FISHERY ECOSYSTEM PLAN
for the
MARIANA ARCHIPELAGO

Western Pacific Regional Fishery Management Council
1164 Bishop St., Suite 1400
Honolulu, HI 96813

PHONE: (808) 522-8220
FAX: (808) 522-8226

www.wpcouncil.org

Working Draft: 10/6/2015 12:03 PM

This page was intentionally left blank.

PREFACE

In 2005, the Council recommended to establish and implement fishery ecosystem plans for archipelagic, pelagic, and remote island areas in the Western Pacific Region. In order to accomplish this directive, Council staff conducted a series of ecosystem-based fishery management (EBFM) workshop between 2005 and 2007: Ecosystem Science (2005); Social Science (2006); and Management Policy (2007). Previously, the Council managed fisheries in these areas using the single-species management paradigm. Ecosystem-based fishery management addresses a geographically-specified system of fishery-associated organisms (including humans), and the environment and the processes that control its dynamics. It includes noncommercial and commercial fisheries, and recognizes the physical, biological, economic and social interactions among the affected components of the ecosystem. Perhaps most importantly, EBFM seeks to manage for a spectrum of goals society has for fishery ecosystems – some of which may be in competition.

The Council's first fishery ecosystem plans were approved by the Secretary of Commerce in September 2009. However, ecosystem-based fishery management thinking has an extended history in our region. For example, the Council's Executive Director, Kitty Simonds, was an active participant in one of the National Oceanic and Atmospheric Administration's (NOAA) first ecosystem management workshops, in 1986. In 2001, the Council took final action to recommend the first fishery ecosystem management plan in the nation. The Coral Reef Ecosystem Fishery Management Plan encompassed Council-associated coral reef fishery ecosystems in the U.S. Pacific Islands. Among other things, the plan established a process to assess and control ecosystem effects of bottomfish, precious coral, and crustacean fisheries operating federal waters under then-existing fishery management.

The Fishery Ecosystem Plan for the Mariana Archipelago (FEP) is the framework under which the Council will manage place-based fishery ecosystem resources, including the integration of important ecosystem elements important to decision-making. These elements include social, cultural, and economic dimensions, protected species, habitat considerations, climate change effects, and the implications to fisheries from various spatial uses of the marine environment. Successful ecosystem-based fisheries management requires an increased understanding of a range of social and scientific issues, including the societal goals society appropriate management objectives, biological and trophic relationships, ecosystem indicators and models, and the ecological effects of non-fishing activities on the marine environment. Future fishery management actions are anticipated to utilize this information as it becomes available, and adaptive management will be used to further advance the implementation of ecosystem science and principles. In this regard, the success of the EBFM approach relies heavily on the data collection and synthesis process established by the pelagic and archipelago annual fishery ecosystem reports (SAFE Reports). In 2015, the Council, in partnership with the National Marine Fisheries (NMFS) Pacific Islands Fishery Science Center, local fishery resource management agencies, and the NMFS Pacific Islands Regional Office revised and expanded the contents of these reports to include the range of ecosystem elements described above.

This page was intentionally left blank.

EXECUTIVE SUMMARY

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) is the primary domestic legislation governing management of the nation's marine fisheries. The United States Congress has amended and reauthorized the MSA several times since 1976. The 1996 reauthorization included, among other things, a new emphasis on the precautionary approach. In 2006, an annual catch limit requirement was written in. The MSA contains ten national standards, with which all fishery management plans and plan amendments must conform. The MSA also requires U.S. fisheries management be consistent with the requirements of other regulations including the National Environmental Policy Act, Marine Mammal Protection Act, the Endangered Species Act, the Migratory Bird Treaty Act, and several other Federal laws and Executive Orders.

Under the Magnuson-Stevens Act, the Western Pacific Regional Fishery Management Council (Council) is authorized to prepare and submit to the Secretary of Commerce for approval, disapproval or partial approval, a Fishery Management Plan (FMP) and any necessary amendments, for fisheries that are under its authority and that require conservation and management. The Council transitioned to Fishery Ecosystem Plans (FEPs) from FMPs in 2009. The Council conducts public hearings so that all interested persons may have opportunities to participate in the development of FEPs and amendments.

This Fishery Ecosystem Plan (FEP) governs federal fisheries of the Mariana archipelago. The management area is the United States (U.S.) Exclusive Economic Zone (EEZ) of the archipelago. The Plan covers bottomfish, coral reef fish, crustacean, and precious coral stocks and fisheries. The FEP was implemented on September 24, 2009. It replaced a set of species-based FMPs that covered the Western Pacific Region. This version of the Mariana FEP was implemented on ____. It strengthens the ecosystem-based fishery management approach, provides the public with additional information regarding the management process, conforms to new information requirements, and is a framework for a clearer understanding of fishery and conservation and management measures promulgated by the FEP and subsequent amendments to it.

This page was intentionally left blank.

TABLE OF CONTENTS

PREFACE i

EXECUTIVE SUMMARY iii

1 INTRODUCTION 1

1.1 Mission 1
1.2 Authorities and Primary Management and Process Drivers 2
1.2.1 MSA 2
1.2.1.1 National Standards 5
1.2.1.2 Essential Fish Habitat 6
1.2.2 National Marine Fisheries Service Guidance 7
1.2.3 The National Environmental Policy Act 7
1.2.4 Endangered Species Act 8
1.2.5 Marine Mammal Protection Act 9
1.3 Marianas Archipelago 10
1.3.1 Geography 10
1.3.2 People 11
1.3.2.1 Indigenous Culture 11
1.3.2.2 Current Demographics 11
1.3.2.3 Socio-political boundaries 12
1.3.2.4 Fishing Communities 13

2 MANAGEMENT POLICY, GOALS, AND OBJECTIVES 17

2.1 Council Management Policy 17
2.2 Marianas FEP Purpose and Need 17
2.3 Mariana Archipelago Fishery Ecosystem Plan Goals 17
2.4 Marianas FEP Objectives 19

3 MANAGEMENT REGIME AND FISHERY INFORMATION 23

3.1 Management Regime 23
3.1.1 Bottomfish Fisheries 25
3.1.1.1 CNMI Bottomfish Fishery 26
3.1.1.1.1 Description (commercial, charter, recreational) 26
3.1.1.1.2 Type and Quantity of Fishing Gear 27
3.1.1.1.3 Catch in Numbers or Weight 28
3.1.1.1.4 Fishing Areas 28
3.1.1.1.5 Time of Fishing 28
3.1.1.1.6 Economics 28
3.1.1.1.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors 28
3.1.1.1.8 Present and Probable Future Condition of the Fishery 29
3.1.1.1.9 Yield 29
3.1.1.1.10 Annual Catch Limit 29
3.1.1.1.11 Criteria for Determining Overfishing 30
3.1.1.1.12 MSA Conservation and Management Measures 31
3.1.1.1.13 Regulations implementing International Recommendations and other Applicable Laws 32

3.1.1.1.14 Bycatch Amount and Type 32
3.1.1.1.15 CNMI Bottomfish Essential Fish Habitat 33
3.1.1.2 Guam Bottomfish Fishery 34
3.1.1.2.1 Description (commercial, charter, recreational) 34
3.1.1.2.2 Type and Quantity of Fishing Gear 35
3.1.1.2.3 Catch in Numbers or Weight 35
3.1.1.2.4 Fishing Areas 36
3.1.1.2.5 Time of Fishing 36
3.1.1.2.6 Economics 36
3.1.1.2.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors 36
3.1.1.2.8 Present and Probably Future Condition of the Fishery 36
3.1.1.2.9 Yield 37
3.1.1.2.10 Annual Catch Limit 37
3.1.1.2.11 Criteria for Determining Overfishing 38
3.1.1.2.12 MSA Conservation and Management Measures 39
3.1.1.2.13 Regulations implementing International Recommendations and other Applicable Laws 40
3.1.1.2.14 Bycatch Amount and Type 40
3.1.1.2.15 Guam Bottomfish Essential Fish Habitat 41
3.1.2 Coral Reef Fisheries 42
3.1.2.1 CNMI Coral Reef Fishery 42
3.1.2.1.1 Description (commercial, charter, recreational) 46
3.1.2.1.2 Type and Quantity of Fishing Gear 47
3.1.2.1.3 Catch in Numbers or Weight 47
3.1.2.1.4 Fishing Areas 48
3.1.2.1.5 Time of Fishing 49
3.1.2.1.6 Economics 49
3.1.2.1.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors 49
3.1.2.1.8 Present and Probable Future Condition of the Fishery 49
3.1.2.1.9 Yield 49
3.1.2.1.10 Extent to Which Fishing Vessels will Harvest OY 50
3.1.2.1.11 Extent to Which U.S. Fish Processors will Process OY 50
3.1.2.1.12 Annual Catch Limit 50
3.1.2.1.13 Criteria for Determining Overfishing 50
3.1.2.1.14 MSA Conservation and Management Measures 51
3.1.2.1.15 Regulations Implementing International Recommendations and other Applicable Laws 53
3.1.2.1.16 Bycatch 53
3.1.2.1.17 CNMI Coral Reef Essential Fish Habitat 53
3.1.2.2 Guam Coral Reef Fishery 57
3.1.2.2.1 Description (commercial, charter, recreational) 57
3.1.2.2.2 Type and Quantity of Fishing Gear 59
3.1.2.2.3 Catch in Numbers or Weight 59
3.1.2.2.4 Fishing Areas 60
3.1.2.2.5 Time of Fishing 60
3.1.2.2.6 Economics 60

3.1.2.2.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors 60
3.1.2.2.8 Present and Probable Future Condition of the Fishery 60
3.1.2.2.9 Yield 61
Coral reef fishes are not typically processed (filleted, etc.). Reef fish are sold fresh whole by retailers or directly to consumers by fishermen in person-to-person transactions or along the roadside. 62
3.1.2.2.10 Annual Catch Limit 62
3.1.2.2.11 Criteria for Determining Overfishing 62
3.1.2.2.12 MSA Conservation and Management Measures 63
3.1.2.2.13 Regulations Implementing International Recommendations and other Applicable Laws 64
3.1.2.2.14 Bycatch 65
3.1.2.2.15 Guam Coral Reef Essential Fish Habitat 65
3.1.3 Crustacean Fisheries 66
3.1.3.1 CNMI Crustacean Fishery 66
3.1.3.1.1 Description (commercial, charter, recreational) 66
3.1.3.1.2 Type and Quantity of Fishing Gear 66
3.1.3.1.3 Catch in Numbers or Weight 67
3.1.3.1.4 Fishing Areas 68
3.1.3.1.5 Time of Fishing 68
3.1.3.1.6 Economics 68
3.1.3.1.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors 68
3.1.3.1.8 Present and Probable Future Condition of the Fishery 68
3.1.3.1.9 Yield 68
3.1.3.1.10 Annual Catch Limit 69
3.1.3.1.11 Criteria for Determining Overfishing 70
3.1.3.1.12 MSA Conservation and Management Measures 70
3.1.3.1.13 Bycatch 72
3.1.3.1.14 CNMI Spiny and Slipper Lobster and Kona Crab Essential Fish Habitat 72
3.1.3.1.15 CNMI Deepwater Shrimp Essential Fish Habitat 73
3.1.3.2 Guam Crustacean Fishery 74
3.1.3.2.1 Description (commercial, charter, recreational) 74
3.1.3.2.2 Type and Quantity of Fishing Gear 74
3.1.3.2.3 Catch in Numbers or Weight 74
3.1.3.2.4 Fishing Areas 75
3.1.3.2.5 Time of Fishing 75
3.1.3.2.6 Economics 75
3.1.3.2.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors 75
3.1.3.2.8 Present and Probable Future Condition of the Fishery 75
3.1.3.2.9 Yield 75
3.1.3.2.10 Annual Catch Limit 76
3.1.3.2.11 Criteria for Determining Overfishing 77
3.1.3.2.12 MSA Conservation and Management Measures 77
3.1.3.2.13 Regulations Implementing International Recommendations and other Applicable Laws 79
3.1.3.2.14 Bycatch 79

3.1.3.2.15 Crustacean Essential Fish Habitat 79
3.1.3.2.16 CNMI Deepwater Shrimp Essential Fish Habitat 80
3.1.1 Precious Corals Fisheries 81
3.1.1.1 CNMI and Guam Precious Corals Fisheries 81
3.1.1.1.1 Description (commercial, charter, recreational) 81
3.1.1.1.2 Type and Quantity of Fishing Gear 82
3.1.1.1.3 Catch in Number or Weight 82
3.1.1.1.4 Time of Fishing 82
3.1.1.1.5 Fishing Areas 82
3.1.1.1.6 Yield 82
3.1.1.1.7 Extent to Which U.S. Processors will Process OY 82
3.1.1.1.8 Annual Catch Limit 82
3.1.1.1.9 Criteria for Determining Overfishing 83
3.1.1.1.10 MSA Conservation and Management Measures 83
3.1.1.1.11 Bycatch 86
3.1.1.1.12 Regulations Implementing International Recommendations and other Applicable Laws 86
3.1.1.1.13 Precious Corals Essential Fish Habitat 86
3.1.2 Small Boat Pelagic Fisheries 87
3.1.2.1 Summary Description 87
3.2 Other Consideration Important for FEP Implementation 89
3.2.1 Sociocultural Data 89
3.2.2 Protected Species Information 90
3.2.3 Climate Change Data and Research 91
3.2.4 Marine Planning Considerations 92
3.2.5 Fishing Rights of Indigenous People 93
3.2.6 Aquaculture 95

4 MANAGEMENT PROCESS 97

4.1 Council Process 97
4.1.1 Overview of Council Process 97
4.1.1.1 Development and Approval Process for Management Actions 97
4.1.1.2 Specific Elements and their Relationship to Decision-making 98
4.1.1.2.1 Advisory Panels 100
4.1.1.2.2 Plan Teams 100
4.1.1.2.3 Science and Statistical Committee 100
4.1.1.2.4 Fishing Industry Advisory Committee 101
4.1.1.2.5 REAC and other Council Committees 101
4.1.1.2.6 Ad-hoc Committees and Working Groups 102
4.1.1.2.7 Federal Agencies 102
4.1.1.2.8 Local Agencies 102
4.1.1.2.9 Regional Entities 103
4.1.1.2.10 Fishery Impact Statement 103
4.1.1.2.11 Public Consultation Process 103
4.1.1.3 The Role of Agreements, Statement of Organization Practices and Procedures, etc. 103
4.1.1.4 Communication Plan 103

4.1.1.5 Council Five Year Research Priorities 104
4.1.1.6 Annual Fishery Reports and their Use 105
4.1.1.7 International Considerations 106
4.1.1.8 Other Applicable Laws and their Role 107

5 REFERENCES 109

LIST OF FIGURES

Figure 1. Map of the US Western Pacific Region. 2
Figure 2. Traditional Chamorro sailing canoe. 11
Figure 3. Traditional thrownet fisherman. 13
Figure 4. Assorted catch using traditional thrownet gear. 13
Figure 5. Atulai harvest being divided up for 14
Figure 6. Mariana Fishery Ecosystem Management Plan Regulated Fishing Waters. 24
Figure 7. Mariana Trench Marine National Monument. Source: http://www.gop.gov/fdsys/pkg/FR-2009-01-12/pdf/E9-496.pdf 25
Figure 8. Typical small trailer vessel used for 26
Figure 9. Large bottomfish vessels moored in Saipan, CNMI. 27
Figure 10. CNMI bottomfish catch trend 2004-2014. 28
Figure 11. Road side vendor selling yellowtail paka. 34
Figure 12. Guam Bottomfish Trend 2004-2014. 36
Figure 13. Anchoring Prohibition for Vessels over 50 ft LOA off Guam. 40
Figure 14. Assorted coral reef fish catch. 46
Figure 15. Relative proportion of reef fish families that dominate the catch based on a nine-year average from creel survey and commercial purchase system information. 48
Figure 16. Average catch of reef fish across different 48
Figure 17. Coral reef fish harvest from small boat fisheries. 58
Figure 18. Relative proportion of reef fish families that dominate the catch 59
Figure 19. Average catch of reef fish across different fishing methods employed in Guam. 60
Figure 20. Crustaceans catch. 67
Figure 21. Guam Crustacean Catch Trend 2004-2014. 75
Figure 22. Tailor boats commonly used for pelagic trolling and bottomfishing can be launched from small boat harbors or at various beach sites. 87
Figure 23. Small boat pelagic trolling vessel leaving port 89

LIST OF TABLES

Table 1. Mariana Archipelago Bottomfish Management Unit Species. 26
Table 2. Overfishing Threshold Specifications for Bottomfish Stocks 30
Table 3. Recruitment Overfishing Control Rule Specifications for Bottomfish Stocks 31
Table 4 Mariana Archipelago Coral Reef Ecosystem MUS, Currently Harvested Coral Reef Taxa 42
Table 5. CPUE-based Overfishing Limits and Reference Points for Coral Reef Species. 51
Table 6. EFH Designations for Coral Reef Taxa 55

Table 7: Coral Reef Ecosystem HAPC in the Mariana Archipelago 57
Table 8. Mariana Archipelago Crustaceans MUS 66
Table 9 Mariana Archipelago Precious Coral MUS 81

APPENDICES

Appendix A: List of Acronyms……...……A-1
Appendix B: List of Definitions……..B-1
Appendix C: Regulations Implementing the Mariana Archipelago Fishery Ecosystem Plan and Mariana Trench Marine National Monument……..…….……C-1
Appendix D: Summary of Fishery Management Plans and Amendments……..D-1
Appendix E: MSY Control Rule and Stock Status Determination and Process for Specifying Annual Catch Limits and Accountability Measures……E-1
Appendix F: EFH Impacts Provisions……..F-1
Appendix G: Essential Fish Habitat and Habitat Areas of Particular Concern Maps…….G-1

1 INTRODUCTION

1.1 Mission

The Western Pacific Regional Fishery Management Council (Council) is a federal instrumentality established and authorized by Congress in 1976. Its mission is to "plan, coordinate and realize all responsibilities as delegated under the MSA for effective conservation and prudent development of the region's fishery resources for the benefit of the region and the nation." To meet this mission, the Council established the following Guiding Principles:

1. Support quality research and obtain the most complete scientific information available to assess and manage fisheries;
2. Promote an ecosystem approach in fisheries management, including reducing waste in fisheries and minimizing impacts on marine habitat and impacts on protected species;
3. Conduct education and outreach to foster good stewardship principles and broad and direct public participation in the Council's decision making process;
4. Recognize the importance of island cultures and traditional fishing practices in managing fishery resources and foster opportunities for participation;
5. Promote environmentally responsible fishing and the utilization of sustainable fisheries that provide long term economic growth and stability;
6. Promote regional cooperation to manage domestic and international fisheries; and
7. Encourage development of technologies and methods to achieve the most effective level of monitoring, control and surveillance and to ensure safety at sea.

The Council is responsible for developing fishery management policies for the western Pacific region, which includes the State of Hawaii, Territories of American Samoa and Guam, the Commonwealth of the Northern Mariana Islands and other U.S. Pacific remote island areas (Figure 1). All management plans, amendments to them, and regulations implementing them, must comply with the MSA and all other applicable laws – such as the National Environmental Policy Act (NEPA). The Council's primary responsibility is to develop and recommend fishery management measures for any federal managed fishery, stock, or stock complex, as well as measure to protect important ecosystem components, such as protected species and fish habitat.

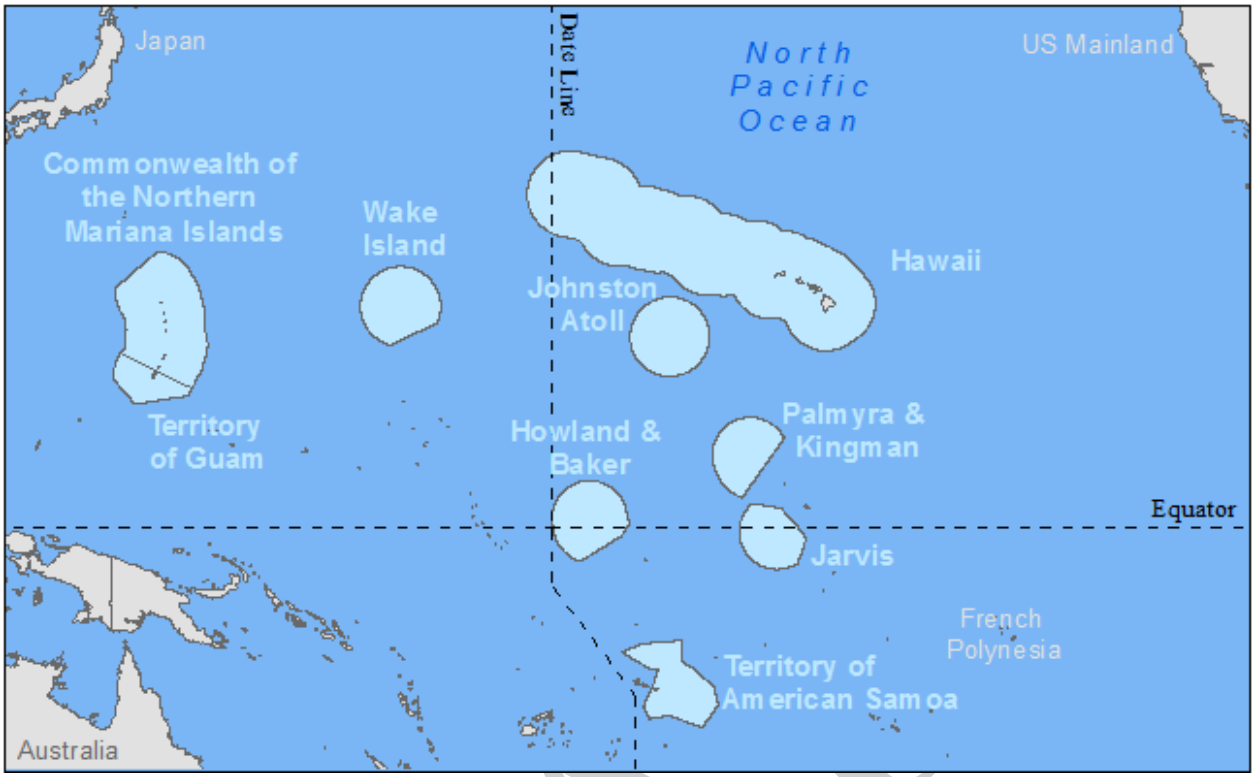


Figure 1. Map of the US Western Pacific Region.

Our region's archipelagos have distinct cultures, communities, and marine resources. For thousands of years, the indigenous people of these islands relied on healthy marine ecosystems to sustain themselves, their families, and their island communities. Although the past century has brought enormous advancements in transportation and diet, these islanders continue to depend on healthy marine ecosystems, owing to the remoteness of the islands, and their intact cultural practices. Even in the modern period, much ecological, economic, and social benefit is realized from sustainably managing island resources.

1.2 Authorities and Primary Management and Process Drivers

1.2.1 MSA

In 1976, the United States Congress passed the Fishery Conservation and Management Act to promote domestic fisheries and establish management authority over fishery and related resources within the 200 mile federal Exclusive Economic Zone (EEZ). The statute has been subsequently amended and reauthorized over the ensuing years and is now known as the

Magnuson-Stevens Fishery Conservation and Management Act (MSA).[2] It is the primary law governing federal management of United States fisheries.

Under the MSA, the United States (U.S.) has exclusive fishery management authority over all fishery resources found within its Exclusive Economic Zone (EEZ). For purposes of the MSA, the inner boundary of the U.S. EEZ extends from the seaward boundary of each coastal state to a distance of 200 nautical miles from the baseline from which the breadth of the territorial sea is measured. In the Mariana Archipelago, the Council has authority over the fisheries based in, and surrounding, the Territory of Guam and the Commonwealth of the Northern Mariana Islands.

The management system created by the MSA is unique in U.S. natural resource management. In order to reduce top-down, centralized fishery resource management decision-making, Congress established eight regional fishery management councils and provided them with responsibility for developing fishery management plans and recommending amendments to those plans on an ongoing basis, as well as regulatory language for implementation. As such, the Councils have a unique relationship with their primary partner federal agency, the National Marine Fisheries Service (NMFS). Councils are composed of federal, state, and territorial fishery management officials, participants in commercial and recreational fisheries, and other individuals with experience, scientific expertise, or training that give them knowledge about fishery conservation and management or commercial or recreational harvest. In addition, the MSA mandates certain advisory bodies (and authorized the Councils to creates others) so as to provide the Councils with technical advice and guidance in fishery policy decision making. The MSA mandates an open, public process for the development of fishery management measures and actions through the Council system.

As in other regions, responsibility for the management of marine resources in the Western Pacific is shared by a number of federal and local government agencies. At the federal level are the Council, the NMFS (also known as the NOAA Fisheries Service), the National Oceanic and Atmospheric Administration (NOAA), the U.S. Fish and Wildlife Service (U.S. Department of the Interior) and the U.S. Department of State. The U.S Coast Guard, in the U.S. Department of Homeland Security, as well as the Department of Defense, through the Air Force, Army, Navy and Marine Corps, also controls access, enforcement, and use of various marine waters throughout the region.

Sixteen members of the Council include the following:

- Regional Administrator, Pacific Islands Regional Office, National Marine Fisheries Service

[2] The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended through 2006, is available at: http://www.nmfs.noaa.gov/sfa/magact/MSA_Amended_2007%20.pdf

- Director, Department of Marine and Wildlife Resources, Territory of American Samoa
- Secretary, Department of Land and Natural Resources, Commonwealth of the Northern Mariana Islands
- Director, Department of Agriculture, Territory of Guam
- Chair, Department of Land and Natural Resources, State of Hawaii
- One obligatory member from each of the four island areas nominated by their respected governors and appointed by the Secretary of Commerce
- Four at-large members nominated by the region's Governors and appointed by the Secretary of Commerce.
- District Commander, US Coast Guard 14th District (non-voting member)
- Director, Office of Marine Conservation, US State Department (non-voting member)
- Director, US Fish and Wildlife Service (non-voting member)

The basic functions of the Council as required by the MSA are diverse. For fisheries under its authority that require conservation and management the Council has the following responsibilities:

1. Prepares and transmits to the Secretary fishery ecosystem plans (FEPs) and amendments to such plans as necessary to address changing needs in conservation and management;
2. Prepares comments on any application for foreign fishing transmitted to the Council, and any fishery management plan or amendment transmitted to the Council;
3. Conducts public scoping, meetings and hearings at appropriate times and in appropriate locations in its geographic area[3] so as to allow all interested persons an opportunity to be heard in the development of FEPs and amendments to such plans, and other matters with respect to the administration and implementation of the provisions of the Magnuson-Stevens Act and other Statutory requirements;
4. Submits to the Secretary such periodic reports as the Council deems appropriate and any other relevant report that may be requested by the Secretary;
5. Reviews on a continuing basis, and revises as appropriate, the following for each fishery within its geographical area of authority: assessments and related specifications with respect to the optimum yield (OY); the capacity and extent to which US fish processors will process US harvested fish; and the total allowable level of foreign fishing;
6. Develops annual catch limits (ACLs) for managed fisheries that may not exceed the fishing level recommendations of its Scientific and Statistical Committee (SSC) or similar peer-review process;

[3] "Geographic area" may include an area under the authority of another Council if the fish in the fishery concerned migrate into, or occur in, that area or if the matters being heard affect fishermen of that area.

7. Develops, in conjunction with its SSC, five-year research priorities for fisheries, fisheries interactions, habitats and other areas of research that are necessary for management purposes; update them as necessary; and submit them to the Secretary of Commerce (Secretary) and the Pacific Islands Fisheries Science Center (PIFSC) of the National Marine Fisheries Service (NMFS) for their consideration in developing research priorities and budgets for the Pacific Islands/Western Pacific Region;
8. May review and provide comments on any federal or state action that may affect fishery habitat under the Council's jurisdiction; and
9. Conducts any other activities that are required by, or provided for in, the MSA or which are necessary and appropriate to the foregoing functions.

1.2.1.1 National Standards

To carry out the above functions, the Council pays particular attention to 10 National Standards (NS) described in the MSA, against which the Council's recommendations to the Secretary are measured:

1. Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the OY from each fishery for the United States fishing industry.
2. Conservation and management measures shall be based upon the best scientific information available.
3. To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range and interrelated stocks of fish shall be managed as a unit or in close coordination.
4. Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be fair and equitable to all such fishermen; reasonably calculated to promote conservation; and carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.
5. Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.
6. Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources and catches.
7. Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.
8. Conservation and management measures shall, consistent with the conservation requirements of the MSA (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that meet the requirements of NS 2 in order to provide for the sustained participation of such communities, and, to the extent practicable, minimize adverse economic impacts on such communities.

9. Conservation and management measures shall, to the extent practicable, minimize bycatch and, to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.
10. Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.

1.2.1.2 Essential Fish Habitat

In 1996, Congress passed the Sustainable Fisheries Act, which amended the MSA and added several new FMP provisions. From an ecosystem management perspective, the identification and description of essential fish habitat (EFH) for all federally managed species were among the most important of these additions.

The EFH provisions are especially important because of the procedural requirements they impose on both Councils and federal agencies. First, for each FMP, Councils must identify adverse impacts to EFH resulting from both fishing and non-fishing activities, and describe measures to minimize these impacts. Under § 305(b)(2) of the MSA, federal agencies are required to consult with NMFS on any action authorized, funded, or undertaken by the agency that may adversely affect EFH identified by the Council. Councils are not required to provide conservation and enhancement recommendations except for anadromous species. In 2002, NMFS revised the guidelines by providing additional clarifications and guidance to ease implementation of the EFH provisions by Councils.

The guidelines recommended that each Council prepare a preliminary inventory of available environmental and fisheries information on each managed species. Such an inventory is useful in describing and identifying EFH, as it also helps to identify missing information about the habitat utilization patterns of particular species. The guidelines note that a wide range of basic information is needed to identify EFH. This includes data on current and historic stock size, the geographic range of the managed species, the habitat requirements by life history stage, and the distribution and characteristics of those habitats. Because EFH has to be identified for each major life history stage, information about a species' distribution, density, growth, mortality, and production within all of the habitats it occupies, or formerly occupied, is also necessary.

The guidelines also state that the quality of available data used to identify EFH should be rated using the following four-level system:

Level 1: All that is known is where a species occurs based on distribution data for all or part of the geographic range of the species.
Level 2: Data on habitat-related densities or relative abundance of the species are available.
Level 3: Data on growth, reproduction, or survival rates within habitats are available.
Level 4: Production rates by habitat are available.

With higher quality data, those habitats most utilized by a species could be identified, allowing a more precise designation of EFH. Habitats of lesser value to a species may also be essential, depending on the health of the fish population and the ecosystem. For example, if a species is overfished, and habitat loss or degradation is thought to contribute to its overfished condition, all

habitats currently used by the species may be essential.

The EFH provisions are especially important because of the procedural requirements they impose on both Councils and federal agencies. First, for each FMP, Councils must identify adverse impacts to EFH resulting from both fishing and non-fishing activities, and describe measures to minimize these impacts. Second, the provisions allow Councils to provide comments and make recommendations to federal or state agencies that propose actions which may affect habitat, including EFH, of a managed species. In 2002, NMFS revised the guidelines by providing additional clarifications and guidance to ease implementation of the EFH provisions by Councils.

Based on the best available information on habitats in waters of the Mariana Archipelago and the existing fisheries, the Council has determined that the fisheries operating in the Marianas are not expected to have adverse impacts on EFH or Habitat Areas of Particular Concern (HAPC; a subset of EFH) for managed species. Continued and future operations of fisheries under the Mariana Archipelago FEP are not likely to lead to substantial physical, chemical, or biological alterations to the habitat, or result in loss of, or injury to, these species or their prey.

The description and identification of EFH and HAPC for fisheries managed under this FEP can be found in Section 3, Management Regime. Information related to activities that may adversely affect EFH and EFH maps can be found in Appendices 4 and 5. Life history and habitat information on managed species, on which the EFH descriptions are based, may be found in the EFH Source Document available on the Council's web site. The most up-to-date EFH maps are also available on the Council's web site.

1.2.2 National Marine Fisheries Service Guidance

Primary authority for implementing and enforcing management action developed under the MSA rests with the U.S. Secretary of Commerce (Secretary), who has delegated this responsibility to the National Marine Fisheries Service (NMFS). The NMFS develops guidance to aid the Councils, fishermen and others to develop, implement and comply with fishery regulations. In addition, the Council and NMFS have established operating agreements to help define specific roles and responsibilities for developing, approving, and implementing fishery management plans and other actions under the auspices of the MSA. Such guidance documents and agreements include, but are not limited to, *Operational Guidelines for Fishery Management Process* and *Regional Operating Agreements*.

1.2.3 The National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires federal agencies to assess and consider the effects of major federal actions on the quality of the human environment by considering the environmental impacts of proposed actions and reasonable alternatives to those actions. The Act also requires that the public be provided the opportunity to help identify, review and comment on such effects, particularly in cases where an environmental impact statement (EIS) is being prepared.

NEPA requires an environmental impact statement (EIS) for major federal actions that significantly affect the quality of the human environment. Agencies may conduct an environmental assessment to determine whether an EIS is necessary or whether a Finding of No Significant Impact (FONSI) or a Categorical Exclusion (CE) is warranted.

At the time of the final decision (and in the case of an EIS, at least 30 days after the Final EIS is noticed and at least 90 days after the Draft EIS is noticed), agencies must have prepared a record of decision (ROD), FONSI, or determined that a CE applies. It is important to be aware of the interaction of NEPA and MSA timing requirements. For example, the deadline for the Secretary to approve, disapprove, or partially approve a Council-submitted FMP or Amendment (i.e., 30 days after the close of the comment period on the FMP or Amendment and often referred to as "Day 95") should not occur prior to signing the ROD or the FONSI. If it is an FEIS, the ROD may not be signed sooner than 30 days after noticing the availability of the FEIS.

1.2.4 Endangered Species Act

The Endangered Species Act (ESA) provides for the conservation of species that are endangered or threatened, and the conservation of the ecosystems on which they depend. Section 7(a)(2) of the ESA requires each federal agency to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. To "jeopardize" means to reduce appreciably the likelihood of survival and recovery of a species in the wild by reducing its numbers, reproduction, or distribution. As described in the NMFS policy for Integration of Endangered Species Act Section 7 with the Magnuson-Stevens Act Processes (PD 01-117), the Council plays an integral role in these consultations.

When a federal agency's action "may affect" an ESA-listed species, that agency is required to consult formally with NMFS (for marine species, some anadromous species, and their designated critical habitats) or the U.S. Fish and Wildlife Service (USFWS; for terrestrial and freshwater species or their designated critical habitat). The product of formal consultation is the agency's biological opinion (BiOp). Federal agencies are exempt from this formal consultation requirement if they have concluded that an action "may affect, but is not likely to adversely affect" ESA-listed species or their designated critical habitat, and NMFS or USFWS concur with that conclusion (see 50 CFR § 402.14(b)).

The ESA also prohibits the taking[4] of listed species except under limited circumstances. Western Pacific regional fisheries are operated in accordance with terms of ESA consultations that consider the potential interactions of fisheries with listed species, the impacts of interactions on the survival and recovery of listed species, and the protection of any designated critical habitat.

[4] The definition of "take" includes to harass, harm, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.

As provided in 50 CFR § 402.16, NMFS is required to reinitiate formal consultation if:
(1) the amount or extent of the incidental take is exceeded;
(2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in an opinion;
(3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in the opinion; or
(4) a new species is listed or critical habitat designated that may be affected by the action.

Fisheries operating under this FEP have the potential to interact with a range of protected species. A current list of ESA listed species applicable to the Marianas FEP is included in the Annual Archipelagic Fishery Ecosystem Report (SAFE Report) and additional information regarding protected species interactions in this FEP is included in Section 3.2 (Other Considerations Important for Implementation – Protected Species Information).

1.2.5 Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) prohibits, with certain exceptions, the take of marine mammals in the U.S. EEZ and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the United States. The MMPA gives the Secretary authority and duties for the protection and conservation of all cetaceans (whales, dolphins, and porpoises) and pinnipeds (seals and sea lions, except walruses). The MMPA requires NMFS to prepare and periodically review marine mammal stock assessments (see 16 U.S.C. § 1361, *et seq*.).

Pursuant to the MMPA, NMFS has promulgated specific regulations that govern the incidental take of marine mammals during fishing operations (50 CFR 229). Under section 118 of the MMPA, NMFS must publish, at least annually, a List of Fisheries that classifies U.S. commercial fisheries into three categories, based on relative frequency of incidental mortality and serious injury to marine mammals in each fishery:

- Category I designates fisheries with frequent serious injuries and mortalities incidental to commercial fishing. Annual mortality and serious injury of a stock in a given fishery is by itself responsible for the annual removal of greater than or equal to 50 percent or more of any stock's potential biological removal (PBR) level.

- Category II designates fisheries with occasional serious injuries and mortalities incidental to commercial fishing. Annual mortality and serious injury of a stock in a given fishery is, collectively with other fisheries, responsible for the annual removal of greater than 10 percent of any stock's PBR level, and is by itself responsible for the annual removal of between 1 and less than 50 percent, exclusive, of any stock's PBR level.

- Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities. A Category III fishery is, collectively with other fisheries, responsible for the annual removal of 10 percent or less of any stock's PBR level; or collectively with other fisheries, more than 10 percent of any stock's PBR level, but is by itself responsible for the annual removal of 1 percent or less of PBR level.

Owners of vessels or gear engaging in a Category I or II fishery are required under 50 CFR 229.4 to obtain authorization to lawfully incidentally take non-ESA listed marine mammals by registering with NMFS' marine mammal authorization program. Fishermen participating in Category I or II fisheries are also required to accommodate an observer onboard upon request by NMFS, and are required to comply with any applicable take reduction plans. Current List of Fisheries classifications for fisheries operating under the Mariana Archipelago FEP are included in the WPRFMC Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

Section 101 (a)(5)(E) of the MMPA requires the Secretary of Commerce to allow the incidental, but not intentional, taking of individuals from marine mammal stocks that are designated as depleted because of listing as threatened or endangered under the ESA in the course of commercial fishing operations if it is determined that three criteria are met:

1. Incidental mortality and serious injury will have a negligible impact on the affected species or stock;
2. A recovery plan has been developed or is being developed; and
3. Where required under section 118 of the MMPA, a monitoring program has been established, vessels engaged in such fisheries are registered in accordance with section 118 of the MMPA, and a take reduction plan (TRP) has been developed or is being developed for such species or stock.

1.3 Marianas Archipelago

1.3.1 Geography

The Mariana Archipelago is a chain of islands in the western Pacific roughly oriented north-south. It is anchored at the southern end by the relatively large island of Guam at 13.5° north latitude. The Commonwealth of the Northern Mariana Islands (CNMI) stretch off to the north. The entire chain is approximately 425 miles long. The archipelago was named by Spanish explorers in the 16th Century in honor of Spanish Queen Mariana of Austria.

The total land area of Guam is approximately 212 square miles and its EEZ is just over 84,000 square miles. The CNMI consists of 14 main islands. From north to south these are: Farallon de Pajaros, Maug, Asuncion, Agrihan, Pagan, Alamagan, Guguan, Sarigan, Anatahan, Farallon de Medinilla, Saipan, Tinian, Aguijan, and Rota. Only Saipan, Rota, and Tinian are permanently inhabited, with 90% of the population residing on the island of Saipan. The total land area of the CNMI is 176.5 square miles and its EEZ is almost 300,000 square miles.

Guam and the southern islands of the CNMI are limestone, with level terraces and fringing coral reefs. The CNMI's northern islands are volcanic and sparsely inhabited, with active volcanoes on several islands, including Anatahan, Pagan, and Agrihan (the highest, at 3,166 feet). The archipelago has a tropical maritime climate moderated by seasonal northeast trade winds. While there is little seasonal temperature variation, there is a dry season (December to June) and a rainy season (July to November). The rainy season coincides with the northern hemisphere hurricane season, and the Mariana Archipelago is periodically impacted by powerful typhoons.

The Mariana Trench is located to the east of the chain. The trench includes the deepest point in

the world's oceans. The vertical measurement from the seafloor to Saipan's highest point (Mount Tapotchau) is 37,752 ft.

1.3.2 People

1.3.2.1 Indigenous Culture

The Mariana Archipelago was first settled 3,500 to 4,000 years ago by two primary waves of seafaring people. Their descendants became known as Chamorrans, a term deriving from the indigenous *chamorri*, meaning "of high caste." The explorer Ferdinand Magellan made brief and violent first contact with indigenous residents of the archipelago in 1621, but the term *"Chamurres"* was first used by the Miguel Lopez de Legazpi expedition of 1565. It appears in other records from the same period. By the time of the Jesuit missionary expedition led by Diego Luis de San Vitores a century later, the terms "*Chamorris*" and "*Chamorros*" were commonly used to refer to the indigenous population (Taitano 1985).

Figure 2. Traditional Chamorro sailing canoe.

A Jesuit mission was established in the Marianas in 1668, initiating a long period of social change among descendants of the original seafaring settlers. The present social and demographic structure of the Mariana Islands is largely the result of colonial experiences during the last 500 years. During the 19th century, Carolinians from what is now Yap and Chuuk states in the Federated States of Micronesia were encouraged by Spain to settle in the Mariana Islands. The Carolinians stayed away from centers of Spanish activity and formed small enclaves on the islands.

The first Europeans were impressed by the skills of indigenous residents, who trolled from sailing canoes for flying fish, marlin, mahimahi, and skipjack tuna. Fish and other living marine resources were central to the local diet and were used for a variety of customary purposes, including consumption during religious ceremonies, recompense for various crimes, and as gifts for the dying (Driver 2000).

1.3.2.2 Current Demographics

The total population of the Mariana Archipelago was estimated in 2014 to be 212,484 people.

Guam's population was estimated at 161,001, while CNMI was estimated at 51,483. Males comprise approximately 48% of the population in Guam and approximately 51% of the population in the CNMI. The racial composition of Guam is: Chamorro 37.3%, Filipino 26.3%, white 7.1%, Chuukese 7%, Korean 2.2%, other Pacific Islander 2%, other Asian 2%, Chinese 1.6%, Palauan 1.6%, Japanese 1.5%, Pohnpeian 1.4%, mixed 9.4% and other 0.6%. In the CNMI these numbers are: Filipino 35.5%, other Pacific Islander 34.9%, Chamorro 23.9%, Chinese 6.8%, Native Hawaiian or Pacific Islander 6.4%, Carolinian 4.6%, mixed 12.7%, other 2.5%. Both have Roman Catholic majorities, although traditional beliefs and taboos may still be found.

1.3.2.3 Socio-political boundaries

The U.S. acquired Guam in 1898, following the Spanish-American War. Japan attacked and invaded Guam December 1941and occupied the island until July 21, 1944, when Guam it was liberated by U.S. forces. Guam is an organized, unincorporated territory of the U.S as authorized by the Guam Organic Act of August 1, 1950. The Act provided U.S. citizenship to the native Chamorro people and established local civil government. It was amended in 1968 to provide for the election of a local Governor and Lt. Governor. Congress later granted a non-voting delegate to the U.S. House of Representatives, who serves on committees, but cannot vote on legislation.

Following the Spanish-American war, a defeated Spain sold all of the Mariana Islands north of Guam, the Caroline Islands and Palau, to Germany. Under Germany administration, agriculture and fishing was developed. Germany supported copra and coconut production and recruited Carolinian people from the islands of Chuuk and Yap as well as Japan. Japanese immigrants developed commerce in agriculture and sugar cane and controlled the trade in the Northern Marianas. In the aftermath of World War One, Japan became the administrator of the islands under the League of Nations. Political tensions between the United States and Japan led to declarations of war, and control over the islands changed. In 1944, American forces secured the islands from the Japan after one of World War II's bloodiest battles. Only a few Japanese survived. Hundreds of Japanese civilians, including women and children, jumped to their deaths from the cliffs of Marpi, rather than submit to the opposing forces. America took charge of reconstructing the Northern Marianas Islands.

In 1947 the United States Navy was charged with administration of the islands after the newly-formed United Nations gave the U.S. trusteeship over the Mariana Islands. In1951, President Truman entrusted the United States Department of the Interior to administer the islands under the U.S. Trust Territory of the Pacific Islands. During the Trust Territory years, the U.S. government restricted entry to the Northern Islands and used the islands for various military training activities. Most of Tinian, still, is reserved for potential U.S. military use.

The Northern Mariana Islands became a self-governing commonwealth of the U.S. by plebiscite in 1978. The small islands of the northern part of the chain are lightly populated and in the Municipality of the Northern Islands. The main islands are grouped together in the southern part of the chain. The Commonwealth's capital is Saipan, but no locality on that island is recognized specifically as the capital. Several government offices are located in the Census Designated Place of Capital Hill, but the legislature meets in Susupe.

Changes in local immigration law to comply with the U.S. Immigration and Nationality Act and other U.S. immigration laws impacts the ability of immigrants to remain in Saipan, These

individuals comprise the majority of the fishing fleet. In addition, new rules regarding foreign investment have been implemented in 2014 and will affect foreign investment in tourism and other industries. The potential will then arise for long-term and significant impacts to the overall economy of CNMI, and the demand for locally caught seafood may increase. There is a potential for exports of their seafood products to Asia as well as the US.

Figure 3. Traditional thrownet fisherman.

1.3.2.4 Fishing Communities

The MSA defines a fishing community as a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and United States fish processors that are based in such community.

Figure 4. Assorted catch using traditional thrownet gear.

The Mariana Islands are like other island communities in the Western Pacific, where the surrounding ocean and its resources have long provided residents with a source of food and opportunities for maritime commerce and recreation. Because participants in Guam's and CNMI's various marine fisheries are not concentrated in specific locales but rather reside in villages and small towns across the islands, and because fishing, seafood, and fishing-related businesses assume extensive social and economic importance throughout the region, the Council

recommended in 1999 that the Secretary of Commerce designate Guam and the CNMI as fishing communities under the MSA[5]. The NMFS Pacific Islands Fisheries Science Center has since developed general profiles of the Guam and CNMI fishing communities[6].

Figure 5. Atulai harvest being divided up for distribution to community members. Umatac, Guam.

The social and economic interplay between Guam and CNMI residents and the surrounding ocean environment is central to an understanding of community life in the archipelago. The islands are relatively small and most towns and villages are located along the coastal zone. As such, the ocean is an ongoing visual presence in the lives of all residents. Because the region is located some 1,800 miles from the nearest continent and over 5,500 miles from North America, goods must be transshipped or over thousands of miles of ocean. Importation of fresh and processed seafood has also increased as the populations of Guam and the CNMI have increased. This has led to a relatively high cost of living and limited availability of certain goods and services. The tourism economy has also expanded and is dependent on recreation and leisure opportunities along the coastal zone. It too is conditioned by distance of travel to the islands. Military buildup and expansion of training exercises in the Mariana Island impact access to traditional fishing grounds and has been at the center of fishing concerns in recent years. Fishing activities are important across the Mariana Islands, and living marine resources are used for commercial sale, household consumption, and as a source of recreation. Various aspects of local

[5] Federal Register Vol. 64, No. 74 April 19, 1999, 19067
[6] Allen S.D. and J.R. Amesbury. 2012. Commonwealth of the Northern Mariana Islands as a Fishing Community. U.S. Dept. of Commerce, NOAA Technical Memorandum NOAA-TM-NMFS-PIFSC-36. 90 p.

Allen S.D. and P. Bartram. 2008. Guam as a Fishing Community. Pacific Islands Fish. Sci. Cent., Natl. Mar. Fish. Serv., NOAA, Honolulu, HI 96822-2396. Pacific Islands Fish. Sci. Cent. Admin. Rep. H—08-01,70 p.

and indigenous history, culture, and society are closely related to the surrounding ocean and use of its resources.

This page was intentionally left blank.

2 MANAGEMENT POLICY, GOALS, AND OBJECTIVES

2.1 Council Management Policy

The Council's management policy is to apply responsible and proactive management practices, based on sound scientific data and analysis and inclusive of fishing community members, to conserve and manage fisheries and their associated ecosystems of the Mariana Archipelago.

2.2 Marianas FEP Purpose and Need

The Marianas Archipelago contains various stocks and stock complexes that are found in federal waters and which provide important benefits to the people of Guam and the CNMI and by extension, the Nation. Since these resources are in need of management, the Council is required under the MSA to develop management plans to accomplish this. In addition, the habitats for these fish, as well as other elements of the marine ecosystem, such as sea turtles, cetaceans, and corals, are also locally and nationally important. Since all of these are interconnected, the Council opted in the mid-2000s[7] to take an archipelagic ecosystem-based approach to fisheries managed and spent the next several years revising its five species/complex-based fishery management plans (FMPs) (Precious Corals FMP became effective in September 1983; Crustaceans FMP (March 1983); Bottomfish and Seamount Groundfish (August 1986); Pelagics FMP (March 1987); Coral Reef Ecosystems FMP (February 2004)) to place-based fishery ecosystem plans (FEPs). The five FEPs approved by the Council in 2007 and implemented in 2009 include the American Samoa Archipelago FEP, Mariana Islands Archipelago FEP, Hawaii Archipelago FEP, Pacific Remote Island Area FEP, and Pacific Pelagic FEP.

The Council's decision to transition to ecosystem-based fishery management (EBFM) followed Congressional direction in 1998 to the NMFS to establish an Ecosystem Principles Advisory Panel (Panel; EPAP). The Panel was tasked with assessing the extent to which ecosystem principles were being or could be used in fisheries management and recommending how to further ecosystem principle use to improve the status and management of marine resources. The Panel was composed of members of academia, fishery and conservation organizations, and fishery management agencies (see below).

2.3 Mariana Archipelago Fishery Ecosystem Plan Goals

The Mariana Archipelago FEP establishes a framework under which the Council can recommend management measures required by federal law and best available scientific information. The NMFS Ecosystem Principles Advisory Panel described above reached consensus that the Councils and NMFS should develop and implement Fishery Ecosystem Plans in order to manage U.S. fisheries and marine resources in a more comprehensive and integrated manner (NMFS

[7] At its 130th meeting held December 20, 2005, the Council took final action to recommend implementation of place-based FEPs for the Western Pacific Region.

1999). According to the EPAP, an FEP should contain and implement a management framework to control harvests of marine resources on the basis of available information regarding the structure and function of the ecosystem in which such harvests occur. The EPAP constructed eight ecosystem statements that it believes to be important to the successful management of marine ecosystems which were recognized and used as a guide by the Council in developing this FEP. These principles are as follows:

- The ability to predict ecosystem behavior is limited.
- An ecosystem has real thresholds and limits that, when exceeded, can affect major system restructuring.
- Once thresholds and limits have been exceeded, changes can be irreversible.
- Diversity is important to ecosystem functioning.
- Multiple scales interact within and among ecosystems.
- Components of ecosystems are linked.
- Ecosystem boundaries are open.
- Ecosystems change with time.

Similarly, the National Oceanic and Atmospheric Administration (NOAA) defines an ecosystem approach as "management that is adaptive, specified geographically, takes account of ecosystem knowledge and uncertainties, considers multiple external influences, and strives to balance diverse social objectives." In addition, because of the wide-ranging nature of ecosystems, successful implementation of ecosystem approaches will need to be incremental and collaborative (NOAA 2004).

On international, national, and local levels, institutions and agencies tasked with managing marine resources are moving toward an ecosystem approach to fisheries management. One reason for this shift is a growing awareness that many of Earth's marine resources are stressed and the ecosystems that support them are degraded. In addition, increased concern regarding the potential impacts of fishing and non-fishing activities on the marine environment, and a greater understanding of the relationships between ecosystem changes and population dynamics, have all fostered support for a holistic approach to fisheries management that is science based and forward thinking (Pikitch et al. 2004).

In order to achieve EBFM, this plan: 1. identifies the management objectives of the Mariana Archipelago FEP; 2. delineates the boundaries of the Mariana Archipelago FEP; 3. designates the management unit species included in the Mariana Archipelago FEP; 4. details the federal fishery regulations applicable under the Mariana Archipelago FEP; and 5. establishes appropriate Council structures and advisory bodies to provide scientific and management advice to the Council regarding the Mariana Archipelago FEP. In addition, this plan provides the information and rationale for these measures; discusses the key components of the Mariana Archipelago ecosystem, including an overview of the region's non-pelagic fisheries; and explains how the measures contained here are consistent with the MSA and other applicable laws.

This FEP has four goals:

Goal 1. Conserve and manage target and non-target stocks;
Goal 2. Protect species and habitats of special concern;

Goal 3. Understand and account for important ecosystem parameters and their linkages, and;
Goal 4. Meet the needs of fishermen, their families, and communities in the Mariana Archipelago.

2.4 Marianas FEP Objectives

To achieve the policy and goals of the Mariana Archipelago FEP, the Council has adopted the following objectives.

OBJECTIVE 1: Support Fishing Communities

a. Identify the various social and economic groups within the region's fishing communities and their interconnections.
b. Ensure that regulations designed to meet conservation objectives are written to be as minimally-constraining as possible.
c. Select alternatives that minimize adverse economic impacts to fishing communities when possible.
d. Eliminate regulations that are no longer necessary (i.e., eliminate access barriers).
e. Increase communication between fishery sectors.
f. Support fishery development, training and processing opportunities.
g. Support projects, programs and policies that increase sustainable fishing opportunities.

OBJECTIVE 2. Prevent Overfishing on Council-managed Stocks

a. Develop status determination criteria for appropriate stocks.
b. Monitor fisheries to understand when overfishing may be close to occurring.

OBJECTIVE 3. Improve Fishery Monitoring and Data Collection

a. Increase the number of fishery ecosystem elements being monitored.
b. Improve the timeliness of data availability.
c. Improve the quantity and quality of relevant fishery data.
d. Encourage research to improve precision of data regarding protected species populations and distributions.
e. Increase research coordination between the Council, the state, and federal agencies.

OBJECTIVE 4. Promote Compliance

a. Understand factors that may result in non-compliance.
b. Consider ways to develop or increase buy-in from affected parties.
c. Ensure that regulations are written and implemented so as to be easy to follow and enforce.
d. Increase the quality and quantity of monitoring and enforcement data through improved technology.
e. Develop codes of conduct specific to individual fisheries.

OBJECTIVE 5. Reduce Bycatch and Minimize Interactions and Impacts to Protected Species

a. Maintain minimal impacts to protected species and other bycatch species while

maintaining the viability of fisheries.

b. Encourage non-regulatory approaches to reducing protected species and bycatch impacts where necessary and appropriate
c. Increase fishermen's knowledge about protected species issues and regulations and ways to minimize interactions.
d. Continue to work with federal and state agencies to protect relevant threatened and endangered species.
e. Improve assessment of protected species and bycatch species impacts through improvements in data collection, research and monitoring.
f. Encourage research that examines whether and to what extent bycatch is an issue in the fisheries covered by this management plan.

OBJECTIVE 6. Refine and Minimize Impacts to Essential Fish Habitat

a. Review and update EFH and HAPC designations on regular schedule (5-years) based on the best available scientific information of a higher EFH level than was used for the original designation.
b. Identify and prioritize research to: assess adverse impacts to EFH and HAPC from fishing and non-fishing activities, including, but not limited to, military activities and activities that introduce non-point source pollution into the coastal environment.

OBJECTIVE 7. Increase Traditional and Local Knowledge in Decision-making

a. Identify relevant indigenous and local practices and knowledge that may improve scientific inquiry regarding Council-managed fisheries.
b. Utilize cultural practitioners, concepts, and bodies in the analysis of management alternatives.
c. Utilize fishermen knowledge in the analysis of management alternatives.

OBJECTIVE 8. Consider the Implications of Spatial Management Arrangements in Council Decision-making

a. Identify and prioritize research that examines the positive and negative consequences of current no-take fishing areas to fisheries, fishery ecosystems, and fishermen, such as the military installations, Monuments, Northern Island restrictions, and Marine Conservation Areas.
b. Consider whether the goals of any spatial-based fishing restrictions proposed in federal waters appear to be achievable.
c. Establish spatial-based fishing restrictions.
d. Remove spatial-based fishing restrictions that are no longer necessary.

OBJECTIVE 9. Consider the Implications of Climate Change in Council Decision-making

a. Identify and prioritize research that examines the effects of climate change on Council-managed fisheries and fishing communities.
b. Ensure climate change considerations are incorporated into the analysis of management alternatives.
c. Monitor climate-change related variables via the Council's Annual Reports.
d. Engage in climate change outreach with US Pacific island communities.

This page was intentionally left blank.

3 MANAGEMENT REGIME AND FISHERY INFORMATION

3.1 Management Regime

The federal fishery management area in the Mariana Archipelago is composed of two management subareas (shown in Figure 6 with regulated fishing areas). The Guam management subarea includes all federal waters of the U.S. EEZ from 3 to 200 nm around Guam. The CNMI management subarea includes all federal waters of the U.S. EEZ from 3 to 200 nm around the CNMI, except for the three northern most islands of Uracus, Maug, and Asuncion, and the island of Farallon de Medinilla, where federal jurisdiction extends to the shoreline. At Tinian, federal waters also extend to the shoreline around certain lands leased by the U.S. government.[8]

[8] As provided for under the Lease Agreement Made Pursuant to the Covenant to Establish a Commonwealth of the Northern Mariana Islands in Political Union with the United States of America, dated January 6, 1983, as amended.

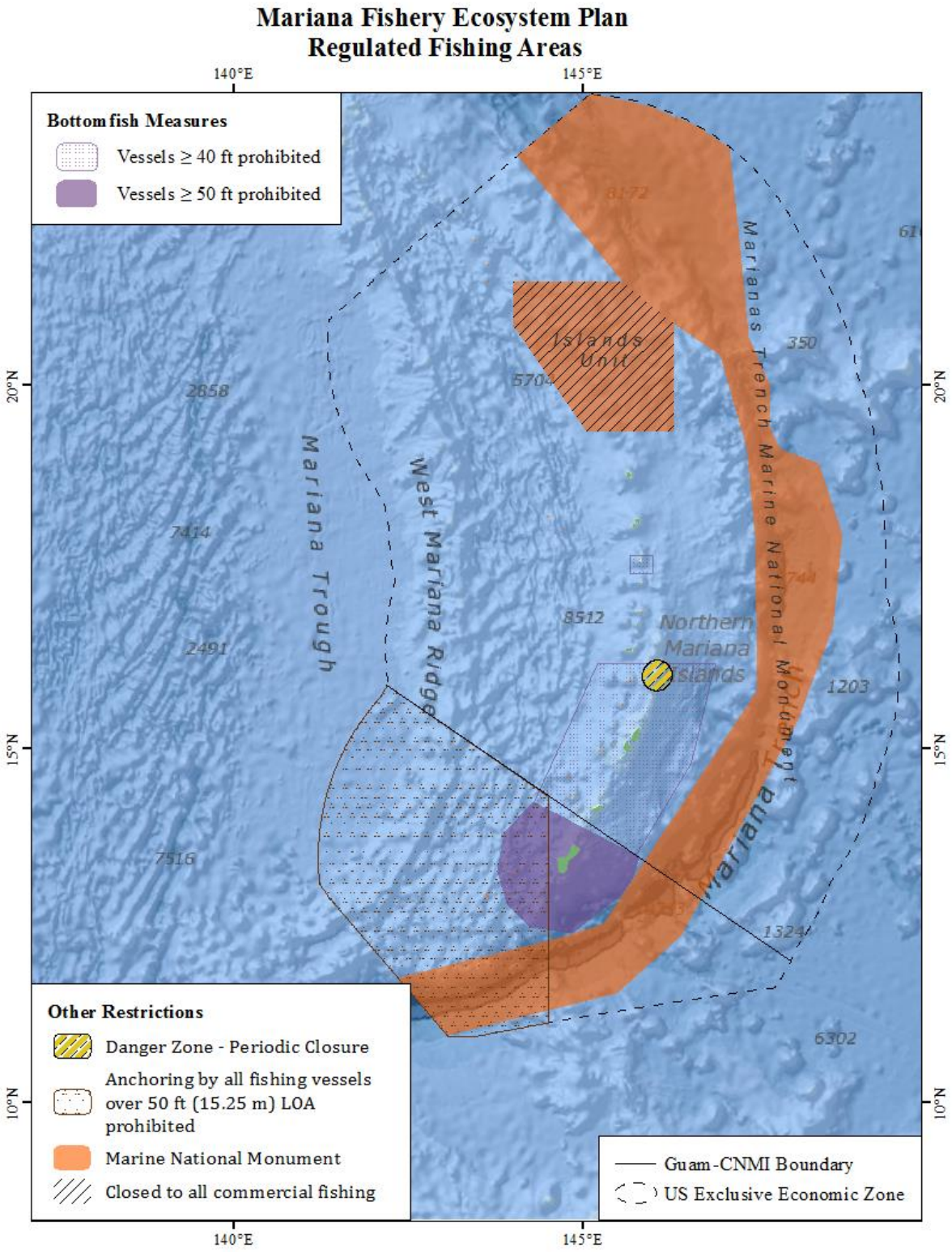


Figure 6. Mariana Fishery Ecosystem Management Plan Regulated Fishing Waters.

In 2009, Proclamation 8335 established the Marianas Trench Marine National Monument (Monument). The Monument includes certain waters and submerged lands around the three northernmost islands of the CNMI (Uracas or Farallon de Pajaros, Maug, and Asuncion), which comprise the "Islands Unit." The Monument also includes the submerged lands of designated volcanic sites (the "Volcanic Unit"), and the Marianas Trench ("Trench Unit)" (Figure 7). Federal regulations implementing Proclamation 8335 prohibits commercial fishing within the Islands Unit and establishes management measures for non-commercial fishing, including permit and reporting requirements, eligibility for such permits (WPFMC 2013). Prohibitions do not apply to activities conducted by the Department of Defense.

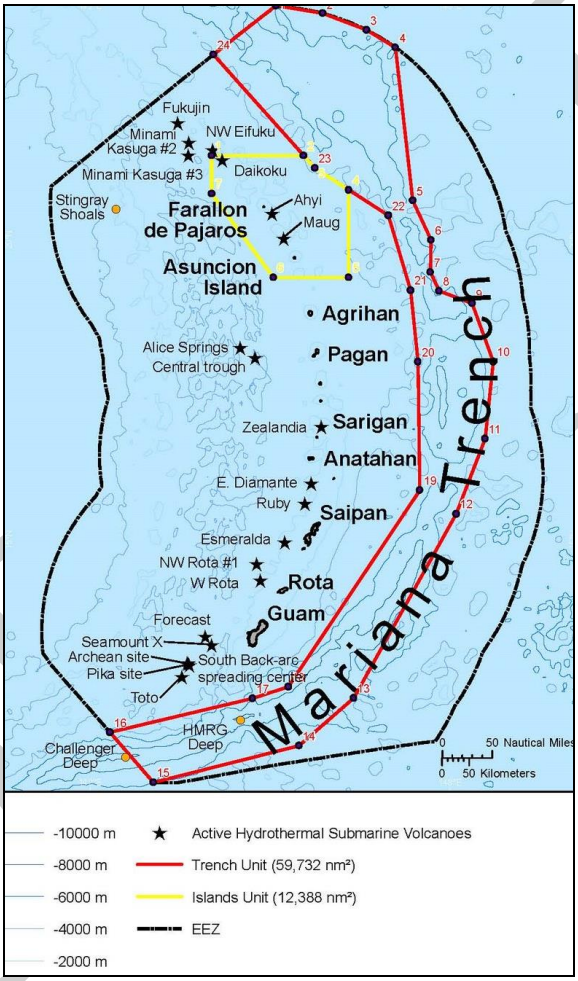


Figure 7. Mariana Trench Marine National Monument. Source: http://www.gop.gov/fdsys/pkg/FR-2009-01-12/pdf/E9-496.pdf

3.1.1 Bottomfish Fisheries

The commercial and non-commercial bottomfish fisheries of the Marianas Archipelago harvest a complex of 17 species that includes both shallow and deep-water snappers, and several species of groupers, emperors and jacks. The main species targeted is the redgill emperor (*Lethrinus rubrioperculatus*). The local names of bottomfish management unit species (BMUS) are provided in Chamorro and Carolinian (Table 1), the two native languages spoken in Guam and

CNMI. Where local Chamorro or Carolinian is unknown, the symbol NA (not applicable) is provided.

Table 1. Mariana Archipelago Bottomfish Management Unit Species.

Scientific Name	**English Common Name**	**Local Name Chamorro/Carolinian**
Aphareus rutilans	red snapper/silvermouth	lehi/maroobw
Aprion virescens	gray snapper/jobfish	gogunafon/aiwe
Caranx ignobilis	giant trevally/jack	tarakitu/etam
Caranx lugubris	black trevally/jack	tarakiton attelong/orong
Epinephelus fasciatus	blacktip grouper	gadao/meteyil
Variola louti	lunartail grouper	bueli/bwele
Etelis carbunculus	red snapper	buninas agaga/ falaghal moroobw
Etelis coruscans	red snapper	buninas/taighulupegh
Lethrinus rubrioperculatus	redgill emperor	mafuti/atigh
Lutjanus kasmira	blueline snapper	funai/saas
Pristipomoides auricilla	yellowtail snapper	buninas/falaghal-maroobw
Pristipomoides filamentosus	pink snapper	buninas/falaghal-maroobw
Pristipomoides flavipinnis	yelloweye snapper	buninas/falaghal-maroobw
Pristipomoides seiboldii	pink snapper	NA
Pristipomoides zonatus	Snapper	buninas rayao amiriyu/ falaghal-maroobw
Seriola dumerili	Amberjack	tarakiton tadong/meseyugh

Figure 8. Typical small trailer vessel used for pelagic trolling and bottomfishing.

3.1.1.1 CNMI Bottomfish Fishery

3.1.1.1.1 Description (commercial, charter, recreational)

CNMI's bottomfish fishery consists primarily of small-scale local boats engaged in commercial and subsistence fishing, although a few (generally <5) larger vessels (30– 60 ft) also participate in the fishery. The bottomfish fishery can be broken down into two sectors: deep-water (>500 ft) and shallow-water (100–500 ft) fisheries. The deep-water fishery is primarily commercial, targeting snappers and groupers (WPFMC, 2009) while, the shallow-water fishery, which targets the redgill emperor (*Lethrinus rubrioperculatus*) is mostly commercial, but also includes subsistence fishermen (WPFMC, 2011b). These fishermen also harvest coral reef associated species as well. Hand lines, home-fabricated hand reels and small electric reels are the commonly used gear for small-scale fishing operations, whereas electric reels and hydraulics are the commonly used gear for the larger operations in this fishery. Fishermen generally fish daylight hours, with vessels presumed to return before or soon after sunset, although larger vessels have made multi-day trips to the Northern Islands (Farallon de Medinilla to Farallon de Pajaros) in the past. Many fishermen participating in the bottomfish fishery also engage in other boat based fisheries such as trolling and jigging for pelagics.

Figure 9. Large bottomfish vessels moored in Saipan, CNMI.

In the early 1980s, it was estimated that there were over 100 vessels participating in the CNMI bottomfish fishery. By 2005, the level of participation decreased to approximately 62 vessels (WPFMC 2006). In 2009, Federal permit and reporting regulations were instituted requiring all commercial bottomfishing vessels to have a federal bottomfish permit and report catch on a per trip basis. At the time, NMFS estimated through local survey data that 50-125 vessels would make 10 to 50 trips per year, and average 1.2 days per trip. At that rate, the program should have generated in the range of 600 to 7,500 daily fishing logbooks per year. However, since the permit and reporting requirements went into effect, only 14 vessels have been permitted in the fishery in any one year (2012), and that number fell to just seven vessels in 2014. Creel survey expanded data estimates 10 fishermen in 2014. This suggests that either nearly three-quarters of the bottomfish fleet is non-commercial, or some are out of compliance with federal regulations.

For current fishery performance metrics, see detailed statistics in the Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.1.2 Type and Quantity of Fishing Gear

Hand lines, home-fabricated hand reels and small electric reels are the commonly used gear for small-scale fishing operations, whereas electric reels and hydraulics are the commonly used gear

for the larger operations in this fishery.

3.1.1.1.3 Catch in Numbers or Weight

CNMI bottomfish catch (Figure 10) averaged 20,030 lbs. per year for the period 2004-2014, with a high of 40,312 lbs. (2005) and a low of 10,066 lbs. (2012). For the most recent catch numbers, see the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

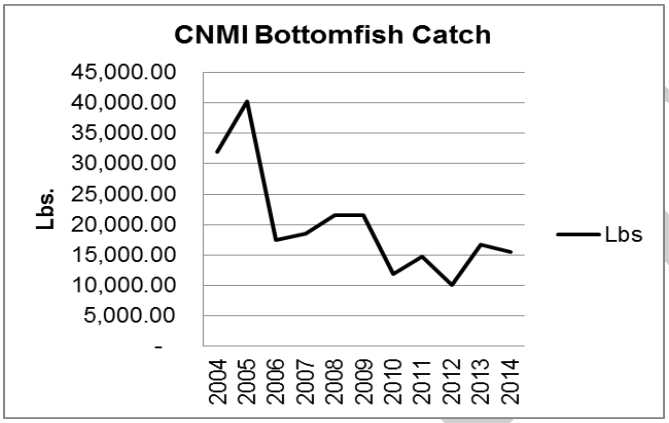


Figure 10. CNMI bottomfish catch trend 2004-2014.

3.1.1.1.4 Fishing Areas

Bottomfish are targeted on the offshore slopes, ridges and banks from depths ranging from 50 to 200 fathoms. Bottomfishing vessels longer than 40 feet are prohibited from fishing within 50 nautical miles around the Southern Islands of Rota, Saipan, Tinian and FDM and within 10 nautical miles around Alamagan. Federal regulations also prohibit commercial fishing within the Monument Islands Unit. Vessels area also prohibited from fishing within 12 nm around FDM and expanded closures during life fire training exercises.

3.1.1.1.5 Time of Fishing

Fishing is often conducted during daylight hours, with vessels presumed to return before or soon after sunset, although larger vessels have made multi-day trips to the Northern Islands (north of Saipan) in the past. Bottomfish fishing occurs year round with peak fishing activity taking place during the calmer summer months. Fishermen also fish overnight for deep slope bottomfish species.

3.1.1.1.6 Economics

The 2004-2014 year average for revenue across the CNMI BMUS was $64,172, with a high of $111,022 (2005) and a low of $43,746 (2010). For the same time period, price per pound in the fishery averaged $2.88/lb., with a high of $3.51 (2014) and a low of $2.56 (2004). For current information regarding revenue of the fishery, price per pound, total direct employment, and fisheries-dependent services or industries, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.1.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors

Bottomfish are generally sold fresh whole through local retail seafood markets and restaurants. Processing of bottomfish does not occur at sea or at the market level.

3.1.1.1.8 Present and Probable Future Condition of the Fishery

In 2010, the most recent year for which stock status information is available, F_{2010}/F MSY = 0.09 while B_{2010}/B_{MSY} = 1.78 (Table 13 in Brodziak et al., 2012). The production model results indicate that the CNMI bottomfish complex was not overfished and did not experience overfishing at any point between the periods 1986 and 2010. Based on current risk projections, an annual catch of more than six times greater than the 2003-2013 ten year average catch would be necessary to result in overfishing. Therefore the probable future condition of the fishery should be stable, with harvest rates well below maximum exploitation rates.

3.1.1.1.9 Yield

3.1.1.1.9.1 MSY

The Maximum Sustainable Yield for the bottomfish fishery is estimated through stock assessments generated by the Pacific Island Fisheries Science Center. The assessments determine the status of the stock following the MSY control rule (described in Appendix E, which also specifies the relationship of F to B or other indicator of productive capacity under an MSY harvest policy.) The assessments are updated every three years (maximum) and benchmark assessment every six years (maximum) following the assessment schedule described in the Western Pacific Stock Assessment Review Policy.

For more information regarding the MSY reference points, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.1.9.2 OY

Optimum Yield for CNMI bottomfish fisheries has been established as equal to the ACL, since social, ecological, and economic factors, as well as management uncertainties, are accounted in ACL specification.

3.1.1.1.9.3 Extent to Which Fishing Vessels will Harvest OY

With harvest rates well below maximum exploitation rates, so few permitted vessels in the fishery, and the small number of vessels able to participate successfully in the fishery in the CNMI, domestic vessels do not have sufficient harvesting capacity to take the entire OY.

3.1.1.1.9.4 Extent to Which U.S. Fish Processors will Process OY

Bottomfish harvested in CNMI are marketed as fresh whole product. Little or no processing occurs, either at sea or in the market Therefore, US fish processors will not process bottomfish beyond OY.

3.1.1.1.10 Annual Catch Limit

3.1.1.1.10.1 Specification Mechanism

For the bottomfish fishery, specification of the acceptable biological catch and annual catch limits are required by the MSA and follows the mechanism described in Appendix E. The NMFS

specifies the ACL annually, based on the Council's recommendation.

3.1.1.1.10.2 Limit

For the most recent Annual Catch Limits, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.1.10.3Accountability Measures

Accountability measures are specified on an annual basis by NMFS based on recommendations by the Council. There currently is no near-real-time monitoring for bottomfish fisheries in the CNMI. The specification of accountability measures will follow the process described in Appendix E.

3.1.1.1.11 Criteria for Determining Overfishing

Biological and other fishery data are poor for all bottomfish species in the Mariana Archipelago. Generally, data are only available on commercial landings by species and catch-per-unit-effort (CPUE) for the multi-species complexes as a whole. At this time it is not possible to partition these effort measures among the various bottomfish MUS

Overfishing criteria and control rules are specified and applied to individual species within the multi-species stock whenever possible. When this is not possible, they are based on an indicator species for the multi-species stock. It is important to recognize that individual species would be affected differently based on this type of control rule, and it is important that for any given species fishing, mortality does not currently exceed a level that would result in excessive depletion of that species. For the seamount groundfish stocks, armorhead serves as the indicator species. No indicator species are being used for the two bottomfish multi-species stock complexes (Guam and CNMI). Instead, the control rules are applied to each stock complex as a whole.

The MSY control rule is used as the maximum fishing mortality threshold (MFMT). The MFMT and minimum stock size threshold (MSST) are specified based on recommendations in Restrepo et al. (1998) and both are dependent on the natural mortality rate (M). The value of M used to determine the reference point values are not specified in this document. The latest estimate, published annually in the SAFE report, is used and the value is occasionally re-estimated using the best available information. The range of M among species within a stock complex is taken into consideration when estimating and choosing the M to be used for the purpose of computing the reference point values.

In addition to the thresholds MFMT and MSST, a warning reference point, B_{FLAG}, is specified at some point above the MSST to provide a trigger for consideration of management action prior to B reaching the threshold. MFMT, MSST, and B_{FLAG} are specified as indicated in Table 2.

Table 2. Overfishing Threshold Specifications for Bottomfish Stocks

MFMT	MSST	B_{FLAG}
$F(B) = \frac{F_{MSY} B}{c\, B_{MSY}}$ for $B \le c\, B_{MSY}$	$c\, B_{MSY}$	B_{MSY}

$F(B) = F_{MSY}$ for $B > c\ B_{MSY}$		
where c = max (1-M, 0.5)		

Standardized values of fishing effort (E) and catch-per-unit-effort (CPUE) are used as proxies for F and B, respectively, so E_{MSY}, $CPUE_{MSY}$, and $CPUE_{FLAG}$ are used as proxies for F_{MSY}, B_{MSY}, and B_{FLAG}, respectively.

In cases where reliable estimates of $CPUE_{MSY}$ and E_{MSY} are not available, they will be estimated from catch and effort times series, standardized for all identifiable biases. $CPUE_{MSY}$ would be calculated as half of a multi-year average reference CPUE, called $CPUE_{REF}$. The multi-year reference window would be objectively positioned in time to maximize the value of $CPUE_{REF}$. E_{MSY} would be calculated using the same approach or, following Restrepo et al. (1998), by setting E_{MSY} equal to E_{AVE}, where E_{AVE} represents the long-term average effort prior to declines in CPUE. When multiple estimates are available, the more precautionary one is used.

Since the MSY control rule specified here applies to multi-species stock complexes, it is important to ensure that no particular species within the complex has a mortality rate that leads to excessive depletion. In order to accomplish this, a secondary set of reference points is specified to evaluate stock status with respect to recruitment overfishing. A secondary "recruitment overfishing" control rule is specified to control fishing mortality with respect to that status. The rule applies only to those component stocks (species) for which adequate data are available. The ratio of a current spawning stock biomass proxy ($SSBP_t$) to a given reference level ($SSBP_{REF}$) is used to determine if individual stocks are experiencing recruitment overfishing. SSBP is CPUE scaled by percent mature fish in the catch. When the ratio $SSBP_t/SSBP_{REF}$, or the "SSBP ratio" (SSBPR) for any species drops below a certain limit ($SSBPR_{MIN}$), that species is considered to be recruitment overfished and management measures will be implemented to reduce fishing mortality on that species. The rule applies only when the SSBP ratio drops below the $SSBPR_{MIN}$, but it will continue to apply until the ratio achieves the "SSBP ratio recovery target" ($SSBPR_{TARGET}$), which is set at a level no less than $SSBPR_{MIN}$. These two reference points and their associated recruitment overfishing control rule, which prescribe a target fishing mortality rate ($F_{RO\text{-}REBUILD}$) as a function of the SSBP ratio, are specified as indicated in Table 3. Again, E_{MSY} is used as a proxy for F_{MSY}.

Table 3. Recruitment Overfishing Control Rule Specifications for Bottomfish Stocks

$\mathbf{F}_{RO\text{-}REBUILD}$	$\mathbf{SSBPR}_{MIN}$	$\mathbf{SSBPR}_{TARGET}$
$F(SSBPR) = 0$ for $SSBPR \le 0.10$ $F(SSBPR) = 0.2\ F_{MSY}$ for $0.10 < SSBPR \le SSBPR_{MIN}$ $F(SSBPR) = 0.5\ F_{MSY}$ for $SSBPR_{MIN} < SSBPR \le SSBPR_{TARGET}$	0.20	0.30

3.1.1.1.12 MSA Conservation and Management Measures

In addition to the federal permit and reporting requirements described above, the federal fisheries

management regime under the Mariana FEP (WPFMC 2009) also includes vessel identification and at-sea observer requirements, and a prohibition on the use of poisons, explosives, or intoxicating substances, bottom trawls, and bottom set gillnets. The bottomfish fisheries of the CNMI are also subject to an annual catch limit (quota) to prevent overfishing (WPFMC 2011a). The quota is reviewed annually, and is published in a notice in the Federal Register. For more information on annual catch limits, go to NMFS website at http://www.fpir.noaa.gov.

In the CNMI, federal regulations prohibit bottomfish fishing vessels 40 ft and longer from fishing within 50 nautical miles (nm) around the southern islands of Rota, Aquijan, Tinian, Saipan, and Farallon de Medenilla and within 10 nm around the island of Alamagan (WPFMC 2008). CNMI bottomfish vessels 40 ft and longer must also carry vessel monitoring systems onboard, which allow NMFS to track vessel location at all times and monitor compliance with bottomfish closed areas. Federal regulations governing this fishery can be found in Appendix C and the Code of Federal Regulations, Title 50, Part 665, Subpart D.

In 2009, Proclamation 8335 established the Marianas Trench Marine National Monument (Monument). The Monument includes certain waters and submerged lands around the three northernmost islands of the CNMI (Uracas or Farallon de Pajaros, Maug, and Asuncion), which comprise the "Islands Unit." The Monument also includes the submerged lands of designated volcanic sites (the "Volcanic Unit"), and the Marianas Trench ("Trench Unit)" (Figure 7). Federal regulations implementing Proclamation 8335 prohibits commercial fishing within the Islands Unit and establishes management measures for non-commercial fishing, including permit and reporting requirements, eligibility for such permits (WPFMC 2013). A permit issued under this section may be issued only to a community resident of Guam or the CNMI. Customary exchange of fish harvested within the Islands Unit under a non-commercial permit is allowed, except that customary exchange by fishermen engaged in recreational fishing is prohibited. Federal regulations governing this fishery can be found in the Code of Federal Regulations, Title 50, Part 665, Subpart G and in Appendix C.

3.1.1.1.13 Regulations implementing International Recommendations and other Applicable Laws

There are no international recommendations or applicable laws that relate to bottomfish and seamount groundfish in CNMI. However, the North Pacific Seamount Regional Fishery Management Organization's (RFMO) efforts may include actions aimed at seamount groundfish, and potentially bottomfish, in the future. Such actions may have the potential to impact CNMI bottomfish and seamount groundfish fisheries.

3.1.1.1.14 Bycatch Amount and Type

CNMI bottomfishing bycatch is obtained directly from bottomfishing interviews where bycatch was voluntarily reported. It is an unexpanded number. In general, bottomfishing in the CNMI results in minimal bycatch. Interactions with protected species are also believed to be minimal. To date, there have been no reported or observed interactions between protected species and coral reef fisheries in Federal waters around the CNMI and the potential for interactions is believed to be low due to the gear types and fishing methods.

For the most bycatch numbers, see the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.1.15 CNMI Bottomfish Essential Fish Habitat

Except for several of the major commercial species, very little is known about the life histories, habitat utilization patterns, food habits, or spawning behavior of most adult bottomfish and seamount groundfish species. Furthermore, very little is known about the distribution and habitat requirements of juvenile bottomfish.

Generally, the distribution of adult bottomfish in the Marianas is closely linked to suitable physical habitat. Unlike the U.S. mainland with its continental shelf ecosystems, Pacific islands are primarily volcanic peaks with steep drop-offs and limited shelf ecosystems. The BMUS under the Council's jurisdiction are found concentrated on the steep slopes of deepwater banks. The 100-fathom isobath is commonly used as an index of bottomfish habitat. Adult bottomfish are usually found in habitats characterized by a hard substrate of high structural complexity. The total extent and geographic distribution of the preferred habitat of bottomfish is not well known. Bottomfish populations are not evenly distributed within their natural habitat; instead, they are found dispersed in a non-random, patchy fashion. Deepwater snappers tend to aggregate in association with prominent underwater features, such as headlands and promontories.

There is regional variation in species composition, as well as a relative abundance of the MUS of the deepwater bottomfish complex in the Western Pacific Region. In Guam and the Northern Mariana Islands, the bottomfish fishery can be divided into two distinct fisheries: a shallow- and a deep-water bottomfish fishery, based on species and depth. The shallow-water (0–100 m) bottomfish complex comprises groupers, snappers, and jacks in the genera *Lethrinus*, *Lutjanus*, *Epinephelus*, *Aprion*, *Caranx*, *Variola*, and *Cephalopholis*. The deep-water (100–400 m) bottomfish complex comprises primarily snappers and groupers in the genera *Pristipomoides*, *Etelis*, *Aphareus*, *Epinephelus*, and *Cephalopholis*.

To reduce the complexity and the number of EFH identifications required for individual species and life stages, the Council has designated EFH for bottomfish assemblages pursuant to Section 600.805(b) of 62 FR 66551. The species complex designations include deep-slope bottomfish (shallow water and deep water). The designation of these complexes is based on the ecological relationships among species and their preferred habitat. These species complexes are grouped by the known depth distributions of individual BMUS throughout the Western Pacific Region.

3.1.1.1.15.1 Description and Identification of EFH

At present, there is not enough data on the relative productivity of different habitats to develop EFH designations based on Level 3 or Level 4 data. Given the uncertainty concerning the life histories and habitat requirements of many BMUS, the Council designated EFH for adult and juvenile bottomfish as the water column and all bottom habitat extending from the shoreline to a depth of 400 meters (200 fathoms) encompassing the steep drop-offs and high-relief habitats that are important for bottomfish throughout the Western Pacific Region.

The eggs and larvae of all BMUS are pelagic, floating at the surface until hatching and subject thereafter to advection by the prevailing ocean currents. There have been few taxonomic studies of these life stages of snappers (lutjanids) and groupers (epinepheline serranids). Presently, few larvae can be identified to species. As snapper and grouper larvae are rarely collected in plankton surveys, it is extremely difficult to study their distribution. Because of the existing scientific

uncertainty about the distribution of the eggs and larvae of bottomfish, the Council designated the water column extending from the shoreline to the outer boundary of the EEZ to a depth of 400 meters as EFH for bottomfish eggs and larvae throughout the Western Pacific Region.

3.1.1.1.15.2 Identification of Habitat Areas of Particular Concern

Figure 11. Road side vendor selling yellowtail paka.

On the basis of the known distribution and habitat requirements of adult bottomfish, the Council designated all escarpments/slopes between 40–280 meters as HAPC. The basis for this designation is the ecological function that these areas provide, the rarity of the habitat, and the susceptibility of these areas to human-induced environmental degradation.

The discovery of concentrations of juvenile snappers in relatively shallow water and featureless bottom habitat in Hawaii indicates the need for more research to help identify, map, and study nursery habitat for juvenile snapper in the Marianas Archipelago.

3.1.1.2 Guam Bottomfish Fishery

3.1.1.2.1 Description (commercial, charter, recreational)

Bottomfishing on Guam is a combination of recreational, subsistence, and small-scale commercial fishing. The fishery is composed of two distinct fisheries targeting species complexes separated by depth and species composition: shallow-water and deep-water bottomfish complexes. The shallow water complex (<500 feet) makes up a larger portion of the total bottomfish effort and harvest and is comprised primarily of reef-dwelling species under genus *Lutjanus*, *Lethrinus*, *Aprion*, *Epinephelus*, *Variola*, and *Caranx*. Shallow-water fishermen typically use two to four spinning reels with several hooks, generally size 8/0 circle hooks.

Fishermen use a weighted (1-3 lb) fishing line, and position hooks at various depths in the water column above the ocean floor, targeting a mix of coral reef ecosystem and bottomfish species.

The deepwater complex (>500 feet) consists primarily of groupers and snappers of the genera *Pristipomoides, Etelis, Aphareus,* and *Epinephelus* (WPFMC 2011b). Vessels in the deepwater fishery typically fish during the day. Commercial fishermen generally operate between two to six electric reels with one 6-lb. weight on the end. The main line has several 1.5 ft. branch lines with hooks attached at 1.5 to 3 ft. intervals above the weight, although this configuration may vary. Fishermen also may suspend a light or a chum bag containing chopped bait above the highest hook to attract fish. Squid or cut fish are preferred baits.

The shallow-water component is the larger of the two in terms of participation because of the lower expenditure and relative ease of fishing close to shore (Myers 1997). Participants in the shallow-water component seldom sell their catch because they fish mainly for recreational or subsistence purposes (WPRMC 2006). The commercially oriented highliner vessels tend to be longer than 25 feet, and their effort is usually concentrated on the deep-water bottomfish complex. Most fishermen troll for pelagic fish to supplement their bottomfishing effort and most of those who sell their catch also hold jobs outside the fishery (WPFMC 2006b).

Guam's bottomfish fishery can be highly seasonal, with effort significantly increasing when sea conditions are calm, generally during the summer months. During these periods, bottomfishing activity increases substantially on the offshore banks to the south of Guam (in federal waters), as well as offshore banks on the east side of the island (in territorial waters), which are more productive fishing areas that is generally inaccessible to small boats during most of the year due to rough seas.

Participation in the Guam bottomfish fishery peaked in 2003 with 481 vessels. Since then, participation has fluctuated between 233 and 355 vessels with approximately 285 vessels active in fishery in 2013 (WPFMC in prep). A similar pattern is evident when examining data for fishing hours and trips. As previously mentioned above, federal bottomfishing permits are only required for 50 ft. and longer. Since NMFS and the Council implemented this requirement in 2006, the maximum number of large vessels participating in this fishery was six in 2010 and 2011.

3.1.1.2.2 Type and Quantity of Fishing Gear

Hand lines, home-fabricated hand reels and small electric reels are the commonly used gear for small-scale fishing operations, whereas electric reels and hydraulics are the commonly used gear for the larger operations in this fishery.

3.1.1.2.3 Catch in Numbers or Weight

Guam bottomfish MUS catch (Figure 12) averaged 7,671 lbs. per year for the period 2004-2014, with a high of 13.607 (2005) and a low of 2,325s. (2014). For the most recent catch numbers, see the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

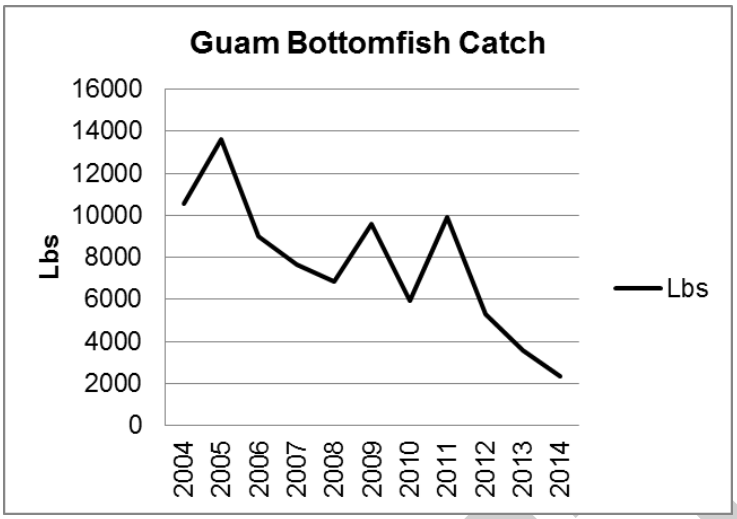


Figure 12. Guam Bottomfish Trend 2004-2014.

3.1.1.2.4 Fishing Areas

Bottomfish are targeted on the offshore slopes, ridges and banks from depths ranging from 50 to 200 fathoms. Bottomfishing vessels longer than 50 feet are prohibited from fishing within 50 nautical miles around Guam.

3.1.1.2.5 Time of Fishing

Bottomfish fishing occurs year round with peak fishing activity taking place during the calmer summer months. Fishing trips are typically day trips that with vessels leaving port during predawn to early morning hours and returning before dusk. Fishermen also fish overnight for deep slope bottomfish species.

3.1.1.2.6 Economics

The 2004-2014 average for direct revenue from Guam bottomfish MUS was $29,532 with a high of $49,042 (2005) and a low of $9,422 (2014). For current information regarding revenue of the fishery, price per pound, total direct employment, and fisheries-dependent services or industries, refer to the current WPFMC Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.2.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors

Bottomfish harvested in Guam are marketed as fresh whole product. Processing of bottomfish does not occur at sea or at the market level. Therefore, US fish processors will not process bottomfish beyond OY.

3.1.1.2.8 Present and Probably Future Condition of the Fishery

In 2010, the most recent year for which stock status information is available, F_{2010}/F MSY = 0.36 while B_{210}/B_{MSY} = 1.594 (Table 14 in Brodziak et al., 2012). The production model results indicate that during the period 1982 through 2010, the Guam bottomfish complex has not been overfished and has not experienced overfishing, except perhaps in 2000. Based on current risk projections, an annual catch of more than two times the 2003-2013 ten year average catch would

be necessary to result in overfishing. These projections remain valid until a new stock assessment is produced.

3.1.1.2.9 Yield

3.1.1.2.9.1 MSY

The Maximum Sustainable Yield for the Guam bottomfish fishery is estimated through stock assessments generated by the Pacific Island Fisheries Science Center. The assessments determine the status of the stock following the MSY control rule (described in Appendix E, which also specifies the relationship of F to B or other indicator of productive capacity under an MSY harvest policy.) The assessments are updated every three years (maximum) and benchmark assessment every six years (maximum) following the assessment schedule described in the Western Pacific Stock Assessment Review Policy.

For more information regarding the MSY reference points, refer to the most current WPFMC archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.2.9.2 OY

Optimum Yield for Guam bottomfish fisheries has been established as equal to the ACL, since social, ecological, and economic factors, as well as management uncertainties, are accounted in ACL specification.

3.1.1.2.9.3 Extent to Which Fishing Vessels will Harvest OY

With harvest rates well below maximum exploitation rates, so few permitted vessels in the fishery, and the small number of vessels able to participate successfully in the fishery in Guam, domestic vessels do not have sufficient harvesting capacity to take the entire OY.

3.1.1.2.9.4 Extent to Which U.S. Fish Processors will Process OY

Bottomfish harvested in Guam are marketed as fresh whole product. Little or no processing occurs, either at sea or in the market Therefore, US fish processors will not process bottomfish beyond OY.

3.1.1.2.10 Annual Catch Limit

3.1.1.2.10.1 Specification Mechanism

For the bottomfish fishery, specification of the acceptable biological catch and annual catch limits are required by the MSA and follows the mechanism described in Appendix E. The NMFS specifies the ACL annually, based on the Council's recommendation.

3.1.1.2.10.2 Limit

For the most recent Annual Catch Limits, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.2.10.3 Accountability Measures

Accountability measures are specified on an annual basis by NMFS based on recommendations by the Council. There currently is no near-real-time monitoring for bottomfish fisheries in the

Guam. The specification of accountability measures will follow the process described in Appendix E.

3.1.1.2.11 Criteria for Determining Overfishing

Biological and other fishery data are poor for all bottomfish species in the Mariana Archipelago. Generally, data are only available on commercial landings by species and catch-per-unit-effort (CPUE) for the multi-species complexes as a whole. At this time it is not possible to partition these effort measures among the various bottomfish MUS

Overfishing criteria and control rules are specified and applied to individual species within the multi-species stock whenever possible. When this is not possible, they are based on an indicator species for the multi-species stock. It is important to recognize that individual species would be affected differently based on this type of control rule, and it is important that for any given species fishing, mortality does not currently exceed a level that would result in excessive depletion of that species. For the seamount groundfish stocks, armorhead serves as the indicator species. No indicator species are being used for the two bottomfish multi-species stock complexes (Guam and CNMI). Instead, the control rules are applied to each stock complex as a whole.

The MSY control rule is used as the maximum fishing mortality threshold (MFMT). The MFMT and minimum stock size threshold (MSST) are specified based on recommendations in Restrepo et al. (1998) and both are dependent on the natural mortality rate (M). The value of M used to determine the reference point values are not specified in this document. The latest estimate, published annually in the SAFE report, is used and the value is occasionally re-estimated using the best available information. The range of M among species within a stock complex is taken into consideration when estimating and choosing the M to be used for the purpose of computing the reference point values.

In addition to the thresholds MFMT and MSST, a warning reference point, B_{FLAG}, is specified at some point above the MSST to provide a trigger for consideration of management action prior to B reaching the threshold. MFMT, MSST, and B_{FLAG} are specified as indicated in Table 2.

Standardized values of fishing effort (E) and catch-per-unit-effort (CPUE) are used as proxies for F and B, respectively, so E_{MSY}, $CPUE_{MSY}$, and $CPUE_{FLAG}$ are used as proxies for F_{MSY}, B_{MSY}, and B_{FLAG}, respectively.

In cases where reliable estimates of $CPUE_{MSY}$ and E_{MSY} are not available, they will be estimated from catch and effort times series, standardized for all identifiable biases. $CPUE_{MSY}$ would be calculated as half of a multi-year average reference CPUE, called $CPUE_{REF}$. The multi-year reference window would be objectively positioned in time to maximize the value of $CPUE_{REF}$. E_{MSY} would be calculated using the same approach or, following Restrepo et al. (1998), by setting E_{MSY} equal to E_{AVE}, where E_{AVE} represents the long-term average effort prior to declines in CPUE. When multiple estimates are available, the more precautionary one is used.

Since the MSY control rule specified here applies to multi-species stock complexes, it is important to ensure that no particular species within the complex has a mortality rate that leads to excessive depletion. In order to accomplish this, a secondary set of reference points is specified

to evaluate stock status with respect to recruitment overfishing. A secondary "recruitment overfishing" control rule is specified to control fishing mortality with respect to that status. The rule applies only to those component stocks (species) for which adequate data are available. The ratio of a current spawning stock biomass proxy ($SSBP_t$) to a given reference level ($SSBP_{REF}$) is used to determine if individual stocks are experiencing recruitment overfishing. SSBP is CPUE scaled by percent mature fish in the catch. When the ratio $SSBP_t/SSBP_{REF}$, or the "SSBP ratio" (SSBPR) for any species drops below a certain limit ($SSBPR_{MIN}$), that species is considered to be recruitment overfished and management measures will be implemented to reduce fishing mortality on that species. The rule applies only when the SSBP ratio drops below the $SSBPR_{MIN}$, but it will continue to apply until the ratio achieves the "SSBP ratio recovery target" ($SSBPR_{TARGET}$), which is set at a level no less than $SSBPR_{MIN}$. These two reference points and their associated recruitment overfishing control rule, which prescribe a target fishing mortality rate ($F_{RO\text{-}REBUILD}$) as a function of the SSBP ratio, are specified as indicated in Table 3. Again, E_{MSY} is used as a proxy for F_{MSY}.

3.1.1.2.12 MSA Conservation and Management Measures

In addition to the federal permit and reporting requirements described above, the federal fisheries management regime under the Mariana FEP (WPFMC 2009) also includes vessel identification and at-sea observer requirements, and a prohibition on the use of poisons, explosives, or intoxicating substances, bottom trawls, and bottom set gillnets. The bottomfish fisheries of Guam are also subject to an annual catch limit (quota) to prevent overfishing (WPFMC 2011a). The quota is reviewed annually, and is published in a notice in the Federal Register. For more information on annual catch limits, go to NMFS website at http://www.fpir.noaa.gov.

In Guam, federal regulations also prohibit vessels 50 ft and longer from fishing within 50 nautical miles (nm) of Guam (WPFMC 2006a). Federal regulations governing this fishery can be found in the Code of Federal Regulations, Title 50, Part 665, Subpart D.

Anchoring by all fishing vessels over 50 ft (15.25 m) LOA is prohibited in the U.S. EEZ seaward of Guam west of 144°30′E. long. except in the event of an emergency caused by ocean conditions or by a vessel malfunction that can be documented (Figure 13) (50 CFR § 665.399).

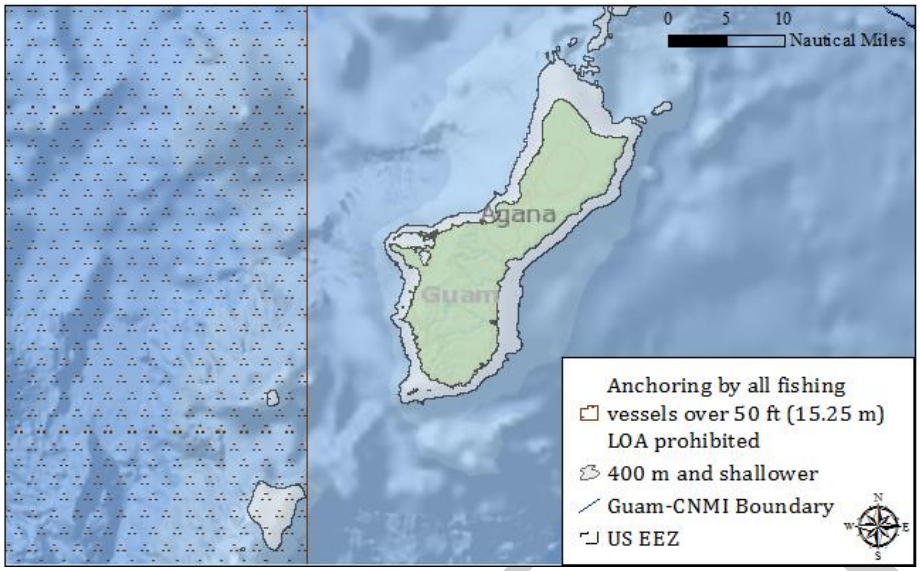


Figure 13. Anchoring Prohibition for Vessels over 50 ft LOA off Guam.

In 2009, Proclamation 8335 established the Marianas Trench Marine National Monument (Monument). The Monument includes certain waters and submerged lands around the three northernmost islands of the CNMI (Uracas or Farallon de Pajaros, Maug, and Asuncion), which comprise the "Islands Unit." The Monument also includes the submerged lands of designated volcanic sites (the "Volcanic Unit"), and the Marianas Trench ("Trench Unit)" (Figure 7). Federal regulations implementing Proclamation 8335 prohibits commercial fishing within the Islands Unit and establishes management measures for non-commercial fishing, including permit and reporting requirements, eligibility for such permits (WPFMC 2013). A permit issued under this section may be issued only to a community resident of Guam or the CNMI. Customary exchange of fish harvested within the Islands Unit under a non-commercial permit is allowed, except that customary exchange by fishermen engaged in recreational fishing is prohibited.

Federal regulations governing this fishery can be found in the Code of Federal Regulations, Title 50, Part 665, Subpart G and Appendix C.

3.1.1.2.13 Regulations implementing International Recommendations and other Applicable Laws

There are no international recommendations or applicable laws that relate to bottomfish and seamount groundfish in Guam. However, the North Pacific Seamount Regional Fishery Management Organization's (RFMO) efforts may include actions aimed at seamount groundfish, and potentially bottomfish, in the future. Such actions may have the potential to impact CNMI bottomfish and seamount groundfish fisheries.

3.1.1.2.14 Bycatch Amount and Type

With an overall bycatch (discard) rate of less than 4 percent, most fish caught in the Guam bottomfish fishery are kept, regardless of size or species. However, the charter fishing sector commonly practices catch-and-release fishing, resulting in an overall bycatch rate of 20 percent.

For the most bycatch numbers, see the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

To date, there have been no reported or observed interactions between protected species and coral reef fisheries in Federal waters around the CNMI and the potential for interactions is believed to be low due to the gear types and fishing methods used.

3.1.1.2.15 Guam Bottomfish Essential Fish Habitat

Except for several of the major commercial species, very little is known about the life histories, habitat utilization patterns, food habits, or spawning behavior of most adult bottomfish and seamount groundfish species. Furthermore, very little is known about the distribution and habitat requirements of juvenile bottomfish.

Generally, the distribution of adult bottomfish in the Marianas is closely linked to suitable physical habitat. Unlike the U.S. mainland with its continental shelf ecosystems, Pacific islands are primarily volcanic peaks with steep drop-offs and limited shelf ecosystems. The BMUS under the Council's jurisdiction are found concentrated on the steep slopes of deepwater banks. The 100-fathom isobath is commonly used as an index of bottomfish habitat. Adult bottomfish are usually found in habitats characterized by a hard substrate of high structural complexity. The total extent and geographic distribution of the preferred habitat of bottomfish is not well known. Bottomfish populations are not evenly distributed within their natural habitat; instead, they are found dispersed in a non-random, patchy fashion. Deepwater snappers tend to aggregate in association with prominent underwater features, such as headlands and promontories.

There is regional variation in species composition, as well as a relative abundance of the MUS of the deepwater bottomfish complex in the Western Pacific Region. In Guam and the Northern Mariana Islands, the bottomfish fishery can be divided into two distinct fisheries: a shallow- and a deep-water bottomfish fishery, based on species and depth. The shallow-water (0–100 m) bottomfish complex comprises groupers, snappers, and jacks in the genera *Lethrinus*, *Lutjanus*, *Epinephelus*, *Aprion*, *Caranx*, *Variola*, and *Cephalopholis*. The deep-water (100–400 m) bottomfish complex comprises primarily snappers and groupers in the genera *Pristipomoides*, *Etelis*, *Aphareus*, *Epinephelus*, and *Cephalopholis*.

To reduce the complexity and the number of EFH identifications required for individual species and life stages, the Council has designated EFH for bottomfish assemblages pursuant to Section 600.805(b) of 62 FR 66551. The species complex designations include deep-slope bottomfish (shallow water and deep water). The designation of these complexes is based on the ecological relationships among species and their preferred habitat. These species complexes are grouped by the known depth distributions of individual BMUS throughout the Western Pacific Region.

3.1.1.2.15.1 Description and Identification of EFH

At present, there is not enough data on the relative productivity of different habitats to develop EFH designations based on Level 3 or Level 4 data. Given the uncertainty concerning the life histories and habitat requirements of many BMUS, the Council designated EFH for adult and juvenile bottomfish as the water column and all bottom habitat extending from the shoreline to a depth of 400 meters (200 fathoms) encompassing the steep drop-offs and high-relief habitats that are important for bottomfish throughout the Western Pacific Region.

The eggs and larvae of all BMUS are pelagic, floating at the surface until hatching and subject thereafter to advection by the prevailing ocean currents. There have been few taxonomic studies of these life stages of snappers (lutjanids) and groupers (epinepheline serranids). Presently, few larvae can be identified to species. As snapper and grouper larvae are rarely collected in plankton surveys, it is extremely difficult to study their distribution. Because of the existing scientific uncertainty about the distribution of the eggs and larvae of bottomfish, the Council designated the water column extending from the shoreline to the outer boundary of the EEZ to a depth of 400 meters as EFH for bottomfish eggs and larvae throughout the Western Pacific Region.

3.1.1.2.15.2 Identification of Habitat Areas of Particular Concern

On the basis of the known distribution and habitat requirements of adult bottomfish, the Council designated all escarpments/slopes between 40–280 meters as HAPC. The basis for this designation is the ecological function that these areas provide, the rarity of the habitat, and the susceptibility of these areas to human-induced environmental degradation.

The discovery of concentrations of juvenile snappers in relatively shallow water and featureless bottom habitat in Hawai‘i indicates the need for more research to help identify, map, and study nursery habitat for juvenile snapper in the Marianas Archipelago.

3.1.2 Coral Reef Fisheries

3.1.2.1 CNMI Coral Reef Fishery

Table 4 Mariana Archipelago Coral Reef Ecosystem MUS, Currently Harvested Coral Reef Taxa.

Family Name	Scientific Name	English Common Name	Local Name Chamorro/Carolinian
Acanthuridae (Surgeonfishes)	*Acanthurus olivaceus*	orange-spot surgeonfish	NA
	Acanthurus xanthopterus	yellowfin surgeonfish	hugupao dangulo/ mowagh
	Acanthurus triostegus	convict tang	kichu/limell
	Acanthurus dussumieri	eye-striped surgeonfish	NA
	Acanthurus nigroris	blue-lined surgeon	NA
	Acanthurus leucopareius	whitebar surgeonfish	NA
	Acanthurus lineatus	blue-banded surgeonfish	hiyok/filaang
	Acanthurus nigricauda	blackstreak surgeonfish	NA
	Acanthurus nigricans	whitecheek surgeonfish	NA
	Acanthurus guttatus	white-spotted surgeonfish	NA
	Acanthurus blochii	ringtail surgeonfish	NA
	Acanthurus nigrofuscus	brown surgeonfish	NA
	Acanthurus pyroferus	mimic surgeonfish	NA
	Zebrasoma flavescens	yellow tang	NA
Acanthuridae	*Ctenochaetus striatus*	striped bristletooth	NA

Family Name	Scientific Name	English Common Name	Local Name Chamorro/Carolinian
(Surgeonfishes)	*Ctenochaetus binotatus*	twospot bristletooth	NA
	Naso unicornus	bluespine unicornfish	tataga/igh-falafal
	Naso lituratus	orangespine unicornfish	hangon/bwulaalay
	Naso tuberosus	humpnose unicornfish	NA
	Naso hexacanthus	black tongue unicornfish	NA
	Naso vlamingii	bignose unicornfish	NA
	Naso annulatus	whitemargin unicornfish	NA
	Naso brevirostris	spotted unicornfish	NA
	Naso brachycentron	humpback unicornfish	NA
	Naso caesius	gray unicornfish	NA
Balistidae (Triggerfishes)	*Balistoides viridescens*	titan triggerfish	NA
	Balistoides conspicillum	clown triggerfish	NA
	Balistapus undulatus	orangstriped triggerfish	NA
	Melichthys vidua	pinktail triggerfish	NA
	Melichthys niger	black triggerfish	NA
	Pseudobalistes fuscus	blue triggerfish	NA
	Rhinecanthus aculeatus	Picassofish	NA
	Balistoides rectanulus	wedged Picassofish	NA
	Sufflamen fraenatus	bridled triggerfish	NA
Carangidae (Jacks)	*Selar crumenophthalmus*	bigeye scad	atulai/peti
	Decapterus macarellus	mackerel scad	NA
Carcharhinidae (Sharks)	*Carcharhinus amblyrhynchos*	grey reef shark	NA
	Carcharhinus albimarginatus	silvertip shark	NA
	Carcharhinus galapagensis	Galapagos shark	NA
	Carcharhinus melanopterus	blacktip reef shark	NA
	Triaenodon obesus	whitetip reef shark	NA
Holocentridae (Solderfish/ Squirrelfish	*Myripristis berndti*	bigscale soldierfish	saksak/mweel
	Myripristis adusta	bronze soldierfish	sagamelon
	Myripristis murdjan	blotcheye soldierfish	sagamelon
	Myripristis amaena	brick soldierfish	sagamelon
	Myripristis pralinia	scarlet soldierfish	sagamelon
	Myripristis violacea	violet soldierfish	sagamelon
	Myripristis vittata	whitetip soldierfish	sagamelon
	Myripristis chryseres	yellowfin soldierfish	sagamelon
	Myripristis kuntee	pearly soldierfish	sagamelon
	Sargocentron caudimaculatum	tailspot squirrelfish	sagamelon
	Sargocentron		

Family Name	Scientific Name	English Common Name	Local Name Chamorro/Carolinian
	microstoma	file-lined squirrelfish	NA
	Sargocentron diadema	crown squirrelfish	chalak
	Sargocentron tiere	blue-lined squirrelfish	sagsag/leet
	Sargocentron spiniferum	saber or long jaw squirrelfish	sisiok
	Neoniphon spp.	spotfin squirrelfish	sagsag/leet
Kuhliidae (Flagtails)	*Kuhlia mugil*	barred flag-tail	NA
Kyphosidae (Rudderfish)	*Kyphosus biggibus*	rudderfish	guili
	Kyphosus cinerascens	rudderfish	guili/schpwul
	Kyphosus vaigienses	rudderfish	guilen puengi/reel
Labridae (Wrasses)	*Cheilinus chlorourus*	floral wrasse	NA
	Cheilinus undulates	napoleon wrasse	tangison/maam
	Cheilinus trilobatus	triple-tail wrasse	lalacha mamate/porou
	Cheilinus fasciatus	harlequin tuskfish or red-breasted wrasse	NA
	Oxycheilinus unifasciatus	ring-tailed wrasse	NA
	Xyrichtys pavo	razor wrasse	NA
	Xyrichtys aneitensis	whitepatch wrasse	NA
	Cheilio inermis	cigar wrasse	NA
	Hemigymnus melapterus	blackeye thicklip	NA
	Hemigymnus fasciatus	barred thicklip	NA
	Halichoeres trimaculatus	three-spot wrasse	NA
	Halichoeres hortulanus	checkerboard wrasse	NA
	Halichoeres margaritacous	weedy surge wrasse	NA
	Thalassoma purpureum	surge wrasse	NA
	Thalassoma quinquevittatum	red ribbon wrasse	NA
	Thalassoma lutescens	sunset wrasse	NA
	Hologynmosus doliatus	longface wrasse	NA
	Novaculichthys taeniourus	rockmover wrasse	NA
Mullidae (Goatfishes)	*Mulloidichthys* spp.	yellow goatfish	NA
	Mulloidichthys vanicolensis	yellowfin goatfish	satmoneti/wichigh
	Mulloidichthys flavolineatus	yellowstripe goatfish	ti‘ao (juv.) satmoneti (adult)
	Parupeneus spp.	banded goatfish	NA
	Parupeneus barberinus	dash-dot goatfish	satmonetiyo/failighi
	Parupeneus bifasciatus	doublebar goatfish	satmoneti acho/ sungoongo

Family Name	Scientific Name	English Common Name	Local Name Chamorro/Carolinian
	Parupeneus heptacanthus	redspot goatfish	NA
	Parupeneus ciliatus	white-lined goatfish	ti‘ao (juv.) satmoneti (adult)
	Parupeneus cyclostomas	yellowsaddle goatfish	ti‘ao (juv.) satmoneti (adult)
	Parupeneus pleurostigma	side-spot goatfish	ti‘ao (juv.) satmoneti (adult)
	Parupeneus multifaciatus	multi-barred goatfish	ti‘ao (juv.) satmoneti (adult)
	Upeneus arge	bantail goatfish	NA
Mugilidae (Mullets)	*Mugil cephalus*	striped mullet	aguas (juv.) laiguan (adult)
	Moolgarda engeli	Engel’s mullet	aguas (juv.) laiguan (adult)
	Crenimugil crenilabis	fringelip mullet	aguas (juv.) laiguan (adult)
Muraenidae (Moray eels)	*Gymnothorax flavimarginatus*	yellowmargin moray eel	NA
	Gymnothorax javanicus	giant moray eel	NA
	Gymnothorax undulatus	undulated moray eel	NA
Octopodidae (Octopus)	*Octopus cyanea*	octopus	gamsun
	Octopus ornatus	octopus	gamsun
Polynemidae	*Polydactylus sexfilis*	threadfin	NA
Pricanthidae (Bigeye)	*Heteropriacanthus cruentatus*	glasseye	NA
	Priacanthus hamrur	bigeye	NA
Scaridae (Parrotfishes)	*Bolbometopon muricatum*	humphead parrotfish	atuhong/roow
	Scarus spp.	parrotfish	palakse/laggua
	Hipposcarus longiceps	Pacific longnose parrotfish	gualafi/oscha
	Calotomus carolinus	stareye parrotfish	palaksin chaguan
Scombridae	*Gymnosarda unicolor*	dogtooth tuna	white tuna/ayul
Siganidae (Rabbitfish)	*Siganus aregentus*	forktail rabbitfish	hiting/manahok/llegh
	Siganus guttatus	golden rabbitfish	hiting
	Siganus punctatissimus	gold-spot rabbitfish	hiting galagu
	Siganus randalli	Randall’s rabbitfish	NA
	Siganus spinus	scribbled rabbitfish	hiting/sesyon/palawa
	Siganus vermiculatus	vermiculate rabbitfish	hiting
Sphyraenidae (Barracuda)	*Sphyraena helleri*	Heller’s barracuda	NA
	Sphyraena barracuda	great barracuda	NA
Turbinidae	*Turbo* spp.	green snails	aliling pulan/aliling

Family Name	Scientific Name	English Common Name	Local Name Chamorro/Carolinian
(turban /green snails		turban shells	tulompu

3.1.2.1.1 Description (commercial, charter, recreational)

Small-scale nearshore fisheries in the CNMI and Guam are of fundamental importance for subsistence, social and cultural purposes, in addition to providing food, trade, and recreational

Figure 14. Assorted coral reef fish catch.

resources. The coral reef fishery is an important resource for families in Mariana Islands. Not only is it a source of food but also an alternate source of income and majority of fishermen sell part of their catch and keep the rest for consumption.

Although coral reef fisheries surveys in the CNMI cover fishing by persons engaged in commercial, recreational, and subsistence fishing activities, only estimates of total commercial landings of "reef fishes" are made available on the WPacFIN website. Recent commercial landings are in the tens of thousands, an order of magnitude lower than the commercial landings in the 1980s and 1990s.[9] However, this figure is likely to be an underestimate as the data collection system does not provide an estimate of total catch because resources have been insufficient to cover the full spatial and temporal aspects of the fishery (Bak 2012). The peak of

[9] http://www.pifsc.noaa.gov/wpacfin/cnmi/Data/Landings_Charts/ce3b.htm.Website accessed on August 6, 2015.

the landings of coral reef fishes occurred in 1989 followed by a steep drop in the early 1990s. Catches appeared stable in the 1990s to early 2000 but dropped thereafter with a spike in landings in 2008.

Small-scale nearshore fisheries in the CNMI are fundamentally important for subsistence, social and cultural purposes, income and trade, and recreation. In CNMI, most coral reef fishing occurs in near-shore areas. Finfish and invertebrates are the primary targets and small quantities of seaweed are also harvested. Cast-netting, spear-fishing, hook and line, gleaning, trolling, and bottom fishing are common fishing techniques practiced in the CNMI.

Some of the common families targeted by CNMI's reef fish fishery are: Acanthuridae (surgeonfish), Scaridae (parrotfish), Mullidae (goatfish), Serranidae, (grouper), Labridae (wrasse), Holocentridae (soldier/squirrelfish), Carangidae (Jacks), Balistidae (triggerfish), Scombridae (scad), Haemulidae (sweetlips), Gerridae (mojarra), Lethrinidae (emperors), as well as other and non-finfish.

Currently, there are five Marine Protected Areas (MPAs) in the waters around Saipan, three of which are no take marine conservation areas. Two of these MPAs are species-based reserves. Additional management measures such as gillnet ban and scuba spear fishing ban, trochus moratorium, sea cucumber moratorium, cast net restrictions, lobster size limits, and others have been implemented in recent years. Special provisions have been established permitting the use of traditional surround net fishing "chenchulu" within coastal areas for community gatherings and fiestas. Guam Department of Fish and Wildlife staff collect fishery information from permitted fishing activity.

3.1.2.1.2 Type and Quantity of Fishing Gear

Cast-netting, spear-fishing, hook and line, gleaning, trolling, and bottom fishing are common fishing techniques practiced in the Mariana Islands.

3.1.2.1.3 Catch in Numbers or Weight

The dominant component of the catch, based on average total catch from creel survey data and commercial purchase system between 2005 and 2014, is emperors followed by big eye scad, parrotfish, jacks and surgeonfish (Figure 15). The average catch between 2005 and 2014 for gear types in CNMI coral reef fisheries is found in Figure 16. The total average catch from the boat and shore-based creel surveys and the Commercial Purchase System data was estimated at 94,459 lbs. with a high of 138,619 lbs. in 2006 and low of 30,503 lbs. in 2014. For the most recent information on the CNMI coral reef fishery statistics, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

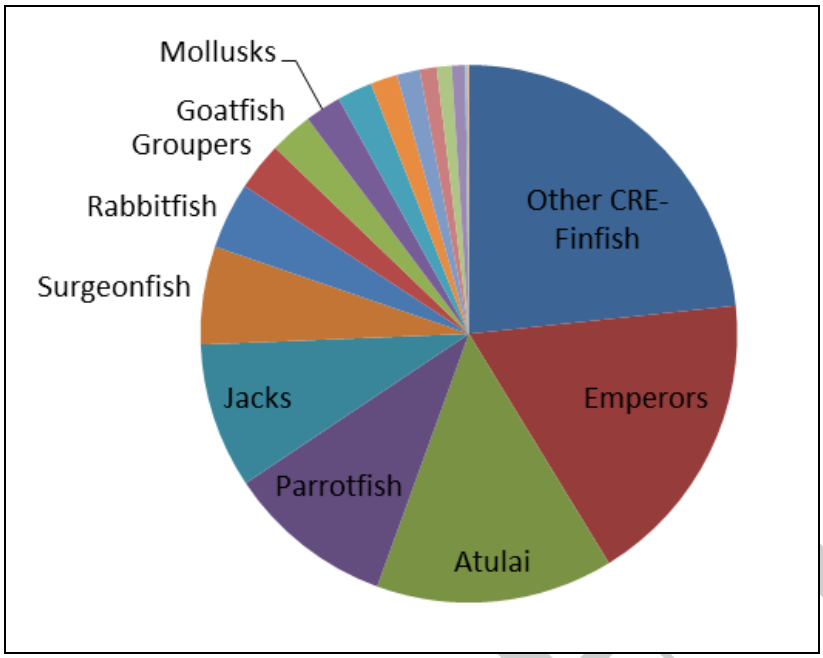


Figure 15. Relative proportion of reef fish families that dominate the catch based on a nine-year average from creel survey and commercial purchase system information.

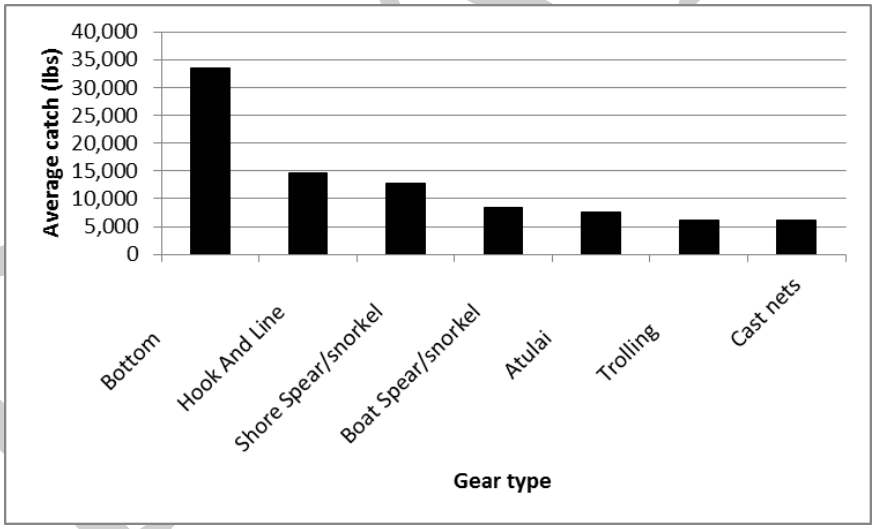


Figure 16. Average catch of reef fish across different fishing methods employed in the CNMI.

3.1.2.1.4 Fishing Areas

Coral reef fisheries in the CNMI are mostly limited to nearshore areas of the three southernmost islands of Saipan, Rota, and Tinian. Limited fishing for CREMUS occurs north of Saipan. Finfish and invertebrates are the primary targets, but small quantities of seaweed are also taken. The Saipan lagoon is one of the primary fishing areas but it is significantly impacted by land-based sources of pollution.

3.1.2.1.5 Time of Fishing

The majority of the coral reef fishing in CNMI is conducted during the day time – particularly the hook-and-line and net fishery. Spearfishing is commonly a conducted at night.

3.1.2.1.6 Economics

The 2004-2014 average for revenue across CNMI CREMUS was $216,267, with a high of $370,003 (2006) and a low of $80,361 (2013). For current information regarding revenue of the fishery, price per pound, total direct employment, and fisheries-dependent services or industries, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.2.1.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors

Coral reef fish are generally not processed and are sold as whole fresh fish in small retail outlets or along the roadside.

3.1.2.1.8 Present and Probable Future Condition of the Fishery

The coral reef fisheries in the Marianas are in various levels of exploitation. The level of exploitation depends on the marketability and demand for the species, coupled with its life history characteristic. Fishing effort has been declining in the Mariana Islands (particularly in CNMI) in recent years and the biomass to fishing effort ratio has generally been favorable from a sustainability perspective. Fishing effort and catch in the CNMI is currently inadequately monitored and managed, making it difficult to assess any such impacts in near-real time. Better understanding of fishing pressure, as well the contribution of non-fishing impacts, such as pollution and habitat degradation, to stock productivity is necessary to estimate the probable future condition of the CNMI coral reef fishery.

3.1.2.1.9 Yield

3.1.2.1.9.1 MSY

The Maximum Sustainable Yield for the fishery is estimated through stock assessments generated by the Pacific Island Fisheries Science Center. The assessments determine the status of the stock following the MSY control rule (described in Appendix E, which also specifies the relationship of F to B or other indicator of productive capacity under an MSY harvest policy.) The assessments are updated every three years (maximum) and benchmark assessment every six years (maximum) following the assessment schedule described in the Western Pacific Stock Assessment Review Policy. However, due to the data-limited nature of the coral reef fishery, the current MSY control rules and reference point proxies described in Section 3.1.2.1.13 below cannot be applied to the hundreds of species in the coral reef management unit species list.

For ACL specification purposes, Maximum Sustainable Yield in the coral reef fisheries are determined by using the Biomass-Augmented Catch-MSY approach (Sabater and Kleiber 2014). This method estimates MSY using plausible combination rates of population increase (denoted by r) and carrying capacity (denoted by k) assumed from the catch time series, resilience characteristics (from FishBase), and biomass from existing underwater census surveys done by the Pacific Island Fisheries Science Center. This method was applied to species complexes grouped by taxonomic families. For more information regarding the MSY reference points, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.2.1.9.2 OY

Optimum Yield for CNMI coral reef fisheries is established as equal to the ACL, since social, ecological, and economic factors, as well as management uncertainties, are accounted for when specifying the ACL.

3.1.2.1.10 Extent to Which Fishing Vessels will Harvest OY

Fishing participation is monitored through the Annual Archipelagic Fishery Ecosystem Report (SAFE Report). Once OY has been calculated, the total number of fishing participants are extrapolated to determine the extent that fishing participants can potentially harvest OY.

3.1.2.1.11 Extent to Which U.S. Fish Processors will Process OY

Coral reef fishes are not typically processed (filleted, etc.). Reef fish are sold fresh whole by retailers or directly to consumers by fishermen in person-to-person transactions or along the roadside.

3.1.2.1.12 Annual Catch Limit

3.1.2.1.12.1 Specification Mechanism

For the coral reef fishery, specification of the acceptable biological catch and annual catch limits are required by the MSA and follows the mechanism described in Appendix E. The specification is conducted on an annual basis by NMFS based on recommendations from the Council.

3.1.2.1.12.2 Limit

For the most recent coral reef fishery taxonomic family Annual Catch Limits, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.2.1.12.3 Accountability Measures

Accountability measures are specified on an annual basis by NMFS based on recommendations by the Council. There currently is no near-real-time monitoring for coral reef fisheries in the CNMI. The specification of accountability measures follow the process described in Appendix E.

3.1.2.1.13 Criteria for Determining Overfishing

MSY Control Rule and Stock Status Determination

Available biological and fishery data are poor for all coral reef ecosystem management unit species in the Mariana Islands. There is scant information on the life histories, ecosystem dynamics, fishery impact, community structure changes, yield potential, and management reference points for many coral reef ecosystem species. Additionally, total fishing effort cannot be adequately partitioned between the various management unit species (MUS) for any fishery or area. Biomass, maximum sustainable yield, and fishing mortality estimates are not available for any single MUS. Once these data are available, fishery managers can establish limits and reference points based on the multi-species coral reef ecosystem as a whole.

When possible, the MSY control rule should be applied to the individual species in a multi-species stock. When this is not possible, MSY may be specified for one or more species; these

values can then be used as indicators for the multi-species stock's MSY.

Individual species that are part of a multi-species complex will respond differently to an OY-determined level of fishing effort (F_{OY}). Thus, for a species complex that is fished at F_{OY}, managers still must track individual species' mortality rates in order to prevent species-specific population declines that would lead to depletion.

For the coral reef fishery, the multi-species complex as a whole is used to establish limits and reference points for each area. When possible, available data for a particular species are used to evaluate the status of individual MUS stocks in order to prevent recruitment overfishing. When better data and the appropriate multi-species stock assessment methodologies become available, all stocks will be evaluated independently, without proxy.

Establishing Reference Point Values

Standardized values of catch per unit effort (CPUE) and effort (E) are used to establish limit and reference point values, which act as proxies for relative biomass and fishing mortality, respectively. Limits and reference points are calculated in terms of $CPUE_{MSY}$ and E_{MSY} included in Table 5.

Table 5. CPUE-based Overfishing Limits and Reference Points for Coral Reef Species.

Value	**Proxy**	**Explanation**
MaxFMT (F_{MSY})	E_{MSY}	0.91 $CPUE_{MSY}$
F_{OY}	0.75 E_{MSY}	suggested default scaling for target
B_{MSY}	$CPUE_{MSY}$	operational counterpart
B_{OY}	1.3 $CPUE_{MSY}$	simulation results from Mace (1994)
MinSST	0.7 $CPUE_{MSY}$	suggested default (1-M)B_{MSY} with M=0.3*
B_{FLAG}	0.91 $CPUE_{MSY}$	suggested default (1-M)B_{OY} with M=0.3*

When reliable estimates of E_{MSY} and $CPUE_{MSY}$ are not available, they are generated from time series of catch and effort values, standardized for all identifiable biases using the best available analytical tools. $CPUE_{MSY}$ is calculated as one-half a multi-year moving average reference CPUE ($CPUE_{REF}$).

3.1.2.1.14 MSA Conservation and Management Measures

Permit and Reporting Requirements

In order to identify participants, collect harvest and effort data, and control harvests, special permits are required for any directed fisheries on potentially harvested coral reef taxa (PHCRT) within the regulatory area or to fish for any CRE MUS in the coral reef regulatory area with any gear not normally permitted. Those who are issued a Federal permit to fish for non-CRE MUS but who incidentally catch CRE MUS are exempt from the CRE permit requirement. Those

fishing for currently harvested coral reef taxa (CHCRT) outside of an MPA and who do not retain any incidentally-caught PHCRT, or any person collecting marine organisms for scientific research are also exempt from the CRE permit requirement. Permits are only valid for fishing in the fishery management subarea specified on the permit.

The harvest of live rock and living corals is prohibited throughout the federally managed U.S. EEZ waters of the region; however, under special permits with conditions specified by NMFS following consultation with the Council, indigenous residents could be allowed to harvest live rock or coral for traditional uses, and aquaculture operations could be permitted to harvest seed stock. A Federal reporting system for all fishing under special permits is in place. Resource monitoring systems administered by state, territorial, and Commonwealth agencies continue to collect fishery data on the existing coral reef fisheries that do not require special permits. Fishery participants have the option of using NMFS approved electronic logbooks in lieu of paper logbooks.

Notification

To support fishery monitoring, any special permit holder must contact the appropriate NMFS enforcement agent in Guam at least 24 hours before landing any CRE MUS harvested under a special permit, and report the port and the approximate date and time at which the catch will be landed.

Gear Restrictions

To protect habitat and reduce bycatch, allowable gear types comprise: (1) Hand harvest; (2) spear; (3) slurp gun; (4) hand/dip net; (5) hoop net for Kona crab; (6) throw net; (7) barrier net; (8) surround/purse net that is attended at all times; (9) hook-and-line (powered and unpowered handlines, rod and reel, and trolling); (10) crab and fish traps with vessel ID number affixed; and (11) remote operating vehicles/submersibles. New fishing gears that are not included in the allowable gear list may be allowed under the special permit provision. CRE MUS may not be taken by means of poisons, explosives, or intoxicating substances. Possession and use of these materials is prohibited.

All fish and crab trap gear used by permit holders must be identified with the vessel number. Unmarked traps and unattended surround nets or bait seine nets found deployed in the CRE regulatory area will be considered unclaimed property and may be disposed of by NMFS or other authorized officers.

Framework Procedures

A framework process, providing for an administratively simplified procedure to facilitate adjustments to management measures previously analyzed in the CRE FMP, is an important component of the FEP. These framework measures include designating “no-anchoring” zones and establishing mooring buoys, requiring vessel monitoring systems on board fishing vessels, designating areas for the sole use of indigenous peoples, and moving species from the PHCRT to the CHCRT list when sufficient data has been collected. A general fishing permit program could also be established for all U.S. EEZ coral reef ecosystem fisheries under the framework process.

Bycatch Measures

Almost all coral reef fishes caught in the Mariana Archipelago are considered food fishes and are kept, regardless of size or species. There is no specific information available on bycatch from coral reef fisheries, particularly inshore fisheries. CRE MUS may not be taken by means of poisons, explosives, or intoxicating substances and further, possession and use of these materials is prohibited. These restrictions further reduce the potential for bycatch in this fishery. In addition, any fishing vessel (commercial or non-commercial) operating in the territorial seas or EEZ of the U.S. in a fishery identified through NMFS' annual determination process must carry an observer when directed to do so.

Federal regulations governing this fishery can be found in the Code of Federal Regulations, Title 50, Part 665, Subpart G and Appendix C.

3.1.2.1.15 Regulations Implementing International Recommendations and other Applicable Laws

There are no current international recommendations or applicable laws in the coral reef fishery for the Mariana Archipelago. However, to ensure that coral reef fisheries are adequately represented, the Council participates in meetings of the U.S. Coral Reef Task Force, established by Executive Order 13089 to protect coral reefs and coral reef ecosystems.

3.1.2.1.16 Bycatch

While the boat-based and shore-based creel survey programs administered by CNMI DFW provide for the collection of bycatch information, no such information is currently available which suggests that most of the fish that are caught are retained. However, like other Pacific Islands, discards, if they occur, are usually due to cultural reasons (i.e., taboo) or practical reasons such as toxicity (e.g., ciguatera and poison).

In the CNMI, the U.S. EEZ extends from the shore to 200 nm; however, the federal coral reef ecosystem management area applies only to offshore waters from 3-200 nm from shore, consistent with the other island areas. As previously noted, coral reef fishing is conducted predominantly in nearshore waters from 0-3 nm because the majority of coral reef ecosystem habitat is found within this boundary. Consequently, it might be argued that there is no bycatch problem for coral reef fisheries under federal control. Nevertheless, there are federal management regulations currently in place to minimize the potential for bycatch through the prohibition on the use of destructive and non-selective gear methods. Specifically, federal regulations allow only certain gear types to be used while fishing for CREMUS. These include: (1) hand harvest; (2) spear; (3) slurp gun; (4) hand net/dip net; (5) hoop net for crab; (6) throw net; (7) barrier net; (8) surround/purse net that is attended at all times; (9) hook and line; (10) crab and fish traps with vessel ID number affixed; and (11) remotely operated vehicles/submersibles.

3.1.2.1.17 CNMI Coral Reef Essential Fish Habitat

In designating EFH for Coral Reef Ecosystem MUS, MUS are linked to specific habitat "composites" (e.g., sand, live coral, seagrass beds, mangrove, open ocean) for each life history stage, consistent with the depth of the ecosystem to 50 fathoms and to the limit of the EEZ.

Except for several of the major coral reef associated species, very little is known about the life

histories, habitat utilization patterns, food habits, or spawning behavior of most coral reef associated species. For this reason, the Council, through the CRE-FMP, designated EFH using a two-tiered approach based on the division of MUS into the Currently Harvested Coral Reef Taxa (CHCRT) and Potentially Harvested Coral Reef Taxa (PHCRT) categories. This is also consistent with the use of habitat composites.

3.1.2.1.17.1 Description and Identification of EFH for Currently Harvested Coral Reef Taxa

In the first tier, EFH has been identified for species that (a) are currently being harvested in state and federal waters and for which some fishery information is available and (b) are likely to be targeted in the near future based on historical catch data.

To reduce the complexity and the number of EFH identifications required for individual species and life stages, the Council has designated EFH for species assemblages pursuant to 50 CFR 600.815 (a)(2)(ii)(E). The designation of these complexes is based on the ecological relationships among species and their preferred habitat. These species complexes are grouped by the known depth distributions of individual MUS. The textual EFH designations for CHCRT throughout the Western Pacific Region are found in Table 6.

3.1.2.1.17.2 Description and Identification of EFH for Potentially Harvested Coral Reef Taxa

EFH has also been designated for the second tier, PHCRT. These taxa include literally thousands of species encompassing almost all coral reef fauna and flora. However, there is very little scientific knowledge about the life histories and habitat requirements of the thousands of species of organisms that compose these taxa. In fact, a large percentage of these biota have not been described by science. Therefore, the Council has used the precautionary approach in designating EFH for PHCRT so that enough habitat is protected to sustain managed species.

EFH for all life stages of Potentially Harvested Coral Reef Taxa is designated as the water column and bottom habitat from the shoreline to the outer boundary of the EEZ to a depth of 50 fathoms (Table 6). As with CHCRT, the Council has designated EFH for species assemblages pursuant to the federal regulations cited above.

Table 6. EFH Designations for Coral Reef Taxa

Species Assemblage/Complex	EFH (Egg and Larvae)	EFH (Adult and Juvenile)
Acanthuridae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm.
Balistidae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm.
Carangidae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm.
Carcharhinidae	N/A	All bottom habitat and the adjacent water column from 0 to 50 fm to the outer extent of the EEZ.
Holocentridae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky and coral areas and the adjacent water column from 0 to 50 fm.
Kuhliidae	The water column from the shoreline to the outer limits of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 25 fm.
Kyphosidae	Egg, larvae, and juvenile: the water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky and coral bottom habitat and the adjacent water column from 0 to 15 fm.
Labridae	The water column and all bottom habitat extending from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	
Mullidae	The water column extending from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky/coral and sand-bottom habitat and adjacent water column from 0 to 50 fm.
Mugilidae	The water column from the shoreline to the outer limits of the EEZ to a depth of 50 fm.	All sand and mud bottoms and the adjacent water column from 0 to 25 fm.

Species Assemblage/Complex	**EFH (Egg and Larvae)**	**EFH (Adult and Juvenile)**
Muraenidae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky and coral areas and the adjacent water column from 0 to 50 fm.
Octopodidae	Larvae: The water column from the shoreline to the outer limits of the EEZ to a depth of 50 fm.	EFH for the adult, juvenile phase, and demersal eggs is defined as all coral, rocky, and sand-bottom areas from 0 to 50 fm.
Polynemidae	The water column extending from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky/coral and sand-bottom habitat and the adjacent water column from 0 to 50 fm.
Priacanthidae	The water column extending from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky/coral and sand-bottom habitat and the adjacent water column from 0 to 50 fm.
Scaridae	The water column from the shoreline to the outer limit of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm
Siganidae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm.
Scombridae	EFH for all life stages of dogtooth tuna is designated as the water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	
Sphyraenidae	EFH for all life stages in the family Sphyraenidae is designated as the water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	
Turbinidae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm.
Potentially Harvested Coral Reef Taxa	EFH for all life stages of Potentially Harvested Coral Reef Taxa is designated as the water column and bottom habitat from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	

3.1.2.1.17.3 Identification of Habitat Areas of Particular Concern

Because of the already-noted lack of scientific data, the Council considered locations that are known to support populations of Coral Reef Ecosystem MUS and meet NMFS criteria for HAPC. Although not one of the criteria established by NMFS, the Council considered designating areas that are already protected—for example, wildlife refuges—as HAPC because such areas have been singled out for their ecological values during their designation as a protected area, and therefore would likely meet the HAPC criteria as well. The Coral Reef Ecosystem MUS HAPCs identified in Table 7 have met at least one of the four criteria listed above, or the fifth criterion just identified (i.e., protected areas). However, a great deal of life history work needs to be done in order to adequately identify the extent of HAPCs and link them to particular species or life stages. One coral reef ecosystem HAPC has been designated in the CNMI and five in Guam (Table 7).

Table 7: Coral Reef Ecosystem HAPC in the Mariana Archipelago

HAPC	Rarity of Habitat	Ecological Function	Susceptibility to Human Impact	Likelihood of Developmental Impacts	Existing Protective Status
Guam					
Cocos Lagoon	x	x	x		
Orote Point Ecological Reserve Area	x	x	x	x	x
Haputo Point Ecological Reserve Area	x	x			x
Ritidian Point	x	x			x
Jade Shoals	x	x	x		
CMNI					
Saipan (Saipan Lagoon)	x	x	x	x	x (Managaha Marine Conservation Area)

3.1.2.2 Guam Coral Reef Fishery

See Table 4 for list of management unit species.

3.1.2.2.1 Description (commercial, charter, recreational)

Small-scale nearshore fisheries in the Guam are of fundamental importance for subsistence,

social and cultural purposes, in addition to providing food, trade, and recreational resources. The coral reef fishery is an important resource for families in Mariana Islands. Not only is it a source of food but also an alternate source of income and majority of fishermen sell part of their catch and keep the rest for consumption. Small-scale nearshore fisheries in the CNMI are fundamentally important for subsistence, social and cultural purposes, income and trade, and recreation. In Guam, most coral reef fishing occurs in near-shore areas. Finfish and invertebrates are the primary targets and small quantities of seaweed are also harvested. Cast-netting, spear-fishing, hook and line, gleaning, trolling, and bottom fishing are common fishing techniques practiced in Guam.

Figure 17. Coral reef fish harvest from small boat fisheries.

The coral reef fishery harvests more than 100 species of fish, including the families Acanthuridae, Carangidae, Gerreidae, Holocentridae, Kyphosidae, Labridae, Lethrinidae, Lutjanidae, Mugilidae, Mullidae, Scaridae, and Siganidae (Hensley and Sherwood 1993). Some of the common families targeted by CNMI and Guam's reef fish fishery are: Acanthuridae (surgeonfish), Scaridae (parrotfish), Mullidae (goatfish), Serranidae, (grouper), Labridae (wrasse), Holocentridae (soldier/squirrelfish), Carangidae (Jacks), Balistidae (triggerfish), Scombridae (scad), Haemulidae (sweetlips), Gerridae (mojarra), Kuhliidae (flagtail), Kyphosidae (rudderfish) and Mugilidae (mullet), as well as other and non-finfish.

Myers (1997) noted that seven families (Acanthuridae, Mullidae, Siganidae, Carangidae, Mugilidae, Lethrinidae, and Scaridae) were consistently among the top ten species in any given year and accounted for 45 percent of the annual fish harvest. Approximately 40 taxa of invertebrates are harvested by the nearshore fishery, including 12 crustacean taxa, 24 mollusk taxa, and four echinoderm taxa (Hensley and Sherwood; Myers 1997). Species that became rare on shallow reefs due to heavy fishing include bumphead parrotfish (Bolbometopon muricatum), humphead wrasse (Cheilinus undulatus), stingrays, parrotfish, jacks, emperors, and groupers

(Green 1997).

3.1.2.2.2 Type and Quantity of Fishing Gear

In Guam, most coral reef fishing occurs in near-shore areas and most of the fishing grounds are in the east side of the island. The west side of the island of Guam is exposed to the northeast trade winds, making it difficult to fish with a small boat. Finfish and invertebrates are the primary targets and small quantities of seaweed are also harvested. Cast-netting, spear-fishing, hook and line, gleaning, trolling, and bottom fishing are common fishing techniques practiced on Guam.

3.1.2.2.3 Catch in Numbers or Weight

The ten-year average catch (2004-2014) for gear types in Guam coral reef fisheries was 198,893 lbs. with a high of 340,181 lbs. and low of 146,770 lbs. Recent average catch for shore and boat based fisheries showed dominance of atulai in the catch followed by surgeonfish jacks and emperor (Figure 18). The coral reef fishery landings comes primarily from bottomfishing, shoreline hook & line, spearfishing and gillnets (Figure 19). For the most recent Guam coral reef fishery statistics, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

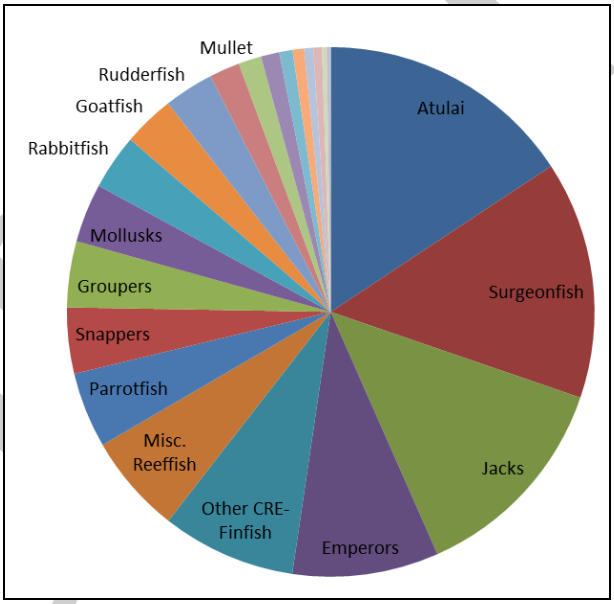


Figure 18. Relative proportion of reef fish families that dominate the catch based on a nine-year average from boat and shore-based creel survey information.

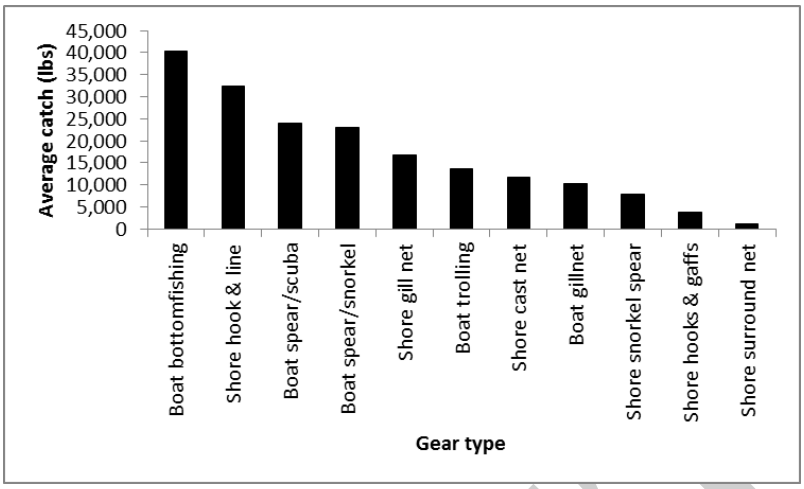


Figure 19. Average catch of reef fish across different fishing methods employed in Guam.

3.1.2.2.4 Fishing Areas

Shore-based fishing accounts for most of the fish and invertebrate harvest from coral reefs around Guam.

According to Myers (1997), less than 20 percent of the total coral reef resources harvested in Guam are taken from the EEZ, primarily because they are associated with less accessible offshore banks. Finfish make up most of the catch in the EEZ. Most offshore banks are deep, remote and subject to strong currents. Generally, these banks are only accessible during calm weather in the summer months (May to August/September). Galvez Bank is the closest and most accessible and, consequently, fished most often. In contrast, the other banks (White Tuna, Santa Rose, Rota) are remote and can only be fished during exceptionally good weather conditions (Green 1997). Local fishermen report that up to ten commercial boats, with two to three people per boat, and some recreational boats, use the banks when the weather is good (Green 1997).

3.1.2.2.5 Time of Fishing

The majority of the coral reef fishing in Guam is conducted during the day time – particularly the hook-and-line and net fishery. Spearfishing is commonly a night fishery.

3.1.2.2.6 Economics

The 2004-2014 average for direct revenue from Guam CREMUS was $259,487 with a high of $410,266 (2006) and a low of $109,983 (2013). For current information regarding revenue of the fishery, price per pound, total direct employment, and fisheries-dependent services or industries, refer to the current Anual WPFMC Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.2.2.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors

There is no additional processing of coral reef fish products in Guam. Products are sold as whole fresh fish on small fish retail outlets or through the Guam Fisherman's Cooperative.

3.1.2.2.8 Present and Probable Future Condition of the Fishery

Virtually no information exists on the condition of the reefs on offshore banks. On the basis of anecdotal information, most of the offshore banks are in good condition because of their isolation. The coral reef fisheries in the Marianas are in various levels of exploitation. The level of exploitation depends on the marketability and demand for the species, coupled with its life history characteristic. Fishing effort has been declining in the Mariana Islands (particularly in CNMI) in recent years and the biomass to fishing effort ratio has generally been favorable from a sustainability perspective. However, the potential for fishing-based biomass impacts from increasing numbers of Micronesian migrants, especially from the Federated States of Micronesia, has many on Guam concerned about the future condition of coral reef fish stocks. The number of Micronesian migrants living on Guam has increased threefold in the past decade or so and now stands at more than 30,000 (Pacific Islands Report, 2012). Fishing has provided a number of these migrants opportunities to participate in the local economy, and several fish markets now exist that buy and sell fish almost exclusively within this community. Fishing effort and catch on Guam is currently inadequately monitored and managed, making it difficult to assess any such impacts in near-real time. Better understanding of fishing pressure, as well the contribution of non-fishing impacts, such as pollution and habitat degradation, to stock productivity is necessary to estimate the probable future condition of the Guam coral reef fishery.

3.1.2.2.9 Yield

3.1.2.2.9.1 MSY

Available biological and fishery data are limited for most coral reef ecosystem management unit species in the Marianas Archipelago. There is little information on the life histories, ecosystem dynamics, fishery impact, community structure changes, yield potential, and management reference points for many coral reef ecosystem species. Therefore, Maximum Sustainable Yields in the coral reef fisheries have not been determined by *species*, but rather by *taxonomic family* within the MUS. For the purposes of specifying ACLs, MSY are determined by using the Biomass-Augmented Catch-MSY approach (Sabater and Kleiber 2014). This method estimates MSY using plausible combination *rate of population increase* (denoted by *r*) and *carrying capacity* (denoted by *k*) assumed from the catch time series, resilience characteristics (from FishBase), and biomass from existing underwater census surveys done by the Pacific Island Fisheries Science Center.

3.1.2.2.9.2 OY

Optimum Yield for Guam coral reef fisheries has been established as equal to the ACL, since social, ecological, and economic factors, as well as management uncertainties, are accounted for in ACL specification.

3.1.2.2.9.3 Extent to Which Fishing Vessels will Harvest OY

Fishing participation will be monitored through the annual report. Once OY has been calculated, the total number of fishing participants would be extrapolated to determine the extent of fishing participants that can potentially harvest OY.

3.1.2.2.9.4 Extent to Which U.S. Fish Processors will Process OY

Coral reef fishes are not typically processed (filleted, etc.). Reef fish are sold fresh whole by retailers or directly to consumers by fishermen in person-to-person transactions or along the roadside.

3.1.2.2.10 Annual Catch Limit

3.1.2.2.10.1 Specification Mechanism

For the coral reef fishery, specification of the acceptable biological catch and annual catch limits are required by the MSA and follows the mechanism described in Appendix E. The specification will be done on an annual basis by NMFS based on recommendations from the Council.

3.1.2.2.10.2 Limit

For the most recent coral reef fishery taxonomic family Annual Catch Limits, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.2.2.10.3 Accountability Measures

Accountability measures are specified on an annual basis by NMFS based on recommendations by the Council. There currently is no near-real-time monitoring for coral reef fisheries in the Guam. The specification of accountability measures follows the process described in Appendix E.

3.1.2.2.11 Criteria for Determining Overfishing

MSY Control Rule and Stock Status Determination

Available biological and fishery data are poor for all coral reef ecosystem management unit species in the Mariana Islands. There is scant information on the life histories, ecosystem dynamics, fishery impact, community structure changes, yield potential, and management reference points for many coral reef ecosystem species. Additionally, total fishing effort cannot be adequately partitioned between the various management unit species (MUS) for any fishery or area. Biomass, maximum sustainable yield, and fishing mortality estimates are not available for any single MUS. Once these data are available, fishery managers will then be able to establish limits and reference points based on the multi-species coral reef ecosystem as a whole.

When possible, the MSY control rule is applied to the individual species in a multi-species stock. When this is not possible, MSY may be specified for one or more species; these values can then be used as indicators for the multi-species stock's MSY.

Individual species that are part of a multi-species complex will respond differently to an OY-determined level of fishing effort (F_{OY}). Thus, for a species complex that is fished at F_{OY}, managers still must track individual species' mortality rates in order to prevent species-specific population declines that would lead to their becoming depleted.

For the coral reef fisheries, the multi-species complex as a whole is used to establish limits and reference points for each area.

When possible, available data for a particular species is used to evaluate the status of individual MUS stocks in order to prevent recruitment overfishing. When better data and the appropriate

multi-species stock assessment methodologies become available, all stocks will be evaluated independently, without proxy.

Establishing Reference Point Values

Standardized values of catch per unit effort (CPUE) and effort (E) are used to establish limit and reference point values, which act as proxies for relative biomass and fishing mortality, respectively. Limits and reference points are calculated in terms of $CPUE_{MSY}$ and E_{MSY} included in Table 5.

When reliable estimates of E_{MSY} and $CPUE_{MSY}$ are not available, they are generated from time series of catch and effort values, standardized for all identifiable biases using the best available analytical tools. $CPUE_{MSY}$ is calculated as one-half a multi-year moving average reference CPUE ($CPUE_{REF}$).

3.1.2.2.12 MSA Conservation and Management Measures

Anchoring by all fishing vessels over 50 ft. (15.25 m) LOA is prohibited in the U.S. EEZ seaward of Guam west of 144°30′E. long. except in the event of an emergency caused by ocean conditions or by a vessel malfunction that can be documented (Figure 13).

Permit and Reporting Requirements

In order to identify participants, collect harvest and effort data, and control harvests, special permits are required for any directed fisheries on potentially harvested coral reef taxa (PHCRT) within the regulatory area or to fish for any CRE MUS in the coral reef regulatory area with any gear not normally permitted. Those issued a Federal permit to fish for non-CRE MUS but who incidentally catch CRE MUS are exempt from the CRE permit requirement. Those fishing for currently harvested coral reef taxa (CHCRT) outside of an MPA and who do not retain any incidentally-caught PHCRT, or any person collecting marine organisms for scientific research are also exempt from the CRE permit requirement. Permits are only valid for fishing in the fishery management subarea specified on the permit.

The harvest of live rock and living corals is prohibited throughout the federally managed U.S. EEZ waters of the region; however, under special permits with conditions specified by NMFS following consultation with the Council, indigenous residents could be allowed to harvest live rock or coral for traditional uses, and aquaculture operations could be permitted to harvest seed stock. A Federal reporting system for all fishing under special permits is in place. Resource monitoring systems administered by state, territorial, and Commonwealth agencies continue to collect fishery data on the existing coral reef fisheries that do not require special permits. Fishery participants have the option of using NMFS approved electronic logbooks in lieu of paper logbooks.

Notification

To support fishery monitoring, any special permit holder must contact the appropriate NMFS enforcement agent in Guam at least 24 hours before landing any CRE MUS harvested under a special permit, and report the port and the approximate date and time at which the catch will be

landed.

Gear Restrictions

To protect habitat and reduce bycatch, allowable gear types comprise: (1) Hand harvest; (2) spear; (3) slurp gun; (4) hand/dip net; (5) hoop net for Kona crab; (6) throw net; (7) barrier net; (8) surround/purse net that is attended at all times; (9) hook-and-line (powered and unpowered handlines, rod and reel, and trolling); (10) crab and fish traps with vessel ID number affixed; and (11) remote operating vehicles/submersibles. New fishing gears that are not included in the allowable gear list may be allowed under the special permit provision. CRE MUS may not be taken by means of poisons, explosives, or intoxicating substances. Possession and use of these materials is prohibited.

All fish and crab trap gear used by permit holders must be identified with the vessel number. Unmarked traps and unattended surround nets or bait seine nets found deployed in the CRE regulatory area will be considered unclaimed property and may be disposed of by NMFS or other authorized officers.

Framework Procedures

A framework process, providing for an administratively simplified procedure to facilitate adjustments to management measures previously analyzed in the CRE FMP, is an important component of the FEP. These framework measures include designating "no-anchoring" zones and establishing mooring buoys, requiring vessel monitoring systems on board fishing vessels, designating areas for the sole use of indigenous peoples, and moving species from the PHCRT to the CHCRT list when sufficient data has been collected. A general fishing permit program could also be established for all U.S. EEZ coral reef ecosystem fisheries under the framework process.

Bycatch Measures

Almost all coral reef fishes caught in the Mariana Archipelago are considered food fishes and are kept, regardless of size or species. There is no specific information available on bycatch from coral reef fisheries, particularly inshore fisheries. CRE MUS may not be taken by means of poisons, explosives, or intoxicating substances and further, possession and use of these materials is prohibited. These restrictions further reduce the potential for bycatch in this fishery. In addition, any fishing vessel (commercial or non-commercial) operating in the territorial seas or EEZ of the U.S. in a fishery identified through NMFS' annual determination process must carry an observer when directed to do so.

Federal regulations governing this fishery can be found in the Code of Federal Regulations, Title 50, Part 665, Subpart G and Appendix C.

3.1.2.2.13 Regulations Implementing International Recommendations and other Applicable Laws

There are no current international recommendations or applicable laws in the coral reef fishery for the Mariana Archipelago. However, to ensure that coral reef fisheries are adequately represented, the Council participates in meetings of the U.S. Coral Reef Task Force, established

by Executive Order 13089 to protect coral reefs and coral reef ecosystems.

3.1.2.2.14 Bycatch

While the boat-based and shore-based creel survey programs administered by Guam DAWR provide for the collection of bycatch information, no such information is currently available, which suggests that most of the fish that are caught are retained. However, like other Pacific Islands, discards, if they occur, are usually due to cultural reasons (i.e., taboo) or practical reasons such as toxicity (e.g., ciguatera and poison).

In Guam, the U.S. EEZ extends from the 3 to 200 nm. As previously noted, coral reef fishing is conducted predominantly in nearshore waters from 0-3 nm because the majority of coral reef ecosystem habitat is found within this boundary. Consequently, it might be argued that there is no bycatch problem for coral reef fisheries under federal control. Nevertheless, there are federal management regulations currently in place to minimize the potential for bycatch through the prohibition on the use of destructive and non-selective gear methods. Specifically, federal regulations allow only certain gear types to be used while fishing for CREMUS. These include: (1) hand harvest; (2) spear; (3) slurp gun; (4) hand net/dip net; (5) hoop net for crab; (6) throw net; (7) barrier net; (8) surround/purse net that is attended at all times; (9) hook and line; (10) crab and fish traps with vessel ID number affixed; and (11) remotely operated vehicles/submersibles.

3.1.2.2.15 Guam Coral Reef Essential Fish Habitat

In designating EFH for Coral Reef Ecosystem MUS, MUS are linked to specific habitat "composites" (e.g., sand, live coral, seagrass beds, mangrove, open ocean) for each life history stage, consistent with the depth of the ecosystem to 50 fathoms and to the limit of the EEZ.

Except for several of the major coral reef associated species, very little is known about the life histories, habitat utilization patterns, food habits, or spawning behavior of most coral reef associated species. For this reason, the Council, through the CRE-FMP, designated EFH using a two-tiered approach based on the division of MUS into the Currently Harvested Coral Reef Taxa (CHCRT) and Potentially Harvested Coral Reef Taxa (PHCRT) categories. This is also consistent with the use of habitat composites.

In the first tier, EFH has been identified for species that (a) are currently being harvested in state and federal waters and for which some fishery information is available and (b) are likely to be targeted in the near future based on historical catch data.

3.1.2.2.15.1 Description and Identification of EFH for Currently Harvested Coral Reef Taxa

To reduce the complexity and the number of EFH identifications required for individual species and life stages, the Council has designated EFH for species assemblages pursuant to 50 CFR 600.815 (a)(2)(ii)(E). The designation of these complexes is based on the ecological relationships among species and their preferred habitat. These species complexes are grouped by the known depth distributions of individual MUS. The EFH designations for CHCRT throughout the Western Pacific Region are found in Table 6.

3.1.2.2.15.2Description and Identification of EFH for Potentially Harvested Coral Reef

Taxa

EFH has also been designated for the second tier, PHCRT. These taxa include literally thousands of species encompassing almost all coral reef fauna and flora. However, there is very little scientific knowledge about the life histories and habitat requirements of the thousands of species of organisms that compose these taxa. In fact, a large percentage of these biota have not been described by science. Therefore, the Council has used the precautionary approach in designating EFH for PHCRT so that enough habitat is protected to sustain managed species.

EFH for all life stages of Potentially Harvested Coral Reef Taxa is designated as the water column and bottom habitat from the shoreline to the outer boundary of the EEZ to a depth of 50 fathoms (Table 6) . As with CHCRT, the Council has designated EFH for species assemblages pursuant to the federal regulations cited above.

3.1.3 Crustacean Fisheries

3.1.3.1 CNMI Crustacean Fishery

Table 8. Mariana Archipelago Crustaceans MUS

Scientific Name	English Common Name	Local Name
Panulirus penicillatus	spiny lobster	mahongang
Family Scyllaridae	slipper lobster	paʻpangpang
Ranina ranina	Kona crab	NA
Heterocarpus spp.	deepwater shrimp	NA

3.1.3.1.1 Description (commercial, charter, recreational)

The primary harvestable crustaceans in the CNMI are deepwater shrimp, slipper lobster, spiny lobster and Kona crab. With regard to deepwater shrimp, a yield assessment conducted by NMFS Southwest Fisheries Science Center in the mid-1980s (Moffitt and Polovina 1987) identified *Heterocarpus ensifer*, *Heterocarpus laevigatus*, and *Heterocarpus longirostris* as the major components of catch in the Mariana Archipelago.

There is no record of any fishery for Kona crab in the CNMI. However, due to their documented presence, they are included in the crustacean management unit of the Mariana Archipelago FEP. Currently, there are no federal permit requirements for Kona crab in the EEZ around the CNMI and Guam.

3.1.3.1.2 Type and Quantity of Fishing Gear

Figure 20. Crustaceans catch.

Lobsters around the CNMI do not appear to go into traps and have not been found in waters deeper than 13 meters (M. Trianni, personal communication). The CNMI fishery primarily targets spiny lobster in nearshore waters with reported catches taken almost exclusively hand harvesters with scuba or free diving.

Deepwater shrimp are caught using traps. One CNMI company fished for total of 193 days in 1995. They used oval plastic Fathom Plus traps which weighed 7 kg. and experienced a trap loss of 3.5 percent per set with an average of 12.7 traps per string (range of 3 to 40 traps per string). A second company experienced no trap losses over 61 sets and 1561 traps deployed. Traps used by this company were lightweight with nylon netting. These traps weighed only 2.5 kg and if they became entangled on the bottom, they could tear away and still be recovered. Trap size was smaller and catch per trap was on average 76 percent of the plastic traps, but they were able to deploy many more traps per string without fear of gear loss. As the fishing grounds exploited are relatively close to Saipan and because neither vessel had freezer capabilities, shrimp were kept on ice for 12-48 hours before being brought to market.

Throughout the Pacific, deep-water shrimp fisheries have been sporadic in nature (Hastie and Saunders 1992). The reasons for this are manifold. Gear loss has been a common problem and made many past ventures unprofitable. A second difficulty is the short shelf life and a history of inconsistent quality, leading to fluctuating market demand for the product. Lastly, these fisheries generally experience local depletion on known fishing grounds, which leads to much lower catch rates. While other banks might have abundant stocks, unfamiliarity with them could lead to even greater gear loss.

3.1.3.1.3 Catch in Numbers or Weight

The combined average catch of spiny and slipper lobster and deepwater shrimp for the 10 year period from 2003 to 2013 was 2,204 pounds, with a minimum catch reported in 2014 of 8 pounds and maximum catch of 5,770 pounds reported in 2005. For more detailed reporting of fishery statistics, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE

Report).

3.1.3.1.4 Fishing Areas

The CNMI crustacean fishery primarily targets spiny lobster in nearshore waters with reported catches taken almost exclusively within the 0-3 nautical mile zone of the inhabited southern islands, by hand harvesters with scuba or free diving. Beyond three nautical miles, the topography in most locations drops off steeply. These lobster habitats are relatively small and access is difficult. Anecdotal information indicates that in the northern islands on reef surrounding FDM, bottomfish fishermen anchored for the night occasionally dive for lobsters. Anchoring and diving at FDM occurs exclusively within 3 nautical miles and most likely on the lee side within 100 yards of land. This activity is primarily for personal consumption.

Deep-water shrimping undertaken in the 1990s occurred on flat areas near steep banks at depths greater than 350 meters – mostly on grounds around Saipan and Tinian (Ostazeski 1997). While three species of pandalid shrimp are known to occur at varying depths in the waters around CNMI, (Heterocarpus ensifer (366–550 m), Heterocarpus laevigatus (550–915 m), and Heterocarpus longirostris (> 915 m) (Moffitt and Polovina 1987), the most commercially valuable and subsequently targeted is the largest species, Heterocarpus laevigatus.

3.1.3.1.5 Time of Fishing

Fishing may be done during the day or at night for lobsters, kona crab and deepwater shrimp. In the Northern Islands on reef surrounding FDM, bottomfish fishermen anchored for the night occasionally dive for lobsters (CNMI-DFW 1997b).

3.1.3.1.6 Economics

The 2003-2013 average for direct revenue from the CNMI crustacean fishery (spiny lobster, slipper lobster, and shrimp) was $14,261 with a high of $53,825 (2005) and a low of $38.00 (2010). For current information regarding revenue of the fishery, price per pound, total direct employment, and fisheries-dependent services or industries, refer to the current WPFMC Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.3.1.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors

There is no processing of crustacean products in CNMI. Products are sold as whole fresh through small seafood retail outlets or through roadside vendors.

3.1.3.1.8 Present and Probable Future Condition of the Fishery

Overfishing is not occurring in the fishery and is not expected to occur in the future.

3.1.3.1.9 Yield

3.1.3.1.9.1 MSY

<u>Deepwater Shrimp</u>

No MSY is available for this stock based because criteria for determining overfishing have not been established. However, MSY estimates are available from scientific studies. The most current estimate of MSY for the deepwater shrimp stock complex in CNMI was based on Moffitt and Polovina (1987).

Spiny Lobster

No MSY is available for this stock based because criteria for determining overfishing have not been established. However, MSY estimates are available from scientific studies. The most current estimate of MSY for the spiny lobster stock was based on the Biomass-Augmented Catch MSY approach (Sabater and Kleiber) for ACL specification purposes.

Slipper Lobster

No MSY is available for this stock based because criteria for determining overfishing have not been established. There is no MSY estimate for slipper lobsters in CNMI and there is no available catch information for CNMI and so the Council cannot use the Tier 5 ABC control rule. For ACL specification purposes, the SSC at its 108th meeting developed a proxy for calculating an ABC for the CNMI slipper lobster stock complex. The SSC utilized Hawaii-based information and extrapolated ABCs for Guam and CNMI using available EFH information for slipper lobsters.

Kona Crab

No MSY is available for this stock based because the criteria for determining overfishing were not been established for this stock. Additionally, the lack of catch information precludes the use of the Tier 5 ABC control rule. For ACL specification purposes, the SSC at its 108th meeting developed a proxy for calculating the ABC for the Kona crab fishery in the CNMI and Guam. The SSC utilized a Hawaii-based information and extrapolate the ABC using available EFH information for juvenile and adult Kona crab.

3.1.3.1.9.2 OY

Optimum Yield for all CNMI crustacean MUS has been established as equal to the ACL, since of social, ecological, and economic factors, as well as management uncertainties, are accounted for when setting the ACL.

3.1.3.1.9.3 Extent to Which Fishing Vessels will Harvest OY

Crustaceans harvested around CNMI are marketed as fresh product with each vessel processing its catch at sea. Therefore the domestic processing capacity and domestic processing levels will equal or exceed the harvest for the foreseeable future.

3.1.3.1.9.4 Extent to Which U.S. Fish Processors will Process OY

Crustaceans in the CNMI are not typically processed. Crustaceans are sold fresh whole by retailers or directly to consumers by fishermen in person-to-person transactions or along the roadside.

3.1.3.1.10 Annual Catch Limit

The Council set the ACL for the CNMI Kona crab fishery equal to the SSC-recommended ABC. The Council did not recommend reducing ACL from ABC for social, economic, ecological considerations or management uncertainty as described in the Mariana Archipelago FEP.

3.1.3.1.10.1 Specification Mechanism

For the crustacean fishery in CNMI, specification of the acceptable biological catch and annual catch limits are required by the MSA and follows the mechanism described in Appendix E. The specification will be done on an annual basis by NMFS based on recommendations from the Council.

3.1.3.1.10.2 Limit

For the most recent CNMI crustacean Annual Catch Limits, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.3.1.10.3 Accountability Measures

Accountability measures are specified on an annual basis by NMFS based on recommendations by the Council. There is currently no in-season monitoring of crustacean catch in CNMI. The specification of accountability measures will follow the process described in Appendix E.

3.1.3.1.11 Criteria for Determining Overfishing

Criteria for determining overfishing have not been determined for Crustacean MUS in the Mariana Archipelago as there is virtually no crustacean fishery operating in the EEZ surrounding those areas at present. MSY for deepwater shrimp and spiny lobster in CNMI has been established (see above). Should substantial crustacean fisheries develop, and the Council determines a stock status determination is needed, the Council will rely on the specification of target and rebuilding control rules and reference points established for the NWHI lobster and deepwater shrimp fisheries until appropriate specifications are developed for crustacean fishery resources of the Mariana Archipelago. The specifications would be applied to multi-species stock complexes or to individual species, depending on the information and stock assessment tools available. Spatial assessments will initially be done separately for EEZ waters around Guam and CNMI but may be integrated as stock bounds and ecosystem structure become better understood.

3.1.3.1.12 MSA Conservation and Management Measures

Permit and Reporting Requirements

A Federal permit is required to harvest Crustacean MUS in Federal waters around the Mariana Archipelago and permit holders are required to participate in local reporting systems.

In order to identify participants and to collect harvest and effort data, Federal permit and logbook reporting is required when fishing for Crustacean MUS in EEZ waters around Guam and CNMI. A permit application must obtained from the Regional Administrator and permits will be issued to the owner of the vessel that is used to fish for crustacean MUS. Fishery participants have the option of using NMFS approved electronic logbooks in lieu of paper logbooks.

Management Areas and Subareas

Permit Area 3 includes EEZ waters around Guam and American Samoa as well as EEZ waters outside of 3 nm around CNMI.

Gear Restrictions

To protect habitat and reduce bycatch in Permit Area 3, it is unlawful for any person to fish for, take or retain lobsters with explosives, poisons, or electrical shocking devices.

Notifications

To support fishery monitoring, vessel operators must report not less than 24 hours, but not more than 36 hours, before landing, the port, the approximate date and the approximate time at which spiny and slipper lobsters will be landed. They must also report not less than six hours, and not more than twelve hours, before offloading, the location and time that offloading spiny and slipper lobsters will begin. The Regional Administrator will notify permit holders of any change in the reporting method and schedule required at least 30 days prior to the opening of the fishing season.

At-Sea Observer Coverage

To support fishery monitoring, all fishing vessels must carry an observer when requested to do so by the NMFS Regional Administrator.

Framework Procedures

New management measures may be added through rulemaking if new information demonstrates that there are biological, social, or economic concerns in Permit Areas 1, 2 or 3. By June 30 of each year, the Plan Team will prepare an annual report on the fisheries in the management area. The report shall contain, among other things, recommendations for Council action and an assessment of the urgency and effects of such action(s).

Established measures are management measures that, at some time, have been included in regulations implementing the FEP, and for which the impacts have been evaluated in Council/NMFS documents in the context of current conditions. Following the framework procedures of Amendment 9 to the FMP, the Council may recommend to the NMFS Regional Administrator that established measures be modified, removed, or re-instituted. Such recommendation shall include supporting rationale and analysis, and shall be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

New measures are management measures that have not been included in regulations implementing the FEP, or for which the impacts have not been evaluated in Council/NMFS documents in the context of current conditions. Following the framework procedures of Amendment 9 to the FMP, the Council will publicize, including by a Federal Register document, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is discussed, the Council will consider recommendations and prepare a Federal Register document summarizing the Council's deliberations, rationale, and analysis for the preferred action, and the time and place for any subsequent Council meeting(s) to consider the new measure. At subsequent public meeting(s), the Council will consider public comments and other information received to make a recommendation to the Regional

Administrator about any new measure. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

Bycatch Measures

No bycatch measures or actions are necessary at this time. Lobsters are taken by hand and harvest currently occurs primarily almost exclusively in territorial waters, 0-3 miles. There is no known bycatch associated with this fishery.

3.1.3.1.13 Bycatch

Lobsters are taken by hand and harvest currently occurs primarily almost exclusively in territorial waters, 0-3 miles. There is no known bycatch associated with this fishery. Similarly, traps for deepwater shrimp and kona crab are highly selective, based on fishing area and trap construction.

3.1.3.1.14 CNMI Spiny and Slipper Lobster and Kona Crab Essential Fish Habitat

Spiny lobsters are found through the Indo-Pacific region. All spiny lobsters in the Western Pacific Region belong to the family *Palinuridae*. The slipper lobsters belong to the closely related family, *Scyllaridae*. There are 13 species of the genus *Panulirus* distributed in the tropical and subtropical Pacific between 35° N and 35° S. *P. penicillatus* is the most widely distributed, and the other three species are absent from the waters of many island nations of the region. Spiny lobsters are typically found on rocky substrate in well-protected areas, in crevices, and under rocks. Similarly, juvenile and adult *P. penicillatus* also share the same habitat.

In the southwestern Pacific, spiny lobsters are typically found in association with coral reefs. Coral reefs provide shelter as well as a diverse and abundant supply of food items. *P. penicillatus* inhabits the rocky shelters in the windward surf zones of oceanic reefs and moves on to the reef flat at night to forage.

To reduce the complexity and the number of EFH identifications required for individual species and life stages, the Council has designated EFH for crustacean species assemblages. The species complex designations are spiny and slipper lobsters and Kona crab. The designation of these complexes is based on the ecological relationships among species and their preferred habitat.

At present, there are not enough data on the relative productivity of different habitats of CMUS to develop EFH designations based on Level 3 or Level 4 data. There are little data concerning growth rates, reproductive potentials, and natural mortality rates at the various life history stages. The relationship between egg production, larval settlement, and stock recruitment is also poorly understood. Although there is a paucity of data on the preferred depth distribution of *phyllosoma* larvae in Hawaii, the depth distribution of *phyllosoma* larvae of other species of *Panulirus* common in the Indo-Pacific region has been documented. Later stages of *panulirid phyllosoma* larvae have been found at depths between 80 and 120 meters.

3.1.3.1.14.1 Description and Identification of EFH for Spiny and Slipper Lobster and Kona Crab

For these reasons, the Council designated EFH for spiny and slipper lobster and Kona crab eggs and larvae as the water column from the shoreline to the outer limit of the EEZ down to a depth of 150 meters throughout the Western Pacific Region. The EFH for juvenile and adult spiny and slipper lobster and Kona crab is designated as the bottom habitat from the shoreline to a depth of 100 meters throughout the Western Pacific Region.

3.1.3.1.14.2 Identification of Habitat Areas of Particular Concern

Research from the Northwestern Hawaiian Islands indicates that banks with summits less than 30 meters support successful recruitment of juvenile spiny lobster while those with summit deeper than 30 meters do not. For this reason, the Council has designated all banks with summits less than 30 meters as HAPC. The basis for designating these areas as HAPC is the ecological function provided, the rarity of the habitat type, and the susceptibility of these areas to human-induced environmental degradation. The complex relationship between recruitment sources and sinks of spiny lobsters is poorly understood, so the spiny lobster in the NWHI was used as a proxy for the Marianas crustaceans stocks. The Council believes that in the absence of a better understanding of these relationships, the adoption of a precautionary approach to protect and conserve habitat is warranted.

The relatively long pelagic larval phase for *palinurids* results in very wide dispersal of spiny lobster larvae. *Panulirid* larvae are transported up to 2,000 nautical miles by prevailing ocean currents. Because *phyllosoma* larvae are transported by the prevailing ocean currents outside of EEZ waters, the Council has identified habitat in these areas as "important habitat." To date HAPC has not been identified or designated for deepwater shrimp.

3.1.3.1.15 CNMI Deepwater Shrimp Essential Fish Habitat

In the Mariana Archipelago, shrimp trapping surveys conducted at 22 islands and banks between 1982 and 1984 reported the presence of all eight species of *Heterocarpus: Heterocarpus ensifer, H. laevigatus* and *H. longirostris* comprised 99 percent of the catch while *H. tricarinatus, H. gibbosus* and *H. sibogae* were rare (Moffitt and Polovina 1987). Maximum depths according to Moffitt and Polovina are *H. ensifer* 366 m, *H. laevigatus* 777 m, and *H. longirostris* 1052 m. Similar depth ranges were reported for *H. ensifer* and *H. laevigatus* in Guam (Wilder 1977).

The species complex designations includes all eight species of deepwater shrimp extant in the Western Pacific Region (*Heterocarpus ensifer, H. laevigatus, H. sibogae, H. gibbosus, H. Lepidus, H. dorsalis, H. tricarinatus and H. longirostris*). This designation is consistent with the Code of Federal Regulations (CFR) §600.815 (a)(1)(iv)(E).

3.1.3.1.15.1 Description and Identification of EFH for Deepwater Shrimp

To reduce the complexity and the number of EFH identifications required for each individual species and life stages of the genus *Heterocarpus* in the Western Pacific Region, and based upon the above information, the Council has recommended EFH for the complete assemblage of adult and juvenile *Heterocarpus* spp. as the outer reef slopes between 300 and 700 meters surrounding every island and submerged banks in the Western Pacific Region.

At present, there are not enough data on the relative productivity of different habitats of *Heterocarpus* to develop EFH designations based on Level 3 (growth, reproduction and survival

rates by habitat area) or Level 4 (production rates by habitat) data. In fact, there are little to no data available concerning growth rates, reproductive potentials and natural mortality rates at each life history stage.

The relationship between egg production, larval settlement and stock recruitment is also poorly understood and only available for a few specific sites (Wilder 1977; Clarke 1972; Moffitt and Polovina 1987). Mature shrimps may undergo a depth related seasonal migration in synchrony with reproduction and a shift into deeper waters from depths of about 550 meters to 700 meters. For these reasons the Council has designated EFH for *Heterocarpus* spp. eggs and larvae as the water column and outer reef slopes between 550 and 700 meters in the Western Pacific Region.

3.1.3.2 Guam Crustacean Fishery

See Table 8 for list of management unit species.

3.1.3.2.1 Description (commercial, charter, recreational)

Little is known about Guam's crustacean fisheries. Fishing for these species around Guam mostly occurs in inshore territorial waters, usually in a subsistence or recreational context. In 2004, however, two Crustacean FMP permits were registered to vessels to fish in the EEZ around Guam. The activities of these vessels (if any) including catch levels, composition, bycatch or location are unknown (A. Katekaru, NMFS, personal communication, August 2004).

3.1.3.2.2 Type and Quantity of Fishing Gear

Deepwater shrimp are caught using either trawls or traps. In the 1970's, one small scale, deepwater shrimp fishery was attempted in Guam, but no known operations have occurred since (Wilder 1979).

3.1.3.2.3 Catch in Numbers or Weight

The 2004-2014 average Guam crustacean catch (primarily lobsters) was 2,120 lbs. with a high of 5,089 (2006) and a low of 611 (Figure 21; 2013). For current information regarding catch in the fishery, refer to the most current WPFMC Archipelagic Fishery Ecosystem Report (SAFE Report).

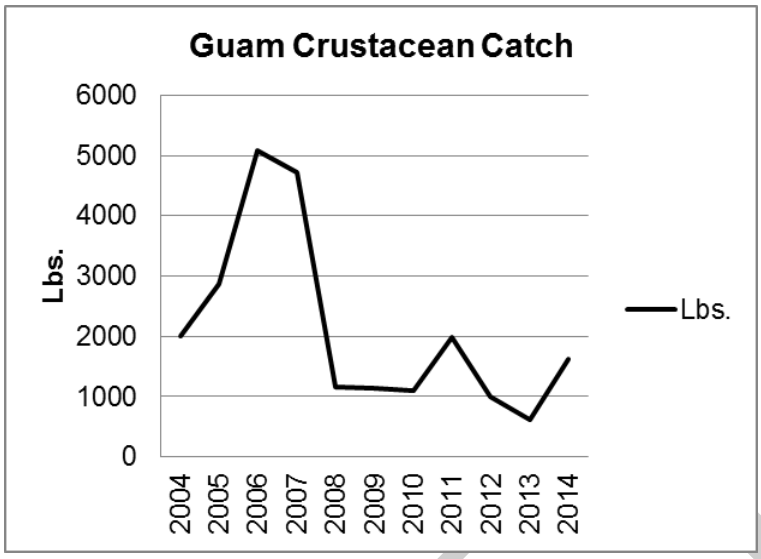


Figure 21. Guam Crustacean Catch Trend 2004-2014.

3.1.3.2.4 Fishing Areas

Fishing for lobsters, deepwater shrimp and kona crab around Guam mostly occurs in inshore territorial waters.

3.1.3.2.5 Time of Fishing

Fishing may be done during the day or at night for lobsters, kona crab and deepwater shrimp.

3.1.3.2.6 Economics

The 2004-2014 average for direct revenue from the Guam crustacean fishery (primarily lobsters) was $7,715 with a high of $18,841 (2006) and a low of $2,278 (2013). For current information regarding revenue of the fishery, price per pound, total direct employment, and fisheries-dependent services or industries, refer to the most current WPFMC Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.3.2.7 Estimated and Actual Processing Capacity Utilized by U.S. Processors

There is no processing of crustacean products in Guam. Products are sold as whole fresh through small seafood retail outlets or through roadside vendors.

3.1.3.2.8 Present and Probable Future Condition of the Fishery

Overfishing is not occurring in the fishery and is not is expected in the future.

3.1.3.2.9 Yield

3.1.3.2.9.1 MSY

<u>Deepwater Shrimp</u>

No MSY is available for this stock based because the criteria for determining overfishing were not been established for this stock. However, MSY estimates are available from scientific studies. The most current estimate of MSY for the deepwater shrimp stock complex in Guam,

including the offshore banks of Galvez and Santa Rosa was based on Moffitt and Polovina, 1987.

Spiny Lobster

No MSY is available for this stock based because the criteria for determining overfishing were not been established for this stock. However, MSY estimates are available from scientific studies. The most current estimate of MSY for the spiny lobster stock was based on the Biomass-Augmented Catch MSY approach (Sabater and Kleiber) for ACL specification purposes.

Slipper Lobster

No MSY is available for this stock based because the criteria for determining overfishing were not been established for this stock. There is no MSY estimate for slipper lobsters in Guam and there is no available catch information for Guam and so the Council cannot use the Tier 5 ABC control rule. For ACL specification purposes, the SSC at its 108th meeting developed a proxy for calculating an ABC for the Guam slipper lobster stock complex. The SSC utilized Hawaii-based information and extrapolated ABCs for Guam and CNMI using available EFH information for slipper lobsters.

Kona Crab

No MSY is available for this stock based because the criteria for determining overfishing were not been established for this stock. Additionally, the lack of catch information precludes the use of the Tier 5 ABC control rule. For ACL specification purposes, the SSC at its 108th meeting developed a proxy for calculating the ABC for the Kona crab fishery in the CNMI and Guam. The SSC utilized a Hawaii-based information and extrapolate the ABC using available EFH information for juvenile and adult Kona crab.

3.1.3.2.9.2 OY

Optimum Yield for all Guam crustacean MUS has been established as equal to the ACL, since of social, ecological, and economic factors, as well as management uncertainties, are accounted for when setting the ACL.

3.1.3.2.9.3 Extent to Which Fishing Vessels will Harvest OY

Fishing participation will be monitored through the annual report. Once OY has been calculated, the total number of fishing participants would be extrapolated to determine the extent of fishing participants that can potentially harvest OY.

3.1.3.2.9.4 Extent to Which U.S. Fish Processors will Process OY

Crustaceans are harvested and sold whole through small markets and road side vendors. No processing occurs in this fishery therefore it is highly unlikely that fish processors will process OY.

3.1.3.2.10 Annual Catch Limit

3.1.3.2.10.1 Specification Mechanism

For the crustacean fishery in Guam, specification of the acceptable biological catch and annual catch limits are required by the MSA and follows the mechanism described in Appendix E. The

specification will be done on an annual basis by NMFS based on recommendations from the Council.

3.1.3.2.10.2 Limit

For the most recent Guam crustacean Annual Catch Limits, refer to the most current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.3.2.10.3 Accountability Measures

Accountability measures will be specified on an annual basis by NMFS based on recommendations by the Council. There is currently no in-season monitoring of crustacean catch in CNMI. The specification of accountability measures will follow the process described in Appendix E.

3.1.3.2.11 Criteria for Determining Overfishing

Criteria for determining overfishing have not been determined for Crustacean MUS in the Mariana Archipelago as there is virtually no crustaceans fishery operating in the EEZ surrounding those areas at present. MSY for spiny lobster is Guam has been established (see above). Should substantial crustacean fisheries develop, and the Council determines a stock status determination is needed, the Council will rely on the specification of target and rebuilding control rules and reference points established for the NWHI lobster and deepwater shrimp fisheries until appropriate specifications are developed for crustacean fishery resources of the Mariana Archipelago. The specifications would be applied to multi-species stock complexes or to individual species, depending on the information and stock assessment tools available. Spatial assessments will initially be done separately for EEZ waters around Guam and CNMI but may be integrated as stock bounds and ecosystem structure become better understood.

3.1.3.2.12 MSA Conservation and Management Measures

Anchoring by all fishing vessels over 50 ft (15.25 m) LOA is prohibited in the U.S. EEZ seaward of Guam west of 144°30′E. long. except in the event of an emergency caused by ocean conditions or by a vessel malfunction that can be documented. CRF Title 50 Part 665.399.

<u>Permit and Reporting Requirements</u>

A Federal permit is required to harvest Crustacean MUS in Federal waters around the Mariana Archipelago and permit holders are required to participate in local reporting systems.

In order to identify participants and to collect harvest and effort data, Federal permit and logbook reporting is required when fishing for Crustacean MUS in EEZ waters around Guam and CNMI. A permit application must obtained from the Regional Administrator and permits will be issued to the owner of the vessel that is used to fish for crustacean MUS. Fishery participants have the option of using NMFS approved electronic logbooks in lieu of paper logbooks.

<u>Management Areas and Subareas</u>

Permit Area 3 includes EEZ waters around Guam and American Samoa as well as EEZ waters outside of 3 nm around CNMI.

Gear Restrictions

To protect habitat and reduce bycatch in Permit Area 3, it is unlawful for any person to fish for, take or retain lobsters with explosives, poisons, or electrical shocking devices.

Notifications

To support fishery monitoring, vessel operators must report not less than 24 hours, but not more than 36 hours, before landing, the port, the approximate date and the approximate time at which spiny and slipper lobsters will be landed. They must also report not less than six hours, and not more than twelve hours, before offloading, the location and time that offloading spiny and slipper lobsters will begin. The Regional Administrator will notify permit holders of any change in the reporting method and schedule required at least 30 days prior to the opening of the fishing season.

At-Sea Observer Coverage

To support fishery monitoring, all fishing vessels must carry an observer when requested to do so by the NMFS Regional Administrator.

Framework Procedures

New management measures may be added through rulemaking if new information demonstrates that there are biological, social, or economic concerns in Permit Areas 1, 2 or 3. By June 30 of each year, the Plan Team will prepare an annual report on the fisheries in the management area. The report shall contain, among other things, recommendations for Council action and an assessment of the urgency and effects of such action(s).

Established measures are management measures that, at some time, have been included in regulations implementing the FEP, and for which the impacts have been evaluated in Council/NMFS documents in the context of current conditions. Following the framework procedures of Amendment 9 to the FMP, the Council may recommend to the NMFS Regional Administrator that established measures be modified, removed, or re-instituted. Such recommendation shall include supporting rationale and analysis, and shall be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

New measures are management measures that have not been included in regulations implementing the FEP, or for which the impacts have not been evaluated in Council/NMFS documents in the context of current conditions. Following the framework procedures of Amendment 9 to the FMP, the Council will publicize, including by a Federal Register document, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is discussed, the Council will consider recommendations and prepare a Federal Register document summarizing the Council's deliberations, rationale, and analysis for the preferred action, and the time and place for any subsequent Council meeting(s) to consider the new measure. At subsequent public meeting(s), the Council will consider public comments and other information received to make a recommendation to the Regional Administrator about any new measure. NMFS may implement the Council's recommendation by

rulemaking if approved by the Regional Administrator.

Bycatch Measures

No bycatch measures or actions are necessary at this time. Lobsters are taken by hand and harvest currently occurs primarily almost exclusively in territorial waters, 0-3 miles. There is no known bycatch associated with this fishery.

3.1.3.2.13 Regulations Implementing International Recommendations and other Applicable Laws

Not applicable.

3.1.3.2.14 Bycatch

Lobsters are taken by hand and harvest currently occurs primarily almost exclusively in territorial waters, 0-3 miles. There is no known bycatch associated with this fishery. Similarly, traps for deepwater shrimp and kona crab are highly selective, based on fishing area and trap construction.

3.1.3.2.15 Crustacean Essential Fish Habitat

Spiny lobsters are found through the Indo-Pacific region. All spiny lobsters in the Western Pacific Region belong to the family *Palinuridae*. The slipper lobsters belong to the closely related family, *Scyllaridae*. There are 13 species of the genus *Panulirus* distributed in the tropical and subtropical Pacific between 35° N and 35° S. *P. penicillatus* is the most widely distributed, and the other three species are absent from the waters of many island nations of the region. Spiny lobsters are typically found on rocky substrate in well-protected areas, in crevices, and under rocks. Similarly, juvenile and adult *P. penicillatus* also share the same habitat.

In the southwestern Pacific, spiny lobsters are typically found in association with coral reefs. Coral reefs provide shelter as well as a diverse and abundant supply of food items. *P. penicillatus* inhabits the rocky shelters in the windward surf zones of oceanic reefs and moves on to the reef flat at night to forage.

To reduce the complexity and the number of EFH identifications required for individual species and life stages, the Council has designated EFH for crustacean species assemblages. The species complex designations are spiny and slipper lobsters and Kona crab. The designation of these complexes is based on the ecological relationships among species and their preferred habitat.

At present, there are not enough data on the relative productivity of different habitats of CMUS to develop EFH designations based on Level 3 or Level 4 data. There are little data concerning growth rates, reproductive potentials, and natural mortality rates at the various life history stages. The relationship between egg production, larval settlement, and stock recruitment is also poorly understood. Although there is a paucity of data on the preferred depth distribution of *phyllosoma* larvae in Hawaii, the depth distribution of *phyllosoma* larvae of other species of *Panulirus* common in the Indo-Pacific region has been documented. Later stages of *panulirid phyllosoma* larvae have been found at depths between 80 and 120 meters.

3.1.3.2.15.1 Description and Identification of EFH for Spiny and Slipper Lobster and Kona Crab

For these reasons, the Council designated EFH for spiny and slipper lobster and Kona crab eggs and larvae as the water column from the shoreline to the outer limit of the EEZ down to a depth of 150 meters throughout the Western Pacific Region. The EFH for juvenile and adult spiny and slipper lobster and Kona crab is designated as the bottom habitat from the shoreline to a depth of 100 meters throughout the Western Pacific Region.

3.1.3.2.15.2 Identification of Habitat Areas of Particular Concern

Research from the Northwestern Hawaiian Islands indicates that banks with summits less than 30 meters support successful recruitment of juvenile spiny lobster while those with summit deeper than 30 meters do not. For this reason, the Council has designated all banks with summits less than 30 meters as HAPC. The basis for designating these areas as HAPC is the ecological function provided, the rarity of the habitat type, and the susceptibility of these areas to human-induced environmental degradation. The complex relationship between recruitment sources and sinks of spiny lobsters is poorly understood, so the spiny lobster in the NWHI was used as a proxy for the Marianas crustaceans stocks. The Council believes that in the absence of a better understanding of these relationships, the adoption of a precautionary approach to protect and conserve habitat is warranted.

The relatively long pelagic larval phase for *palinurids* results in very wide dispersal of spiny lobster larvae. *Panulirid* larvae are transported up to 2,000 nautical miles by prevailing ocean currents. Because *phyllosoma* larvae are transported by the prevailing ocean currents outside of EEZ waters, the Council has identified habitat in these areas as "important habitat." To date HAPC has not been identified or designated for deepwater shrimp.

3.1.3.2.16 CNMI Deepwater Shrimp Essential Fish Habitat

In the Mariana Archipelago, shrimp trapping surveys conducted at 22 islands and banks between 1982 and 1984 reported the presence of all eight species of *Heterocarpus: Heterocarpus ensifer, H. laevigatus* and *H. longirostris* comprised 99 percent of the catch while *H. tricarinatus, H. gibbosus* and *H. sibogae* were rare (Moffitt and Polovina 1987). Maximum depths according to Moffitt and Polovina are *H. ensifer* 366 m, *H. laevigatus* 777 m, and *H. longirostris* 1052 m. Similar depth ranges were reported for *H. ensifer* and *H. laevigatus* in Guam (Wilder 1977).

The species complex designations includes all eight species of deepwater shrimp extant in the Western Pacific Region (*Heterocarpus ensifer, H. laevigatus, H. sibogae, H. gibbosus, H. Lepidus, H. dorsalis, H. tricarinatus and H. longirostris*). This designation is consistent with the Code of Federal Regulations (CFR) §600.815 (a)(1)(iv)(E).

3.1.3.2.16.1 Description and Identification of EFH for Deepwater Shrimp

To reduce the complexity and the number of EFH identifications required for each individual species and life stages of the genus *Heterocarpus* in the Western Pacific Region, and based upon the above information, the Council has recommended EFH for the complete assemblage of adult and juvenile *Heterocarpus* spp. as the outer reef slopes between 300 and 700 meters surrounding every island and submerged banks in the Western Pacific Region.

At present, there are not enough data on the relative productivity of different habitats of *Heterocarpus* to develop EFH designations based on Level 3 (growth, reproduction and survival rates by habitat area) or Level 4 (production rates by habitat) data. In fact, there are little to no data available concerning growth rates, reproductive potentials and natural mortality rates at each life history stage.

The relationship between egg production, larval settlement and stock recruitment is also poorly understood and only available for a few specific sites (Wilder 1977; Clarke 1972; Moffitt and Polovina 1987). Mature shrimps may undergo a depth related seasonal migration in synchrony with reproduction and a shift into deeper waters from depths of about 550 meters to 700 meters. For these reasons the Council has designated EFH for *Heterocarpus* spp. eggs and larvae as the water column and outer reef slopes between 550 and 700 meters in the Western Pacific Region .

3.1.1 Precious Corals Fisheries

Table 9 Mariana Archipelago Precious Coral MUS

Scientific Name	English Common Name	Local Name Chamorro/Carolinian
Corallium secundum	pink coral (also known as red coral)	NA
Corallium regale	pink coral (also known as red coral)	NA
Corallium laauense	pink coral (also known as red coral)	NA
Gerardia spp.	gold coral	NA
Narella spp.	gold coral	NA
Calyptrophora spp.	gold coral	NA
Lepidisis olapa	bamboo coral	NA
Acanella spp.	bamboo coral	NA
Antipathes dichotoma	black coral	NA
Antipathes grandis	black coral	NA
Antipathes ulex	black coral	NA

3.1.1.1 CNMI and Guam Precious Corals Fisheries

3.1.1.1.1 Description (commercial, charter, recreational)

There are no existing fisheries for precious corals in the Mariana Archipelago. However, since precious corals are Council MUS species, the Council is required to set ACLs for these fisheries. Little is known about the presence of precious corals in the waters around the CNMI. During the 1970s, surveys for precious coral in the waters surrounding CNMI were performed (Grigg and Eldridge 1975). The study focused on the presence of pink and red corals (Corallium spp.) and black coral (Antipathes spp.). Very little precious coral resources were found in these surveys.

Reports of a fishery from pre–World War II suggest that large quantities of high-quality Corallium spp. were taken in waters north of Pagan Island (Takahashi 1942 as cited in Grigg and Eldredge 1975). In the Northern Mariana Islands, Japanese fishermen have reported pink coral north of Pagan Island and near Rota and Saipan. Since these areas remain unsurveyed, no information is available regarding the abundance of coral present. Since then, no known precious coral harvests have occurred within EEZ waters around CNMI.

3.1.1.1.2 Type and Quantity of Fishing Gear

There is no current harvest of precious corals in CNMI or Guam, therefore no gears are currently being used. However, the types of gears that are allowed under the FEP are provided in section 3.1.2.1.10.

3.1.1.1.3 Catch in Number or Weight

Refer to the most current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.1.4 Time of Fishing

Precious corals may be harvested at night or during the day.

3.1.1.1.5 Fishing Areas

The amount of habitat where precious corals can grow is limited throughout the archipelago because of the steep topography. Black coral grows in relatively shallow waters of 30–100 meters, while pink, gold, and bamboo coral grows in deeper waters of 300 to1,500 meters (Grigg, 1993). Thus, precious corals could theoretically exist in both the nearshore waters (0–3 nm) as well as in the offshore (3–200 nm) waters.

3.1.1.1.6 Yield

3.1.1.1.6.1 MSY

There are no estimates available of MSY values for precious corals around CNMI. There are no MSY estimates available for precious corals around Guam.

3.1.1.1.6.2 OY

Precious corals in the EEZ around CNMI comprise exploratory area XP-CNMI, which has an OY of 1,000 kg per year for all species combined (except black corals). No OY has been determined for black corals around CNMI. This definition is consistent with that contained in the Precious Corals FMP.

3.1.1.1.7 Extent to Which U.S. Processors will Process OY

There is sufficient domestic processing capacity to accommodate increased harvests. The U.S. imports semi-processed coral for finishing into jewelry. Under the FEP, domestic production could replace these imports. It is anticipated that domestic processing capacity and domestic processing levels will equal or exceed the domestic harvest for the foreseeable future.

3.1.1.1.8 Annual Catch Limit

3.1.1.1.8.1 Specification Mechanism

For the precious coral fishery, specification of the acceptable biological catch and annual catch limits are required by the MSA and follows the mechanism described in Appendix E. The specification will be done on an annual basis by NMFS based on recommendations from the Council.

3.1.1.1.8.2 Limit

For the most recent precious coral Annual Catch Limits, refer to the most current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.1.8.3 Accountability Measures

Accountability measures will be specified on an annual basis by NMFS based on recommendations by the Council. If fisheries existed in the Mariana Archipelago for precious corals, there would be no near-real-time monitoring. The specification of accountability measures will follow the process described in Appendix E.

3.1.1.1.9 Criteria for Determining Overfishing

Due to the paucity of information on the existence and distribution of precious corals and the absence of a precious coral fishery in the Mariana Archipelago, specification of MSY, OY and overfishing have not been individually determined for precious coral management unit species. However, OY values have been defined for precious corals in the exploratory areas around CNMI and Guam. Should a precious coral fishery develop in the Mariana Archipelago, the Council may develop specifications for specific coral species or beds depending on the information and stock assessment tools available. Spatial assessments will initially be done separately for EEZ waters around Guam and CNMI but may be integrated as stock bounds and ecosystem structure become better understood.

3.1.1.1.10 MSA Conservation and Management Measures

Permit and Reporting Requirements

Federal permits are required to harvest Precious Coral MUS in Federal waters around the CNMI or Guam and permit holders are required to maintain Federal logbooks of their catch and effort. This is an open access fishery and as of June 2015 no Federal permits had been issued. There are currently no defined known precious coral beds or active precious coral fisheries in either Federal or Territorial waters around the Mariana Archipelago. However, because the precious coral MUS are known to be present it is possible a future fishery may develop. If one were to develop it would be subject to the existing quotas for exploratory areas and would have an annual harvest quota 1,000 kg of all species combined (except black corals) kg for EEZ waters around CNMI and a second annual harvest quota of 1,000 kg of all species combined (except black corals) for EEZ waters around Guam.

In order to identify participants and to collect harvest and effort data, Federal permits and reporting are required for any vessel of the United States fishing for, taking or retaining precious corals in EEZ waters around Guam or CNMI. Each permit will be valid for fishing only in the permit area. No more than one permit will be valid for any one person at any one time. The holder of a valid permit to fish one permit area may obtain a permit to fish another permit area only upon surrendering to the NMFS Regional Administrator any current permit for the precious

corals fishery. Fishery participants have the option of using NMFS approved electronic logbooks in lieu of paper logbooks.

Observers

Any vessel (commercial or non-commercial) operating in the territorial seas or EEZ of the U.S. in a fishery identified through NMFS' annual determination process to carry on board an observer when directed to do so by NMFS. This measure is intended to allow NMFS to learn more about sea turtle interactions with fishing operations, to evaluate existing measures to reduce sea turtle interactions, and to determine whether additional measures to reduce interactions may be necessary.

Seasons and Quotas

The fishing year for precious corals begins on July 1 and ends on June 30 the following year.

The quota limiting the amount of precious corals that may be taken in an exploratory area during the fishing year are 1,000 kg per area, all species combined (except black corals). Only live coral is counted toward the quota. Live coral means any precious coral that has live coral polyps or tissue.

The quotas for exploratory areas will be held in reserve for harvest by vessels of the U.S. by determining at the beginning of each fishing year that the reserve for each of the three exploratory areas will equal the quota minus the estimated domestic annual harvest for that year. And, as soon as practicable after December 31, each year, the Regional Administrator will determine the amount harvested by vessels of the U.S. between July 1 and December 31 of that year. NMFS may release to TALFF an amount of precious coral for each exploratory area equal to the quota minus the two times amount harvested by vessels of the U.S. in that July 1 to December 31 period. Finally, NMFS will publish in the Federal Register a notification of the Regional Administrator's determination and a summary of the information of which it is based a soon as practicable after the determination is made.

Closures

If the NMFS Regional Administrator determines that the harvest quota for any exploratory area will be reached prior to the end of the fishing year NMFS will issue a Federal Register notice closing the bed and the public will be informed through appropriate news media. Any such field order must indicate the reason for the closure, delineate the bed being closed, and identify the effective date of the closure. A closure is also effective for a permit holder upon the permit holder's actual harvest of the applicable quota.

Restrictions

The height of a live coral specimen shall be determined by a straight line measurement taken from its base to its most distal extremity. The stem diameter of a living coral specimen shall be determined by measuring the greatest diameter of the stem at a point no less than one inch (2.54

cm) from the top surface of the living holdfast. Live pink coral harvested from any precious corals permit area must have attained a minimum height of 10 inches (25.4 cm). Live black coral harvested from any precious corals permit area must have attained either a minimum stem diameter of 1 inch (2.54 cm), or a minimum height of 48 inches (122 cm).

Gear Restrictions

To protect habitat and reduce bycatch, only selective gear may be used to harvest coral from any precious corals permit area. Selective gear means any gear used for harvesting corals that can discriminate or differentiate between type, size, quality, or characteristics of living or dead corals.

Gold Coral Harvest Moratorium

To prevent overfishing and stimulate research on gold corals, fishing for, taking, or retaining any gold coral (live and dead) in any precious coral permit area is prohibited through June 30, 2018. This includes all EEZ waters of the Western Pacific Region. Additional research results on gold coral age structures, growth rates, and correlations between length and age would be considered by the Council and NMFS prior to the expiration of the 5-year moratorium.

Framework Procedures

Established management measures may be revised and new management measures may be established and/or revised through rulemaking if new information demonstrates that there are biological, social, or economic concerns in a precious corals permit area. By June 30 of each year, the Council-appointed Plan Team will prepare an annual report on the fishery in the management area. The report will contain, among other things, recommendations for Council action and an assessment of the urgency and effects of such action(s).

Established measures are management measures that, at some time, have been included in regulations implementing the FEP, and for which the impacts have been evaluated in Council/NMFS documents in the context of current conditions. According to the framework procedures of Amendment 3 to the Precious Corals FMP, the Council may recommend to the Regional Administrator that established measures be modified, removed, or re-instituted. Such recommendation will include supporting rationale and analysis and will be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

New measures are management measures that have not been included in regulations implementing the FEP, or for which the impacts have not been evaluated in Council/NMFS documents in the context of current conditions. Following the framework procedures of Amendment 3 to the Precious Corals FMP, the Council will publicize, including by a Federal Register document, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is discussed, the Council will consider recommendations and prepare a Federal Register document summarizing the Council's deliberations, rationale, and analysis for the preferred action and the time and place for any

subsequent Council meeting(s) to consider the new measure. At a subsequent public meeting, the Council will consider public comments and other information received before making a recommendation to the Regional Administrator about any new measure. If approved by the Regional Administrator, NMFS may implement the Council's recommendation by rulemaking.

Bycatch Measures

A variety of invertebrates and fish are known to utilize the same habitat as precious corals. Such organisms include onaga (Etelis coruscans), kāhala (Seriola dumerallii) and the shrimp Heterocarpus ensifer, however, there is no evidence that these species or others significantly depend on precious coral beds for shelter or food. However, only selective gear can be used to harvest precious corals, thereby reducing the potential for bycatch. In addition, any fishing vessel (commercial or non-commercial) operating in the territorial seas or EEZ of the U.S. in a fishery identified through NMFS' annual determination process must carry an observer when directed to do so.

Federal regulations governing this fishery can be found in the Code of Federal Regulations, Title 50, Part 665, Subpart G and Appendix C.

3.1.1.1.11 Bycatch

There is no existing fishery for precious corals in the Marianas, therefore there is no by-catch. However, if a fishery was to develop, precious coral harvest is extremely selective, since harvesting is done via SCUBA or using submersibles. By-catch information is collected through voluntary market and creel intercept surveys.

3.1.1.1.12 Regulations Implementing International Recommendations and other Applicable Laws

As a signatory to the Convention on International Trade in Endangered Species (CITES), the United States is required to abide by regulations include in this international agreement. CITES includes regulations on international trade of endangered species through import and export permits. Currently, black coral is listed as an Appendix II species, which requires an export permit for international commercial trade. *Corallium* (Red/Pink corals) continues to be proposed as an Appendix II species and may end up on the list in the near future.

3.1.1.1.13 Precious Corals Essential Fish Habitat

Precious corals may be divided into deep- and shallow-water species. Deep-water precious corals are generally found between 350 and 1,500 meters and include pink coral (*Corallium secundum*), gold coral (*Gerardia* sp. and *Parazoanthus* sp.), and bamboo coral (*Lepidistis olapa*). Shallow-water species occur between 30 and 100 meters and consist primarily of three species of black coral: *Antipathes dichotoma*, *Antipathes grandis*, and *Antipathes ulex*.

Precious corals are non–reef building and inhabit depth zones below the euphotic zone. They are found on solid substrate in areas that are swept relatively clean by moderate-to-strong (> 25 cm/sec) bottom currents. Strong currents help prevent the accumulation of sediments, which would smother young coral colonies and prevent settlement of new larvae. Precious coral yields

tend to be higher in areas of shell sandstone, limestone, and basaltic or metamorphic rock with a limestone veneer.

Black corals are most frequently found under vertical drop-offs. Pink, bamboo, and gold corals all have planktonic larval stages and sessile adult stages. Larvae settle on solid substrate where they form colonial branching colonies. The length of the larval stage of all species of precious corals is unknown.

The habitat sustaining precious corals is generally in pristine condition. There are no known areas in the Marinas Archipelago that have sustained damage due to resource exploitation.

To reduce the complexity and the number of EFH identifications required for individual species and life stages, the Council designated EFH for precious coral assemblages. The species complex designations are deep- and shallow-water complexes. The designation of these complexes is based on the ecological relationships among the individual species and their preferred habitat.

3.1.1.1.13.1 Description and Identification of EFH

The Council considered using the known depth range of individual precious coral MUS to designate EFH, but rejected this alternative because of the rarity of the occurrence of suitable habitat conditions. Instead, the Council designated the six known beds of precious corals as EFH. The Council believes that the narrow EFH designation will facilitate the consultation process.

3.1.1.1.13.2 Identification of Habitat Areas of Particular Concern

There are no designated HAPC for the precious corals fishery in the Marianas Archipelago.

3.1.2 Small Boat Pelagic Fisheries

3.1.2.1 Summary Description

Pelagic fishing vessels based on Guam are small, primarily recreational, trolling boats that are

Figure 22. Tailor boats commonly used for pelagic trolling and bottomfishing can be launched from small boat harbors or at various beach sites.

either towed to boat launch sites or marina-berthed charter boats and fish only within local

waters, either within Guam's EEZ or on some occasions in the adjacent EEZ of the Northern Mariana Islands. Most fishermen sell a portion of their catch at one time or another and it is difficult to make a distinction between recreational, subsistence, and commercial fishers. There are currently 15 civilian charter vessels on Guam and one charter operation run by the U.S. military from Sumay Cove. A summary of the catches by the Guam charter fleet is given in WPRFMC Pelagics Annual Report (2013). A feature of the Guam charter industry is that catches are often served as sashimi to the patrons, most of whom are Japanese.

Landings consist primarily of five major species: mahimahi (*Coryphaena hippurus*), wahoo (*Acanthocybium solandri*), bonita or skipjack tuna (*Katsuwonus pelamis*), yellowfin tuna (*Thunnus albacares*), and Pacific blue marlin (*Makaira mazara*). Other minor species caught include rainbow runner (*Elagatis bipinnulatus*), kawakawa (*Euthynnus affinis*), dogtooth tuna (*Gymnosarda unicolor*), double-lined mackerel *(Grammatorcynus bilineatus*), and oilfish (*Ruvettus pretiosus*).

High value is placed on sharing one's fish catch with relatives and friends. The social obligation to share one's fish catch extends to part-time and full-time commercial fishermen (Amesbury and Hunter-Anderson, 1989). In a study conducted by Rubinstein (2001), nearly all fishermen (96 percent) reported that they share fish regularly, giving fish to family (36 percent), friends (13 percent) or both (47 percent). A majority (53 percent) said they did not give fish to people other than family and close friends; of those who did occasionally, the main recipients were church fiestas (32 percent) and other church events or organizations (20 percent). A 2005 survey of Guam households found that out of the fish consumed by households, a little more than half (51 percent) was purchased at a store or restaurant and 9 percent was purchased at a flea market or from a roadside stand. Nearly one-quarter (24 percent) of the fish consumed was caught by the respondent or an immediate family member, and an additional 14 percent was caught by a friend or extended family member (Beukering et al., 2007 in Allen and Bartram 2008).

In the CNMI, the majority of boats in the local fishing fleet are small, outboard engine-powered vessels. The harvest of pelagic species by CNMI-based vessels has always been small, around 100 metric tons annually, caught with trolling gear. Both supply and demand conditions direct the majority of domestic commercial fishing effort in CNMI toward reef fish and bottomfish. There is less seasonality in these fisheries, and they require shorter offshore trips; moreover, their market value is often much higher than that of the commonly caught pelagic fish.

CNMI's pelagic fishery occurs primarily from waters off the island of Farallon de Medinilla south to the Island of Rota. The pelagic fishing fleet consists primarily of trolling vessels less than 24 ft in length which generally take one-day trips within 30 nm around the islands where they find abundant skipjack tuna. These vessels have a limited travel and fishing range and fishery participants necessarily rely on catches from waters within their reach.

Figure 23. Small boat pelagic trolling vessel leaving port

The primary target and most marketable species for the pelagic fleet is skipjack tuna. In 2010, skipjack tuna continued to dominate the pelagic landings, comprising around 80 percent of commercial pelagic landings and revenues totaling about $215,946. Schools of skipjack tuna have historically been common in nearshore waters, providing an opportunity for trollers to catch numerous fish with a minimum of travel time and fuel costs. Yellowfin tuna and mahimahi are also easily marketable species but are seasonal. Peak mahimahi catches are usually from February through April while the yellowfin season usually runs from April through September.

For a full description of the Mariana Islands small boat pelagic fishery and conservation and management measures, see the Pelagic Fishery Ecosystem Plan.

3.2 Other Consideration Important for FEP Implementation

3.2.1 Sociocultural Data

The MSA states the "Pacific Insular Areas contain unique historical, cultural, legal, political, and geographical circumstances which make fisheries resources important in sustaining their economic growth." In addition, ecosystem-based fishery management recognizes and attempts to manage for the interconnectedness of biological, ecological, geological, and social management dimensions. For many in islands communities, a fishery is *social system* that includes fish as well as fishermen, their families and friends, and, in the case of more commercialized fisheries, the associated support infrastructure and industry. Even those who buy and eat fish on a regular basis might be thought of as being part of a fishery.

Because of the importance of managing fishery resources as public trust, and because of the cultural uniqueness of the Pacific Islands, the Council has established several elements in its management process to incorporate science-based social data and traditional ecological knowledge. In fact, the Council from its inception has been very sensitive to traditional and indigenous fishing issues and considerations. These issues include ensuring fishermen participation in setting ACLs, preserving indigenous way of life, navigating the relationship between federal processes and requirements and local custom and norms, and the dependence, on

nearshore and pelagic resource, even in the modern era.

These process elements include formal social science input science the late 1980s via social science recommendations to the newly-established Pelagic Fisheries Research Program, and SSC subcommittee on social science, and a Council Cultural and Social Science Research Plan. In 1988, the Council spearheaded a request for proposals focused on native fishery rights issues and was instrumental in getting a Western Pacific Community Development Program and Plan included in 1996 reauthorization of the MSA. Following and in response to that, the Council established a Community Development Planning Committee. This committee is utilized under this FEP to assist with addressing Marianas Archipelago FEP Objective: Increase Traditional and Local Knowledge in Decision-making.

Between 1999-2002, the Council worked to have the Secretary of Commerce formally designate fishing communities in American Samoa, the CNMI, Guam, and Hawaii under the MSA's fishing communities provision (National Standard 8). To date, ours is the only region that has done so. In 2002, the Council established a formal Social Science Research and Planning Committee (known now as the Social Science Committee). Among other things, this Committee vets social science information needs as part of the Council's identification of fishery research priorities.

Finally, the Council works to address sociocultural considerations via its "SEEM" process and its annual fishery (SAFE) reports. The SEEM assessment quantifies social, economic, and ecological factors, as well as management uncertainty dimensions and SEEM working groups thus recommend whether the ACL is set equal or lower than the ABC based on these considerations. The Council's annual/SAFE report was overhauled in 2015 to monitor a host of social variables.

The Western Pacific Regional Fishery Management Council is the only regional fishery management council that employs both an Indigenous Coordinator and a Social Scientist.

3.2.2 Protected Species Information

Bottomfish, precious coral, coral reef and crustacean fisheries managed under this FEP have limited impacts to protected species, and no specific regulations are in place to mitigate protected species interactions. Destructive gear such as bottom trawls, bottom gillnets, explosives and poisons are prohibited under this FEP, and these provide benefit to protected species by preventing potential interactions with non-selective fishing gear.

NMFS has determined that the fisheries operating under the Marianas FEP are not likely to adversely affect ESA-listed sea turtles, marine mammals, reef-building corals, and scalloped hammerhead shark. The current list of ESA Section 7 consultations applicable to this FEP are listed in the Annual Archipelagic Fishery Ecosystem Report (SAFE Report). NMFS will reinitiate consultation if a new species is listed or critical habitat is designated that may be affected by Marianas FEP fisheries. These fisheries are not known to interact with non-ESA listed marine mammals or seabirds.

Fisheries operating under the Marianas FEP currently do not have federal observers on board.

The Council monitors protected species interactions in these fisheries in the Annual Archipelagic Fishery Ecosystem Report (SAFE Report) using other proxy indicators such as fishing effort and changes in gear types.

3.2.3 Climate Change Data and Research

Changing climate is already adversely impacting island communities, ecosystems, resources, cultures and economies. Increasing pressures on valuable marine and coastal habitats and resources due to changing demands for food, energy, economic growth and community sustainability make climate change an issue of community, national and regional security. In addition to economic considerations such as commercial fisheries, Pacific Island communities must address threats to culturally important species and places as well as community health and food security. Ultimately, for many low-lying coral atoll nations, climate change is a direct threat to national security as rising sea level and changes in the availability of freshwater may make at least some of those nations uninhabitable. To escape these impacts, human migration is anticipated.

The Executive Summary of the 2012 Pacific Islands Regional Climate Assessment (PIRCA) notes that the indicators of climate change suggest multiple concerns for human and natural communities in the Pacific Islands region: decreased freshwater supplies, especially on atolls and low-lying islands; increased coastal flooding and erosion; increased coral bleaching; unknown, negative consequences for the entire marine ecosystem; declines in open-ocean fisheries; increased risk of species extinctions; threats to the traditional lifestyles of indigenous communities making it difficult for Pacific Island communities to sustain their connection with a defined place and their unique set of customs, beliefs, and languages; and human migration from low islands to high islands and continental sites.

At its 157th meeting in June 2013, the Council restructured its Coastal and Marine Spatial Planning (CMSP) Committee into a Marine Planning and Climate Change (MPCC) Committee. The MPCC Committee advises the Council on new and developing research and happenings related to marine planning and climate change as it relates to Western Pacific fisheries, provides input on Council actions and associated analyses and documents as it relates to marine planning and climate change, and recommends research and program priorities, including outreach and education, to address marine planning and impacts of climate change in fisheries and fishing communities. The Committee includes up to 20 members, including at least three representatives each from Hawaii, American Samoa, Guam and the Commonwealth of the Northern Mariana Islands (one of the three is a community representative), three members representing the federal government and an ecosystem modeler. The basic criteria for Committee membership is expertise and interest in marine planning and climate change, with a focus on fisheries and fishing communities. Members of the Committee are selected by the Council and serve three-year terms.

In 2015, the Council adopted the MPCC Policy and action plan drafted by the MPCC Committee. The definition of climate change included in the MPCC Policy is the one used by the Intergovernmental Panel on Climate Change, which includes natural climate variability such as El Nino Southern Oscillation and other patterns of natural variability as well as long-term changes in climate associated with anthropogenic (human) influence on greenhouse gases and

other aspects of the Earth's climate system. The definition of climate change in the Council's MPCC policy also includes ocean acidification. The MPCC policy notes that, in the Pacific Ocean, anticipated climate change impacts include ocean acidification; changing migratory patterns of tuna, other commercially valuable stocks and protected species, among other species; changes in coastal and marine habitats with associated changes in socially, culturally and economically valuable coastal fisheries and other sources of ocean economy; changing patterns of El Niño and other patterns of climate variability; changes in water level including, but not limited to sea level change, increased severity of extreme weather, coral reef changes; and human migration, among others. The MPCC policy recognizes a set of overarching and specific principles and specific policy points for the Council, its advisory bodies and its staff to consider and incorporate in the Mariana Archipelago FEP as well as in Council programs and other actions. The policy can be found on the Council's website.

The Council's MPCC Action Plan prioritizes and provides guidance on implementing climate change measures adopted by the Council, including items related to climate change research and data needs.

A working group of the MPCC Committee, with additional support from PIFSC, tentatively identified climate indicators to monitor initially for the annual reports on the Council's FEPs. The working group suggested that, rather than focusing on the numeric changes and/or stability of these factors, the annual reports indicate whether the monitored indicators are in a green, yellow or red condition. The working group also suggested that the annual reports eventually also monitor climate change impact indicators, such as socioeconomic indicators, to be determined after community consultation. The Council's 2015 restructured Plan Team includes climate change experts who will finalize decisions related to the monitoring of climate indicators and climate impact indicators to be included in the Mariana FEP annual report. Organizations with whom the Council intends to work to identify the climate change impact indicators in the Mariana Archipelago include the Guam Bureau of Statistics, Guam Department of Agriculture, Guam permanent working group on climate change (being established by executive order by Guam Governor), University of Guam, CNMI Climate Change Working Group, CNMI Bureau of Environmental and Coastal Quality, CNMI Division of Fish and Wildlife, as well as community members, schools and policymakers in the Territory and Commonwealth.

3.2.4 Marine Planning Considerations

In the Mariana Archipelago, fisheries compete with other activities for fishing grounds and access to them. These activities include, but are not limited to, coastal military bases and marine training areas, commercial shipping, marine protected areas, recreational activities and pollution.

Marine planning is a tool utilized regionally, nationally and globally to identify and address issues of multiple human uses, ecosystem health and cumulative impacts and is a component of the National Ocean Policy. Since 2010, CMSP has been the focus of several of the Council's advisory body meetings and outreach activities. During this time, the Council also began transforming its Marine Protected Area Committee first into a CMSP Committee and then into the current Marine Planning and Climate Change Committee (see above for details on the Committee).

In 2015, the Western Pacific Regional Fishery Management Council adopted its MPCC Policy,

which was drafted by the Council's MPCC Committee. The policy uses the definition of marine planning as defined in the National Ocean Policy Implementation Plan. The MPCC policy recognizes a set of overarching and specific principles and specific policy points for the Council, its advisory bodies and its staff to consider and incorporate in the Mariana Archipelago FEP as well as in Council programs and other actions. The policy notes that marine planning can be used to determine ocean management priorities across jurisdictions and identify common objectives. The MPCC Policy recognizes that traditional resource management systems can provide an appropriate context for marine planning. A key component of the policy is collaboration with existing organizations in data and information collection, dissemination and outreach. Organizations with whom the Council intends to work include, but are not limited to, the Guam Bureau of Statistics, Guam Department of Agriculture, University of Guam, CNMI Bureau of Environmental and Coastal Quality, CNMI Division of Fish and Wildlife and the Pacific Islands Regional Planning Body as well as community members, the private-sector, schools and policymakers in the Territory. The MPCC Policy can be found on the Council's website.

The Council's Plan Team (restructured in 2015) includes a marine planning expert, and a section on marine planning will be included in the Mariana FEP annual reports.

3.2.5 Fishing Rights of Indigenous People

The WPRFMC addresses the economic and social consequences of militarization, colonization and immigration on the aboriginal people in the Council's area of responsibility and authority through its FEPs. Generally, the resultant cultural hegemony has manifested in poverty, unemployment, social disruption, poor education, poor housing, loss of traditional and cultural practices, and health problems for indigenous communities. These social disorders affect island society. Rapid changes in the patterns of environmental utilization are disruptive to ecological systems that developed over millennia into a state of equilibrium with traditional native cultural practices. The environmental degradation and social disorder impacts the larger community by reducing the quality of life for all island residents. The result is stratification along social and economic lines and conflict within the greater community.

The primary process for the indigenous community to formally participate in the Council process is through their participation in the Advisory Panel discussions. Grant workshops and other Council public fora provide additional opportunity for the indigenous community to participate in the Council process.

There are two programs specifically mandated by the MSA for these communities to participate in the Council process: the Western Pacific Community Development Program and the Western Pacific Community Demonstration Project Program.

3.4.5.1 Western Pacific Community Development Program

The Western Pacific Regional Fishery Management Council (Council), since its inception, has continuously worked on issues related to indigenous fishing rights for Pacific Islanders. In 1996, amendments to the Magnuson-Stevens Fishery Conservation and Management Act (Section 305(i)(2)) recognized special fishing practices for native peoples in American Samoa, Guam, Hawaii and the Northern Mariana Islands in part through establishment of the Western Pacific Community Development Program (CDP). The CDP was further defined in the 2006 reauthorization of the MSA (MSRA). In developing the criteria for eligible communities

provisions of the MSRA mandate that the Council shall base the criteria on "traditional fishing practices in or dependence on the fishery, the cultural and social framework relevant to the fishery, and economic barriers to access to the fishery."

The CDP was established with broad latitude in program development and implementation. The Western Pacific CDP provides flexibility in the method by which benefits can be delivered to indigenous communities. Because of the program's flexibility, different implementing approaches have been used to date. There is potential for a broad variety of community initiatives to come forward for consideration under the CDP, therefore, to facilitate the process the Council seeks to establish a standard procedure to receive, review, approve and implement future CDP initiatives. In addition, CDP initiatives may include the need to provide access to fisheries which would otherwise be restricted.

A community is eligible to participate in a western Pacific community development program and submit a Project proposal if they meet criteria developed by the WPRFMC and approved by the Secretary.

To be eligible to participate in the western Pacific community development program, a community must meet the following criteria:
1. Be located in American Samoa, Guam, Hawaii, or the Northern Mariana Islands (collectively, the Western Pacific);
2. Consist of community residents descended from aboriginal people indigenous to the Western Pacific who conducted commercial or subsistence fishing using traditional fishing practices in the waters of the Western Pacific;
3. Consist of individuals who reside in their ancestral home;
4. Have knowledge of customary practices relevant to fisheries of the Western Pacific;
5. Have a traditional dependence on fisheries of the Western Pacific;
6. Are currently experiencing economic or other constraints that have prevented full participation in the Western Pacific fisheries and, in recent years, have not had harvesting, processing or marketing capability sufficient to support substantial participation in fisheries in the area; and
7. Develop and submit a community development plan to the Council and the NMFS.

3.4.5.2 Western Pacific Community Demonstration Project Program

The Community Demonstration Project Program (CDPP) is a grant program. The Council has an advisory panel which reviews and ranks proposals and forwards to the Council for approval and transmittal to the Secretary of Commerce.

The purpose of the Western Pacific Demonstration Project Program is to promote the involvement of western Pacific communities in fisheries by demonstrating the application and/or adaptation of methods and concepts derived from traditional indigenous practices. Projects may demonstrate the applicability and feasibility of traditional indigenous marine conservation and fishing practices; develop or enhance community-based opportunities to participate in fisheries; involve research, community education, or the acquisition of materials and equipment necessary to carry out a demonstration project.

To support this program, region wide grant application trainings and workshops are conducted by the Council. These workshops also provide a forum for the community to make recommendations and participate in the Council process. The Council develops the funding priorities.

3.2.6 Aquaculture

Aquaculture is a growing industry in the U.S. producing an ever-increasing proportion of marine consumer products once solely harvested from the wild. NMFS defines aquaculture as the as the propagation and rearing of aquatic organisms for any commercial, recreational, or public purpose. In the Pacific it has evolved into a multi-million dollar industry producing a range of marine products including algae, pearls, and fish. In the twentieth century, most aquaculture in the U.S. was conducted at land-based facilities and was focused on freshwater species. Technical innovations, declines in wild marine stocks, and greater demand for seafood have led to a recent expansion of the industry into marine environments.

NMFS is responsible for managing fisheries in federal water and NOAA General Council determined that aquaculture is included in the definition of "fishing" under the Magnuson-Stevens Fishery Conservation and Management Act (MSA)[1]. This designation provides the statutory authority for NMFS and the regional fishery management councils (FMCs) to regulate aquaculture projects in federal waters. NMFS and the FMCs are just beginning to establish management plans for aquaculture activities. In 2009, The Gulf of Mexico FMC established the first fishery management plan for offshore aquaculture. That same year, the Council voted to consider including management measures for offshore aquaculture in the FEPs at its 146th Meeting in October 2009.

The WPRFMC defines aquaculture as the raising and cultivation of plants or animals, both freshwater and marine, for food or other purposes. Aquaculture, as defined by the Council, includes fish farming, fish culturing, ocean ranching, and mariculture. The Western Pacific Regional Fishery Management Council recognizes that aquaculture is a rapidly developing industry in the Western Pacific Region as well as the rest of the world, and that aquaculture presents both potential benefits and potential negative impacts to the environment and society. The Council's Aquaculture Policy can be found at the Council's website, www.wpcouncil.org.

This page was intentionally left blank.

4 MANAGEMENT PROCESS

4.1 Council Process

4.1.1 Overview of Council Process

The Council process to develop or change regulations involves many stages and includes many steps and opportunities for public input and comment. The Council considers proposals, options papers, draft amendment documents, National Environmental Policy Act analysis documents, and eventually votes on preferred alternatives, which may result in regulations at the end of the process.

The Council generally follows this process:

- An issue is brought to the Council's attention – presented from the public, an advisory body, or other avenue;
- The Council reviews the issue and decides whether to initiate an analysis of alternatives;
- If such an analysis is initiated, then:
    - Council staff develops alternatives, analysis and other needed documents for review;
    - There is a review by the Council, its advisory bodies and the public; and
    - The Council may select a preferred alternative, initiate further analysis or decide on no further action.
- After a preferred alternative is selected, the Council decision is forwarded to the Secretary of Commerce in the form of a plan or amendment for review and approval; The Secretary of Commerce may do either of the following:
    - Reject the plan/amendment;
    - Approve the plan/amendment;
    - Partially approve the plan/amendment.
- If the plan/amendment is approved, draft rules are published for public comment;
- After the rules are noticed and comments are addressed, a final decision is made by the Secretary of Commerce; and
- If approved, the rules and regulations from the plan/amendment are implemented through the Code of Federal Regulations.
- If the plan/amendment is rejected or partially approved, it is returned to the Council, with rationale for rejection/partial approval, for the Council's consideration.

4.1.1.1 Development and Approval Process for Management Actions

The process to develop and approve fishery management actions is governed by the MSA with further guidance provided through the Operational Guidelines (OG), Regional Operating Agreements (ROA) and other applicable laws (OALs). While most actions are focused specifically on the Council-initiated fishery management actions, OALs and other rulemaking authorities provide information relevant to fisheries managed by the Secretary under the "Highly Migratory Species" (HMS) provisions of the MSA.

As described in the OG, the fishery management process for Council-managed fisheries consists of five basic phases. Section C of Appendix 2 to the OG provides detailed information about

these phases. In general, they are as follow:

1. Planning
2. Document Drafting
3. Public Review and Council Action to Recommend a Measure
4. Post Council Action to Recommend a Measure
    (a) Preparation for Transmittal
    (b) Secretarial Review and Implementation
5. Ongoing Management (additional regulatory activity, monitoring, need identification, and response – feeds back into phase1).

While the ROA outlines NMFS/Council cooperation and sharing of workloads, it is important to note that the MSA and other applicable laws assign different responsibilities to each entity. Therefore, both NMFS and the Councils must ensure they fulfill their required roles.

4.1.1.2 Specific Elements and their Relationship to Decision-making

The MSA and OALs set forth specific analytical and procedural requirements that interact with NMFS' and Councils decision-making processes under the MSA. Mandates placed on NMFS, as the federal action agency, are distinct from the requirements pertaining to the activities of the Council, in their role as an advisory body. The Council is not precluded from developing analyses and documentation to support compliance with the OALs; in fact, this practice is recommended. However, legal responsibility for most requirements lies with the NMFS. The Council desires to have as complete analysis and documentation as possible available during its deliberations.

a. MSA Role of the Councils

As set forth in sections 302(h), 303, and 304 of the MSA, Councils are responsible for:

- Conducting public hearings to allow for public input into the development of FMPs and amendments,
- Reviewing pertinent information,
- Preparing fishery management plans and amendments for fisheries requiring conservation and management
- Drafting or deeming regulations to implement the plans or amendments
- Developing ACLs,
- Identifying research priorities, and
- Transmitting complete packages containing documentation necessary for NMFS to initiate a review of compliance with all applicable laws including NEPA.

b. MSA Role of NMFS

As set forth in section 304(a) of the MSA, the role of NMFS with respect to fishery management plans and plan amendments developed by the Council is to review– and approve, disapprove, or partially approve –those plans and amendments in accordance with specified procedures, including:

- Immediately upon transmittal of the FMP or FMP amendment: publish a plan or amendment in the Federal Register for a 60-day comment period.

- Approve, disapprove, or partially approve a plan or amendment within 30 days of the end of the comment period on the plan or amendment. Disapproval must be based on inconsistency with the MSA or other applicable law. In addition, disapprovals must provide guidance on what was inconsistent and how to remedy the situation, if possible (see MSA section 304(a)(3)(A)-(C)).

In addition, as set forth in section 304(b) the role of NMFS with respect to Council-recommended draft regulations is to:

- Immediately upon transmittal of the proposed regulations: initiate an evaluation of whether they are consistent with the fishery management plan, plan amendment, the MSA, and other applicable law.

- Within 15 days make a determination of consistency, and—

    - if that determination is affirmative: publish the regulations for a public comment period of 15 to 60 days; or,

    - if that determination is negative: notify the Council in writing of the inconsistencies and provide recommendations on revisions that would make the proposed regulations consistent.

- Consult with the Council before making any revisions to the proposed regulations,

- Promulgate final regulations within 30 days after the end of the comment period and publish in the Federal Register an explanation of any differences between the proposed and final regulations.

The MSA, at section 304(c), also authorizes NMFS to prepare a fishery management plan or amendment if:

(a) the Council fails to develop and submit to NMFS, after a reasonable period of time, a fishery management plan for such fishery, or any necessary amendment to such a plan, if such fishery requires conservation and management;

(b) the NMFS disapproves or partially disapproves any such plan or amendment, or disapproves a revised plan or amendment, and the Council involved fails to submit a revised or further revised plan or amendment; or

(c) the NMFS is given authority to prepare such plan or amendment under the MSA.

NMFS may also develop regulations to implement Secretarial plans and amendments. (MSA section 304(c)(6), (7)).

c. Other Applicable Laws Roles for NMFS and COUNCIL

As described in section D in Appendix 2 of the OG, the OALs set forth a variety of requirements for analysis, documentation, determinations, and procedures. Because of the close relationship between NMFS' actions and the Council's recommendations, compliance with the OALs will be most effective if NMFS and the Councils coordinate closely. The ROAs explain how these relationships work for each Council/Region pair. Council staff can often be responsible for drafting supporting analyses and documentation; however, it is the NMFS' responsibility to ensure the final documents are legally sufficient.

4.1.1.2.1 Advisory Panels

Advisory Panels are established as necessary to assist in carrying out the functions of the Council under the MSA. Section 302(g)(4) of the MSA establishes Advisory Panels to "assist in the evaluation of information relevant to the development of any fishery management plan or plan amendment for a fishery." The Western Pacific Regional Fishery Management Council's Advisory Panel includes representation from various sectors of the fisheries. Members of the Subpanels are selected by the Council and serve four-year terms with an overall Advisory Panel Chair and a Vice-Chair, with a Chair for each Advisory Panel sub-panel. Sub-panels are designated by the Archipelago FEPs and have representation from user groups and interests concerned with management of the fishery including fair representation of commercial fishing interests in the Council's geographical area of authority. The Advisory Panel provides advice on the content and effects of management plans, amendments and pre-season and in-season management measures, as well as issues to be discussed at Council Meetings.

The Marianas Archipelago FEP Sub-Panel includes 16 members (8 each from Guam and CNMI), not including alternates, and meets prior to Council Meetings to discuss action items and provide comments and recommendations on issues of concern to the Council. Recommendations from the Advisory Panel and its Sub-Panels are provided to the Council for its consideration at Council Meetings.

4.1.1.2.2 Plan Teams

Plan teams are a form of advisory panel authorized under Section 302(g) of the MSA. FEP Plan Teams are comprised of Federal, State and non-government specialists that are appointed by the Council and serve indefinite terms. The Council created an Archipelagic FEP Plan Team to oversee the ongoing development and implementation of the American Samoa, Hawaii, Mariana, and PRIA FEPs. The Team is also responsible for reviewing information pertaining to the performance of all the fisheries, the status of all the stocks managed under the four Archipelagic FEPs, monitoring the performance of the FEP through the production of an annual stock assessment and fishery evaluation (SAFE) report , providing information on the status of the fish stocks and other components of the ecosystem, and recommending conservation and management adjustments under framework procedures to better achieve management objectives. The Archipelagic Plan Team's findings and recommendations are reported to the Council at its regular meetings. The Archipelagic Plan Team meets at least once annually and its chair is appointed by the Council Chair after consultation with the Council's Executive Standing Committee.

4.1.1.2.3 Science and Statistical Committee

The Scientific and Statistical Committee (SSC) is mandated under MSA 302(g) to "assist the

Council in the development, collection, evaluation, and peer review of such statistical, biological, economic, social, and other scientific information as is relevant to such Council's development and amendment of any fishery management plan." The Western Pacific Regional Fishery Management Council's SSC is composed of experts with scientific or technical credentials and experience from State and Federal agencies, academic institutions, and other sources. SSC Members represent a wide range of disciplines required for preparation and review of Fishery Ecosystem Plans.

The SSC typically meetings several days prior to a Council meeting to identify scientific resources required for the development of management plans and amendments and recommend resources for Plan Teams; Identify scientific resources required for the development of management plans and amendments and recommend resources for Plan Teams; Provide ongoing multi-disciplinary review of management plans or amendments and advise the Council on their scientific content, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield and achieving rebuilding targets, and reports on stock status and health, bycatch, habitat status, social and economic impacts of management measures and sustainability of fishing practices; Assist the Council in the development, collection, evaluation and peer review of such statistical, biological, economic, social, and other scientific information as is relevant to the Council's activities, and recommend methods and means for the development and collection of such information; Recommend to the Council the composition of Plan Teams; and provide scientific advice to the Council through recommendations on issues and action items.

4.1.1.2.4 Fishing Industry Advisory Committee

Section 302(g) of the MSA requires the Council to establish a Fishing Industry Advisory Committee (FIAC). It includes representation from various fishing sectors of the Western Pacific region. Members of the committee are selected by the Council and serve four year terms, with representation from each of the island jurisdictions. The FIAC reports to the Council and has representation from industry user groups concerned with the management of the fishery for which a plan is being prepared or reviewed, with fair representation of the fishing industry interests in the Council's geographical area of authority. The functions of the FIAC are to advise the Council on fishery management problems; to provide input to the fishery management planning efforts; and to advise the Council on the content and effects of management plans, amendments, and pre-season and in-season management measures. The FIAC includes 10 members from each Archipelagic FEP (with the PRIA FEP included with the Hawaii FEP).

4.1.1.2.5 REAC and other Council Committees

The Regional Ecosystem Advisory Committee (REAC)'s primary role is to provide a forum for government agencies, organizations and other entities to share information to better integrate and coordinate ocean and coastal management. Sub-committees for each area are created with members that include representation from the Council, various Federal, State and local agencies, non-government specialists and private business from each respective area. Members of the REAC are appointed by the Council with the Chair of each area sub-committee appointed by the Council Chair after consultation with the Executive and Budget Committee.

Other Council Committees created to assist the Council in carrying out its statutory functions, as provided under section 302(g)(2) of the MSA include:

- Protected Species Advisory Committee
- Social Science Planning Committee
- Community Demonstration Projects Advisory Panel
- Community Development Program Advisory Panel
- Fishery Data Collection and Research Committee
- Marine Planning and Climate Change Committee
- Education Committee
- Non-Commercial Fisheries Advisory Committee

4.1.1.2.6 Ad-hoc Committees and Working Groups

The Council develops different ad-hoc committees and working groups to deal with specific issues relevant to the FEP and assist it in carrying out its statutory function.

4.1.1.2.7 Federal Agencies

4.1.1.2.7.1 National Marine Fisheries Service

The NMFS implements Council recommendations and is a primary federal enforcement agency for fisheries and other marine resource regulations. Recommendations from the Council, including transmitted amendments and plans, are provided to the NMFS and the Department of Commerce for approval. The Secretary of Commerce may approve, partially-approve, or reject any amendment or plan, in which case the Council will revisit or revise any partially-approved or rejected amendment or plan.

Regionally, the Council works in conjunction with the NMFS Pacific Islands Regional Office (PIRO) and the Pacific Islands Fisheries Science Center (PIFSC).

4.1.1.2.7.2 US Fish and Wildlife Service

The US Fish and Wildlife Service is a non-voting member of the Council and provide information as needed. In the Mariana Archipelago, the USFWS, along with NMFS, is responsible for the Marinas Trench Marine National Monument. Coordination on fishing issues and regulations between the Council and USFWS is crucial for the success of any regulations issued in the area.

4.1.1.2.7.3 United States Coast Guard

The United States Coast Guard, District 14, is responsible for fishery regulation enforcement in the Mariana Archipelago, including enforcing regulations listed in the FEP.

4.1.1.2.8 Local Agencies

In the Mariana Archipelago, the local agencies that the Council work with includes in Guam: The Department of Agriculture and its Division of Aquatics and Wildlife Resources; Department of Chamorro Affairs; Bureau of Statistics and Plans; Mayors Council of Guam.

In CNMI: The Department of Land and Natural Resources and its Division of Fish and Wildlife; Bureau of Environmental and Coastal Quality and its Division of Coastal Resource Management and Division of Environmental Quality; and the Mayor's Office for each island.

4.1.1.2.9 Regional Entities

There are no current regional entities involved in fisheries management in the Mariana Archipelago. Guam and CNMI are member of the SPC, which provides technical fishery research and development support upon request.

4.1.1.2.10 Fishery Impact Statement

The Magnuson-Stevens Act requires that fishery management plan and plan amendments submitted to the Secretary after October 1, 1990 assesses the likely biological and socioeconomic effects of the conservation and management measures on fishery participants and their communities; participants in the fisheries conducted in adjacent areas under the authority of another Council; and the safety of human life at sea. This is typically referred to as a Fishery Impact Statement (FIS). Appendix D contains a list of all relevant amendments that predate this FEP, as well as amendments that were approved subsequent to its adoption. The elements of a FIS are integrated into the environmental impact analyses prepared for these amendment documents, as required. To find a FIS for a specific management measure contained in this FEP, see Appendix D, which contains a list of all amendments to the Council's FMPs and FEPs.

4.1.1.2.11 Public Consultation Process

The public is provided opportunity to comment on provide testimony at all meetings noticed through the Federal Register. The Council also accepts comments and testimony by phone, email and fax and strives to make documents that support decision-making available in a timely manner on its website and at its various meetings.

4.1.1.3 The Role of Agreements, Statement of Organization Practices and Procedures, etc.

The Council enters into agreements to define specific roles and responsibilities of the agencies in developing, approving, and implementing fishery management plans and actions under the MSA. In 2014, the Council entered into a Regional Operating Agreement with the NMFS PIRO and PIFSC to define specific roles and responsibilities of the Council and NMFS Offices in developing, approving and implementing fishery actions under the MSA. The ROA sets forth procedures and review processes to ensure that proposed management actions are adequately and completely analyzed upon decision making. The ROA functions with the general framework of the "Operational Guidelines" set forth by NOAA and can be amended as needed for consistency.

In addition to external agreements, the Council establishes internal working policies and procedures to through which the Council conducts business and carries out its functions under the MSA. The Statement of Organization Practices and Procedures (SOPP) is updated periodically as needed. The SOPP defines the Council's organizational structure, standards of conduct, policies and procedures, advisory bodies and their role and responsibilities and administrative system.

4.1.1.4 Communication Plan

Communication is an essential component of the Council's bottom-up approach to fisheries

management and is one of the Council's seven Guiding Principles: "Conduct education and outreach to foster good stewardship principles and broad and direct public participation in the Council's decision making process."

The Council's Public Involvement and Outreach Plan was prepared in 1995 and serves as the basis for the Council's ongoing communication efforts. The plan identifies training sessions, programs, information sessions, special events and product development (audio-visual, printed materials and displays) for three targeted audiences: fishing communities, regulatory/policy setting agencies and the general public.

In 2010 and 2011, fishermen focus groups were conducted in Hawaii to assess the effectiveness of the Council's outreach efforts and elicit suggestions for improving it. This research was conducted by an independent research firm, which also conducted interviews to gauge the effectiveness of particular Council outreach projects in the Territories and the Commonwealth. The results indicated that fishermen were aware of the Council; however, their understanding of what the Council does could be improved. In 2011, in response to these comments, the Council developed a Communications Framework among other activities.

The Council publishes meeting notices in local publications in English and, in American Samoa, also in the Samoan language. Other regular Council outreach materials include a quarterly newsletter, a monograph series, brochures, displays, magazine articles and press releases and occasional videos, public serve announcements, proceedings and books.

The Council's regularly scheduled outreach and education activities, some of which have been conducted annually for more than a decade, include Fishers Forums, student art contests with teacher resources on various themes of fishery importance, traditional lunar calendars highlighting student art and traditional fishery information, and high school summer courses. The Council also occasionally conducts International Fishers Forums, teacher workshops, student symposiums, community workshops, fishermen workshops and other special events locally, regionally, nationally and internationally.

In 2013, the Council established an Education Committee, which spearheaded a memorandum of understanding signed by federal and local governments and higher education institutions in the Western Pacific Region. The aspiration of the MOU is to improve the capacities of the US Pacific Island territories to manage their fisheries and to enhance tertiary education in fisheries science and management offered in Hawai`i. In 2015, the first outcomes of the MOU included the implementation of the US Pacific Territories Fishery Capacity-Building scholarship and internship program.

The Council has increased its outreach through social media, including the Council website, Facebook, Twitter and Constant Contact distribution. It also works with the education and outreach staff of the other seven Reginal Fishery Management Councils on the fisherycouncils.org website, Managing Our Nation's Fisheries conferences and occasional publications, displays and events.

4.1.1.5 Council Five Year Research Priorities

The reauthorized Magnuson-Stevens Fishery Conservation and Management Act (MSRA),

created new responsibilities and authorities for domestic regional fishery management councils and their advisory bodies. Following is the relevant MSRA text regarding the development and implementation of five-year regional research priorities by Councils. Section 302 (h) Each Council shall develop, in conjunction with the scientific and statistical committee, multi-year research priorities for fisheries, fishery interactions, habitats, and other areas of research that are necessary for management purposes that shall –

(A) establish priorities for 5-year periods;

(B) be updated as necessary; and

(C) be submitted to the Secretary and the regional science centers of the National Marine Fisheries Service for their consideration in developing research priorities and budgets for the region of the Council.

The research priority document is vetted through the Council advisory groups and submitted to the Secretary of Commerce and NMFS on an annual basis for their consideration. These priorities are also the basis for Federal funding opportunities such as the Saltonstall Kennedy Grant Program. A process of addressing and monitoring these research priorities is yet to be developed by the Council and NMFS PIFSC.

Stock assessments for Council managed fisheries remains the highest research priority. Another priority is to understand the fishery dynamics as affected by fish imports (and exports) which is particularly critical for small island communities. For current research priorities, see the Council's website at www.wpcouncil.org.

4.1.1.6 Annual Fishery Reports and their Use

The Council's annual fishery reports serve as Stock Assessment and Fishery Evaluation (SAFE) reports for the Western Pacific region and contain information beyond the SAFE report requirements found in National Standard 2. The reports are generated by the Archipelagic and the Pelagic Plan Team and contain information about the MUS and their associated ecosystems derived from fishery dependent and fishery independent data collection systems. Some of the major elements in the reports are:

Fishery Descriptions: 1) number of participants; 2) number of permit holders; 3) type and quantity of fishing gear used; 4) number of vessels involved; 5) frequency of trips; 6) trip costs; 7) average number of crew or fishing party; 8) species of fish involved and their location(s); 9) disposition of catch; 10) annual catch limit; 11) Status Determination Criteria; 12) Overfishing Limit and Allowable Biological Catch; 13) measures to prevent overfishing and achieve rebuilding targets; 14) sources of fishing mortality; 15) harvest capacity and extent; 16) fishing communities associated with the fishery; 17) fishery bycatch

Fishery Ecosystems: 1) oceanographic indicators; 2) climate change indicators; 3) biological indicators; 4) habitat (status of fish habitat and marine ecosystem; EFH descriptions information; species list and locations; fishing activities that may adversely affect EFH; and non-fishing activities that may adversely affect EFH); 5) human dimensions (describing the participants;

community indicators; cultural importance; economics); 6) protected species (incidental take data in FEP Authorities and Primary Management and Process Drivers.

Data Integration and Fishery Characterizations: 1) fishery and ecosystem indicator integration; 2) fishery and socio-economic indicator integration; 3) fishery and climate indicator integration

Other Fishery Information: 1) import and export of fish and fishery products; 2) aquaculture activities and production

The annual fishery ecosystem reports are used to monitor the fisheries and the status of fishery ecosystems. Because they contain the most recent information about the fisheries, they serve as the basis for developing management measures and evaluating management alternatives as well as tracking the performance of this FEP. A comprehensive report will be generated that contains analysis of available data and will be updated on a 3-year cycle. Summaries of datasets that are generated on an annual basis will be produced annually.

4.1.1.7 International Considerations

The Council hosted the Mariana Archipelago Green Turtle Workshop in Saipan in January 2011 to address the status and recovery of green turtles in the Mariana Archipelago. One of the main objectives of the workshop was to strengthen international collaborations with areas with known common green turtle stocks, which include Japan, Philippines and the broader Micronesian region. International collaborations with these areas with shared green turtle stocks are critical in ensuring the sustainability of populations throughout the range. The Council plans to continue efforts to strengthen these collaborations.

The Compact of Free Association between the Federated States of Micronesia and the United States was initialed by negotiators in 1980 and signed in 1982. Negotiations for a Compact with the United States began in 1969 with the Trust Territory of the Pacific Islands (TTPI) that were comprised of the districts of Kusaie (Kosrae), Ponape (Pohnpei), Truk (Chuuk), and Yap, as well as the districts of the Marshall Islands, the Northern Mariana Islands, and Palau. The latter three entities eventually formulated their own governments as the (Federated States of Micronesia), Republic of the Marshall Islands, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau, respectively.

Legislation on the Compact was adopted by the U.S. Congress in 1986 (see above for citations) and signed into law on November 13, 1986. The Compact provided free immigration opportunities to the United States and its possessions for the citizens of the participating countries of the Freely Associated States (FAS) and made them eligible for various public programs available to citizens of the United States. While Congress provided funding reimbursement to the state and local governments for public services, the funding has fallen short of reimbursing the full costs of immigration and integration into the local community. Not included in the reimbursement formula was the impact to fishery resources of the island of Guam as well as the costs (inclusive of education & outreach) of fishery management and enforcement of local and federal laws.

Immigration from the FAS led to increased fishing pressure and landings in the Mariana Islands, in particular Guam. In 1998, it was estimated that 8,000 migrants had relocated to Guam. By

2012, the population increased to over 30,000.

International coordination is an important component of marine resource management within the island areas of the Western Pacific Region. For example, fish stocks and other marine resources that found within {territory} may be part of larger populations that occur on larger geographic scales. Also, the US EEZ around the islands areas within the Western Pacific Region are adjacent to other EEZs of foreign countries. Marine debris from foreign sources also wash ashore on {Territory). To support international coordination, {Territory} is a member of the Secretariat of the Pacific Community and South Pacific Regional Environmental Programme. {Territory} is also recognized as Participating Territory within the Western and Central Pacific Fisheries Commission. {Territory} also has formal observer status within the Pacific Islands Forum Fisheries Agency

4.1.1.8 Other Applicable Laws and their Role

Section 303(a)(1)(C) of the MSA requires federal fishery management plans to be consistent with other applicable laws. These other laws impose additional procedural, substantive, and timing requirements on the decision process and their applicability must be assessed on a case-by-case basis. This FEP is consistent with the Magnuson-Stevens Act (16 USC 1851), including the ten National Standards, and other applicable law. These typically include the following:

- Administrative Procedure Act
- Coastal Zone Management Act
- Endangered Species Act
- National Monument
- Information Quality Act
- Marine Mammal Protection Act
- National Environmental Policy Act
- National Marine Sanctuaries Act
- Paperwork Reduction Act
- Regulatory Flexibility Act
- Executive Orders 12291 (cost-benefit and avoiding duplication), 12630 (governmental actions and interference with constitutionally protected property rights), 12866 (regulatory planning and review), 12898 (environmental justice), 13089 (coral reef protection), 13132 (federalism implication of federal actions), 13158 (marine protected areas), 13175 (consultation and coordination with Indian tribal governments), 13196 (Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve), 13272 (stewardship of the ocean, our coasts, and the Great Lakes), 13547 (National Ocean Policy) and 12962 (recreational fisheries).

Specific information regarding the implications of each of these can be in the Operational Guidelines for the Fishery Management Process developed by NMFS in consultation with the Council Coordinating Committee at www.nmfs.noaa.gov/sfa/management/councils/ccc/ccc.htm. The statutes themselves, along with their guidance language, regulations, and associated case law are controlling in the instance of any discrepancy between them and this document.

This page was intentionally left blank.

5 REFERENCES

Clarke, T. A. 1972. Exploration for deep benthic fish and crustacean resources in Hawaii. University of Hawaii, Hawaii Institute of Marine Biology. Tech. Rep. 29:1-18.

Ecosystem Principles Advisory Panel. 1999. *Ecosystem-based fishery management: A report to Congress.* Silver Springs, MD: NOAA National Marine Fisheries Service.

Moffitt, R. B., and J. J. Polovina. 1987. Distribution and yield of the deepwater shrimp *Heterocarpus* resources in the Marianas. Fish. Bull. U.S. 85: 339-349.

NOAA (National Oceanic and Atmospheric Administration). 2004. New priorities for the 21st century. *NOAA's Strategic Plan Updated for FY 2005–FY 2010.*

Pikitch, E.K., C. Santora, E. Babcock, A. Bakun, R. Bonfil, D.O. Conover, P. Dayton, P. Doukakis, D. Fluharty, B. Heneman, E.D. Houde, J. Link, P.A. Livingston, M. Mangel, M. K. McAllister, J. Pope, and K. J. Sainsbury. 2004. Ecosystem-based fishery management. *Science*. 305:1–2.

Restrepo, V. R., G. G. Thompson, P. M. Mace, W. L. Gabriel, L. L. Low, A. D. MacCall, R. D. Methot, J.E. Powers, B. L. Taylor, P. R. Wade, and J. F. Witzig 1998. Technical guidance on the use of Precautionary Approaches to implementing National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act. U.S. Department of Commerce, National Oceanic and Atmospheric Administration Technical Memorandum NMFS-F/SPO-31, 54 p.

Wilder, M. J. 1977. Biological aspects and fisheries potential of two deepwater shrimps, *Heterocarpus ensifer* and *H. laevigatus*, in waters surrounding Guam. Masters of Science Thesis, University of Guam. 79 p.

Appendix A: List of Acronyms

APA: Administrative Procedure Act

B: Stock biomass

B_{FLAG}: Minimum Biomass Flag

B_{MSY}: Biomass Maximum Sustainable Yield

B_{OY}: Biomass Optimum Yield

BMUS: Bottomfish Management Unit Species

CFR: Code of Federal Regulations

CITES: Council on International Trade and Endangered Species

CNMI: Commonwealth of the Northern Mariana Islands

CPUE: Catch per unit effort at the reference point

$CPUE_{MSY}$: Catch per unit effort Maximum Sustainable Yield

$CPUE_{REF}$: Catch per unit effort at the Reference Point

CRAMP: Coral Reef Assessment and Monitoring Program

CRE: Coral Reef Ecosystem

CRE-FMP: Coral Reef Ecosystem Fishery Management Plan

CRTF: Coral Reef Task Force

DAR: Division of Aquatic Resources, State of Hawaii

DOC: United States Department of Commerce

DOD: United States Department of Defense

DOI: United States Department of the Interior

EEZ: Exclusive Economic Zone

EFH: Essential Fish Habitat

EIS: Environmental Impact Statement

E_{MSY}: Effort Maximum Sustainable Yield

ENSO: El Niño Southern Oscillation

EO: Executive Order

EPAP: Ecosystem Principals Advisory Panel

ESA: Endangered Species Act

F: Fishing mortality

F_{MSY}: Fishing mortality Maximum Sustainable Yield

F_{OY}: Fishing mortality Optimum Yield

FEP: Fishery Ecosystem Plan

FLPMA: Federal Land Policy and Management Act

fm: fathoms

FMP: Fishery Management Plan

FR: Federal Register

FRFA: Final Regulatory Flexibility Analysis

ft: feet

FWCA: Fish and Wildlife Coordination Act

GIS: Geographic information systems

GPS: Global Positioning System

HAPC: Habitat Areas of Particular Concern

IQA: Information Quality Act

IRFA Initial Regulatory Flexibility Analysis

kg: kilograms

km: kilometers

lb: pounds

LOF List of Fisheries

m:	meters
mt:	metric tons
MFMT:	maximum fishing mortality threshold
MHI:	Main Hawaiian Islands
min SST:	minimum spawning stock threshold
mm:	millimeters
MMPA:	Marine Mammal Protection Act
MPA:	Marine Protected Area
MSA:	Magnuson-Stevens Fishery Conservation and Management Act
MSST:	Minimum Stock Size Threshold
MSY:	Maximum Sustainable Yield
MUS:	Management Unit Species
NDSA:	Naval Defense Sea Areas
NEPA:	National Environmental Policy Act
nm or nmi:	nautical miles
NMFS:	National Marine Fisheries Service (also known as NOAA Fisheries Service)
NOAA:	National Oceanic and Atmospheric Administration
NWHI:	Northwestern Hawaiian Islands
NWR:	National Wildlife Refuge
NWRSAA:	National Wildlife Refuge System Administration Act
OMB:	Office of Management and Budget
OY:	Optimum Yield
PBR:	Potential Biological Removal
PIFSC:	Pacific Islands Fisheries Science Center, NMFS
PIRO:	Pacific Islands Regional Office, NMFS

PRA: Paperwork Reduction Act

PRIA: Pacific Remote Island Areas

RFA: Regulatory Flexibility Act

RIR: Regulatory Impact Review

SFA: Sustainable Fisheries Act

SLA: Submerged Lands Act

SPR: Spawning Potential Ratio

SSC: Scientific and Statistical Committee

TALFF: Total Allowable Level of Foreign Fishing

TSLA: Territorial Submerged Lands Act

USCG: United States Coast Guard

USFWS: United States Fish and Wildlife Service

VMS: Vessel Monitoring System

WPacFIN: Western Pacific Fisheries Information Network, NMFS

WPRFMC: Western Pacific Regional Fishery Management Council

Appendix B: List of Definitions

Adaptive Management: A program that adjusts regulations based on changing conditions of the fisheries and stocks.

Bycatch: Any fish harvested in a fishery which are not sold or kept for personal use, and includes economic discards and regulatory discards.

Barrier Net: A small-mesh net used to capture coral reef or coastal pelagic fishes.

Bioprospecting: The search for commercially valuable biochemical and genetic resources in plants, animals and microorganisms for use in food production, the development of new drugs and other biotechnology applications.

Charter Fishing: Fishing from a vessel carrying a passenger for hire (as defined in section 2101(21a) of Title 46, United States Code) who is engaged in recreational fishing.

Commercial Fishing: Fishing in which the fish harvested, either in whole or in part, are intended to enter commerce or enter commerce through sale, barter or trade. For the purposes of this Fishery Ecosystem Plan, commercial fishing includes the commercial extraction of biocompounds.

Consensual Management: Decision making process where stakeholders meet and reach consensus on management measures and recommendations.

Coral Reef Ecosystem (CRE): Those species, interactions, processes, habitats and resources of the water column and substrate located within any waters less than or equal to 50 fathoms in total depth.

Council: The Western Pacific Regional Fishery Management Council (WPRFMC).

Critical Habitat: Those geographical areas that are essential for bringing an endangered or threatened species to the point where it no longer needs the legal protections of the Endangered Species Act (ESA), and which may require special management considerations or protection. These areas are designated pursuant to the ESA as having physical or biological features essential to the conservation of listed species.

Dealer: Any person who (1) Obtains, with the intention to resell management unit species, or portions thereof, that were harvested or received by a vessel that holds a permit or is otherwise regulated under this FEP; or (2) Provides recordkeeping, purchase, or sales assistance in obtaining or selling such management unit species (such as the services provided by a wholesale auction facility).

Dip Net: A hand-held net consisting of a mesh bag suspended from a circular, oval, square or rectangular frame attached to a handle. A portion of the bag may be constructed of material, such as clear plastic, other than mesh.

Ecology: The study of interactions between an organism (or organisms) and its (their) environment (biotic and abiotic).

Ecological Integrity: Maintenance of the standing stock of resources at a level that allows ecosystem processes to continue. Ecosystem processes include replenishment of resources, maintenance of interactions essential for self-perpetuation and, in the case of coral reefs, rates of accretion that are equal to or exceed rates of erosion. Ecological integrity cannot be directly measured but can be inferred from observed ecological changes.

Economic Discards: Fishery resources that are the target of a fishery but which are not retained because they are of an undesirable size, sex or quality or for other economic reasons.

Ecosystem: A geographically specified system of organisms (including humans), the environment, and the processes that control its dynamics.

Ecosystem-Based Fishery Management: Fishery management actions aimed at conserving the structure and function of marine ecosystems in addition to conserving fishery resources.

Ecotourism: Observing and experiencing, first hand, natural environments and ecosystems in a manner intended to be sensitive to their conservation.

Environmental Impact Statement (EIS): A document required under the National Environmental Policy Act (NEPA) to assess alternatives and analyze the impact on the environment of proposed major Federal actions significantly affecting the human environment.

Essential Fish Habitat (EFH): Those waters and substrate necessary to a species or species group or complex, for spawning, breeding, feeding or growth to maturity.

Exclusive Economic Zone (EEZ): The zone established by Proclamation numbered 5030, dated March 10, 1983. For purposes of the Magnuson Act, the inner boundary of that zone is a line coterminous with the seaward boundary of each of the coastal states, commonwealths, territories or possessions of the United States.

Exporter: One who sends species in the fishery management unit to other countries for sale, barter or any other form of exchange (also applies to shipment to other states, territories or islands).

Fish: Finfish, mollusks, crustaceans and all other forms of marine animal and plant life other than marine mammals and birds

Fishery: One or more stocks of fish that can be treated as a unit for purposes of conservation and management and that are identified on the basis of geographical, scientific, technical, recreational and economic characteristics; and any fishing for such stocks.

Fishery Ecosystem Plan: A fishery ecosystem management plan that contains conservation and management measures necessary and appropriate for fisheries within a given ecosystem to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery.

Fishing: The catching, taking or harvesting of fish; the attempted catching, taking or harvesting of fish; any other activity that can reasonably be expected to result in the catching, taking or harvesting of fish; or any operations at sea in support of, or in preparation for, any activity described in this definition. Such term does not include any scientific research activity that is conducted by a scientific research vessel.

Fishing Community: A community that is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs and includes fishing vessel owners, operators and crews and United States fish processors that are based in such community.

Food Web: Inter-relationships among species that depend on each other for food (predator-prey pathways).

Framework Measure: Management measure listed in an FEP for future consideration. Implementation can occur through an administratively simpler process than a full FEP amendment.

Ghost Fishing: The chronic and/or inadvertent capture and/or loss of fish or other marine organisms by lost or discarded fishing gear.

Habitat: Living place of an organism or community, characterized by its physical and biotic properties.

Habitat Area of Particular Concern (HAPC): Those areas of EFH identified pursuant to Section 600.815(a)(8). In determining whether a type or area of EFH should be designated as a HAPC, one or more of the following criteria should be met: (1) ecological function provided by the habitat is important; (2) habitat is sensitive to human-induced environmental degradation; (3) development activities are, or will be, stressing the habitat type; or (4) the habitat type is rare.

Harvest: The catching or taking of a marine organism or fishery MUS by any means.

Hook-and-line: Fishing gear that consists of one or more hooks attached to one or more lines.

Live Rock: Any natural, hard substrate (including dead coral or rock) to which is attached, or which supports, any living marine life-form associated with coral reefs.

Longline: A type of fishing gear consisting of a main line which is deployed horizontally from which branched or dropper lines with hooks are attached.

Low-Use MPA: A Marine Protected Area zoned to allow limited fishing activities.

Main Hawaiian Islands (MHI): The islands of the Hawaiian Islands archipelago consisting of Niihau, Kauai, Oahu, Molokai, Lanai, Maui, Kahoolawe, Hawaii and all of the smaller associated islets lying east of 161° W longitude.

Marine Protected Area (MPA): An area designated to allow or prohibit certain fishing activities.

Marine National Monument (MNM):

Maximum Sustainable Yield (MSY): The largest long-term average catch or yield that can be taken, from a stock or stock complex under prevailing ecological and environmental conditions and fishery technological characteristics (e.g., gear selectivity), and the distribution of catch among fleets.

National Marine Fisheries Service (NMFS): The component of the National Oceanic and Atmospheric Administration (NOAA), Department of Commerce, responsible for the conservation and management of living marine resources. Also known as NOAA Fisheries Service.

No-Take MPA: A Marine Protected Area where no fishing or removal of living marine resources is authorized.

Northwestern Hawaiian Islands (NWHI): the islands of the Hawaiian Islands archipelago lying to the west of 161°W longitude.

Optimum Yield (OY): With respect to the yield from a fishery "optimum" means the amount of fish that: (a) will provide the greatest overall benefit to the nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems; (b) is prescribed as such on the basis of the MSY from the fishery, as reduced by any relevant economic, social or ecological factor; and (c) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the MSY in such fishery.

Overfished: A stock or stock complex is considered "overfished" when its biomass has declined below a level that jeopardizes the capacity of the stock or stock complex to produce maximum sustainable yield on a continuing basis.

Overfishing: (to overfish) occurs whenever a stock or stock complex is subjected to a level of fishing mortality or total annual catch that jeopardizes the capacity of a stock or stock complex to produce maximum sustainable yield on a continuing basis.

Pacific Remote Island Areas (PRIA): Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Atoll, Wake Island and Palmyra Atoll.

Passive Fishing Gear: Gear left unattended for a period of time prior to retrieval (e.g., traps, gill nets).

Precautionary Approach: The implementation of conservation measures even in the absence of scientific certainty that fish stocks are being overexploited.

Recreational Fishing: Fishing for sport or pleasure.

Recruitment: A measure of the weight or number of fish which enter a defined portion of the stock such as fishable stock (those fish above the minimum legal size) or spawning stock (those fish which are sexually mature).

Reef: A ridgelike or moundlike structure built by sedentary calcareous organisms and consisting mostly of their remains. It is wave-resistant and stands above the surrounding sediment. It is characteristically colonized by communities of encrusting and colonial invertebrates and calcareous algae.

Reef-obligate Species: An organism dependent on coral reefs for survival.

Regulatory Discards: Any species caught that fishermen are required by regulation to discard whenever caught, or are required to retain but not sell.

Resilience: The ability of a population or ecosystem to withstand change and to recover from stress (natural or anthropogenic).

Restoration: The transplanting of live organisms from their natural habitat in one area to another area where losses of, or damage to, those organisms has occurred with the purpose of restoring the damaged or otherwise compromised area to its original, or a substantially improved, condition; additionally, the altering of the physical characteristics (e.g., substrate, water quality) of an area that has been changed through human activities to return it as close as possible to its natural state in order to restore habitat for organisms.

Rock: Any consolidated or coherent and relatively hard, naturally formed, mass of mineral matter.

Rod-and-Reel: A hand-held fishing rod with a manually or electrically operated reel attached.

Scuba-assisted Fishing: Fishing, typically by spear or by hand collection, using assisted breathing apparatus.

Secretary: The Secretary of Commerce or a designee.

Sessile: Attached to a substrate; non-motile for all or part of the life cycle.

Slurp Gun: A self-contained, typically hand-held, tube–shaped suction device that captures organisms by rapidly drawing seawater containing the organisms into a closed chamber.

Social Acceptability: The acceptance of the suitability of management measures by stakeholders, taking cultural, traditional, political and individual benefits into account.

Spear: A sharp, pointed, or barbed instrument on a shaft, operated manually or shot from a gun or sling.

Adaptive Management: A program that adjusts regulations based on changing conditions of the fisheries and stocks.

Bycatch: Any fish harvested in a fishery which are not sold or kept for personal use, and includes economic discards and regulatory discards.

Barrier Net: A small-mesh net used to capture coral reef or coastal pelagic fishes.

Bioprospecting: The search for commercially valuable biochemical and genetic resources in plants, animals and microorganisms for use in food production, the development of new drugs and other biotechnology applications.

Charter Fishing: Fishing from a vessel carrying a passenger for hire (as defined in section 2101(21a) of Title 46, United States Code) who is engaged in recreational fishing.

Commercial Fishing: Fishing in which the fish harvested, either in whole or in part, are intended to enter commerce or enter commerce through sale, barter or trade. For the purposes of this Fishery Ecosystem Plan, commercial fishing includes the commercial extraction of biocompounds.

Consensual Management: Decision making process where stakeholders meet and reach consensus on management measures and recommendations.

Coral Reef Ecosystem (CRE): Those species, interactions, processes, habitats and resources of the water column and substrate located within any waters less than or equal to 50 fathoms in total depth.

Council: The Western Pacific Regional Fishery Management Council (WPRFMC).

Critical Habitat: Those geographical areas that are essential for bringing an endangered or threatened species to the point where it no longer needs the legal protections of the Endangered Species Act (ESA), and which may require special management considerations or protection. These areas are designated pursuant to the ESA as having physical or biological features essential to the conservation of listed species.

Dealer: Any person who (1) Obtains, with the intention to resell management unit species, or portions thereof, that were harvested or received by a vessel that holds a permit or is otherwise regulated under this FEP; or (2) Provides recordkeeping, purchase, or sales assistance in obtaining or selling such management unit species (such as the services provided by a wholesale auction facility).

Dip Net: A hand-held net consisting of a mesh bag suspended from a circular, oval, square or rectangular frame attached to a handle. A portion of the bag may be constructed of material, such as clear plastic, other than mesh.

Ecology: The study of interactions between an organism (or organisms) and its (their) environment (biotic and abiotic).

Ecological Integrity: Maintenance of the standing stock of resources at a level that allows ecosystem processes to continue. Ecosystem processes include replenishment of resources, maintenance of interactions essential for self-perpetuation and, in the case of coral reefs, rates of accretion that are equal to or exceed rates of erosion. Ecological integrity cannot be directly measured but can be inferred from observed ecological changes.

Economic Discards: Fishery resources that are the target of a fishery but which are not retained because they are of an undesirable size, sex or quality or for other economic reasons.

Ecosystem: A geographically specified system of organisms (including humans), the environment, and the processes that control its dynamics.

Ecosystem-Based Fishery Management: Fishery management actions aimed at conserving the structure and function of marine ecosystems in addition to conserving fishery resources.

Ecotourism: Observing and experiencing, first hand, natural environments and ecosystems in a manner intended to be sensitive to their conservation.

Environmental Impact Statement (EIS): A document required under the National Environmental Policy Act (NEPA) to assess alternatives and analyze the impact on the environment of proposed major Federal actions significantly affecting the human environment.

Essential Fish Habitat (EFH): Those waters and substrate necessary to a species or species group or complex, for spawning, breeding, feeding or growth to maturity.

Exclusive Economic Zone (EEZ): The zone established by Proclamation numbered 5030, dated March 10, 1983. For purposes of the Magnuson Act, the inner boundary of that zone is a line coterminous with the seaward boundary of each of the coastal states, commonwealths, territories or possessions of the United States.

Exporter: One who sends species in the fishery management unit to other countries for sale, barter or any other form of exchange (also applies to shipment to other states, territories or islands).

Fish: Finfish, mollusks, crustaceans and all other forms of marine animal and plant life other than marine mammals and birds

Fishery: One or more stocks of fish that can be treated as a unit for purposes of conservation and management and that are identified on the basis of geographical, scientific, technical, recreational and economic characteristics; and any fishing for such stocks.

Fishery Ecosystem Plan: A fishery ecosystem management plan that contains conservation and management measures necessary and appropriate for fisheries within a given ecosystem to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery.

Fishing: The catching, taking or harvesting of fish; the attempted catching, taking or harvesting of fish; any other activity that can reasonably be expected to result in the catching, taking or harvesting of fish; or any operations at sea in support of, or in preparation for, any activity described in this definition. Such term does not include any scientific research activity that is conducted by a scientific research vessel.

Fishing Community: A community that is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs and includes fishing vessel owners, operators and crews and United States fish processors that are based in such community.

Food Web: Inter-relationships among species that depend on each other for food (predator-prey pathways).

Framework Measure: Management measure listed in an FEP for future consideration. Implementation can occur through an administratively simpler process than a full FEP amendment.

Ghost Fishing: The chronic and/or inadvertent capture and/or loss of fish or other marine organisms by lost or discarded fishing gear.

Habitat: Living place of an organism or community, characterized by its physical and biotic properties.

Habitat Area of Particular Concern (HAPC): Those areas of EFH identified pursuant to Section 600.815(a)(8). In determining whether a type or area of EFH should be designated as a HAPC, one or more of the following criteria should be met: (1) ecological function provided by the habitat is important; (2) habitat is sensitive to human-induced environmental degradation; (3) development activities are, or will be, stressing the habitat type; or (4) the habitat type is rare.

Harvest: The catching or taking of a marine organism or fishery MUS by any means.

Hook-and-line: Fishing gear that consists of one or more hooks attached to one or more lines.

Live Rock: Any natural, hard substrate (including dead coral or rock) to which is attached, or which supports, any living marine life-form associated with coral reefs.

Longline: A type of fishing gear consisting of a main line which is deployed horizontally from which branched or dropper lines with hooks are attached.

Low-Use MPA: A Marine Protected Area zoned to allow limited fishing activities.

Main Hawaiian Islands (MHI): The islands of the Hawaiian Islands archipelago consisting of Niihau, Kauai, Oahu, Molokai, Lanai, Maui, Kahoolawe, Hawaii and all of the smaller associated islets lying east of 161° W longitude.

Marine Protected Area (MPA): An area designated to allow or prohibit certain fishing activities.

Marine National Monument (MNM): A marine area designated via Presidential Proclamation under the authority of the Antiquities Act of 1906.

Maximum Sustainable Yield (MSY): The largest long-term average catch or yield that can be taken, from a stock or stock complex under prevailing ecological and environmental conditions and fishery technological characteristics (e.g., gear selectivity), and the distribution of catch among fleets.

National Marine Fisheries Service (NMFS): The component of the National Oceanic and Atmospheric Administration (NOAA), Department of Commerce, responsible for the conservation and management of living marine resources. Also known as NOAA Fisheries Service.

No-Take MPA: A Marine Protected Area where no fishing or removal of living marine resources is authorized.

Northwestern Hawaiian Islands (NWHI): the islands of the Hawaiian Islands archipelago lying to the west of 161°W longitude.

Optimum Yield (OY): With respect to the yield from a fishery "optimum" means the amount of fish that: (a) will provide the greatest overall benefit to the nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems; (b) is prescribed as such on the basis of the MSY from the fishery, as reduced by any relevant economic, social or ecological factor; and (c) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the MSY in such fishery.

Overfished: A stock or stock complex is considered "overfished" when its biomass has declined below a level that jeopardizes the capacity of the stock or stock complex to produce maximum sustainable yield on a continuing basis.

Overfishing: (to overfish) occurs whenever a stock or stock complex is subjected to a level of fishing mortality or total annual catch that jeopardizes the capacity of a stock or stock complex to produce maximum sustainable yield on a continuing basis.

Pacific Remote Island Areas (PRIA): Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Atoll, Wake Island and Palmyra Atoll.

Passive Fishing Gear: Gear left unattended for a period of time prior to retrieval (e.g., traps, gill nets).

Precautionary Approach: The implementation of conservation measures even in the absence of scientific certainty that fish stocks are being overexploited.

Recreational Fishing: Fishing for sport or pleasure.

Recruitment: A measure of the weight or number of fish which enter a defined portion of the stock such as fishable stock (those fish above the minimum legal size) or spawning stock (those fish which are sexually mature).

Reef: A ridgelike or moundlike structure built by sedentary calcareous organisms and consisting mostly of their remains. It is wave-resistant and stands above the surrounding sediment. It is characteristically colonized by communities of encrusting and colonial invertebrates and calcareous algae.

Reef-obligate Species: An organism dependent on coral reefs for survival.

Regulatory Discards: Any species caught that fishermen are required by regulation to discard whenever caught, or are required to retain but not sell.

Resilience: The ability of a population or ecosystem to withstand change and to recover from stress (natural or anthropogenic).

Restoration: The transplanting of live organisms from their natural habitat in one area to another area where losses of, or damage to, those organisms has occurred with the purpose of restoring the damaged or otherwise compromised area to its original, or a substantially improved, condition; additionally, the altering of the physical characteristics (e.g., substrate, water quality) of an area that has been changed through human activities to return it as close as possible to its natural state in order to restore habitat for organisms.

Rock: Any consolidated or coherent and relatively hard, naturally formed, mass of mineral matter.

Rod-and-Reel: A hand-held fishing rod with a manually or electrically operated reel attached.

Scuba-assisted Fishing: Fishing, typically by spear or by hand collection, using assisted breathing apparatus.

Secretary: The Secretary of Commerce or a designee.

Sessile: Attached to a substrate; non-motile for all or part of the life cycle.

Slurp Gun: A self-contained, typically hand-held, tube–shaped suction device that captures organisms by rapidly drawing seawater containing the organisms into a closed chamber.

Social Acceptability: The acceptance of the suitability of management measures by stakeholders, taking cultural, traditional, political and individual benefits into account.

Spear: A sharp, pointed, or barbed instrument on a shaft, operated manually or shot from a gun or sling.

Stock Assessment: An evaluation of a stock in terms of abundance and fishing mortality levels and trends, and relative to fishery management objectives and constraints if they have been specified.

Stock of Fish: A species, subspecies, geographical grouping or other category of fish capable of management as a unit.

Submersible: A manned or unmanned device that functions or operates primarily underwater and is used to harvest fish.

Subsistence Fishing: Fishing to obtain food for personal and/or community use rather than for profit sales or recreation.

Target Resources: Species or taxa sought after in a directed fishery.

Trophic Web: A network that represents the predator/prey interactions of an ecosystem.

Trap: A portable, enclosed, box-like device with one or more entrances used for catching and holding fish or marine organism.

Western Pacific Regional Fishery Management Council (WPRFMC or Coucil): A Regional Fishery Management Council established under the MSA, consisting of the State of Hawaii, the Territory of American Samoa, the Territory of Guam, and the Commonwealth of the Northern Mariana Islands which has authority over the fisheries in the Pacific Ocean seaward of such States, Territories, Commonwealths, and Possessions of the United States in the Pacific Ocean Area. The Council has 13 voting members including eight appointed by the Secretary of Commerce at least one of whom is appointed from each of the following States: Hawaii, the Territories of American Samoa and Guam, and the Commonwealth of the Northern Mariana Islands.

Stock Assessment: An evaluation of a stock in terms of abundance and fishing mortality levels and trends, and relative to fishery management objectives and constraints if they have been specified.

Stock of Fish: A species, subspecies, geographical grouping or other category of fish capable of management as a unit.

Submersible: A manned or unmanned device that functions or operates primarily underwater and is used to harvest fish.

Subsistence Fishing: Fishing to obtain food for personal and/or community use rather than for profit sales or recreation.

Target Resources: Species or taxa sought after in a directed fishery.

Trophic Web: A network that represents the predator/prey interactions of an ecosystem.

Trap: A portable, enclosed, box-like device with one or more entrances used for catching and holding fish or marine organism.

Western Pacific Regional Fishery Management Council (WPRFMC or Coucil): A Regional Fishery Management Council established under the MSA, consisting of the State of Hawaii, the Territory of American Samoa, the Territory of Guam, and the Commonwealth of the Northern Mariana Islands which has authority over the fisheries in the Pacific Ocean seaward of such States, Territories, Commonwealths, and Possessions of the United States in the Pacific Ocean Area. The Council has 13 voting members including eight appointed by the Secretary of Commerce at least one of whom is appointed from each of the following States: Hawaii, the Territories of American Samoa and Guam, and the Commonwealth of the Northern Mariana Islands.

Appendix C: Regulations Implementing the Marianas Archipelago Fishery Ecosystem Plan and Marianas Trench Marine National Monument

PART 665—FISHERIES IN THE WESTERN PACIFIC

Contents

Subpart A—General

§665.1 Purpose and scope.
§665.2 Relation to other laws.
§665.3 Licensing and registration.
§665.4 Annual catch limits.
§§665.5-665.11 [Reserved]
§665.12 Definitions.
§665.13 Permits and fees.
§665.14 Reporting and recordkeeping.
§665.15 Prohibitions.
§665.16 Vessel identification.
§665.17 Experimental fishing.
§665.18 Framework adjustments to management measures.
§665.19 Vessel monitoring system.
§665.20 Western Pacific Community Development Program.

Subpart D—Mariana Archipelago Fisheries

§665.398 Management area.
§665.399 Area restrictions.
§665.400 Mariana bottomfish fisheries. [Reserved]
§665.401 Definitions.
§665.402 Management subareas.
§665.403 Bottomfish fishery area management.
§665.404 Permits.
§665.405 Prohibitions.
§665.406 Gear restrictions.
§665.407 At-sea observer coverage.
§§665.408-665.419 [Reserved]
§665.420 Mariana coral reef ecosystem fisheries. [Reserved]
§665.421 Definitions.
§665.422 Management area.
§665.423 Relation to other laws.
§665.424 Permits and fees.
§665.425 Prohibitions.
§665.426 Notifications.
§665.427 Allowable gear and gear restrictions.
§665.428 Gear identification.
§§665.429-665.439 [Reserved]
§665.440 Mariana crustacean fisheries. [Reserved]
§665.441 Definitions.
§665.442 Permits.
§665.443 Prohibitions.
§665.444 Notifications.
§665.445 At-sea observer coverage.
§§665.446-665.459 [Reserved]
§665.460 Mariana precious coral fisheries. [Reserved]
§665.461 Definitions.
§665.462 Permits.
§665.463 Prohibitions.
§665.464 Gear restrictions.
§665.465 Size restrictions.
§665.466 Closures.

§665.467 Quotas.
§665.468 Seasons.
§665.469 Gold coral harvest moratorium.

Subpart G—Marianas Trench Marine National Monument

§665.900 Scope and purpose.
§665.901 Boundaries.
§665.902 Definitions.
§665.903 Prohibitions.
§665.904 Regulated activities.
§665.905 Fishing permit procedures and criteria.
§665.906 International law.
Figure 1 to Part 665—Carapace Length of Lobsters
Figure 2 to Part 665—Length of Fishing Vessels
Figure 3 to Part 665—Sample Fabricated Arceneaux Line Clipper

AUTHORITY: 16 U.S.C. 1801 *et seq.*

SOURCE: 75 FR 2205, Jan. 14, 2010, unless otherwise noted.

Back to Top

Subpart A—General

Back to Top

§665.1 Purpose and scope.

(a) The regulations in this part govern fishing for western Pacific fishery ecosystem MUS by vessels of the United States that operate or are based inside the outer boundary of the U.S. EEZ around American Samoa, Hawaii, Guam, the Northern Mariana Islands, Palmyra Atoll, Kingman Reef, Jarvis Island, Baker Island, Howland Island, Johnston Atoll, and Wake Island.

(b) General regulations governing fishing by all vessels of the United States and by fishing vessels other than vessels of the United States are contained in 50 CFR part 600.

(c) Regulations governing the harvest, possession, landing, purchase, and sale of shark fins are found in 50 CFR part 600 subpart N.

(d) This subpart contains regulations that are common to all western Pacific fisheries managed under Fishery Ecosystem Plans (FEPs) prepared by the Western Pacific Fishery Management Council under the Magnuson-Stevens Act.

(e) Regulations specific to individual areas and fisheries are included in subparts B through F of this part.

(f) Nothing in subparts B through F of this part is intended to supersede any valid state or Federal regulations that are more restrictive than those published here.

Back to Top

§665.2 Relation to other laws.

NMFS recognizes that any state law pertaining to vessels registered under the laws of that state while operating in the fisheries regulated under this part, that is consistent with this part and the FEPs implemented by this part, shall continue in effect with respect to fishing activities regulated under this part.

Back to Top

§665.3 Licensing and registration.

Any person who is required to do so by applicable state law or regulation must comply with licensing and registration requirements in the exact manner required by applicable state law or regulation.

Back to Top

§665.4 Annual catch limits.

(a) *General.* For each fishing year, the Regional Administrator shall specify an annual catch limit, including any overage adjustments, for each stock or stock complex of management unit species defined in subparts B through F of this part, as recommended by the Council, and considering the best available scientific, commercial, and other information about the fishery for that stock or stock complex. The annual catch limit shall serve as the basis for invoking accountability measures in paragraph (f) of this section.

(b) *Overage adjustments.* If landings of a stock or stock complex exceed the specified annual catch limit in a fishing year, the Council will take action in accordance with 50 CFR 600.310(g), which may include recommending that the Regional Administrator reduce the annual catch limit for the subsequent year by the amount of the overage or other measures, as appropriate.

(c) *Exceptions.* The Regional Administrator is not required to specify an annual catch limit for a management unit species that is statutorily excepted from the requirement pursuant to 50 CFR 600.310(h)(2), or that the Council has identified as an ecosystem component species. The Regional Administrator will publish in the FEDERAL REGISTER the list of ecosystem component species, and will publish any changes to the list, as necessary.

(d) *Annual catch target.* For each fishing year, the Regional Administrator may also specify an annual catch target that is below the annual catch limit of a stock or stock complex, as recommended by the Council. When used, the annual catch target shall serve as the basis for invoking accountability measures in paragraph (f) of this section.

(e) *Procedures and timing.* (1) No later than 60 days before the start of a fishing year, the Council shall recommend to the Regional Administrator an annual catch limit, including any overage adjustment, for each stock or stock complex. The recommended limit should be based on a recommendation of the SSC of the acceptable biological catch for each stock or stock complex. The Council may not recommend an annual catch limit that exceeds the acceptable biological catch recommended by the SSC. The Council may also recommend an annual catch target below the annual catch limit.

(2) No later than 30 days before the start of a fishing year, the Regional Administrator shall publish in the FEDERAL REGISTER a notice of the proposed annual catch limit specification and any associated annual catch target, and request public comment.

(3) No later than the start of a fishing year, the Regional Administrator shall publish in the FEDERAL REGISTER and use other methods to notify permit holders of the final annual catch limit specification and any associated annual catch target.

(f) *Accountability measures.* When any annual catch limit or annual catch target is projected to be reached, based on available information, the Regional Administrator shall publish notification to that effect in the FEDERAL REGISTER and shall use other means to notify permit holders.

(1) The notice will include an advisement that fishing for that stock or stock complex will be restricted beginning on a specified date, which shall not be earlier than 7 days after the date of filing the notice for public inspection at the Office of the Federal Register. The restriction may include, but is not limited to, closure of the fishery, closure of specific areas, changes to bag limits, or restrictions in effort. The restriction will remain in effect until the end of the fishing year, except that the Regional Administrator may, based on a recommendation from the Council, remove or modify the restriction before the end of the fishing year.

(2) It is unlawful for any person to conduct fishing in violation of the restrictions specified in the notification issued pursuant to paragraph (f)(1) of this section.

[76 FR 37286, June 27, 2011]

Back to Top

§§665.5-665.11 [Reserved]

Back to Top

§665.12 Definitions.

In addition to the definitions in the Magnuson-Stevens Act, §600.10 of this chapter, and subparts B through F of this part, general definitions for western Pacific fisheries have the following meanings:

American Samoa FEP means the Fishery Ecosystem Plan for American Samoa.

Bottomfish FMP means the Fishery Management Plan for Bottomfish and Seamount Groundfish of the Western Pacific Region established in 1986 and replaced by FEPs.

Carapace length means a measurement in a straight line from the ridge between the two largest spines above the eyes, back to the rear edge of the carapace of a spiny lobster (see Figure 1 to this part).

Circle hook means a fishing hook with the point turned perpendicularly back towards the shank.

Commercial fishing means fishing in which the fish harvested, either in whole or in part, are intended to enter commerce or enter commerce through sale, barter, or trade. All lobster fishing in Crustacean Permit Area 1 is considered commercial fishing.

Commonwealth of the Northern Mariana Islands (CNMI) means the Northern Mariana Islands.

Coral Reef Ecosystems FMP means the Fishery Management Plan for Coral Reef Ecosystems of the Western Pacific Region established in 2004 and replaced by FEPs.

Council means the Western Pacific Fishery Management Council.

Crustacean receiving vessel means a vessel of the United States to which lobsters taken in a crustacean management area are transferred from another vessel.

Crustaceans FMP means the Fishery Management Plan for Crustacean Fisheries of the Western Pacific Region established in 1982 and replaced by FEPs.

Currently harvested coral reef taxa (CHCRT) means coral reef associated species, families, or subfamilies, as defined in §§665.121, 665.221, 665.421, and 665.621, that have annual landings greater than 454.54 kg (1,000 lb) as reported on individual state, commonwealth, or territory catch reports or through creel surveys. Fisheries and research data from many of these species have been analyzed by regional management agencies.

Customary exchange means the non-market exchange of marine resources between fishermen and community residents, including family and friends of community residents, for goods, and/or services for cultural, social, or religious reasons. Customary exchange may include cost recovery through monetary reimbursements and other means for actual trip expenses, including but not limited to ice, bait, fuel, or food, that may be necessary to participate in fisheries in the western Pacific. Actual trip expenses do not include expenses that a fisherman would incur without making a fishing trip, including expenses relating to dock space, vessel mortgage payments, routine vessel maintenance, vessel registration fees, safety equipment required by U.S. Coast Guard, and other incidental costs and expenses normally associated with ownership of a vessel.

Dead coral means any precious coral that no longer has any live coral polyps or tissue.

Ecosystem component species means any western Pacific MUS that the Council has identified to be, generally, a non-target species, not determined to be subject to overfishing, approaching overfished, or overfished, not likely to become subject to overfishing or overfished, and generally not retained for sale or personal use.

EFP means an experimental fishing permit.

First level buyer means:

(1) The first person who purchases, with the intention to resell, management unit species, or portions thereof, that were harvested by a vessel that holds a permit or is otherwise regulated under crustacean fisheries in subparts B through E of this part; or

(2) A person who provides recordkeeping, purchase, or sales assistance in the first transaction involving MUS (such as the services provided by a wholesale auction facility).

Fishing gear, as used in regulations for the American Samoa, CNMI, Hawaii, and PRIA bottomfish fisheries in subparts B through E of this part, includes:

(1) Bottom trawl, which means a trawl in which the otter boards or the footrope of the net are in contact with the sea bed;

(2) Gillnet, (see §600.10);

(3) Hook-and-line, which means one or more hooks attached to one or more lines;

(4) Set net, which means a stationary, buoyed, and anchored gill net; and

(5) Trawl, (see §600.10).

Fishing trip means a period of time during which fishing is conducted, beginning when the vessel leaves port and ending when the vessel lands fish.

Fishing year means the year beginning at 0001 local time on January 1 and ending at 2400 local time on December 31, with the exception of fishing for Hawaii Restricted Bottomfish Species and any precious coral MUS.

Freeboard means the straight line vertical distance between a vessel's working deck and the sea surface. If the vessel does not have gunwale door or stern door that exposes the working deck, freeboard means the straight line vertical distance between the top of a vessel's railing and the sea surface.

Harvest guideline means a specified numerical harvest objective.

Hawaiian Archipelago means the Main and Northwestern Hawaiian Islands, including Midway Atoll.

Hawaii FEP means the Fishery Ecosystem Plan for the Hawaiian Archipelago.

Hookah breather means a tethered underwater breathing device that pumps air from the surface through one or more hoses to divers at depth.

Incidental catch or incidental species means species caught while fishing for the primary purpose of catching a different species.

Land or landing means offloading fish from a fishing vessel, arriving in port to begin offloading fish, or causing fish to be offloaded from a fishing vessel.

Large vessel means, as used in this part, any vessel equal to or greater than 50 ft (15.2 m) in length overall.

Length overall (LOA) or length of a vessel as used in this part, means the horizontal distance, rounded to the nearest foot (with any 0.5 foot or 0.15 meter fraction rounded upward), between the foremost part of the stem and the aftermost part of the stern, excluding bowsprits, rudders, outboard motor brackets, and similar fittings or attachments (see Figure 2 to this part). “Stem” is the foremost part of the vessel, consisting of a section of timber or fiberglass, or cast forged or rolled metal, to which the sides of the vessel are united at the fore end, with the lower end united to the keel, and with the bowsprit, if one is present, resting on the upper end. “Stern” is the aftermost part of the vessel.

Live coral means any precious coral that has live coral polyps or tissue.

Live rock means any natural, hard substrate, including dead coral or rock, to which is attached, or which supports, any living marine life form associated with coral reefs.

Low-use marine protected area (MPA) means an area of the U.S. EEZ where fishing operations have specific restrictions in order to protect the coral reef ecosystem, as specified under area restrictions in subparts B through F of this part.

Main Hawaiian Islands (MHI) means the islands of the Hawaii Archipelago lying to the east of 161° W. long.

Mariana Archipelago means Guam and the Northern Mariana Islands.

Mariana FEP means the Fishery Ecosystem Plan for the Mariana Archipelago.

Medium vessel, as used in this part, means any vessel equal to or more than 40 ft (12.2 m) and less than 50 ft (15.2 m) LOA.

Non-commercial fishing means fishing that does not meet the definition of commercial fishing in the Magnuson-Stevens Fishery Conservation and Management Act, and includes, but is not limited to, sustenance, subsistence, traditional indigenous, and recreational fishing.

Non-precious coral means any species of coral other than those listed under the definitions for precious coral in §§665.161, 665.261, 665.461, and 665.661.

Non-selective gear means any gear used for harvesting coral that cannot discriminate or differentiate between types, size, quality, or characteristics of living or dead coral.

Northwestern Hawaiian Islands (NWHI) means the islands of the Hawaiian Archipelago lying to the west of 161° W. long.

No-take MPA means an area of the U.S. EEZ that is closed to fishing for or harvesting of any MUS, as defined in subparts B through F of this part.

Offload means to remove MUS from a vessel.

Offset circle hook means a circle hook in which the barbed end of the hook is displaced relative to the parallel plane of the eyed end, or shank, of the hook when laid on its side.

Owner, as used in the regulations for the crustacean fisheries in subparts B through E of this part and §665.203(i) and (j), means a person who is identified as the current owner of the vessel as described in the Certificate of Documentation (Form CG-1270) issued by the United States Coast Guard (USCG) for a documented vessel, or in a registration certificate issued by a state, a territory, or the USCG for an undocumented vessel. As used in the regulations for the precious coral fisheries in subparts B through E of this part and §665.203(c) through (h), the definition of “owner” in §600.10 of this chapter continues to apply.

Pacific Islands Regional Office (PIRO) means the headquarters of the Pacific Islands Region, NMFS, located at 1845 Wasp Blvd., Bldg. 176, Honolulu, HI 96818; telephone number: 808-725-5000.

Pacific remote island areas (PRIA, or U.S. island possessions in the Pacific Ocean) means Palmyra Atoll, Kingman Reef, Jarvis Island, Baker Island, Howland Island, Johnston Atoll, Wake Island, and Midway Atoll.

Pelagics FEP means the Fishery Ecosystem Plan for Pacific Pelagic Fisheries of the Western Pacific Region.

Pelagics FMP means the Fishery Management Plan for Pelagic Fisheries of the Western Pacific Region that was established in 1987 and replaced by the western Pacific pelagic FEP.

Potentially harvested coral reef taxa (PHCRT) means coral reef associated species, families, or subfamilies, as defined in §§665.121, 665.221, 665.421, and 665.621, for which little or no information is available beyond general taxonomic and distribution descriptions. These species have either not been caught in the past or have been harvested annually in amounts less than 454.54 kg (1,000 lb).

Precious Corals FMP means the Fishery Management Plan for Precious Corals of the Western Pacific Region established in 1983 and replaced by fishery ecosystem plans (FEPs).

PRIA FEP means the Fishery Ecosystem Plan for the Pacific Remote Island Areas of Palmyra Atoll, Kingman Reef, Jarvis Island, Baker Island, Howland Island, Johnston Atoll, and Wake Island.

Protected species means an animal protected under the MMPA, as amended, listed under the ESA, as amended, or subject to the Migratory Bird Treaty Act, as amended.

Receiving vessel means a vessel that receives fish or fish products from a fishing vessel, and with regard to a vessel holding a permit under §665.801(e), that also lands western Pacific pelagic MUS taken by other vessels using longline gear.

Recreational fishing means fishing conducted for sport or pleasure, including charter fishing.

Regional Administrator means Regional Administrator, Pacific Islands Region, NMFS (see Table 1 of §600.502 of this chapter for address).

Selective gear means any gear used for harvesting coral that can discriminate or differentiate between type, size, quality, or characteristics of living or dead coral.

Special Agent-In-Charge (SAC) means the Special Agent-In-Charge, NMFS, Pacific Islands Enforcement Division, located at 1845 Wasp Blvd., Bldg. 176, Honolulu, HI 96818; telephone number: 808-725-6100, or a designee.

Special permit means a permit issued to allow fishing for coral reef ecosystem MUS in low-use MPAs or to fish for any PHCRT.

SSC means the Scientific and Statistical Committee of the Western Pacific Fishery Management Council.

State of Hawaii commercial marine license means the license required by the State of Hawaii for anyone to take marine life for commercial purposes (also known as the commercial fishing license).

Transship means to offload or otherwise transfer MUS or products thereof to a receiving vessel.

Trap means a box-like device used for catching and holding lobsters or fish.

U.S. harvested coral means coral caught, taken, or harvested by vessels of the United States within any fishery for which an FMP or FEP has been implemented under the Magnuson-Stevens Act.

Vessel monitoring system unit (VMS unit) means the hardware and software owned by NMFS, installed on vessels by NMFS, and required to track and transmit the positions of certain vessels.

Western Pacific fishery management area means those waters shoreward of the outer boundary of the EEZ around American Samoa, Guam, Hawaii, CNMI, Midway, Johnston and Palmyra Atolls, Kingman Reef, and Wake, Jarvis, Baker, and Howland Islands.

[75 FR 2205, Jan. 14, 2010, as amended at 76 FR 37286, June 27, 2011; 78 FR 33003, June 3, 2013; 79 FR 64111, Oct. 28, 2014]

Back to Top

§665.13 Permits and fees.

(a) *Applicability.* The requirements for permits for specific western Pacific fisheries are set forth in subparts B through I of this part.

(b) *Validity.* Each permit is valid for fishing only in the specific fishery management areas identified on the permit.

(c) *Application.* (1) An application for a permit to operate in a Federal western Pacific fishery that requires a permit and is regulated under subparts B through I of this part may be obtained from NMFS PIRO. The completed application must be submitted to PIRO for consideration. In no case shall PIRO accept an application that is not on a Federal western Pacific fisheries permit application form.

(2) A minimum of 15 days after the day PIRO receives a complete application should be allowed for processing the application for fisheries under subparts B through I of this part. If an incomplete or improperly completed application is filed, NMFS will notify the applicant of the deficiency. If the applicant fails to correct the deficiency within 30 days following the date of the letter of notification of deficiency, the application will be administratively closed.

(d) *Change in application information.* Any change in the permit application information or vessel documentation, submitted under paragraph (c) of this section, must be reported to PIRO in writing within 15 days of the change to avoid a delay in processing the permit application. A minimum of 10 days from the day the information is received by PIRO should be given for PIRO to record any change in information from the permit application submitted under paragraph (c) of this section. Failure to report such changes may result in a delay in processing an application, permit holders failing to receive important notifications, or sanctions pursuant to the Magnuson-Stevens Act at 16 U.S.C. 1858(g) or 15 CFR part 904, subpart D.

(e) *Issuance.* After receiving a complete application submitted under paragraph (c) of this section, the Regional Administrator will issue a permit to an applicant who is eligible under this part, as appropriate.

(f) *Fees.* (1) PIRO will not charge a fee for a permit issued under §§665.142, 665.162, 665.242, 665.262, 665.442, 665.462, 665.642, or 665.662 of this part, for a Ho'omalu limited access permit issued under §665.203, or for a Guam bottomfish permit issued under §665.404.

(2) PIRO will charge a non-refundable processing fee for each application (including transfer and renewal) for each permit listed in paragraphs (f)(2)(i) through (f)(2)(xiii) of this section. The amount of the fee is calculated in accordance with the procedures of the NOAA Finance Handbook for determining the administrative costs incurred in processing the permit. The fee may not exceed such costs. The appropriate fee is specified with each application form and must accompany each application. Failure to pay the fee will preclude the issuance, transfer, or renewal of any of the following permits:

(i) Hawaii longline limited access permit.

(ii) Mau Zone limited access permit.

(iii) Coral reef ecosystem special permit.

(iv) American Samoa longline limited access permit.

(v) MHI non-commercial bottomfish permit.

(vi) Western Pacific squid jig permit.

(vii) Crustacean permit.

(viii) CNMI commercial bottomfish permit.

(ix) Marianas Trench Monument non-commercial permit.

(x) Marianas Trench Monument recreational charter permit.

(xi) Pacific Remote Islands Monument recreational charter permit.

(xii) Rose Atoll Monument non-commercial permit.

(xiii) Rose Atoll Monument recreational charter permit.

(g) *Expiration.* A permit issued under subparts B through I of this part is valid for the period specified on the permit unless revoked, suspended, transferred, or modified under 15 CFR part 904.

(h) *Replacement.* Replacement permits may be issued, without charge, to replace lost or mutilated permits. An application for a replacement permit is not considered a new application.

(i) *Transfer.* An application for a permit transfer under §§665.203(d), 665.242(e), or 665.801(k), or for registration of a permit for use with a replacement vessel under §665.203(i), must be submitted to PIRO as described in paragraph (c) of this section.

(j) *Alteration.* Any permit that has been altered, erased, or mutilated is invalid.

(k) *Display.* Any permit issued under this subpart, or a facsimile of such permit, must be on board the vessel at all times while the vessel is fishing for, taking, retaining, possessing, or landing MUS shoreward of the outer boundary of the fishery management area. Any permit issued under this section must be displayed for inspection upon request of an authorized officer.

(l) *Sanctions.* Procedures governing sanctions and denials are found at subpart D of 15 CFR part 904.

(m) *Permit appeals.* Procedures for appeals of permitting and administrative actions are specified in the relevant subparts of this part.

[75 FR 2205, Jan. 14, 2010, as amended at 78 FR 33003, June 3, 2013; 78 FR 39583, July 2, 2013]

Back to Top

§665.14 Reporting and recordkeeping.

(a) Except for precious coral and crustacean fisheries, any person who is required to do so by applicable state law or regulation must make and/or file all reports of MUS landings containing all data and in the exact manner required by applicable state law or regulation.

(b) *Fishing record forms*—(1) *Applicability.* (i) The operator of a fishing vessel subject to the requirements of §§665.124, 665.142, 665.162, 665.203(a)(2), 665.224, 665.242, 665.262, 665.404, 665.424, 665.442, 665.462, 665.603, 665.624, 665.642, 665.662, 665.801, 665.905, 665.935, or 665.965 must maintain on board the vessel an accurate and complete record of catch, effort, and other data on paper report forms provided by the Regional Administrator, or electronically as specified and approved by the Regional Administrator, except as allowed in paragraph (b)(1)(iii) of this section.

(ii) All information specified by the Regional Administrator must be recorded on paper or electronically within 24 hours after the completion of each fishing day. The logbook information, reported

on paper or electronically, for each day of the fishing trip must be signed and dated or otherwise authenticated by the vessel operator in the manner determined by the Regional Administrator, and be submitted or transmitted via an approved method as specified by the Regional Administrator, and as required by this paragraph (b).

(iii) In lieu of the requirements in paragraph (a)(1)(i) of this section, the operator of a fishing vessel registered for use under a Western Pacific squid jig permit pursuant to the requirements of §665.801(g) may participate in a state reporting system. If participating in a state reporting system, all required information must be recorded and submitted in the exact manner required by applicable state law or regulation.

(2) *Timeliness of submission.* (i) If fishing was authorized under a permit pursuant to §§665.142, 665.242, 665.442, 665.404, 665.162, 665.262, 665.462, 665.662, or 665.801, the vessel operator must submit the original logbook information for each day of the fishing trip to the Regional Administrator within 72 hours of the end of each fishing trip, except as allowed in paragraph (iii) of this section.

(ii) If fishing was authorized under a permit pursuant to §665.203(a)(2), the vessel operator or vessel owner must submit the original logbook form for each day of the fishing trip to the Regional Administrator within 72 hours of the end of each fishing trip.

(iii) If fishing was authorized under a PRIA bottomfish permit pursuant to §665.603(a), PRIA pelagic troll and handline permit pursuant to §665.801(f), crustacean fishing permit for the PRIA (Permit Area 4) pursuant to §665.642(a), or a precious coral fishing permit for Permit Area X-P-PI pursuant to §665.662, the original logbook form for each day of fishing within EEZ waters around the PRIA must be submitted to the Regional Administrator within 30 days of the end of each fishing trip.

(iv) If fishing was authorized under a permit pursuant to §§665.124, 665.224, 665.424, 665.624, 665.905, 665.935, or 665.965, the original logbook information for each day of fishing must be submitted to the Regional Administrator within 30 days of the end of each fishing trip.

(c) *Transshipment logbooks.* Any person subject to the requirements of §§665.124(a)(2), 665.224(a)(2), 665.424(a)(2), 665.624(a)(2), or 665.801(e) must maintain on board the vessel an accurate and complete NMFS transshipment logbook containing report forms provided by the Regional Administrator. All information specified on the forms must be recorded on the forms within 24 hours after the day of transshipment. Each form must be signed and dated by the receiving vessel operator. The original logbook for each day of transshipment activity must be submitted to the Regional Administrator within 72 hours of each landing of western Pacific pelagic MUS. The original logbook for each day of transshipment activity must be submitted to the Regional Administrator within 7 days of each landing of coral reef ecosystem MUS.

(d) *Sales report.* The operator of any fishing vessel subject to the requirements of §§665.142, 665.242, 665.442, or 665.642, or the owner of a medium or large fishing vessel subject to the requirements of §665.404(a)(2) must submit to the Regional Administrator, within 72 hours of offloading of crustacean MUS, an accurate and complete sales report on a form provided by the Regional Administrator. The form must be signed and dated by the fishing vessel operator.

(e) *Packing or weigh-out slips.* The operator of any fishing vessel subject to the requirements of §§665.142, 665.242, 665.442, or 665.642 must attach packing or weighout slips provided to the operator by the first-level buyer(s), unless the packing or weighout slips have not been provided in time by the buyer(s).

(f) *Modification of reporting and recordkeeping requirements.* The Regional Administrator may, after consultation with the Council, initiate rulemaking to modify the information to be provided on the fishing

record forms, transshipment logbook, and sales report forms and timeliness by which the information is to be provided, including the submission of packing or weighout slips.

(g) *Availability of records for inspection.* (1) Western Pacific pelagic MUS. Upon request, any fish dealer must immediately provide an authorized officer access to inspect and copy all records of purchases, sales, or other transactions involving western Pacific pelagic MUS taken or handled by longline vessels that have permits issued under this subpart or that are otherwise subject to subpart F of this part, including, but not limited to, information concerning:

(i) The name of the vessel involved in each transaction and the owner and operator of the vessel.

(ii) The weight, number, and size of each species of fish involved in each transaction.

(iii) Prices paid by the buyer and proceeds to the seller in each transaction.

(2) *Crustacean MUS.* Upon request, any first-level buyer must immediately allow an authorized officer and any employee of NMFS designated by the Regional Administrator, to access, inspect, and copy all records relating to the harvest, sale, or transfer of crustacean MUS taken by vessels that have permits issued under this subpart or §§665.140 through 665.145, 665.240 through 665.252, 665.440 through 665.445, or 665.640 through 665.645 of this part. This requirement may be met by furnishing the information on a worksheet provided by the Regional Administrator. The information must include, but is not limited to:

(i) The name of the vessel involved in each transaction and the owner or operator of the vessel.

(ii) The amount, number, and size of each MUS involved in each transaction.

(iii) Prices paid by the buyer and proceeds to the seller in each transaction.

(3) Bottomfish and seamount groundfish MUS. Any person who is required by state laws and regulations to maintain records of landings and sales for vessels regulated by this subpart and by §§665.100 through 665.105, 665.200 through 665.212, 665.400 through 665.407, and 665.600 through 665.606 of this part must make those records immediately available for Federal inspection and copying upon request by an authorized officer.

(4) *Coral reef ecosystem MUS.* Any person who has a special permit and who is required by state laws and regulations to maintain and submit records of catch and effort, landings and sales for coral reef ecosystem MUS by this subpart and §§665.120 through 665.128, 665.220 through 665.228, 665.420 through 665.428, or 665.620 through 665.628 of this part must make those records immediately available for Federal inspection and copying upon request by an authorized officer as defined in §600.10 of this chapter.

(h) *State reporting.* Any person who has a permit under §§665.124, 665.203, 665.224, 665.404, 665.424, 665.603, or 665.624 and who is regulated by state laws and regulations to maintain and submit records of catch and effort, landings and sales for vessels regulated by subparts B through F of this part must maintain and submit those records in the exact manner required by state laws and regulations.

[75 FR 2205, Jan. 14, 2010, as amended at 78 FR 33003, June 3, 2013; 78 FR 39583, July 2, 2013]

Back to Top

§665.15 Prohibitions.

In addition to the prohibitions in §600.725 of this chapter, it is unlawful for any person to:

(a) Engage in fishing without a valid permit or facsimile of a valid permit on board the vessel and available for inspection by an authorized officer, when a permit is required under §§665.13 or 665.17, unless the vessel was at sea when the permit was issued under §665.13, in which case the permit must be on board the vessel before its next trip.

(b) File false information on any application for a fishing permit under §665.13 or an EFP under §665.17.

(c) Fail to file reports in the exact manner required by any state law or regulation, as required in §665.14.

(d) Falsify or fail to make, keep, maintain, or submit any logbook or logbook form or other record or report required under §§665.14 and 665.17.

(e) Refuse to make available to an authorized officer or a designee of the Regional Administrator for inspection or copying, any records that must be made available in accordance with §665.14.

(f) Fail to affix or maintain vessel or gear markings, as required by §§665.16, 665.128, 665.228, 665.246, 665.428, 665.628, or 665.804.

(g) Violate a term or condition of an EFP issued under §665.17.

(h) Fail to report any take of or interaction with protected species as required by §665.17(k).

(i) Fish without an observer on board the vessel after the owner or agent of the owner has been directed by NMFS to make accommodations available for an observer under §§665.17, 665.105, 665.145, 665.207, 665.247, 665.407, 665.445, 665.606, 665.645, or 665.808.

(j) Refuse to make accommodations available for an observer when so directed by the Regional Administrator under §§665.105, 665.145, 665.207, 665.247, 665.407, 665.445, 665.606, 665.645, or 665.808, or under any provision in an EFP issued under §665.17.

(k) Fail to notify officials as required in §§665.126, 665.144, 665.205, 665.226, 665.244, 665.426, 665.444, 665.626, 665.644, 665.803, or 665.808.

(l) Fish for, take or retain within a no-take MPA, defined in §§665.99, 665.199, 665.399, or 665.599, any bottomfish MUS, crustacean MUS, western Pacific pelagic MUS, precious coral, seamount groundfish or coral reef ecosystem MUS.

(m) Fail to comply with a term or condition governing the vessel monitoring system in violation of §665.19.

(n) Fish for, catch, or harvest MUS without an operational VMS unit on board the vessel after installation of the VMS unit by NMFS, in violation of §665.19(e)(2).

(o) Possess MUS, that were harvested after NMFS has installed the VMS unit on the vessel, on board that vessel without an operational VMS unit, in violation of §665.19(e)(2).

(p) Interfere with, tamper with, alter, damage, disable, or impede the operation of a VMS unit or attempt any of the same; or move or remove a VMS unit without the prior permission of the SAC in violation of §665.19(e)(3).

(q) Make a false statement, oral or written, to an authorized officer, regarding the use, operation, or maintenance of a VMS unit, in violation of §665.19(e).

(r) Interfere with, impede, delay, or prevent the installation, maintenance, repair, inspection, or removal of a VMS unit, in violation of §665.19(e).

(s) Interfere with, impede, delay, or prevent access to a VMS unit by a NMFS observer, in violation of §665.808(f)(4).

(t) Connect or leave connected additional equipment to a VMS unit without the prior approval of the SAC, in violation of §665.19(f).

(u) Fail to comply with the restrictions specified in the notification issued pursuant to §665.4(f)(1), in violation of §665.15(f)(2).

[75 FR 2205, Jan. 14, 2010, as amended at 76 FR 37287, June 27, 2011]

Back to Top

§665.16 Vessel identification.

(a) Applicability. Each fishing vessel subject to this part, except those identified in paragraph (e) of this section, must be marked for identification purposes, as follows:

(1) A vessel that is registered for use with a valid permit issued under §665.801 and used to fish on the high seas within the Convention Area as defined in §300.211 of this title must be marked in accordance with the requirements at §§300.14 and 300.217 of this title.

(2) A vessel that is registered for use with a valid permit issued under §665.801 of this part and not used to fish on the high seas within the Convention Area must be marked in accordance with either:

(i) Sections 300.14 and 300.217 of this title, or

(ii) Paragraph (b) of this section.

(3) A vessel that is registered for use with a valid permit issued under subparts B through E and subparts G through I of this part must be marked in accordance with paragraph (b) of this section.

(b) Identification. Each vessel subject to this section must be marked as follows:

(1) The vessel's official number must be affixed to the port and starboard sides of the deckhouse or hull, and on an appropriate weather deck, so as to be visible from enforcement vessels and aircraft. Marking must be legible and of a color that contrasts with the background.

(2) For fishing and receiving vessels of 65 ft (19.8 m) LOA or longer, the official number must be displayed in block Arabic numerals at least 18 inches (45.7 cm) in height, except that vessels in precious coral fisheries that are 65 ft (19.8 m) LOA or longer must be marked in block Arabic numerals at least 14 inches (35.6 cm) in height.

(3) For all other vessels, the official number must be displayed in block Arabic numerals at least 10 inches (25.4 cm) in height.

(c) The vessel operator must ensure that the official number is clearly legible and in good repair.

(d) The vessel operator must ensure that no part of the vessel, its rigging, or its fishing gear obstructs the view of the official number from an enforcement vessel or aircraft.

(e) The following fishing vessels are exempt from the vessel identification requirements in this section:

(1) A vessel registered for use under a MHI non-commercial bottomfish permit that is in compliance with State of Hawaii bottomfish vessel registration and marking requirements.

(2) A vessel less than 40 ft (12.2 m) LOA registered for use under a CNMI commercial bottomfish permit that is in compliance with CNMI bottomfish vessel registration and marking requirements.

[75 FR 2205, Jan. 14, 2010, as amended at 75 FR 3417, Jan. 21, 2010; 78 FR 33003, June 3, 2013; 78 FR 39583, July 2, 2013]

Back to Top

§665.17 Experimental fishing.

(a) *General.* The Regional Administrator may authorize, for limited purposes, the direct or incidental harvest of MUS that would otherwise be prohibited by this part. No experimental fishing may be conducted unless authorized by an EFP issued by the Regional Administrator in accordance with the criteria and procedures specified in this section. EFPs will be issued without charge.

(b) *Observers.* No experimental fishing for crustacean MUS may be conducted unless a NMFS observer is aboard the vessel.

(c) *Application.* An applicant for an EFP must submit to the Regional Administrator at least 60 days before the desired date of the EFP a written application including, but not limited to, the following information:

(1) The date of the application.

(2) The applicant's name, mailing address, and telephone number.

(3) A statement of the purposes and goals of the experiment for which an EFP is needed, including a general description of the arrangements for disposition of all species harvested under the EFP.

(4) A statement of whether the proposed experimental fishing has broader significance than the applicant's individual goals.

(5) For each vessel to be covered by the EFP:

(i) Vessel name.

(ii) Name, address, and telephone number of owner and operator.

(iii) USCG documentation, state license, or registration number.

(iv) Home port.

(v) Length of vessel.

(vi) Net tonnage.

(vii) Gross tonnage.

(6) A description of the species (directed and incidental) to be harvested under the EFP and the amount of such harvest necessary to conduct the experiment.

(7) For each vessel covered by the EFP, the approximate times and places fishing will take place, and the type, size, and amount of gear to be used.

(8) The signature of the applicant.

(d) *Incomplete applications.* The Regional Administrator may request from an applicant additional information necessary to make the determinations required under this section. An applicant will be notified of an incomplete application within 10 working days of receipt of the application. An incomplete application will not be considered until corrected in writing.

(e) *Issuance.* (1) If an application contains all of the required information, NMFS will publish a notice of receipt of the application in the FEDERAL REGISTER with a brief description of the proposal and will give interested persons an opportunity to comment. The Regional Administrator will also forward copies of the application to the Council, the USCG, and the fishery management agency of the affected state, accompanied by the following information:

(i) The current utilization of domestic annual harvesting and processing capacity (including existing experimental harvesting, if any) of the directed and incidental species for which an EFP is being requested.

(ii) A citation of the regulation or regulations that, without the EFP, would prohibit the proposed activity.

(iii) Biological information relevant to the proposal.

(2) At a Council meeting following receipt of a complete application, the Regional Administrator will consult with the Council and the Director of the affected state fishery management agency concerning the permit application. The applicant will be notified in advance of the meeting at which the application will be considered, and invited to appear in support of the application, if the applicant desires.

(3) Within 5 working days after the consultation in paragraph (e)(2) of this section, or as soon as practicable thereafter, NMFS will notify the applicant in writing of the decision to grant or deny the EFP and, if denied, the reasons for the denial. Grounds for denial of an EFP include, but are not limited to, the following:

(i) The applicant has failed to disclose material information required, or has made false statements as to any material fact, in connection with his or her application.

(ii) According to the best scientific information available, the harvest to be conducted under the permit would detrimentally affect any species of fish in a significant way.

(iii) Issuance of the EFP would inequitably allocate fishing privileges among domestic fishermen or would have economic allocation as its sole purpose.

(iv) Activities to be conducted under the EFP would be inconsistent with the intent of this section or the management objectives of the FEP.

(v) The applicant has failed to demonstrate a valid justification for the permit.

(vi) The activity proposed under the EFP would create a significant enforcement problem.

(4) The decision to grant or deny an EFP is final and unappealable. If the permit is granted, NMFS will publish a notice in the FEDERAL REGISTER describing the experimental fishing to be conducted under the EFP. The Regional Administrator may attach terms and conditions to the EFP consistent with the purpose of the experiment including, but not limited to:

(i) The maximum amount of each species that can be harvested and landed during the term of the EFP, including trip limits, where appropriate.

(ii) The number, sizes, names, and identification numbers of the vessels authorized to conduct fishing activities under the EFP.

(iii) The times and places where experimental fishing may be conducted.

(iv) The type, size, and amount of gear which may be used by each vessel operated under the EFP.

(v) The condition that observers be carried aboard vessels operating under an EFP.

(vi) Data reporting requirements.

(vii) Such other conditions as may be necessary to assure compliance with the purposes of the EFP consistent with the objectives of the FEP.

(f) *Duration.* Unless otherwise specified in the EFP or a superseding notice or regulation, an EFP is effective for no longer than one (1) year from the date of issuance, unless revoked, suspended, or modified. EFPs may be renewed following the application procedures in this section.

(g) *Alteration.* Any EFP that has been altered, erased, or mutilated is invalid.

(h) *Transfer.* EFPs issued under subparts B through F of this part are not transferable or assignable. An EFP is valid only for the vessel(s) for which it is issued.

(i) *Inspection.* Any EFP issued under subparts B through F of this part must be carried aboard the vessel(s) for which it was issued. The EFP must be presented for inspection upon request of any authorized officer.

(j) *Sanctions.* Failure of the holder of an EFP to comply with the terms and conditions of an EFP, the provisions of subparts A through F of this part, any other applicable provision of this part, the Magnuson-Stevens Act, or any other regulation promulgated thereunder, is grounds for revocation, suspension, or modification of the EFP with respect to all persons and vessels conducting activities under the EFP. Any

action taken to revoke, suspend, or modify an EFP will be governed by 15 CFR part 904 subpart D. Other sanctions available under the statute will be applicable.

(k) *Protected species.* Persons fishing under an EFP must report any incidental take or fisheries interaction with protected species on a form provided for that purpose. Reports must be submitted to the Regional Administrator within 3 days of arriving in port.

Back to Top

§665.18 Framework adjustments to management measures.

Framework measures described below for each specific fishery are valid for all management areas, except where specifically noted in this section.

(a) *Pelagic measures*—(1) *Introduction.* Adjustments in management measures may be made through rulemaking if new information demonstrates that there are biological, social, or economic concerns in the fishery. The following framework process authorizes the implementation of measures that may affect the operation of the fisheries, gear, harvest guidelines, or changes in catch and/or effort.

(2) *Annual report.* By June 30 of each year, the Council-appointed pelagics monitoring team will prepare an annual report on the fisheries in the management area. The report shall contain, among other things, recommendations for Council action and an assessment of the urgency and effects of such action(s).

(3) *Procedure for established measures.* (i) Established measures are regulations for which the impacts have been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council may recommend to the Regional Administrator that established measures be modified, removed, or reinstituted. Such recommendation shall include supporting rationale and analysis, and shall be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(4) *Procedure for new measures.* (i) New measures are regulations for which the impacts have not been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council will publicize, including by FEDERAL REGISTER notice, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is discussed, the Council will consider recommendations and prepare a FEDERAL REGISTER notice summarizing the Council's deliberations, rationale, and analysis for the preferred action, and the time and place for any subsequent Council meeting(s) to consider the new measure. At subsequent public meeting(s), the Council will consider public comments and other information received to make a recommendation to the Regional Administrator about any new measure. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(b) *Crustacean measures*—(1) *Introduction.* New management measures may be added through rulemaking if new information demonstrates that there are biological, social, or economic concerns in Permit Areas 1, 2, or 3. The following framework process authorizes the implementation of measures that may affect the operation of the fisheries, gear, harvest guidelines, or changes in catch and/or effort.

(2) *Annual report.* By June 30 of each year, the Council-appointed team will prepare an annual report on the fisheries in the management area. The report shall contain, among other things, recommendations for Council action and an assessment of the urgency and effects of such action(s).

(3) *Procedure for established measures.* (i) Established measures are regulations for which the impacts have been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council may recommend to the Regional Administrator that established measures be modified, removed, or reinstituted. Such recommendation shall include supporting rationale and analysis, and shall be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(4) *Procedure for new measures.* (i) New measures are regulations for which the impacts have not been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council will publicize, including by a FEDERAL REGISTER document, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is discussed, the Council will consider recommendations and prepare a FEDERAL REGISTER document summarizing the Council's deliberations, rationale, and analysis for the preferred action, and the time and place for any subsequent Council meeting(s) to consider the new measure. At subsequent public meeting(s), the Council will consider public comments and other information received to make a recommendation to the Regional Administrator about any new measure. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(c) *Bottomfish measures*—(1) *Annual reports.* By June 30 of each year, a Council-appointed bottomfish monitoring team will prepare an annual report on the fishery by area covering the following topics:

(i) Fishery performance data.

(ii) Summary of recent research and survey results.

(iii) Habitat conditions and recent alterations.

(iv) Enforcement activities and problems.

(v) Administrative actions (*e.g.,* data collection and reporting, permits).

(vi) State and territorial management actions.

(vii) Assessment of need for Council action (including biological, economic, social, enforcement, administrative, and state/Federal needs, problems, and trends). Indications of potential problems warranting further investigation may be signaled by the following indicator criteria:

(A) Mean size of the catch of any species in any area is a pre-reproductive size.

(B) Ratio of fishing mortality to natural mortality for any species.

(C) Harvest capacity of the existing fleet and/or annual landings exceed best estimate of MSY in any area.

(D) Significant decline (50 percent or more) in bottomfish catch per unit of effort from baseline levels.

(E) Substantial decline in ex-vessel revenue relative to baseline levels.

(F) Significant shift in the relative proportions of gear in any one area.

(G) Significant change in the frozen/fresh components of the bottomfish catch.

(H) Entry/exit of fishermen in any area.

(I) Per-trip costs for bottomfish fishing exceed per-trip revenues for a significant percentage of trips.

(J) Significant decline or increase in total bottomfish landings in any area.

(K) Change in species composition of the bottomfish catch in any area.

(L) Research results.

(M) Habitat degradation or environmental problems.

(N) Reported interactions between bottomfish fishing operations and protected species in the NWHI.

(viii) Recommendations for Council action.

(ix) Estimated impacts of recommended action.

(2) *Recommendation of management action.* (i) The team may present management recommendations to the Council at any time. Recommendations may cover actions suggested for Federal regulations, state/territorial action, enforcement or administrative elements, and research and data collection. Recommendations will include an assessment of urgency and the effects of not taking action.

(ii) The Council will evaluate the team's reports and recommendations, and the indicators of concern. The Council will assess the need for one or more of the following types of management action: Catch limits, size limits, closures, effort limitations, access limitations, or other measures.

(iii) The Council may recommend management action by either the state/territorial governments or by Federal regulation.

(3) *Federal management action.* (i) If the Council believes that management action should be considered, it will make specific recommendations to the Regional Administrator after requesting and considering the views of its Scientific and Statistical Committee and Bottomfish Advisory Panel and obtaining public comments at a public hearing.

(ii) The Regional Administrator will consider the Council's recommendation and accompanying data, and, if he or she concurs with the Council's recommendation, will propose regulations to carry out the action. If the Regional Administrator rejects the Council's proposed action, a written explanation for the denial will be provided to the Council within 2 weeks of the decision.

(iii) The Council may appeal a denial by writing to the Assistant Administrator, who must respond in writing within 30 days.

(iv) The Regional Administrator and the Assistant Administrator will make their decisions in accord with the Magnuson-Stevens Act, other applicable law, and the bottomfish measures of the FEPs.

(v) To minimize conflicts between the Federal and state management systems, the Council will use the procedures in paragraph (c)(2) of this section to respond to state/territorial management actions.

Council consideration of action would normally begin with a representative of the state or territorial government bringing a potential or actual management conflict or need to the Council's attention.

(4) *Access limitation procedures.* (i) Access limitation may be adopted under this paragraph (c)(4) only for the NWHI, American Samoa, and Guam.

(ii) If access limitation is proposed for adoption or subsequent modification through the process described in this paragraph (c)(4), the following requirements must be met:

(A) The bottomfish monitoring team must consider and report to the Council on present participation in the fishery; historical fishing practices in, and dependence on, the fishery; economics of the fishery; capability of fishing vessels used in the fishery to engage in other fisheries; cultural and social framework relevant to the fishery; and any other relevant considerations.

(B) Public hearings must be held specifically addressing the limited access proposals.

(C) A specific advisory subpanel of persons experienced in the fishing industry will be created to advise the Council and the Regional Administrator on administrative decisions.

(D) The Council's recommendation to the Regional Administrator must be approved by a two-thirds majority of the voting members.

(5) *Five-year review.* The Council will conduct a comprehensive review on the effectiveness of the Mau Zone limited access program 5 years following implementation of the program. The Council will consider the extent to which the FEP objectives have been met and verify that the target number of vessels established for the fishery is appropriate for current fishing activity levels, catch rates, and biological condition of the stocks. The Council may establish a new target number based on the 5-year review.

(d) *Precious coral measures*—(1) *Introduction.* Established management measures may be revised and new management measures may be established and/or revised through rulemaking if new information demonstrates that there are biological, social, or economic concerns in a precious coral permit area. The following framework process authorizes the implementation of measures that may affect the operation of the fisheries, gear, quotas, season, or levels of catch and/or in effort.

(2) *Annual report.* By June 30 of each year, the Council-appointed precious coral team will prepare an annual report on the fisheries in the management area. The report will contain, among other things, recommendations for Council action and an assessment of the urgency and effects of such action(s).

(3) *Procedure for established measures.* (i) Established measures are regulations for which the impacts have been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council may recommend to the Regional Administrator that established measures be modified, removed, or reinstituted. Such recommendation will include supporting rationale and analysis and will be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(4) *Procedure for new measures.* (i) New measures are regulations for which the impacts have not been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council will publicize, including by a FEDERAL REGISTER document, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is

discussed, the Council will consider recommendations and prepare a FEDERAL REGISTER document summarizing the Council's deliberations, rationale, and analysis for the preferred action and the time and place for any subsequent Council meeting(s) to consider the new measure. At a subsequent public meeting, the Council will consider public comments and other information received before making a recommendation to the Regional Administrator about any new measure. If approved by the Regional Administrator, NMFS may implement the Council's recommendation by rulemaking.

(e) *Coral reef ecosystem measures*—(1) *Procedure for established measures.* (i) Established measures are regulations for which the impacts have been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council may recommend to the Regional Administrator that established measures be modified, removed, or reinstituted. Such recommendation shall include supporting rationale and analysis, and shall be made after advance public notice, public discussion and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(2) *Procedure for new measures.* (i) New measures are regulations for which the impacts have not been evaluated in Council or NMFS documents in the context of current conditions. New measures include, but are not limited to, catch limits, resource size limits, closures, effort limitations, reporting and recordkeeping requirements.

(ii) The Regional Administrator will publicize, including by FEDERAL REGISTER notice, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is discussed, the Council will consider recommendations and prepare a document summarizing the Council's deliberations, rationale, and analysis for the preferred action, and the time and place for any subsequent Council meeting(s) to consider the new measure. At subsequent public meeting(s), the Council will consider public comments and other information received to make a recommendation to the Regional Administrator about any new measure. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(A) The Regional Administrator will consider the Council's recommendation and supporting rationale and analysis, and, if the Regional Administrator concurs with the Council's recommendation, will propose regulations to carry out the action. If the Regional Administrator rejects the Council's proposed action, the Regional Administrator will provide a written explanation for the denial within 2 weeks of the decision.

(B) The Council may appeal a denial by writing to the Assistant Administrator, who must respond in writing within 30 days.

(C) The Regional Administrator and the Assistant Administrator will make their decisions in accordance with the Magnuson-Stevens Act, other applicable laws, and the FEPs.

(D) To minimize conflicts between the Federal and state/territorial/commonwealth management systems, the Council will use the procedures in this paragraph (e)(2)(ii) to respond to state/territorial/commonwealth management actions. The Council's consideration of action would normally begin with a representative of the state, territorial or commonwealth government bringing a potential or actual management conflict or need to the Council's attention.

(3) *Annual report.* By July 31 of each year, a Council-appointed coral reef ecosystem monitoring team will prepare an annual report on coral reef fisheries of the western Pacific region. The report will contain, among other things:

(i) Fishery performance data, summaries of new information and assessments of need for Council action.

(ii) Recommendation for Council action. The Council will evaluate the annual report and advisory body recommendations and may recommend management action by either the state/territorial/commonwealth governments or by Federal regulation.

(iii) If the Council believes that management action should be considered, it will make specific recommendations to the Regional Administrator after considering the views of its advisory bodies.

Back to Top

§665.19 Vessel monitoring system.

(a) *Applicability.* The holder of any of the following permits is subject to the vessel monitoring system requirements in this part:

(1) Hawaii longline limited access permit issued pursuant to §665.801(b);

(2) American Samoa longline limited entry permit, for vessel size Class C or D, issued pursuant to §665.801(c);

(3) Vessels permitted to fish in Crustacean Permit Area 1 VMS Subarea; or

(4) CNMI commercial bottomfish permit, if the vessel is a medium or large bottomfish vessel, issued pursuant to §665.404(a)(2).

(b) *VMS unit.* Only a VMS unit owned by NMFS and installed by NMFS complies with the requirement of this subpart.

(c) *Notification.* After a permit holder subject to §665.19(a) has been notified by the SAC of a specific date for installation of a VMS unit on the permit holder's vessel, the vessel must carry and operate the VMS unit after the date scheduled for installation.

(d) *Fees and charges.* During the experimental VMS program, the holder of a permit subject to §665.19(a) shall not be assessed any fee or other charges to obtain and use a VMS unit, including the communication charges related directed to requirements under this section. Communication charges related to any additional equipment attached to the VMS unit by the owner or operator shall be the responsibility of the owner or operator and not NMFS.

(e) *Permit holder duties.* The holder of a permit subject to §665.19(a) and master of the vessel must:

(1) Provide opportunity for the SAC to install and make operational a VMS unit after notification.

(2) Carry and continuously operate the VMS unit on board whenever the vessel is at sea.

(3) Not remove, relocate, or make non-operational the VMS unit without prior approval from the SAC.

(f) *Authorization by the SAC.* The SAC has authority over the installation and operation of the VMS unit. The SAC may authorize the connection or order the disconnection of additional equipment, including a computer, to any VMS unit when deemed appropriate by the SAC.

Back to Top

§665.20 Western Pacific Community Development Program.

(a) *General.* In accordance with the criteria and procedures specified in this section, the Regional Administrator may authorize the direct or incidental harvest of management unit species that would otherwise be prohibited by this part.

(b) *Eligibility.* To be eligible to participate in the western Pacific community development program, a community must meet the following criteria:

(1) Be located in American Samoa, Guam, Hawaii, or the Northern Mariana Islands (collectively, the western Pacific);

(2) Consist of community residents descended from aboriginal people indigenous to the western Pacific who conducted commercial or subsistence fishing using traditional fishing practices in the waters of the western Pacific;

(3) Consist of individuals who reside in their ancestral homeland;

(4) Have knowledge of customary practices relevant to fisheries of the western Pacific;

(5) Have a traditional dependence on fisheries of the western Pacific;

(6) Are currently experiencing economic or other constraints that have prevented full participation in the western Pacific fisheries and, in recent years, have not had harvesting, processing or marketing capability sufficient to support substantial participation in fisheries in the area; and

(7) Develop and submit a community development plan to the Council and the NMFS that meets the requirements in paragraph (c) of this section.

(c) *Community development plan.* An eligible community seeking access to a fishery under the authority of the Council and NMFS must submit to the Council a community development plan that includes, but is not limited to, the following information:

(1) A statement of the purposes and goals of the plan.

(2) A description and justification for the specific fishing activity being proposed, including:

(i) Location of the proposed fishing activity.

(ii) Management unit species to be harvested, and any potential bycatch.

(iii) Gear type(s) to be used.

(iv) Frequency and duration of the proposed fishing activity.

(3) A statement describing the degree of involvement by the indigenous community members, including the name, address, telephone and other contact information of each individual conducting the proposed fishing activity.

(4) A description of how the community and or its members meet each of the eligibility criteria in paragraph (b) of this section.

(5) If a vessel is to be used by the community to conduct fishing activities, for each vessel:

(i) Vessel name and official number (USCG documentation, state, territory, or other registration number).

(ii) Vessel length overall, displacement, and fish holding capacity.

(iii) Any valid federal fishing permit number(s).

(iv) Name, address, and telephone number of the vessel owner(s) and operator(s).

(d) *Council review.* The Council will review each community development plan to ensure that it meets the intent of the Magnuson-Stevens Act and contains all required information. The Council may consider advice of its advisory panels in conducting this review. If the Council finds the community development plan is complete, it will transmit the plan to the Regional Administrator for review.

(e) *Agency review and approval.* (1) Upon receipt of a community development plan from the Council, the Regional Administrator will review the plan for consistency with paragraphs (b), (c), and (d) of this section, and other applicable laws. The Regional Administrator may request from the applicant additional information necessary to make the determinations pursuant to this section and other applicable laws before proceeding with the review pursuant to paragraph (e)(2) of this section.

(2) If the Regional Administrator determines that a plan contains the required information and is consistent with paragraphs (b), (c), and (d) of this section, and other applicable laws, NMFS will publish a notice in the FEDERAL REGISTER to solicit public comment on the proposed plan and any associated environmental review documents. The notice will include the following:

(i) A description of the fishing activity to be conducted.

(ii) The current utilization of domestic annual harvesting and processing capacity (including existing experimental harvesting, if any) of the target, incidental, and bycatch species.

(iii) A summary of any regulations that would otherwise prohibit the proposed fishing activity.

(iv) Biological and environmental information relevant to the plan, including appropriate statements of environmental impacts on target and non-target stocks, marine mammals, and threatened or endangered species.

(3) Within 90 days from the end of the comment period on the plan, the Regional Administrator will notify the applicant in writing of the decision to approve or disapprove the plan.

(4) If disapproved, the Regional Administrator will provide the reasons for the plan's disapproval and provide the community with the opportunity to modify the plan and resubmit it for review. Reasons for disapproval may include, but are not limited to, the following:

(i) The applicant failed to disclose material information or made false statements related to the plan.

(ii) The harvest would contribute to overfishing or would hinder the recovery of an overfished stock, according to the best scientific information available.

(iii) The activity would be inconsistent with an applicable law.

(iv) The activity would create a significant enforcement, monitoring, or administrative problem, as determined by the Regional Administrator.

(5) If approved, the Regional Administrator will publish a notice of the authorization in the FEDERAL REGISTER, and may attach limiting terms and conditions to the authorization including, but not limited to, the following:

(i) The maximum amount of each management unit species and potential bycatch species that may be harvested and landed during the term of the authorization.

(ii) The number, sizes, names, identification numbers, and federal permit numbers of the vessels authorized to conduct fishing activities.

(iii) Type, size, and amount of gear used by each vessel, including trip limits.

(iv) The times and places where fishing may or may not be conducted.

(v) Notification, observer, vessel monitoring, and reporting requirements.

(f) *Duration.* Unless otherwise specified, and unless revoked, suspended, or modified, a plan may be effective for no longer than five years.

(g) *Transfer.* Plans authorized under this section are not transferable or assignable.

(h) *Sanctions.* The Regional Administrator may revoke, suspend or modify a community development plan in the case of failure to comply with the terms and conditions of the plan, any other applicable provision of this part, the Magnuson-Stevens Act, or other applicable laws.

(i) *Program review.* NMFS and the Council will periodically review and assess each plan. If fishery, environmental, or other conditions have changed such that the plan's goals or requirements are not being met, or the fishery has become in an overfished state or overfishing is occurring, the Regional Administrator may revoke, suspend, or modify the plan.

[75 FR 54046, Sept. 3, 2010]

Back to Top

Subpart D—Mariana Archipelago Fisheries

Back to Top

§665.398 Management area.

The Mariana fishery management area is the EEZ seaward of Guam and CNMI with the inner boundary a line coterminous with the seaward boundaries of Guam and CNMI and the outer boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured, or is coterminous with adjacent international maritime boundaries.

Back to Top

§665.399 Area restrictions.

Anchoring by all fishing vessels over 50 ft (15.25 m) LOA is prohibited in the U.S. EEZ seaward of Guam west of 144°30′ E. long. except in the event of an emergency caused by ocean conditions or by a vessel malfunction that can be documented.

Back to Top

§665.400 Mariana bottomfish fisheries. [Reserved]

Back to Top

§665.401 Definitions.

As used in §§665.400 through 665.419:

CNMI commercial bottomfish permit means the permit required by §665.404(a)(2) to engage in commercial fishing for Mariana bottomfish MUS in the CNMI management subarea.

Guam bottomfish permit means the permit required by §665.404(a)(1) to use a large vessel to fish for, land, or transship Mariana bottomfish MUS shoreward of the outer boundary of the Guam subarea of the Mariana fishery management area.

Mariana bottomfish management unit species (Mariana bottomfish MUS) means the following fish:

Local name Chamorro/Carolinian	English common name	Scientific name
Lehi/maroobw	red snapper, silvermouth	*Aphareus rutilans.*
Gogunafon/aiwe	gray snapper, jobfish	*Aprion virescens.*
Tarakitu/etam	Giant trevally, jack	*Caranx ignobilis.*
Tarakiton attelong/orong	Black trevally, jack	*Caranx lugubris.*
Gadao/meteyil	blacktip grouper	*Epinephelus fasciatus.*
Bueli/bwele	lunartail grouper	*Variola louti.*
Buninas agaga'/falaghal moroobw	red snapper	*Etelis carbunculus.*
Abuninas/taighulupegh	red snapper	*Etelis coruscans.*
Mafuti/atigh	redgill emperor	*Lethrinus rubrioperculatus.*
Mafuti/loot	Ambon emperor	*Lethrinus amboinensis.*
Funai/saas	blueline snapper	*Lutjanus kasmira.*
Buninas/falaghal-maroobw	yellowtail snapper	*Pristipomoides auricilla.*
Buninas or pakapaka/falaghal-maroobw	pink snapper	*Pristipomoides filamentosus.*
Buninas/falaghal-maroobw	yelloweye snapper	*Pristipomoides flavipinnis.*
	pink snapper	*Pristipomoides seiboldii.*

Buninas rayao amariyu/falaghal-maroobw	snapper	*Pristipomoides zonatus.*
Tarakiton tadong/Meseyugh	amberjack	*Seriola dumerili.*

Back to Top

§665.402 Management subareas.

The Mariana fishery management area is divided into bottomfish management subareas with the following designations and boundaries:

(a) *Guam Management Subarea* means the EEZ seaward of the Territory of Guam, with the inner boundary defined as a line coterminous with the seaward boundary of the Territory of Guam.

(b) *CNMI Management Subarea* means the EEZ seaward of the CNMI. The CNMI Management Subarea is further divided into subareas with the following designations and boundaries:

(1) *CNMI Inshore Area* means that portion of the EEZ within 3 nautical miles from the shoreline of the CNMI.

(2) *CNMI Offshore Area* means that portion of the EEZ seaward of 3 nautical miles from the shoreline of the CNMI.

(c) The outer boundary of each fishery management area is a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured, or is coterminous with adjacent international maritime boundaries, except that the outer boundary of the CNMI Inshore Area is 3 nautical miles from the shoreline. The boundary between the fishery management areas of Guam and CNMI extends to those points which are equidistant between Guam and the island of Rota in the CNMI. CNMI and Guam management subareas are divided by a line intersecting these two points: 148° E. long., 12° N. lat., and 142° E. long., 16° N. lat.

Back to Top

§665.403 Bottomfish fishery area management.

(a) *Guam large vessel bottomfish prohibited area (Area GU-1).* A large vessel of the United States, as defined in §665.12, may not be used to fish for Mariana bottomfish MUS in the Guam large vessel bottomfish prohibited area, defined as the U.S. EEZ waters surrounding Guam that are enclosed by straight lines connecting the following coordinates in the order listed:

Point	N. lat.	E. long.
GU-1-A	14°16′	144°17′
GU-1-B	13°50′	143°52′
GU-1-C	13°17′	143°46′
GU-1-D	12°50′	143°54′

GU-1-E	12°30′	144°14′
GU-1-F	12°25′	144°51′
GU-1-G	12°57′	145°33′
GU-1-H	13°12′	145°43′
GU-1-I	13°29′44″	145°48′27″
GU-1-A	14°16′	144°17′

(b) *CNMI medium and large vessel bottomfish prohibited areas.* A medium or large vessel of the United States, as defined in §665.12, may not be used to fish commercially for Mariana bottomfish MUS in the following areas:

(1) *CNMI Southern Islands (Area NM-1).* The CNMI Southern Islands prohibited area is defined as the waters of the U.S. EEZ surrounding CNMI that are enclosed by straight lines connecting the following coordinates in the order listed:

Point	N. lat.	E. long.
NM-1-A	14°9′	144°15′
NM-1-B	16°10′47″	145°12′
NM-1-C	16°10′47″	146°53′
NM-1-D	14°48′	146°33′
NM-1-E	13°27′	145°43′
NM-1-A	14°9′	144°15′

(2) *CNMI Alamagan Island (Area NM-2).* The CNMI Alamagan Island prohibited area is defined as the waters of the U.S. EEZ surrounding CNMI that are enclosed by straight lines connecting the following coordinates in the order listed:

Point	N. lat.	E. long.
NM-2-A	17°26′	145°40′
NM-2-B	17°46′	145°40′
NM-2-C	17°46′	146°00′

NM-2-D	17°26′	146°00′
NM-2-A	17°26′	145°40′

Back to Top

§665.404 Permits.

(a) *Applicability*—(1) *Guam large vessel.* The owner of any large vessel used to fish for, land, or transship Mariana bottomfish MUS shoreward of the outer boundary of the Guam subarea must have a permit issued under this section, and the permit must be registered for use with that vessel.

(2) Commonwealth of the Northern Mariana Islands (CNMI) commercial. The owner of any vessel used to commercially fish for, transship, receive, or land Mariana bottomfish MUS shoreward of the outer boundary of the CNMI management subarea must have a permit issued under this section, and the permit must be registered for use with that vessel.

(b) *Submission.* An application for a permit required under this section must be submitted to PIRO as described in §665.13.

Back to Top

§665.405 Prohibitions.

In addition to the general prohibitions specified in §600.725 of this chapter and §665.15, it is unlawful for any person to do any of the following:

(a) Fish for Mariana bottomfish MUS using gear prohibited under §665.406.

(b) Use a large vessel that does not have a valid Guam bottomfish permit registered for use with that vessel to fish for, land, or transship Mariana bottomfish MUS shoreward of the outer boundary of the Guam management subarea of the bottomfish fishery management area in violation of §665.404(a).

(c) Use a large vessel to fish for Mariana bottomfish MUS within the Guam large vessel bottomfish prohibited area, as defined in §665.403(a).

(d) Land or transship, shoreward of the outer boundary of the Guam management subarea of the bottomfish fishery management area, Mariana bottomfish MUS that were harvested in violation of §665.405(c).

(e) Use a vessel to fish commercially for Mariana bottomfish MUS shoreward of the outer boundary of the CNMI management subarea without a valid CNMI commercial bottomfish permit registered for use with that vessel, in violation of §665.404(a)(2).

(f) Use a medium or large vessel, as defined in §665.12, to fish for Mariana bottomfish MUS within the CNMI medium and large vessel bottomfish prohibited areas, as defined in §665.403(b).

(g) Retain, land, possess, sell, or offer for sale, shoreward of the outer boundary of the CNMI management subarea, Mariana bottomfish MUS that were harvested in violation of §665.405(f), except that Mariana bottomfish MUS that are harvested legally may be transferred to a receiving vessel

shoreward of the outer boundary of the CNMI medium and large vessel bottomfish prohibited area as defined in §665.403(b).

(h) Falsify or fail to make, keep, maintain, or submit a Federal logbook as required under §665.14(b) when using a vessel to engage in commercial fishing for Mariana bottomfish MUS shoreward of the outer boundary of the CNMI management subarea in violation of §665.14(b).

Back to Top

§665.406 Gear restrictions.

(a) Bottom trawls and bottom set gillnets. Fishing for bottomfish with bottom trawls and bottom set gillnets is prohibited.

(b) *Possession of gear.* Possession of a bottom trawl and bottom set gillnet by any vessel having a permit under §665.404 or otherwise established to be fishing for bottomfish in the management subareas is prohibited.

(c) *Poisons and explosives.* The possession or use of any poisons, explosives, or intoxicating substances for the purpose of harvesting bottomfish is prohibited.

Back to Top

§665.407 At-sea observer coverage.

All fishing vessels subject to §§665.400 through 665.407 must carry an observer when directed to do so by the Regional Administrator.

Back to Top

§§665.408-665.419 [Reserved]

Back to Top

§665.420 Mariana coral reef ecosystem fisheries. [Reserved]

Back to Top

§665.421 Definitions.

As used in §§665.420 through 665.439:

Mariana coral reef ecosystem management unit species (Mariana coral reef ecosystem MUS) means all of the Currently Harvested Coral Reef Taxa and Potentially Harvested Coral Reef Taxa listed in this section and which spend the majority of their non-pelagic (post-settlement) life stages within waters less than or equal to 50 fathoms in total depth.

Mariana Currently Harvested Coral Reef Taxa:

Family name	Local name	English common	Scientific name

	(Chamorro/ Carolinian)	**name**	
Acanthuridae (Surgeonfishes)		orange-spot surgeonfish	*Acanthurus olivaceus.*
	hugupao dangulo/mowagh	yellowfin surgeonfish	*Acanthurus xanthopterus.*
	Kichu/limell	convict tang	*Acanthurus triostegus.*
		eye-striped surgeonfish	*Acanthurus dussumieri.*
		blue-lined surgeon	*Acanthurus nigroris.*
		whitebar surgeonfish	*Acanthurus leucopareius.*
		whitebar surgeonfish	*Acanthurus leucopareius.*
	Hiyok/filaang	blue-banded surgeonfish	*Acanthurus lineatus.*
		blackstreak surgeonfish	*Acanthurus nigricauda.*
		whitecheek surgeonfish	*Acanthurus nigricans.*
		white-spotted surgeonfish	*Acanthurus guttatus.*
		ringtail surgeonfish	*Acanthurus blochii.*
		brown surgeonfish	*Acanthurus nigrofuscus.*
		mimic surgeonfish	*Acanthurus pyroferus.*
		Yellow tang	*Zebrasoma flavescens.*
		striped bristletooth	*Ctenochaetus striatus.*
		twospot bristletooth	*Ctenochaetus binotatus.*
	tataga/igh-falafal	bluespine unicornfish	*Naso unicornus.*
	hangon/bwulaalay	orangespine unicornfish	*Naso lituratus.*
		humpnose	*Naso tuberosus.*

		unicornfish	
		black tongue unicornfish	*Naso hexacanthus.*
		bignose unicornfish	*Naso vlamingii.*
		whitemargin unicornfish	*Naso annulatus.*
		spotted unicornfish	*Naso brevirostris.*
		humpback unicornfish	*Naso brachycentron.*
		gray unicornfish	*Naso caesius.*
Balistidae (Triggerfishes)		titan triggerfish	*Balistoides viridescens.*
		clown triggerfish	*Balistoides conspicillum.*
		orange striped triggerfish	*Balistapus undulatus.*
		pinktail triggerfish	*Melichthys vidua.*
		black triggerfish	*Melichthys niger.*
		blue triggerfish	*Pseudobalistes fuscus.*
		Picassofish	*Rhinecanthus aculeatus.*
		wedged Picassofish	*Balistoides rectangulus.*
		bridled triggerfish	*Sufflamen fraenatus.*
Carangidae (Jacks)	atulai/peti	Bigeye scad	*Selar crumenophthalmus.*
		mackerel scad	*Decapterus macarellus.*
Carcharhinidae (Sharks)		grey reef shark	*Carcharhinus amblyrhynchos.*
		silvertip shark	*Carcharhinus albimarginatus.*
		Galapagos shark	*Carcharhinus galapagensis.*
		blacktip reef shark	*Carcharhinus*

			melanopterus.
		whitetip reef shark	*Triaenodon obesus.*
Holocentridae (Solderfish/Squirrelfish	saksak/mweel	bigscale soldierfish	*Myripristis berndti.*
	sagamelon	bronze soldierfish	*Myripristis adusta.*
	sagamelon	blotcheye soldierfish	*Myripristis murdjan.*
	sagamelon	brick soldierfish	*Myripristis amaena.*
	sagamelon	scarlet soldierfish	*Myripristis pralinia.*
	sagamelon	violet soldierfish	*Myripristis violacea.*
	sagamelon	whitetip soldierfish	*Myripristis vittata.*
	sagamelon	yellowfin soldierfish	*Myripristis chryseres.*
	sagamelon	pearly soldierfish	*Myripristis kuntee.*
	sagamelon	tailspot squirrelfish	*Sargocentron caudimaculatum.*
		file-lined squirrelfish	*Sargocentron microstoma.*
	chalak	crown squirrelfish	*Sargocentron diadema.*
	sagsag/leet	blue-lined squirrelfish	*Sargocentron tiere.*
	sisiok	saber or long jaw squirrelfish	*Sargocentron spiniferum.*
	sagsag/leet	spotfin squirrelfish	*Neoniphon* spp.
Kuhliidae (Flagtails)		barred flag-tail	*Kuhlia mugil.*
Kyphosidae (Rudderfish)	Guili	rudderfish	*Kyphosus biggibus.*
	Guili/schpwul	rudderfish	*Kyphosus cinerascens.*
	guilen puengi/reel	rudderfish	*Kyphosus vaigienses.*
Labridae (Wrasses)	tangison/maam	floral wrasse	*Cheilinus chlorourus.*
	tangison/maam	napoleon wrasse	*Cheilinus undulatus.*
	lalacha mamate/Porou	triple-tail wrasse	*Cheilinus trilobatus.*
		harlequin tuskfish, red-breasted wrasse	*Cheilinus fasciatus.*
		ring-tailed wrasse	*Oxycheilinus*

			unifasciatus.
		razor wrasse	*Xyrichtys pavo.*
		whitepatch wrasse	*Xyrichtys aneitensis.*
		cigar wrasse	*Cheilio inermis.*
		blackeye thicklip	*Hemigymnus melapterus.*
		barred thicklip	*Hemigymnus fasciatus.*
		three-spot wrasse	*Halichoeres trimaculatus.*
		checkerboard wrasse	*Halichoeres hortulanus.*
		weedy surge wrasse	*Halichoeres margaritacous.*
		three-spot wrasse	*Halichoeres trimaculatus.*
		surge wrasse	*Thalassoma purpureum.*
		red ribbon wrasse	*Thalassoma quinquevittatum.*
		sunset wrasse	*Thalassoma lutescens.*
		longface wrasse	*Hologynmosus doliatus.*
		rockmover wrasse	*Novaculichthys taeniourus.*
Mullidae (Goatfishes)		yellow goatfish	*Mulloidichthys* spp.
	satmoneti/wichigh	yellowfin goatfish	*Mulloidichthys vanicolensis.*
	satmoneti (adult) ti'ao (juvenile)	yellowstripe goatfish	*Mulloidichthys flaviolineatus.*
		banded goatfish	*Parupeneus* spp.
	satmonetiyo/failighi	dash-dot goatfish	*Parupeneus barberinus.*
	satmoneti acho/sungoongo	doublebar goatfish	*Parupeneus bifasciatus.*
		redspot goatfish	*Parupeneus*

			heptacanthus.
	satmoneti (adult) ti'ao (juvenile)	white-lined goatfish	*Parupeneus ciliatus.*
	satmoneti (adult) ti'ao (juvenile)	yellowsaddle goatfish	*Parupeneus cyclostomas.*
	satmoneti (adult) ti'ao (juvenile)	side-spot goatfish	*Parupeneus pleurostigma.*
	satmoneti (adult) ti'ao (juvenile)	multi-barred goatfish	*Parupeneus multifaciatus.*
		band tail goatfish	*Upeneus arge.*
Mugilidae (Mullets)	laiguan (adult) Agues (juvenile)	striped mullet	*Mugil cephalus.*
	laiguan (adult) Agues (juvenile)	Engel's mullet	*Moolgarda engeli.*
	laiguan (adult) Agues (juvenile)	fringelip mullet	*Crenimugil crenilabis.*
Muraenidae (Moray eels)		yellowmargin moray eel	*Gymnothorax flavimarginatus.*
		giant moray eel	*Gymnothorax javanicus.*
		undulated moray eel	*Gymnothorax undulatus.*
Octopodidae (Octopus)	gamsun	octopus	*Octopus cyanea.*
	gamsun	octopus	*Octopus ornatus.*
Polynemidae		threadfin	*Polydactylus sexfilis.*
Pricanthidae (Bigeye)		glasseye	*Heteropriacanthus cruentatus.*
		Bigeye	*Priacanthus hamrur.*
Scaridae (Parrotfishes)	atuhong/roow	humphead parrotfish	*Bolbometopon muricatum.*
	palakse (sm.) laggua (lg.)	parrotfish	*Scarus* spp.
	gualafi/oscha	Pacific longnose parrotfish	*Hipposcarus longiceps.*
	palaksin chaguan	stareye parrotfish	*Calotomus carolinus.*

Scombridae	White tuna/ayul	dogtooth tuna	*Gymnosarda unicolor.*
Siganidae (Rabbitfish)	hiting/manahok/llegh	forktail rabbitfish	*Siganus aregentus.*
	hiting	golden rabbitfish	*Siganus guttatus.*
	hiting galagu	gold-spot rabbitfish	*Siganus punctatissimus.*
		Randall's rabbitfish	*Siganus randalli.*
	hiting/sesyon/palawa	scribbled rabbitfish	*Siganus spinus.*
	hiting	vermiculate rabbitfish	*Siganus vermiculatus.*
Sphyraenidae (Barracuda)		Heller's barracuda	*Sphyraena helleri.*
		great barracuda	*Sphyraena barracuda.*
Turbinidae (turban/green snails)	aliling pulan/aliling tulompu	green snails	*Turbo* spp.
		turban shells.	

Mariana Potentially Harvested Coral Reef Taxa:

English common name	**Scientific name**
Wrasses (Those species not listed as Currently Harvested Coral Reef Taxa or CHCRT)	Labridae.
Sharks	Carcharhinidae, Sphyrnidae.
Rays and skates	Dasyatididae, Myliobatidae.
Groupers (Those species not listed as CHCRT or Bottomfish Management Unit Species or BMUS)	Serrandiae.
Jacks and Scads (Those species not listed as CHCRT or BMUS)	Carangidae.
Solderfishes and Squirrelfishes (Those species not listed as CHCRT)	Holocentridae.
Goatfishes (Those species not listed as CHCRT)	Mullidae.
Surgeonfishes (Those species not listed as CHCRT)	Acanthuridae.
Batfishes	Ephippidae.
Monos	Monodactylidae.
Sweetlips	Haemulidae.
Remoras	Echeneidae.

Tilefishes	Malacanthidae.
Emperors (Those species not listed as CHCRT)	Lethrinidae.
Dottybacks	Pseudochromidae.
Prettyfins	Plesiopidae.
Eels (Those species not listed as CHCRT)	Muraenidae, Chlopsidae, Congridae, Ophichthidae.
Cardinalfishes	Apogonidae.
Moorish Idols	Zanclidae.
Trumpetfish	*Aulostomus chinensis.*
Cornetfish	*Fistularia commersoni.*
Butterfly fishes	Chaetodontidae.
Angelfishes	Pomacanthidae.
Damselfishes	Pomacentridae.
Scorpionfishes	Scorpaenidae.
Coral crouchers	Caracanthidae.
Flashlightfishes	Anomalopidae.
Herrings	Clupeidae.
Anchovies	Engraulidae.
Gobies	Gobiidae.
Blennies	Blenniidae.
Barracudas (Those species not listed as CHCRT)	Sphyraenidae.
Snappers (Those species not listed as CHCRT or BMUS)	Lutjanidae.
Trigger fishes (Those species not listed as CHCRT)	Balistidae.
Rabbitfishes (Those species not listed as CHCRT)	Siganidae.
Sandperches	Pinguipedidae.
Dog tooth tuna	*Gymnosarda unicolor.*
Rudderfishes (Those species not listed as CHCRT)	Kyphosidae.
Flounders, Soles	Bothidae.
	Soleidae.

Trunkfishes	Ostraciidae.
Fusiliers	Caesionidae.
Hawkfishes	Cirrhitidae.
Frogfishes	Antennariidae.
Pipefishes, Seahorses	Syngnathidae.
Puffer fishes, Porcupine fishes	Tetradontidae.
Blue corals	Heliopora.
Organpipe corals	Tubipora.
Ahermatypic corals	Azooxanthellates.
Sea cucumbers, Sea urchins (Those species not listed as CHCRT)	Echinoderms. Mollusca.
Sea snails	Gastropoda.
Turban shells	*Trochus* spp.
Sea slugs	Opistobranchs.
Black lipped pearl oyster	*Pinctada margaritifera.*
Giant clam	Tridacnidae.
Other Clams	Other Bivalves.
Mushroom corals	Fungiidae.
Small and large coral polyps	
Fire corals	Millepora.
Soft corals, Gorgonians	
Anemones	Actinaria.
Soft zoanthid corals	Zoanthinaria.
	Hydrozoans, Bryzoans.
Sea squirts	Tunicates.
Sponges	Porifera.
	Cephalopods.
Lobsters, Shrimps/Mantis shrimps, true crabs and hermit crabs (Those species not listed as CMUS)	Crustacea.
Lace corals	Stylasteridae.
Hydroid corals	Solanderidae.

Seaweed	Algae.
Segmented worms	Annelids.
Live rock.	
All other Mariana coral reef ecosystem MUS that are marine plants, invertebrates, and fishes that are not listed in the Mariana CHCRT table or are not Mariana bottomfish, crustacean, precious coral or western Pacific pelagic MUS.	

Back to Top

§665.422 Management area.

The Mariana coral reef management area consists of the U.S. EEZ around Guam and the offshore area of the CNMI or that portion of the U.S. EEZ around CNMI between three nautical miles offshore and the outer boundary of the U.S. EEZ. The inner boundary of the management area is the seaward boundaries of the Territory of Guam, and a line three nautical miles seaward from the shoreline of CNMI. The outer boundary of the management area is the outer boundary of the U.S. EEZ or adjacent international maritime boundaries. The CNMI and Guam management area is divided by a line intersecting these two points: 148° E. long., 12° N. lat., and 142° E. long., 16° N. lat.

Back to Top

§665.423 Relation to other laws.

To ensure consistency between the management regimes of different Federal agencies with shared management responsibilities of fishery resources within the Mariana coral reef ecosystem management area, fishing for Mariana coral reef ecosystem MUS is not allowed within the boundary of a National Wildlife Refuge unless specifically authorized by the USFWS, regardless of whether that refuge was established by action of the President or the Secretary of the Interior.

Back to Top

§665.424 Permits and fees.

(a) *Applicability.* Unless otherwise specified in this subpart, §665.13 applies to coral reef ecosystem permits.

(1) *Special permit.* Any person of the United States fishing for, taking or retaining Mariana coral reef ecosystem MUS must have a special permit if they, or a vessel which they operate, is used to fish for any:

(i) Mariana coral reef ecosystem MUS in low-use MPAs as defined in §665.399;

(ii) Mariana Potentially Harvested Coral Reef Taxa in the coral reef ecosystem management area; or

(iii) Mariana Coral reef ecosystem MUS in the Mariana coral reef ecosystem management area with any gear not specifically allowed in this subpart.

(2) *Transshipment permit.* A receiving vessel must be registered for use with a transshipment permit if that vessel is used in the Mariana coral reef ecosystem management area to land or transship Mariana PHCRT, or any Mariana coral reef ecosystem MUS harvested within low-use MPAs.

(3) *Exceptions.* The following persons are not required to have a permit under this section:

(i) Any person issued a permit to fish under any FEP who incidentally catches Mariana coral reef ecosystem MUS while fishing for bottomfish MUS, crustacean MUS, western Pacific pelagic MUS, precious coral, or seamount groundfish.

(ii) Any person fishing for Mariana CHCRT outside of an MPA, who does not retain any incidentally caught Mariana PHCRT.

(iii) Any person collecting marine organisms for scientific research as described in §665.17, or §600.745 of this chapter.

(b) *Validity.* Each permit will be valid for fishing only in the fishery management area specified on the permit.

(c) *General requirements.* General requirements governing application information, issuance, fees, expiration, replacement, transfer, alteration, display, sanctions, and appeals for permits are contained in §665.13.

(d) *Special permit.* The Regional Administrator shall issue a special permit in accordance with the criteria and procedures specified in this section.

(1) *Application.* An applicant for a special or transshipment permit issued under this section must complete, and submit to the Regional Administrator, a Special Coral Reef Ecosystem Fishing Permit Application Form issued by NMFS. Information in the application form must include, but is not limited to, a statement describing the objectives of the fishing activity for which a special permit is needed, including a general description of the expected disposition of the resources harvested under the permit (i.e., stored live, fresh, frozen, preserved; sold for food, ornamental, research, or other use; and a description of the planned fishing operation, including location of fishing and gear operation, amount and species (directed and incidental) expected to be harvested and estimated habitat and protected species impacts).

(2) *Incomplete applications.* The Regional Administrator may request from an applicant additional information necessary to make the determinations required under this section. An applicant will be notified of an incomplete application within 10 working days of receipt of the application. An incomplete application will not be considered until corrected and completed in writing.

(3) *Issuance.* (i) If an application contains all of the required information, the Regional Administrator will forward copies of the application within 30 days to the Council, the USCG, the fishery management agency of the affected state, and other interested parties who have identified themselves to the Council, and the USFWS.

(ii) Within 60 days following receipt of a complete application, the Regional Administrator will consult with the Council through its Executive Director, USFWS, and the Director of the affected state fishery management agency concerning the permit application, and will receive their recommendations for approval or disapproval of the application based on:

(A) Information provided by the applicant;

(B) The current domestic annual harvesting and processing capacity of the directed and incidental species for which a special permit is being requested;

(C) The current status of resources to be harvested in relation to the overfishing definition in the FEP;

(D) Estimated ecosystem, habitat, and protected species impacts of the proposed activity; and

(E) Other biological and ecological information relevant to the proposal. The applicant will be provided with an opportunity to appear in support of the application.

(iii) Following a review of the Council's recommendation and supporting rationale, the Regional Administrator may:

(A) Concur with the Council's recommendation and, after finding that it is consistent with the goals and objectives of the FEP, the national standards, the Endangered Species Act, and other applicable laws, approve or deny a special permit; or

(B) Reject the Council's recommendation, in which case, written reasons will be provided by the Regional Administrator to the Council for the rejection.

(iv) If the Regional Administrator does not receive a recommendation from the Council within 60 days of Council receipt of the permit application, the Regional Administrator can make a determination of approval or denial independently.

(v) Within 30 working days after the consultation in paragraph (d)(3)(ii) of this section, or as soon as practicable thereafter, NMFS will notify the applicant in writing of the decision to grant or deny the special permit and, if denied, the reasons for the denial. Grounds for denial of a special permit include the following:

(A) The applicant has failed to disclose material information required, or has made false statements as to any material fact, in connection with his or her application.

(B) According to the best scientific information available, the directed or incidental catch in the season or location specified under the permit would detrimentally affect any coral reef resource or coral reef ecosystem in a significant way, including, but not limited to, issues related to spawning grounds or seasons, protected species interactions, EFH, and habitat areas of particular concern (HAPC).

(C) Issuance of the special permit would inequitably allocate fishing privileges among domestic fishermen or would have economic allocation as its sole purpose.

(D) The method or amount of harvest in the season and/or location stated on the permit is considered inappropriate based on previous human or natural impacts in the given area.

(E) NMFS has determined that the maximum number of permits for a given area in a given season has been reached and allocating additional permits in the same area would be detrimental to the resource.

(F) The activity proposed under the special permit would create a significant enforcement problem.

(vi) The Regional Administrator may attach conditions to the special permit, if it is granted, consistent with the management objectives of the FEP, including, but not limited to:

(A) The maximum amount of each resource that can be harvested and landed during the term of the special permit, including trip limits, where appropriate.

(B) The times and places where fishing may be conducted.

(C) The type, size, and amount of gear which may be used by each vessel operated under the special permit.

(D) Data reporting requirements.

(E) Such other conditions as may be necessary to ensure compliance with the purposes of the special permit consistent with the objectives of the FEP.

(4) Appeals of permit actions.

(i) Except as provided in subpart D of 15 CFR part 904, any applicant for a permit or a permit holder may appeal the granting, denial, conditioning, or suspension of their permit or a permit affecting their interests to the Regional Administrator. In order to be considered by the Regional Administrator, such appeal must be in writing, must state the action(s) appealed, and the reasons therefore, and must be submitted within 30 days of the original action(s) by the Regional Administrator. The appellant may request an informal hearing on the appeal.

(ii) Upon receipt of an appeal authorized by this section, the Regional Administrator will notify the permit applicant, or permit holder as appropriate, and will request such additional information and in such form as will allow action upon the appeal. Upon receipt of sufficient information, the Regional Administrator will rule on the appeal in accordance with the permit eligibility criteria set forth in this section and the FEP, as appropriate, based upon information relative to the application on file at NMFS and the Council and any additional information, the summary record kept of any hearing and the hearing officer's recommended decision, if any, and such other considerations as deemed appropriate. The Regional Administrator will notify all interested persons of the decision, and the reasons therefore, in writing, normally within 30 days of the receipt of sufficient information, unless additional time is needed for a hearing.

(iii) If a hearing is requested, or if the Regional Administrator determines that one is appropriate, the Regional Administrator may grant an informal hearing before a hearing officer designated for that purpose after first giving notice of the time, place, and subject matter of the hearing in the FEDERAL REGISTER. Such a hearing shall normally be held no later than 30 days following publication of the notice in the FEDERAL REGISTER, unless the hearing officer extends the time for reasons deemed equitable. The appellant, the applicant (if different), and, at the discretion of the hearing officer, other interested parties, may appear personally and/or be represented by counsel at the hearing and submit information and present arguments as determined appropriate by the hearing officer. Within 30 days of the last day of the hearing, the hearing officer shall recommend in writing a decision to the Regional Administrator.

(iv) The Regional Administrator may adopt the hearing officer's recommended decision, in whole or in part, or may reject or modify it. In any event, the Regional Administrator will notify interested persons of the decision, and the reason(s) therefore, in writing, within 30 days of receipt of the hearing officer's recommended decision. The Regional Administrator's action constitutes final action for the agency for the purposes of the Administrative Procedure Act.

(5) The Regional Administrator may extend, for good cause, any time limit prescribed in this section for a period not to exceed 30 days, either upon his or her own motion or upon written request from the Council, appellant or applicant stating the reason(s) therefore.

Back to Top

§665.425 Prohibitions.

In addition to the general prohibitions specified in §600.725 of this chapter and §665.15 of this part, it is unlawful for any person to do any of the following:

(a) Fish for, take, retain, possess or land any Mariana coral reef ecosystem MUS in any low-use MPA as defined in §665.399 unless:

(1) A valid permit has been issued for the hand harvester or the fishing vessel operator that specifies the applicable area of harvest;

(2) A permit is not required, as outlined in §665.424 of this part; or

(3) The Mariana coral reef ecosystem MUS possessed on board the vessel originated outside the management area and this can be demonstrated through receipts of purchase, invoices, fishing logbooks or other documentation.

(b) Fish for, take, or retain any Mariana coral reef ecosystem MUS species:

(1) That is determined overfished with subsequent rulemaking by the Regional Administrator.

(2) By means of gear or methods prohibited under §665.427.

(3) In a low-use MPA without a valid special permit.

(4) In violation of any permit issued under §§665.13 or 665.424.

(c) Fish for, take, or retain any wild live rock or live hard coral except under a valid special permit for scientific research, aquaculture seed stock collection or traditional and ceremonial purposes by indigenous people.

Back to Top

§665.426 Notifications.

Any special permit holder subject to the requirements of this subpart must contact the appropriate NMFS enforcement agent in American Samoa, Guam, or Hawaii at least 24 hours before landing any Mariana coral reef ecosystem MUS unit species harvested under a special permit, and report the port and the approximate date and time at which the catch will be landed.

Back to Top

§665.427 Allowable gear and gear restrictions.

(a) Mariana coral reef ecosystem MUS may be taken only with the following allowable gear and methods:

(1) Hand harvest;

(2) Spear;

(3) Slurp gun;

(4) Hand net/dip net;

(5) Hoop net for Kona crab;

(6) Throw net;

(7) Barrier net;

(8) Surround/purse net that is attended at all times;

(9) Hook-and-line (includes handline (powered or not), rod-and-reel, and trolling);

(10) Crab and fish traps with vessel ID number affixed; and

(11) Remote-operating vehicles/submersibles.

(b) Mariana coral reef ecosystem MUS may not be taken by means of poisons, explosives, or intoxicating substances. Possession or use of these materials by any permit holder under this subpart who is established to be fishing for Mariana coral reef ecosystem MUS in the management area is prohibited.

(c) Existing FEP fisheries shall follow the allowable gear and methods outlined in their respective plans.

(d) Any person who intends to fish with new gear not included in this section must describe the new gear and its method of deployment in the special permit application. A decision on the permissibility of this gear type will be made by the Regional Administrator after consultation with the Council and the director of the affected state fishery management agency.

Back to Top

§665.428 Gear identification.

(a) The vessel number must be affixed to all fish and crab traps on board the vessel or deployed in the water by any vessel or person holding a permit under §§665.13 or 665.424 or that is otherwise established to be fishing for Mariana coral reef ecosystem MUS in the management area.

(b) *Enforcement action.* (1) Traps not marked in compliance with paragraph (a) of this section and found deployed in the coral reef ecosystem management area will be considered unclaimed or abandoned property, and may be disposed of in any manner considered appropriate by NMFS or an authorized officer.

(2) Unattended surround nets or bait seine nets found deployed in the coral reef ecosystem management area will be considered unclaimed or abandoned property, and may be disposed of in any manner considered appropriate by NMFS or an authorized officer.

Back to Top

§§665.429-665.439 [Reserved]

Back to Top

§665.440 Mariana crustacean fisheries. [Reserved]

Back to Top

§665.441 Definitions.

As used in §§665.440 through 665.459:

Crustacean Permit Area 5 (Permit Area 5) means the EEZ around Guam and the EEZ seaward of points 3 nautical miles from the shoreline of the CNMI.

Mariana crustacean management unit species means the following crustaceans:

Local name	English common name	Scientific name
Mahonggang	spiny lobster	*Panulirus marginatus, Panulirus penicillatus.*
pa'pangpang	slipper lobster	Scyllaridae.
	Kona crab	*Ranina ranina.*
	deepwater shrimp	*Heterocarpus* spp.

Back to Top

§665.442 Permits.

(a) *Applicability.* (1) The owner of any vessel used to fish for lobster in Permit Area 3 must have a permit issued for such a vessel.

(2) The owner of any vessel used to fish for deepwater shrimp in Crustacean Permit Area 5 must have a permit issued for that vessel.

(b) *General requirements.* General requirements governing application information, issuance, fees, expiration, replacement, transfer, alteration, display, sanctions, and appeals for permits issued under this section, as applicable, are contained in §665.13.

(c) *Application.* An application for a permit required under this section shall be submitted to PIRO as described in §665.13. If the application for a limited access permit is submitted on behalf of a partnership or corporation, the application must be accompanied by a supplementary information sheet obtained from PIRO and contain the names and mailing addresses of all partners or shareholders and their respective percentage of ownership in the partnership or corporation.

Back to Top

§665.443 Prohibitions.

In addition to the general prohibitions specified in §600.725 of this chapter and §665.15, it is unlawful for any person in Crustacean Permit Area 5 to fish for, take, or retain deepwater shrimp without a permit issued under §665.442.

Back to Top

§665.444 Notifications.

(a) The operator of any vessel subject to the requirements of this subpart must:

(1) Report, not less than 24 hours, but not more than 36 hours, before landing, the port, the approximate date and the approximate time at which spiny and slipper lobsters will be landed.

(2) Report, not less than 6 hours and not more than 12 hours before offloading, the location and time that offloading of spiny and slipper lobsters will begin.

(b) The Regional Administrator will notify permit holders of any change in the reporting method and schedule required in paragraphs (a)(1) and (2) of this section at least 30 days prior to the opening of the fishing season.

Back to Top

§665.445 At-sea observer coverage.

All fishing vessels subject to §§665.440 through 665.445 and subpart A of this part must carry an observer when requested to do so by the Regional Administrator.

Back to Top

§§665.446-665.459 [Reserved]

Back to Top

§665.460 Mariana precious coral fisheries. [Reserved]

Back to Top

§665.461 Definitions.

Mariana precious coral management unit species means any coral of the genus *Corallium* in addition to the following species of corals:

English common name	Scientific name
Pink coral (also known as red coral)	*Corallium secundum, Corallium regale, Corallium laauense.*
Gold coral	*Gerardia* spp., *Callogorgia gilberti,* *Narella* spp., *Calyptrophora* spp.
Bamboo coral	*Lepidisis olapa, Acanella* spp.
Black coral	*Antipathes dichotoma, Antipathes grandis, Antipathes ulex.*

Mariana precious coral permit area means the area encompassing the precious coral beds within the EEZ around the Mariana Archipelago. Each bed is designated by a permit area code and assigned to one of the following four categories:

(1) Established beds. [Reserved]

(2) Conditional beds. [Reserved]

(3) Refugia. [Reserved]

(4) Exploratory Area.

(i) Permit Area X-P-G includes all coral beds, other than established beds, conditional beds, or refugia, in the EEZ seaward of Guam.

(ii) Permit Area X-P-CNMI includes all coral beds, other than established beds, conditional beds, or refugia, in the EEZ seaward of points 3 nautical miles from the shoreline of the CNMI.

Back to Top

§665.462 Permits.

(a) Any vessel of the United States fishing for, taking, or retaining Mariana precious coral MUS in any Mariana Archipelago precious coral permit area must have a permit issued under §665.13.

(b) Each permit will be valid for fishing only in the permit area specified on the permit. Precious Coral Permit Areas are defined in §665.461.

(c) No more than one permit will be valid for any one vessel at any one time.

(d) No more than one permit will be valid for any one person at any one time.

(e) The holder of a valid permit to fish one permit area may obtain a permit to fish another permit area only upon surrendering to the Regional Administrator any current permit for the precious coral fishery issued under §665.13.

(f) General requirements governing application information, issuance, fees, expiration, replacement, transfer, alteration, display, sanctions, and appeals for permits for the precious coral fishery are contained in §665.13.

Back to Top

§665.463 Prohibitions.

In addition to the general prohibitions specified in §600.725 of this chapter and in §665.15, it is unlawful for any person to:

(a) Use any vessel to fish for, take, retain, possess or land Mariana precious coral MUS in any Mariana precious coral permit area, unless a permit has been issued for that vessel and area as specified in §665.13 and that permit is on board the vessel.

(b) Fish for, take, or retain any species of Mariana precious coral MUS in any Mariana precious coral permit area:

(1) By means of gear or methods prohibited by §665.464.

(2) In refugia specified in §665.461.

(3) In a bed for which the quota specified in §665.467 has been attained.

(4) In violation of any permit issued under §§665.13 or 665.17.

(5) In a bed that has been closed pursuant to §§665.466 or 665.469.

(c) Take and retain, possess, or land any live pink coral or live black coral from any precious coral permit area that is less than the minimum height specified in §665.465 unless: (1) A valid EFP was issued under §665.17 for the vessel and the vessel was operating under the terms of the permit; or

(2) The coral originated outside coral beds listed in this paragraph, and this can be demonstrated through receipts of purchase, invoices, or other documentation.

Back to Top

§665.464 Gear restrictions.

Only selective gear may be used to harvest coral from any precious coral permit area.

Back to Top

§665.465 Size restrictions.

The height of a live coral specimen shall be determined by a straight line measurement taken from its base to its most distal extremity. The stem diameter of a living coral specimen shall be determined by measuring the greatest diameter of the stem at a point no less than 1 inch (2.54 cm) from the top surface of the living holdfast.

(a) Live pink coral harvested from any precious coral permit area must have attained a minimum height of 10 inches (25.4 cm).

(b) *Black coral.* Live black coral harvested from any precious coral permit area must have attained either a minimum stem diameter of 1 inch (2.54 cm), or a minimum height of 48 inches (122 cm).

Back to Top

§665.466 Closures.

(a) If the Regional Administrator determines that the harvest quota for any coral bed will be reached prior to the end of the fishing year, NMFS shall publish a notice to that effect in the FEDERAL REGISTER and shall use other means to notify permit holders. Any such notice must indicate the reason for the closure, the bed being closed, and the effective date of the closure.

(b) A closure is also effective for a permit holder upon the permit holder's actual harvest of the applicable quota.

Back to Top

§665.467 Quotas.

(a) *General.* The quotas limiting the amount of precious coral that may be taken in any precious coral permit area during the fishing year are listed in §665.467(d). Only live coral is counted toward the quota. The accounting period for all quotas begins July 1, 1983.

(b) *Conditional bed closure.* A conditional bed will be closed to all nonselective coral harvesting after the quota for one species of coral has been taken.

(c) *Reserves and reserve release.* The quotas for exploratory areas X-P-G and X-P-CNMI will be held in reserve for harvest by vessels of the United States in the following manner:

(1) At the start of the fishing year, the reserve for the Guam and CNMI exploratory areas will equal the quota minus the estimated domestic annual harvest for that year.

(2) As soon as practicable after December 31 each year, the Regional Administrator will determine the amount harvested by vessels of the United States between July 1 and December 31 of the year that just ended on December 31.

(3) NMFS will release to TALFF an amount of precious coral for each exploratory area equal to the quota minus two times the amount harvested by vessels of the United States in that July 1-December 31 period.

(4) NMFS will publish in the FEDERAL REGISTER a notification of the Regional Administrator's determination and a summary of the information on which it is based as soon as practicable after the determination is made.

(d) The Guam and CNMI exploratory permit areas, X-P-GU and X-P-CNMI, each have annual quotas of 1,000 kg for all precious coral MUS combined with the exception of black corals.

Back to Top

§665.468 Seasons.

The fishing year for precious coral begins on July 1 and ends on June 30 the following year.

Back to Top

§665.469 Gold coral harvest moratorium.

Fishing for, taking, or retaining any gold coral in any precious coral permit area is prohibited through June 30, 2018.

[78 FR 32182, May 29, 2013]

Back to Top

Subpart E—Pacific Remote Island Area Fisheries

Back to Top

§665.598 Management area.

The PRIA fishery management area is the EEZ seaward of Palmyra Atoll, Kingman Reef, Jarvis Island, Baker Island, Howland Island, Johnston Atoll, and Wake Island, Pacific Remote Island Areas with the inner boundary a line coterminous with the seaward boundaries of the above atolls, reefs and islands PRIA and the outer boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured, or is coterminous with adjacent international maritime boundaries.

Back to Top

§665.599 Area restrictions.

Except as provided in §665.934, fishing is prohibited in all no-take MPAs. The following U.S. EEZ waters are no-take MPAs: Landward of the 50 fathom curve at Jarvis, Howland, and Baker Islands, and Kingman Reef; as depicted on National Ocean Survey Chart Numbers 83116 and 83153.

[78 FR 33003, June 3, 2013]

Back to Top

§665.600 PRIA bottomfish fisheries. [Reserved]

Back to Top

§665.601 Definitions.

As used in §§665.600 through 665.619:

PRIA bottomfish fishing permit means the permit required by §665.603 to use a vessel to fish for PRIA bottomfish MUS in the EEZ around the PRIA, or to land bottomfish MUS shoreward of the outer boundary of the EEZ around the PRIA, with the exception of EEZ waters around Midway Atoll.

PRIA bottomfish management unit species (PRIA bottomfish MUS) means the following fish:

English common name	Scientific name
Silver jaw jobfish	*Aphareus rutilans.*
Giant trevally	*Caranx ignobilis.*
Black jack	*Caranx lugubris.*
Blacktip grouper	*Epinephelus fasciatus.*
Sea bass	*Epinephelus quernus.*
Red snapper	*Etelis carbunculus.*

Longtail snapper	*Etelis coruscans.*
Redgill emperor	*Lethrinus rubrioperculatus.*
Yellowtail snapper	*Pristipomoides auricilla.*
Pink snapper	*Pristipomoides filamentosus.*
Pink snapper	*Pristipomoides seiboldii.*
Lunartail, lyretail grouper	*Variola louti.*

Back to Top

§665.602 [Reserved]

Back to Top

§665.603 Permits.

(a) *Applicability.* PRIA. The owner of any vessel used to fish for, land, or transship PRIA bottomfish MUS shoreward of the outer boundary of the PRIA subarea must have a permit issued under this section, and the permit must be registered for use with that vessel.

(b) *Submission.* An application for a permit required under this section must be submitted to PIRO as described in §665.13.

Back to Top

§665.604 Prohibitions.

In addition to the general prohibitions specified in §600.725 of this chapter and §665.16, it is unlawful for any person to do any of the following:

(a) Fish for PRIA bottomfish MUS using gear prohibited under §665.605.

(b) Fish for, or retain on board a vessel, PRIA bottomfish MUS in the PRIA without the appropriate permit registered for use with that vessel issued under §665.13.

(c) Falsify or fail to make or file all reports of PRIA bottomfish MUS landings taken in the PRIA, containing all data in the exact manner, as specified in §665.14(b).

Back to Top

§665.605 Gear restrictions.

(a) *Bottom trawls and bottom set gillnets.* Fishing for PRIA bottomfish MUS with bottom trawls and bottom set gillnets is prohibited.

(b) *Possession of gear.* Possession of a bottom trawl and bottom set gillnet by any vessel having a permit under §665.603 or otherwise established to be fishing for PRIA bottomfish MUS in the PRIA fishery management area is prohibited.

(c) *Poisons and explosives.* The possession or use of any poisons, explosives, or intoxicating substances for the purpose of harvesting PRIA bottomfish is prohibited.

Back to Top

§665.606 At-sea observer coverage.

All fishing vessels subject to §§665.600 through 665.606 must carry an observer when directed to do so by the Regional Administrator.

Back to Top

§§665.607-665.619 [Reserved]

Back to Top

§665.620 PRIA coral reef ecosystem fisheries. [Reserved]

Back to Top

§665.621 Definitions.

As used in §§665.620 through 665.639:

PRIA coral reef ecosystem management unit species (PRIA coral reef ecosystem MUS) means all of the Currently Harvested Coral Reef Taxa and Potentially Harvested Coral Reef Taxa listed in this section and which spend the majority of their non-pelagic (post-settlement) life stages within waters less than or equal to 50 fathoms in total depth.

PRIA Currently Harvested Coral Reef Taxa:

Family name	English common name	Scientific name
Acanthuridae (Surgeonfishes)	orange-spot	*Acanthurus olivaceus.*
	surgeonfish	
	yellowfin surgeonfish	*Acanthurus xanthopterus.*
	convict tang	*Acanthurus triostegus.*
	eye-striped surgeonfish	*Acanthurus dussumieri.*
	blue-lined surgeon	*Acanthurus nigroris.*
	Whitebar surgeonfish	*Acanthurus leucopareius.*
	blue-banded surgeonfish	*Acanthurus lineatus.*
	blackstreak surgeonfish	*Acanthurus nigricauda.*
	whitecheek surgeonfish	*Acanthurus nigricans.*
	white-spotted surgeonfish	*Acanthurus guttatus.*

	Ringtail surgeonfish	*Acanthurus blochii.*
	brown surgeonfish	*Acanthurus nigrofuscus.*
	yellow-eyed surgeonfish	*Ctenochaetus strigosus.*
	striped bristletooth	*Ctenochaetus striatus.*
	twospot bristletooth	*Ctenochaetus binotatus.*
	Yellow tang	*Zebrasoma flavescens.*
	bluespine unicornfish	*Naso unicornus.*
	orangespine unicornfish	*Naso lituratus.*
	black tongue unicornfish	*Naso hexacanthus.*
	bignose unicornfish	*Naso vlamingii.*
	whitemargin unicornfish	*Naso annulatus.*
	spotted unicornfish	*Naso brevirostris.*
Labridae (Wrasses)	Napoleon wrasse	*Cheilinus undulatus.*
	Triple-tail wrasse	*Cheilinus trilobatus.*
	Floral wrasse	*Cheilinus chlorourus.*
	ring-tailed wrasse	*Oxycheilinus unifasciatus.*
	bandcheek wrasse	*Oxycheilinus diagrammus.*
	Barred thicklip	*Hemigymnus fasciatus.*
	three-spot wrasse	*Halichoeres trimaculatus.*
	red ribbon wrasse	*Thalassoma quinquevittatum.*
	Sunset wrasse	*Thalassoma lutescens.*
Mullidae (Goatfishes)	Yellow goatfish	*Mulloidichthys.* spp.
	Orange goatfish	*Mulloidichthys pfleugeri.*
	yellowstripe goatfish	*Mulloidichthys flavolineatus.*
	Banded goatfish	*Parupeneus.* spp.
Mullidae (Goatfishes)	dash-dot goatfish	*Parupeneus barberinus.*
	yellowsaddle goatfish	*Parupeneus cyclostomas.*
	multi-barred goatfish	*Parupeneus multifaciatus.*
	bantail goatfish	*Upeneus arge.*
Mugilidae (Mullets)	fringelip mullet	*Crenimugil crenilabis.*

	engel's mullet	*Moolgarda engeli.*
	false mullet	*Neomyxus leuciscus.*
Muraenidae (Moray eels)	yellowmargin moray eel	*Gymnothorax flavimarginatus.*
	giant moray eel	*Gymnothorax javanicus.*
	undulated moray eel	*Gymnothorax undulatus.*
Octopodidae	Octopus	*Octopus cyanea.*
	Octopus	*Octopus ornatus.*
Pricanthidae (Bigeye)	Glasseye	*Heteropriacanthus cruentatus.*
Scaridae (Parrotfishes)	Humphead parrotfish	*Bolbometopon muricatum.*
	parrotfish	*Scarus.* spp.
	pacific longnose parrotfish	*Hipposcarus longiceps.*
	stareye parrotfish	*Calotomus carolinus.*
Scombridae	Dogtooth tuna	*Gymnosarda unicolor.*
Sphyraenidae (Barracuda)	great barracuda	*Sphyraena barracuda.*

PRIA Potentially Harvested Coral Reef Taxa:

English common name	Scientific name
wrasses (Those species not listed as CHCRT)	Labridae.
sharks (Those species not listed as CHCRT)	Carcharhinidae, Sphyrnidae.
rays and skates	Myliobatidae, Mobulidae.
groupers (Those species not listed as CHCRT or as BMUS)	Serrandiae.
jacks and scads (Those species not listed as CHCRT or as BMUS)	Carangidae.
solderfishes and squirrelfishes (Those species not listed as CHCRT)	Holocentridae.
goatfishes (Those species not listed as CHCRT)	Mullidae.
Batfishes	Ephippidae.
Sweetlips	Haemulidae.
Remoras	Echeneidae.
Tilefishes	Malacanthidae.

Dottybacks	Pseudochromidae.
Prettyfins	Plesiopidae.
surgeonfishes (Those species not listed as CHCRT)	Acanthuridae.
emperors (Those species not listed as CHCRT or as BMUS)	Lethrinidae.
Herrings	Clupeidae.
Gobies	Gobiidae.
snappers (Those species not listed as CHCRT or as BMUS)	Lutjanidae.
trigger fishes (Those species not listed as CHCRT)	Balistidae.
rabbitfishes (Those species not listed as CHCRT)	Siganidae.
eels (Those species not listed as CHCRT)	Muraenidae, Chlopsidae, Congridae, Ophichthidae.
Cardinalfishes	Apogonidae.
moorish idols	Zanclidae.
butterfly fishes	Chaetodontidae.
Angelfishes	Pomacanthidae.
Damselfishes	Pomacentridae.
Scorpionfishes	Scorpaenidae.
Blennies	Blenniidae.
barracudas (Those species not listed as CHCRT)	Sphyraenidae.
Sandperches	Pinguipedidae.
rudderfishes (Those species not listed as CHCRT)	Kyphosidae.
Fusiliers	Caesionidae.
hawkfishes (Those species not listed as CHCRT)	Cirrhitidae.
Frogfishes	Antennariidae.
pipefishes, seahorses	Syngnathidae.
flounders, soles	Bothidae.
Trunkfishes	Ostraciidae.
puffer fishes, porcupine fishes	Tetradontidae.
Trumpetfish	*Aulostomus chinensis.*

Cornetfish	*Fistularia commersoni.*
blue corals	Heliopora.
organpipe corals	Tubipora.
ahermatypic corals	Azooxanthellates.
mushroom corals	Fungiidae.
small and large coral polyps	
fire corals	Millepora.
soft corals, gorgonians	
Anemones	Actinaria.
soft zoanthid corals	Zoanthinaria.
	Hydrozoans, Bryzoans.
sea squirts	Tunicates.
sea cucumbers and sea urchins	Echinoderms.
Those species not listed as CHCRT	Mollusca.
sea snails	Gastropoda.
	Trochus.
sea slugs	Opistobranchs.
black lipped pearl oyster	*Pinctada margaritifera.*
giant clam	Tridacnidae.
other clams	Other Bivalves.
	Cephalopods.
lobsters, shrimps/mantis shrimps, true crabs and hermit crabs (Those species not listed as CMUS)	Crustaceans.
Sponges	Porifera.
lace corals	Stylasteridae.
hydroid corals	Solanderidae.
segmented worms	Annelids.
Seaweed	Algae.
Live rock.	
All other PRIA coral reef ecosystem MUS that are marine plants, invertebrates, and fishes that	

are not listed in the PRIA CHCRT table or are not PRIA bottomfish, crustacean, precious coral, or western Pacific pelagic MUS.

Back to Top

§665.622 [Reserved]

Back to Top

§665.623 Relation to other laws.

To ensure consistency between the management regimes of different Federal agencies with shared management responsibilities of fishery resources within the PRIA fishery management area, fishing for PRIA coral reef ecosystem MUS is not allowed within the boundary of a National Wildlife Refuge unless specifically authorized by the USFWS, regardless of whether that refuge was established by action of the President or the Secretary of the Interior.

Back to Top

§665.624 Permits and fees.

(a) *Applicability.* Unless otherwise specified in this subpart, §665.13 applies to coral reef ecosystem permits.

(1) *Special permit.* Any person of the United States fishing for, taking or retaining PRIA coral reef ecosystem MUS must have a special permit if they, or a vessel which they operate, is used to fish for any:

(i) [Reserved]

(ii) PRIA Potentially Harvested Coral Reef Taxa in the PRIA coral reef ecosystem management area; or

(iii) PRIA Coral reef ecosystem MUS in the PRIA coral reef ecosystem management area with any gear not specifically allowed in this subpart.

(2) *Transshipment permit.* A receiving vessel must be registered for use with a transshipment permit if that vessel is used in the PRIA coral reef ecosystem management area to land or transship PRIA PHCRT, or any PRIA coral reef ecosystem MUS harvested within low-use MPAs.

(3) *Exceptions.* The following persons are not required to have a permit under this section:

(i) Any person issued a permit to fish under any FEP who incidentally catches PRIA coral reef ecosystem MUS while fishing for bottomfish MUS, crustacean MUS, western Pacific pelagic MUS, precious coral, or seamount groundfish.

(ii) Any person fishing for PRIA CHCRT outside of an MPA, who does not retain any incidentally caught PRIA PHCRT.

(iii) Any person collecting marine organisms for scientific research as described in §665.17, or §600.745 of this chapter.

(b) *Validity.* Each permit will be valid for fishing only in the fishery management area specified on the permit.

(c) *General requirements.* General requirements governing application information, issuance, fees, expiration, replacement, transfer, alteration, display, sanctions, and appeals for permits are contained in §665.13.

(d) *Special permit.* The Regional Administrator shall issue a special permit in accordance with the criteria and procedures specified in this section.

(1) *Application.* An applicant for a special or transshipment permit issued under this section must complete and submit to the Regional Administrator a Special Coral Reef Ecosystem Fishing Permit Application Form issued by NMFS. Information in the application form must include, but is not limited to, a statement describing the objectives of the fishing activity for which a special permit is needed, including a general description of the expected disposition of the resources harvested under the permit (*i.e.,* stored live, fresh, frozen, preserved; sold for food, ornamental, research, or other use; and a description of the planned fishing operation, including location of fishing and gear operation, amount and species (directed and incidental) expected to be harvested and estimated habitat and protected species impacts).

(2) *Incomplete applications.* The Regional Administrator may request from an applicant additional information necessary to make the determinations required under this section. An applicant will be notified of an incomplete application within 10 working days of receipt of the application. An incomplete application will not be considered until corrected and completed in writing.

(3) *Issuance.* (i) If an application contains all of the required information, the Regional Administrator will forward copies of the application within 30 days to the Council, the USCG, the fishery management agency of the affected state, and other interested parties who have identified themselves to the Council, and the USFWS.

(ii) Within 60 days following receipt of a complete application, the Regional Administrator will consult with the Council through its Executive Director, USFWS, and the Director of the affected state fishery management agency concerning the permit application and will receive their recommendations for approval or disapproval of the application based on:

(A) Information provided by the applicant;

(B) The current domestic annual harvesting and processing capacity of the directed and incidental species for which a special permit is being requested;

(C) The current status of resources to be harvested in relation to the overfishing definition in the FEP;

(D) Estimated ecosystem, habitat, and protected species impacts of the proposed activity; and

(E) Other biological and ecological information relevant to the proposal. The applicant will be provided with an opportunity to appear in support of the application.

(iii) Following a review of the Council's recommendation and supporting rationale, the Regional Administrator may:

(A) Concur with the Council's recommendation and, after finding that it is consistent with the goals and objectives of the FEP, the national standards, the Endangered Species Act, and other applicable laws, approve or deny a special permit; or

(B) Reject the Council's recommendation, in which case, written reasons will be provided by the Regional Administrator to the Council for the rejection.

(iv) If the Regional Administrator does not receive a recommendation from the Council within 60 days of Council receipt of the permit application, the Regional Administrator can make a determination of approval or denial independently.

(v) Within 30 working days after the consultation in paragraph (d)(3)(ii) of this section, or as soon as practicable thereafter, NMFS will notify the applicant in writing of the decision to grant or deny the special permit and, if denied, the reasons for the denial. Grounds for denial of a special permit include the following:

(A) The applicant has failed to disclose material information required, or has made false statements as to any material fact, in connection with his or her application.

(B) According to the best scientific information available, the directed or incidental catch in the season or location specified under the permit would detrimentally affect any coral reef resource or coral reef ecosystem in a significant way, including, but not limited to issues related to, spawning grounds or seasons, protected species interactions, EFH, and habitat areas of particular concern (HAPC).

(C) Issuance of the special permit would inequitably allocate fishing privileges among domestic fishermen or would have economic allocation as its sole purpose.

(D) The method or amount of harvest in the season and/or location stated on the permit is considered inappropriate based on previous human or natural impacts in the given area.

(E) NMFS has determined that the maximum number of permits for a given area in a given season has been reached and allocating additional permits in the same area would be detrimental to the resource.

(F) The activity proposed under the special permit would create a significant enforcement problem.

(vi) The Regional Administrator may attach conditions to the special permit, if it is granted, consistent with the management objectives of the FEP, including but not limited to:

(A) The maximum amount of each resource that can be harvested and landed during the term of the special permit, including trip limits, where appropriate.

(B) The times and places where fishing may be conducted.

(C) The type, size, and amount of gear which may be used by each vessel operated under the special permit.

(D) Data reporting requirements.

(E) Such other conditions as may be necessary to ensure compliance with the purposes of the special permit consistent with the objectives of the FEP.

(4) Appeals of permit actions.

(i) Except as provided in subpart D of 15 CFR part 904, any applicant for a permit or a permit holder may appeal the granting, denial, conditioning, or suspension of their permit or a permit affecting their

interests to the Regional Administrator. In order to be considered by the Regional Administrator, such appeal must be in writing, must state the action(s) appealed, and the reasons therefore, and must be submitted within 30 days of the original action(s) by the Regional Administrator. The appellant may request an informal hearing on the appeal.

(ii) Upon receipt of an appeal authorized by this section, the Regional Administrator will notify the permit applicant, or permit holder as appropriate, and will request such additional information and in such form as will allow action upon the appeal. Upon receipt of sufficient information, the Regional Administrator will rule on the appeal in accordance with the permit eligibility criteria set forth in this section and the FEP, as appropriate, based upon information relative to the application on file at NMFS and the Council and any additional information, the summary record kept of any hearing and the hearing officer's recommended decision, if any, and such other considerations as deemed appropriate. The Regional Administrator will notify all interested persons of the decision, and the reasons therefor, in writing, normally within 30 days of the receipt of sufficient information, unless additional time is needed for a hearing.

(iii) If a hearing is requested, or if the Regional Administrator determines that one is appropriate, the Regional Administrator may grant an informal hearing before a hearing officer designated for that purpose after first giving notice of the time, place, and subject matter of the hearing in the FEDERAL REGISTER. Such a hearing shall normally be held no later than 30 days following publication of the notice in the FEDERAL REGISTER, unless the hearing officer extends the time for reasons deemed equitable. The appellant, the applicant (if different), and, at the discretion of the hearing officer, other interested parties, may appear personally and/or be represented by counsel at the hearing and submit information and present arguments as determined appropriate by the hearing officer. Within 30 days of the last day of the hearing, the hearing officer shall recommend in writing a decision to the Regional Administrator.

(iv) The Regional Administrator may adopt the hearing officer's recommended decision, in whole or in part, or may reject or modify it. In any event, the Regional Administrator shall notify interested persons of the decision, and the reason(s) therefore, in writing, within 30 days of receipt of the hearing officer's recommended decision. The Regional Administrator's action constitutes final action for the agency for the purposes of the Administrative Procedure Act.

(5) The Regional Administrator may, for good cause, extend any time limit prescribed in this section for a period not to exceed 30 days, either upon his or her own motion or upon written request from the Council, appellant or applicant stating the reason(s) therefore.

[75 FR 2205, Jan. 14, 2010, as amended at 78 FR 33003, June 3, 2013]

Back to Top

§665.625 Prohibitions.

In addition to the general prohibitions specified in §600.725 of this chapter and §665.15, it is unlawful for any person to do any of the following:

(a) [Reserved]

(b) Fish for, take, or retain any PRIA coral reef ecosystem MUS species:

(1) That is determined overfished with subsequent rulemaking by the Regional Administrator.

(2) By means of gear or methods prohibited under §665.627.

(3) [Reserved]

(4) In violation of any permit issued under §§665.13 or 665.624.

(c) Fish for, take, or retain any wild live rock or live hard coral except under a valid special permit for scientific research, aquaculture seed stock collection or traditional and ceremonial purposes by indigenous people.

[75 FR 2205, Jan. 14, 2010, as amended at 78 FR 33003, June 3, 2013]

Back to Top

§665.626 Notifications.

Any special permit holder subject to the requirements of this subpart must contact the appropriate NMFS enforcement agent in American Samoa, Guam, or Hawaii at least 24 hours before landing any PRIA coral reef ecosystem MUS unit species harvested under a special permit, and report the port and the approximate date and time at which the catch will be landed.

Back to Top

§665.627 Allowable gear and gear restrictions.

(a) Coral reef ecosystem MUS may be taken only with the following allowable gear and methods:

(1) Hand harvest;

(2) Spear;

(3) Slurp gun;

(4) Hand net/dip net;

(5) Hoop net for Kona crab;

(6) Throw net;

(7) Barrier net;

(8) Surround/purse net that is attended at all times;

(9) Hook-and-line (includes handline (powered or not), rod-and-reel, and trolling);

(10) Crab and fish traps with vessel ID number affixed; and

(11) Remote-operating vehicles/submersibles.

(b) PRIA coral reef ecosystem MUS may not be taken by means of poisons, explosives, or intoxicating substances. Possession or use of these materials by any permit holder under this subpart who is established to be fishing for coral reef ecosystem MUS in the management area is prohibited.

(c) PRIA coral reef ecosystem MUS may not be taken by means of spearfishing with SCUBA at night (from 6 p.m. to 6 a.m.) in the U.S. EEZ waters around Howland Island, Baker Island, Jarvis Island, Wake Island, Kingman Reef, Johnston Atoll and Palmyra Atoll.

(d) Existing FEP fisheries shall follow the allowable gear and methods outlined in their respective plans.

(e) Any person who intends to fish with new gear not included in this section must describe the new gear and its method of deployment in the special permit application. A decision on the permissibility of this gear type will be made by the Regional Administrator after consultation with the Council and the director of the affected state fishery management agency.

Back to Top

§665.628 Gear identification.

(a) The vessel number must be affixed to all fish and crab traps on board the vessel or deployed in the water by any vessel or person holding a permit under §§665.13 or 665.624 or that is otherwise established to be fishing for PRIA coral reef ecosystem MUS in the PRIA fishery management area.

(b) *Enforcement action.* (1) Traps not marked in compliance with paragraph (a) of this section and found deployed in the PRIA fishery management area will be considered unclaimed or abandoned property, and may be disposed of in any manner considered appropriate by NMFS or an authorized officer.

(2) Unattended surround nets or bait seine nets found deployed in the coral reef ecosystem management area will be considered unclaimed or abandoned property, and may be disposed of in any manner considered appropriate by NMFS or an authorized officer.

Back to Top

§§665.629-665.639 [Reserved]

Back to Top

§665.640 PRIA crustacean fisheries. [Reserved]

Back to Top

§665.641 Definitions.

As used in §§665.640 through 665.659:

Crustacean Permit Area 4 (Permit Area 4) means the EEZ around Palmyra Atoll, Kingman Reef, Jarvis Island, Baker Island, Howland Island, Johnston Atoll, and Wake Island.

PRIA crustacean fishing permit means the permit required by §665.642 to use a vessel to fish for PRIA crustacean MUS in the PRIA fishery management area, or to land crustacean MUS shoreward of the outer boundary of the PRIA fishery management area.

PRIA crustacean management unit species means the following crustaceans:

English common name	Scientific name
Spiny lobster	*Panulirus marginatus, Panulirus penicillatus.*
Slipper lobster	Scyllaridae.
Kona crab	*Ranina ranina.*
Deepwater shrimp	*Heterocarpus.* spp.

Back to Top

§665.642 Permits.

(a) *Applicability.* (1) The owner of any vessel used to fish for lobster in Permit Area 4 must have a permit issued for that vessel.

(2) The owner of any vessel used to fish for deepwater shrimp in Crustacean Permit Area 4 must have a permit issued for that vessel.

(b) *General requirements.* General requirements governing application information, issuance, fees, expiration, replacement, transfer, alteration, display, sanctions, and appeals for permits issued under this section, as applicable, are contained in §665.13.

(c) *Application.* An application for a permit required under this section will be submitted to PIRO as described in §665.13. If the application for a limited access permit is submitted on behalf of a partnership or corporation, the application must be accompanied by a supplementary information sheet obtained from PIRO and contain the names and mailing addresses of all partners or shareholders and their respective percentage of ownership in the partnership or corporation.

Back to Top

§665.643 Prohibitions.

In addition to the general prohibitions specified in §600.725 of this chapter and §665.15, it is unlawful for any person in Crustacean Permit Area 4 to fish for, take, or retain deepwater shrimp without a permit issued under §665.642.

Back to Top

§665.644 Notifications.

(a) The operator of any vessel subject to the requirements of this subpart must:

(1) Report, not less than 24 hours, but not more than 36 hours, before landing, the port, the approximate date and the approximate time at which spiny and slipper lobsters will be landed.

(2) Report, not less than 6 hours and not more than 12 hours before offloading, the location and time that offloading of spiny and slipper lobsters will begin.

(b) The Regional Administrator will notify permit holders of any change in the reporting method and schedule required in paragraphs (a)(1) and (2) of this section at least 30 days prior to the opening of the fishing season.

Back to Top

§665.645 At-sea observer coverage.

All fishing vessels subject to §§665.640 through 665.645 and subpart A of this part must carry an observer when requested to do so by the Regional Administrator.

Back to Top

§§665.646-665.659 [Reserved]

Back to Top

§665.660 PRIA precious coral fisheries. [Reserved]

Back to Top

§665.661 Definitions.

As used in §§665.660 through 665.669:

PRIA precious coral management unit species (PRIA precious coral MUS) means any coral of the genus *Corallium* in addition to the following species of corals:

English common name	Scientific name
Pink coral (also known as red coral)	*Corallium secundum, Corallium regale, Corallium laauense.*
Gold coral	*Gerardia* spp., *Callogorgia gilberti,* *Narella* spp., *Calyptrophora* spp.
Bamboo coral	*Lepidisis olapa, Acanella* spp.
Black coral	*Antipathes dichotoma, Antipathes grandis, Antipathes ulex.*

PRIA precious coral permit area means the area encompassing the precious coral beds within the EEZ around the PRIA. Each bed is designated by a permit area code and assigned to one of the following four categories:

(1) Established beds. [*Reserved*]

(2) Conditional beds. [*Reserved*]

(3) Refugia. [*Reserved*]

(4) Exploratory Area. Permit Area X-P-PI includes all coral beds, other than established beds, conditional beds, or refugia, in the EEZ seaward Palmyra Atoll, Kingman Reef, Jarvis Island, Baker Island, Howland Island, Johnston Atoll and Wake Island.

Back to Top

§665.662 Permits.

(a) Any vessel of the United States fishing for, taking, or retaining PRIA precious coral MUS in any PRIA precious coral permit area must have a permit issued under §665.13.

(b) Each permit will be valid for fishing only in the permit area specified on the permit. Precious Coral Permit Areas are defined in §665.661.

(c) No more than one permit will be valid for any one vessel at any one time.

(d) No more than one permit will be valid for any one person at any one time.

(e) The holder of a valid permit to fish one permit area may obtain a permit to fish another permit area only upon surrendering to the Regional Administrator any current permit for the precious coral fishery issued under §665.13.

(f) General requirements governing application information, issuance, fees, expiration, replacement, transfer, alteration, display, sanctions, and appeals for permits for the precious coral fishery are contained in §665.13.

Back to Top

§665.663 Prohibitions.

In addition to the general prohibitions specified in §600.725 of this chapter and in §665.15, it is unlawful for any person to:

(a) Use any vessel to fish for, take, retain, possess or land PRIA precious coral MUS in any precious coral permit area, unless a permit has been issued for that vessel and area as specified in §665.13 and that permit is on board the vessel.

(b) Fish for, take, or retain any species of PRIA precious coral MUS in any precious coral permit area:

(1) By means of gear or methods prohibited by §665.664.

(2) In refugia specified in §665.661.

(3) In a bed for which the quota specified in §665.667 has been attained.

(4) In violation of any permit issued under §§665.13 or 665.17.

(5) In a bed that has been closed pursuant to §§665.666 or 665.669.

(c) Take and retain, possess, or land any live pink coral or live black coral from any precious coral permit area that is less than the minimum height specified in §665.665 unless:

(1) A valid EFP was issued under §665.17 for the vessel and the vessel was operating under the terms of the permit; or

(2) The coral originated outside coral beds listed in this paragraph, and this can be demonstrated through receipts of purchase, invoices, or other documentation.

Back to Top

§665.664 Gear restrictions.

Only selective gear may be used to harvest coral from any precious coral permit area.

Back to Top

§665.665 Size restrictions.

The height of a live coral specimen shall be determined by a straight line measurement taken from its base to its most distal extremity. The stem diameter of a living coral specimen shall be determined by measuring the greatest diameter of the stem at a point no less than 1 inch (2.54 cm) from the top surface of the living holdfast.

(a) Live pink coral harvested from any precious coral permit area must have attained a minimum height of 10 inches (25.4 cm).

(b) *Black coral.* Live black coral harvested from any precious coral permit area must have attained either a minimum stem diameter of 1 inch (2.54 cm), or a minimum height of 48 inches (122 cm).

Back to Top

§665.666 Closures.

(a) If the Regional Administrator determines that the harvest quota for any coral bed will be reached prior to the end of the fishing year, NMFS shall publish a notice to that effect in the FEDERAL REGISTER and shall use other means to notify permit holders. Any such notice must indicate the reason for the closure, the bed being closed, and the effective date of the closure.

(b) A closure is also effective for a permit holder upon the permit holder's actual harvest of the applicable quota.

Back to Top

§665.667 Quotas.

(a) *General.* The quotas limiting the amount of precious coral that may be taken in any precious coral permit area during the fishing year are listed in §665.667(d). Only live coral is counted toward the quota. The accounting period for all quotas begins July 1, 1983.

(b) *Conditional bed closure.* A conditional bed will be closed to all nonselective coral harvesting after the quota for one species of coral has been taken.

(c) *Reserves and reserve release.* The quotas for exploratory area, X-P-PI, will be held in reserve for harvest by vessels of the United States in the following manner: (1) At the start of the fishing year, the reserve for the PRIA exploratory area will equal the quota minus the estimated domestic annual harvest for that year. (2) As soon as practicable after December 31 each year, the Regional Administrator will determine the amount harvested by vessels of the United States between July 1 and December 31 of the year that just ended on December 31. (3) NMFS will release to TALFF an amount of precious coral for each exploratory area equal to the quota minus two times the amount harvested by vessels of the United States in that July 1-December 31 period. (4) NMFS will publish in the FEDERAL REGISTER a notification of the Regional Administrator's determination and a summary of the information on which it is based as soon as practicable after the determination is made.

(d) PRIA exploratory permit area, X-P-PI, has an annual quota of 1,000 kg for all precious coral MUS combined with the exception of black corals.

Back to Top

§665.668 Seasons.

The fishing year for precious coral begins on July 1 and ends on June 30 the following year.

Back to Top

§665.669 Gold coral harvest moratorium.

Fishing for, taking, or retaining any gold coral in any precious coral permit area is prohibited through June 30, 2018.

[78 FR 32182, May 29, 2013]

Back to Top

Subpart G—Marianas Trench Marine National Monument

SOURCE: 78 FR 33003, June 3, 2013, unless otherwise noted.

Back to Top

§665.900 Scope and purpose.

The regulations in this subpart codify certain provisions of the Proclamation, and govern the administration of fishing in the Monument. Nothing in this subpart shall be deemed to diminish or enlarge the jurisdiction of the Territory of Guam or the Commonwealth of the Northern Mariana Islands.

Back to Top

§665.901 Boundaries.

The Marianas Trench Marine National Monument includes the following:

(a) *Islands Unit.* The Islands Unit includes the waters and submerged lands of the three northernmost Mariana Islands (Farallon de Pajaros (Uracas), Maug, and Asuncion). The shoreward boundary of the Islands Unit is the mean low water line. The seaward boundary of Islands Unit is defined by straight lines connecting the following coordinates in the order listed:

ID	E. long.	N. lat.
1	144°1′22.97″	21°23′42.40″
2	145°33′25.20″	21°23′42.40″
3	145°44′31.14″	21°11′14.60″
4	146°18′36.75″	20°49′17.46″
5	146°18′36.75″	19°22′0.00″
6	145°3′12.22″	19°22′0.00″
7	144°1′22.97″	20°45′44.11″
1	144°1′22.97″	21°23′42.40″

(b) *Volcanic Unit.* The Volcanic Unit includes the submerged lands of designated volcanic sites. The boundaries of the Volcanic Unit are defined as circles of a one nautical mile radius centered on each of the following points:

ID	E. long.	N. lat.
Fukujin	143°27′30″	21°56′30″
Minami Kasuga #2	143°38′30″	21°36′36″
N.W. Eifuku	144°2′36″	21°29′15″
Minami Kasuga #3	143°38′0″	21°24′0″
Daikoku	144°11′39″	21°19′27″
Ahyi	145°1′45″	20°26′15″
Maug	145°13′18″	20°1′15″
Alice Springs	144°30′0″	18°12′0″
Central trough	144°45′0″	18°1′0″

Zealandia	145°51′4″	16°52′57″
E. Diamante	145°40′47″	15°56′31″
Ruby	145°34′24″	15°36′15″
Esmeralda	145°14′45″	14°57′30″
N.W. Rota #1	144°46′30″	14°36′0″
W. Rota	144°50′0″	14°19′30″
Forecast	143°55′12″	13°23′30″
Seamount X	144°1′0″	13°14′48″
South Backarc	143°37′8″	12°57′12″
Archaean site	143°37′55″	12°56′23″
Pika site	143°38′55″	12°55′7″
Toto	143°31′42″	12°42′48″

(c) *Trench Unit.* The Trench Unit includes the submerged lands of the Marianas Trench. The boundary of the Trench Unit extends from the northern limit of the EEZ around the Commonwealth of the Northern Mariana Islands to the southern limit of the EEZ around Guam as defined by straight lines connecting the following coordinates in the order listed:

ID	E. long.	N. lat.
1	145°5′46″	23°53′35″
2	145°52′27.10″	23°45′50.54″
3	146°36′18.91″	23°29′18.33″
4	147°5′16.84″	23°11′43.92″
5	147°22′31.43″	20°38′41.35″
6	147°40′48.31″	19°59′23.30″
7	147°39′59.51″	19°27′2.96″

8	147°48′51.61″	19°8′18.74″
9	148°21′47.20″	18°56′6.46″
10	148°42′50.50″	17°58′2.20″
11	148°34′47.12″	16°40′53.86″
12	148°5′39.95″	15°25′51.09″
13	146°23′24.38″	12°21′38.38″
14	145°28′33.28″	11°34′7.64″
15	143°3′9″	10°57′30″
16	142°19′54.93″	11°47′24.83″
17	144°42′31.24″	12°21′24.65″
18	145°17′59.93″	12°33′5.35″
19	147°29′32.24″	15°49′25.53″
20	147°27′32.35″	17°57′52.76″
21	147°20′16.96″	19°9′19.41″
22	146°57′55.31″	20°23′58.80″
23	145°44′31.14″	21°11′14.60″
24	144°5′27.55″	23°2′28.67″
1	145°5′46″	23°53′35″

Back to Top

§665.902 Definitions.

The following definitions are used in this subpart:

Management unit species or MUS means the Mariana Archipelago management unit species as defined in §§665.401, 665.421, 665.441, and 665.461, and the pelagic management unit species as defined in §665.800.

Monument means the submerged lands and, where applicable, waters of the Marianas Trench Marine National Monument as defined in §665.901.

Proclamation means Presidential Proclamation 8335 of January 6, 2009, "Establishment of the Marianas Trench Marine National Monument."

Back to Top

§665.903 Prohibitions.

In addition to the general prohibitions specified in §600.725 of this chapter, and §665.15 and subpart D of this part, the following activities are prohibited in the Islands Unit and, thus, unlawful for a person to conduct or cause to be conducted.

(a) Commercial fishing in violation of §665.904(a).

(b) Non-commercial fishing, except as authorized under permit and pursuant to the procedures and criteria established in §665.905.

(c) Transferring a permit in violation of §665.905(d).

(d) Commercial fishing outside the Islands Unit and non-commercial fishing within the Islands Unit on the same trip in violation of §665.904(c).

[78 FR 33003, June 3, 2013, as amended at 78 FR 39583, July 2, 2013]

Back to Top

§665.904 Regulated activities.

(a) Commercial fishing is prohibited in the Islands Unit.

(b) Non-commercial fishing is prohibited in the Islands Unit, except as authorized under permit and pursuant to the procedures and criteria established in §665.905.

(c) Commercial fishing outside the Islands Unit and non-commercial fishing within the Islands Unit during the same trip is prohibited.

[78 FR 33003, June 3, 2013, as amended at 78 FR 39583, July 2, 2013]

Back to Top

§665.905 Fishing permit procedures and criteria.

(a) *Marianas Trench Monument Islands Unit non-commercial permit*—(1) *Applicability.* Both the owner and operator of a vessel used to non-commercially fish for, take, retain, or possess MUS in the Islands Unit must have a permit issued under this section, and the permit must be registered for use with that vessel.

(2) *Eligibility criteria.* A permit issued under this section may be issued only to a community resident of Guam or the CNMI.

(3) *Terms and conditions.* (i) Customary exchange of fish harvested within the Islands Unit under a non-commercial permit is allowed, except that customary exchange by fishermen engaged in recreational fishing is prohibited.

(ii) Monetary reimbursement under customary exchange shall not exceed actual fishing trip expenses, including but not limited to ice, bait, fuel, or food.

(b) *Marianas Trench Monument Islands Unit recreational charter permit*—(1) *Applicability.* Both the owner and operator of a vessel chartered to recreationally fish for, take, retain, or possess MUS in the Islands Unit must have a permit issued under this section, and the permit must be registered for use with that vessel. Charter boat customers are not required to obtain a permit.

(2) *Eligibility criteria.* To be eligible for a permit issued under this section, a charter business must be established legally under the laws of Guam or the CNMI.

(3) *Terms and conditions.* (i) The sale or exchange through barter or trade of fish caught in the Monument by a charter boat is prohibited.

(ii) No MUS harvested under a recreational charter fishing permit may be used for the purposes of customary exchange.

(c) *Application.* An application for a permit required under this section must be submitted to PIRO as described in §665.13.

(d) *Transfer.* A permit issued under this section is not transferrable.

(e) *Reporting and recordkeeping.* The operator of a vessel subject to the requirements of this section must comply with the terms and conditions described in §665.14.

[78 FR 33003, June 3, 2013, as amended at 78 FR 39583, July 2, 2013]

Back to Top

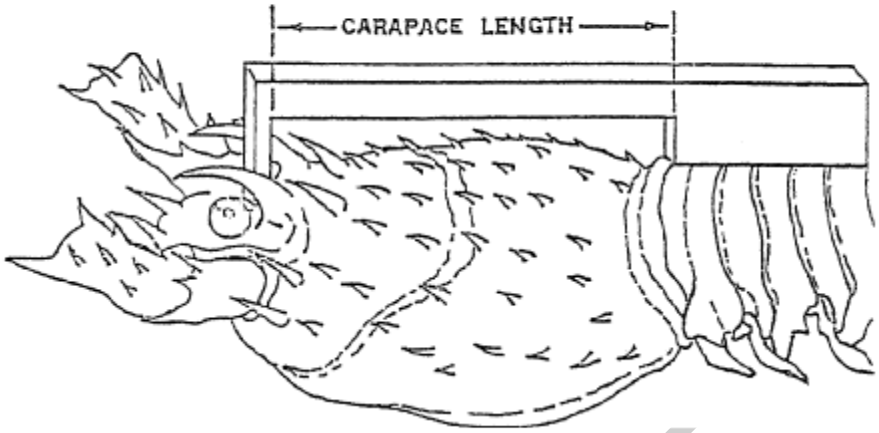
§665.906 International law.

The regulations in this subpart shall be applied in accordance with international law. No restrictions shall apply to or be enforced against a person who is not a citizen, national, or resident alien of the United States (including foreign flag vessels) unless in accordance with international law.

Back to Top

Figure 1 to Part 665—Carapace Length of Lobsters

FIGURE 1 TO PART 665. CARAPACE LENGTH OF LOBSTERS

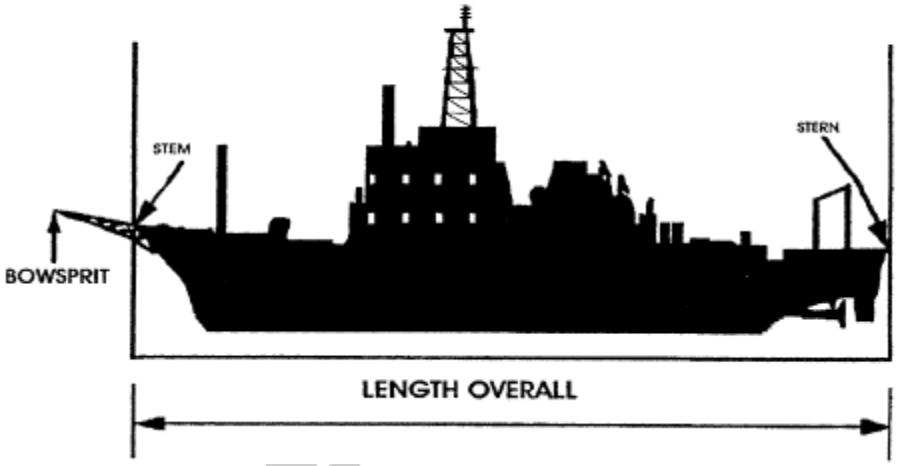


View or download PDF

Back to Top

Figure 2 to Part 665—Length of Fishing Vessels

FIGURE 2 TO PART 665. LENGTH OF FISHING VESSELS

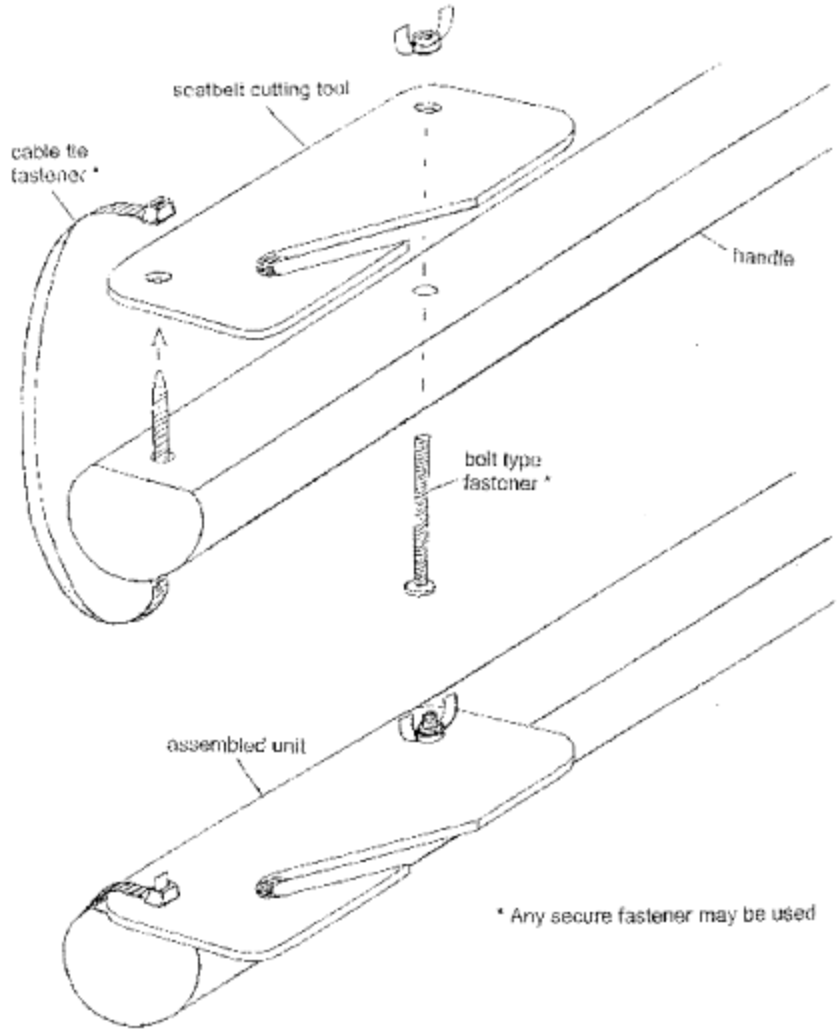


View or download PDF

Back to Top

Figure 3 to Part 665—Sample Fabricated Arceneaux Line Clipper

FIGURE 3 TO PART 665. SAMPLE FABRICATED ARCENEAUX LINE CLIPPER



View or download PDF

Back to Top

This page was intentionally left blank.

Appendix D: Summary of Fishery Management Plan and Fishery Ecosystem Plan Amendments

1. Fishery Management Plan Amendments

FMP for Precious Corals of the Western Pacific Region

The fishery management plan (FMP) for Precious Coral Fisheries of the Western Pacific Region was implemented in September 1983 (48 FR 39229, September 29, 1983) and established the plan's management unit species, management areas and classified several known precious coral beds. Since 1983, the FMP has been amended seven times with each amendment summarized in **Table** 1.

Table 1. Amendments to the Precious Coral FMP

No.	Effective Date/Federal Register Notice	Action
7	8/13/08 73 FR 47098	Designated the Auau Channel bed as an established bed with a harvest quota for black coral of 5,000 kg every two years for Federal and state waters combined. Implemented a five year gold harvest moratorium for the entire region.
6	9/12/06 71 FR 53605	Included Federal waters around CNMI and the Pacific Remote Island Areas within the FMP's management area. Extended existing requirements for Federal permits and logbooks to include all harvests of precious corals in EEZ waters in these areas.
5	2/24/04 69 FR 8336	Prepared in parallel with the Coral Reef FMP. Prohibits the harvest of Precious Coral Management Unit Species in the no-take marine protected areas established under the Coral Reef FMP, including areas around Rose Atoll in American Samoa, Kingman Reef, Jarvis Island, Howland Island, and Baker Island.
4	4/19/99 64 FR 19067 8/5/03 56 FR 14866	Addressed new requirements under the 1996 Sustainable Fisheries Act (SFA). Portions of the amendment that were immediately approved included designations of essential fish habitat, definitions of overfishing and descriptions of bycatch and of some fishing communities. Those provisions became effective on February 3, 1999. Remaining provisions regarding Hawaii fishing communities became effective August 5, 2003.
3	10/19/98 63 FR 55809	Established a framework procedure for adjusting management measures in the fishery.
2	1/28/91 56 FR 3072	Defined overfishing for Established beds as: an Established bed shall be deemed overfished with respect to recruitment when the total spawning biomass (all species combined) has been reduced to 20% of its unfished condition. This definition applies to all species of precious corals and is based on cohort analysis of the pink coral, *Corallium secundum*.
1	7/21/88	Applied the management measures of the FMP to the Pacific

No.	Effective Date/Federal Register Notice	Action
	50 FR 27519	Remote Island Areas by incorporating them into a single Exploratory Permit Area, expanded the management unit species to include all species of the genus *Corallium*, and outlined provisions for the issuance of experimental fishing permits designed to stimulate the domestic fishery

In addition to FMP amendments, the management program for precious coral fisheries has been modified through several regulatory amendments and framework actions as described below.

Regulatory Amendment 1: Removed an exemption allowing fishermen who reported black coral harvest to the State of Hawaii within five years prior to April 17, 2002 to harvest black coral at a minimum base diameter of 3/4 inch. All harvest of black corals must be done at a minimum of 1 inch base diameter or 48 inch minimum height (72 FR 59259, September 14, 2007).

Framework Action 1: Revised the definitions of "live coral" and "dead coral," suspended the harvest of gold coral at Makapu'u Bed, applied minimum size restrictions only to live precious corals, prohibited the harvest of black coral with a stem diameter of less than one inch or a height of less than 48 inches (with certain exceptions), prohibited the use of non-selective fishing gear to harvest precious corals, and applied the minimum size restrictions for pink coral to all permit areas (67 FR 11941, February 16, 2002).

FMP for Crustacean Fisheries of the Western Pacific Region

The FMP for Crustacean Fisheries of the Western Pacific Region was approved in 1983. Initial provisions of the FMP, which was initially named "Spiny Lobster Fisheries of the Western Pacific Region," went into effect March 9, 1983 (48 FR 5560, 7 February 1983). The FMP implemented the following management measures for the Northwestern Hawaiian Islands (NWHI) management area: federal permit requirements, a minimum size limit for spiny lobsters, gear restrictions, a ban on the harvest of egg-bearing female spiny lobsters, the closure of waters within 20 nm of Laysan Island, all NWHI waters shallower than 10 fm, and all NWHI lagoons, to fishing for spiny lobsters, a mandatory logbook program, and a requirement to carry a fishery observer if directed by the National Marine Fisheries Service. The FMP also implemented permit, data reporting, and observer requirements within EEZ waters around the Main Hawaiian Islands (MHI), American Samoa, and Guam. Since 1983, the Crustacean FMP has been amended 13 times with each amendment summarized in **Table** 2.

Table 2. Amendments to the Crustaceans FMP

No.	Effective Date/Federal Register Notice	Action
13	11/21/08 73 FR 70603	Included the deepwater shrimp genus *Heterocarpus* as Management Unit Species (MUS) within the Crustaceans FMP. Required Federal permits and reporting for deepwater shrimp fishing in all Federal waters of the Western Pacific Region.

No.	Effective Date/Federal Register Notice	Action
12	10/26/06 71 FR 53605	Included federal waters around CNMI and the Pacific Remote Island Areas in the Crustaceans FMP and implemented federal permit and reporting requirements (71 FR 231) for vessels targeting crustacean MUS in these areas.
11	2/24/04 69 FR 8336	Prepared in parallel with the Coral Reef Ecosystems FMP. This amendment prohibits the harvest of Crustacean MUS in the no-take marine protected areas established under the Coral Reef Ecosystems FMP, including Rose Atoll in American Samoa, Kingman Reef, Jarvis Island, Howland Island, and Baker Island. The final rule implementing the Coral Reef Ecosystem FMP (including Amendment 11 to the Crustaceans FMP) became effective 3/25/04.
10	4/19/99 64 FR 19067 8/5/03 68 FR 46112	Addressed new requirements under the 1996 Sustainable Fisheries Act. Portions of the amendment that were immediately approved included designations of essential fish habitat, and descriptions of bycatch and of some fishing communities. Those provisions became effective on February 3, 1999. Remaining portions approved on August 5, 2003, included provisions regarding Hawaii fishing communities, overfishing definitions, and bycatch.
9	7/5/96 61 FR 35145	Established a system by which the annual harvest guideline would be set based on a constant percent of the population (i.e., proportional to the estimated exploitable population size) based on a specified acceptable risk of overfishing. Amendment 9 set this risk level at 10% and specified that annual harvest guidelines be published by NMFS no later than February 28 of each year. Earlier in-season adjustment procedures were eliminated. Earlier minimum size limits and prohibitions on harvesting of egg bearing females were eliminated and a mechanism was provided for certain regulatory adjustments to be made through framework procedures of the FMP.
8	11/10/94 59 FR 56004	Eliminated the NWHI minimum landings requirements for permit renewal, allowed the catch per unit effort target that is used to set the harvest guideline to be changed through the framework process, and modified reporting requirements
7	3/26/92 57 FR 10437	Established a NWHI limited access program, an adjustable fleet-wide NWHI annual harvest guideline, and a closed season (January through June) in the NWHI fishery. Participation was limited to 15 permits (and vessels). Other measures include a maximum limit on the number of traps per vessel (1,100), revisions to reporting requirements, and other provisions
6	1/28/91 56 FR 3071	Defined recruitment overfishing for lobster stocks in terms of reference points expressed in terms of the spawning potential ratio (SPR). The minimum SPR threshold, below which the stock would be considered recruitment overfished, is 20%.

No.	Effective Date/Federal Register Notice	Action
5	1987	Implemented a minimum size for slipper lobster (5.6 cm tail width), required the release of egg-bearing female slipper lobsters, required escape vents in all lobster traps, and revised some of the permit application and reporting requirements. It also changed the name of the FMP from "Spiny Lobster Fisheries" to "Crustaceans Fisheries."
4	1986	Applied existing NWHI closed areas to slipper lobsters.
3	1985	Revised the minimum spiny lobster size specifications for the NWHI management area to a limit on tail width (5.0 cm).
2	1983	Modified the allowable trap opening dimensions with the intent of minimizing the risk of harm to the Hawaiian monk seal while allowing sufficient flexibility in trap design.
1	1983	Adopted the State of Hawaii's lobster fishing regulations for the federal waters around the MHI.

In addition to FMP amendments, the management program for crustacean fisheries has been modified through several regulatory amendments described below.

Regulatory Amendment 1: Implemented VMS for the crustacean fishery in the NWHI (64 FR 36820, June 8, 1999).

Regulatory Amendment 2: Allocated 1998 NWHI lobster harvest among three individual banks and a fourth combined area (63 FR 40337, June 29, 1998).

Regulatory Amendment 3: Divided the NWHI into four fishing grounds across which harvest is allocated and allowed fishing vessels with NMFS-certified VMS to transit through fishing grounds during a closure (64 FR 36820, June 7, 1999).

FMP for Bottomfish and Seamount Groundfish of the Western Pacific Region

The FMP for Bottomfish and Seamount Groundfish Fisheries of the Western Pacific Region became effective on August 27, 1986 (51 FR 27413). Initial bottomfish fishery management measures prohibited certain destructive fishing techniques, including explosives, poisons, trawl nets, and bottom-set gillnets; established a moratorium on the commercial harvest of seamount groundfish stocks at the Hancock Seamounts, and implemented a permit system for fishing for bottomfish in the waters of the Exclusive Economic Zone (EEZ) around the Northwestern Hawaiian Islands (NWHI). The plan also established a management framework that provided for regulatory adjustments to be made, such as catch limits, size limits, area or seasonal closures, fishing effort limitations, fishing gear restrictions, access limitations, permit and/or catch reporting requirements, as well as a rules-related notice system. Since 1986, the Bottomfish and Seamount Groudfish FMP has been amended multiple times with each amendment summarized in **Tabl**e 3.

Table 3. Amendments to the Bottomfish and Seamount Groundfish FMP.

No.	Effective Date/Federal Register Notice	Action
14	4/04/08 73 FR 18450	Addressed bottomfish overfishing in the Hawaiian Archipelago by implementing a total allowable catch limit (TAC), federal non-commercial permits and reporting requirements, non-commercial bag limits and a closed season for fishing for Deep 7 species in the Main Hawaiian Islands. It also defined the Main Hawaiian Islands bottomfish fishing year as September 1-August 31, and became effective April 1, 2008 (73 FR 18450) with the permit and reporting requirements effective as of August 18, 2008 (73 FR 41296).
11-13		Amendments 11-13 were intended to address various issues which have now become moot due to changing circumstances.
10	12/12/08 73 FR 75615	Prohibited commercial fishing for bottomfish from vessels greater than 40' long in waters 0-10 miles around the Southern Islands of CNMI and 0-10 miles around the Northern Island of Alamagan. Commercial bottomfishing vessels over 40' long must carry active VMS units owned, installed, and maintained by NMFS. Also, the operators of all vessels commercially fishing for bottomfish in EEZ waters around CNMI must obtain federal permits and complete federal logbooks.
9	11/02/06 71 FR 67774	Prohibited vessels greater than 50' long from targeting Bottomfish species within 50 miles of Guam and required these vessels to obtain federal permits and to submit federal logbooks effective December 4, 2006 (71 FR 69496).
8	9/12/06 71 FR 53605	Included federal waters around CNMI and the Pacific Remote Island Areas in the Bottomfish FMP. Implemented federal permitting and reporting requirements for bottomfish fishing in the PRIA effective 1/2/07 (71 FR 69496).
7	2/24/04 69 FR 8336	Developed in parallel with the Coral Reef Ecosystems FMP. Prohibited harvest of Bottomfish and Seamount Groundfish Management Unit Species (MUS) in the no-take marine protected areas established under the Coral Reef Ecosystems FMP. The Coral Reef Ecosystems established such areas around Rose Atoll in American Samoa, Kingman Reef, Jarvis Island, Howland Island, and Baker Island. The final rule implementing the Coral Reef Ecosystem FMP (including Amendment 7 to the Bottomfish FMP) became effective 3/25/04.
6	4/19/99 64 FR19067 8/5/03 68 FR 46112	Addressed new requirements under the 1996 Sustainable Fisheries Act. Portions of the amendment that were immediately approved included designations of essential fish habitat, and descriptions of bycatch and of some fishing communities. Those provisions became effective on 2/3/99. Remaining portions approved on 8/5/03, included provisions regarding Hawaii fishing communities, overfishing definitions, and bycatch.
5	4/28/99	Established a limited entry program for the Mau Zone in the NWHI

No.	Effective Date/Federal Register Notice	Action
	64 FR 22810	with non-transferable permits and landing requirements for permit renewal. Included in requirements was attendance by the primary vessel operator at a protected species workshop. Also reserved 20% of Mau Zone permits a Western Pacific Community Development Program (CDP), as well as instituting a maximum vessel length of 60' for replacement vessels in the Hoomalu or Mau Zones
4	5/30/91 56 FR 24351	Implemented a requirement for vessel owners or operators to notify NMFS at least 72 hours before leaving port if they intend to fish in a "protected species study zone" that extends 50 nautical miles (nm) around the NWHI to allow federal observers to be placed on board bottomfish vessels to record interactions with protected species if this action is deemed necessary
3	1/16/91 56 FR 2503	Defined recruitment overfishing as a condition in which the ratio of the spawning stock biomass per recruit at the current level of fishing to the spawning stock biomass per recruit that would occur in the absence of fishing is equal to or less than 20%. Amendment 3 also delineated a process by which overfishing would be monitored and evaluated.
2	9/6/88 53 FR 29907	Divided the EEZ around the NWHI into the Hoomalu and Mau zones. A vessel limited access system was established for the Ho'omalu Zone, with non-transferable permits and landing requirements for permit renewal and for new entry into the fishery. Access to the Mau Zone was left unrestricted, except for vessels permitted to fish in the Hoomalu Zone.
1	11/11/87 52 FR 38102	Established a system to allow implementation of limited access systems for bottomfish fisheries in EEZ waters around American Samoa and Guam within the framework measures of the FMP.

FMP for Pelagic Fisheries of the Western Pacific Region

The FMP for Pelagic Fisheries of the Western Pacific Region became effective on March 23, 1987 (52 FR 5987). The Pelagic Management Unit Species (PMUS) at that time were billfish, wahoo, mahimahi, and oceanic sharks. The FMP's first measures prohibited drift gillnet fishing within the region's waters of the U.S. EEZ and prohibited foreign longline fishing within certain areas of the EEZ. Since 1987, the Pelagic FMP has been amended multiple times with each amendment summarized in **Table** 4.

Table 4. Amendments to the Pelagic FMP.

No.	Effective Date/Federal Register Notice	Action

No.	Effective Date/Federal Register Notice	Action
18	12/10/09 74 FR 65460	Removed 2,120 set limit for Hawaii-based shallow-set longline fishery. Implemented a new loggerhead sea turtle hard cap of 46 annual interactions.
16-17		Was intended to address issues which have now become moot due to changing circumstances.
15	11/21/08 73 FR 70600	Added the following pelagic squid species to the FMP: *Ommastrephes bartramii*, *Thysanoteuthis rhombus*, and *Sthenoteuthis oualaniensis*. Also, required owners of U.S. vessels greater than 50 ft in length overall that fish for pelagic squid in U.S. EEZ of the western Pacific to obtain Federal permits under the Pelagics Fishery Management Plan, to carry Federal observers if requested by NMFS, and to report any Pacific pelagic squid catch and effort either in Federal logbooks or via existing local reporting systems.
14	6/18/07 72 FR 33442	Partially approved by NMFS. This amendment contained recommendations regarding international and domestic management, including a mechanism by which the Council could participate in international negotiations regarding these stocks. Amendment 14 contained measures to implement control dates for Hawaii's non-longline commercial pelagic vessels (70 FR 47781) and purse seine and longline vessels (70 FR 47782), as well as requirements for federal permits and reporting for Hawaii-based non-longline commercial pelagic vessels. NMFS disapproved the Amendment's international measures as premature. NMFS disapproved the domestic permit and reporting requirements as duplicative of existing State requirements. NMFS noted that Amendment 14 met the requirements of the Magnuson-Act regarding overfishing.
12-13		Was intended to address issues which have now become moot due to changing circumstances.
11	5/24/05 70 FR 29646	Effective August 1, 2005, Amendment 11 established a limited access system for pelagic longlining in EEZ waters around American Samoa. Longline vessel operators were required to obtain federal permits, to complete federal logbooks, to carry and use vessel monitoring systems installed, owned and operated by NFMS on vessels greater than 40 ft in length, to carry federal observers if requested by NMFS, and to follow sea turtle handling and resuscitation requirements.
10	2/24/04 69 FR 8336	Amendment 10 prohibits the harvest of Pelagic Management Unit Species in the no-take marine protected areas established under the Coral Reef Ecosystems FMP. The Coral Reef FMP establishes such areas around Rose Atoll in American Samoa, Kingman Reef, Jarvis Island, Howland Island, and Baker Island. The final rule implementing the Coral Reef Ecosystem FMP includes Amendment

No.	Effective Date/Federal Register Notice	Action
		10 to the Pelagics FMP.
9		Was intended to address issues which have now become moot due to changing circumstances.
8	4/19/99 64 FR 19067 8/5/03 68 FR 46112	Addressed new requirements under the 1996 Sustainable Fisheries Act. Portions of the amendment that were immediately approved (4/19/99) included designations of essential fish habitat and descriptions of some fishing communities. Remaining portions were provisions regarding Hawaii fishing communities, overfishing definitions, and bycatch (approved 8/5/03).
7	5/24/94 59 FR 26979	Replaced Amendment 4 moratorium with a limited entry program for Hawaii-based domestic longline fishery with transferable permits, a limit of 164 vessels, and a maximum vessel size of 101' in length overall. It also established a framework procedure for use with implementation of certain new regulations.
6	11/2/92 57 FR 36637	Specified that all tuna species are designated as fish under U.S. management authority and included tunas and related species as Pelagic Management Unit Species under the FMP. It also applied the longline exclusion zones of 50 nm around the island of Guam and the 25-75 nm zone around the MHI to foreign vessels.
5	3/2/92 57 FR 7661	Created a domestic longline vessel exclusion zone around the Main Hawaiian Islands (MHI) ranging from 50 to 75 nm, and a similar 50 nm exclusion zone around Guam and its offshore banks. A seasonal reduction in the size of the closure was implemented in October 1992; between October and January longline fishing is prohibited within 25 nm of the windward shores of all Main Hawaiian Islands except Oahu, where it is prohibited within 50 nm from the shore.
4	10/14/91 56 FR 52214	Created a 50 nm longline exclusion zone around the NWHI to protect endangered Hawaiian monk seals. It also implemented framework provisions for establishing a mandatory observer program to collect information on interactions between longline fishing and sea turtles.
3	10/14/91 56 FR 52214	Created a 50 nm longline exclusion zone around the NWHI to protect endangered Hawaiian monk seals. It also implemented framework provisions for establishing a mandatory observer program to collect information on interactions between longline fishing and sea turtles.
2	5/26/91 56 FR 24731	Implemented requirements for domestic pelagic longline fishing and transhipment vessel operators to have Federal permits, maintain Federal fishing logbooks, and, if fishing within 50 nm of the Northwestern Hawaiian Islands, to have observers on board if directed by NMFS. It required longline gear to be marked with the official number of the permitted vessel, and incorporated waters of the EEZ around CNMI into the area managed under the FMP.

No.	Effective Date/Federal Register Notice	Action
1	3/1/91 56 FR 9686	Defined recruitment overfishing for each PMUS. Defined the optimum yield for PMUS.

In addition to FMP amendments, the management program for pelagic fisheries has been modified through several regulatory amendments and framework actions described below.

Regulatory Amendment 1: Incorporated reasonable and prudent alternative of the March 2001 Biological Opinion issued by NMFS. This amendment prohibited shallow set pelagic longlining north of the equator and closed waters between 0° and 15° N from April-May annually to longline fishing. It instituted sea turtle handling requirements for all vessels using hooks to target pelagic species in the region's EEZ waters and extended the protected species workshop requirement to include the operators of vessels registered to longline general permits (67 FR 40232, May 8, 2002**)**.

Regulatory Amendment 2: Established Federal permit and reporting requirements for any vessel using troll or handline gear to catch PMUS in EEZ waters around the Pacific Remote Island Areas of Kingman Reef, Howland, Baker, Jarvis, Johnston and Wake Islands, and Palmyra and Midway Atolls (67 FR 59813, September 3, 2002)

Regulatory Amendment 3: Implemented measures for the longline fisheries to achieve optimum yield while not jeopardizing the long term existence of sea turtles and other listed species. The amendment established a limited Hawaii-based shallow-set swordfish fishery using circle hooks with mackerel bait. Fishing effort in the shallow-set swordfish fishery was limited to 50% of the 1994-1999 annual average number of sets (just over 2,100 sets) allocated between fishermen applying to participate in the fishery. A 'hard' limit on the number of leatherback (16) and loggerhead (17) turtle interactions that could occur in the swordfish fishery was implemented; the fishery closed for the remainder of the calendar year if either limit was reached. The amendment re-implemented earlier sea turtle handling and resuscitation requirements and included conservation projects to protect sea turtles in their nesting and coastal habitats. This rule implemented the requirement for night setting imposed by the USFWS Biological Opinion on Hawaii-based longline vessels targeting swordfish north of 23 degrees north latitude (69 FR 17329, April 2, 2004**)**.

Regulatory Amendment 4: Included measures to minimize turtle interactions by non-Hawaii based domestic longline vessels operating in the Western Pacific under general longline permits. Vessels with longline general permits making shallow sets north of the equator were required to use 18/0 circle hooks with mackerel-type bait and dehookers to release any accidentally caught turtles. The amendment required vessel operators and owners with general longline permits to annually attend protected species training workshops. Operators of vessels with general longline permits were required to carry and use specific mitigation gear to aid release of sea turtles accidentally hooked or entangled by longlines. This amendment required operators of non-longline pelagic vessels (e.g. trollers and handliners) to follow handling guidelines and remove trailing gear wherever they fish (70 FR 69282, November 14, 2005).

Regulatory Amendment 5: Allowed operators of Hawaii-based longline vessels fishing north of 23 degrees north latitude, as well as those targeting swordfish south of 23 degrees north, to utilize side-setting to reduce seabird interactions in lieu of the seabird mitigation measures required by Framework Measure 1 (70 FR 75075, December 17, 2005).

Regulatory Amendment 6: Removed the seven day delay in effectiveness when closing the Hawaii based shallow-set longline fishery as a result of reaching interaction limits for sea turtles, allowing instead for an immediate closure of the fishery (72 FR 8289, February 26, 2007).

Regulatory Amendment 7: Provided pelagic fishery participants the option of using NMFS approved electronic logbooks in lieu of paper logbooks (72 FR 19123, April 16, 2007)

Framework Amendment 1: Prohibited fishing for pelagic species by vessels greater than 50 ft in length overall within EEZ waters 0-50 nm around the islands of American Samoa. Exception: vessels that landed PMUS in American Samoa under a Federal longline general permit prior to November 13, 1997 (67 FR 4369, January 30, 2002)

Framework Amendment 2: Incorporated terms and conditions developed by the Council and contained in the November 28, 2000 USFWS seabird Biological Opinion requiring Hawaii-based pelagic longline vessel operators to use blue-dyed bait, strategic offal discards, and line shooters with weighted branch lines when fishing north of 23° N. Also included requirement that all Hawaii-based longline vessel owners and operators annually attend a protected species workshop conducted by NMFS (67 FR 34408, May 12, 2002)

FMP for Coral Reef Ecosystem Fisheries of the Western Pacific Region

The FMP for Coral Reef Ecosystems of the Western Pacific Region was partially approved on June 14, 2002. NMFS disapproved a portion of the plan that governs fishing in the Northwestern Hawaiian Islands (NWHI) west of 160°50' W. long. because it would be inconsistent with or duplicate certain provisions of Executive Orders 13178 and 13196, which together established the NWHI Coral Reef Ecosystem Reserve. A final rule implementing the Coral Reef Ecosystem FMP was published on February 24, 2004 (69 FR 8336). The FMP is the nation's first ecosystem-based plan for fisheries and includes specific measures to promote sustainable fisheries while providing for substantial protection of coral reef ecosystem resources and habitats throughout the Council's jurisdiction. The management measures of the Coral Reef Ecosystems FMP:

- Established a network of marine protected areas (MPA) in the Pacific Remote Island Areas (PRIA). Howland, Baker, Jarvis Islands, Rose Atoll, and Kingman Reef have been designated as no-take MPAs. Palmyra and Johnston Atolls, and Wake Islands are designated as low-use MPAs where fishing is allowed under special fishing permits. Both no-take and low-use MPAs were proposed for the NWHI in the FMP, but were disapproved by NMFS;
- Requires a special permit and federal reporting system for controlling and monitoring the harvest of certain coral reef ecosystem management unit species (MUS) for which there is little or no information. Special permits are also required to fish in all areas designated as low-use MPAs. The FMP also uses data collected under existing local reporting systems to monitor the harvest of currently fished coral reef ecosystem MUS;
- Prohibits the use of destructive and non-selective fishing gears;

- Prohibits harvesting of coral and live rock, but allow limited take under the special permit system for collection of seed stock by aquaculture operations, and religious/cultural use by indigenous peoples;
- Incorporates an adaptive management approach using a framework process for rapid regulatory modifications in the event of major changes within coral reef ecosystems or coral reef fisheries;
- Considers and take into account in management, the historical and cultural dependence of coral reef resources by indigenous people and;
- Identifies and prioritize coral reef related research needs for each island area, including socio-economic and cultural research for future potential allocation of resources.

Since its implementation in 2004, the Coral Reef FMP has not been amended.

2. Fishery Ecosystem Plan Amendments

Omnibus Amendment: Community Development Program Process, 9/3/10

The Council amended all FEPs to establish eligibility requirements and procedures for reviewing and approving community development plans. The intent is to promote participation of island communities in fisheries that they traditionally depend on, but may not have the capabilities to support continued and substantial participation. A second final rule was published 11/05/10 in which OMB approved the collection-of-information requirements (75 FR 68199).

Omnibus Amendment: Establish a Western Pacific Region Process for Specifying Annual Catch Limits and Accountability Measures, 6/27/11

The Council amended all FEPs to establish the mechanism the Council will use to specify ACLs and AMs for each FEP fishery. Specifically, the proposed action described in this document consists of three components that would: 1) in each FEP, establish a mechanism the Council will use to determine ACLs and AMs , including a process for setting acceptable biological catch limits (ABCs); 2) adopt the ecosystem component (EC) species classification described in the NMFS advisory guidelines for National Standard 1 (NS1) so the Council can develop specific criteria for identifying EC species in subsequent amendments to the FEPs; and 3) identify pelagic management unit species that have statutory exceptions to the ACL and AM requirements.

Amendment to the Pacific Pelagic, American Samoa, Mariana, and Pacific Remote Island Area FEPs: Fishery Management in the Marianas Trench, Pacific Remote Islands, and Rose Atoll Marine National Monuments,

The Council amended the Pacific Pelagics, American Samoa, Pacific Remote Island Areas, and the Mariana Islands FEPs, to establish certain provisions relating to non-commercial fishing practices. Consistent with the monument Proclamations, the amendments:

- Codified the boundaries of the Monuments and their various management units.
- Implemented the prohibition on commercial fishing at Rose Atoll and PRI Monuments, and in the Islands Unit of the Marianas Trench Monument.

- Established management measures for non-commercial and recreational fishing in the Monuments including, but not limited to:
    - Requiring Federal permits and reporting for non-commercial and recreational charter fishing to aid in the monitoring of fishing activities.
    - Limiting fishing permit eligibility to residents and businesses of local fishing communities in the Rose Atoll Monument and Marianas Trench Monument, Islands Unit.
    - Allowing customary exchange in non-commercial fishing in the Marianas Trench Islands Unit and Rose Atoll Monuments to help preserve traditional indigenous and cultural fishing practices.
    - Defining customary exchange as the non-market exchange of marine resources between fishermen and community residents for goods, services, and/or social support for cultural, social or religious reasons, and may include cost recovery through monetary reimbursements and other means for actual trip expenses (ice, bait, food, or fuel) that may be necessary to participate in fisheries in the western Pacific. Customary exchange of fish harvested in the Monuments includes family and friends of residents of the fishing communities.
    - Prohibiting all fishing within 12 nautical miles (nm) of the Pacific Remote Islands, subject to USFWS's authority to allow non-commercial fishing, in consultation with NMFS and the Council.
    - Prohibit all fishing within 12 nm around Rose Atoll.
- Prohibited the conduct of commercial fishing outside of a monument, and noncommercial fishing within a monument, on the same trip.

Amendment 2 to the Pacific Pelagic FEP: Establishment of Longline Prohibited Areas in the Mariana Archipelago, 3/4/2011

The Council amended the Pacific Pelagic FEP to establish a 30 mile longline fishing prohibited areas in the CNMI to promote sustained participation in fishing by Guam and CNMI fishing communities.

Amendment 5 to the Pacific Pelagic FEP: Measures to Reduce Interactions between the American Samoa Longline Fishery and Green Sea Turtles, 8/24/11

The American Samoa longline fishery has been observed to interact with (hook or entangle) with green sea turtles (Chelonia mydas) which are listed as threatened under the Endangered Species Act. To address this issue, the Council amended the Pelagics FEP to provide for the longterm survival, recovery, and sustainability of the sea turtles by reducing the number of sea turtle interactions with the fishery.

Amendment 7 to the Pacific Pelagic FEP: Use and Assignment of Catch and Effort Limits of Pelagic Management Unit Species by the U.S. Pacific Island Territories. 3/28/14

Amendment 7 establishes a management framework and process for specifying fishing catch and effort limits and accountability measures for pelagic fisheries in the U.S. Pacific territories (American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands). The framework authorizes the government of each territory to allocate a portion of its specified catch or effort limit to a U.S. fishing vessel or vessels through a specified fishing agreement, and

establish criteria, which a specified fishing agreement must satisfy. The framework also includes measures to ensure accountability for adhering to fishing catch and effort limits.

Table 5. Amendments to the Fishery Ecosystem Plans (post-2009).

FEP	No.	Effective Date/Federal Register Notice	Action
AS	1	6/27/11 76 FR 37285	Omnibus amendment. Establishes eligibility requirements and procedures for reviewing and approving community development plans. The intent is to promote participation of island communities in fisheries that they traditionally depend on, but may not have the capabilities to support continued and substantial participation. . A second final rule was published 11/05/10 in which OMB approved the collection-of-information requirements (75 FR 68199).
AS	2	09/03/10 75 FR 54044	Omnibus amendment that establishes a mechanism for specifying annual catch limits.
HI	1	09/03/10 75 FR 54044	Omnibus amendment. Establishes eligibility requirements and procedures for reviewing and approving community development plans. The intent is to promote participation of island communities in fisheries that they traditionally depend on, but may not have the capabilities to support continued and substantial participation. A second final rule was published 11/05/10 in which OMB approved the collection-of-information requirements (75 FR 68199).
HI	2	11/10/10 75 FR 69015	Establishes the Hancock Seamounts Ecosystem Management Area as well as continues the moratorium on armorhead and other seamount groundfish until the armorhead stock is rebuilt.
HI	3	6/27/11 76 FR 37285	Omnibus amendment that establishes a mechanism for specifying annual catch limits
MA	1	09/03/10 75 FR 54044	Omnibus amendment. Establishes eligibility requirements and procedures for reviewing and approving community development plans. The intent is to promote participation of island communities in fisheries that they traditionally depend on, but may not have the capabilities to support continued and substantial participation. A second final rule was published 11/05/10 in which OMB approved the collection-of-information requirements (75 FR 68199).
MA	2	6/27/11 76 FR 37285	Omnibus amendment that establishes a mechanism for specifying Annual Catch Limits.
PRIA	1	6/27/11	Omnibus amendment that establishes a mechanism for

FEP	No.	Effective Date/Federal Register Notice	Action
		76 FR 37285	specifying annual catch limits.
PRIA	2	6/03/13 78 FR 32996	Establishes management measures for non-commercial and recreational fishing within the Pacific Remote Islands Marine National Monument; prohibits commercial fishing within monument
PEL	1	09/03/10 75 FR 54044	Eligibility requirements and procedures for reviewing and approving community development plans. The intent is to promote participation of island communities in fisheries that they traditionally depend on, but may not have the capabilities to support continued and substantial participation.
PEL	2	Disapproval: 7/11/11 76 FR 40764	Establishes a purse seine area closure in American Samoa. The purse seine area closure was disapproved.
PEL	3	6/27/11 76 FR 37287	Establishes a purse seine area closure and longline area closure in CNMI. The final rule only approved the longline closure.
PEL	4	6/27/11 76 FR 37285	Omnibus amendment that establishes a mechanism for specifying annual catch limits.
PEL	5	8/24/11 76 FR 52888	American Samoa longline gear configuration modifications to reduce sea turtle interactions.
PEL	6		
PEL	7		Catch and effort limits for the US Participating Territories; Specification of annual bigeye tuna catch limits for the US Participating Territories.

Appendix E: MSY Control Rule & Stock Status Determination Criteria and Process for Specifying Annual Catch Limits and Accountability Measures

MSY Control Rule and Stock Status Determination Criteria

A MSY control rule is a control rule that specifies the relationship of F to B or other indicator of productive capacity under an MSY harvest policy. Because fisheries must be managed to achieve optimum yield, not MSY, the MSY control rule is a benchmark control rule rather than an operational one. However, the MSY control rule is useful for specifying the "objective and measurable criteria for identifying when the fishery to which the plan applies is overfished" that are required under the MSA. The National Standard Guidelines (74 FR 3178) refer to these criteria as "status determination criteria" and state that they must include two limit reference points, or thresholds: one for F that identifies when overfishing is occurring and a second for B or its proxy that indicates when the stock is overfished.

The status determination criterion for F is the maximum fishing mortality threshold (MFMT). Minimum stock size threshold (MSST) is the criterion for B. If fishing mortality exceeds the MFMT for a period of one year or more, overfishing is occurring. A stock or stock complex is considered overfished when its biomass has declined below a level that jeopardizes the capacity of the stock to produce MSY on a continuing basis (i.e., the biomass falls below MSST). A Council must take remedial action in the form of a new FMP, an FMP amendment, or proposed regulations within two years following notification by the Secretary of Commerce that overfishing is occurring, a stock or stock complex is overfished or approaching an overfished condition[1] or existing remedial action to end previously identified overfishing or to rebuild an overfished stock has not resulted in adequate progress.

The National Standard Guidelines state that the MFMT may be expressed as a single number or as a function of some measure of the stock's productive capacity. Guidance in Restrepo et al. (1998:17) regarding specification of the MFMT is based on the premise that the MSY control rule constitutes the MFMT. In the example in Figure 1 the MSY control rule sets the MFMT constant at F_{MSY} for values of B greater than the MSST and decreases the MFMT linearly with biomass for values of B less than the MSST. This is the default MSY control rule recommended in Restrepo et al. (1998). Again, if F is greater than the MFMT for a period of one year or more, overfishing is occurring.

The National Standard Guidelines state that to the extent possible, the MSST should equal whichever of the following is greater: One-half the MSY stock size, or the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock or stock complex were exploited at the MFMT. The MSST is indicated in Figure 1 by a vertical line at a biomass level somewhat less than B_{MSY}. A specification of MSST below B_{MSY} would allow

[1] A stock or stock complex is approaching an overfished condition when it is projected that there is more than a 50 percent chance that the biomass of the stock or stock complex will decline below MSST within two years (74 FR 3178).

for some natural fluctuation of biomass above and below B_{MSY}, which would be expected under, for example, an MSY harvest policy. Again, if B falls below MSST the stock is overfished.

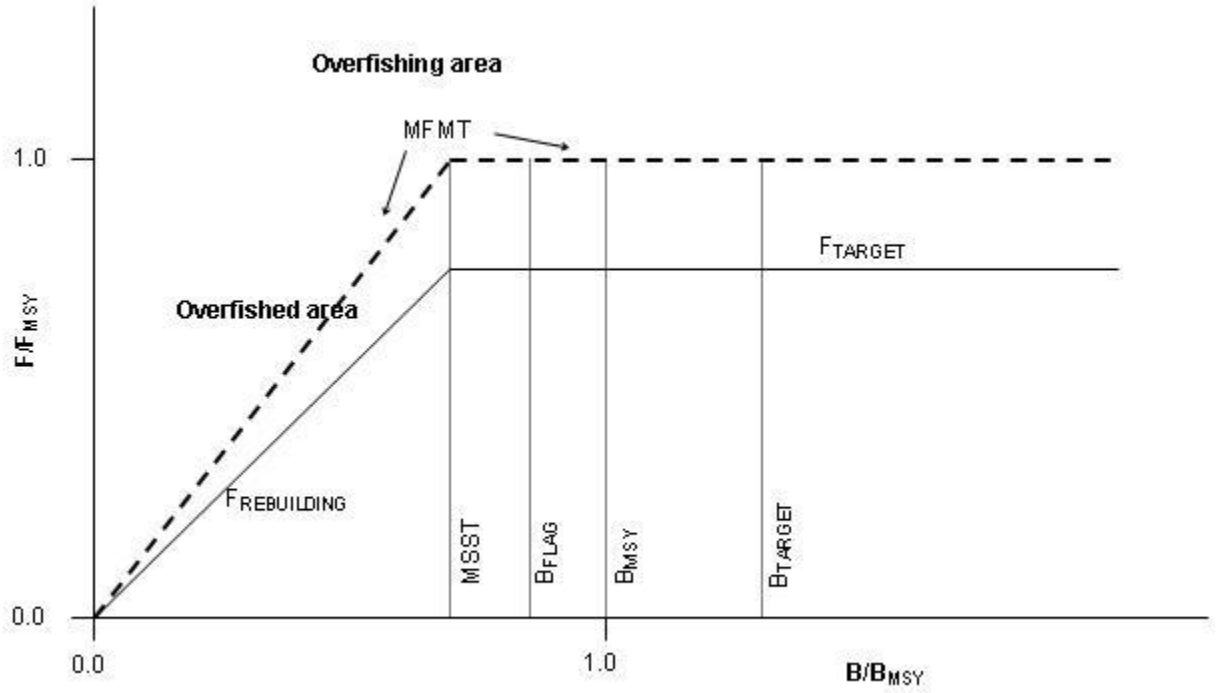


Figure 1. Example of MSY, Target and Rebuilding Control Rules
Source: Restrepo et al. 1998

Warning reference points comprise a category of reference points that will be considered in this FEP together with the required thresholds. Although not required under the MSA, warning reference points could be specified in order to provide warning in advance of B or F approaching or reaching their respective thresholds. Considered in this FEP is a stock biomass flag (B_{FLAG}) that would be specified at some point above MSST, as indicated in Figure 1. The control rule would not call for any change in F as a result of breaching B_{FLAG} – it would merely serve as a trigger for consideration of action or perhaps preparatory steps towards such action. Intermediate reference points set above the thresholds could also be specified in order to trigger changes in F – in other words, the MFMT could have additional inflection points.

Target Control Rule and Reference Points

A target control rule specifies the relationship of F to B for a harvest policy aimed at achieving a given target. Optimum yield (OY) is one such target, and National Standard 1 requires that conservation and management measures both prevent overfishing and achieve OY on a continuing basis. Optimum yield is the yield that will provide the greatest overall benefits to the nation, and is prescribed on the basis of MSY, as reduced by any relevant economic, social, or ecological factor. MSY is therefore an upper limit for OY.

A target control rule can be specified using reference points similar to those used in the MSY control rule, such as F_{TARGET} and B_{TARGET}. For example, the recommended default in Restrepo et al. (1998) for the target fishing mortality rate for certain situations (ignoring all economic, social, and ecological factors except the need to be cautious with respect to the thresholds) is 75 percent of the MFMT, as indicated in Figure 1. Simulation results using a deterministic model have shown that fishing at 0.75 F_{MSY} would tend to result in equilibrium biomass levels between 1.25 and 1.31 B_{MSY} and equilibrium yields of 0.94 MSY or higher (Mace 1994).

It is emphasized that while MSST and MFMT are limits, the target reference points are merely targets. They are guidelines for management action, not constraints. For example Restrepo et al. (1998) state that target reference points should not be exceeded more than 50% of the time, nor on average.

Rebuilding Control Rule and Reference Points

If it has been determined that overfishing is occurring, a stock or stock complex is overfished or approaching an overfished condition, or existing remedial action to end previously identified overfishing or to rebuild an overfished stock has not resulted in adequate progress, the Council must take remedial action within two years. In the case that a stock or stock complex is overfished (i.e., biomass falls below MSST in a given year), the action must be taken through a stock rebuilding plan (which is essentially a rebuilding control rule as supported by various analyses) with the purpose of rebuilding the stock or stock complex to the MSY level (B_{MSY}) within an appropriate time frame, as required by MSA §304(e)(4). The details of such a plan, including specification of the time period for rebuilding, would take into account the best available information regarding a number of biological, social, and economic factors, as required by the MSA and National Standard Guidelines.

If B falls below MSST, management of the fishery would shift from using the target control rule to the rebuilding control rule. Under the rebuilding control rule in the example in Figure 1, F would be controlled as a linear function of B until B recovers to MSST (see $F_{REBUILDING}$), then held constant at F_{TARGET} until B recovers to B_{MSY}. At that point, rebuilding would have been achieved and management would shift back to using the target control rule (F set at F_{TARGET}). The target and rebuilding control rules "overlap" for values of B between MSST and the rebuilding target (B_{MSY}). In that range of B, the rebuilding control rule is used only in the case that B is recovering from having fallen below MSST. In the example in Figure 1 the two rules are identical in that range of B (but they do not need to be), so the two rules can be considered a single, integrated, target control rule for all values of B.

Measures to Prevent Overfishing and Overfished Stocks

The control rules specify how fishing mortality will be controlled in response to observed changes in stock biomass or its proxies. Implicitly associated with those control rules are management actions that would be taken in order to manipulate fishing mortality according to the rules. In the case of a fishery which has been determined to be "approaching an overfished condition or is overfished," MSA §303(a)(10) requires that the FMP "contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery."

Use of National Standard 1 Guidelines in FEPs
This FEP carries forward the provisions pertaining to compliance with the Sustainable Fisheries Act which were recommended by the Council and subsequently approved by NMFS (68 FR 16754, April 7, 2003). Because biological and fishery data are limited for all species managed by this FEP, MSY-based control rules and overfishing thresholds are specified for multi-species stock complexes.

Process for Specifying Annual Catch Limits (ACLs) and Accountability Measures (AMs)

In 2012, a mechanism for specifying ACLs was established in the FEPs for American Samoa, Hawaii, the Mariana Archipelago, the Pacific Remote Island Areas, and western Pacific Pelagic fisheries. The ACL mechanism included a tiered system of ABC control rules that the SSC applies to calculate ABC. Included in this is a qualitative method the Council employed to determine an appropriate P* (P* denotes risk of overfishing) value for each fishery. The ACL mechanism also includes methods for determining ACLs and AMs for stocks and stock complexes in the fishery. ACLs and AMs developed by the Council are specified by the agency prior to the start of each fishing year. Figure 2 illustrates the method for specifying ACLs, including the procedures for calculating ABC and setting ACL and AMs that are all described in this section.

Calculation of the Acceptable Biological Catch

This section describes how the ABC is calculated and set compared to the OFL using ABC control rules that account for the level of scientific knowledge about the stock or stock complex, scientific uncertainty in the estimate of OFL, and other scientific information. This section also discusses how the acceptable risk of overfishing (P*) is factored into the ABC control rule and how P* is determined.

Tiered System of ABC Control Rules
For stocks and stock complexes required to have an ABC, the Council utilizes a five-tiered system of ABC control rules that allows for different levels of scientific information to be considered when calculating ABC. The control rules are organized from data rich down to data poor, with Tier 1 being the highest (data rich) and Tier 5 being the lowest (data poor). Tiers 1-2 involve data rich to data moderate situations and include levels of uncertainty derived from model-based stock assessments. Tiers 3-5 involve data poor situations and include levels of uncertainty derived from ad-hoc procedures including simulation models or expert opinion.

When calculating an ABC for a stock or stock complex, the SSC first evaluate the information available for the stock and assign the stock or stock complex into one of the five tiers. The SSC then applies the control rule assigned to that tier to determine the ABC. The SSC may recommend an ABC that differs from the result of the control rule calculation based on factors such as data uncertainty, recruitment variability, declining trends in population variables, and other factors determined relevant by the SSC, but must explain their rationale. The tiered system of ABC control rules are described below.

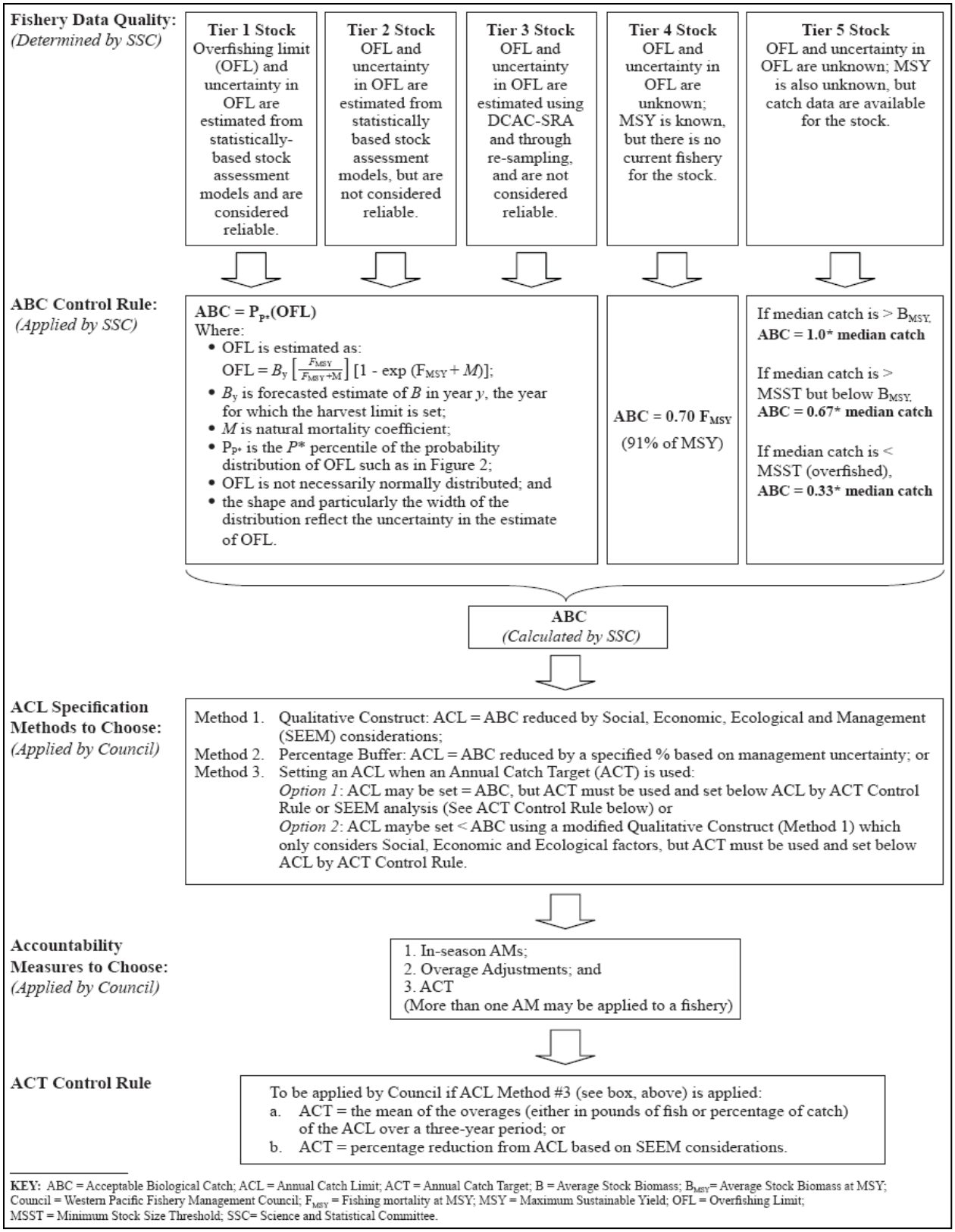


Figure 2. Schematic of method for specifying ABC, ACL and AMs, including ACTs.

Tier 1. Model-Based Probabilistic Approach to Estimating ABCs
In this tier, the data used are reliable and complete enough to be able to utilize statistical-based stock assessment models (e.g., Stock Synthesis 2 (or 3), Multifan-CL (MFCL), C++ Algorithmic Stock Assessment Laboratory (CASAL), and Bayesian production models). From these stock assessments, reliable estimates of MSY, F_{MSY}, B_{MSY}, and B_t are available. Of special relevance to being included in this tier, measures of the uncertainty of F_{MSY}, B_t and B_{t+k} and OFL_{t+k} must be available directly.

In plain English:

ABC is the maximum value for which the probability "p" of exceeding OFL is less than P*.

Or, in conceptual mathematical terms:

ABC = max (x | p(x > OFL) < P*)

Or, as commonly estimated:

ABC = P_{P*}(OFL)
Where:

- OFL is estimated as $\text{OFL} = B_y \left[\frac{F_{\text{MSY}}}{F_{\text{MSY}}+M}\right][1 - \exp(F_{\text{MSY}} + M)]$;
- B_y is forecasted estimate of *B* in year *y*, the year for which the harvest limit is set;
- *M* is natural mortality coefficient;
- P_{P*} is the P* percentile of the probability distribution of OFL such as in Figure 2;
- OFL is not necessarily normally distributed; and
- the shape and particularly the width of the distribution reflect the uncertainty in the estimate of OFL.

The Council must advise the SSC on the acceptable P* to use prior to calculating and recommending the ABC. If the SSC determines that the uncertainty of OFL is underestimated (due to underestimating the uncertainty of F_{MSY} and/or the forecasted estimated B_t), the SSC could appropriately rescale the width of the OFL distribution.

Tier 2. Quasi-Probabilistic Approach to Estimating ABCs
The key difference between assessments in Tier 1 and Tier 2 is that in Tier 2, measures of uncertainty of OFL are not as reliable or are not available from a single, integrated stock assessment model. Reliable data must still be available to be in included in this tier, but those used are obtained through some separate analysis or analyses. The methods often involve re-sampling or ad hoc methods. While the statistical-based model characteristic of Tier 1 can occur here, the common assessments are Yield-per-Recruit (Y/R) and Spawning-per-Recruit (SPR). Such assessments involve the use of F_{MSY} proxies, usually $F_{30\%}$ and $F_{60\%}$. The data in Tier 2 may not be as reliable or complete as in Tier 1, though still of sufficient quality to provide fully usable stock assessments.

$F_{30\%}$ = Fishing at the rate that reduces spawning biomass per recruit to 30% of the unfished value. Used as a substitute for F_{MSY} when using Y/R and SPR stock assessments. $F_{60\%}$, as well as others, has also commonly been used.

ABC is estimated using the equation in Tier 1 above, with the uncertainty estimates coming from re-sampling (i.e. method for estimating and re-estimating probability distributions such as bootstrapping). The Council must advise the SSC on the acceptable P* to use prior to calculating and recommending the ABC.

Tier 3. Data-poor Probabilistic Approach to Setting ABCs

In this tier, the available data are not sufficient for the use of model-based assessment tools. Data are sufficient to apply the data limited approaches such as (but not limited to) Depletion-Corrected Average Catch (DCAC) (MacCall 2009), Stock Reduction Analysis (DCAC-SRA) (Dick and MacCall 2011), Catch-MSY (Martell and Froese 2012), Biomass-augmented catch-MSY (Sabater and Kleiber 2014) with information on the biology of the stock, or DCAC, in which there is some estimate of natural mortality (M), but other life history information is lacking. For a comprehensive list of data limited approaches see Carruthers et al 2014. In these circumstances, the uncertainty of OFL (the probability distribution of OFL) can be estimated using the Monte Carlo simulation (i.e. a technique that uses algorithms that rely on repeated random sampling to compute results). These tools are to be applied to long-lived species where the natural mortality coefficient M should be less than 0.20 and recruitment should not be highly episodic.

ABC is estimated using the equation in Tier 1 above, with the uncertainty estimates established by the Monte Carlo simulation. Again, the Council must advise the SSC on the acceptable P* to use prior to calculating and recommending the ABC.

Tier 4. ABC Control Rule for Species without Current Harvest

This ABC control rule is for species or species assemblages with stock assessments and/or MSY estimates, but no current harvest, such as deepwater shrimp (*Heterocarpus*). The ABC is set at 0.70 F_{MSY} (= yield 91% OFL = 91% MSY = ABC; see Walters et al. 2005) as a precautionary measure to maximize yield while minimizing biomass impacts and accounting for scientific uncertainty. An alternative target fishing mortality value may be specified if additional data or modeling is available to support it, or the Council chooses to be more precautionary.

Walters et al. (2005) provided an example through the modeling tool, ECOSIM, in which k = 0.7 represents a precautionary factor in setting the target fishing mortality (F_{MSY}), which is predicted to have little impact on yield. When k = 0.7, the ECOSIM simulations implied a sustainable yield of around 0.9 MSY. "k" is a factor that a fishery modeler can vary to represent varying levels of precaution for F_{MSY} within the ECOSIM model. Similarly, NMFS Technical Guidance on implementing NS1 by Restrepo et al. (1998) recommended a default fishing mortality target of 25% below MFMT, or 0.75 F_{MSY}, which results in an equilibrium yield of 94% MSY or higher. This Tier 4 control rule adopted by the WPFMC is more precautionary than the control rule recommended by Restrepo et al. (1998) and in line with the results of Walters et al. (2005). As Tier 4 involves a fishery with no current harvest, this ABC control rule does not include

consideration of P*; however if harvest occurs, the fishery may be moved into higher tier where P* would be need to be considered.

Tier 5. Data-poor Ad-hoc Approach to Setting ABCs
In this tier, catches may be small and/or the catch history may contain gaps or be too variable. Catch history may also be lacking in consistently stable periods or periods with consistent trends for using DCAC-SRA or DCAC. Hence, there is no basis for estimating a reliable MSY or OFL.

For these data poor fisheries, a multiplier of the long-term median catch history will be used. The multiplier will be determined by the biological knowledge of the stock or stock complex, in light of the guidance provided by Restrepo et al. *(Section 2.2.2: Data Poor Situations*). The guidance recommends that the default control rule be implemented by multiplying the average catch from a time period where there is no quantitative or qualitative evidence of declining abundance ("Recent Catch") by a factor based on a qualitative estimate of relative stock size. The following guidelines were provided:

Above B_{MSY}	Limit catch = 1.00*Recent Catch
Above MSST but below B_{MSY}	Limit catch = 0.67*Recent Catch
Below MSST (i.e. overfished)	Limit catch = 0.33*Recent Catch

However, Restrepo et al. (1998) advises that because it will probably not be possible to analytically determine stock status relative to B_{MSY} for data poor stocks, an approach based on informed judgment will be necessary. The authors further state that "in cases of severe data limitations, qualitative approaches may be necessary, including expert opinion and consensus-building methods." As Tier 5 involves data poor situations, this ABC control rule does not include consideration of P*.

Determining the Acceptable Probability of Overfishing used in the ABC Control Rule
The ABC control rule for Tier 1-3 fisheries requires the Council to advise the SSC on the acceptable probability of overfishing (P*) in order for the SSC to calculate and recommend the ABC. As discussed above, P* refers to the acceptable probability or risk that actual catch equal to the ABC would exceed the OFL and thus, result in overfishing. NS1 guidelines require that the probability that overfishing will occur cannot exceed 50% and should be a lower value. Consequently, the Council adopted a maximum P* value of 50%; however, where adequate scientific information is available on the stock or stock complex, the Council will utilize a qualitative method for determining an appropriate P* that is lower than the maximum of 50%. This qualitative approach is described below.

Qualitative Analysis for Determining P*
The Council developed a process by which the risk of overfishing can be reduced from the 50% maximum P*. This approach, based on the approach developed by the South Atlantic FMC, is a qualitative method of determining P* that considers the amount of information available on the stock or stock complex, including scientific uncertainty, for the following dimensions: 1) assessment information, 2) assessment uncertainty, 3) stock status, and 4) productivity and susceptibility. Information on the four dimensions will be complied and analyzed by a team that may include Council and SSC members, Council staff, and other individuals knowledgeable in

the fishery, including stock assessment experts. Team members will use their knowledge and expertise to assign a single score for each dimension based on the criteria below. The maximum value for each dimension is 12.5 and the sum of the four dimensions has a maximum value of 50. The scores for each dimension will be added together for a final score, then be reduced from the maximum risk of overfishing (P^*_{MAX}) of 50. The team's analysis will be vetted through the Council process with the Council ultimately deciding the final P* value. The Council-approved P* would then be utilized in the calculation of the recommended ABC. An example of the qualitative analysis is provided below, but the exact criteria and scoring values used may change as deemed appropriate by the team for each assessed stock.

1) Assessment Information

Criteria	**Score**	
Quantitative assessment provides estimates of exploitation and B; includes MSY-derived benchmarks	0.0	
Reliable measures of exploitation or B, no MSY benchmarks, proxy reference points	2.5	X
Relative measures of exploitation or B, absolute measures of stock unavailable, proxy reference points	5.0	
Reliable catch history	7.5	
Scarce or unreliable catch records	12.5	

2) Assessment Uncertainty

Criteria	**Score**	
Complete. Key determinant – uncertainty in both assessment inputs and environmental conditions included	0.0	
High. Key determinant – reflects more than just uncertainty in future recruitment	2.5	
Medium. Uncertainties are addressed using statistical techniques and sensitivities, but full uncertainty is not carried forward in projections	5.0	X
Low. Distributions of F_{MSY} and MSY are lacking	7.5	
None. Only single point estimates; no sensitivities or uncertainty evaluations	12.5	

3) Stock Status

Criteria	**Score**	
Neither overfished nor overfishing. Stock is at high B and low exploitation relative to benchmark values	0.0	
Neither overfished nor overfishing. Stock may be in close proximity to benchmark values	2.5	X
Stock is either overfished or overfishing is occurring	5.0	
Stock is overfished and overfishing is occuring	7.5	
Either status criterion is unknown	12.5	

4) Productivity and Susceptibility

Criteria	Score	
Low risk. High productivity, low vulnerability, low susceptibility	0.0	
Medium risk. Moderate productivity, vulnerability, and susceptibility	5.0	X
High risk. Low productivity, high vulnerability, high susceptibility	12.5	

SCORE SUMMARY

Dimensions	Score
Assessment information	2.5
Assessment uncertainty	5.0
Stock status	2.5
PSA	5.0
Total Score	**15.0**
Risk of overfishing: **(P*=50 minus Total Score, where 50 equals P^*_{MAX})**	**35**

In the example above, the resulting P* of 35 could then be used in the ABC control rule equations available for stocks in any of the tiers 1 through 3. Benefits of this include the following: 1) it brings together multiple experts to determine the risk of overfishing based on their diverse knowledge; 2) it can be applied in both data rich and data poor situations, i.e. whether formal stock assessments can be conducted or not; and 3) it need not be repeated annually unless information suggests that circumstances have changed significantly.

Setting the Annual Catch Limit

NS1 guidelines require the Council to determine an ACL that may not exceed the SSC-recommended ABC; however, NS1 does not provide guidance on how to set an ACL below the SSC-recommended ABC. This section describes the methods the Council will use to set ACLs starting in 2011.

ACL will be set by the Council after considering the ABC provided by the SSC, as well as social and economic factors, pertinent ecological considerations, and management uncertainty. Management uncertainty stems from insufficient information about true catch (e.g. late reporting, underreporting and misreporting of landings), lack of management precision, and/or the ability to close a fishery before a catch limit is exceeded. NS1 guidelines suggest management uncertainty be accounted for during the establishment of AMs for a fishery, including ACTs; however, nothing precludes the Council from accounting for management uncertainty at the ACL step.

Method 1: Qualitative Construct for Setting an ACL

The ACL qualitative construct uses an approach similar to the P* qualitative construct. While the P* qualitative construct considers the amount of biological information (scientific uncertainty) available on the stock or stock complex, the ACL qualitative construct considers the amount of socio-economic information (management uncertainty) on the fishery that targets the stock or stock complex. Specifically, the dimensions that will be used for the ACL qualitative construct

would include the following factors: 1) Social; 2) Economic; 3) Ecological; and 4) Management uncertainty (SEEM). Aspects of the SEEM dimensions could include the importance of the fishery both socially and economically; consideration of the ecological importance of the stock or stock complex targeted by the fishery (e.g., is the stock a key indicator species of ecological health of the ocean), and whether managers can effectively constrain catch to planned levels.

Information on the SEEM dimensions will be compiled and analyzed by a team that may include Council and SSC members, Council staff, and other individuals knowledgeable in the fishery. This team will also be responsible for developing the criteria and scoring values regarding the quality and completeness of the information for each dimension. Like the P* qualitative construct, the scores for each dimension will be added together so that the total score is subtracted from a default value of 100% ABC (i.e., 100). Because SEEM analyses will be unique for each fishery, there are no specifics given at this time for the criteria or scoring values within the dimensions.

Method 2: Percentage Buffer for Setting an ACL

Under this method, the ACL would be set as a percentage of the ABC (e.g., ACL = 10% to 100% of the ABC) with the actual percentage dependent upon the amount of management uncertainty that exists in the fishery. For example, if management uncertainty is low, the ACL would be set close to 100% of the ABC. Alternatively, if management uncertainty is high, ACL would be set as a lower percentage. Factors that the Council will consider when selecting the percentage include late reporting, underreporting, and misreporting of landings in the fishery, as these factors contribute to the possibility that the true catch may actually exceed the ABC and ultimately the OFL of a fishery, thus resulting in overfishing. The justification for using this method over method 1 would need to be clearly identified by the Council when setting the ACL, as it is not a quantitative decision. However, it is useful to note that the ACL is a management decision for the Council to make, not necessarily a numerically-derived limit.

Method 3: Setting an ACL when an ACT will be Utilized

An ACT is an amount of annual catch of a stock or stock complex that is the management target of the fishery, and accounts for management uncertainty in controlling the actual catch at or below the ACL. When an ACT is used, it should be set lower than the ACL with a large enough buffer between the two reference points such that risk of exceeding the ACL is low. NS1 guidelines recommend ACTs in the system of accountability measures so that ACL is not exceeded. See Section 0 for a description of setting the ACT.

If the Council decides to use an ACT as a means to ensure an ACL is not exceeded, there are two options the Council may use in setting an ACL. Under the first option, the Council could simply set the ACL equal to the ABC. If this option is taken, management uncertainty will be accounted for at the ACT level using the ACT control rule. Under this option, in addition to management uncertainty, the Council could also consider social, economic and ecological factors to set the ACT and thus could apply the entire SEEM analysis described under Method 1 to set the ACT below the ACL. While NS1 guidelines do not require social, economic or ecological factors to be considered in setting the ACT, nothing precludes the Council from doing so, although the resulting ACT would be more precautionary than NS1 intends.

Under the second option, the Council would set the ACL less than the ABC using a modified Method 1 (Qualitative construct for setting ACLs) described above whereby the analysis for setting the ACL will only consider sociological, economic, and/or ecological factors. Under this option, management uncertainty will be accounted for at the ACT level using the ACT control rule (3-year running average).

As a performance measure for all ACL managed fisheries, if landings exceed the ACL for any stock or stock complex more than once in a four year period, the Council will re-evaluate the system of ACLs and AMs for the fishery and modify the system as necessary to improve its performance and effectiveness.

Suite of Accountability Measures

In addition to ACLs, the MSA also requires NMFS and the Councils to implement AMs (MSA §303(a)(15)). NS1 guidelines (74 FR 3178; January 16, 2009) explain that AMs are management controls to prevent ACLs from being exceeded and to correct or mitigate overages of the ACLs if they occur. The guidelines recommend FMPs describe AMs and how those measures are triggered. NS1 guidelines also suggest that management uncertainty be accounted for in establishing the AMs for a fishery, including uncertainty in the ability of managers to constrain catch and uncertainty in quantifying the true catch amounts. Since the purpose of ACLs and other harvest controls is to prevent overfishing, AMs are triggered at the ACL level to ensure the ABC and OFL are not exceeded and overfishing does not occur.

In fisheries for which in-season monitoring of catch is possible (i.e. fisheries with federal logbook reporting and State of Hawaii commercial fisheries, including MHI bottomfish), tracking of catch landings towards the ACL would be initiated at the start of each fishing year. When the ACL is projected to be reached, the commercial and non-commercial fishery sectors will be closed in federal waters for the remainder of the fishing year. For fisheries that rely on non-federal creel survey programs conducted by local marine resource management agencies, in-season tracking of catch landings may not be fully possible because availability of catch data is dependent upon local agencies workload and priorities. For these fisheries, the Council may employ overage adjustments as an accountability measure. If the Council determines at the end of a fishing year that total catch has exceeded the specified ACL for any fishery, the Council may reduce the ACL for the subsequent fishing year by the percentage or absolute value of the overage. However, one crucial aspect of this is that overages are typically factored into the subsequent year's stock assessment, as are any underages. For this reason, the Council will need to decide whether to include an overage adjustment if the overage has already been considered in a stock assessment, although stock assessments are typically not performed annually. However, as a performance measure for all ACL managed fisheries, if landings exceed the ACL for any stock or stock complex more than once in a four year period, the Council will re-evaluate the system of ACLs and AMs for the fishery and may modify the system as necessary to improve its performance and effectiveness.

In Method 3 of ACL specification options, ACTs may also be utilized as an accountability measure to ensure a fishery does not exceed its ACL.

The first approach utilizes an ACT control rule based on a 3-year running average of overages of a specified catch limit (e.g. TAC, quota, ACL, or ACT). The percentage or absolute value of the overage of a catch limit over a three year period will be reduced from the ACL in the following year. With this approach, if an ACL is not exceeded, a zero (0) percentage or absolute value will be attributed for that year. For example, assuming a static ACL of 100,000 pounds has been set annually for three consecutive years, and total catch exceeded the ACL in year 1 by 2,000 pounds (or 2%), year 2 by 6000 pounds (6%), and in the third year was 3000 pounds short (or 97,000 pounds), the ACT reduction would be calculated as a percentage as follows (2% + 6% + 0%)÷3 = 2.67%. In this example, ACT will be reduced by 2.67% (or 2,667 pounds) from the next 100,000 ACL, resulting in an ACT of 97,330 pounds in that following year. Alternatively, absolute values instead of a percentage could also be utilized. For example, using the same 100,000 pound ACL, the ACT would be calculated as follows: (2000 pounds + 6000 pounds + 0 pounds) ÷ 3 = 2,667 pounds, which results in that amount being reduced from the 100,000 pound ACL in the following year, or an ACT of 97,330 pounds. It is important to note, however, that assuming a static ACL for a number of years sequentially is unrealistic. More likely the ACL will vary annually due to fishery dynamics; therefore, using the percentage approach would likely be employed in these situations because this method allows the value of any overages to be standardized.

The second approach for setting an ACT is based on a percentage reduction from ACL using the SEEM analysis. This approach could be used regardless of whether an ACL is set equal to or less than the ABC. Under this approach, instead of applying the 3-year running average approach, the Council could apply the full SEEM analysis described under Method 1 to set the ACT below the ACL when the ACL equals the ABC. If ACL is set lower than the ABC because the social, ecological, and economic factors have already been taken into account, then the ACT can be set by using the 3-year running average approach described above or based on factors related to management uncertainty (i.e. the M part of the SEEM analysis).

This page was intentionally left blank.

Appendix F: EFH Impacts Provisions

The EFH provisions of the Magnuson Stevens Act impose procedural requirements on both Councils and federal agencies related to marine planning. First, for each FMP, Councils must identify adverse impacts to EFH resulting from both fishing and non-fishing activities, and describe measures to minimize these impacts. Second, the provisions allow Councils to provide comments and make recommendations to federal or state agencies that propose actions that may affect the habitat, including EFH, of a managed species. NMFS is required to consult with federal agencies on actions that may adversely affect EFH, which usually occurs concurrently with the NEPA planning process.

None of the fisheries operating under the Hawaii Archipelago FEP are expected to have adverse impacts on EFH or HAPC for species managed under the different fisheries. Continued and future operations of fisheries under the Hawaii Archipelago FEP are not likely to lead to substantial physical, chemical, or biological alterations to the habitat, or result in loss of, or injury to, these species or their prey.

1. MSA and non-MSA fishing activities that may adversely affect EFH

The Council is required to act to prevent, mitigate, or minimize adverse effects from fishing on evidence that a fishing practice has identifiable adverse effects on EFH for any MUS covered by an FMP. Adverse fishing impacts may include physical, chemical, or biological alterations of the substrate and loss of, or injury to, benthic organisms, prey species, and their habitat or other components of the ecosystem.

The predominant fishing gear types—hook and line, longline, troll, traps—used in the fisheries managed by the Council cause few fishing-related impacts to the benthic habitat utilized by coral reef species, bottomfish, crustaceans, or precious corals. The current management regime prohibits the use of bottom trawls, bottom-set nets, explosives, and poisons. The use of non-selective gear to harvest precious corals is prohibited and only selective and non-destructive gear may be allowed to fish for Coral Reef Ecosystem MUS. Although lobster traps have a potential impact on the benthic habitat, the tropical lobster *Panulirus penicillatus* does not enter lobster traps. In the limited areas where harvesting does occur in the Hawaii Archipelago, lobsters are caught by hand. This technique causes limited damage or no fishing-related impacts to the benthic habitat, and its continued use is likely.

The Council has determined that current management measures to protect fishery habitat are adequate and that no additional measures are necessary at this time. However, the Council has identified the following potential sources of fishery-related impacts to benthic habitat that may occur during normal fishing operations:

- Anchor damage from vessels attempting to maintain position over productive fishing habitat.
- Heavy weights and line entanglement occurring during normal hook-and-line fishing operations.
- Lost gear from lobster fishing operations.

- Remotely operated vehicle (ROV) tether damage to precious coral during harvesting operations.

Trash and discarded and lost gear (leaders, hooks, weights) by fishing vessels operating in the EEZ, are a Council concern. A report on the first phase of a submersible-supported research project conducted in Hawaii in 2001 preliminarily determined that bottomfish gear exhibited minimal to no impact on the coral reef habitat (C. Kelley, personal communication). A November 2001 cruise in the Main Hawaiian Islands determined that precious corals harvesting has "negligible" impact on the habitat (R. Grigg, personal communication). The Council is concerned with habitat impacts of marine debris originating from fishing operations outside the Western Pacific Region. NMFS is currently investigating the source and impacts of this debris. International cooperation will be necessary to find solutions to this broader problem.
Because the habitat of pelagic species is the open ocean, and managed fisheries employ variants of hook-and-line gear, there are no direct impacts to EFH. Lost gear may be a hazard to some species due to entanglement, but it has no direct effect on habitat. A possible impact would be caused by fisheries that target and deplete key prey species, but currently there is no such fishery. There is also a concern that invasive marine and terrestrial species may be introduced into sensitive environments by fishing vessels transiting from populated islands and grounding on shallow reef areas. Of most concern is the potential for unintentional introduction of rats (*Rattus* spp.) to the remote islands in the NWHI and PRIA that harbor endemic land birds. Although there are no restrictions that prohibit fishing vessels from transiting near these remote island areas, no invasive species introductions due to this activity have been documented. However, the Council is concerned that this could occur as fisheries expand and emerging fisheries develop in the future.

While the Council has determined that current management measures to protect fishery habitat are adequate, should future research demonstrate a need, the Council will act accordingly to protect habitat necessary to maintain a sustainable and productive fishery in the Western Pacific Region.

In modern times, some reefs have been degraded by a range of human activities. Comprehensive lists of human threats to coral reefs in the U.S. Pacific Islands are provided by Maragos et al. (1996), Birkeland (1997a), Grigg 2002, and Clark and Gulko (1999). (These findings are summarized in Table 27.) More recently, the U.S. Coral Reef Task Force identified six key threats to coral reefs: (1) landbased sources of pollutions, (2) overfishing, (3) recreational overuse, (4) lack of awarness, (5) climate change, and (6) coral bleaching and disease. In general, reefs closest to human population centers are more heavily used and are in worse condition than those in remote locations (Green 1997). Nonetheless, it is difficult to generalize about the present condition of coral reefs in the U.S. Pacific Islands because of their broad geographic distribution and the lack of long-term monitoring to document environmental and biological baselines. Coral reef conditions and use patterns vary throughout the U.S. Pacific Islands.
A useful distinction is between coral reefs near inhabited islands of American Samoa, CNMI, Guam, and the main Hawaiian islands and coral reefs in the remote NWHI, PRIAs, and northern islands of the CNMI. Reefs near the inhabited islands are heavily used for small-scale artisanal, recreational, and subsistence fisheries, and those in Hawaii, CNMI and Guam are also the focus for extensive non-consumptive marine recreation. Rather than a relatively few large-scale mechanized operations, many fishermen each deploy more limited gear. The more accessible

banks in the main Hawaiian Islands (Penguin Bank, Kaula Rock), Guam (southern banks), and the CNMI (Esmeralda Bank, 300 Reef, Marpi Reef, Dump Coke and Malakis Reef are the most heavily fished offshore reefs in the Western Pacific Region management area.
The vast majority of the reefs in the Western Pacific Region are remote and, in some areas, they have protected status. Most of these are believed to be in good condition. Existing fisheries are limited. The major exception is in the NWHI, where there are commercial fisheries for spiny lobster and deep-slope bottomfish (Green 1997). Poaching by foreign fishing fleets is suspected at Guam's southern banks, in the PRIA, and possibly in other areas. Poachers usually target high-value and often rare or overfished coral reef resources. These activities are already illegal but difficult to detect.

2. Non-fishing related activities that may adversely affect EFH

On the basis of the guidelines established by the Secretary under Section 305 (b)(1)(A) of the MSA, NMFS has developed a set of guidelines to assist councils meet the requirement to describe adverse impacts to EFH from non-fishing activities in their FMPs (67 FR 2376). A wide range of non-fishing activities throughout the U.S. Pacific Islands contribute to EFH degradation. FEP implementation will not directly mitigate these activities. However, as already noted, it will allow NMFS and the Council to make recommendations to any federal or state agency about actions that may impact EFH. Not only could this be a mechanism to minimize the environmental impacts of agency action, it will help them focus their conservation and management efforts.

The Council is required to identify non-fishing activities that have the potential to adversely affect EFH quality and, for each activity, describe its known potential adverse impacts and the EFH most likely to be adversely affected. The descriptions should explain the mechanisms or processes that may cause the adverse effects and how these may affect habitat function. The Council considered a wide range of non-fishing activities that may threaten important properties of the habitat used by managed species and their prey, including dredging, dredge material disposal, mineral exploration, water diversion, aquaculture, wastewater discharge, oil and hazardous substance discharge, construction of fish enhancement structures, coastal development, introduction of exotic species, and agricultural practices. These activities and impacts, along with mitigation measures, are detailed in the next section.

Table 1: Threats to Coral Reefs in the Hawaiian Archipelago

Activity	**MHI**	**NWHI**
Coastal construction	x	
Destructive fishing	x	
Flooding	x	
Industrial pollution		
Overuse/over harvesting	x	
Nutrient loading (sewage/eutrophication)	x	
Soil erosion/sedimentation	x	

Vessel groundings/oil spills		x
Military activity	x	x
Hazardous waste		x
Tourist impacts	x	
Urbanization	x	
Thermal pollution	x	
Marine debris	x	x
Introduced species	x	

Sources: Birkeland 1997a; Clark and Gulko 1999; Grigg 2002; Jokiel 1999; Maragos et al. 1996

3. Cumulative Impacts Assessment

A cumulative impacts analysis (CIA) is required by the NMFS EFH Final Rule (2002) to the extent feasible and practicable. The CIA "should analyze how the cumulative impacts of fishing and non-fishing activities influence the function of EFH on an ecosystem or watershed scale" (67 FR 2378, January 17, 2002). The assessment should include multiple threats, including natural stresses.

There are a variety of past, present, and future activities that have the potential to affect EFH in the Hawaiian Archipelago. In the Main Hawaiian Islands, there has been interest in aquaculture, inter-island electricity cables, and offshore energy development as the state moves toward self-sufficiency in energy and food production. Since many water column impacts are temporary in nature, benthic alteration associated with laying cables and anchoring are most likely to have an adverse impact and pose the greatest threat to EFH for juvenile and adult life stages. Nearshore impacts associated with development have the potential to impact shallow water species. Large-scale impacts such as global climate change that affect ocean temperatures, currents, and potentially food chain dynamics are most likely to threaten EFH for egg and larval pelagic stages.

The Northwestern Hawaiian Islands are very remote. All commercial fishing for bottomfish and seamount groundfish species is under moratorium in the Hancock Seamount Ecosystem Management Area; commercial fishing is banned within the Papahānaumokuākea Marine National Monument. Activity within the Monument is generally limited to scientific research. Similar to larval and egg life stages, global environmental problems pose the largest threat to EFH in the NWHI.

Future analyses will seek to analyze cumulative impact of habitat conversion and the impacts of discharges in order to evaluate the cumulative impacts on EFH. Information and techniques that are developed for this process will be used to supplement future revisions of these EFH provisions as the information becomes available.

4. Conservation and Enhancement Recommendations

According to NMFS guidelines, Councils should describe ways to avoid, minimize, or compensate for the adverse effects to EFH and promote the conservation and enhancement of EFH. Generally, non-water dependent actions that may have adverse impacts should not be located in EFH. Activities that may result in significant adverse effects on EFH should be avoided where less environmentally harmful alternatives are available. If there are no alternatives, the impacts of these actions should be minimized. Environmentally sound engineering and management practices should be employed for all actions that may adversely affect EFH. Disposal or spillage of any material (dredge material, sludge, industrial waste, or other potentially harmful materials) that would destroy or degrade EFH should be avoided. If avoidance or minimization is not possible, or will not adequately protect EFH, compensatory mitigation to conserve and enhance EFH should be recommended. FEPs may recommend proactive measures to conserve or enhance EFH. When developing proactive measures, Councils may develop a priority ranking of the recommendations to assist federal and state agencies undertaking such measures. Councils should describe a variety of options to conserve or enhance EFH, which may include, but are not limited to the following:

Enhancement of rivers, streams, and coastal areas through new federal, state, or local government planning efforts to restore river, stream, or coastal area watersheds.

Improve water quality and quantity through the use of the best land management practices to ensure that water-quality standards at state and federal levels are met. The practices include improved sewage treatment, disposing of waste materials properly, and maintaining sufficient in-stream flow to prevent adverse effects to estuarine areas.

Restore or create habitat, or convert non-EFH to EFH, to replace lost or degraded EFH, if conditions merit such activities. However, habitat conversion at the expense of other naturally functioning systems must be justified within an ecosystem context.
Established policies and procedures of the Council and NMFS provide the framework for conserving and enhancing EFH. Components of this framework include adverse impact avoidance and minimization, provision of compensatory mitigation whenever the impact is significant and unavoidable, and incorporation of enhancement. New and expanded responsibilities contained in the MSA will be met through appropriate application of these policies and principles. In assessing the potential impacts of proposed projects, the Council and the NMFS are guided by the following general considerations:

- The extent to which the activity would directly and indirectly affect the occurrence, abundance, health, and continued existence of fishery resources.
- The extent to which the potential for cumulative impacts exists.
- The extent to which adverse impacts can be avoided through project modification, alternative site selection, or other safeguards.
- The extent to which the activity is water dependent if loss or degradation of EFH is involved.
- The extent to which mitigation may be used to offset unavoidable loss of habitat functions and values.

Seven non-fishing activities have been identified that directly or indirectly affect habitat used by MUS. Impacts and conservation measures are summarized below for each of these activities.

Although not all inclusive, what follows is a good example of the kinds of measures that can help to minimize or avoid the adverse effects of identified non-fishing activities on EFH.

- Habitat Loss and Degradation

Impacts:

- Changes in abundance of infaunal and bottom-dwelling organisms
- Turbidity plumes
- Biological availability of toxic substances
- Damage to sensitive habitats
- Current patterns/water circulation modification
- Loss of habitat function
- Contaminant runoff
- Sediment runoff
- Shoreline stabilization projects

Conservation Measures:

1. To the extent possible, fill materials resulting from dredging operations should be placed on an upland site. Fills should not be allowed in areas with subaquatic vegetation, coral reefs, or other areas of high productivity.
2. The cumulative impacts of past and current fill operations on EFH should be addressed by federal, state, and local resource management and permitting agencies and should considered in the permitting process.
3. The disposal of contaminated dredge material should not be allowed in EFH.
4. When reviewing open-water disposal permits for dredged material, state and federal agencies should identify the direct and indirect impacts such projects may have on EFH. When practicable, benthic productivity should be determined by sampling prior to any discharge of fill material. Sampling design should be developed with input from state and federal resource agencies.
5. The areal extent of the disposal site should be minimized. However, in some cases, thin layer disposal may be less deleterious. All non-avoidable impacts should be mitigated.
6. All spoil disposal permits should reference latitude–longitude coordinates of the site so that information can be incorporated into GIS systems. Inclusion of aerial photos may also be required to help geo-reference the site and evaluate impacts over time.
7. Further fills in estuaries and bays for development of commercial enterprises should be curtailed.
8. Prior to installation of any piers or docks, the presence or absence of coral reefs and submerged aquatic vegetation should be determined. These areas should be avoided. Benthic productivity should also be determined, and areas with high productivity avoided. Sampling design should be developed with input from state and federal resource agencies.
9. The use of dry stack storage is preferable to wet mooring of boats. If that method is not feasible, construction of piers, docks, and marinas should be designed to minimize impacts to the coral reef substrate and subaquatic vegetation.
10. Bioengineering should be used to protect altered shorelines. The alteration of natural, stable shorelines should be avoided.

- Pollution and Contamination

Impacts:

- Introduction of chemicals
- Introduction of animal wastes
- Increased sedimentation
- Wastewater effluent with high contaminant levels
- High nutrient levels downcurrent of outfalls
- Biocides to prevent biofouling
- Thermal effects
- Turbidity plumes
- Affected submerged aquatic vegetation sites
- Stormwater runoff
- Direct physical contact
- Indirect exposure
- Cleanup

Conservation Measures:

1. Outfall structures should be placed sufficiently far offshore to prevent discharge water from affecting areas designated as EFH. Discharges should be treated using the best available technology, including implementation of up-to-date methodologies for reducing discharges of biocides (e.g., chlorine) and other toxic substances.
2. Benthic productivity should be determined by sampling prior to any construction activity. Areas of high productivity should be avoided to the maximum extent possible. Sampling design should be developed with input from state and federal resource agencies.
3. Mitigation should be provided for the degradation or loss of habitat from placement of the outfall structure and pipeline as well as the treated water plume.
4. Containment equipment and sufficient supplies to combat spills should be on-site at all facilities that handle oil or hazardous substances.
5. Each facility should have a Spill Contingency Plan, and all employees should be trained in how to respond to a spill.
6. To the maximum extent practicable, storage of oil and hazardous substances should be located in an area that would prevent spills from reaching the aquatic environment.
7. Construction of roads and facilities adjacent to aquatic environments should include a storm-water treatment component that would filter out oils and other petroleum products.
8. The use of pesticides, herbicides, and fertilizers in areas that would allow for their entry into the aquatic environment should be avoided.
9. The best land management practices should be used to control topsoil erosion and sedimentation.

- Dredging

Impacts:

- Changes in abundance of infaunal and bottom-dwelling organisms
- Turbidity plumes
- Bioavailability of toxic substances

- Damage to sensitive habitats
- Water circulation modification

Conservation Measures:

1. To the maximum extent practicable, dredging should be avoided. Activities that require dredging (such as placement of piers, docks, marinas, etc.) should be sited in deep-water areas or designed in such a way as to alleviate the need for maintenance dredging. Projects should be permitted only for water-dependent purposes, when no feasible alternatives are available.
2. Dredging in coastal and estuarine waters should be performed during the time frame when MUS and prey species are least likely to be entrained. Dredging should be avoided in areas with submerged aquatic vegetation and coral reefs.
3. All dredging permits should reference latitude–longitude coordinates of the site so that information can be incorporated into Geographic Information Systems (GIS). Inclusion of aerial photos may also be required to help geo-reference the site and evaluate impacts over time.
4. Sediments should be tested for contaminants as per the EPA and U.S. Army Corps of Engineers requirements.
5. The cumulative impacts of past and current dredging operations on EFH should be addressed by federal, state, and local resource management and permitting agencies and should be considered in the permitting process.
6. If dredging needs are caused by excessive sedimentation in the watershed, those causes should be identified and appropriate management agencies contacted to assure action is done to curtail those causes.
7. Pipelines and accessory equipment used in conjunction with dredging operations should, to the maximum extent possible, avoid coral reefs, seagrass beds, estuarine habitats, and areas of subaquatic vegetation.

o Marine Mining

Impacts:

- Loss of habitat function
- Turbidity plumes
- Resuspension of fine-grained mineral particles
- Composition of the substrate altered

Conservation Measures:

1. Mining in areas identified as a coral reef ecosystem should be avoided.
2. Mining in areas of high biological productivity should be avoided.
3. Mitigation should be provided for loss of habitat due to mining.

o Water Intake Structures

Impacts:

- Entrapment, impingement, and entrainment
- Loss of prey species

Conservation Measures:

1. New facilities that rely on surface waters for cooling should not be located in areas where coral reef organisms are concentrated. Discharge points should be located in areas that have low concentrations of living marine resources, or they should incorporate cooling towers that employ sufficient safeguards to ensure against release of blow-down pollutants into the aquatic environment.
2. Intake structures should be designed to prevent entrainment or impingement of MUS larvae and eggs.
3. Discharge temperatures (both heated and cooled effluent) should not exceed the thermal tolerance of the plant and animal species in the receiving body of water.
4. Mitigation should be provided for the loss of EFH from placement of the intake structure and delivery pipeline.

o Aquaculture Facilities

Impacts:

- Discharge of organic waste from the farms
- Impacts to the seafloor below the cages or pens

Conservation Measures:

1. Facilities should be located in upland areas as often as possible. Tidally influenced wetlands should not be enclosed or impounded for mariculture purposes. This includes hatchery and grow-out operations. Siting of facilities should also take into account the size of the facility, the presence or absence of submerged aquatic vegetation and coral reef ecosystems, proximity of wild fish stocks, migratory patterns, competing uses, hydrographic conditions, and upstream uses. Benthic productivity should be determined by sampling prior to any operations. Areas of high productivity should be avoided to the maximum extent possible. Sampling design should be developed with input from state and federal resource agencies.
2. To the extent practicable, water intakes should be designed to avoid entrainment and impingement of native fauna.
3. Water discharge should be treated to avoid contamination of the receiving water and should be located only in areas having good mixing characteristics.
4. Where cage mariculture operations are undertaken, water depths and circulation patterns should be investigated and should be adequate to preclude the buildup of waste products, excess feed, and chemical agents.
5. Non-native, ecologically undesirable species that are reared may pose a risk of escape or accidental release, which could adversely affect the ecological balance of an area. A thorough scientific review and risk assessment should be undertaken before any non-native species are allowed to be introduced.
6. Any net pen structure should have small enough webbing to prevent entanglement by prey species.
7. Mitigation should be provided for the EFH areas impacted by the facility.

o Introduction of Exotic Species

Impacts:

- Habitat alteration
- Trophic alteration

- Gene pool alteration
- Spatial alteration
- Introduction of disease

Conservation Measures:

1. Vessels should discharge ballast water far enough out to sea to prevent introduction of nonnative species to bays and estuaries.
2. Vessels should conduct routine inspections for presence of exotic species in crew quarters and hull of the vessel prior to embarking to remote islands (PRIAs, NWHI, and northern islands of the CNMI).
3. Exotic species should not be introduced for aquaculture purposes unless a thorough scientific evaluation and risk assessment are performed (see section on aquaculture).
4. Effluent from public aquaria display laboratories and educational institutes using exotic species should be treated prior to discharge.

5. Essential Fish Habitat Research Needs

The Council conducted an initial inventory of available environmental and fisheries data sources relevant to the EFH of each managed fishery. Based on this inventory, a series of tables were created that indicated the existing level of data for individual MUS in each fishery. These tables are available in Supplements to Amendment 4, 6, and 10 to the Precious Corals, Bottomfish and Seamount Groundfish, and Crustaceans FMPs respectively (WPRFMC 2002), and the Coral Reef Ecosystems FMP (WPRFMC 2001) and are summarized below.

Additional research is needed to make available sufficient information to support a higher level of description and identification of EFH and HAPC. Additional research may also be necessary to identify and evaluate actual and potential adverse effects on EFH, including, but not limited to, direct physical alteration; impaired habitat quality/functions; cumulative impacts from fishing; or indirect adverse effects, such as sea level rise, climate change, and climate shifts. The following scientific data are needed to more effectively address EFH provisions:

All Species

- Distribution of early life history stages (eggs and larvae) of MUS by habitat
- Juvenile habitat (including physical, chemical, and biological features that determine suitable juvenile habitat)
- Food habits (feeding depth, major prey species, etc.)
- Habitat-related densities for all MUS life history stages
- Habitat utilization patterns for different life history stages and species for BMUS
- Growth, reproduction, and survival rates for MUS within habitats

Bottomfish Species

- Inventory of marine habitats in the EEZ of the Western Pacific Region
- Data to obtain a better SPR estimate for American Samoa's bottomfish complex
- Baseline (virgin stock) parameters (CPUE, percent immature) for the Guam/NMI deep- and shallow-water bottomfish complexes
- High-resolution maps of bottom topography/currents/water masses/primary productivity

Crustaceans Species

- Identification of postlarval settlement habitat of all CMUS
- Identification of source–sink relationships in the NWHI and other regions (i.e., relationships between spawning sites settlement using circulation models, and genetic techniques)
- Establish baseline parameters (CPUE) for the Guam/Northern Marinas crustacean populations
- Research to determine habitat related densities for all CMUS life history stages in American Samoa, Guam, Hawaii, and NMI
- High-resolution mapping of bottom topography, bathymetry, currents, substrate types, algal beds, and habitat relief

Precious Corals Species

- Distribution, abundance, and status of precious corals in the Western Pacific Region

Coral Reef Ecosystem Species

- The distribution of early life history stages (eggs and larvae) of MUS by habitat
- Description of juvenile habitat (including physical, chemical, and biological features that determine suitable juvenile habitat)
- Food habits (feeding depth, major prey species, etc.)
- Habitat-related densities for all MUS life history stages
- Habitat utilization patterns for different life history stages and species
- Growth, reproduction, and survival rates for MUS within habitats.
- Inventory of coral reef ecosystem habitats in the EEZ of the Western Pacific Region
- Location of important spawning sites
- Identification of postlarval settlement habitat
- Establishment of baseline parameters for coral reef ecosystem resources
- High-resolution mapping of bottom topography, bathymetry, currents, substrate types, algal beds, and habitat relief

NMFS guidelines suggest that the Council and NMFS periodically review and update the EFH components of FMPs as new data become available. The Council recommends that new information be reviewed, as necessary, during preparation of the annual and SAFE reports by the Plan Teams, in accordance with the National Standards guidelines. EFH designations may be changed under the FEP amendment process if information presented in an annual review indicates that modifications are justified.

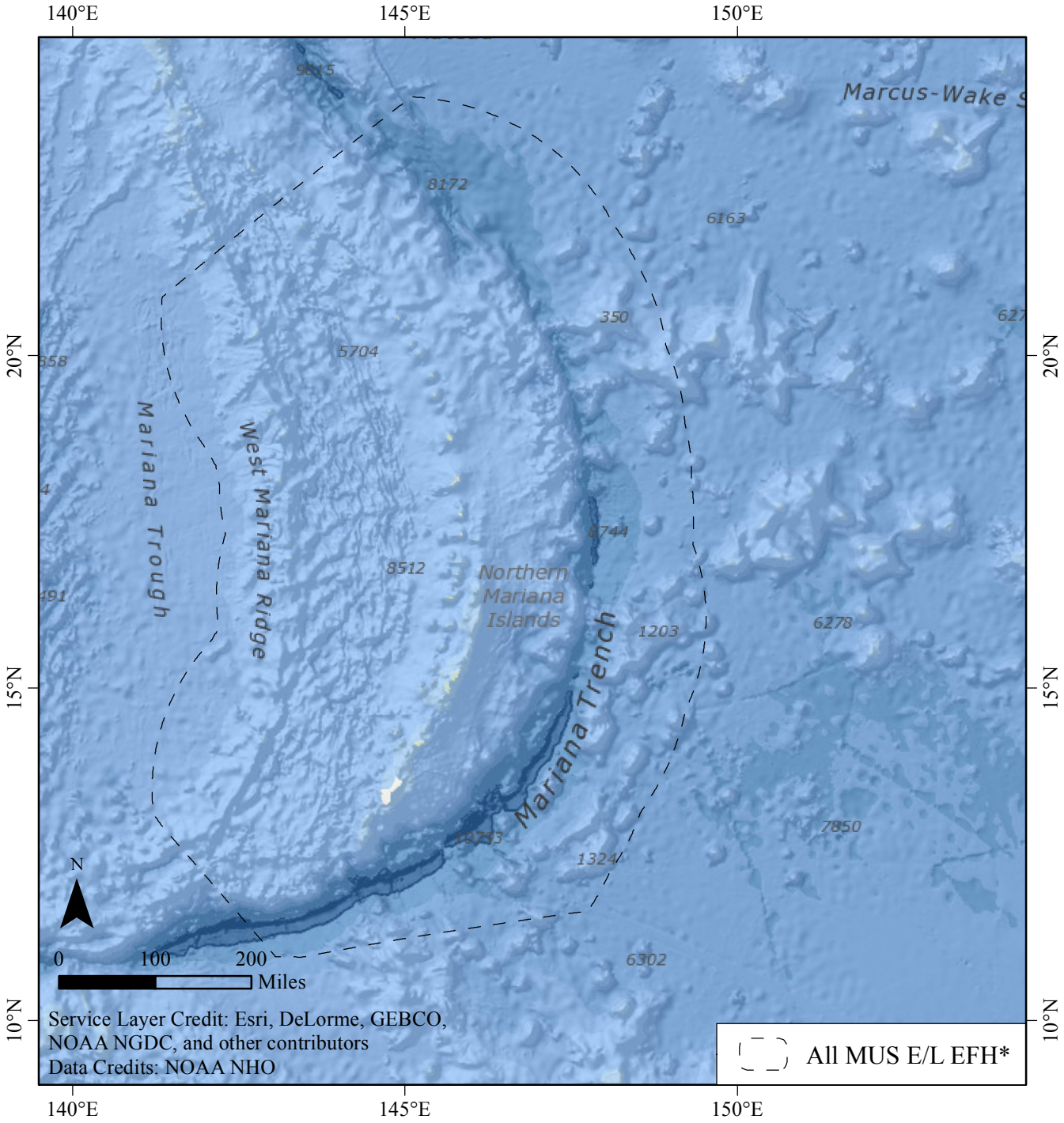
This page was intentionally left blank.

Appendix G: Essential Fish Habitat and Habitat Areas of Particular Concern Maps

Management Unit Species	Extent	Page
All MUS, Egg and Larval Life Stages	Marianas Archipelago	G-3
Bottomfish		
	Santa Rosa Reef to Galvez Bank	G-4
	Guam	G-5
	Rota	G-6
	Aguijan, Tinian, Saipan, Marpi Bank	G-7
	Farallon de Medinilla to Anatahan	G-8
	Sarigan	G-9
	Guguan to Alamagan	G-10
	Pagan	G-11
	Agrihan	G-12
	Asuncion	G-13
	Maug Islands to Supply Reef	G-14
	Uracas/Farallon de Pajaros	G-15
Coral Reef		
	Santa Rosa Reef to Galvez Bank	G-16
	Guam	G-17
	Rota	G-18
	Aguijan, Tinian, Saipan, Marpi Bank	G-19
	Farallon de Medinilla to Anatahan	G-20
	Sarigan	G-21
	Guguan	G-22
	Alamagan	G-23
	Pagan	G-24
	Agrihan	G-25
	Asuncion	G-26
	Maug Islands to Supply Reef	G-27
	Uracas/Farallon de Pajaros	G-28
Crustaceans		
	Santa Rosa Reef to Galvez Bank	G-29
	Guam	G-30
	Rota	G-31
	Aguijan, Tinian, Siapan, Marpi Bank	G-32
	Farallon de Medinilla to Anatahan	G-33
	Sarigan	G-34
	Guguan to Alamagan	G-35
	Pagan	G-36
	Agrihan	G-37
	Asuncion	G-38
	Maug Islands to Supply Reef	G-39
	Uracas/Farallon de Pajaros	G-40

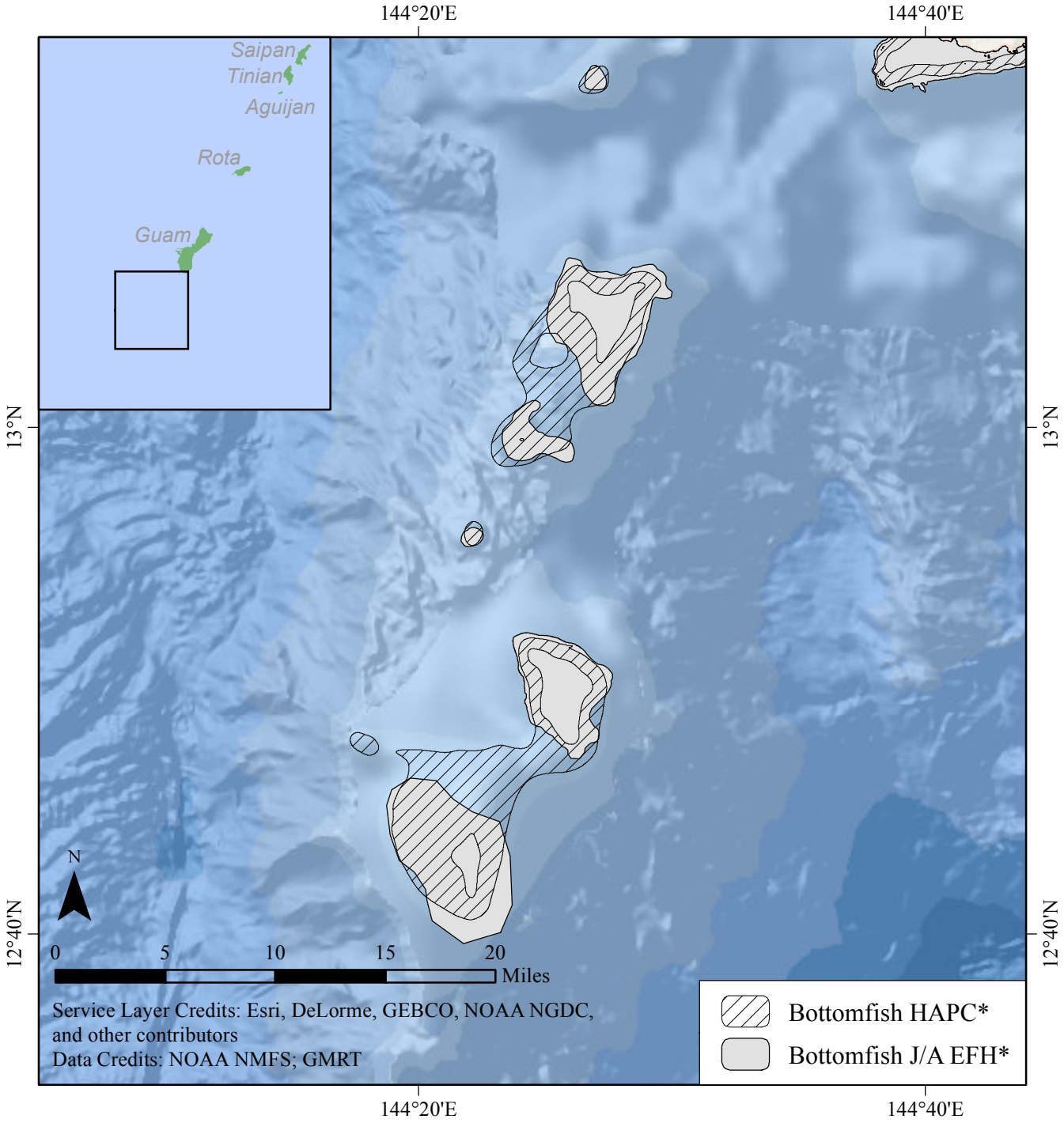
This page was intentionally left blank.

Mariana Archipelago Fishery Ecosystem Plan
Egg and Larval EFH, All MUS: Mariana Archipelago



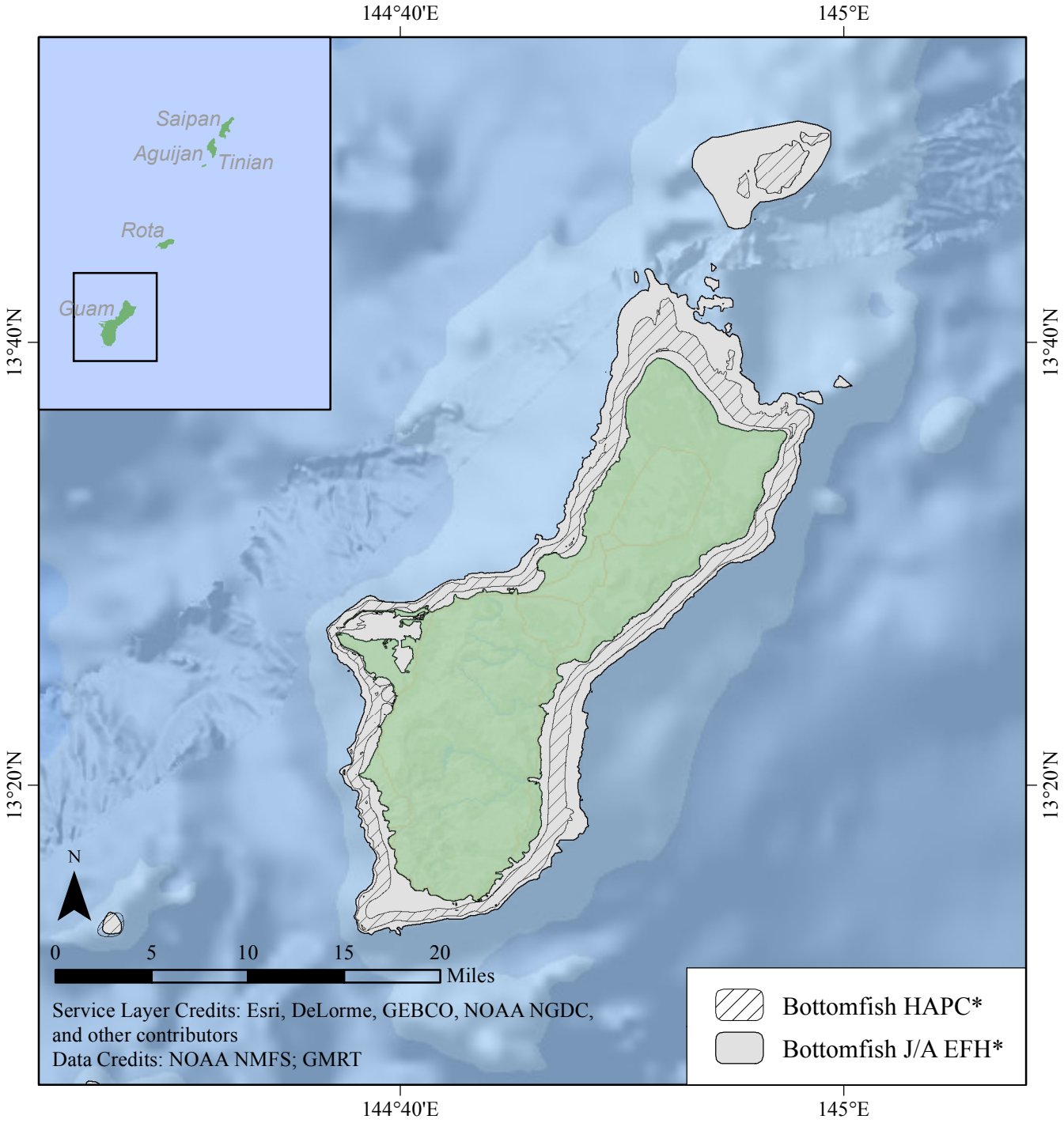
** The geographic extent of EFH is shown for the egg and larval (E/L) stages of all management unit species (MUS) except deepwater shrimp from the Crustaceans MUS. Other Crustacean E/L EFH is the water column to a depth of 150 m. Coral Reef E/L EFH is the water column to a depth of 100 m. Bottomfish E/L EFH is the water column to a depth of 400 m.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: Santa Rosa Reef to Galvez Bank



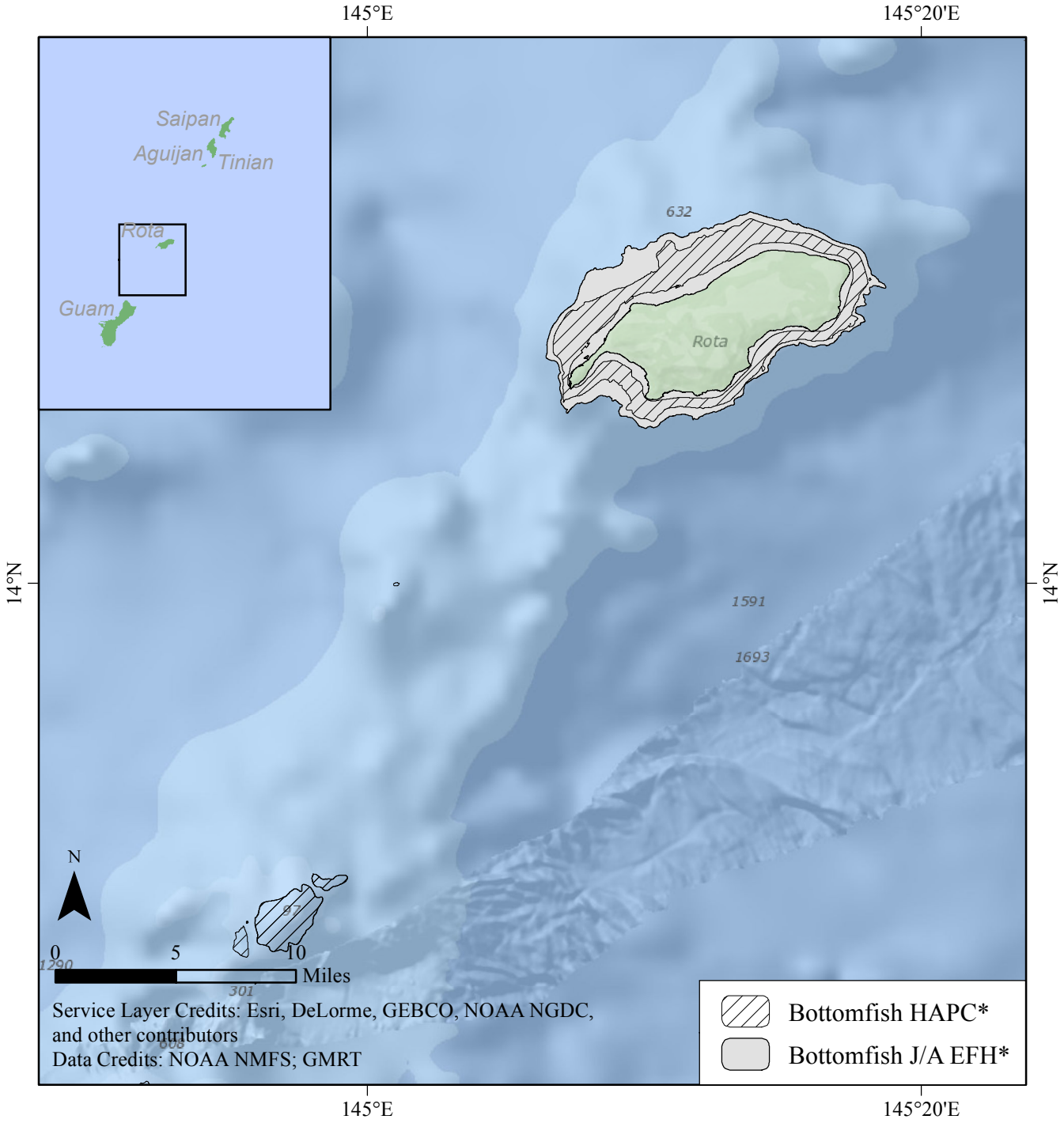
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: Guam



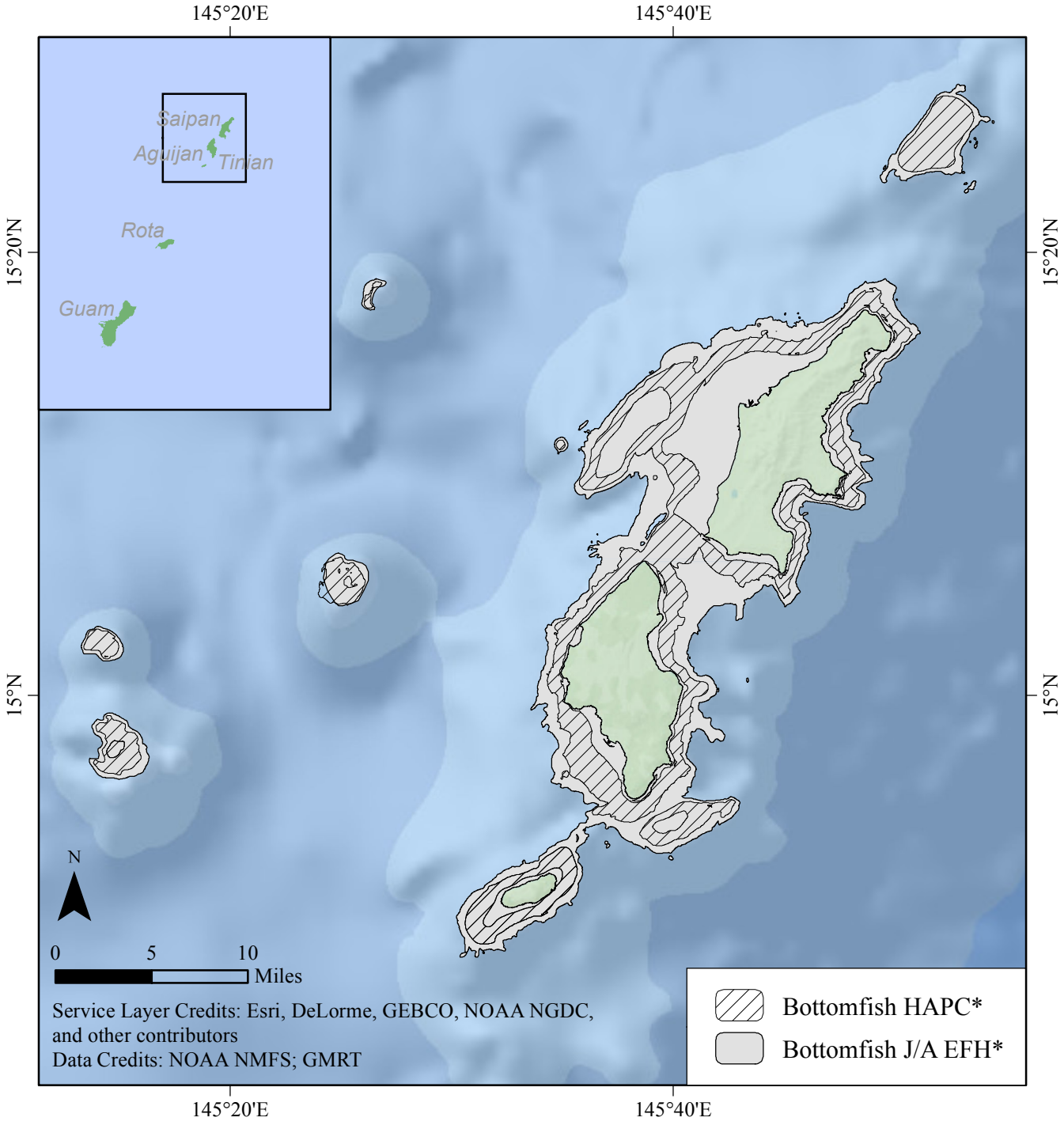
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: Rota



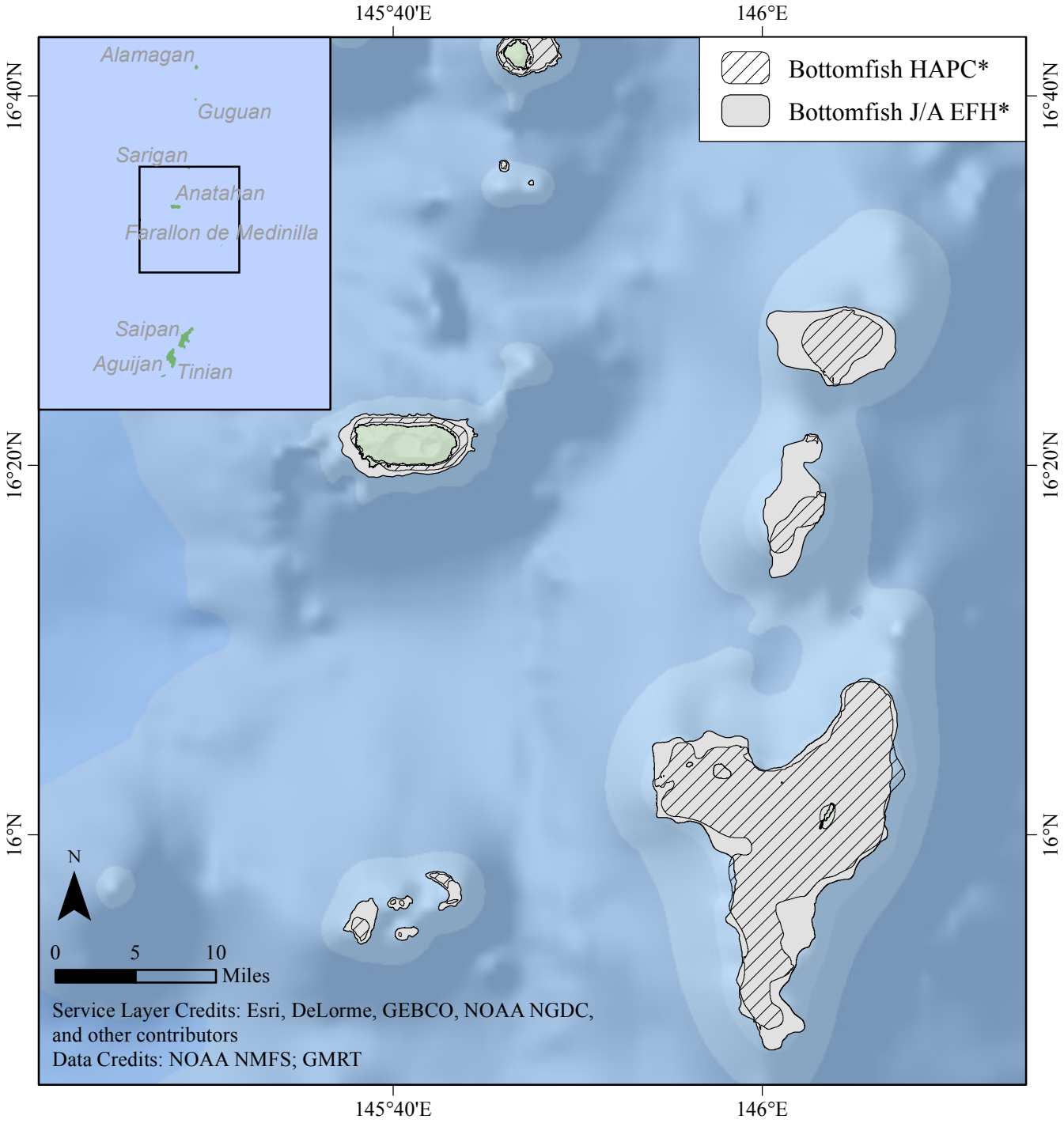
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: Saipan, Tinian, and Aguijan



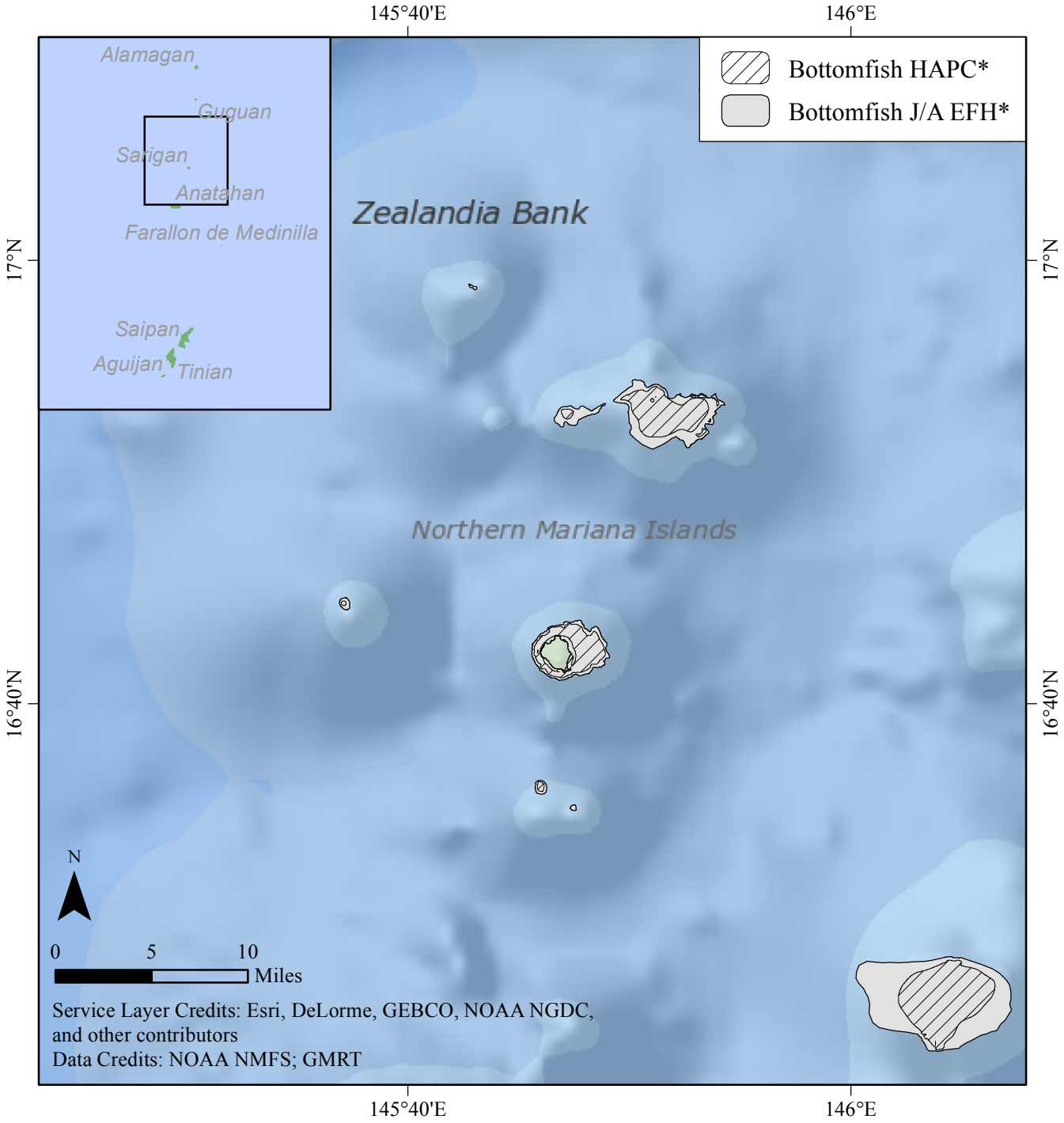
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: FDM to Anatahan



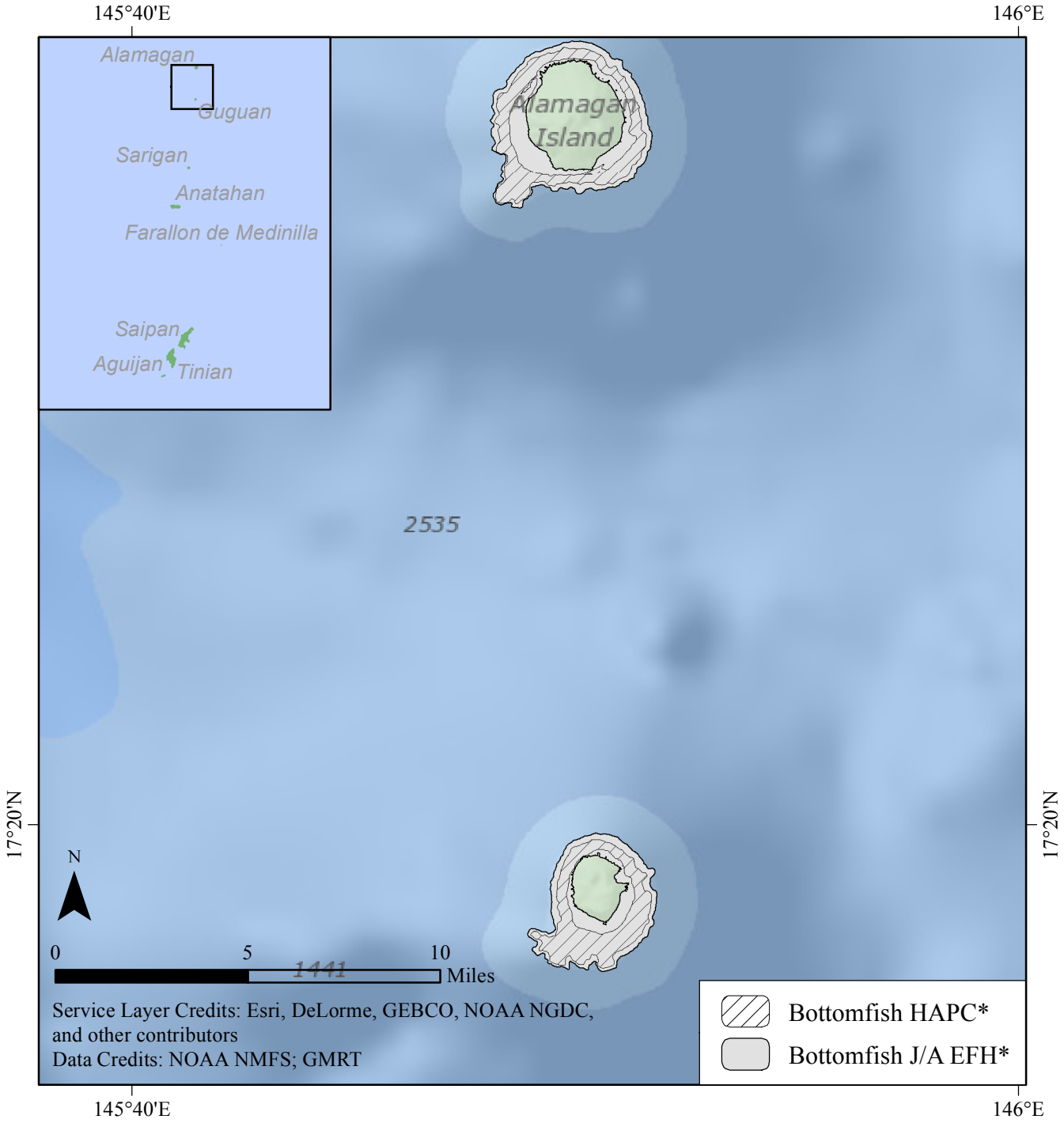
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: Sarigan and Outlying Banks



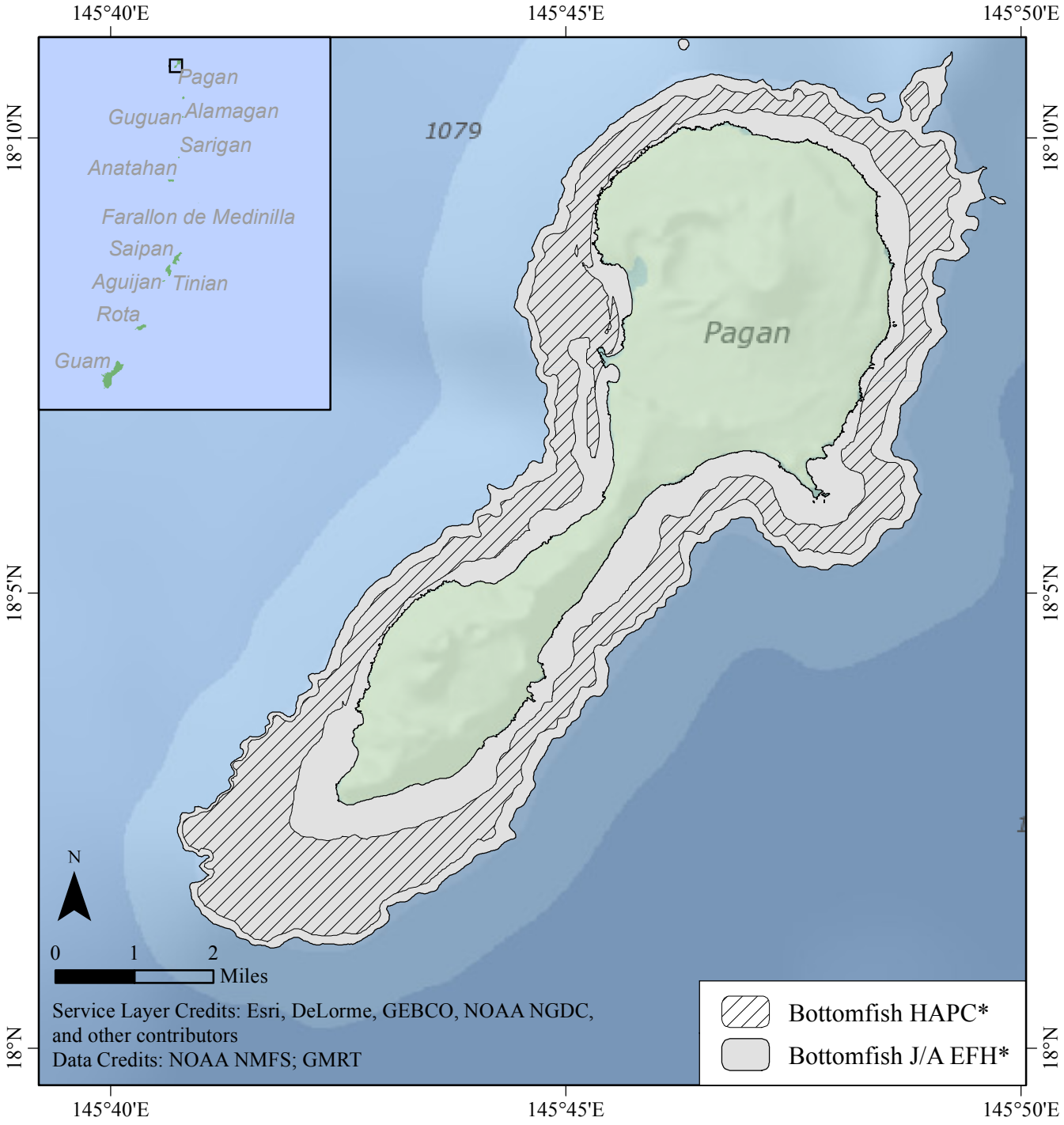
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: Guguan to Alamagan



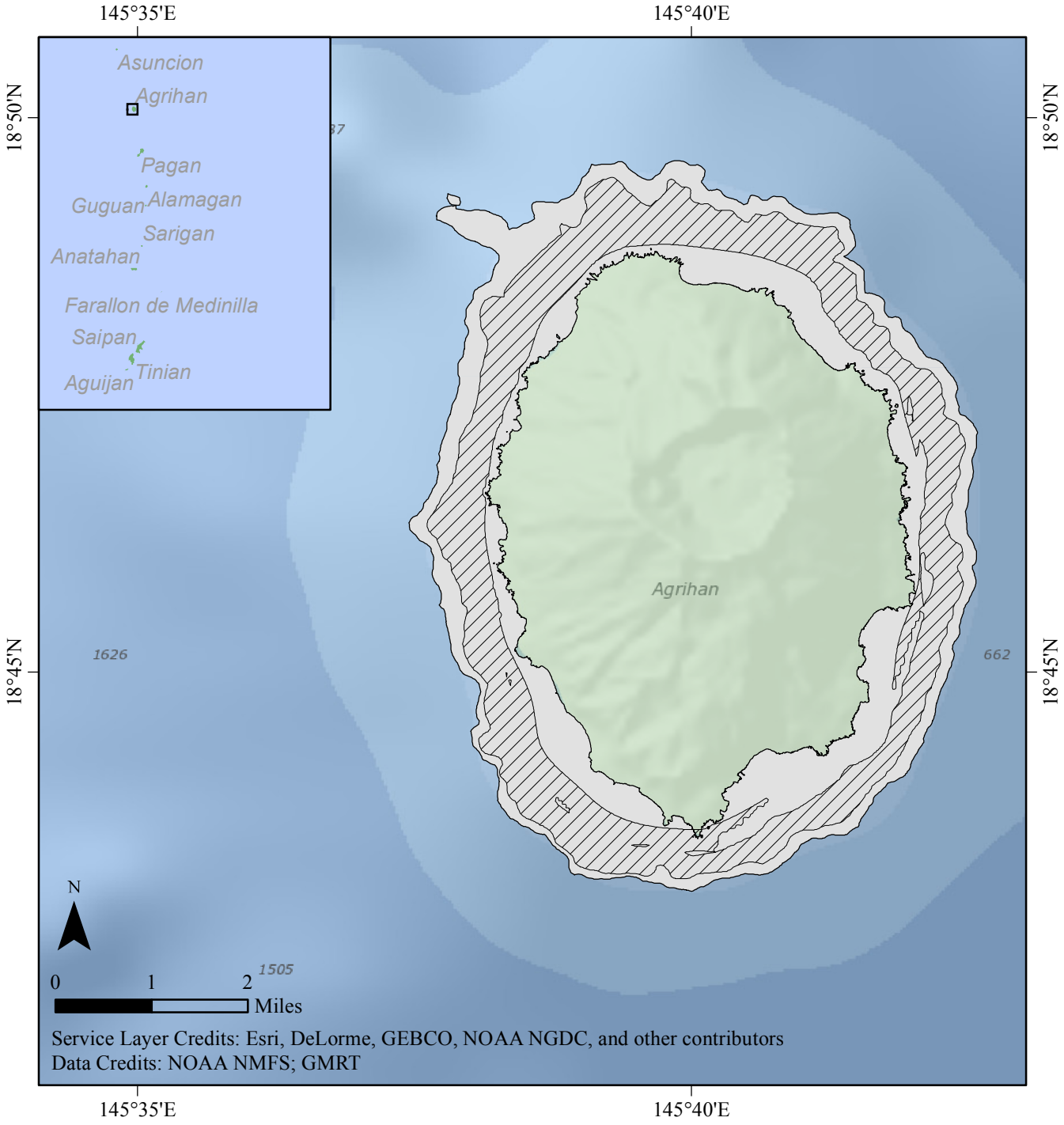
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: Pagan



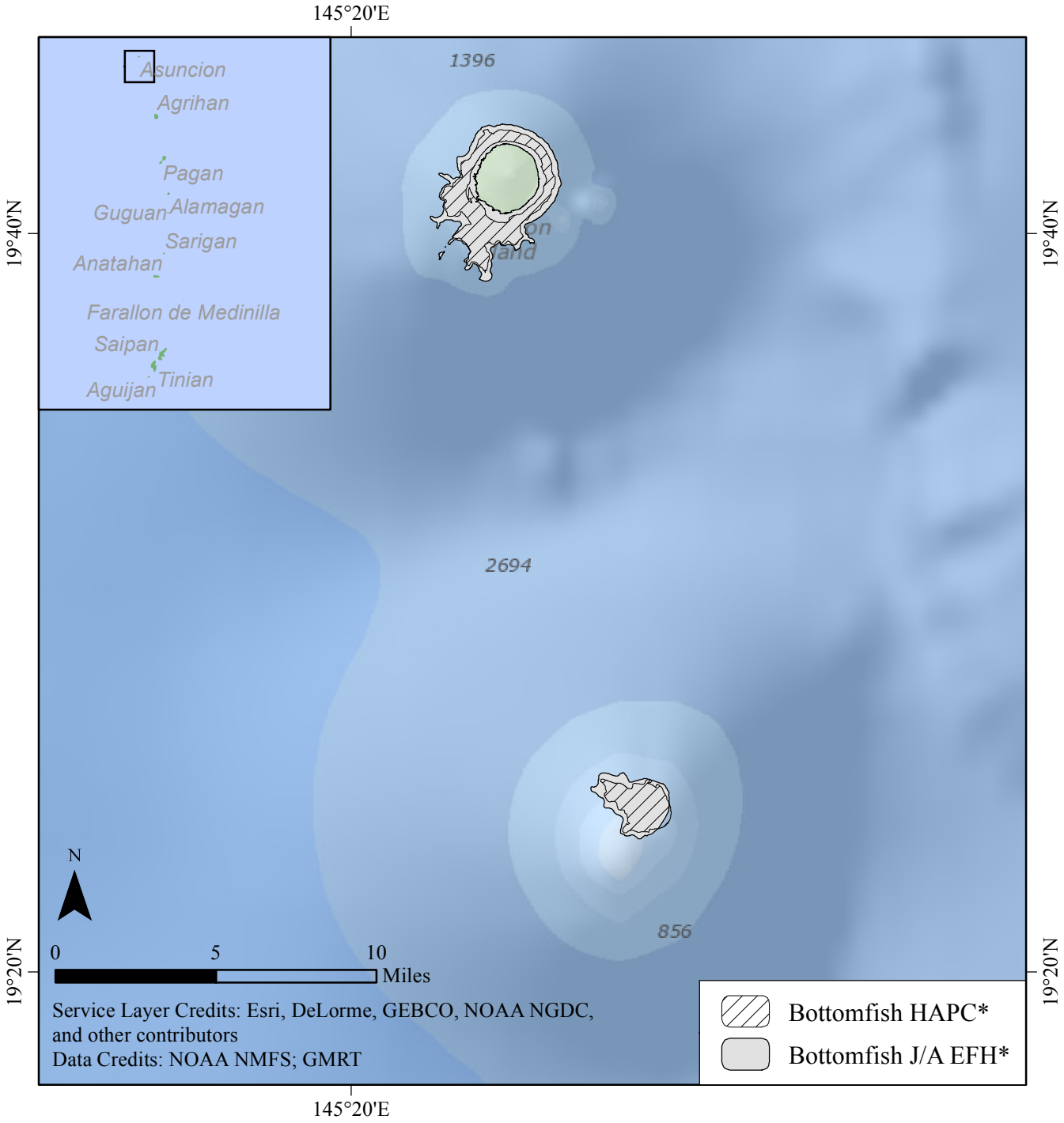
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: Agrihan



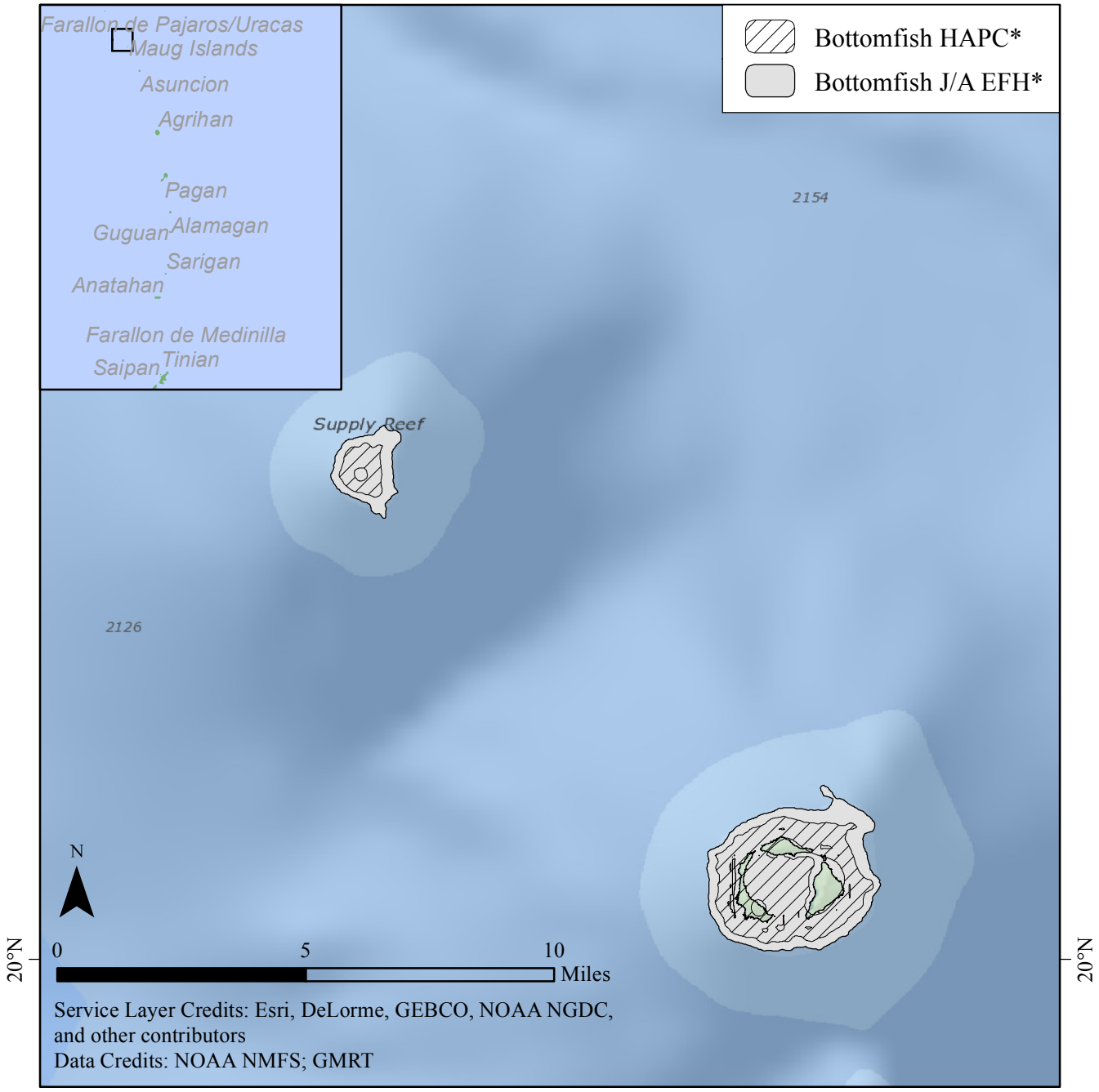
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: Asuncion



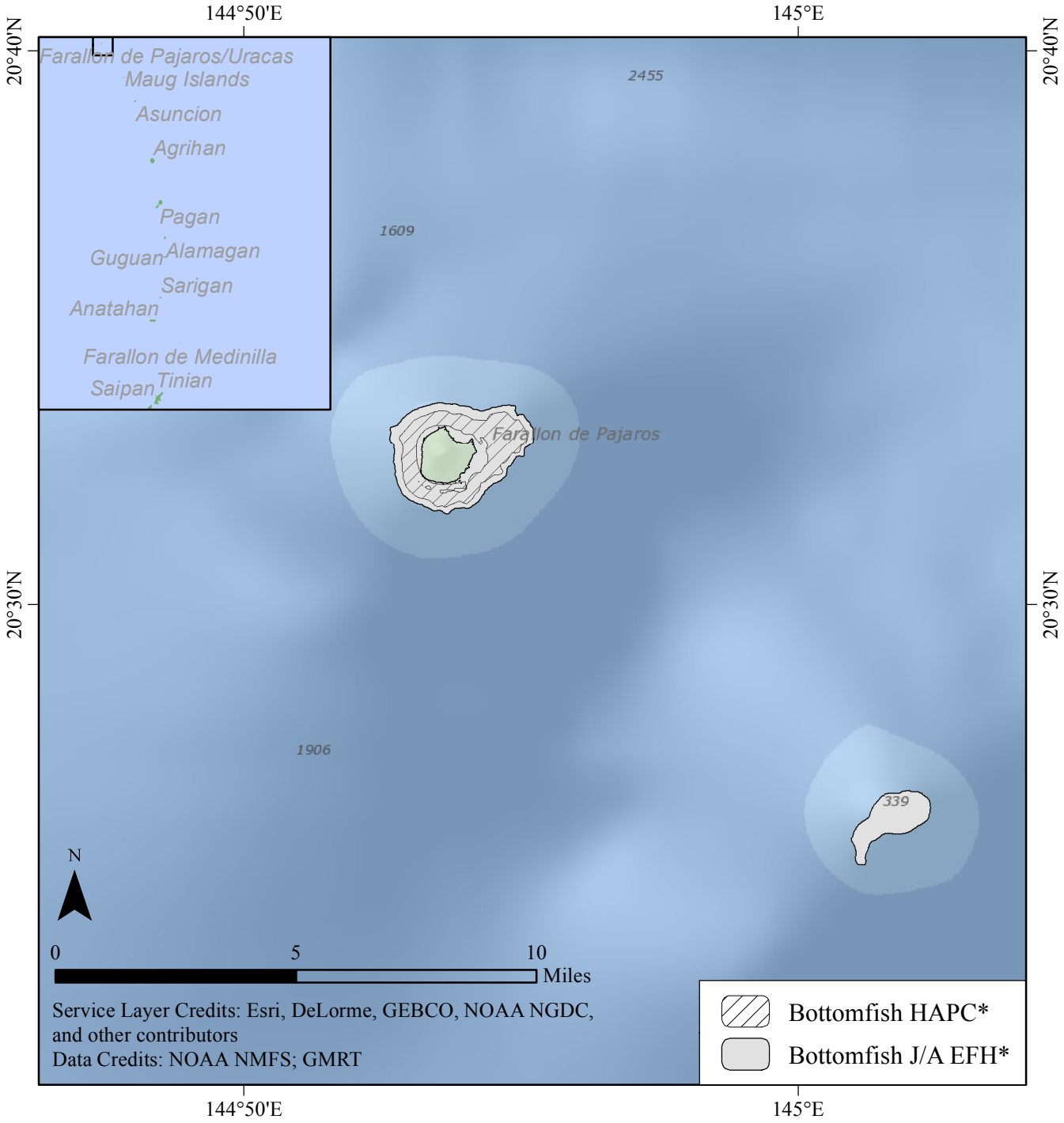
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: Maug Islands



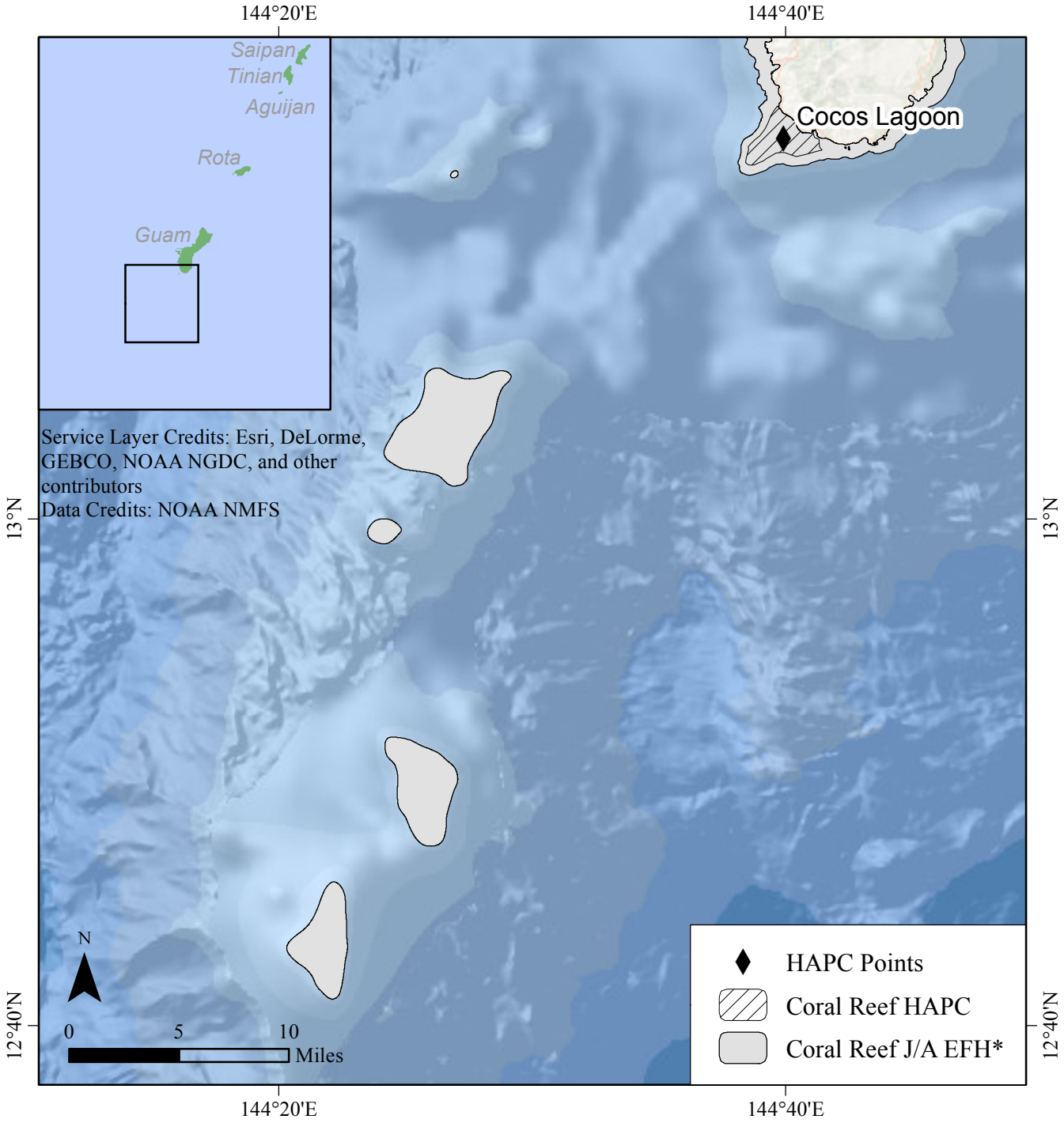
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Bottomfish EFH/HAPC: Uracas/Farallon de Pajaros



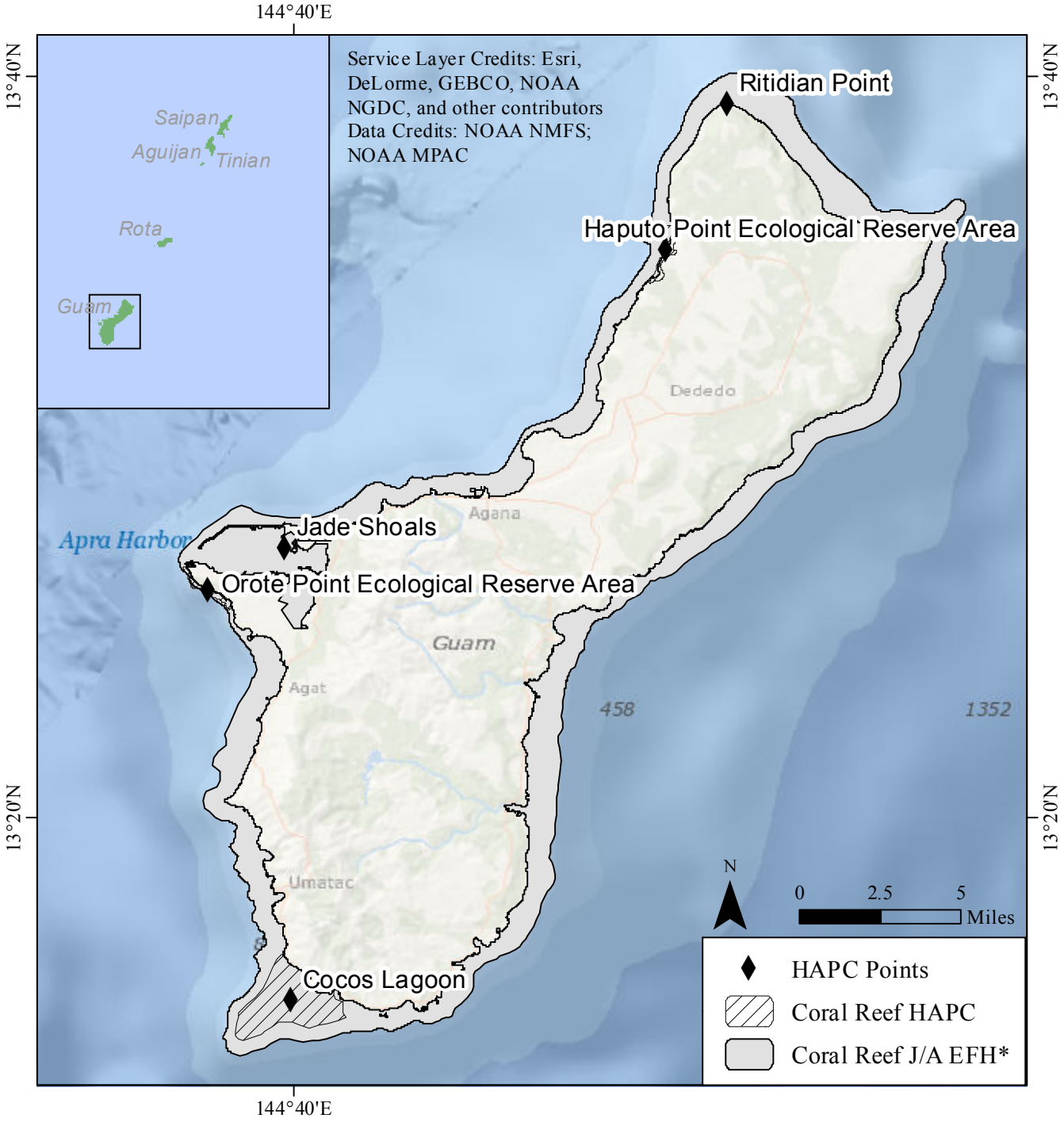
**The geographic extent of EFH and HAPC are shown. EFH for eggs and larvae (E/L) is the water column to a depth of 400 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is the water column and all bottom habitat to a depth of 400 m to the extent shown. HAPC is all escarpments/ slopes between 40–280 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Santa Rosa Reef to Galvez Bank



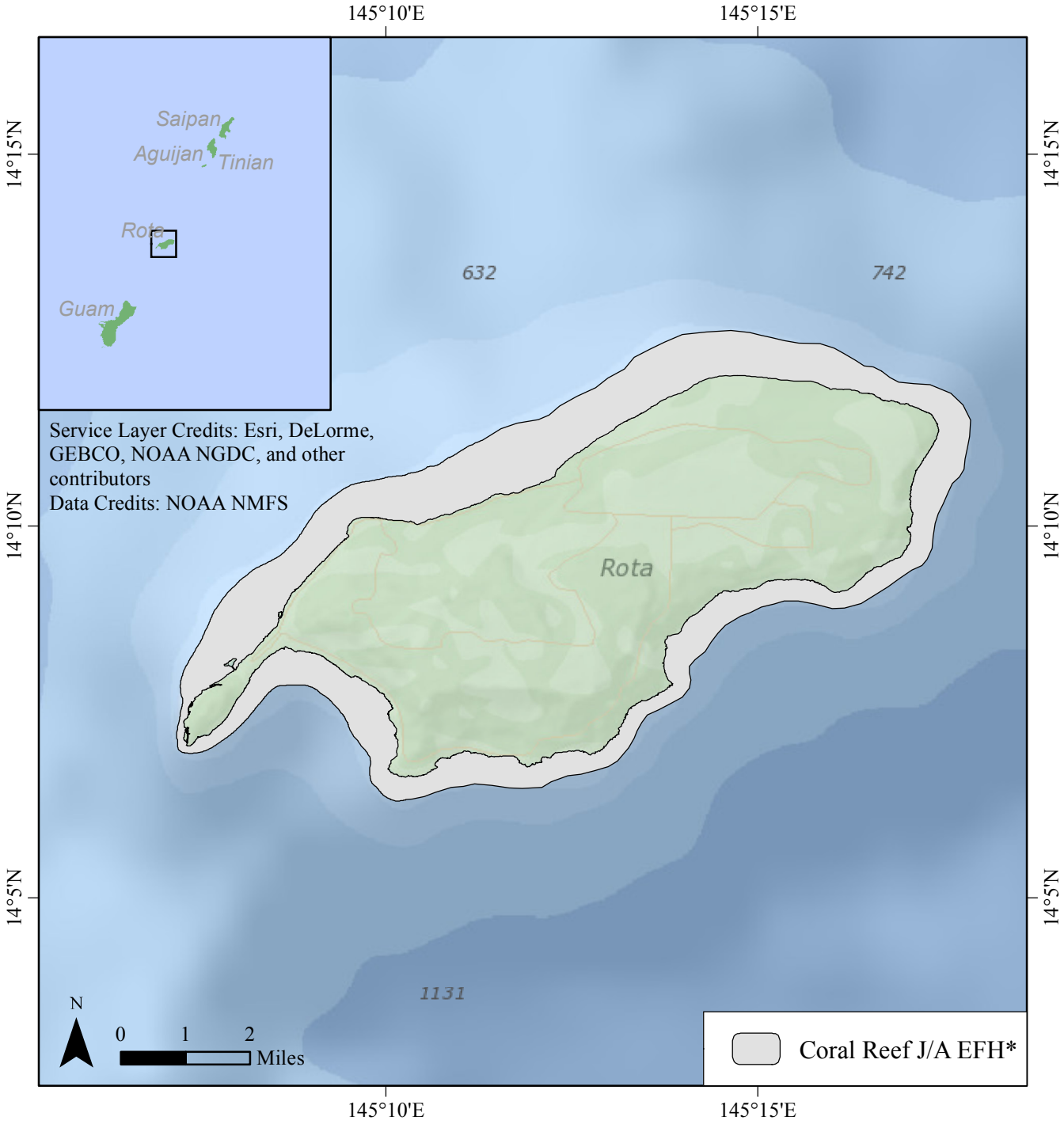
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Guam



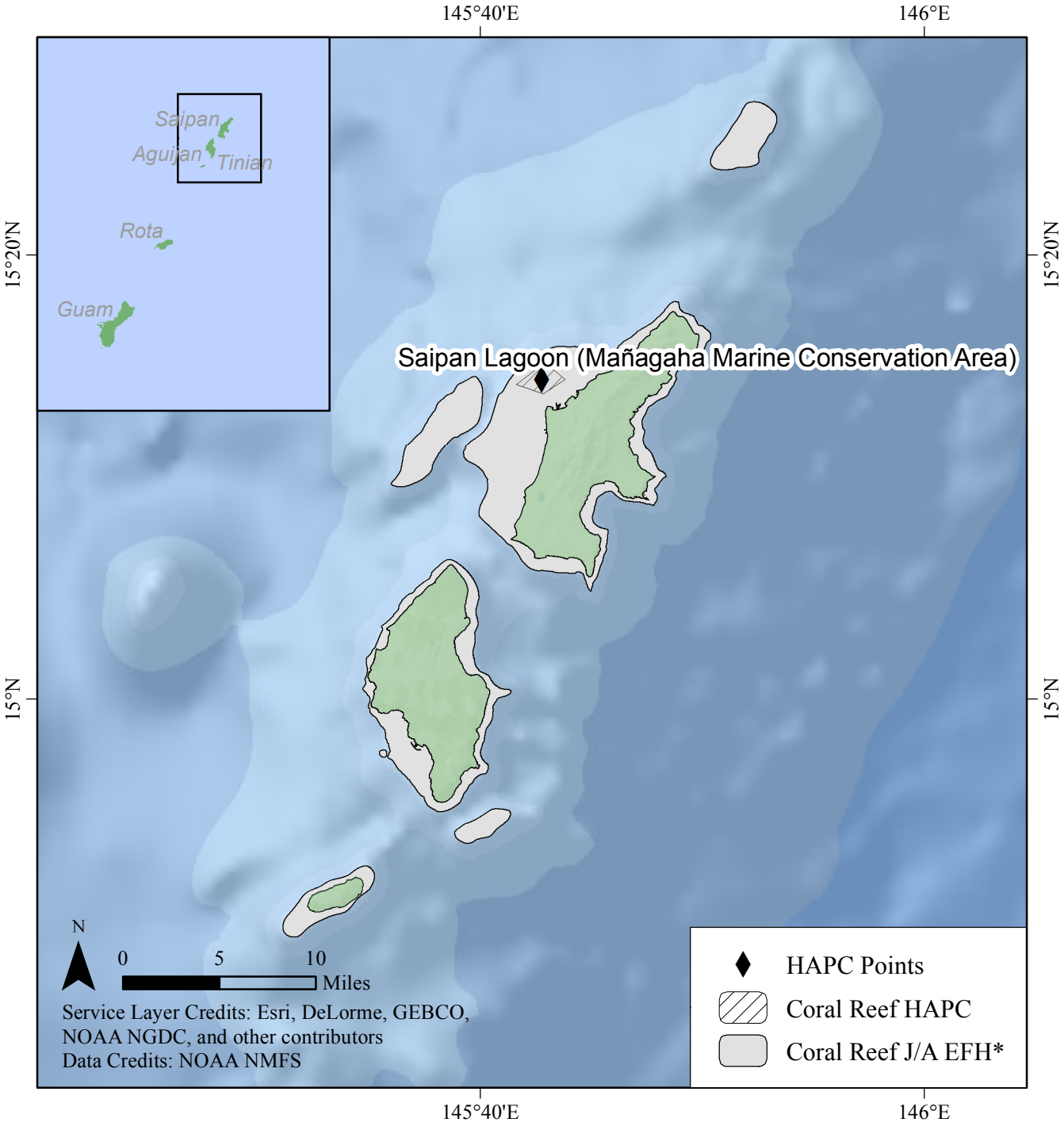
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Rota



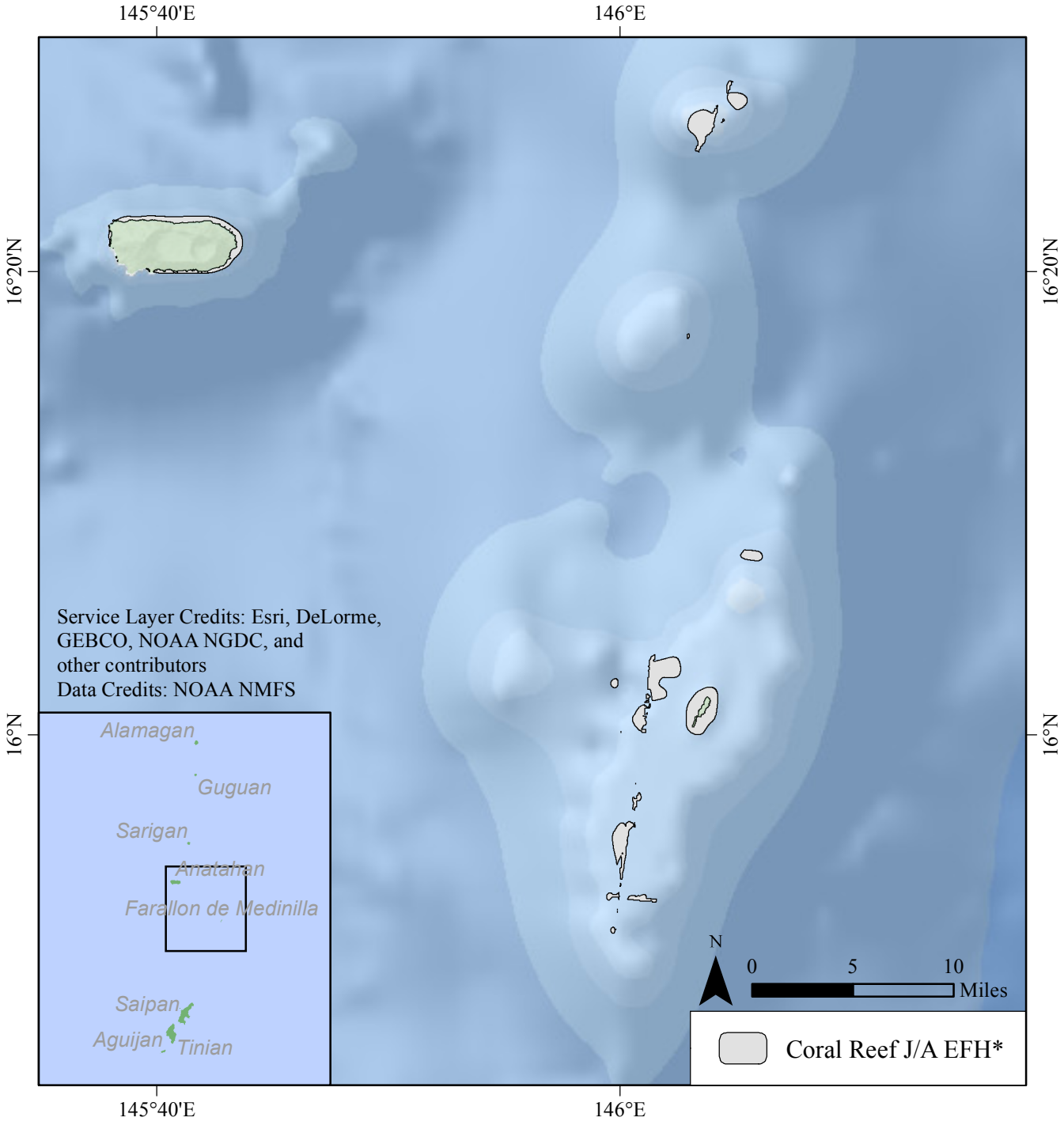
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Saipan, Tinian, and Aguijan



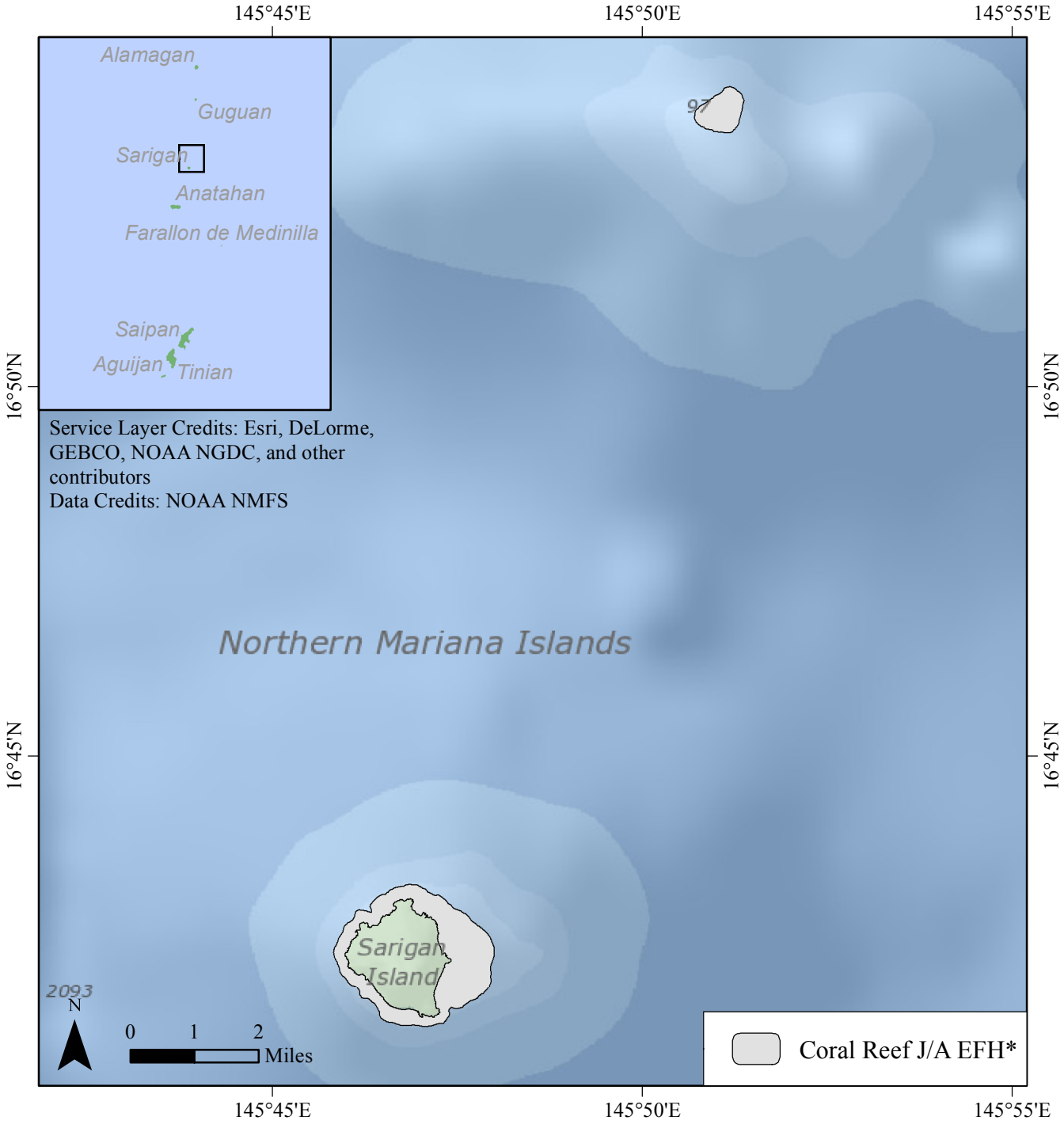
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: FDM to Anatahan



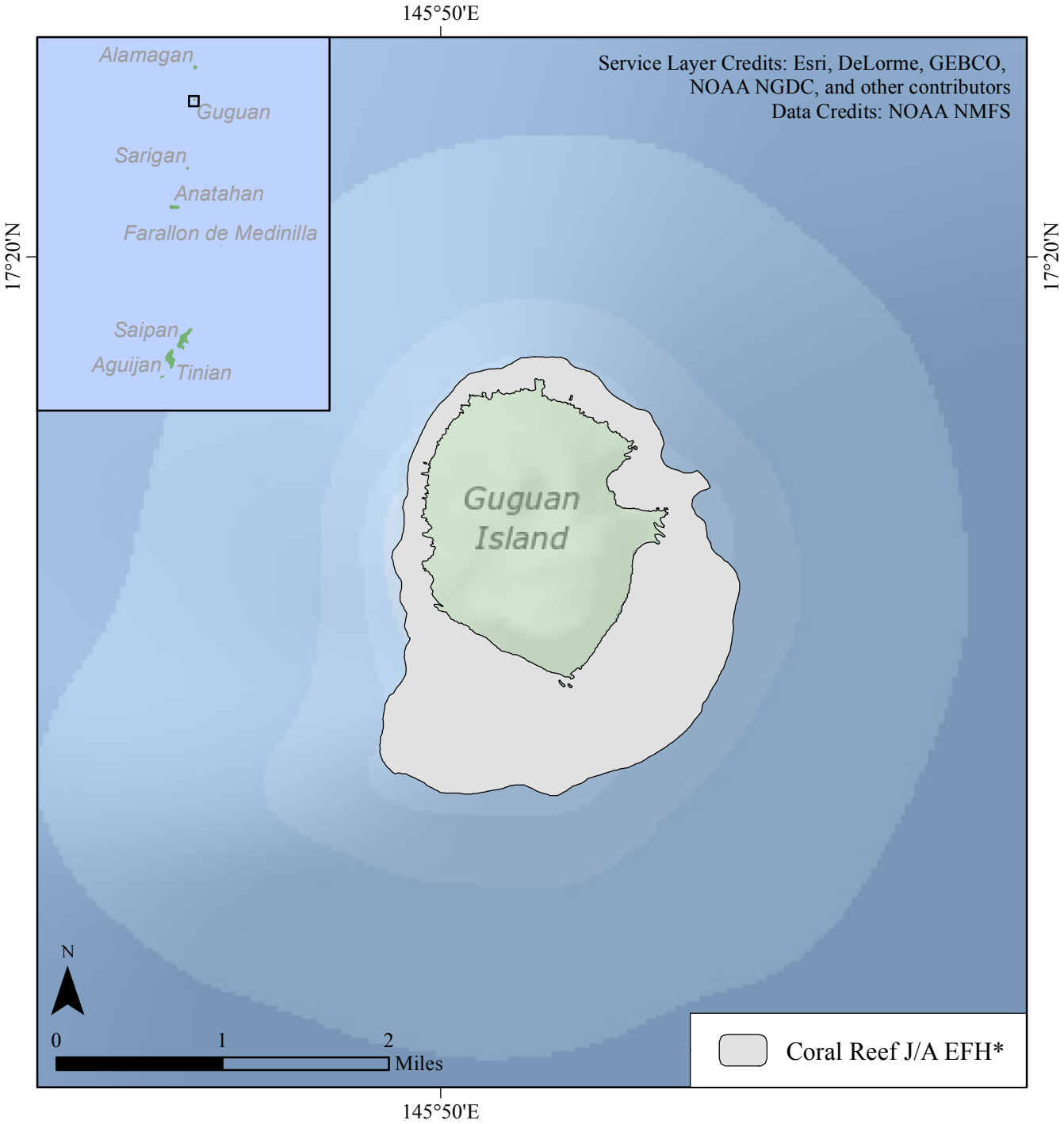
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Sarigan and Outlying Banks



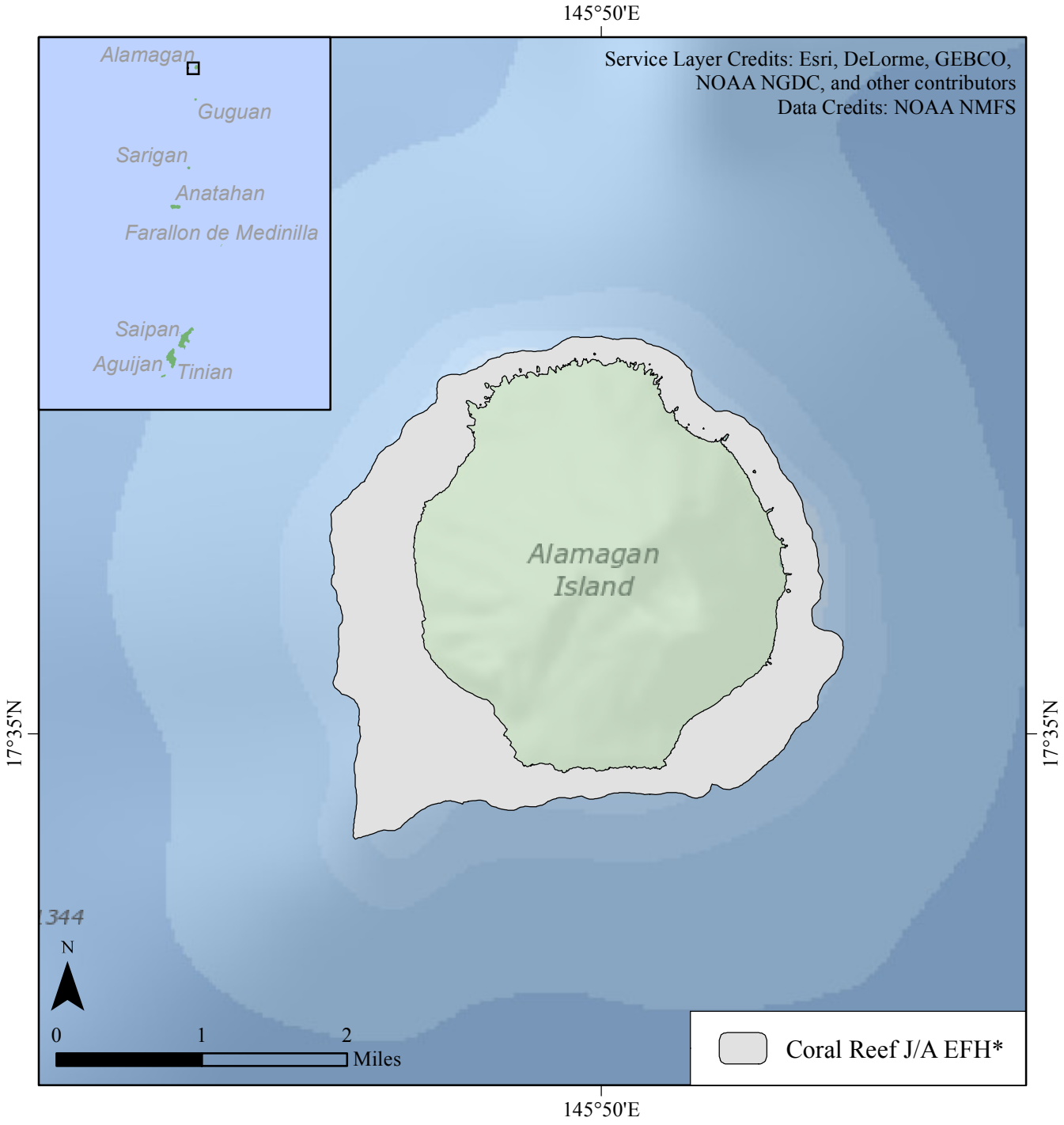
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Guguan



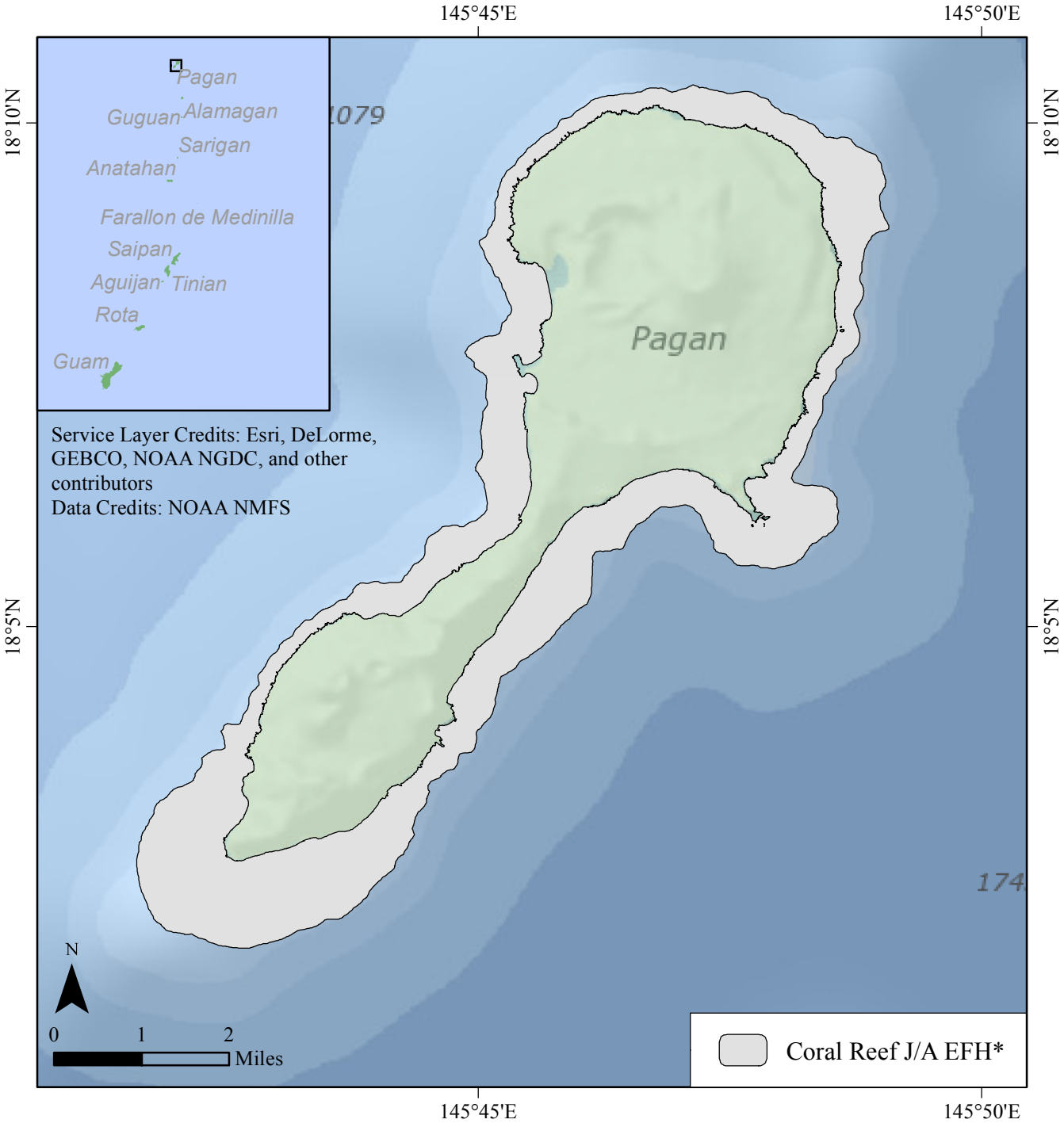
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Alamagan



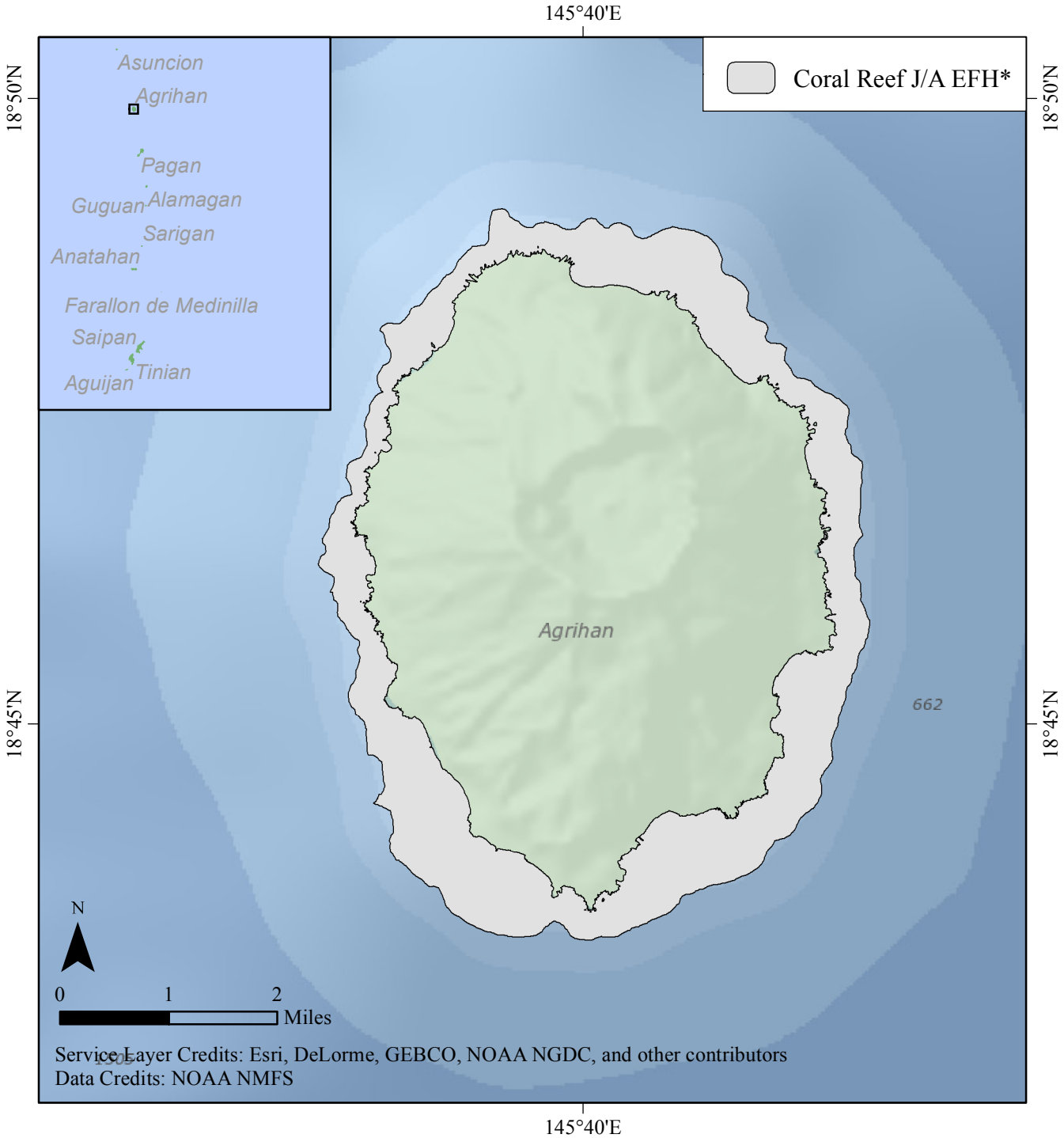
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Pagan



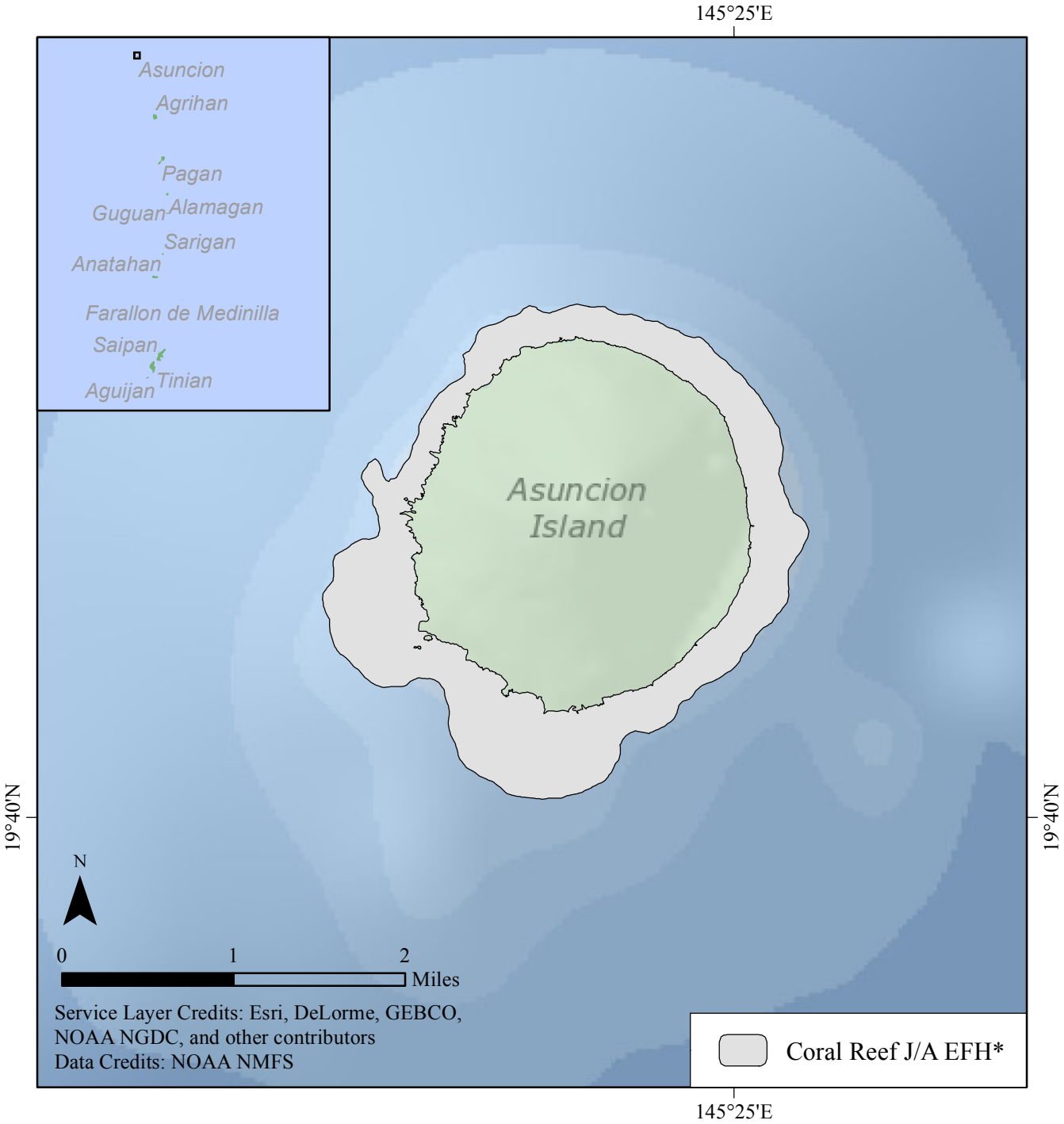
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Agrihan



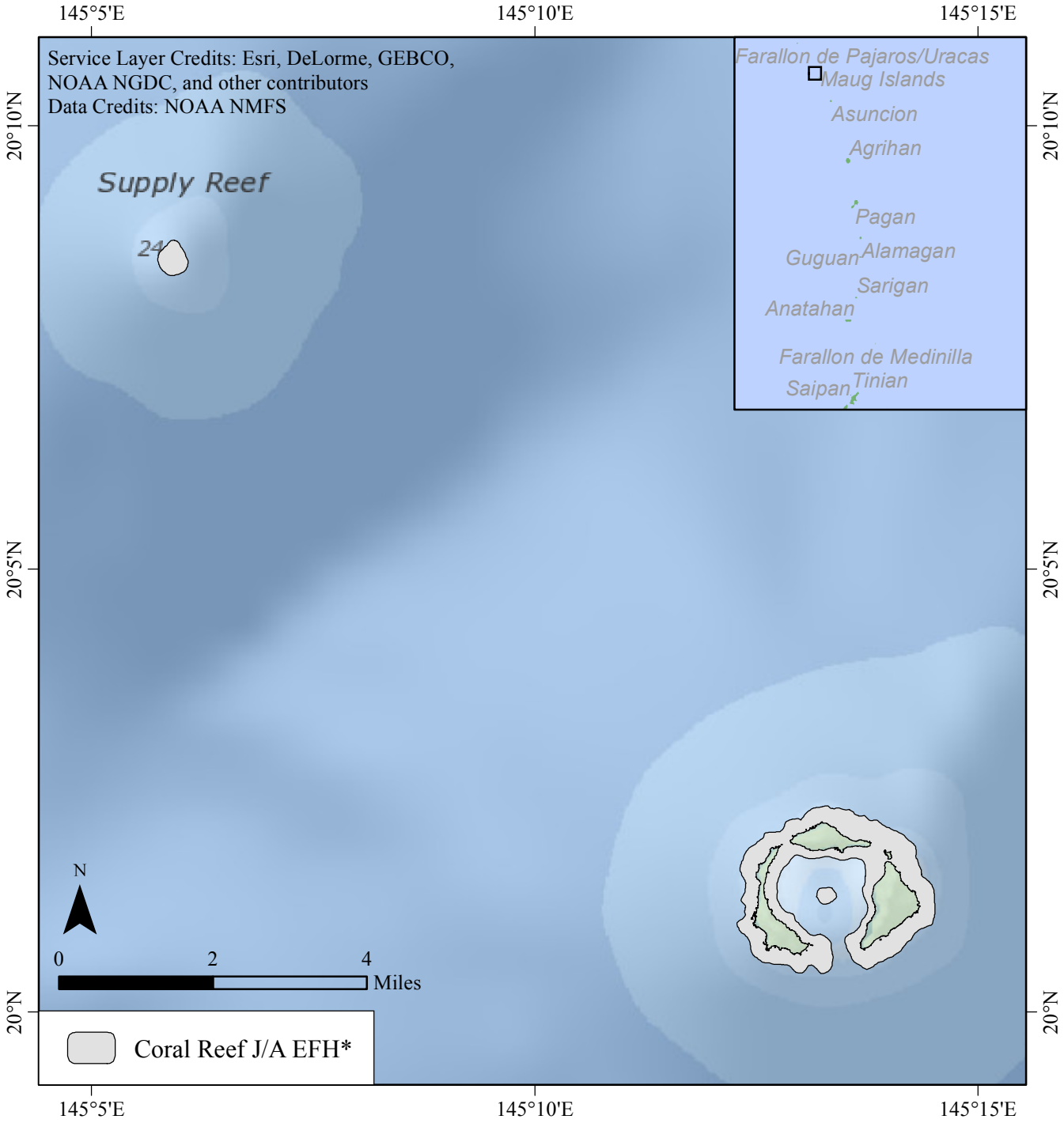
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Asuncion



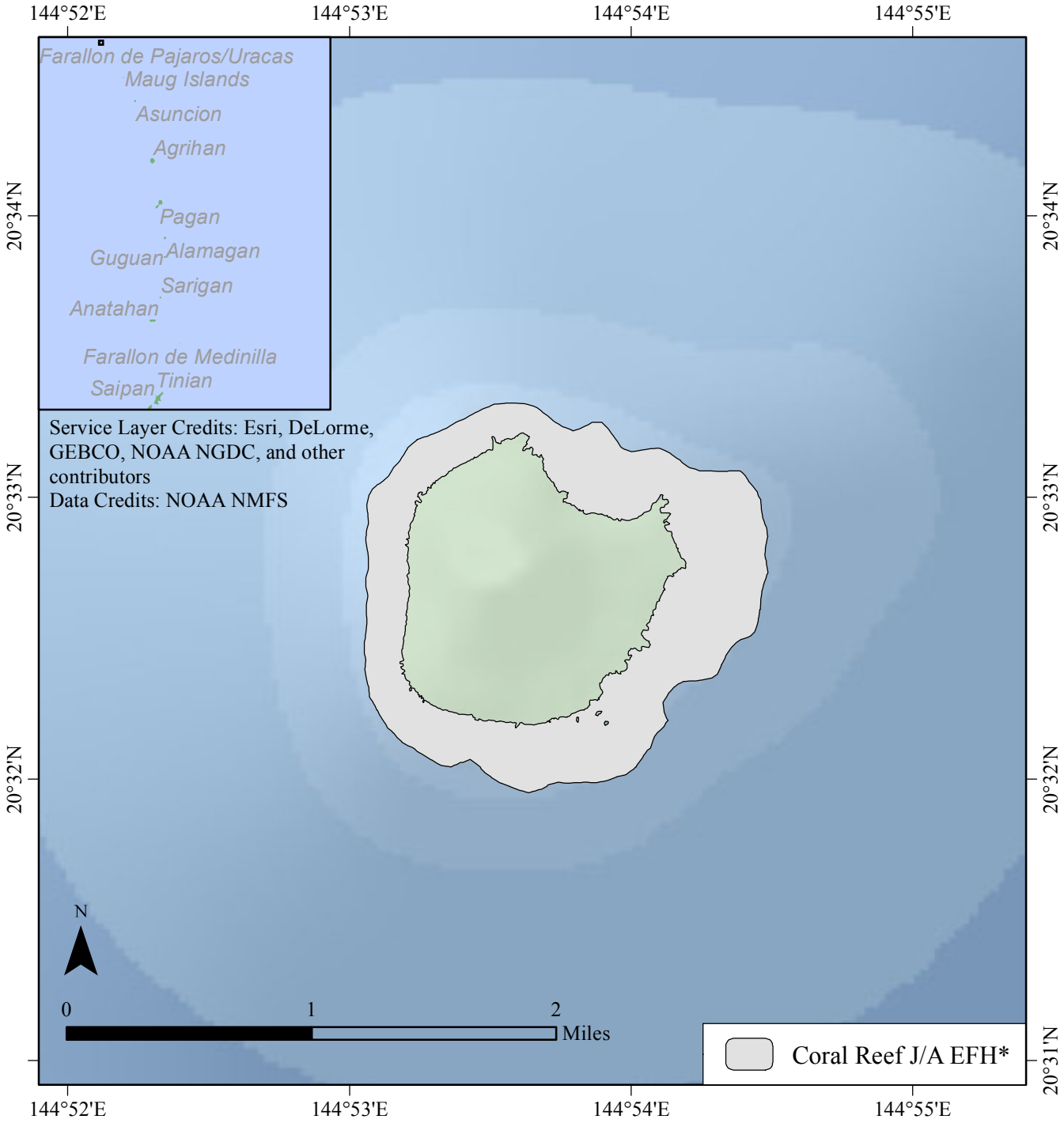
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Maug Islands and Supply Reef



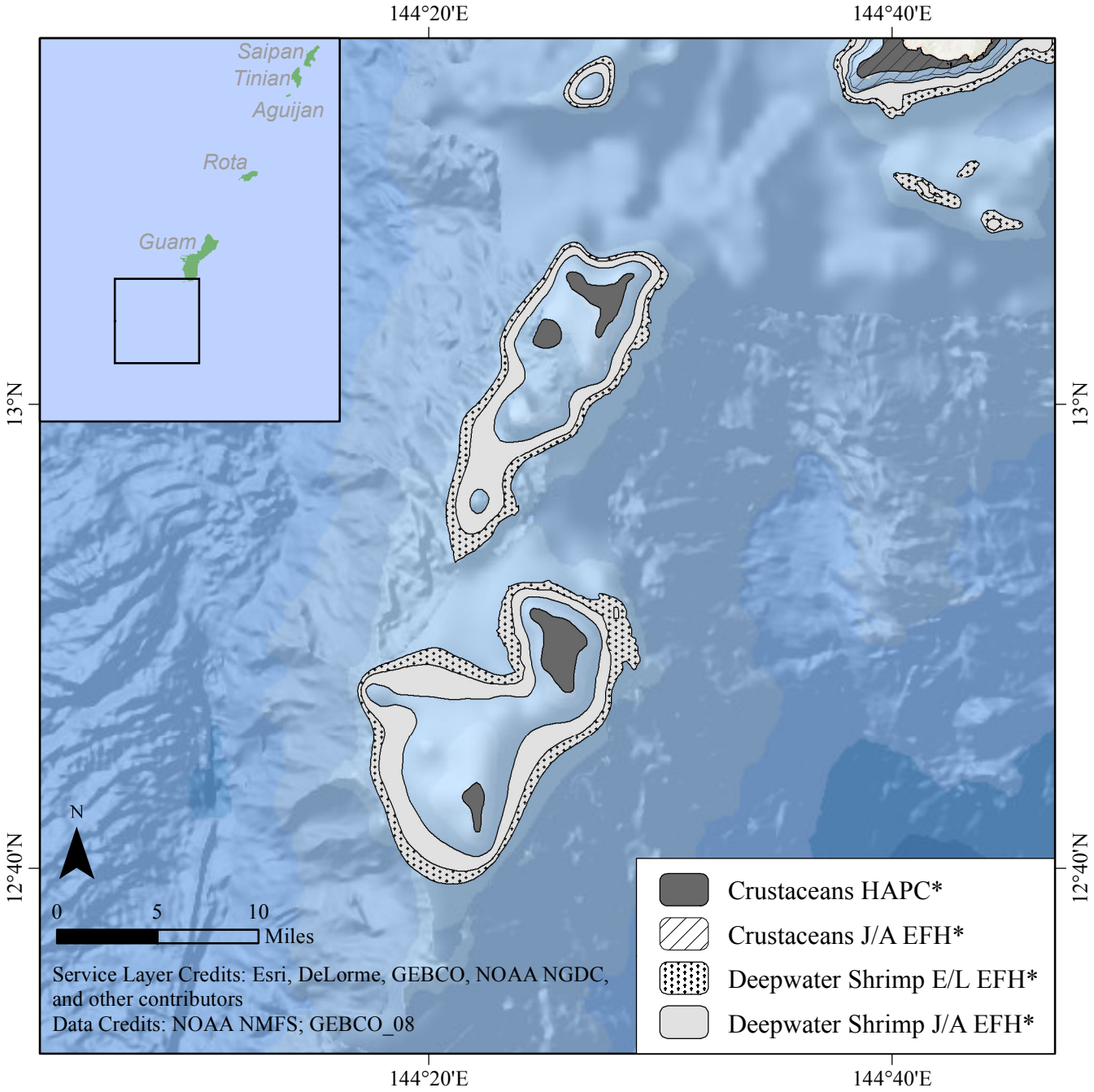
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Uracas/Farallon de Pajaros



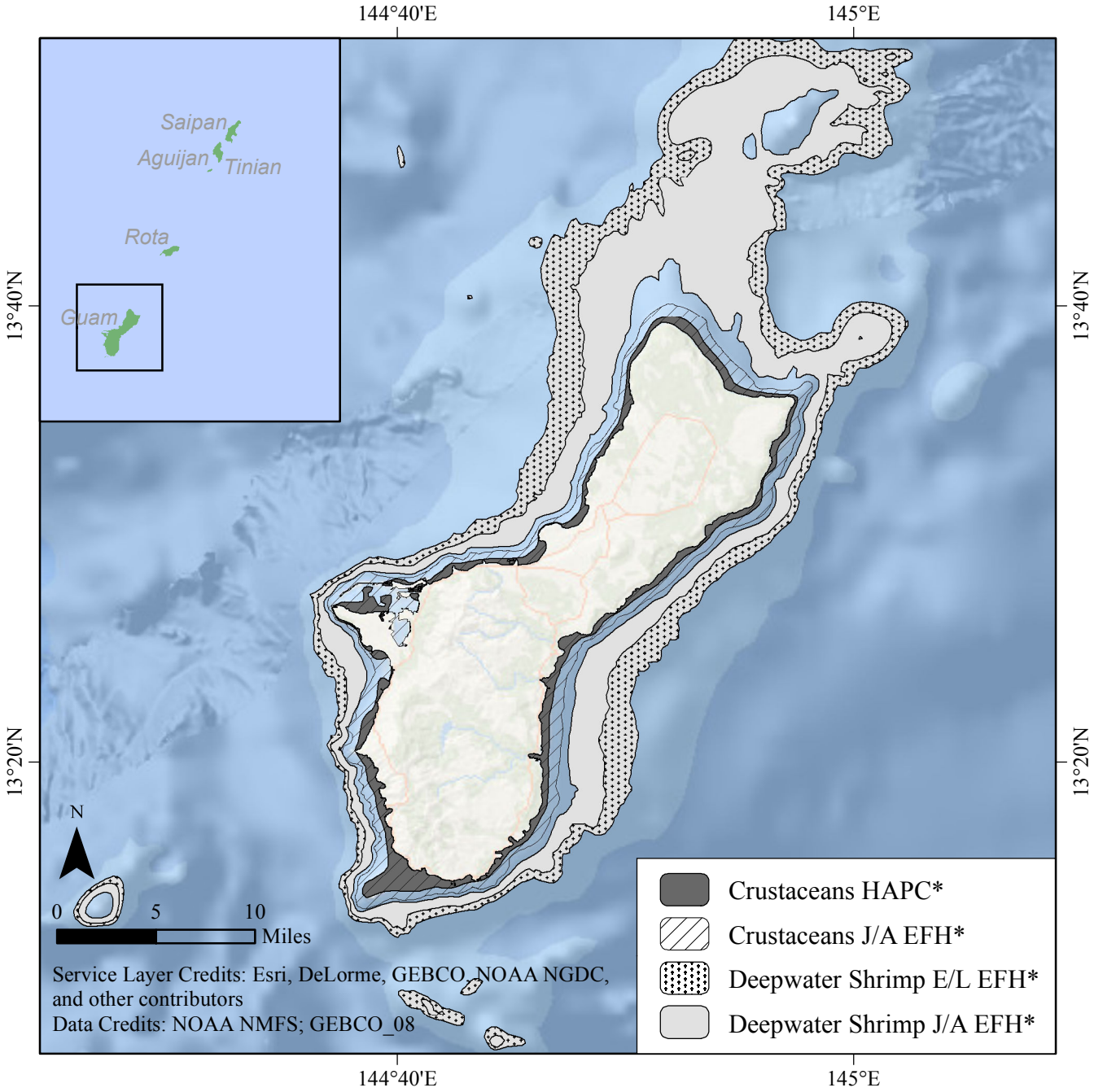
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family.*

Mariana Archipelago Fishery Ecosystem Plan
Crustaceans EFH/HAPC: Santa Rosa Reef to Galvez Bank



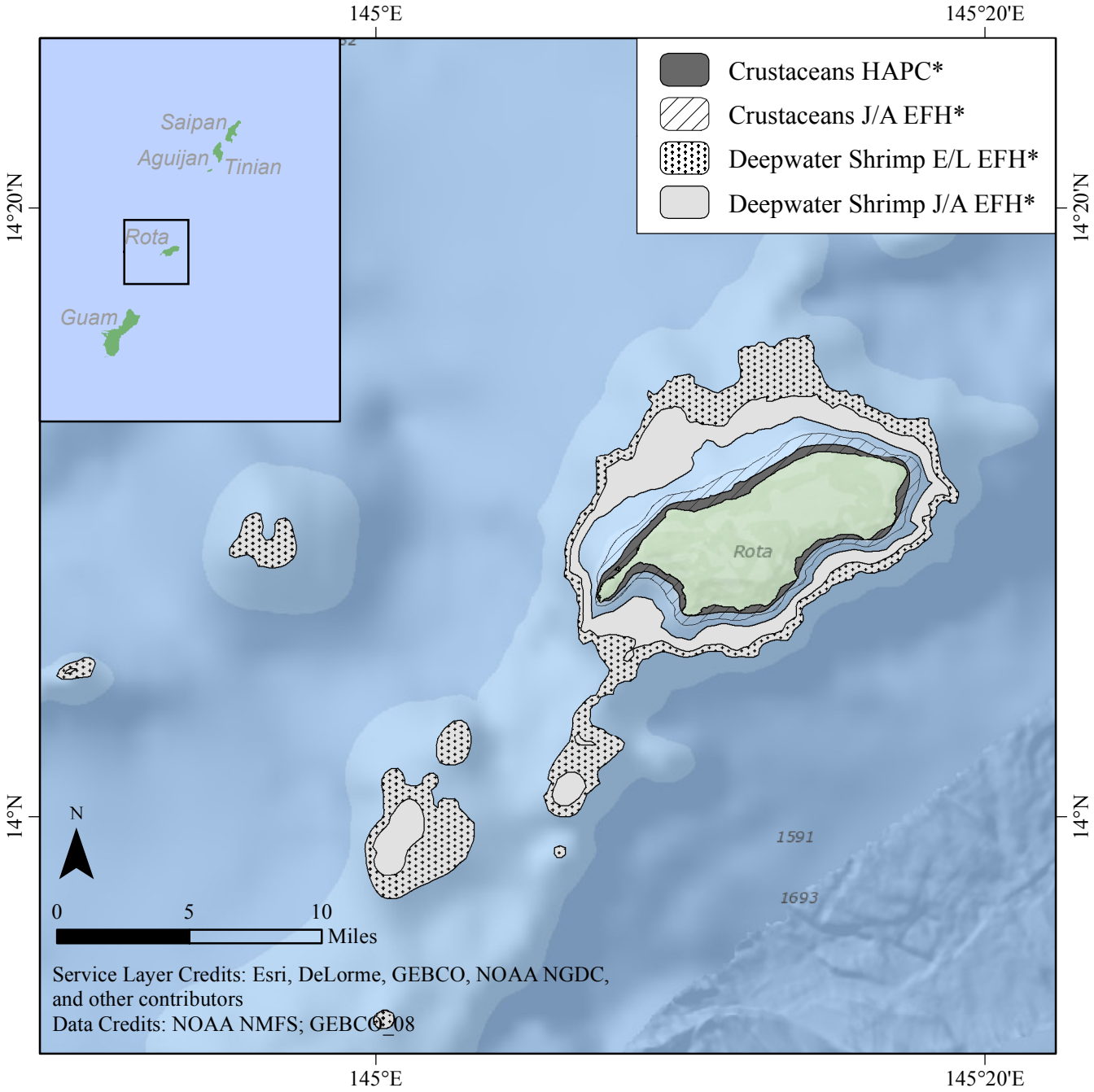
**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Crustaceans EFH/HAPC: Guam



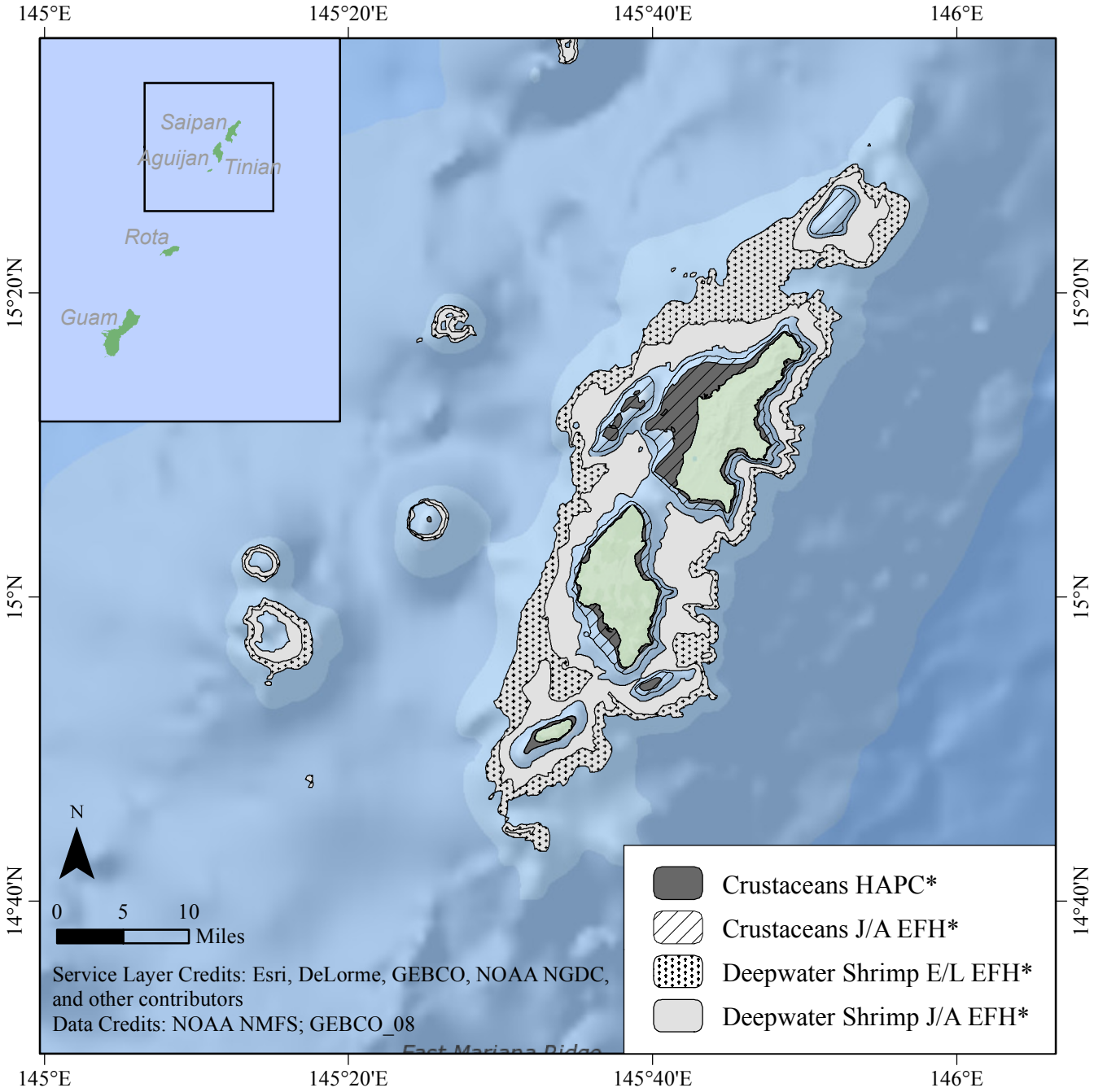
**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Crustaceans EFH/HAPC: Rota and Outlying Banks



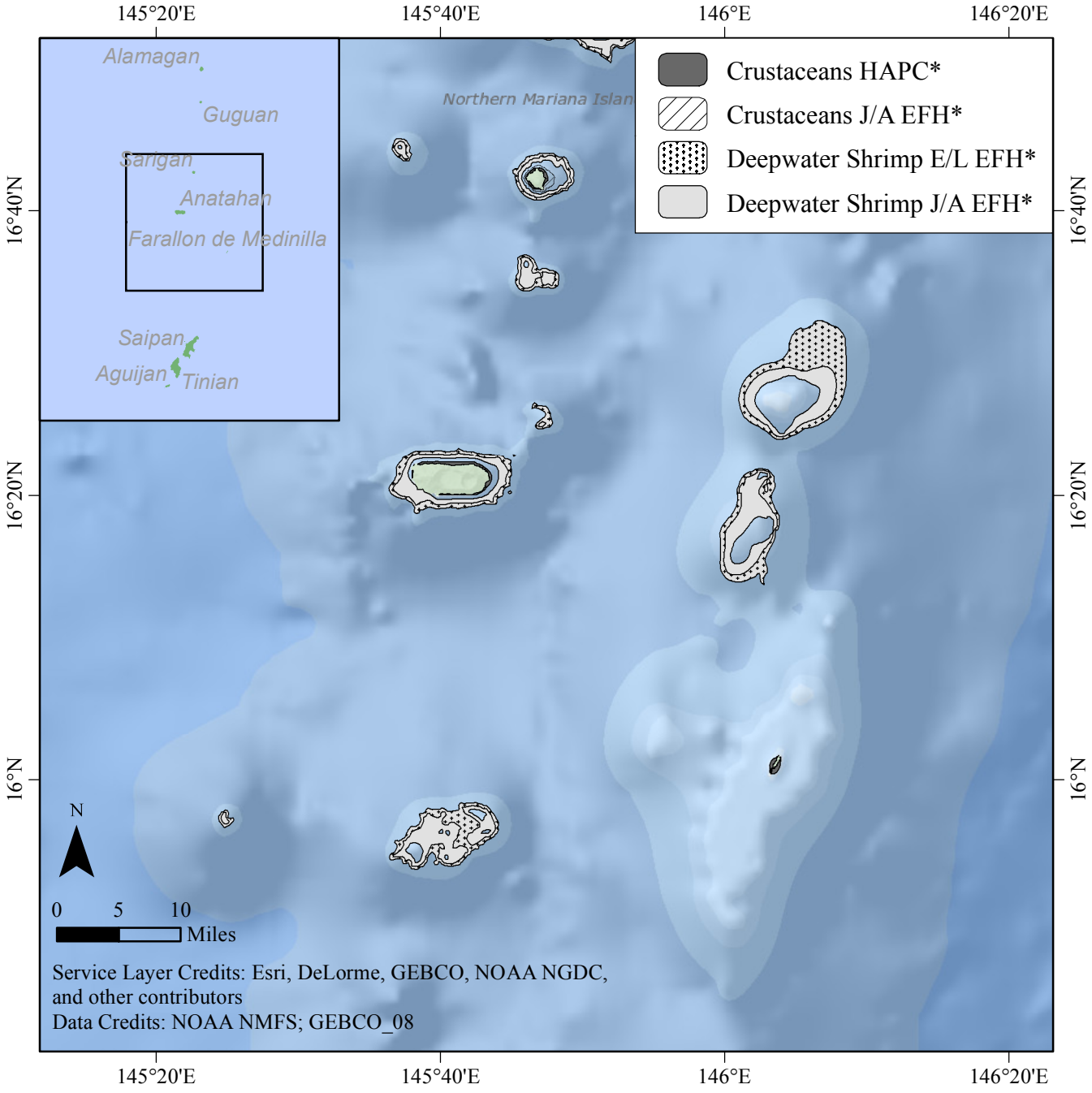
**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Coral Reef EFH/HAPC: Saipan, Tinian, and Aguijan



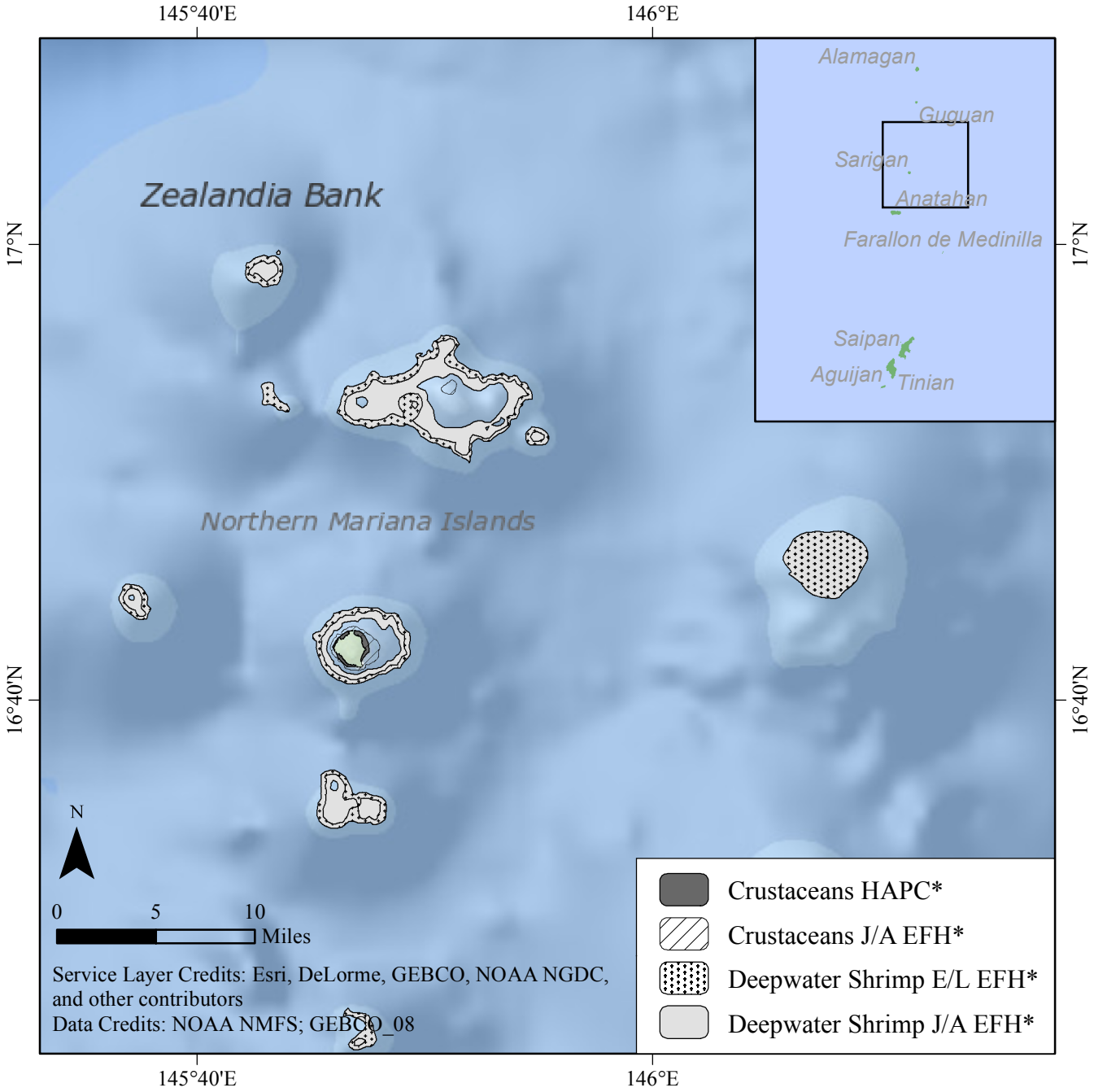
**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Crustaceans EFH/HAPC: FDM to Anatahan



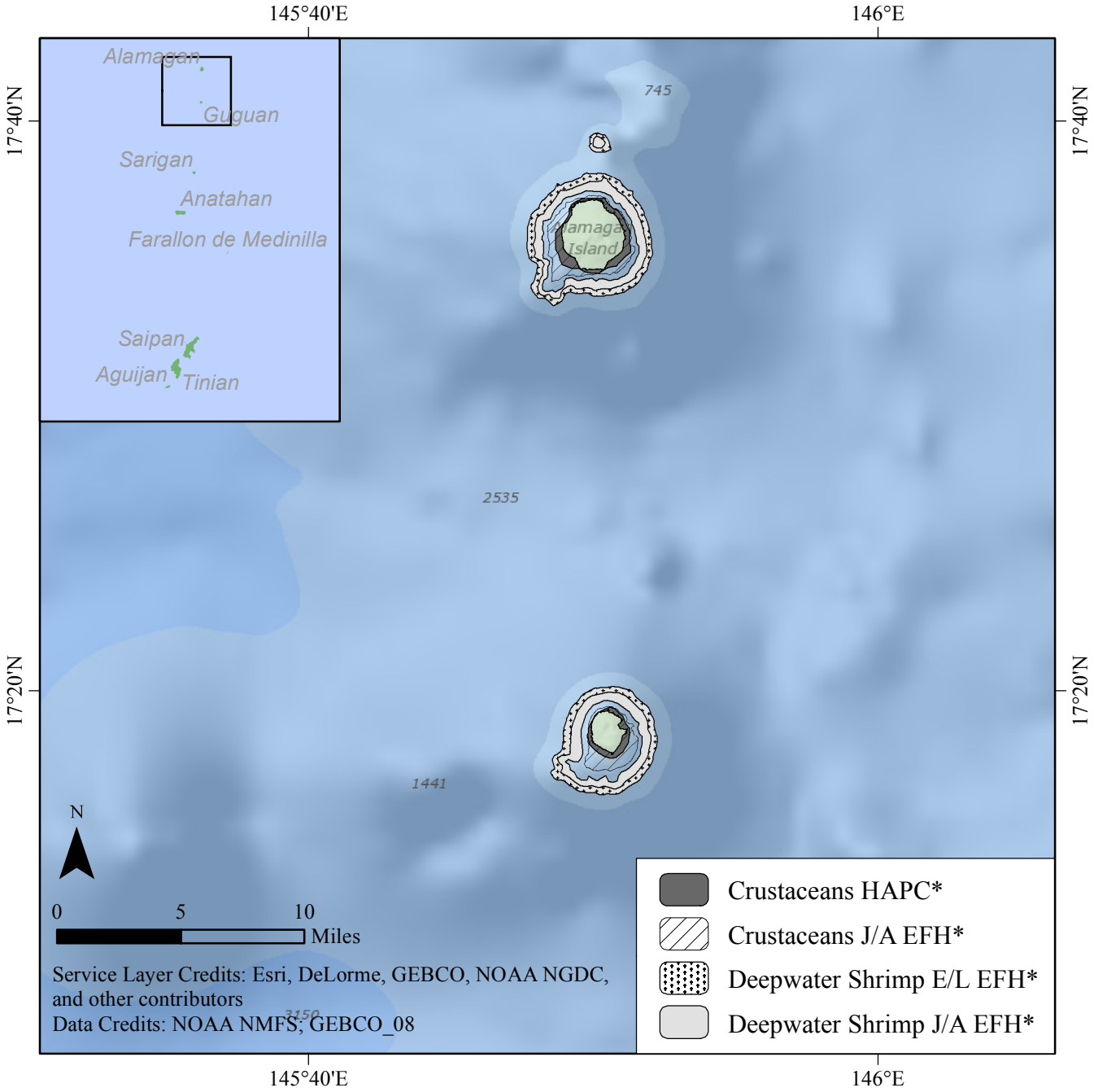
**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Crustaceans EFH/HAPC: Sarigan and Outlying Banks



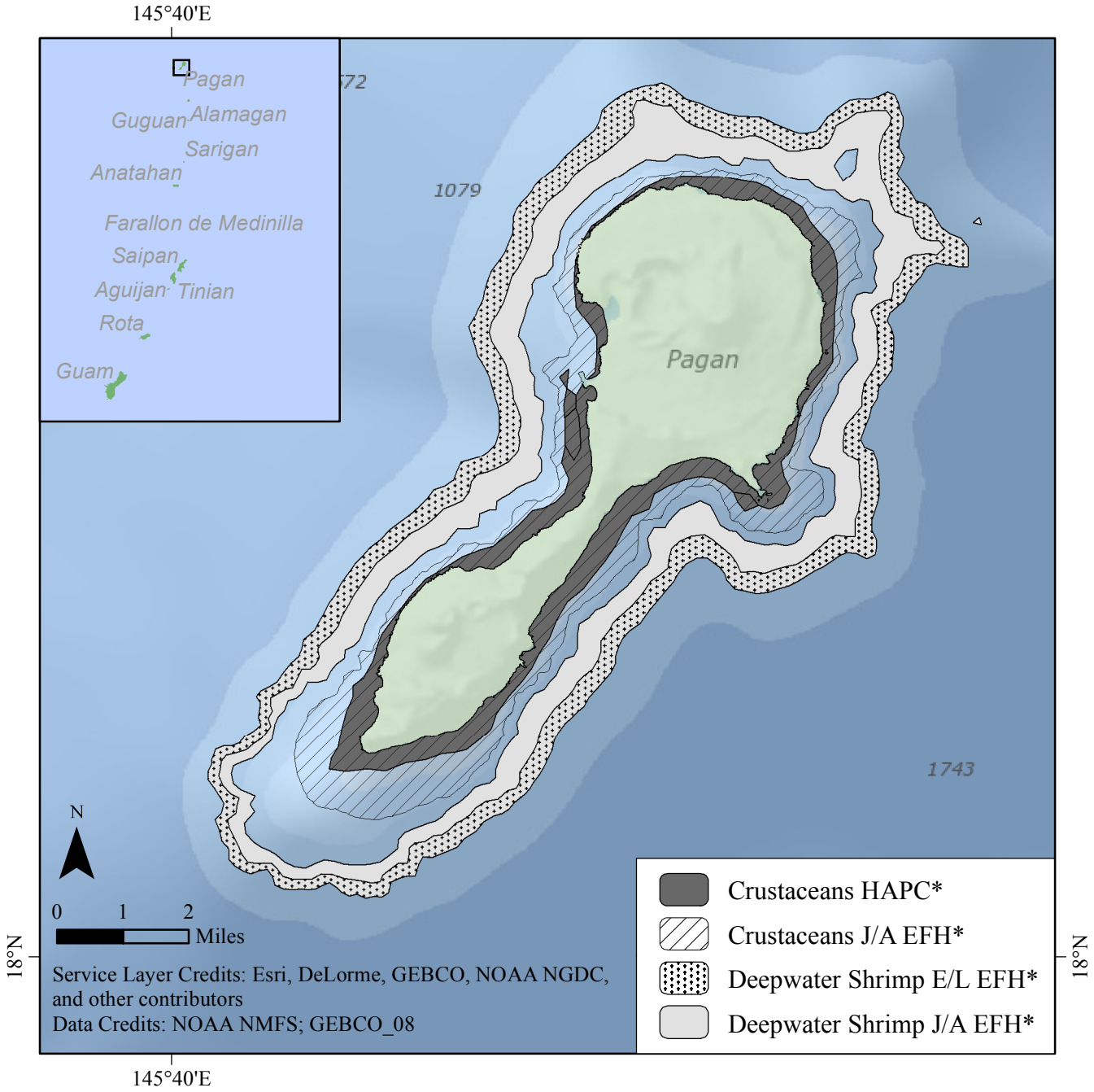
**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Crustaceans EFH/HAPC: Guguan to Alamagan



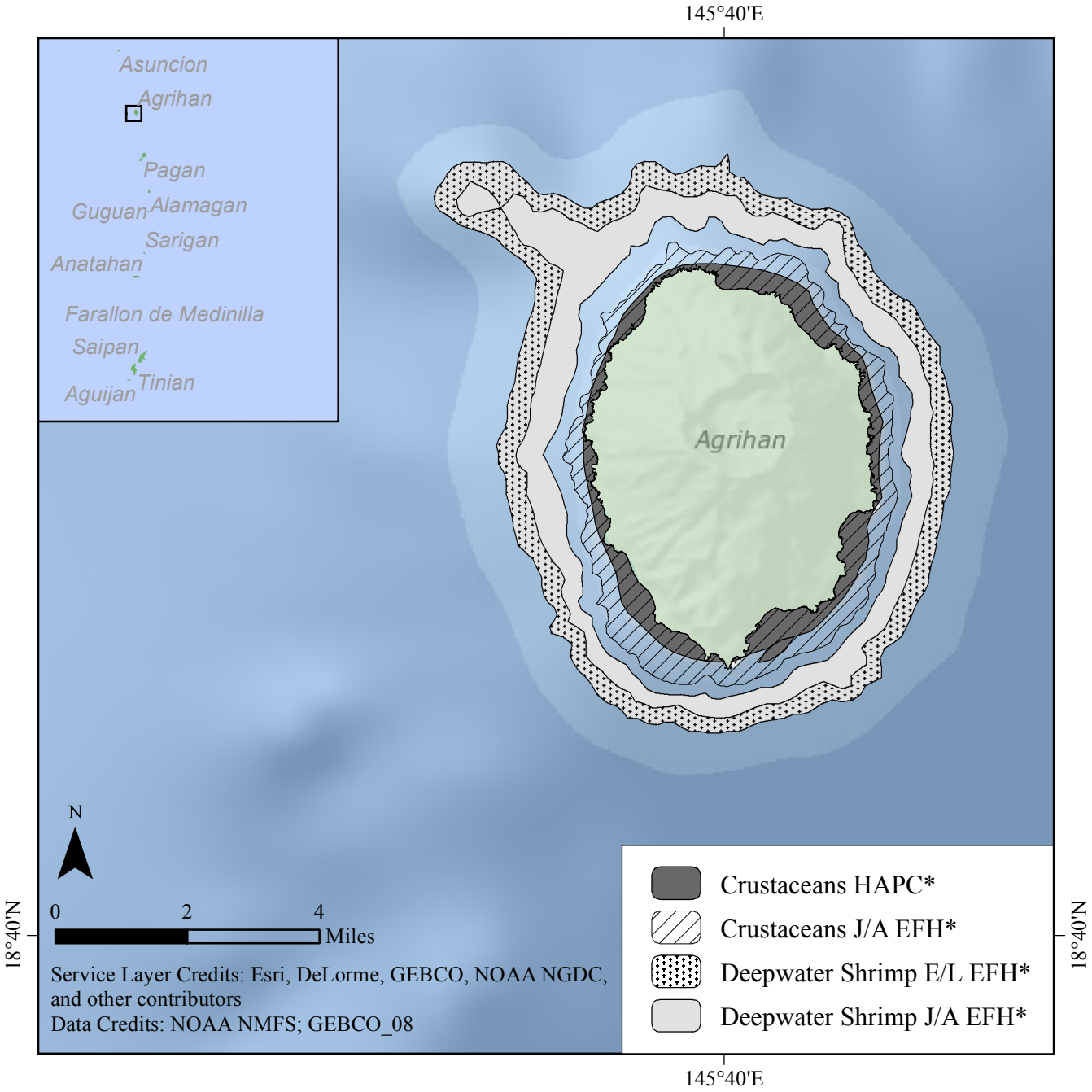
**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Crustaceans EFH/HAPC: Pagan



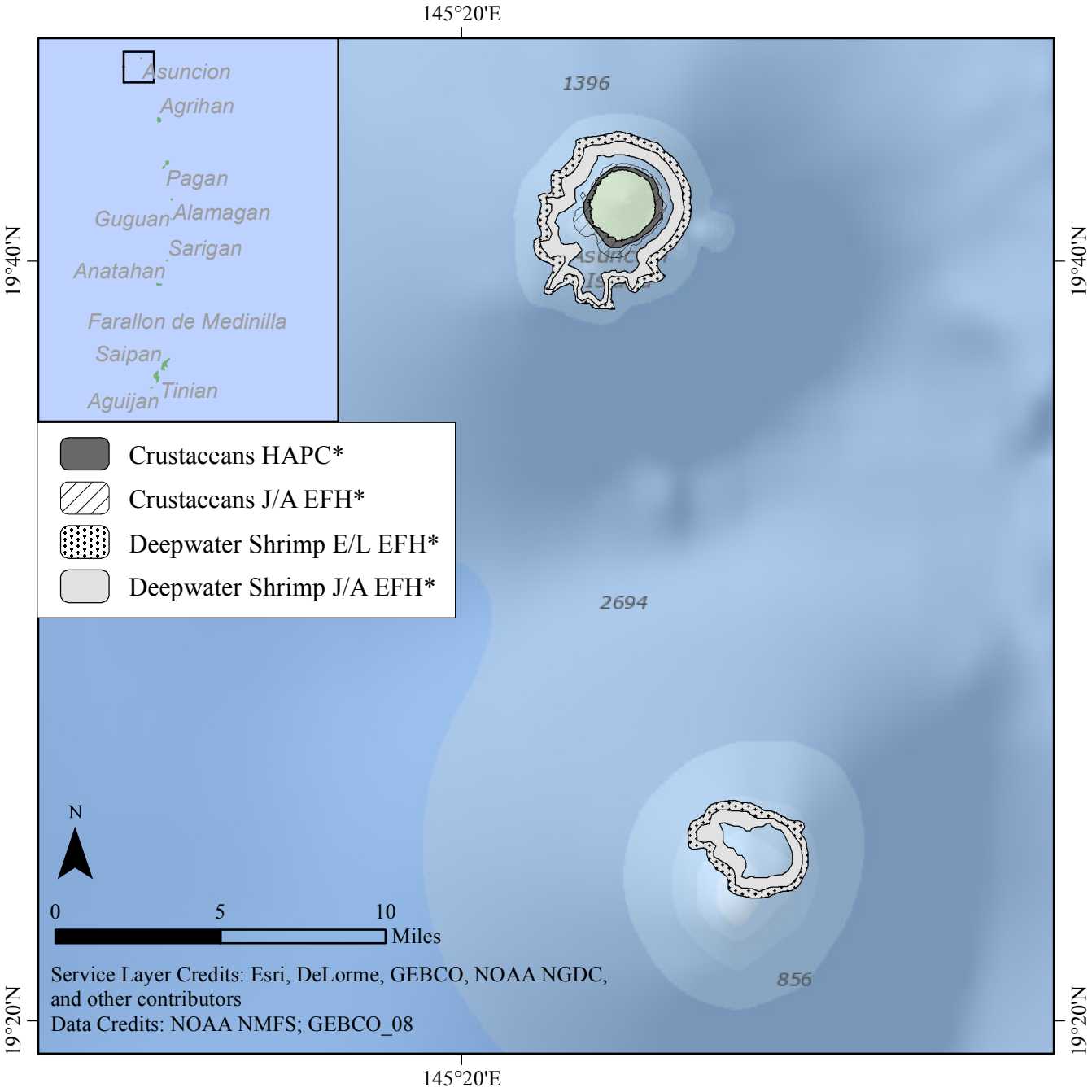
**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Crustaceans EFH/HAPC: Agrihan



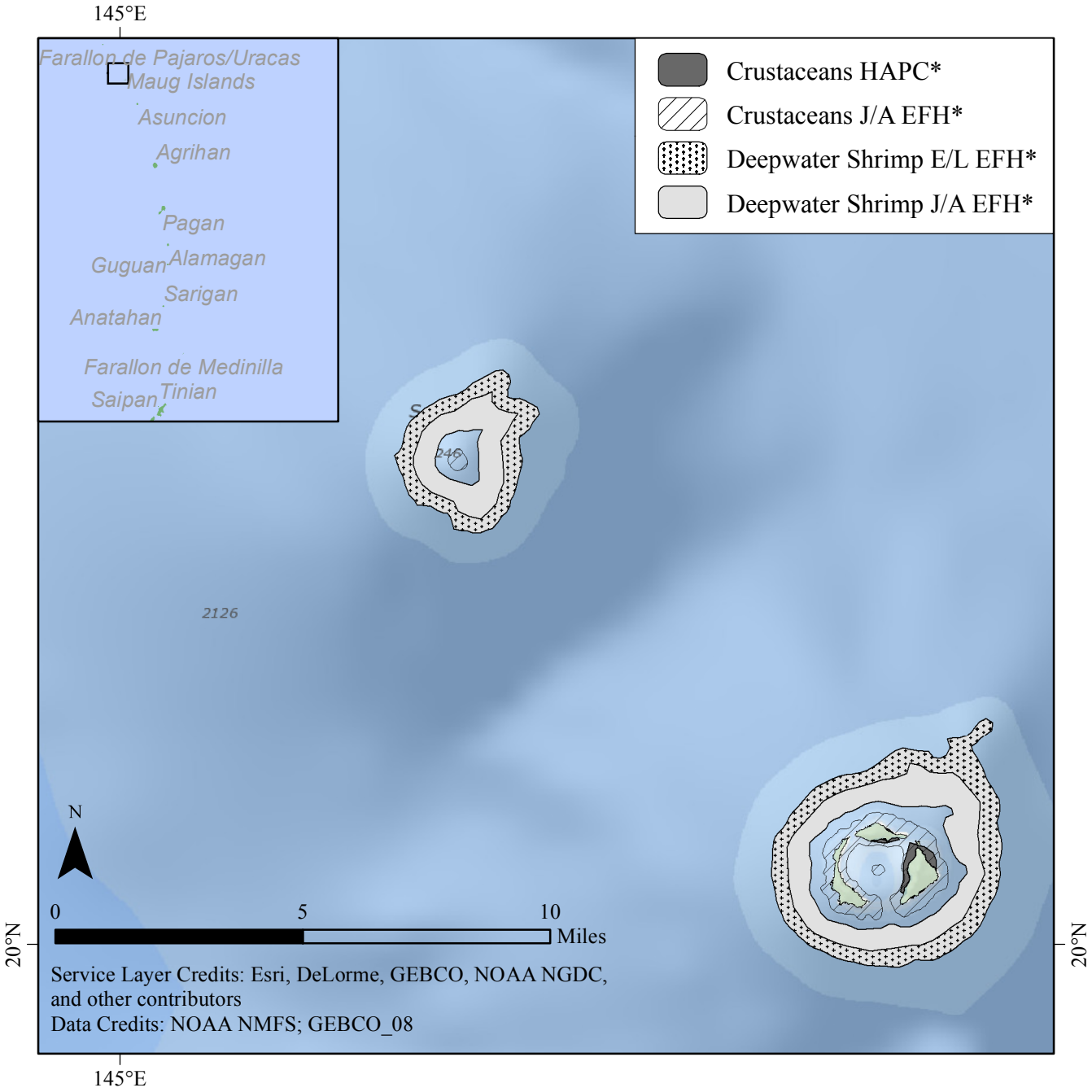
**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Crustaceans EFH/HAPC: Asuncion



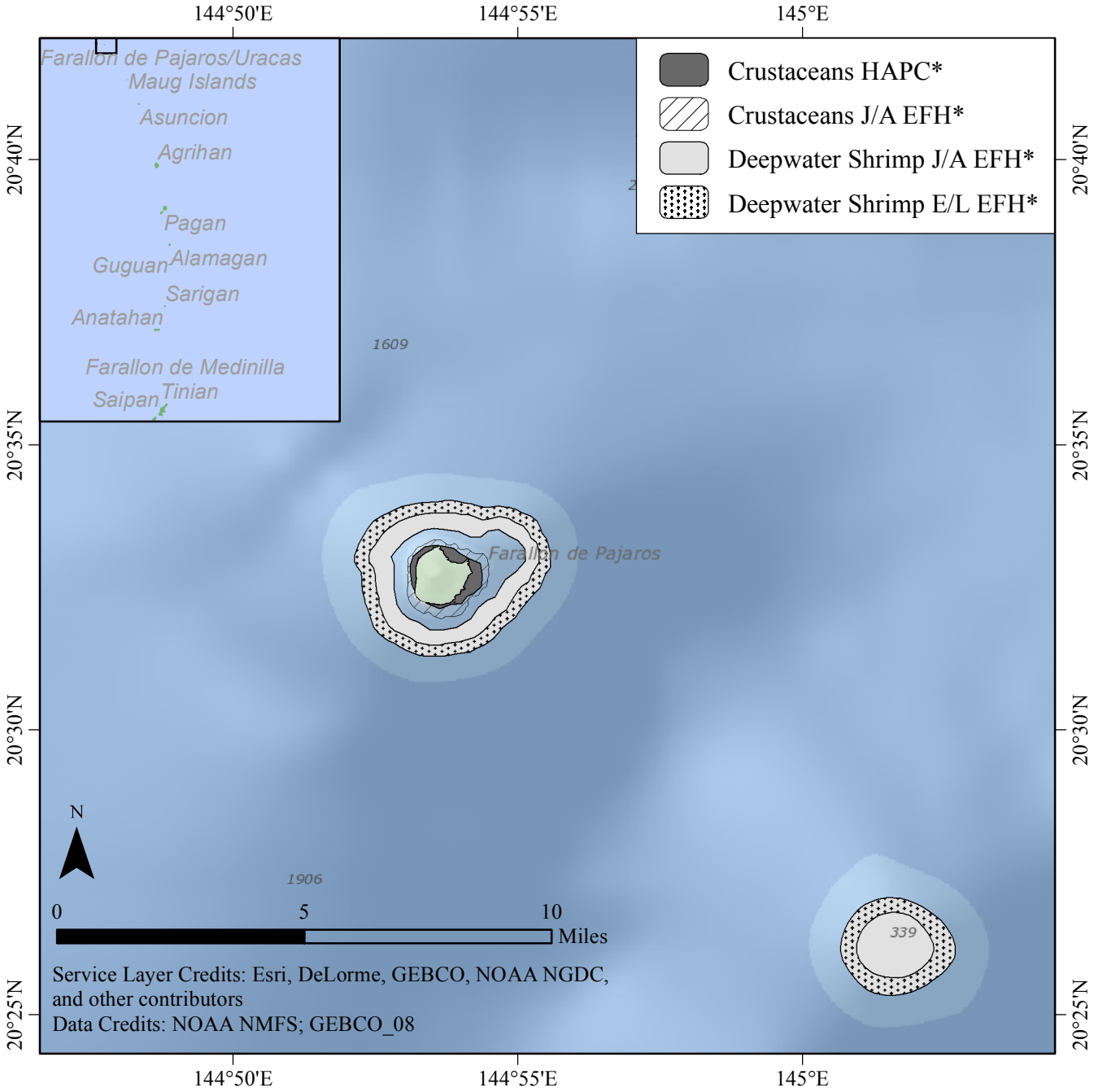
**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Crustaceans EFH/HAPC: Maug Islands



**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Mariana Archipelago Fishery Ecosystem Plan
Crustaceans EFH/HAPC: Uracas/Farallon de Pajaros



**The geographic extent of EFH and HAPC are shown. Crustaceans EFH for eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown. HAPC is all banks with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*