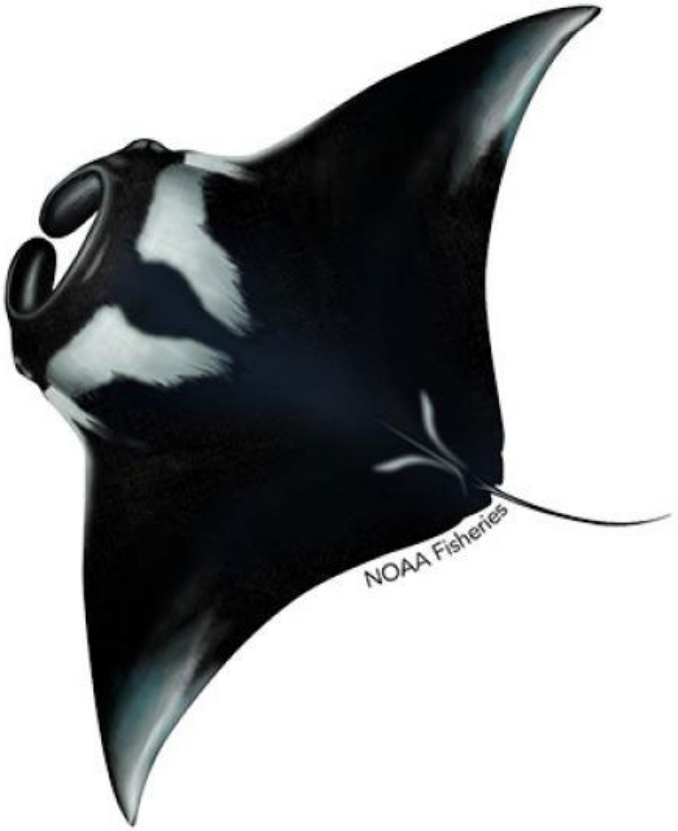
Draft Environmental Assessment, Regulatory Impact Review, and Initial Regulatory Flexibility Analysis for a Rule to Prohibit Retention of Mobulid Rays in Fisheries for Atlantic Highly Migratory Species



United States Department of Commerce
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Office of Sustainable Fisheries
Atlantic Highly Migratory Species Management Division

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Action:	Rule to Prohibit Retention of Mobulid Rays in Fisheries for Atlantic Highly Migratory Species
Type of Statement:	Draft Environmental Assessment, Regulatory Impact Review, and Initial Regulatory Flexibility Analysis
Lead Agency:	National Marine Fisheries Service Office of Sustainable Fisheries
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Abstract: The National Marine Fisheries Service (NMFS) is proposing changes to regulations to implement the binding International Commission for the Conservation of Atlantic Tunas Recommendation 24-12 on mobulid rays of the family Mobulidae, which was adopted in 2024. Specifically, NMFS is considering alternatives to: (1) prohibit retention of mobulid rays, and (2) implement handling and release practices. NMFS is taking this action consistent with the Atlantic Tunas Convention Act, section 971d, and the Magnuson-Stevens Fishery Conservation and Management Act, including section 305(d).

Contents

1 Introduction

1.1 REGULATORY AUTHORITIES

The National Marine Fisheries Service (NMFS), on behalf of the Secretary of Commerce, is responsible for managing Atlantic highly migratory species (HMS)[1], including the federal Atlantic shark, tuna, billfish, and swordfish fisheries, pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; 16 U.S.C. 1801 *et seq*.) and consistent with the Atlantic Tunas Convention Act (ATCA; 16 U.S.C. 971 *et seq*.). Since 1993, under the authority provided in section 304(g)(1) of the Magnuson-Stevens Act, NMFS has implemented several fishery management plans (FMP), FMP amendments, and numerous regulations relating to HMS fisheries under the authority of the Magnuson-Stevens Act (see 16 U.S.C. 1854(g)(1)). Currently, NMFS manages HMS fisheries under the 2006 Consolidated HMS FMP (HMS FMP), its amendments,[2] and implementing regulations at 50 CFR part 635. Section 305(d) of the Magnuson-Stevens Act requires NMFS to ensure that the HMS FMP and its amendments are implemented consistently with regulations promulgated under ATCA to implement ICCAT recommendations (see 16 U.S.C. 1855(d)).

Under section 971d(c)(1)(A) of ATCA, NMFS must promulgate such regulations as may be necessary and appropriate to carry out binding recommendations of the International Commission for the Conservation of Atlantic Tunas (ICCAT). Further, regulations promulgated shall, to the extent practicable, be consistent with FMPs prepared and implemented under the Magnuson-Stevens Act (see section 971d(c)(1)(C)). Additionally, the Magnuson-Stevens Act requires measures in an FMP such as the HMS FMP to be consistent with regulations implementing recommendations by international organizations, as well as the National Standards (see section 303(a)(1)(C) or 16 U.S.C. 1853(a)(1)(C)). National Standard 9 requires that conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch (see section 301(a)(9) or 16 U.S.C. 1851(a)(9)). Section 305(d) provides for the promulgation of such regulations as may be necessary to implement an FMP such as the HMS FMP, and would help ensure that the HMS FMP is implemented consistently with the ICCAT recommendation, as well as National Standard 9. In accordance with the Magnuson-Stevens Act, NMFS analyzed the potential environmental consequences, including ecological, economic, and social impacts, for the alternatives in this Environmental Assessment (EA) and associated proposed rule. This action considers changes to regulations to implement ICCAT Recommendation 24-12 on mobulid rays, which was adopted in 2024.

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[1] The Magnuson–Stevens Act, Section 3, defines the term "highly migratory species" as tuna species, marlin (*Tetrapturus* spp. and *Makaira* spp.), oceanic sharks, sailfishes (*Istiophorus* spp.), and swordfish (*Xiphias gladius*) (16 U.S.C. 1802(21)). Further, the Magnuson-Stevens Act, Section 3, defines the term "tunas species" as albacore tuna (*Thunnus alalunga*), bigeye tuna (*Thunnus obesus*), bluefin tuna (*Thunnus thynnus*), skipjack tuna (*Katsuwonus pelamis*), and yellowfin tuna (*Thunnus albacares*) (16 U.S.C. 1802(44)).

[2] Available at https://www.fisheries.noaa.gov/atlantic-highly-migratory-species/atlantic-hms-fishery-management-plans-and-amendments

In addition to the Magnuson-Stevens Act and ATCA, any management measures must also be consistent with other applicable laws including, but not limited to, the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), and the Coastal Zone Management Act (CZMA). This document is prepared, in part, to comply with NMFS' responsibilities under NEPA (42 U.S.C. 4321 *et seq.*), as amended by the Fiscal Responsibility Act (137 Stat. 10, P.L. 118-5, effective June 3, 2023), and consistent with National Oceanic and Atmospheric Administration's (NOAA's) Administrative Order 216-6A (NAO 216-6A) and its Companion Manual.

1.2 BRIEF OVERVIEW OF MANAGEMENT MEASURES

This section provides a brief overview of domestic and international management measures for mobulid rays (family Mobulidae) in the Atlantic, as well as the current operational practices of HMS fisheries in relation to mobulid rays. There are currently no regulations at 50 CFR part 635 concerning mobulid rays, nor are there any measures described in the HMS FMP or its amendments. The FMP for the Exclusive Economic Zone (EEZ) around Puerto Rico lists one species of mobulid ray, the giant manta ray (*Mobula birostris*), as a prohibited species (87 FR 56204, September 13, 2022; see 50 CFR 622.438(f)). The harvest of mobulid rays is not managed under any other FMPs in the U.S. Atlantic, including in the Gulf of America or Caribbean.

In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. NMFS does not have records of sales of mobulid rays from HMS fisheries. Interaction rates of HMS fisheries with mobulid rays are low. While there are no regulatory requirements specific to mobulid rays in HMS fisheries, HMS fisheries are subject to a number of requirements on bycatch mitigation and safe handling and release of other bycatch species (see for example, requirements for all HMS gears at § 635.21(a)(1) and (2), pelagic longline sea turtle bycatch mitigation measures at § 635.21(c)(5) and shark bycatch mitigation measures at § 635.21(c)(6), and bottom longline bycatch mitigation measures at § 635.21(d)(2)).

The giant manta ray is listed as threatened under the ESA (83 FR 2916, January 22, 2018; 88 FR 81351, November 22, 2023). In recognition of the ESA listing, NMFS developed recommended giant manta ray handling and release procedures.[3] A Draft Recovery Plan, a Draft Recovery Implementation Strategy, and a Recovery Status Review for giant manta ray were released in 2024.[4] Under the Draft Recovery Plan, recovery actions include: through international coordination and collaboration with relevant international organizations, such as Regional Fishery Management Organizations (RFMOs), eliminate target fisheries and minimize fisheries bycatch and mortality of giant manta rays; improve species-specific monitoring and reporting of giant manta rays in commercial and artisanal fisheries by RFMOs and individual countries to improve estimates of catch and discards, provide a better understanding of the effects of illegal, unreported, and unregulated fishing, and measure progress towards recovery; and minimize

[3] Available at https://media.fisheries.noaa.gov/dam-migration/manta__hms_placard_2020.pdf. Note that these procedures were distributed to HMS fisheries, as required by the Terms and Conditions of the 2020 Biological Opinions for HMS fisheries.

[4] Available at https://www.fisheries.noaa.gov/species/giant-manta-ray/conservation-management

fishing mortality of giant manta rays through effective development, implementation, and enforcement of international and domestic measures such as legislation and regulations (NMFS 2024a). Further information related to the ESA is provided in Chapter 3.

ICCAT conservation and management measures for mobulid rays were first adopted in 2023 under Recommendation 23-14.[5] However, implementation of that recommendation was delayed pending further scientific advice from ICCAT's Standing Committee on Research and Statistics (SCRS). In 2024, the SCRS advised that the Commission give full effect to the measures in Recommendation 23-14, due to factors including life history traits of mobulid rays such as low productivity and slow growth; known interactions between mobulids and fisheries, including purse seine fisheries and, to a lesser extent, longline fisheries; incomplete fisheries data; and poor species identification (SCRS 2024).

In 2024, ICCAT adopted Recommendation 24-12 on mobulid rays. This recommendation replaced Recommendation 23-14 and has identical provisions to the previous recommendation with the addition of a reference to Recommendation 19-01. Recommendation 24-12 requires, among other things, that the United States and other ICCAT parties prohibit retaining on board, transshipping, landing, or storing any part or whole carcass of all species of mobulid rays (family Mobulidae) as listed in Recommendation 19-01 and taken in the Convention area in association with ICCAT fisheries. Further, Recommendation 24-12 requires that vessels promptly release unharmed, to the extent practicable, mobulid rays as soon as they are seen in the net, on the hook, or at the vessel, in a manner that shall result in the least possible harm to the individual. Recommendation 24-12 also encourages implementation of best handling practices for the safe release of mobulid rays. For longline gear, suggested handling practices include to leave the animal in the water, to use a de-hooker to remove the hook or a long-handled line cutter to cut the gear as close to the hook as possible, and not to gaff, drag, carry, lift or pull a ray by its "cephalic lobes" or tail or by inserting hooks or hands into the gill slits or the spiracles.

Of the species of mobulid rays in the family Mobulidae, HMS fisheries are most likely to interact with the following five species: *Mobula birostris*, *M. hypostoma*, *M. mobular*, *M. tarapacana*, and *M. thurstoni*. Recommendation 19-01, referenced in Recommendation 24-12, lists the following seven species of mobulid rays as relevant to ICCAT: *Manta alfredi* (reef manta ray), *Manta birostris* (giant manta ray), *Mobula hypostoma* (lesser, or pygmy, devil ray), *M. japonica*, *M. mobular* (devil fish or spinetail devil ray), *M. tarapacana* (Chilean, or sicklefin, devil ray), and *M. thurstoni* (smoothtail mobula or bentfin devil ray). Subsequent to adoption of Recommendation 19-01, *Manta alfredi* and *Manta birostris* are now recognized as belonging to the genus *Mobula*. *M. japonica* is now considered to be the same species as *M. mobular* (Ellis et al. 2024). *M. alfredi* occurs in the Pacific, with some studies indicating the species may have been reported in the eastern Atlantic Ocean and thus highly unlikely to interact with HMS fisheries. Therefore, HMS fisheries are most likely to interact with five species of mobulid rays. Ellis et al. (2024) note that the taxonomy of mobulid rays is still somewhat uncertain, as evidenced by these recent changes, and any management measures should be established at the

[5] ICCAT recommendations available at https://www.iccat.int/en/RecRes.asp

family level (i.e., Mobulidae) to alleviate potential future problems with management or enforcement if there are further taxonomic revisions.

1.3 PROPOSED ACTION, PURPOSE, AND NEED

Proposed Action: NMFS is considering alternatives to: (1) prohibit retention of mobulid rays and (2) implement handling and release practices.

Purpose: The purpose of this action is to protect mobulid rays and minimize their bycatch and bycatch mortality to the extent practicable in HMS fisheries consistent with ICCAT Recommendation 24-12, as well as National Standard 9.

Need: The need for this action is to implement binding ICCAT Recommendation 24-12, adopted in 2024, which prohibits the retention of mobulid rays in ICCAT fisheries and details best practices for handling and release of mobulid rays. Current regulations for HMS fisheries do not address retention or bycatch of mobulid rays.

1.4 SCOPE AND ORGANIZATION OF THIS DOCUMENT RELATED TO THE NATIONAL ENVIRONMENTAL POLICY ACT

In considering the management measures outlined in this document, NMFS must comply with a number of federal statutes and executive orders. To comply with these requirements and eliminate redundancies to the extent practicable, NMFS consolidates all the requirements into one comprehensive document. Therefore, this document considers the requirements under all relevant statutes and executive orders including NEPA (42 U.S.C. §§ 4321 et seq.). Under NEPA, the purpose of an EA is to provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a finding of no significant impact (FONSI) and to aid in the agency's compliance with NEPA when no EIS is necessary.

In developing this document, NMFS adhered to the procedural requirements of NEPA as amended by the 2023 Fiscal Responsibility Act and NAO 216-6A with its accompanying Companion Manual. The following definitions were generally used to characterize the nature of the various impacts evaluated in this EA. Chapter 4 describes more specifically how these definitions were used for each alternative.

- *Effects or impacts*. In this document, effects or impacts refer to the changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and include the following: direct effects, which are caused by the action and occur at the same time and place; indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable; cumulative effects, which are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (federal or non-federal) or person undertakes such other actions; and effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative.

- *Short-term or long-term impacts*. These characteristics are determined on a case-by-case basis and do not refer to any rigid time period. In general, short-term impacts are those that would occur only with respect to a particular activity or for a finite period. Long-term impacts are those that are more likely to be persistent and chronic.
- *Minor, moderate, or major impacts*. These relative terms are used to characterize the magnitude of an impact. Minor impacts are generally those that might be perceptible but, in their context, are not amenable to measurement because of their relatively minor character. Moderate impacts are those that are more perceptible and, typically, more amenable to quantification or measurement. Major impacts are those that, in their context and due to their intensity (severity), have the potential to be significant and, thus, warrant heightened attention and examination for potential means for mitigation to fulfill the requirements of NEPA.
- *Neutral, adverse, or beneficial impacts*. A neutral impact is one having neither positive nor negative outcomes on the man-made or natural environment. An adverse impact is one having unfavorable, or undesirable outcomes on the man-made or natural environment. A beneficial impact is one having positive outcomes on the man-made or natural environment. A single act might result in adverse impacts on one environmental resource and beneficial impacts on another resource.

This EA assesses the potential and cumulative ecological, economic, and social impacts of prohibiting retention of mobulid rays and implementing handling and release practices. This document comprehensively analyzes the alternatives considered for all these requirements. The chapters that follow describe the management measures and potential alternatives (Chapter 2); the affected environment as it currently exists (Chapter 3); the probable consequences on the human environment that may result from the implementation of the management measures and their alternatives, including the potential impacts on the fisheries (Chapter 4); any cumulative impacts from this action (Section 4.4); and mitigation and unavoidable impacts (Chapter 5). While NMFS wrote some of the chapters to comply with the specific requirements under NEPA, as described below, some of the analyses in these chapters may also include analyses or descriptions necessary to comply with the specific requirements of other statutes and executive orders. Overall, it is the document as a whole that meets all the federal requirements and not any individual chapter.

Draft Certification of Page Limit

NMFS has considered the factors mandated by NEPA and this EA represents NMFS' good-faith effort to prioritize documentation of the most important considerations required by the statute within the congressionally mandated page limits. This prioritization reflects NMFS' expert judgment and any considerations addressed briefly or left unaddressed were, in NMFS' judgment, comparatively not of a substantive nature that meaningfully informed the consideration of environmental effects and the resulting decision on how to proceed.

Draft Certification of Deadline

This EA represents NMFS' good-faith effort to fulfill NEPA's requirements within the congressionally mandated timeline. With the completion of this EA, this effort is substantially complete. In NMFS' expert opinion, it has thoroughly considered the factors mandated by NEPA and in NMFS' judgment, the analysis contained in the EA is adequate to inform and reasonably explain NOAA's final decision regarding this activity.

1.5 SCOPE AND ORGANIZATION OF THIS DOCUMENT RELATED TO OTHER APPLICABLE LAWS AND EXECUTIVE ORDERS

As described above, when considering management actions, NMFS must comply with a variety of laws. To do this, NMFS consolidates all the requirements into one comprehensive document. Therefore, this document considers, in addition to the NEPA requirements as described above, the requirements under all relevant statutes and executive orders including the Magnuson-Stevens Act, Executive Order 12866 (E.O. 12866, Regulatory Planning and Review), and the Regulatory Flexibility Act (RFA). In addition to the purpose and need outlined in this chapter and the various alternatives outlined in Chapter 2, Chapter 4 provides a summary of all the economic analyses and associated data; Chapter 6 addresses the requirements under E.O. 12866, also known as the Regulatory Impact Review; Chapter 7 provides the Initial Regulatory Flexibility Analysis (IRFA) required under RFA; and Chapter 8 provides additional consistency information that is required under specific sections of the Magnuson-Stevens Act and other statutes such as the Coastal Zone Management Act. As described above, while NMFS wrote some of the chapters to comply with the specific requirements under these various statutes and executive orders, it is the document as a whole that meets all the federal requirements and not any individual chapter.

2 Summary of the Alternatives

NEPA requires that any federal agency proposing a major federal action consider a reasonable range of alternatives, in addition to the proposed action. The evaluation of alternatives in an EA assists NMFS in ensuring that any unnecessary impacts are avoided through an assessment of alternative ways to achieve the underlying purpose of the project that may result in less environmental harm.

To warrant detailed evaluation, an alternative must be reasonable[6] and meet the purpose and need of the action (see Section 1.3). The range of alternatives considered must meet the purpose and need for the action and include a "no action" alternative. Additionally, NMFS considered the following screening criteria to determine whether an alternative is reasonable. Each of the alternatives described in this chapter meet each of these screening criteria.

Screening Criteria – To be considered "reasonable" for purposes of this EA, an alternative must meet the following criteria:

- An alternative must be consistent with the Magnuson-Stevens Act, including the 10 National Standards set forth in the Magnuson-Stevens Act.
- An alternative must be administratively feasible. The costs associated with implementing an alternative cannot be prohibitively exorbitant or require unattainable infrastructure.
- An alternative cannot violate other laws (e.g., ESA, MMPA).
- An alternative must be consistent with the HMS FMP and its amendments.
- An alternative must be consistent with ICCAT recommendations.

This chapter includes a full range of reasonable alternatives designed to meet the purpose and need for the action described in Chapter 1. These alternatives are listed below. The environmental, economic, and social impacts of these alternatives are discussed in later chapters.

2.1 ALTERNATIVES ON RETENTION OF MOBULID RAYS

NMFS is considering three alternatives on retention of mobulid rays of the family Mobulidae. This action does not make any changes to the prohibition on retention of giant manta rays in the EEZ of Puerto Rico (see 50 CFR 622.438(f)).

Alternative A1: Do not implement regulations on retention of mobulid rays. – No Action

Under Alternative A1, the No Action alternative, the HMS regulations at 50 CFR part 635 would continue not addressing the retention of mobulid rays. This alternative would not implement binding ICCAT Recommendation 24-12.

[6] Section 102(C)(iii) of NEPA (42 U.S.C. 4332) directs agencies to consider "a reasonable range of alternatives to the proposed agency action, including an analysis of any negative environmental impacts of not implementing the proposed agency action in the case of a no action alternative, that are technically and economically feasible, and meet the purpose and need of the proposal." In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative.

Alternative A2: Prohibit retention of mobulid rays in fisheries for tunas and tuna-like species.

Under Alternative A2, NMFS would prohibit retention of mobulid rays in fisheries for tunas and tuna-like species (i.e., swordfish and billfish), which are considered to be ICCAT fisheries. This alternative would implement Recommendation 24-12, prohibiting retention of mobulid rays taken in association with ICCAT fisheries.

In commercial fisheries, vessels with pelagic longline gear on board would be prohibited from retaining, transshipping, landing, or storing any parts or whole carcasses of mobulid rays. The same prohibition would apply to vessels issued. or which should have been issued, the following permits if swordfish, billfish, or tunas are retained or possessed on board, or offloaded from, the vessel: Atlantic Tunas General category permit, Atlantic Tunas Harpoon category permit, Atlantic Tunas Longline category permit, swordfish directed limited access permit (LAP), swordfish incidental LAP, swordfish handgear LAP, Swordfish General Commercial permit, Commercial Caribbean Small Boat permit, or HMS Charter/Headboat permit.

In recreational fisheries, vessels issued an HMS Charter/Headboat permit, vessels issued an HMS Angling permit, or vessels issued an Atlantic Tunas General category permit or Swordfish General Commercial permit fishing in a recreational HMS fishing tournament, would be prohibited from retaining, possessing, or landing mobulid rays if swordfish, tuna, or billfish are retained or possessed on board, or offloaded from, the vessel.

Persons would be prohibited from selling or purchasing any mobulid ray, a whole carcass or part thereof, that was caught by a fishing vessel with pelagic longline gear on board, or by a fishing vessel issued or required to be issued any HMS permit when tuna, swordfish or billfish are on board the vessel, offloaded from the vessel, or being offloaded from the vessel. Implementing a prohibition on sale or purchase of mobulid rays in addition to prohibiting their retention would facilitate effective implementation and provide clarity for the regulated community and for enforcement purposes.

Retention of mobulid rays in fisheries for sharks (e.g., bottom longline and gillnet shark fisheries, or recreational HMS fisheries targeting sharks and not retaining tunas, swordfish, or billfish) would not be addressed under this alternative. Application of this measure in some HMS fisheries and not others could lead to issues related to inconsistent application, complicate implementation, and cause confusion or complications for the regulated community and for enforcement purposes.

Under this alternative, researchers conducting research on mobulid rays would need an exempted fishing permit (EFP) or related permit (e.g., scientific research permit, display permit) consistent with the regulations at § 635.32 exempting them from the mobulid ray regulations when conducting research on a pelagic longline vessel or on a vessel with one of the HMS permits described above when also retaining tunas, swordfish, or billfish. Researchers issued an EFP or related permit that are conducting research on a vessel other than a pelagic longline vessel or on a vessel with one of the HMS permits described above when also retaining tunas, swordfish, or billfish could conduct research on mobulid rays without any exemptions from the HMS

regulations. Researchers who interact with giant manta rays would continue to need to consult with the NMFS Office of Protected Resources for any additional authorizations required under the ESA.

Alternative A3: Prohibit retention of mobulid rays in all HMS fisheries. – *Preferred Alternative*

Under Alternative A3, the preferred alternative, NMFS would prohibit retention of mobulid rays in all HMS fisheries. Vessels issued, or which should have been issued, any HMS permit, commercial or recreational, would be prohibited from retaining, transshipping, landing, or storing any parts or whole carcasses of mobulid rays. Persons would be prohibited from selling or purchasing any mobulid ray, a whole carcass or part thereof, that was caught by a vessel issued or required to be issued a permit for HMS.

This alternative would implement Recommendation 24-12, prohibiting retention of mobulid rays taken in association with ICCAT fisheries. This alternative would additionally prohibit retention of mobulid rays in fisheries for sharks. While fisheries for sharks are not ICCAT fisheries for tunas and tuna-like species, application of the measures for shark fisheries would ensure consistent application, facilitate effective implementation, and provide clarity for the regulated community and for enforcement purposes. Applying this requirement in all HMS fisheries would further implement measures in the HMS FMP consistent with the National Standards (specifically National Standard 9 here) and regulations implementing recommendations by international organizations, as required under the Magnuson-Stevens Act. Similarly, implementing a prohibition on sale or purchase of mobulid rays in addition to prohibiting their retention would facilitate effective implementation and provide clarity for the regulated community and for enforcement purposes.

Under this alternative, researchers conducting research on mobulid rays would need an EFP or related permit consistent with the regulations at § 635.32 exempting them from the mobulid ray regulations when conducting research on any HMS-permitted fishing vessel. Researchers who interact with giant manta rays would continue to need to consult with the NMFS Office of Protected Resources for any additional authorizations required under the ESA.

2.2 ALTERNATIVES ON HANDLING AND RELEASE PRACTICES FOR MOBULID RAYS

NMFS is considering three alternatives on handling and release practices for mobulid rays of the family Mobulidae.

Alternative B1: Do not implement regulations on handling and release practices for mobulid rays. - No Action

Under Alternative B1, the No Action alternative, the HMS regulations at 50 CFR part 635 would continue not to address handling practices or release of mobulid rays. This alternative would not implement binding ICCAT Recommendation 24-12 or align HMS fishery requirements with this aspect of the giant manta ray handling and release procedures recommended after the ESA listing. However, the current giant manta ray handling and release procedures would continue to be recommended for HMS fisheries.

Alternative B2: Require mobulid rays to be released unharmed in all HMS fisheries. – *Preferred Alternative*

Under Alternative B2, a preferred alternative, vessels issued, or which should have been issued, any HMS permit would be required to release unharmed, to the extent practicable, mobulid rays as soon as they are seen on the hook or at the vessel (with additional requirements for pelagic longline vessels as described under Alternative B3). This alternative would implement Recommendation 24-12, requiring vessels to promptly release mobulid rays unharmed, to the extent practicable. Application of this requirement in all HMS fisheries, rather than only ICCAT fisheries for tunas and tuna-like species, would ensure consistent application, facilitate effective implementation, and provide clarity for the regulated community and for enforcement purposes.

In addition, this alternative would align HMS fishery requirements with the giant manta ray handling and release procedures recommended after the ESA listing which state that giant manta rays should be released in a manner that will promote their survival after any fishery interaction. As Alternative B2 would apply this requirement to all mobulid rays, this alternative would also avoid any differing requirement among species of mobulid rays that could lead to mishandling of giant manta rays due to misidentification. The Recovery Status Review describes a high rate of misidentification between giant manta rays and other mobulid rays (NMFS 2024b).

Alternative B3: Implement handling practices for pelagic longline gear. – *Preferred Alternative*

Under Alternative B3, a preferred alternative, NMFS would require vessels issued, or which should have been issued, an HMS permit and fishing with pelagic longline gear to release, as safely as practicable, any hooked or entangled mobulid rays using dehookers or line clippers or cutters. If using a line clipper or cutter, the gangion would be required to be cut so that less than 3 feet (91.4 cm) of line remains attached to the hook. Handling requirements would also state that mobulid rays must be left in the water, and no mobulid ray may be gaffed.

This alternative would implement the suggested best handling practices for the safe release of mobulid rays in Recommendation 24-12. In addition, similar to Alternative B2, this alternative would align HMS fisheries with aspects of the recommended giant manta ray handling and release procedures. As Alternative B3 would apply this requirement to all mobulid rays, this alternative would also avoid any differing requirement among species of mobulid rays that could lead to mishandling of giant manta rays due to misidentification. Further, requiring mobulid rays to be dehooked or cut off with a limited amount of line would facilitate the ability of NMFS observers and vessel captains or crew to identify and report which species of mobulid ray was involved in the interaction. The requirement to cut the gangion so that less than 3 feet of line remains attached to the hook would be consistent with handling and release requirements for shark bycatch on pelagic longline gear (see § 635.21(c)(6)(i)).

Considered but not Further Analyzed

NMFS considered a management option to require mobulid rays be released unharmed in fisheries for tunas and tuna-like species (i.e., swordfish and billfish), which are considered to be

ICCAT fisheries. The application of this option in commercial and recreational fisheries would be the same as described under Alternative A2. Release of mobulid rays in fisheries for sharks would not be addressed. Application of this measure in some HMS fisheries and not others could lead to issues related to inconsistent application, complicate implementation, and cause confusion or complications for the regulated community and for enforcement purposes. The difficulty of enforcing release requirements in some fisheries and not others is compounded from that of enforcing retention prohibitions due to the challenge of tracking release actions which occur over short periods of time during vessel operations, in addition to needing to confirm which fishery a given vessel is operating in. For these reasons, NMFS considers that the B alternatives described above are the reasonable alternatives under this section, and while the option described here was considered, it was not further analyzed.

3 Affected Environment

This chapter describes the affected environment, including domestic and international management, and the population status, biology, life history, and habitat of mobulid rays. As discussed in Section 1.2, of the species of mobulid rays in the family Mobulidae, HMS fisheries are most likely to interact with the following five species: *Mobula birostris, M. hypostoma, M. mobular, M. tarapacana*, and *M. thurstoni*. This chapter provides an overview of the best scientific information available regarding the species' population estimates, ecological significance, and vulnerability due to low reproductive rates. The chapter also examines interactions between mobulid rays and HMS fisheries, including bycatch in commercial and recreational fisheries, fishery participants and the economic environment, and discusses regulatory measures under the ESA and MMPA. This information establishes a baseline for assessing potential impacts of management actions on HMS fisheries and mobulid ray populations.

3.1 DOMESTIC MANAGEMENT

3.1.1 MANAGEMENT OF MOBULID RAYS IN THE ATLANTIC

A review of management measures related to mobulid rays was included in the giant manta ray ESA Recovery Status Review (NMFS 2024b). As described in Section 1.2, there are currently no HMS regulations at 50 CFR part 635 concerning mobulid rays, nor are there any measures described in the HMS FMP or its amendments. The FMP for the Exclusive Economic Zone (EEZ) around Puerto Rico lists one species of mobulid ray, the giant manta ray (*Mobula birostris*), as a prohibited species (87 FR 56204, September 13, 2022; see 50 CFR 622.438(f)). The harvest of mobulid rays is not managed under any other FMPs in the U.S. Atlantic, including in the Gulf of America or Caribbean.

In state waters, the Florida Administrative Code (Chapter 68B-44) states that a person may not possess, harvest, or land a mobulid ray from Florida waters. Mobulid ray regulations were not cited for any other state.

3.1.2 BYCATCH MITIGATION IN HMS FISHERIES

In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. NMFS does not have records of sales of mobulid rays from HMS fisheries. While there are no regulatory requirements specific to mobulid rays in HMS fisheries, HMS fisheries are subject to a number of requirements on bycatch mitigation and safe handling and release of other bycatch species (see for example, requirements for all HMS gears at § 635.21(a)(1) and (2), pelagic longline sea turtle bycatch mitigation measures at § 635.21(c)(5) and shark bycatch mitigation measures at § 635.21(c)(6), and bottom longline bycatch mitigation measures at § 635.21(d)(2)). For more information regarding measures to reduce bycatch in HMS fisheries, please see Chapter 6 of the HMS Stock Assessment and Fishery Evaluation (SAFE) Report (NMFS 2023). In addition, as described in Section 1.2, in recognition of the ESA listing of giant manta ray, NMFS developed

recommended handling and release procedures. These procedures were distributed to HMS fishermen per the Terms and Conditions of 2020 Biological Opinions for HMS fisheries.

3.2 INTERNATIONAL MANAGEMENT OF MOBULID RAYS IN THE ATLANTIC

At the 2013 meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Parties agreed to include all manta rays (*Manta* spp.) in Appendix II of CITES, with the listing effective on September 14, 2014. In 2016, the Parties agreed to include all devil rays (*Mobula* spp.) on Appendix II of CITES, effective on April 4, 2017. In 2022, the CITES Parties adopted taxonomic changes reclassifying *Manta* spp. into the genus *Mobula*. The inclusion of mobulid rays in CITES Appendix II helps ensure that the international trade in these species is legal and sustainable. These measures apply to mobulid rays globally.

As discussed in Section 1.2, ICCAT conservation and management measures for mobulid rays were first adopted in 2023 under Recommendation 23-14. However, implementation of that recommendation was delayed pending further scientific advice from the SCRS. In 2024, the SCRS advised that the Commission give full effect to the measures in Recommendation 23-14, due to factors including life history traits of mobulid rays such as low productivity and slow growth; known interactions between mobulids and fisheries, including purse seine fisheries and, to a lesser extent, longline fisheries; incomplete fisheries data; and poor species identification (SCRS 2024).

In 2024, ICCAT adopted Recommendation 24-12 on mobulid rays. This recommendation replaced Recommendation 23-14 and has identical provisions to the previous recommendation with the addition of a reference to Recommendation 19-01. Recommendation 24-12 requires, among other things, that the United States and other ICCAT parties prohibit retaining on board, transshipping, landing, or storing any part or whole carcass of all species of mobulid rays (family Mobulidae) as listed in Recommendation 19-01 and taken in the Convention area in association with ICCAT fisheries. Further, Recommendation 24-12 requires that vessels promptly release unharmed, to the extent practicable, mobulid rays as soon as they are seen in the net, on the hook, or at the vessel, in a manner that shall result in the least possible harm to the individual. Recommendation 24-12 also encourages implementation of best handling practices for the safe release of mobulid rays.

3.3 ECOLOGY OF MOBULID RAYS

In response to a request from ICCAT to the SCRS under Recommendation 23-14, Ellis et al. (2024) compiled a review of current knowledge on mobulid rays in the ICCAT Convention area, which informed the summary here. Further information is drawn from the ESA Draft Recovery Plan for the giant manta ray (NMFS 2024a).

3.3.1 POPULATION STATUS

Mobulid ray population sizes in the ICCAT Convention Area are unknown and there are limited data on population trends (Ellis et al. 2024). As discussed in Section 1.2, giant manta rays are listed as threatened under the ESA (83 FR 2916, January 22, 2018; 88 FR 81351, November 22,

2023). Giant manta rays in the Western North Atlantic subregion (west of 57°W longitude and north of equator boundary line) are at low-to-moderate extinction risk from the stressors of bycatch in commercial trawl fisheries and from inadequacy of fisheries regulations, and are at low extinction risk from the stressors of bycatch in commercial longline, gillnet, or purse seine fisheries or from recreational fisheries interactions (NMFS 2024a). The annual rate of population change is found to be stable or increasing at a rate of a minimum of 1-2 percent in at least one Atlantic Ocean Subregion, over 40 years (2 generations). Globally, giant manta rays are at a low extinction risk from the stressors of climate change, entanglement, tourism, aquarium trade, environmental contaminants or pollutants, and vessel strikes.

3.3.2 BIOLOGY AND LIFE HISTORY

Mobulid rays, comprising manta rays and devil rays (Order Myliobatiformes; Family Mobulidae), are obligate filter feeders, primarily consuming planktonic organisms such as euphausiids, mysids, copepods, and small fish (Notarbartolo di Sciara 1988; Rohner et al. 2017; Medeiros et al. 2022). Generally, mobulid rays exhibit late maturity, low fecundity, and slow growth rates (Dulvy et al. 2014; Rambahiniarison et al. 2018). These biological traits contribute to slow population recovery, making mobulid rays particularly susceptible to declines from overexploitation and incidental capture (Pardo et al. 2016; Carpenter et al. 2023). Giant manta rays with their exceptionally low reproductive output—females typically give birth to a single pup following a prolonged gestation—have one of the lowest intrinsic population growth rates among elasmobranchs (Cortés 2016; Carlson, unpublished).

Mobulid rays are viviparous meaning they give birth to live young. Female mobulid rays typically produce a single pup per reproductive cycle, although there are rare instances of twin births (Rambahiniarison et al. 2018). Estimated gestation periods range from 12 to 13 months, as inferred from studies on the reef manta ray (*Mobula alfredi*) (Marshall and Bennett 2010; Yamaguchi 2007; Kitchen-Wheeler 2013). Resting intervals between pregnancies can extend up to five years, resulting in exceptionally low reproductive rates that constrain population recovery (Rambahiniarison et al. 2018; Marshall et al. 2022). Mobulid rays are long-lived with a late age at maturity. Age at maturity for giant manta rays is estimated at 8–10 years, with longevity projections exceeding 31 years for reef manta rays and approximately 45 years for giant manta rays (Cuevas-Zimbrón et al. 2013; Dulvy et al. 2014; Marshall et al. 2022).

Due to their relatively low encounter rates, population estimates remain challenging. However, regional assessments indicate small population sizes, with most studied aggregations comprising fewer than 1,000 individuals (Hearn et al. 2014; Beale et al. 2019; Cabral et al. 2023).

3.3.3 HABITAT

Mobulid rays, including the giant manta ray (*Mobula birostris*), are primarily distributed in tropical and subtropical waters, with some occurrences in warm temperate zones (Last et al. 2016; Stevens et al. 2018). They are typically found in epipelagic zones, occupying surface and midwater depths in both coastal and oceanic regions. Their distribution is strongly influenced by

oceanographic conditions, including water temperature, productivity, and prey availability (Notarbartolo di Sciara 1988; Rohner et al. 2017; Medeiros et al. 2022).

Giant manta rays and other mobulids frequently occur near dynamic oceanographic features such as coastal upwellings, seamounts, thermal fronts, and eddies, which concentrate planktonic prey (Notarbartolo di Sciara 1988; Rohner et al. 2017). These features create productive feeding grounds that support their filter-feeding behavior. While some individuals undertake long-distance migrations exceeding 1,000 km, studies indicate that many exhibit site fidelity, forming small, regionally distinct subpopulations with limited connectivity (Stewart et al. 2016; Marshall et al. 2018).

In U.S. waters, giant manta rays are found along the Atlantic east coast as far north as Long Island, New York, and throughout the Gulf of America, U.S. Virgin Islands, Puerto Rico, Hawaiian Islands, and Pacific territories such as Jarvis Island (Marshall et al. 2018; Knochel et al. 2022). Their habitat use varies by life stage and ecological requirements. Juveniles have been observed using nearshore environments, including shallow coastal bays and estuaries, while adults are more commonly encountered in offshore waters (Stewart et al. 2016; Marshall et al. 2018).

Although mobulid rays are highly mobile, they remain dependent on specific environmental conditions for feeding, reproduction, and thermoregulation. Habitat degradation caused by coastal development, pollution, and climate change—such as shifts in ocean temperatures and changes in plankton availability—may impact their distribution and abundance (Rohner et al. 2017; Medeiros et al. 2022). Additionally, interactions with commercial fisheries, including bycatch in pelagic longline and purse seine operations, present a potential threat to their preferred habitats (Carpenter et al. 2023).

3.4 HMS FISHERY INTERACTIONS WITH MOBULID RAYS

Fishery interactions with giant manta rays are described in the Recovery Status Review (NMFS 2024b) and summarized below. As noted below, fisheries interact with other species of mobulid rays as well, with some data collected at the family level.

3.4.1 COMMERCIAL FISHERY INTERACTIONS

Mobulid rays are incidentally caught as bycatch in several U.S. commercial fisheries operating in the Northwest Atlantic Ocean and Gulf of America. The primary gear types associated with mobulid ray bycatch include pelagic and bottom longlines, gillnets, trawls, and hook-and-line fisheries. Of those, HMS fisheries are further described below. Data from federal fisheries observer programs in the Southeast United States have provided critical insight into these interactions, particularly following the 2018 listing of the giant manta ray under the ESA. Observer programs began specifically identifying mobulid ray bycatch in 2019-2020, leading to improved species identification and reporting. However, a significant portion of records remain classified generically as "ray" or "mobulid," making it difficult to assess species-specific interactions fully.

The HMS pelagic longline fishery has documented incidental captures of giant manta rays throughout its operational range, including the Mid-Atlantic Bight, the Northeast Coastal Atlantic, and the Gulf of America. Observer coverage in this fishery is maintained at a minimum of 8 percent, though coverage levels have varied annually. Between 2020 and 2022, observers (at 9.9 percent coverage) recorded 8 giant manta rays caught in pelagic longline gear, 3 of which resulted in mortalities. Additional historic records from the Gulf of America indicate giant manta ray bycatch in previous years, though early records often lacked species-level identification. In 2020, NMFS issued a Biological Opinion which included rates of incidental take of giant manta rays in the pelagic longline fishery, as described in Section 3.5.

The shark bottom longline fishery operates from the Mid-Atlantic Bight through the Gulf of America and incidentally captures giant manta rays. Observer data, with an estimated 3.9 percent total fishing effort coverage for shark bottom longline and reef fish bottom longline fisheries combined, has documented four giant manta ray captures in these fisheries, all of which were released alive. However, post-release survival remains uncertain, as mobulid rays are known to experience physiological stress when entangled in longline gear.

Gillnets also pose a risk to giant manta rays, though specific data on the extent of interactions is limited. Due to the large size of manta rays, entanglement in gillnets can result in significant injury, stress, and potential mortality.

3.4.2 RECREATIONAL FISHERY INTERACTIONS

Giant manta rays are also vulnerable to incidental capture in recreational fisheries. Studies from southern Florida indicate that up to 27 percent of observed giant manta rays exhibit evidence of foul-hooking or fishing line entanglement, with a significant portion of these individuals experiencing multiple interactions (Pate and Marshall 2020). Juvenile manta rays are frequently observed near fishing piers, inlet jetties, and other high-traffic fishing areas, increasing the likelihood of accidental capture.

NMFS has documented unintended manta ray hookings from recreational anglers targeting sharks from shore and vessels (NMFS 2024b). While some interactions result in minimal permanent injury, prolonged fight times—often exceeding an hour—can lead to significant physiological stress. Fishing line entanglement may cause deep lacerations, cephalic fin amputations, and impaired feeding efficiency, potentially affecting long-term growth and reproductive success. Although no direct mortalities have been attributed to recreational fishing, cryptic mortality remains a concern due to the negative buoyancy of manta rays, which reduces the likelihood of carcasses washing ashore.

Data from the Marine Recreational Information Program (MRIP) indicate that, in many years, there are infrequent interactions with mobulid rays in the recreational fishery that primarily result in releases. Estimates of catch have very high standard errors, indicating that these are rare event interactions. In MRIP data, mobulid rays are reported as either “manta family,” manta, or devil ray.

3.5 FISHERY PARTICIPANTS

In order to understand the scope of potential effects of this action on relevant permit holders, NMFS analyzed the number of vessels and dealer permits issued. As of October 2023, approximately 164 Swordfish Directed, 63 Swordfish Incidental, 68 Swordfish Handgear, 188 Shark Directed, 221 Shark Incidental, and 223 Atlantic Tunas Longline category limited access permits were issued. As of December 2023, there were 4,324 HMS Charter/Headboat permits (with 3,085 shark endorsements and 2,014 commercial sale endorsements), 24,552 HMS Angling permits (with 12,840 shark endorsements), and 3,471 Atlantic Tunas General category and Swordfish General Commercial permits (with 1,709 shark endorsements). In addition, approximately 66 Commercial Caribbean Small Boat permits, 188 Smoothhound Shark permits, and 37 Atlantic Tunas Harpoon category permits were issued. For more information regarding the distribution of these permits across states and territories, please see Chapter 4 of the HMS SAFE Report (NMFS 2023).

3.6 ECONOMIC ENVIRONMENT

Total ex-vessel annual revenues landed in 2022 in HMS fisheries were $41.1 million. Based on dealer reports, approximately 60 percent of 2022 total revenues in the fishery were landed by pelagic longline gear. In addition, 27 percent of landings by value were from vessels using commercial rod and reel gear, 4 percent were from buoy gear, 2 percent were from bottom longline, and 7.1 percent were from other gear categories. These other gear categories include gill net, harpoon, handline, green-stick, and other miscellaneous gears. For more information on the overall economic status of HMS fisheries, please see Chapter 8 of the HMS SAFE Report.

In addition to the economic value generated from fishing, there is strong evidence of economic value generated by non-consumptive manta ray (i.e., *Mobula alfredi* and *M. birostris*) watching. A 2013 study estimated manta ray watching in the United States generated over $4.6 million annually in revenue to dive operators and direct economic impacts of $15.4 million when including tourism expenditures (O'Malley et al. 2013). While this study focused on U.S. dive operations out of Hawaii, similar dives occur in the Flower Garden Banks National Marine Sanctuary.[7]

3.7 ENDANGERED SPECIES ACT AND MARINE MAMMAL PROTECTION ACT

The ESA is the primary federal legislation governing interactions between fisheries and species listed as threatened or endangered and effects on ESA-listed critical habitat. Through a consultation process, the ESA requires federal agencies to evaluate actions they authorize, fund, or carry out that may affect a listed species. In the case of marine fisheries, NMFS Office of Sustainable Fisheries consults with the Office of Protected Resources to determine what effects federal fishery management actions could have on threatened or endangered marine species and what actions can be taken to reduce or eliminate negative effects. Under the ESA Section 7 consultation process, if a federal agency determines its action is likely to adversely affect a species, or destroy or adversely modify critical habitat, the agency engages in formal

[7] See for example https://flowergarden.noaa.gov/visiting/eastwestwwis.html

consultation with NMFS. At the conclusion of formal consultation, NMFS issues a Biological Opinion that analyzes the effects of the action. If NMFS concludes that the action will jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat, NMFS specifies Reasonable and Prudent Alternatives to the proposed action. If NMFS concludes that the action will not jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat, NMFS specifies Reasonable and Prudent Measures and Terms and Conditions to mitigate the effects of the action and authorizes any allowable "incidental take" of the species.

The giant manta ray is listed as threatened under the ESA (83 FR 2916, January 22, 2018; 88 FR 81351, November 22, 2023). A Draft Recovery Plan, a Draft Recovery Implementation Strategy, and a Recovery Status Review were released in 2024. These documents contain information on the range of giant manta ray and interactions with HMS fisheries, which was used in describing the affected environment in this chapter.

In May 2020, NMFS issued Biological Opinions for the HMS pelagic longline and non-pelagic longline fisheries (NMFS 2020a, 2020b). These Biological Opinions stated that the continued operation of HMS fisheries is not likely to jeopardize the continued existence of sea turtles, sawfish, Atlantic sturgeon, scalloped hammerhead sharks (Central and Southwest Atlantic Distinct Population Segment), oceanic whitetip sharks, and giant manta ray. The 2020 Biological Opinions specified incidental take levels for giant manta rays in HMS fisheries in an Incidental Take Statement (ITS), as well as anticipated mortalities. While take of the giant manta ray is not prohibited as NMFS has not promulgated a Section 4(d) rule extending the take prohibitions to the species, giant manta ray was included in the ITS to, among other reasons, provide a consultation reinitiation trigger under section 7 of the ESA. The Opinions also included Reasonable and Prudent Measures and associated Terms and Conditions requiring the dissemination of giant manta ray safe handling and release training materials to HMS fishermen,[8] and requiring the HMS Management Division to routinely monitor incidental takes of giant manta rays in coordination with Southeast Fishery Science Center observer programs. Total estimated incidental takes of giant manta rays in HMS fisheries have remained well-below the specified incidental take levels. However, in July 2022, the HMS Management Division requested reinitiation of formal Section 7 consultation on the HMS pelagic longline fishery due to new information indicating that estimated *mortalities* of giant manta ray may have exceeded the Incidental Take Statement levels, which specified an anticipated future take estimate of six mortalities in a three-year period. During this reinitiated formal consultation, NMFS continues the operation of the HMS fisheries under the 2020 Biological Opinion, including continued implementation of the Reasonable and Prudent Measures and Terms and Conditions to minimize the amount or extent of incidental take until the issuance of an amendment to the 2020 Biological Opinion, or a new Biological Opinion.

This action, including the provision for exempted fishing activities consistent with the regulations at § 635.32, is not anticipated to affect the above-referenced ESA-listed species in

[8] Available at https://media.fisheries.noaa.gov/dam-migration/manta__hms_placard_2020.pdf

any way not previously analyzed for existing regulations and there is no new information that would alter this conclusion.

The MMPA established a national policy to prevent marine mammal species and population stocks from declining beyond the point where they ceased to be significant functioning elements of the ecosystems of which they are a part. The MMPA prohibits, with certain exceptions, the "take" of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the United States. The HMS shark gillnet fishery is listed as a Category II fishery, which means it has an occasional likelihood of seriously injuring or killing marine mammals. The HMS bottom longline, hook-and-line, and recreational fisheries are listed as Category III fisheries, which means they have a remote likelihood of seriously injuring or killing marine mammals. Commercial vessel owners or operators, or fishermen, in Category I, II, or III fisheries must report all incidental mortalities and injuries of marine mammals during the course of commercial fishing operations to NMFS. Although the pelagic longline fishery is considered a Category I fishery, with the high likelihood of serious injury or mortality to marine mammals, this action is not likely to produce additional adverse impacts to marine mammals that were not analyzed in the HMS FMP or its amendments and existing regulations. There are currently no regulations requiring recreational fishermen to report takes, nor are they authorized to have incidental takes (i.e., they are illegal). NMFS does require reporting and authorizes takes by charter/headboat fishermen (considered “commercial” by MMPA).

Please refer to Sections 3.8 and 3.9.9 of the HMS FMP and Chapter 6 of the HMS SAFE Report for additional information on the protected species and marine mammals in the area of HMS fisheries.

4 Environmental Consequences of Alternatives

As described earlier, NMFS developed various alternatives in this EA to consider prohibiting retention of mobulid rays and implementing handling and release practices. These alternatives would apply to mobulid rays of the family Mobulidae.

4.1 IMPACTS OF ALTERNATIVES ON RETENTION OF MOBULID RAYS

In order to meet the objectives stated in Chapter 1, NMFS is analyzing three alternatives on retention of mobulid rays: maintaining the status quo, prohibiting retention of mobulid rays in fisheries for tunas and tuna-like species, and prohibiting retention of mobulid rays in all HMS fisheries.

4.1.1 ECOLOGICAL EVALUATION

Alternative A1 – No Action

Under Alternative A1, the No Action alternative, the HMS regulations at 50 CFR part 635 would not address retention of mobulid rays. This alternative is not expected to have any effect on the current level of fishing, catch rates, or distribution of fishing effort in HMS fisheries, or any effect on the rate of interactions of HMS fisheries with mobulid rays. In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. Therefore, Alternative A1 would likely result in neutral short-term and long-term ecological impacts for mobulid rays.

However, under this alternative, vessels permitted in HMS fisheries could decide at some point in the future to target and retain mobulid rays. If that were to happen, that retention could result in long-term adverse ecological impacts for mobulid rays. However, NMFS cannot currently estimate the scale of such impacts given the limited market for mobulid rays in the United States.

Alternative A2

Under Alternative A2, NMFS would prohibit retention of mobulid rays in fisheries for tunas and tuna-like species (i.e., swordfish and billfish), which are considered to be ICCAT fisheries. Retention of mobulid rays in fisheries for sharks would not be addressed under this alternative. This alternative is not expected to have any effect on the current level of fishing, catch rates, or distribution of fishing effort in HMS fisheries, or any effect on the rate of interactions of HMS fisheries with mobulid rays. In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. Therefore, Alternative A2 would likely result in neutral short-term and long-term ecological impacts for mobulid rays.

However, under this alternative, vessels permitted to use bottom longline or gillnet and fish for sharks (i.e., non-ICCAT fisheries) could decide at some point in the future to target and retain mobulid rays. If that were to happen, that retention could result in long-term adverse ecological impacts for mobulid rays, but to a lesser degree than potential retention in all HMS fisheries under Alternative A1. However, NMFS cannot currently estimate the scale of such impacts given the limited market for mobulid rays in the United States.

Alternative A3 – Preferred Alternative

Under preferred Alternative A3, NMFS would prohibit retention of mobulid rays in all HMS fisheries. This alternative is not expected to have any effect on the current level of fishing, catch rates, or distribution of fishing effort in HMS fisheries, or any effect on the rate of interactions of HMS fisheries with mobulid rays. In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. Therefore, Alternative A3 would likely result in neutral short-term and long-term ecological impacts for mobulid rays.

4.1.2 SOCIAL AND ECONOMIC IMPACTS

Alternative A1 - No Action

Under Alternative A1, the No Action alternative, the HMS regulations at 50 CFR part 635 would continue not to address retention of mobulid rays. In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. NMFS does not have records of sale of mobulid rays from HMS fisheries. However, there are potential costs to not implementing binding ICCAT recommendations, including potentially being identified for noncompliance by the ICCAT Compliance Committee. Noncompliance could also negatively affect public perception of HMS fisheries and influence decisions by consumers. Therefore, Alternative A1 could result in neutral to minor adverse short-term and long-term social and economic impacts.

However, if vessels permitted in HMS fisheries decide to retain and sell mobulid rays in the future under Alternative A1, that revenue could result in long-term minor beneficial social and economic impacts. The impact is likely to be minor since there is a very limited market in the United States. The same potential costs to noncompliance with binding ICCAT recommendations could exist.

Alternative A2

Under Alternative A2, NMFS would prohibit retention of mobulid rays in fisheries for tunas and tuna-like species (i.e., swordfish and billfish), which are considered to be ICCAT fisheries. Retention of mobulid rays in fisheries for sharks would not be addressed under this alternative. In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. NMFS does not have records of sale of mobulid rays from HMS fisheries. Therefore, Alternative A2 would likely result in neutral short-term and long-term social and economic impacts.

However, if vessels permitted to fish for sharks with bottom longline or gillnet decide to retain and sell mobulid rays in the future under Alternative A2, that revenue could result in long-term minor beneficial social and economic impacts, but to a lesser degree than potential revenue in all HMS fisheries under Alternative A1. The impact is likely to be minor since there is a very limited market in the United States.

Alternative A3 – Preferred Alternative

Under preferred Alternative A3, NMFS would prohibit retention of mobulid rays in all HMS fisheries. In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. NMFS

does not have records of sale of mobulid rays from HMS fisheries. Therefore, Alternative A3 would likely result in neutral short-term and long-term social and economic impacts. Compared to Alternative A2, this alternative would simplify the regulations by prohibiting mobulid rays in all HMS fisheries and would thus make communicating this change easier and reduce the time and effort needed by fishery participants to understand the retention prohibition, without increasing any costs to fishery participants.

4.2 IMPACTS OF ALTERNATIVES ON HANDLING AND RELEASE PRACTICES FOR MOBULID RAYS

In order to meet the objectives stated in Chapter 1, NMFS is analyzing three alternatives on handling and release practices for mobulid rays: maintaining the status quo, requiring mobulid rays to be released unharmed, and implementing handling practices for pelagic longline gear.

4.2.1 ECOLOGICAL EVALUATION

Alternative B1 – No Action

Under Alternative B1, the No Action alternative, the HMS regulations at 50 CFR part 635 would not address handling practices or release of mobulid rays. Current giant manta ray handling and release procedures under the ESA would remain in place. This alternative is not expected to have any effect on the current level of fishing, catch rates, or distribution of fishing effort in HMS fisheries, or any effect on the rate of interactions of HMS fisheries with mobulid rays. However, if mobulid rays were caught, vessel operators would not have any procedures, requirements, or guidelines in place for handling and release of mobulid rays other than giant manta ray. Likewise, vessel operators that use pelagic longline gear would not be required to limit the amount of trailing line attached to mobulid rays. Without these procedures, requirements, or guidelines, it is possible that vessel operators could improperly handle and release mobulid rays, leading to the mortality of the ray. Therefore, Alternative B1 could result in short-term and long-term minor adverse ecological impacts for mobulid rays.

Alternative B2 – Preferred Alternative

Under preferred Alternative B2, vessels issued any HMS permit would be required to release unharmed, to the extent practicable, mobulid rays as soon as they are seen on the hook or at the vessel (with additional requirements for pelagic longline vessels as described under Alternative B3). This alternative is not expected to have any effect on the current level of fishing, catch rates, or distribution of fishing effort in HMS fisheries, or any effect on the rate of interactions of HMS fisheries with mobulid rays. However, requiring all mobulid rays be released unharmed under this alternative would likely result in short-term and long-term minor beneficial ecological impacts for mobulid rays.

Alternative B3 – Preferred Alternative

Under preferred Alternative B3, NMFS would implement handling practices for mobulid rays caught on pelagic longline gear, including requirements to limit trailing line to three feet, to leave mobulid rays in the water, and to not gaff mobulid rays. This approach is similar to the

approach required when releasing sea turtles, marine mammals, sharks, and giant manta ray, in that such animals released with a minimum of gear are assumed to have a greater likelihood of surviving. This alternative is not expected to have any effect on the current level of fishing, catch rates, or distribution of fishing effort in HMS fisheries, or any effect on the rate of interactions of HMS fisheries with mobulid rays. However, implementing handling practice for all mobulid rays caught on pelagic longline gear under this alternative would likely result in short-term and long-term minor beneficial ecological impacts for mobulid rays.

4.2.2 SOCIAL AND ECONOMIC IMPACTS

Alternative B1 – No Action

Under Alternative B1, the No Action alternative, the HMS regulations at 50 CFR part 635 would continue not to address handling practices or release of mobulid rays. Current giant manta ray handling and release procedures under the ESA would remain in place. Alternative B1 would not require any changes to current mobulid rays handling and release practices. However, there are potential costs to not implementing binding ICCAT recommendations, including potentially being identified for noncompliance by the ICCAT Compliance Committee. Noncompliance could also negatively affect public perception of HMS fisheries and influence decisions by consumers. Therefore, Alternative B1 could likely result in neutral to minor adverse short-term and long-term social and economic impacts.

Alternative B2 – Preferred Alternative

Under preferred Alternative B2, vessels issued any HMS permit would be required to release unharmed, to the extent practicable, mobulid rays as soon as they are seen on the hook or at the vessel (with additional requirements for pelagic longline vessels as described under Alternative B3). In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. NMFS does not have records of sale of mobulid rays from HMS fisheries. Therefore, Alternative B2 would likely result in neutral short-term and long-term social and economic impacts.

Alternative B3 – Preferred Alternative

Under preferred Alternative B3, NMFS would implement handling practices for mobulid rays caught on pelagic longline gear, including requirements to limit trailing line to three feet, to leave mobulid rays in the water, to use a dehooking device, and to not gaff mobulid rays. Currently, pelagic longline fishermen are required to use a dehooking device if a protected species (e.g., sea turtle or marine mammal) is caught, as well as for sharks that will not be retained, but they are not currently required to use a dehooker to release all mobulid rays. It is common practice in the pelagic longline fishery to release mobulid rays by cutting the gangion, but they usually do not cut the gangions so only three feet remain. They are, however, already required to leave only three feet of trailing line when cutting off a shark that will not be retained. Therefore, Alternative B3 would likely result in short-term minor adverse social and economic impacts as fishermen adjust to this new practice. Although this may be an initial issue, NMFS expects that these inefficiencies would be minimal and that fishermen would become adept in using these practices to release mobulid rays over time given they are adept at using similar

practices to release sharks and protected species. Thus, Alternative B3 would be expected to have neutral long-term social and economic impacts.

4.3 COMPARISON OF NATIONAL ENVIRONMENTAL POLICY ACT ALTERNATIVES

Table 4.1 provides a qualitative comparison of the impacts associated with the various alternatives considered in this rulemaking. This table summarizes the impacts that were discussed in detail in Sections 4.1 and 4.2.

Table 4.1 Comparison of NEPA alternatives considered.

Alternative	Ecological	Social and Economic
Alternative A1	Neutral to Adverse	Minor Adverse to Minor Beneficial
Alternative A2	Neutral to Adverse	Neutral to Minor Beneficial
Alternative A3 (*Preferred Alternative*)	Neutral	Neutral
Alternative B1	Minor Adverse	Minor Adverse to Neutral
Alternative B2 (*Preferred Alternative*)	Minor Beneficial	Neutral
Alternative B3 (*Preferred Alternative*)	Minor Beneficial	Minor Adverse to Neutral

4.4 CUMULATIVE IMPACTS

A cumulative impact is an impact on the environment that results from the incremental impact of the preferred alternatives when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Cumulative impacts may also include the effects of natural processes and events, depending on the specific resource in question. Cumulative impacts include the total of all impacts to a particular resource that have occurred, are occurring, and would likely occur as a result of any action or influence, including the direct and reasonably foreseeable indirect impacts of a federal activity. The goal of this section is to describe the cumulative ecological, economic, and social impacts of past, present, and reasonably foreseeable future actions on HMS fishermen and the environment, with regard to the management measures presented in this document.

Overall, the preferred alternatives in this EA would have neutral to minor beneficial cumulative ecological impacts for mobulid rays. Alternatives A3 would prohibit the retention of mobulid rays in HMS fisheries, however this alternative would likely have neutral ecological impacts since mobulid rays are not currently targeted or retained. Alternatives B2 and B3 would implement handling and release practices that are anticipated to decrease the post-release mortality of mobulid rays.

Overall, the preferred alternatives in this EA would have neutral to minor adverse cumulative social and economic impacts for HMS fishermen because the requirements under Alternatives A3, B2, and B3 would not represent a change from current fishing practices. The one exception

is that fishermen may need a short-term adjustment period (with short-term minor adverse and long-term neutral social and economic impacts) under Alternative B3 to adapt to changes in handling practices.

The status quo, or No Action, alternatives (A1 and B1), would have neutral to adverse cumulative ecological impacts. Currently, mobulid rays are neither retained nor targeted in HMS fisheries so Alternative A1 is not expected to have any effect on the current level of fishing, catch rates, or distribution of fishing effort in HMS fisheries, or any effect on the rate of interactions of HMS fisheries with mobulid rays. The exception would be if HMS fishermen were to decide at some point in the future to retain mobulid rays, resulting in adverse ecological impacts in the long term. In addition, not implementing handling and release requirements under Alternative B1 could result in minor adverse ecological impacts due to improper handling and release of mobulid rays.

Additionally, the status quo, or No Action, alternatives would have minor adverse to minor beneficial cumulative social and economic impacts. There are potential costs to not implementing binding ICCAT recommendations, which could result in minor adverse social and economic impacts. Overall however, HMS fisheries would continue to operate under current conditions, resulting in neutral social and economic impacts. The one exception would be minor beneficial social and economic impacts if HMS fishermen were to decide to retain and sell mobulid rays in the long term.

The other alternative considered (A2) would have neutral to adverse ecological impacts for mobulid rays as described in Section 4.1.1, and neutral to minor beneficial social and economic impacts on HMS fishermen as described in Section 4.1.2.

In May 2024, NMFS announced the availability of a scoping document (89 FR 36763, May 3, 2024) to consider potential changes to the gear regulations in HMS. While management measures implemented since 1999 have helped achieve fishery management and conservation goals, the combination of over two decades of gear-specific measures may have had unanticipated consequences. Changes in species distribution, fishing gears, fishing techniques, market conditions, and fishing interests warrant a reexamination of some gear-specific management measures to see if they are still meeting applicable goals. A future rulemaking implementing any HMS fishing gear modifications may affect how mobulid rays interact with HMS fisheries.

NMFS is not aware of any other reasonably foreseeable future actions that would affect the rates of interactions of HMS fisheries with mobulid rays.

5 Mitigation and Unavoidable Adverse Impacts

Mitigation is an important mechanism that federal agencies can use to minimize, prevent, or eliminate damage to the human and natural environments associated with their actions. Mitigation efforts may include one or more of the following: avoiding the impact by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time through preservation and maintenance operations during the life of the action; and compensating for the impact by replacing or providing substitute resources or environments. The mitigation measures discussed in an EA should cover the range of impacts of the proposal and consider impacts that by themselves would not be considered "significant." NMFS may consider mitigation, provided that the mitigation efforts do not circumvent the goals and objectives of the rulemaking or the mandate to rebuild fisheries under the Magnuson-Stevens Act.

5.1 UNAVOIDABLE ADVERSE IMPACTS

In general, there are no unavoidable adverse ecological impacts expected as a result of the preferred alternatives. NMFS does not expect a change in current fishing practices, including fishing behavior or gear type, or an increase in fishing effort due to prohibiting retention of mobulid rays or implementing handling and release practices for mobulid rays. Thus, the preferred alternatives would not be expected to change previously analyzed endangered species or marine mammal interaction rates or magnitudes, or substantially alter current fishing practices or bycatch mortality rates.

5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

No irreversible or irretrievable commitments of resources are expected as a result of the proposed action.

6 Regulatory Impact Review

NMFS conducts a Regulatory Impact Review for all regulatory actions that are of public interest in order to comply with E.O. 12866. The Regulatory Impact Review provides, for each alternative, an analysis of the economic benefits and costs to the applicable fishery(ies) and the nation as a whole. The information contained in Chapter 6, taken together with the data and analyses incorporated by reference, comprise the complete Regulatory Impact Review for this proposed action.

The requirements for all regulatory actions specified in E.O.12866 are summarized in the following statement from the order:

> *In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits should be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nonetheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.*

E.O. 12866 further requires the Office of Management and Budget to review proposed regulations that are considered to be "significant." A significant regulatory action is one that is likely to:

- Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments of communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

6.1 DESCRIPTION OF MANAGEMENT OBJECTIVES

Please see Chapter 1 for a description of the objectives of this rulemaking.

6.2 DESCRIPTION OF FISHERY

Please see Chapter 3 for a description of the fisheries that could be affected by these management actions.

6.3 STATEMENT OF PROBLEM

Please see Chapter 1 for a description of the problem and need for this rulemaking.

6.4 DESCRIPTION OF EACH ALTERNATIVE

Please see Chapter 2 for a summary of each alternative and Chapter 4 for a complete description of each alternative and its expected ecological, social, and economic impacts.

6.5 ECONOMIC ANALYSIS OF EXPECTED EFFECTS OF EACH ALTERNATIVE RELATIVE TO THE BASELINE

Table 6.1 below summarizes the net economic benefits and costs of each of the alternatives analyzed in this EA. Additional details and more complete analyses are provided in Chapter 4.

6.6 CONCLUSION

As noted above, under E.O. 12866, a regulation is a "significant regulatory action" if it is likely to: (1) have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order. Pursuant to the procedures established to implement section 6 of E.O. 12866, the Office of Management and Budget has determined that this action is not significant. A summary of the expected net economic benefits and costs of each alternative, which are based on supporting text in Chapter 4, can be found in Table 6.1 below.

Table 6.1 Summary of expected net economic benefits and costs of analyzed alternatives.

Alternative	Net Economic Benefits	Net Economic Costs
Alternative A1: No Action	This alternative may have neutral economic benefits since fishing rates and effort are not expected to change and mobulid rays are not currently retained or targeted. However, this alternative may have minor economic benefits in the future if HMS fishermen were to choose to retain and sell mobulid rays.	This alternative may have neutral economic costs since fishing rates and effort are not expected to change and mobulid rays are not currently retained. However, there are potential costs to not implementing binding ICCAT recommendations, including potentially being identified for noncompliance by the ICCAT Compliance Committee. Noncompliance could also negatively affect public perception of HMS fisheries and influence decisions by consumers.
Alternative A2: Prohibit retention of mobulid rays in fisheries for tunas and tuna-like species.	This alternative may have neutral economic benefits since fishing rates and effort are not expected to change and mobulid rays are not currently retained or targeted. However, this alternative may have minor economic benefits in the future if HMS fishermen were to choose to retain and sell mobulid rays caught in fisheries for sharks.	This alternative may have neutral economic costs since fishing rates and effort are not expected to change and mobulid rays are not currently retained.
Alternative A3: Prohibit retention of mobulid rays in all HMS fisheries. – *Preferred Alternative*	This alternative may have neutral economic benefits since fishing rates and effort are not expected to change and mobulid rays are not currently retained or targeted.	This alternative may have neutral economic costs since fishing rates and effort are not expected to change and mobulid rays are not currently retained.
Alternative B1: No Action	This alternative may have neutral economic benefits since fishing rates and effort are not expected to change.	This alternative may have neutral economic costs since fishing rates and effort are not expected to change. However, there are potential costs to not implementing binding ICCAT recommendations, including potentially being identified for noncompliance by the ICCAT Compliance Committee. Noncompliance could also negatively affect public perception of HMS fisheries and influence decisions by consumers.
Alternative B2: Require mobulid rays to be released unharmed in all HMS fisheries. - *Preferred Alternative*	This alternative may have neutral economic benefits since fishing rates and effort are not expected to change.	This alternative may have neutral economic costs since fishing rates and effort are not expected to change.
Alternative B3: Implement handling practices for pelagic longline gear. - *Preferred Alternative*	This alternative may have neutral economic benefits since fishing rates and effort are not expected to change.	This alternative may have minor economic costs due to a short-term adjustment period for fishermen to adopt changes to handling practices. In the long term, economic costs may be neutral.

7 Initial Regulatory Flexibility Act

This IRFA is conducted to comply with the RFA (5 U.S.C. 601 *et seq*.). The goal of the RFA is to minimize the economic burden of federal regulations on small entities. To that end, the RFA directs federal agencies to assess whether a proposed regulation is likely to result in significant economic impacts to a substantial number of small entities, and identify and analyze any significant alternatives to the proposed rule that accomplish the objectives of applicable statutes and minimize any significant effects on small entities. Certain data and analysis required in an IRFA are also included in other chapters of this document. Therefore, this IRFA incorporates by reference the economic analyses and impacts in Chapter 4 of this document.

7.1 DESCRIPTION OF THE REASONS WHY ACTION IS BEING CONSIDERED

Per section 603(b)(1) of the RFA, the purpose of this proposed rulemaking is to protect mobulid rays and minimize their bycatch and bycatch mortality to the extent practicable in HMS fisheries consistent with ICCAT Recommendation 24-12, as well as National Standard 9 of the Magnuson-Stevens Act. Please see Chapter 1 for a full description of the reasons why this action is being considered.

7.2 STATEMENT OF THE OBJECTIVES OF, AND LEGAL BASIS FOR, THE PROPOSED RULE

Section 603(b)(2) of the RFA requires agencies to state the objective of, and legal basis for the proposed action. Please see Chapter 1 for a full description of the objectives of, and legal basis for this action.

7.3 DESCRIPTION AND ESTIMATE OF THE NUMBER OF SMALL ENTITIES TO WHICH THE PROPOSED RULE WILL APPLY

Section 603(b)(3) of the RFA requires agencies to provide an estimate of the number of small entities to which the rule would apply. The Small Business Administration (SBA) has established size criteria for all major industry sectors in the United States, including fish harvesters. Provision is made under SBA's regulations for an agency to develop its own industry-specific size standards after consultation with Advocacy and an opportunity for public comment (see 13 CFR 121.903(c)). Under this provision, NMFS may establish size standards that differ from those established by the SBA Office of Size Standards, but only for use by NMFS and only for the purpose of conducting an analysis of economic effects in fulfillment of the agency's obligations under the RFA. To utilize this provision, NMFS must publish such size standards in the Federal Register, which NMFS did on December 29, 2015 (80 FR 81194). In that final rule, effective on July 1, 2016, NMFS established a small business size standard of $11 million in annual gross receipts for all businesses in the commercial fishing industry (North American Industry Classification System (NAICS) code 11411) for RFA compliance purposes. NMFS considers all HMS permit holders to be small entities because they had average annual receipts of less than $11 million for commercial fishing. SBA has established size standards for all other major industry sectors in the United States, including the scenic and sightseeing transportation (water) sector (NAICS code 487210, for-hire), which includes charter/party boat entities. SBA

has defined a small charter/party boat entity as one with average annual receipts (revenue) of less than $14 million.

As discussed in Chapter 3, the proposed rule would apply to the permit holders of 164 Swordfish Directed, 63 Swordfish Incidental, 68 Swordfish Handgear, 188 Shark Directed, 221 Shark Incidental, and 223 Atlantic Tunas Longline category limited access permits. The proposed rule would also apply to the permit holders of 4,324 HMS Charter/Headboat permits (with 3,085 shark endorsements and 2,014 commercial sale endorsements), 3,471 Atlantic Tunas General category and Swordfish General Commercial permits (with 1,709 shark endorsements), 37 Atlantic Tunas Harpoon category permits, 66 Commercial Caribbean Small Boat permits, and 188 Smoothhound Shark permits. This proposed rule would also affect HMS Angling permit holders, but those permit holders are considered individuals and not small entities under RFA. NMFS considers all HMS permit holders, both commercial and for-hire, to be small entities because they have average annual receipts of less than their respective sector's standard of $11 million and $14 million. NMFS has determined that the proposed rule would not likely affect any small governmental jurisdictions. More information regarding the description of the fisheries affected, and the categories and number of permit holders can be found in the HMS SAFE Report.

7.4 DESCRIPTION OF THE PROJECTED REPORTING, RECORDKEEPING, AND OTHER COMPLIANCE REQUIREMENTS OF THE PROPOSED RULE, INCLUDING AN ESTIMATE OF THE CLASSES OF SMALL ENTITIES WHICH WILL BE SUBJECT TO THE REQUIREMENTS OF THE REPORT OR RECORD

Section 603(b)(4) of the RFA requires agencies to describe any new reporting, record-keeping and other compliance requirements. The action does not contain any new collection of information, reporting, or record-keeping requirements.

7.5 IDENTIFICATION OF ALL RELEVANT FEDERAL RULES WHICH MAY DUPLICATE, OVERLAP, OR CONFLICT WITH THE PROPOSED RULE

Under section 603(b)(5) of the RFA, agencies must identify, to the extent practicable, relevant federal rules which duplicate, overlap, or conflict with the proposed action. Fishermen, dealers, and managers in these fisheries must comply with a number of international agreements, domestic laws, and other fishery management measures. These include, but are not limited to, the Magnuson-Stevens Act, ATCA, the High Seas Fishing Compliance Act, MMPA, ESA, NEPA, the Paperwork Reduction Act, and the CZMA. This proposed action has been determined not to duplicate, overlap, or conflict with any federal rules.

7.6 DESCRIPTION OF ANY SIGNIFICANT ALTERNATIVES TO THE PROPOSED RULE THAT ACCOMPLISH THE STATED OBJECTIVES OF APPLICABLE STATUTES AND THAT MINIMIZE ANY SIGNIFICANT ECONOMIC IMPACT OF THE PROPOSED RULE ON SMALL ENTITIES

One of the requirements of an IRFA is to describe any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities. The analysis shall discuss

significant alternatives such as: 1) establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; 2) clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; 3) use of performance rather than design standards; and 4) exemptions from coverage of the rule, or any part thereof, for small entities. These categories of alternatives are described at 5 U.S.C. 603(c)(1)-(4). NMFS examined each of these categories of alternatives. Regarding the first, second, and fourth categories, NMFS cannot establish differing compliance or reporting requirements for small entities or exempt small entities from coverage of the rule or parts of it because all of the businesses impacted by this rule are considered small entities and thus the requirements are already designed for small entities. NMFS does not know of any performance or design standards that would satisfy the aforementioned objectives of this rulemaking while, concurrently, complying with ATCA and the Magnuson-Stevens Act. As described below, NMFS analyzed several different alternatives in this proposed rulemaking, and provides rationales for identifying the preferred alternatives to achieve the desired objectives. The alternatives considered and analyzed are described below. The IRFA assumes that each vessel will have similar catch and gross revenues to show the relative impact of the proposed action on vessels.

7.6.1 ALTERNATIVES ON RETENTION OF MOBULID RAYS

Under Alternative A1, the No Action alternative, the HMS regulations at 50 CFR part 635 would continue not to address retention of mobulid rays. In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. NMFS does not have records of sales of mobulid rays from HMS fisheries. This would likely indicate neutral economic impacts on small entities participating in HMS fisheries. However, there are potential costs to not implementing binding ICCAT recommendations, including potentially being identified for noncompliance by the ICCAT Compliance Committee and thereby influencing decisions by consumers due to negative public perception, which could result in minor adverse economic impacts. By contrast in the future, if small entities permitted in HMS fisheries decide to retain and sell mobulid rays under Alternative A1, that decision could result in revenue that has minor beneficial economic impacts. The impact is likely to be minor since there is a very limited market in the United States. The same potential costs to noncompliance with binding ICCAT recommendations could exist.

Under Alternative A2, NMFS would prohibit retention of mobulid rays in fisheries for tunas and tuna-like species (i.e., swordfish and billfish), which are considered to be ICCAT fisheries. Retention of mobulid rays in fisheries for sharks would not be addressed under this alternative. In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. NMFS does not have records of sales of mobulid rays from HMS fisheries. Therefore, Alternative A2 would likely result in neutral economic impacts on small entities participating in HMS fisheries. However, if small entities permitted to fish for sharks with bottom longline or gillnet decide to retain and sell mobulid rays in the future under Alternative A2, that revenue could result in long-term minor beneficial social and economic impacts, but to a lesser degree than potential revenue in all HMS fisheries under Alternative A1. The impact is likely to be minor since there is a very limited market in the United States.

Under preferred Alternative A3, NMFS would prohibit retention of mobulid rays in all HMS fisheries. In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. NMFS does not have records of sales of mobulid rays from HMS fisheries. Therefore, Alternative A3 would likely result in neutral economic impacts on small entities participating in HMS fisheries.

7.6.2 ALTERNATIVES ON HANDLING AND RELEASE PRACTICES FOR MOBULID RAYS

Under Alternative B1, the No Action alternative, the HMS regulations at 50 CFR part 635 would continue not to address handling practices or release of mobulid rays. Current giant manta ray handling and release procedures under the ESA would remain in place. Alternative B1 would not require any changes to current mobulid rays handling and release practices and, therefore, would likely result in neutral economic impacts on small entities participating in HMS fisheries. However, there are potential costs to not implementing binding ICCAT recommendations, including potentially being identified for noncompliance by the ICCAT Compliance Committee and thereby influencing decisions by consumers due to negative public perception, which could result in minor adverse economic impacts.

Under preferred Alternative B2, vessels issued any HMS permit would be required to release unharmed, to the extent practicable, mobulid rays as soon as they are seen on the hook or at the vessel (with additional requirements for pelagic longline vessels as described under Alternative B3). In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. NMFS does not have records of sales of mobulid rays from HMS fisheries. Therefore, Alternative B2 would likely result in neutral economic impacts on small entities participating in HMS fisheries.

Under preferred Alternative B3, NMFS would implement handling practices for mobulid rays caught on pelagic longline gear, including requirements to limit trailing line to three feet, to leave mobulid rays in the water, to use a dehooking device, and to not gaff mobulid rays. Currently, pelagic longline fishermen are required to use a dehooking device if a protected species (e.g., sea turtle or marine mammal) is caught, as well as for sharks that will not be retained, but they are not currently required to use a dehooker to release all mobulid rays. While this fishery infrequently interacts with mobulid rays, it is common practice in the pelagic longline fishery to release mobulid rays by cutting the gangion. However, they usually do not cut the gangions so only three feet remains. They are, nevertheless, already required to leave only three feet of trailing line when cutting off a shark that will not be retained. Therefore, Alternative B3 would likely result in short-term minor adverse economic impacts to small entities as fishermen adjust to this new practice. Although this may be an initial issue, NMFS expects that these inefficiencies would be minimal and that fishermen would become adept in using these practices to release mobulid rays over time given they are adept at using similar practices to release sharks and protected species. Thus, Alternative B3 would be expected to have neutral long-term economic impacts.

8 Applicable Laws

While this document comprehensively analyzes the alternatives considered for all the requirements under applicable laws and executive orders, this chapter provides summaries of how this action complies with various requirements that were not discussed in earlier chapters. These include parts of the Magnuson-Stevens Act and the CZMA.

8.1 THE MAGNUSON-STEVENS ACT: THE NATIONAL STANDARDS

Section 301(a) of the Magnuson-Stevens Act notes that any fishery management plan prepared and any regulation promulgated to implement any such plan needs to be consistent with 10 National Standards (NSs) (see 16 U.S.C. 1851(a)). As described below, the analyses in this document are consistent with those NSs and the NS Guidelines (see 50 CFR Part 600, Subpart D for National Standard Guidelines), subject to further consideration after public comment.

NS1 requires NMFS to prevent overfishing while achieving, on a continuing basis, optimum yield from each fishery for the U.S. fishing industry. The preferred alternatives in this document are consistent with NS1. As summarized in other chapters, mobulid rays are not targeted or retained in HMS fisheries and NMFS does not manage a fishery for mobulid rays. The preferred alternatives in this action are not expected to change the level of fishing pressure, catch rates, or distribution of fishing effort for HMS. Management of HMS fisheries under the HMS FMP and its amendments continues to be consistent with NS1.

NS2 requires that conservation and management measures be based on the best scientific information available. The preferred alternatives in this document are consistent with NS2. The preferred alternatives consider the most recent information published on giant manta rays and other mobulid rays by the ICCAT SCRS and by NMFS under the ESA, including NMFS observer data. The preferred alternatives also drew on information in ICCAT Recommendation 24-12. Taken together, this information constitutes the best scientific information available and serves as the basis for the preferred alternatives.

NS3 requires that, to the extent practicable, an individual stock of fish be managed as a unit throughout its range and interrelated stocks of fish be managed as a unit or in close coordination. The preferred alternatives in this document are consistent with NS3. The preferred alternatives apply to HMS fisheries throughout their management unit within the U.S. EEZ and in state waters as a condition of federal HMS fishing permits, unless the state has more restrictive measures. The preferred alternatives are designed to comply with ICCAT Recommendation 24-12, which coordinates management measures for fisheries across the entire ICCAT Convention area in relation to their interaction with mobulid rays.

NS4 requires that conservation and management measures do not discriminate between residents of different states. Furthermore, if it becomes necessary to allocate or assign fishing privileges among various U.S. fishermen, such allocation should be fair and equitable to all fishermen; be reasonably calculated to promote conservation; and should be carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges. The preferred alternatives in this document are consistent with NS4. The preferred

alternative applies across the entire U.S. EEZ and state waters for HMS. Thus, the conservation and management measures do not discriminate between residents of different states, consistent with NS4. The preferred alternatives do not allocate or assign fishing privileges among various fishermen.

NS5 requires that conservation and management measures should, where practicable, consider efficiency in the utilization of fishery resources, with the exception that no such measure shall have economic allocation as its sole purpose. The preferred alternatives in this document are consistent with NS5. The preferred alternatives were analyzed for changes in the efficiency of utilization of the fishery resource. The purpose of this action is to protect mobulid rays and minimize bycatch mortality in HMS fisheries. Mobulid rays are not targeted, retained, or sold in HMS fisheries. As demonstrated in the EA, none of the preferred alternatives focus solely on economic allocation, and are expected to have economic impacts that range from minor adverse to neutral.

NS6 states that conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches. The preferred alternatives in this document are consistent with NS6. The preferred alternatives would implement measures for mobulid rays throughout their range within the U.S. EEZ.

NS7 states that conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication. The preferred alternatives in this document are consistent with NS7. The economic impacts section of the EA provides detailed analyses of the costs associated with each alternative, and the preferred alternatives are expected to have minor or no costs. The preferred alternatives were also structured to avoid unnecessary duplication by taking into account existing requirements on the relevant fisheries.

NS8 states that conservation and management measures shall, consistent with the conservation requirements of the Magnuson-Stevens Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to provide for the sustained participation of such communities, and to the extent practicable, minimize adverse economic impacts on such communities. The preferred alternatives in this document are consistent with NS8. The social and economic impacts of the preferred alternatives on fishing communities are expected to be neutral, with potential minor adverse impacts in the short term (as described in Chapters 4, 6, and 7).

NS9 states that conservation and management measures shall, to the extent practicable, minimize bycatch, and to the extent that bycatch cannot be avoided, minimize the mortality of such bycatch. The preferred alternatives in this document are consistent with NS9. The purpose of this action is to protect mobulid rays and minimize bycatch mortality in HMS fisheries, by prohibiting retention of mobulid rays and implementing handling and release practices. In HMS fisheries, mobulid rays are bycatch and are not targeted or retained. While handling and release procedures for giant manta ray were developed in recognition of the ESA listing and distributed to HMS fishermen per the Terms and Conditions of the 2020 Biological Opinions for HMS fisheries, the preferred alternatives would expand handling and release requirements to all

mobulid rays and would codify those requirements in the HMS regulations. The preferred alternatives would further implement measures adopted internationally to protect mobulid rays under ICCAT Recommendation 24-12. Additionally, the preferred alternatives are not expected to cause significant changes in fishing effort, areas, or gears, and thus are not expected to lead to significant increases in potential bycatch or increased interactions with non-target, or incidentally caught species, including giant manta rays and other protected species.

NS10 states that conservation and management measures shall, to the extent practicable, promote the safety of human life at sea. The preferred alternatives in the document are consistent with NS10. No impact to safety of life at sea is anticipated to result from these preferred alternatives. The preferred alternatives would not result in fishermen having to travel greater distances, fish in bad weather, or otherwise fish in an unsafe manner. Fishing effort is unlikely to change as a result of the preferred alternatives.

8.2 THE MAGNUSON-STEVENS ACT: ESSENTIAL FISH HABITAT

Pursuant to section 305(b)(1) of the Magnuson-Stevens Act (see 16 U.S.C. 1855(b)(1)), and as implemented at 50 CFR 600.815, NMFS is required to identify and describe EFH for each life stage of managed species and to evaluate the potential adverse effects of fishing activities on EFH, including the cumulative effects of multiple fisheries activities. If NMFS determines that fishing gears are having an adverse effect on HMS EFH, or other species' EFH, then NMFS must include management measures that minimize adverse effects to the extent practicable.

In the HMS FMP and Amendment 1, NMFS reviewed the various HMS gear types with the potential to affect EFH. Based on the best information available at that time, NMFS determined that there was no evidence that physical effects caused by any authorized HMS gears were affecting EFH for targeted or non-targeted species, to the extent that physical effects can be identified on the habitat or the fisheries. In 2015, NMFS completed an HMS EFH 5-year review to investigate additional effects of HMS fishing gears on HMS EFH since Amendment 1. NMFS did not find any significant changes in effects to HMS EFH from HMS and non-HMS fishing gear types and no new information that any authorized HMS gear would have adverse effects on EFH. Based on findings from the 2015 HMS EFH 5-year review, updates were made to HMS EFH in Amendment 10. NMFS conducted a literature review as part of Draft Amendment 10 (81 FR 62100, September 8, 2016). Final Amendment 10 was published on September 7, 2017 (82 FR 42329). The preferred alternatives in this action are not expected to change the fishing gear types authorized relative to the status quo. Therefore, the preferred alternatives in the context of the fishery as a whole would not have an adverse effect on EFH and an EFH consultation is not required.

NMFS recently completed an HMS EFH 5-year review to gather all new information and determine whether modifications to existing EFH descriptions and designations are warranted. The Final HMS EFH 5-Year Review published on April 18, 2024 (89 FR 27716). Based on the Final HMS EFH 5-Year Review, NMFS determined that EFH modifications are warranted, which will be completed through Amendment 17 to the HMS FMP.

8.3 COASTAL ZONE MANAGEMENT ACT

The CZMA (1972; reauthorized in 1996) requires that federal actions be consistent, to the extent practicable, with the enforceable policies of all state coastal zone management programs. NMFS finds the alternatives analyzed in this action to be consistent to the maximum extent practicable with the enforceable policies of states that have approved coastal zone management programs. NMFS is seeking concurrence with respect to the preferred alternatives and will ask for states' agreement with this determination during the proposed rule stage.

8.4 PROTECTED RESOURCES

The preferred alternatives considered in this action (A3, B2, and B3) are likely to have neutral effects on protected resources other than giant manta ray, including sea turtles, sharks listed under the ESA, or marine mammals protected by the MMPA. Preferred Alternative A3 on prohibiting retention of mobulid rays in HMS fisheries is likely to have neutral effects on giant manta rays, as giant manta rays and other mobulid rays are not currently retained in HMS fisheries. Preferred Alternatives B2 and B3 on implementing handling and release practices for mobulid rays are likely to have beneficial effects on giant manta rays and other mobulid rays, as described in Chapter 4. Gears authorized for use in the commercial and recreational HMS fisheries include bottom longline, pelagic longline, rod and reel, handline, harpoon, bandit gear, and gillnet. NMFS does not expect an increase in effort or gear modifications that would increase interactions with protected resources such as giant manta rays, sea turtles, sharks listed under the ESA, or marine mammals protected by the MMPA. If an individual of one of these species were to be captured or hooked, it would be quickly removed and released since each of these gears is actively tended. Because these gears would continue to be actively tended, each of the alternatives would have neutral direct and indirect impacts in the short and long term on protected resources other than giant manta ray.

The No Action alternatives considered (A1 and B1) would not implement any new management measures. As a result, no reduction of fishing pressure or related mortality for these species, and no reduction of pressure on other protected resources would be expected from the status quo. Similar to preferred Alternative A3, the other alternative considered, Alternative A2, is likely to have neutral effects on giant manta rays, as giant manta rays and other mobulid rays are not currently retained in these fisheries. No modifications with respect to authorized fishing gear would be made under Alternative A2, and therefore no changes in impacts to protected resources from the status quo would be expected. Under the other alternatives considered, incidentally caught individuals would be quickly removed and released since each of the authorized gears is actively tended. Because these gears would continue to be actively tended, the non-preferred alternatives would be expected to have neutral direct and indirect impacts in the short- and long-term on protected resources.

In May 2020, NMFS issued Biological Opinions for the HMS pelagic longline and non-pelagic longline fisheries (NMFS 2020a, 2020b). These Biological Opinions stated that the continued operation of HMS fisheries is not likely to jeopardize the continued existence of sea turtles, sawfish, Atlantic sturgeon, scalloped hammerhead sharks (Central and Southwest Atlantic

Distinct Population Segment), oceanic whitetip sharks, and giant manta ray. This action is not anticipated to affect the above-referenced ESA-listed species in any way not previously analyzed for existing regulations, including the provision for exempted fishing activities, and there is no new information that would alter this conclusion.

In July 2022, the HMS Management Division requested reinitiation of formal Section 7 consultation on the HMS pelagic longline fishery due to new information indicating that estimated mortalities of giant manta ray may have exceeded the Incidental Take Statement levels. During the consultation, NMFS continues the operation of the HMS fisheries under the 2020 Biological Opinions, including continued implementation of the reasonable and prudent measures (RPMs) and terms and conditions to minimize the amount or extent of incidental take until the issuance of an amendment to the 2020 Biological Opinion, or a new Biological Opinion, thus completing the reinitiated formal consultation. Consistent with Section 7(d) of the ESA, there will be no irreversible or irretrievable commitment of resources with respect to the agency action that would have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternatives which would avoid violating section 7(a)(2) of the ESA.

9 List of Agencies and Persons Consulted

The development of this rulemaking involved input from many people including NMFS staff, NMFS contractors, the public, constituent groups, and the HMS Advisory Panel. Staff and contractors from the HMS Management Division, in alphabetical order, who worked on this document include:

- Randy Blankinship, Division Chief
- Karyl Brewster-Geisz, Branch Chief
- Peter Cooper, Branch Chief
- Tobey Curtis, Fishery Management Specialist
- Brad McHale, Branch Chief
- Sarah McLaughlin, Management and Program Analyst
- Anna Quintrell, Fishery Management Specialist
- George Silva, Economist
- Carrie Soltanoff, Fishery Management Specialist

The development of this document also involved considerable input from other staff members and Offices throughout NOAA including, but not limited to the Office of the General Counsel, Southeast Fisheries Science Center, Southeast Regional Office, and Northeast Fisheries Science Center.

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