

Marine Life Management Act Master Plan: Implementation Work Plan

February 7, 2020

Background

The Marine Life Management Act Master Plan (2018 Master Plan) was adopted by the Fish and Game Commission (FGC) in June 2018. The 2018 Master Plan, which updates the original 2001 Master Plan, provides guidance and a toolbox for implementing the Marine Life Management Act (MLMA) goals and objectives. To help ensure that the 2018 Master Plan is implemented effectively, it specifies the development of an Implementation Work Plan (Work Plan).

Structure and Content

To aid in the successful implementation of the 2018 Master Plan, the Work Plan incorporates the following two characteristics:

1. The Work Plan must clearly capture the range of activities that are required to implement MLMA-based management over the next several years. These include fishery prioritization and scaling components from the 2018 Master Plan as well as routine ongoing activities and new statutory mandates.
2. The Work Plan must be adaptable to reflect change as specific tasks reach completion and others are initiated. In many cases, the results from completed tasks will inform the development of new tasks. For instance, the prioritization and scaling tasks within the MLMA-based management “Framework” will inform the decision (and resulting tasks) regarding which species currently need more focused management.

The Work Plan incorporates these two characteristics through nine key elements. The tasks listed under these elements within the Work Plan table below reflect current or soon-to-be implemented work. Some completed tasks are listed to provide context for current work; other completed tasks are listed in Appendix A. Planned next steps, those that are expected to be addressed at within the next several years, are provided in Appendix B.

Stakeholder engagement and peer review, as described in the 2018 Master Plan, are crucial to the successful implementation of the MLMA across most of the elements listed below. A variety of partners assist the Department with the implementation of these tasks including: members of the fishing industry; commercial and recreational fishing associations; academics; federal, state and local agencies; and non-government organizations.

Plan Updates

This is an update to the Work Plan provided to the FGC at their June 2019 meeting. Verbal updates of the MLMA Master Plan implementation will be provided to the MRC and, as needed or requested, to the FGC Tribal Committee and FGC at their scheduled 2020 meetings.

Work Plan

Time Frame: Completed, Annual, Ongoing, EC (Estimated Completion, Month and Year), In Progress (no estimated completion date), TBD (To Be Determined), or specifically described

I. MLMA Framework - Prioritization

Topic	Tasks	Time Frame
Fisheries Set #1: Key finfish plus Bay Shrimp, CA Spiny Lobster, and Market Squid	Present prioritized list to FGC	Completed - FGC Dec 2019
Fisheries Set #2: Remaining key invertebrate fisheries	Conduct Bycatch ERA and Habitat ERA; conduct Target ERA and combine with PSA; combine Bycatch, Habitat, and PSA + Target results	In progress
Fisheries Set #2	Present prioritized list to FGC	TBD

II. MLMA Framework - Scaling

Topic	Tasks	Time Frame
Prioritized Fisheries (Set #1)	Conduct evaluation (degree of management change needed; fishery complexity) to determine appropriate management scale; as possible, include socioeconomic and climate considerations (See Appendix C)	Completed Feb 2020
Prioritized Fisheries (Set #2)	Conduct evaluation (degree of management change needed; fishery complexity) to determine appropriate management scale; as possible, include socioeconomic and climate considerations	TBD

III. Scaled Fishery Management: Document Development

Topic	Tasks	Time Frame
Enhanced Status Reports (ESRs)	Develop 30 ESRs for 33 species	Completed
ESRs	Develop ESRs for remaining 5 species (see Section IV and V for more information on CA Halibut, Pacific Herring, and Bay Shrimp)	In progress
All ESRs	Update completed ESRs with 2019 landings and catch, research and monitoring results, and regulation changes	Dec 2020
New ESRs	Develop 4 additional ESRs (Spotfin Croaker, Yellowfin Croaker, Yellowtail, and Surf Smelt)	TBD
Fishery Management Plans (FMPs)	Complete Red Abalone FMP	EC Jan 2021
FMPs	Conduct a management strategy integration process for Red Abalone to determine the suite of indicators that provide the best management strategies for reopening a fishery and for managing an open fishery	EC Apr 2020

IV. Scaled Fishery Management: Key Actions for Priority Species without FMP^a

Topic	Tasks	Time Frame
CA Halibut	Develop CA Halibut stock assessment	EC Jun 2020
CA Halibut	Conduct formal peer view of CA Halibut stock assessment	EC Jul 2020
CA Halibut	Conduct outreach meetings	EC Jul 2020
CA Halibut	Complete ESR	EC Dec 2020
CA Halibut	Evaluate bycatch in commercial fishery	TBD
CA Halibut	Explore development of FMP	TBD
CA Halibut	Explore incorporation of Management Strategy Evaluation (MSE) Data Limited Methods toolkit (toolkit) results into management	TBD
Grunion	Develop ESR	EC Apr 2020

Topic	Tasks	Time Frame
Grunion	Develop regulation package for recreational fishery	EC Feb 2021
Kelp (Giant and Bull Kelp)	Develop ESR	EC Apr 2021
Kelp and Marine Algae	Commercial kelp and marine algae regulatory overhaul	Phase II EC Aug 2020
Kelp	Implement a statewide Kelp Management Plan	EC Apr 2022
Kelp	Develop a suite of priority projects (Statewide Kelp Restoration Toolkit) for kelp recovery and restoration	EC Apr 2022
Barred Sand Bass	Develop stock assessment	TBD
Barred Sand Bass	Evaluate immediate management needs	TBD
Barred Sand Bass	Explore incorporation of MSE toolkit results into management	TBD
Kelp Bass	Develop stock assessment	TBD
Kelp Bass	Explore incorporation of MSE toolkit results into management	TBD
Barred Surfperch	Conduct MSE using toolkit	TBD
Barred Surfperch	Identify most accurate ageing techniques using an age validation analysis	EC Dec 2020
Barred Surfperch	Conduct a latitudinal analysis of fecundity and parturition timing	EC Jun 2021
CA Barracuda	Conduct MSE using toolkit	TBD
CA Barracuda	Evaluate bycatch in commercial fishery	TBD
Bay Shrimp	Complete ESR	EC Dec 2020
Bay Shrimp	Evaluate bycatch in commercial fishery	TBD
Pacific Angel Shark	Evaluate bycatch in commercial fishery	TBD
Brown Smoothhound Shark	Monitor stock status as outlined in the ESR	Ongoing

^a Information on how these species fit within Scaled Fishery Management is provided in Appendix D.

V. Scaled Fishery Management: Key Actions for Priority Species with FMP

Topic	Tasks	Time Frame
White Seabass	Complete maturity study	EC Feb 2021
White Seabass	Evaluate bycatch in commercial fishery	TBD
Pacific Herring	Implement FMP	Effective Mar 2020
Pacific Herring	Complete ESR	EC Dec 2020
Pacific Herring	Herring Eggs on Kelp Rulemaking	EC June 2020
CA Sheephead	Evaluate bycatch in commercial fishery	TBD
Market Squid	Reconvene Fishery Advisory Committee	TBD
Market Squid	Evaluate need for short and long-term regulatory changes	TBD

VI. Managing Fisheries

Topic	Tasks	Time Frame
Monitoring/Research	Long-term fishery–dependent and –independent data collection	Ongoing
Monitoring/Research	Collaborative study investigating climate change impacts on the sustainability of CA Spiny Lobster, Market Squid, and Pacific Sardine within the CA Current System	EC 2020
Monitoring/Research	Socioeconomics of recreational fishery including target species choices	TBD
Data Analysis and Stock Assessments	Conduct Management Strategy Evaluation (MSE) through the Data-Limited Methods (DLM) Toolkit on eight state-managed species/species groups (Barred Sand Bass, CA Halibut, Kelp Bass, Redtail Surfperch, CA Spiny Lobster, Red Sea Urchin, Rock Crab [3 species], and Warty Sea Cucumber)	EC Jun 2020

Topic	Tasks	Time Frame
Review Analytical Results and Develop Management Options	White Seabass, Pacific Herring, and CA Spiny Lobster status as determined through process outlined in FMPs	Annual
Review Analytical Results and Develop Management Options	Market Squid status as determined through egg escapement evaluation	Ongoing
Review Analytical Results and Develop Management Options	Cabazon, Greenlings, CA Sheephead, Kellet's Whelk and Sheep Crab landings against TACs	Annual
Review Analytical Results and Develop Management Options	Northern CA Red Abalone status	Ongoing
Review Analytical Results and Develop Management Options	Dungeness Crab meat quality evaluation	Annual
Review Analytical Results and Develop Management Options	Dungeness Crab, Rock Crab, Razor Clam, and CA Spiny Lobster domoic acid level evaluation	Ongoing
Identification of Management Measures and Development of Regulations	Recreational crab trap bycatch of whales and turtles	Proposed adoption Nov 2020
Identification of Management Measures and Development of Regulations	Hydraulic pump use for taking clams	TBD
Identification of Management Measures and Development of Regulations	Purple Urchin emergency rulemaking	Proposed Adoption Feb 2020

VII. Outreach

Topic	Tasks	Time Frame
ESR Accessibility	Upload 30 final ESRs onto Marine Region website until imported into CA Fisheries Portal	EC Feb 2020
CA Fisheries Portal Phase 2	Build website for CA Fisheries Portal and add ESR text	EC July 2020
Marine Region Website	Renovate website	In progress
FGC Updates	Provide regular updates at FGC Marine Resource Committee and Tribal Committee meetings	Ongoing

Topic	Tasks	Time Frame
Partnerships and Stakeholder Engagement	Participate on formal and informal fishery task forces and workgroups	Ongoing
Partnerships and Stakeholder Engagement	Outreach to fishermen through port discussions	Ongoing
Partnerships and Stakeholder Engagement	Build partnerships to support implementation	Ongoing

VIII. Implementing New Programs

Topic	Tasks	Time Frame
California Fisheries Innovation Act of 2018 (AB 1573)	Implement Experimental Fishing Permit Program	EC Dec 2020
SB 1309	Implement Risk Assessment and Mitigation Program (RAMP)	EC Nov 2020
SB 1309	Implement Gear Retrieval Program for Dungeness Crab Traps	Completed Sept 2019
SB 1309	Implement Standardized Gear Marking Program	EC Apr 2020
Experimental Fisheries	Initiate Experimental Box Crab fishery	Started April 2019
Experimental Fisheries	Collect Box Crab catch information	EC for first year Mar 2020
Fisheries Disaster Relief Programs	Implement as required	Ongoing

IX. Improving MLMA Fisheries (Ecological, Social, and Management Systems)

Topic	Tasks	Time Frame
Data Modernization and Review	Review and evaluate logbooks and use of E-logs	In progress
New Data Collection Methods	Evaluate use of electronic monitoring for vessels participating in Box Crab experimental fishing program	EC Mar 2022
New Fishery Management Protocols and Tools	Develop criteria and protocols to evaluate and respond to potential risk of marine life entanglement (SB 1309)	Ongoing
FMP Planning	Lessons learned evaluation for FMP planning	In progress

Topic	Tasks	Time Frame
Restricted Access	Provide information for review of restricted access programs for Market Squid, Pink Shrimp, Spot Prawn, and CA Halibut	EC Dec 2020
Ocean Resources Enhancement	Administer Ocean Resources Enhancement and Hatchery Program (OREHP)	Ongoing
Fisheries Adaptive Capacity	Investigate ways for improving fisheries management responsiveness and fishing communities' resilience to changing ocean conditions	Ongoing
Fisheries Adaptive Capacity	Support development of port profile descriptions and socioeconomic tools	EC Sep 2020

Appendix A: Completed Tasks

A-I. MLMA Framework – Prioritization

Topic	Tasks
Fisheries Set #1: Key finfish plus Bay Shrimp, CA Spiny Lobster, and Market Squid	Bycatch Ecological Risk Assessment (ERA) and Habitat ERA, Target ERA conducted and combined with Productivity & Susceptibility Analysis (PSA); Bycatch, Habitat, and PSA + Target results combined
Fisheries Set #1	Update on production of prioritized list presented to MRC
Fisheries Set #1	ERA + PSA prioritization results presented to stakeholders

A-II. MLMA Framework - Scaling

See II. MLMA Framework – Scaling for current status of tasks.

A-III. Scaled Fishery Management: Document Development

See III. Scaled Fishery Management: Document Development for current status of tasks.

A-IV. Scaled Fishery Management: Key Actions for Priority Species without FMP

See IV. Scaled Fishery Management: Key Actions for Priority Species without FMP for current status of tasks.

A-V. Scaled Fishery Management: Key Actions for Priority Species with FMP

Topic	Tasks
Pacific Herring	FMP completed

A-VI. Managing Fisheries

Topic	Tasks
Monitoring/Research	Collaborative research on habitat use and population monitoring of the Warty Sea Cucumber completed
Identification of Management Measures and Development of Regulations	Regulations for Pacific Hagfish traps permitted on single vessel adopted

A-VII. Outreach

Topic	Tasks
CA Fisheries Portal Phase 1	Design for CA Fisheries Portal developed; includes layout for ESR text

A-VIII. Implementing New Programs

Topic	Tasks
Fisheries Disaster Relief Programs	Program for Dungeness Crab fisheries disaster payout developed

A-IX. Improving MLMA Fisheries (Ecological, Social, and Management Systems)

Topic	Tasks
Data Modernization and Review	Transition from paper commercial landing receipts to electronic receipts
New Data Collection Methods	Evaluation of use of remote operating vehicles for collecting sea cucumber data inside and outside of MPAs
New Fishery Management Protocols and Tools	Scoping regarding types of analyses to support review of CA restricted access programs

Appendix B: Longer-term Tasks

B-I. MLMA Framework – Prioritization

Topic	Tasks
Future Prioritization Process	Develop socioeconomic assessment tool for use in prioritization process as noted in MLMA-based Management Framework
Future Prioritization Process	Develop oceanographic and climate assessment tool to include in the prioritization process

B-II. MLMA Framework – Scaling

No new tasks identified at this time.

B-III. Scaled Fishery Management: Document Development

Topic	Tasks
Update ESRs	Enhance sections of management documents for priority fisheries including socioeconomics and climate
Prioritized Fisheries (Set #2)	Address target species of priority fisheries at appropriate scale identified in Section II

B-IV. Scaled Fishery Management: Key Actions for Priority Species without FMP

Topic	Tasks
Prioritized Target Species (Set #2)	Identify key actions for target species of priority fisheries identified in Section II that are not currently covered under an FMP

B-V. Scaled Fishery Management: Key Actions for Priority Species with FMP

Topic	Tasks
Prioritized Target Species (Set #2)	Identify key actions for target species of priority fisheries identified in Section II that are currently covered under an FMP

B-VI. Managing Fisheries

Topic	Tasks
Monitoring/Research	Conduct research to address the use of marine protected areas in MLMA-based management
Monitoring/Research	Conduct research to address socioeconomic information gaps
Monitoring/Research	Conduct research to address climate-related information gaps
Review Analytical Results and Develop Management Options	Identify management options to address fisheries concerns (e.g., ecological and socioeconomic) highlighted through monitoring/research and assessments
Review Analytical Results and Develop Management Options	Identify management options for addressing risks to fish stocks and fishing communities from climate change

B-VII. Outreach

Topic	Tasks
CA Fisheries Portal Phase 3	Implement enhancements for CA Fisheries Portal

B-VIII. Implementing New Programs

Topic	Tasks
New Mandated Programs	Implement any new marine fisheries programs as mandated through new legislation

Topic	Tasks
Experimental Fisheries	Identify emerging fisheries that might benefit from inclusion in an experimental gear program

B-IX. Improving MLMA Fisheries (Ecological, Social, and Management Systems)

Topic	Tasks
Data Modernization and Review	Develop and implement public fisheries data query tool for the Marine Landings Data System
Data Modernization and Review	Centralize fisheries independent data sets
New Fishery Management Protocols and Tools	Test methods for reducing bycatch
Fisheries Adaptive Capacity	Identify management approaches that increase adaptive capacity for responding to climate change

Appendix C: Fisheries Prioritization Set #1

Commercial Fisheries

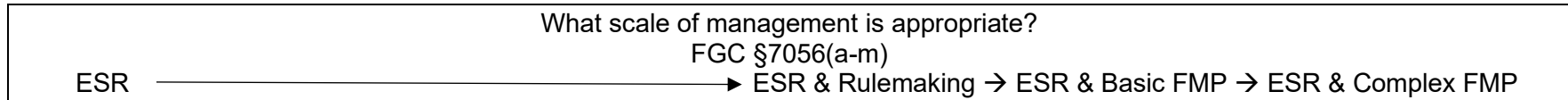
Species	Gear	Total	PSA Rank	Bycatch Rank	Habitat Rank
Pacific Angel Shark	Gill Net	4	1	1	2
CA Halibut	Trawl	5	2	2	1
CA Halibut	Gill Net	5	2	1	2
White Seabass	Gill Net	6	3	1	2
CA Bay Shrimp	Trawl	7	3	3	1
Spiny Lobster	Trap	7	2	3	2
Pacific Herring	Gill Net	8	3	3	2
CA Sheephead	Trap	8	2	4	2
CA Barracuda	Gill Net	10	3	2	5
Pacific Hagfish	Trap	11	4	4	3
Shiner Perch	Trap	11	4	4	3
Market Squid	Purse Seine	11	4	3	4
CA Halibut	Hook-and-Line	12	3	4	5
Pacific Bonito	Purse Seine	13	4	4	5
Redtail Surfperch	Hook-and-Line	13	4	4	5
Night Smelt	A Frame	13	4	4	5
Jacksmelt	Hook-and-Line	13	4	4	5

Recreational Fisheries

Species	Gear	Total	PSA Rank	Bycatch Rank	Habitat Rank
Brown Smoothhound	Hook-and-Line	9	1	4	4
CA Sheephead	Hook-and-Line	9	2	4	3
Kelp Bass	Hook-and-Line	9	2	4	3
Ocean Whitefish	Hook-and-Line	9	2	4	3
Spiny Lobster	Hoop Net	9	3	4	2
Spotted Sand Bass	Hook-and-Line	10	2	4	4
Barred Sand Bass	Hook-and-Line	10	2	4	4
CA Halibut	Hook-and-Line	11	3	4	4
Barred Surfperch	Hook-and-Line	11	3	4	4
White Seabass	Hook-and-Line	12	4	4	4
CA Barracuda	Hook-and-Line	12	3	4	5
CA Corbina	Hook-and-Line	12	4	4	4
White Croaker	Hook-and-Line	12	4	4	4
Pacific Bonito	Hook-and-Line	13	4	4	5

Appendix D: Scaled Fishery Management

Scaled Fishery Management along a continuum from Enhanced Status report (ESR) to a complex Fishery Management Plan (FMP)
[Adapted from the 2018 MLMA Master Plan, Figure 2]



ESR	ESR & Data/Scoping	ESR & Rulemaking	ESR & Basic/Complex FMP
Spotfin Croaker*	Barred Sand Bass	Grunion**	California Halibut
Yellowfin Croaker*	Kelp Bass	Kelp**	Red Abalone***
Yellowtail*	Barred Surfperch		
Surf smelt*	California Barracuda		
	Bay Shrimp		
	Pacific Angel Shark		
	Brown Smoothhound Shark		

* Species not included in prioritization process, but identified as needing ESR

** Species not included in prioritization process, but identified as needing ESR and rulemaking in accordance with criteria listed in the MLMA Master Plan, Chapter 2, regarding emerging issues

*** FMP currently being developed