low – Enhanced Status Report Alone

All fisheries would be the subject of an Enhanced Status Report. Building off current Status Reports, Enhanced Status Reports would be structured around the requirements of the MLMA itself, helping to ensure that included information is relevant to management under the MLMA. These reports would have sections on the history and socio-economics of the fishery, the biology and status of target stocks, ecosystem aspects of the fishery, past and current conservation measures, essential fisheries information (EFI), and monitoring. This revised format would ensure a basic standard of MLMA-based management is applied across all fisheries in a consistent and transparent fashion. It would summarize all of the available EFI 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. Enhanced Status Reports can serve as a repository of information documenting the consistency of a fishery's management with the MLMA and the results of the analyses described above. They can also serve as sources of information for future analyses and FMP development.

Medium low - Status Reports Plus Focused Rulemakings

A second group of fisheries may need relatively simple adjustments in management to address specific risks or concerns identified in the prioritization analyses. These might include a modification to an existing regulation, or the creation of a new one, where the available science is sufficient to warrant the change and there is broad stakeholder support behind the change. Any rulemakings made in this context should be relatively non-controversial, easily enforceable, and applied to the entire fishery with relative ease. An Enhanced Status Report plus a tailored rulemaking to address relatively simple issues may be an effective combination for many lower risk fisheries. Similar to the revised approach to Enhanced Status Report, the content of these limited rulemakings could more explicitly track with the areas of concern identified in the MLMA.

Medium high to high - Scaled Fishery Management Plans

In cases where the degree of management change, fishery complexity, controversy, and information needs are high, a detailed FMP may be required. The MLMA specifies what information must be included in an FMP, but does not specifically describe the process required to achieve that outcome. Rather than considering FMPs as having a process recipe in which there is a list of requirements to be checked off, it may be helpful to view the FMP as a graduated process, with increasing levels of intensity as required.

The resource demands on the Department and Commission may be reduced through several means, including process design, partnerships, and efficient stakeholder engagement, among other things. For example, creating Enhanced Status Reports early can help the Department to flag missing EFI in fisheries that have been prioritized for additional management action in the

medium term, enabling necessary data collection and analysis..

Identifying where along the continuum of management a fishery belongs depends on, 1) the degree of management change required to address risk and improve MLMA consistency, 2) the complexity of the fishery and, 3) the type and amount of information needed. The level of management change has two essential components: the impact on the fleet from the anticipated changes, and the administrative difficulty for managers to implement it. A change in decision-making framework or from input to output based controls may constitute a major change. Examples of minor changes in the degree of management might include a modification to the gear used to prosecute the fishery. In addition to the anticipated degree of management change, the level of complexity of the fishery will influence the intensity of the public process as well as the scope and scale of the resulting management document. Complexity criteria include the number of gear types, sector use and allocation, geographic distribution, and number of participants. Another key factor in determining the need for an FMP is whether existing statutes might conflict with the necessary changes to the fishery. By adopting a detailed FMP, any conflicting statutes can be rendered inoperative for that particular fishery, allowing greater management responsiveness.

While the first component of the framework is designed to help focus limited Department capacity on fisheries of greatest concern, this management scaling component is intended to match the level of management effort and resources to the characteristics and needs of a given fishery. In many ways this provides an explicit framework around what is an intuitive approach and seeks to identify important criteria for managers and stakeholders to consider when scaling management efforts.

III. The Web-based Fishery Dashboard

Section 7050(b)(8): Promote the dissemination of accurate information concerning the condition of, or management of, marine resources and fisheries by seeking out the best available information and making it available to the public through the marine resources management process.

The information gathered throughout the prioritization and management processes could be housed and regularly updated on a web-based dashboard. The dashboard would be a user interface that organizes and presents information from status reports in a way that is easy to understand at a glance. At its core would be a front page where users could choose among the state's fisheries and learn basic information, with more details nested within specific categories. The tabbed page format would be common to all fisheries, and would break the information from each Enhanced Status Report into its major component parts, including tabs for "at-a-glance", "natural history", "the fishery", "ecosystem considerations", "management issues", and "research and monitoring". While substantial time and cost will be required upfront to develop the dashboard and its underlying database, once established it should be designed to be relatively simple to maintain and update. The web-based dashboard is envisioned to help promote transparency in fisheries management, foster public engagement, and focus academic research on areas of management relevance.

DRAFT- Amended Framework for MLMA-based Management

*Development and implementation of this framework is contingent upon sufficient resources and capacity
Projects on climate change, partnerships, stakeholder engagement, and peer review apply across the framework*

