Environmental Assessment for a Proposed Rule to Implement Decisions of the Western and Central Pacific Fisheries Commission:

Transshipping, Bunkering, Reporting, and Purse Seine Discard Requirements

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LIST OF ABBREVIATIONS AND ACRONYMS

Abbreviations and acronyms

CCM	Commission Members, Cooperating Non-Members, and Participating Territories
CEQ	Council on Environmental Quality
CMM	Conservation and Management Measure
Convention	Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean
Convention Area	Area of Application of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean
EA	Environmental Assessment
Eastern SMA	Eastern High Seas Special Management Area
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
ENSO	El Niño – Southern Oscillation
ESA	Endangered Species Act
FAD	Fish Aggregating Device
FEP	Fishery Ecosystem Plan
FFA	Forum Fisheries Agency
FMP	Fishery Management Plan
HAPC	Habitat Areas of Particular Concern
HMS	Highly Migratory Species
IRCS	International Radio Call Sign
IATTC	Inter-American Tropical Tuna Commission
Interim Register	Interim Register of non-Member Carrier and Bunker Vessels
IUU	Illegal, unreported, and unregulated
MMPA	Marine Mammal Protection Act
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MUS	Management Unit Species
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NWR	National Wildlife Refuge
NWSAA	National Wildlife System Administration Act of 1966

PIPs	Pacific Island Countries that are parties to the Treaty
PRIA	Pacific Remote Island Areas
RFMO	Regional Fishery Management Organization
ROP	Regional Observer Programme
SPTA	South Pacific Tuna Act of 1988
SPTT or Treaty	South Pacific Tuna Treaty (formally, the Treaty on Fisheries between the Governments of Certain Pacific Island States and the Government of the United States of America)
USFWS	United States Fish and Wildlife Service
UTC	Coordinated Universal Time
WCPFC	Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, also known as the Western and Central Pacific Fisheries Commission
WCPFCIA	Western and Central Pacific Fisheries Convention Implementation Act
WCPO	Western and Central Pacific Ocean

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CHAPTER 1: INTRODUCTION AND PURPOSE AND NEED

The National Marine Fisheries Service (NMFS) is issuing a proposed rule to implement decisions made by the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC) at its Sixth Regular Session, in Papeete, Tahiti, in December 2009. The decisions that would be implemented through the proposed regulations include: "Conservation and Management Measure on the Regulation of Transhipment" (CMM 2009-06), "WCPFC Record of Fishing Vessels and Authorization to Fish" (CMM 2009-01), and "Conservation and Management Measure on the Application of High Seas [Fish Aggregating Device] FAD Closure and Catch Retention" (CMM 2009-02). The proposed rule would also implement a decision made by the WCPFC at its Seventh Regular Session, in Honolulu, Hawaii, in December 2010: "Conservation and Management Measure for the Eastern High-Seas Pocket Special Management Area" (CMM 2010-02). This Environmental Assessment (EA) analyzes the potential impacts on the human environment that could result from implementation of the rule.

This EA has been prepared pursuant to the provisions of the National Environmental Policy Act (NEPA; 42 USC 4321, *et seq*.) and related authorities, such as the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508) and the National Oceanic and Atmospheric Administration's (NOAA) Environmental Review Procedures for Implementing NEPA (NAO 216-6).

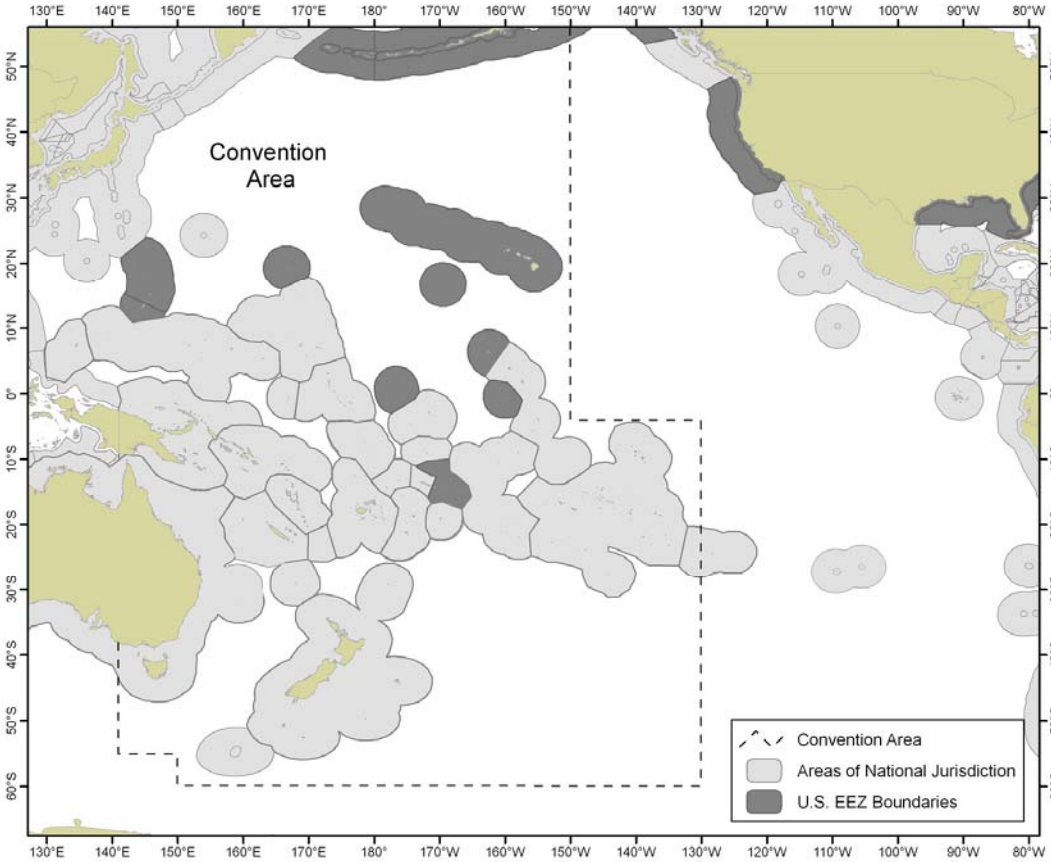
1.1 BACKGROUND

The United States ratified the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (Convention) in 2007.[1] The area of application of the Convention (Convention Area) is shown in Figure 1. The Convention text indicates that the agreement is focused on highly migratory fish species (HMS) and stocks thereof within the Convention Area (see the Convention text for the specific HMS covered).[2] The Convention provides for the conservation and management of target stocks, non-target species, and species belonging to the same ecosystem or dependent upon or associated with the target stocks.

[1] The Convention was opened for signature in Honolulu on September 5, 2000, and entered into force in June 2004; the Convention entered into force for the United States in 2007. The full text of the Convention is available at: http://www.wcpfc.int/key-documents/convention-text.

[2] Though not stated in the Convention text, it has also been agreed that southern bluefin tuna (*Thunnus maccoyii*) that are found in the Convention Area will continue to be solely managed by the Commission for the Conservation of Southern Bluefin tuna.

Figure 1: The Convention Area - high seas (in white); U.S. Exclusive Economic Zone (EEZ) (in dark gray); and foreign jurisdictions ("claimed maritime jurisdictions," in light gray)



Source: NMFS; R. O'Conner.

The WCPFC – among other things – adopts Conservation and Management Measures (CMMs) for Commission Members, Cooperating Non-Members, and Participating Territories (collectively referred to as CCMs) of the WCPFC to implement through their respective national laws and procedures. The Western and Central Pacific Fisheries Convention Implementation Act (WCPFCIA; Pub. L. 109-479, Sec 501, *et seq*., and codified at 16 USC 6901 *et seq*.) authorizes the Secretary of Commerce, in consultation with the Secretary of State and the Secretary of the Department in which the Coast Guard is operating, to develop such regulations as are needed to carry out the obligations of the United States under the Convention. The authority to promulgate regulations to implement the provisions of the Convention and WCPFC decisions, such as regulations to implement CMMs, has been delegated by the Secretary of Commerce to NOAA Fisheries Service, also known as NMFS.

CMM 2009-06[3] is premised on the recognition that unregulated and unreported transshipment of catches of HMS at sea contributes to inaccurate reporting of the catches

[3] This decision as well as other decisions of the WCPFC is available at http://www.wcpfc.int/conservation-and-management-measures.

of such stocks and illegal, unreported, and unregulated (IUU) fishing activities. The CMM, which builds on Article 29 of the Convention, includes specific obligations for WCPFC members to regulate transshipment of HMS in the Convention Area. Among the objectives of the CMM is to establish procedures to obtain and verify data on the quantity and species transshipped in the Convention Area to ensure accurate reporting of catches, so that stock assessments of HMS include improved data. The term transshipment as specified in the Convention means the unloading of all or any of the fish on board a fishing vessel to another fishing vessel either at sea or in port. The CMM applies to transshipments in the Convention Area of all HMS covered by the Convention. The notice and reporting requirements also apply to transshipments of fish taken in the Convention Area and transshipped elsewhere. The CMM does not apply to transshipments of HMS where fish are taken and transshipped wholly in archipelagic waters or territorial seas.

The CMM includes provisions that obligate CCMs to do the following: (1) require operators of vessels that offload or receive transshipments, at sea or in port, to complete a transshipment report, including specific information detailing the transshipment and the products transshipped, and if the transshipment takes place on the high seas or is an emergency transshipment that would otherwise be prohibited, the transshipment report must be submitted to the Executive Director of the WCPFC within 15 days of the transshipment; (2) require that a notice be submitted to the WCPFC containing specific information in the case of an emergency transshipment that would otherwise be prohibited within 12 hours of the completion of the transshipment by means of a device that can both send and receive data (e.g., fax or email); (3) require that a notice be submitted to the WCPFC containing specific information 36 hours prior to each transshipment on the high seas in the Convention Area or of fish caught in the Convention Area and transshipped on the high seas elsewhere by means of a device that can both send and receive data (e.g., fax or email); (4) require that observers be carried on vessels to monitor transshipments; and (5) prohibit vessels from transshipping to or from a vessel flagged to a non-CCM unless that vessel has received authorization, such as being listed on the WCPFC Interim Register of Non-Member Carrier and Bunker Vessels or has been specifically licensed to fish in the EEZ of a CCM in accordance with a decision of the WCPFC.

Under the Convention, CCMs are obligated with limited exceptions to prohibit transshipments at sea involving purse seine vessels in the Convention Area. NMFS has implemented this prohibition (see 50 CFR 300.216(b)). This rulemaking would implement the provision of CMM 2009-06 that requires CCMs to prohibit transshipments at sea involving purse seine vessels of fish caught in the Convention Area but transshipped outside of the Convention Area. The proposed rule would not prohibit purse seine vessels from continuing to transship in port.

CMM 2009-06 contains a provision obligating CCMs to prohibit vessels (other than purse seine vessels) flying their flags from transshipping on the high seas in the Convention Area, subject to certain considerations. NMFS is preparing an advance notice

of proposed rulemaking regarding this provision of CMM 2009-06 to address the transshipment prohibition and any applicable exceptions.

CMM 2009-01 revised CMM 2004-01, and specifically established an "Interim Register of non-Member Carrier and Bunker Vessels" (Interim Register). The CMM includes a specific provision obligating WCPFC Members and Cooperating Non-Members to prohibit their fishing vessels from conducting transshipments and bunkering or other support activities in the Convention Area with another vessel unless that vessel is: (1) flagged to WCPFC Members or Cooperating Non-Members; (2) not flagged to WCPFC Members or Cooperating Non-Members but on the Interim Register; or (3) operated under charter, lease, or similar mechanisms as an integral part of the fishery of a CCM, in accordance with relevant WCPFC provisions. This provision is similar to the provision in CMM 2009-06 obligating CCMs to prohibit vessels from transshipping to or from a vessel flagged to a non-CCM unless that vessel has received authorization from the WCPFC.

The provisions in CMM 2009-02 modify or supplement the provisions in CMM 2008-01, "Conservation and Management Measure for Bigeye and Yellowfin Tuna in the Western and Central Pacific Ocean," for FAD prohibition periods and catch retention requirements for purse seine fishing vessels, including specific requirements for reporting discards of fish. Prior to the adoption of CMM 2009-02, NMFS issued regulations implementing the requirements for the FAD prohibition periods and catch retention specified in CMM 2008-01. Those regulations are set forth at 50 CFR 300.223. NMFS has determined that existing regulations implementing the FAD prohibition periods and catch retention requirements under CMM 2008-01 are consistent with the related provisions of CMM 2009-02. Therefore, no additional steps need to be taken at this time to implement these provisions, except that NMFS proposes to remove the termination date applicable to the existing catch retention provision. In addition, CMM 2009-02 also contains new reporting requirements for discards of fish from purse seine vessels which would be implemented under this rulemaking.

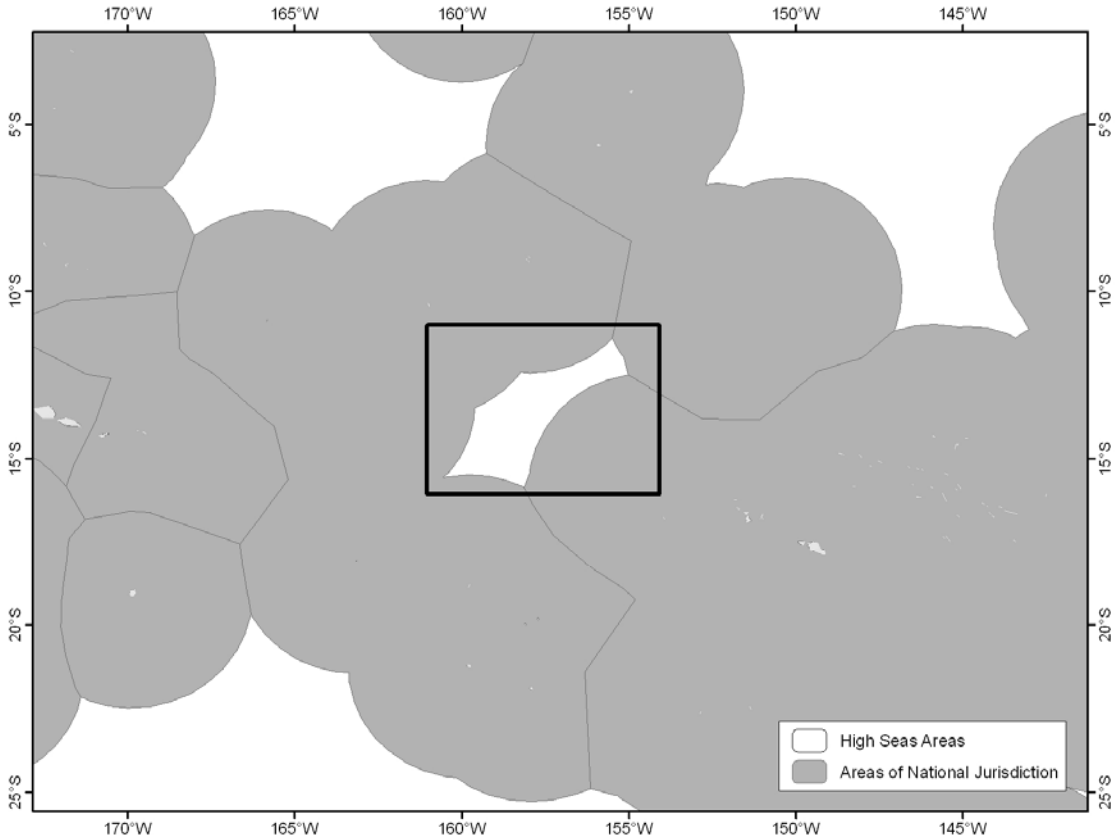
Related to the catch retention and discard reporting requirements, the proposed rule also proposes to implement restrictions regarding "net sharing" (i.e., the transfer of fish that have not yet been loaded on board any fishing vessel from the purse seine net of one vessel to another fishing vessel) for U.S. purse seine vessels fishing in the western and central Pacific Ocean.

The existing regulations at 50 CFR 300.223(d) implementing the catch retention requirements of CMM 2008-01 require U.S. purse seine fishing vessels to retain all catch of bigeye tuna (*Thunnus obesus*), yellowfin tuna (*Thunnus albacares*), and skipjack tuna (*Katsuwonus pelamis*) within the Convention Area unless: (1) the fish are unfit for human consumption; (2) there is insufficient well space to accommodate all the fish captured in a given set, provided that no additional sets are made during the trip; or (3) serious malfunction of equipment occurs. As stated above, existing regulations at 50 CFR 300.216 prohibit purse seine vessels from conducting transshipments at sea in the Convention Area. However, on occasion, a vessel will have insufficient well space to

accommodate all the fish caught in a set. NMFS believes that in such circumstances, it would be appropriate to allow the vessel to transfer the excess fish in the net to another purse seine vessel for the purpose of reducing discards. NMFS' proposal is consistent with CMM 2008-01, which states that "excess fish taken in the last set may be transferred to and retained on board another purse seine vessel provided this is not prohibited under applicable national law." Thus, the rule proposes to exclude net sharing activities from the definition of transshipment (which for purse seine vessels is generally prohibited at sea). However, a purse seine vessel would be prohibited from engaging in net sharing unless the vessel that transfers fish does not make any additional purse seine sets during the remainder of its fishing trip.

CMM 2010-02 seeks to reduce IUU fishing and applies to the area of the high seas bounded by the EEZs of the Cook Islands to the north and west, French Polynesia to the east and Kiribati to the northeast. The measure obligates CCMs to require their vessels to submit reports with specific information, including catch data, at least six hours prior to entry and no later than six hours prior to exiting this area of the high seas. The map in Figure 2 shows the Eastern High Seas Special Management Area (Eastern SMA) as the high seas area within the rectangle.

Figure 2: Eastern SMA, Areas of high seas are indicated in white; areas of claimed national jurisdiction, including territorial seas, archipelagic waters, and exclusive economic zones, are indicated in dark shading. The Eastern SMA is the high seas area (in white) within the rectangle bounded by the bold black lines. This map displays indicative maritime boundaries only.



Source: NMFS; R. O'Conner.

1.2 PURPOSE AND NEED

The purpose of the proposed rule is for NMFS: (1) to implement, with respect to fishing vessels of the United States engaged in commercial fishing, certain applicable provisions of CMM 2009-06 and CMM 2009-01 for the regulation of transshipping and bunkering in the Convention Area in order to support efforts for the accurate reporting of catches and to curb IUU fishing activities; (2) to implement, with respect to U.S. purse seine fishing vessels, the discard reporting requirements specified in CMM 2009-02 and associated restrictions on net sharing activities; and (3) to implement the provisions of CMM 2010-02 to combat IUU fishing in the Eastern SMA. The need for the proposed rule is to satisfy the international obligations of the United States as a Contracting Party to the Convention to implement the conservation and management measures adopted by the Commission, pursuant to the authority of the WCPFCIA.

1.3 ORGANIZATION OF THIS DOCUMENT

The CEQ's regulations at 40 CFR 1502.10 set forth the recommended format for NEPA documents.[4] However, this regulation allows the format of NEPA documents to vary, so long as the required contents or substance of the document are included. Section 5.03b of NAO 216-6 specifies the required contents of an EA.

Chapter 1 of this EA provides background information, as well as the purpose of and need for the proposed rule. Chapter 2 describes the proposed action and the development of alternatives analyzed in this EA. Chapter 3 sets forth the analysis of direct, indirect, and cumulative impacts that could be caused by implementation of the proposed rule under any of the action alternatives, as well as the analysis of the No-Action or baseline alternative, and concludes with a comparison of the alternatives. Appropriate information regarding the affected environment is included throughout Chapter 3. Appendix A includes tables listing the preparers of this EA and the agencies and persons consulted in preparation of this EA.

[4] The regulations specify the recommended format for environmental impact statements, which are generally more detailed than EAs; this format has been used for EAs.

CHAPTER 2: PROPOSED ACTION AND ALTERNATIVES

In an environmental review document, agencies must assess the environmental impacts of a proposed action and the reasonable and feasible alternatives to the proposed action in comparative form. The purpose of this comparison of alternatives is to provide the decisionmaker and the public with a clear basis for choosing among the alternatives.[5] This chapter provides a description of the Proposed Action analyzed in this EA and the alternative means of implementing the Proposed Action. The chapter also includes a description of the No-Action Alternative (i.e., the existing conditions and the conditions that would result if the Proposed Action were not implemented under any of the action alternatives).

2.1 PROPOSED ACTION

The Proposed Action is the promulgation of a proposed rule to implement certain relevant provisions of CMM 2009-06, "Conservation and Management Measure on the Regulation of Transhipment," CMM 2009-01, "WCPFC Record of Fishing Vessels and Authorization to Fish," CMM 2009-02, "Conservation and Management Measure on the Application of High Seas FAD Closures and Catch Retention," and CMM 2010-02, "Conservation and Management Measure for the Eastern High-Seas Pocket Special Management Area. The provisions can be grouped into the following six categories:

1. Transshipment Reporting Requirements (applicable to transshipping in the Convention Area and transshipping anywhere of fish caught in the Convention Area)
2. Prior Notice for High Seas Transshipments and Notice of Emergency Transshipments (applicable to transshipping in the Convention Area and transshipping anywhere of fish caught in the Convention Area)
3. Observer Coverage for Transshipments at Sea (applicable to transshipping in the Convention Area)
4. Categories of Vessels with which Transshipping and Bunkering May Be Conducted (applicable to transshipping and bunkering in the Convention Area)
5. Requirements Regarding Notification of Entry into or Exit from Eastern SMA
6. Requirements Regarding Discards from Purse Seine Fishing Vessels

Below is a description of each of these categories of provisions and alternative means of implementing each provision. Section 2.2 combines the various alternatives for each of the categories of provisions to develop three action alternatives that are analyzed in detail in this EA.

[5] See the CEQ's Regulations for Implementing the Procedural Provisions of NEPA at 40 CFR 1502.14.

2.1.1 CATEGORY 1: TRANSSHIPMENT REPORTING REQUIREMENTS

As discussed in Chapter 1, CMM 2009-06 obligates WCPFC members to require operators of vessels that offload or receive transshipments of HMS to complete a transshipment report, including specific information detailing the transshipment and the products transshipped. The specific information that must be included in the transshipment report, as detailed in Annex I of CMM 2009-06 includes:

1. A unique document identifier
2. The name of the offloading vessel and its WCPFC Identification Number[6]
3. The name of the receiving vessel and its WCPFC Identification Number
4. The fishing gear used to take the fish
5. The quantity of product (tuna and tuna-like species, i.e., target species), including species and its processed state, to be transshipped (processed state means the following: whole, gutted and headed; gutted, headed, and tailed; gutted only, not gilled; gilled and gutted; gilled, gutted, and tailed)
6. The state of the fish (fresh or frozen)
7. The quantity of by-product (non tuna and tuna-like species, i.e., non-target species)
8. The geographic location of the catches of HMS to be transshipped, meaning sufficient information to identify what proportion of the catch was taken in the following areas: high seas, outside the WCPFC Convention Area, or within an EEZ (listed separately)
9. The date and location of the transshipment in decimal latitude and longitude to the nearest 0.1 degrees and accompanied by a description of the location, such as high seas, outside the Convention Area, or within a named EEZ
10. If applicable, the name and signature of the WCPFC observer[7]
11. The quantity of product already on board the receiving vessel and the geographic origin of the product, meaning the quantity of product from each regional fisheries management organization (RFMO) area.

Vessel owners and operators who transship at sea or in port in the Convention Area, or conduct any transshipments of HMS caught in the Convention Area must ensure the completion of this report, unless the fish are caught and transshipped entirely in archipelagic waters or territorial seas. NMFS is preparing a transshipment report form that would include the information requirements specified in Annex I of CMM 2009-06, as well as all existing domestic transshipment reporting requirements (i.e., existing requirements established under fishery ecosystem or management plans prepared under authority of the Magnuson-Stevens Fishery Conservation and Management Act). This

[6] The WCPFC Identification Number is the unique number assigned to a vessel when being included on the WCPFC Record of Fishing Vessels or WCPFC Interim Register.

[7] A WCPFC observer means a person authorized by the WCPFC in accordance with any procedures established by the WCPFC to undertake vessel observer duties as part of the WCPFC's Regional Observer Programme, including an observer deployed as part of a NMFS-administered observer program or as part of another national or sub-regional observer program, provided that such program is authorized by the WCPFC to be part of the WCPFC Regional Observer Programme (50 CFR 300.211).

form would also be used to fulfill the transshipment reporting requirements specified by the Inter-American Tropical Tuna Commission (IATTC) in Resolution C-11-09, "Resolution (Amended) on Establishing a Program for Transhipments by Large-Scale Fishing Vessels," which NMFS plans to implement in a separate rule. This form is intended to replace some, but not all, of the current U.S. transshipment logsheet forms.[8]

According to CMM 2009-06, the transshipment report for high seas transshipments and emergency transshipments[9] must be submitted to the Executive Director of the WCPFC within 15 days of the transshipment. However, CMM 2009-06 does not specify when the information needs to be submitted to the flag State for other transshipments, leaving it to the flag State to determine. Existing domestic longline regulations require submission of transshipment logs to the NMFS Pacific Islands Regional Administrator within 72 hours of landing for vessels subject to the requirements of 50 CFR Part 665 (50 CFR 665.14(c)), submission of transshipment logs to the NMFS Southwest Regional Administrator within 30 days of transshipment for vessels registered for use under a west coast HMS permit (i.e., albacore troll vessels (50 CFR 660.708(a))), and within two days of completion of the transshipment to the NMFS Pacific Islands Regional Administrator for purse seine vessels licensed under the regulations implementing the Treaty on Fisheries between the Governments of Certain Pacific Island States and the Government of the United States of America (SPTT or Treaty) (50 CFR 300.34(c)(2)) (the original form must be submitted to the Forum Fisheries Agency within 14 days of completion of the transshipment). For vessel owners and operators[10] subject to existing requirements, the NMFS would instruct vessel owners and operators to submit the new transshipment report form to the same addresses where the transshipment logs are currently submitted. NMFS has identified a range of alternatives for the timing of the form's submittal, as described below. NMFS would need copies of all of the forms for data collection and management purposes and only some of the forms (those involving high seas or emergency transshipments) need be submitted to the WCPFC. Therefore vessel owners and operators would ensure the submission of the form to NMFS in all instances and NMFS would forward the form to the WCPFC as appropriate. Vessel owners and operators would never have the forms submitted directly to the WCPFC.

One alternative would require the form to be submitted to NMFS at a specified time for emergency transshipments and transshipments that take place on the high seas and at other specified times for transshipments that take place in areas other than the high seas

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[8] The Purse Seine Transshipment and Other Unloading Logsheet required to be submitted under the regulations implementing the Treaty on Fisheries between the Governments of certain Pacific Islands States and the Government of the United States of America (SPTT or Treaty) is part of the Treaty itself. So long as the existing Treaty remains in force, U.S. purse seine owners and operators would need to complete and submit the Purse Seine Transshipment and Other Unloading Logsheet as well as the new transshipment report form. Affected vessel owners and operators subject to the reporting requirements at 50 CFR 660.708(a) would also need to complete both the new transshipment report form and the existing catch report form that includes several pieces of information for transshipments.

[9] CMM 2009-06 allows for emergency transshipments that would otherwise be prohibited if there is a force majeure or serious mechanical breakdown that threatens the health or safety of the crew or threatens to cause a significant financial loss through fish spoilage.

[10] The terms "owner" and "operator" are defined at 50 CFR 300.2.

and that are not emergencies. This would allow the proposed rule to incorporate the provision of CMM 2009-06 requiring that the information in the transshipment report be submitted to the WCPFC's Executive Director within 15 days of emergency transshipments and transshipments that take place on the high seas, and to more closely match existing requirements for non-emergency transshipments that take place in other areas. Thus, the alternative considered here would require the form to be submitted to NMFS 10 calendar days after completion of emergency transshipments or transshipments on the high seas. This would allow NMFS time to process and submit the forms to the WCPFC within the 15-day due date. For other transshipments (i.e., those for which the transshipment reports do not need to be submitted to the WCPFC), the timeframes would be as follows: for purse seine vessels licensed under the regulations implementing the Treaty, the original forms would need to be submitted to NMFS consistent with the existing due date for submission of the original transshipment logsheet as specified at 50 CFR 300.34 (currently, within 14 days of completion of the transshipment); for albacore troll vessels, registered for use under 50 CFR 660.707, the form would need to be submitted to NMFS as specified at 50 CFR 660.708 (currently, within 30 days of completion of the transshipment); for longline vessels subject to the transshipment reporting requirements in 50 CFR Part 665, the form would need to be submitted as specified in those regulations (currently, within 72 hours of landing); for all other transshipments at sea, this alternative would require the form to be submitted within 72 hours of first entering into port; and for all other transshipment in port, this alternative would require the form to be submitted within 72 hours of completion of the transshipment.

A second alternative would institute a uniform timeframe for the submission of all forms, regardless of the area where the transshipment takes place and regardless of the type of vessels involved in the transshipment. Under this alternative, all forms would be required to be submitted to NMFS no later than 10 calendar days after completion of the transshipment. Because the form would replace current transshipment logsheet forms under existing requirements, those existing requirements would need to be amended to incorporate the new uniform timeframe. Thus, this alternative could not be implemented fully as part of the Proposed Action, which is limited to implementing certain provisions of CMM 2009-06, CMM 2009-01, CMM 2009-02, and CMM 2010-02, pursuant to the authority of the WCPFCIA. However, given that this alternative fulfills the purpose of and need for the Proposed Action, as set forth in Section 1.2 of this EA, and is reasonable,[11] this alternative is considered in depth in this EA.

2.1.2 CATEGORY 2: PRIOR NOTICE FOR HIGH SEAS TRANSSHIPMENT OR EMERGENCY TRANSSHIPMENTS

CMM 2009-06 specifies that the WCPFC Executive Director must be sent notice 36 hours prior to high seas transshipments. For emergency transshipments that would otherwise be prohibited, the CMM specifies that notice of the transshipment and the

[11] CEQ 1981, Question 2b.

circumstances causing the transshipment must be sent to the WCPFC Executive Director within 12 hours of the completion of the transshipment. An emergency transshipment is a transshipment conducted under circumstances of force majeure or other serious mechanical breakdown that could reasonably be expected to threaten the health or safety of the vessel or crew or cause a significant financial loss through fish spoilage. The transshipment notices must be completed by vessel owners and operators who transship at sea or in port in the Convention Area, or conduct transshipments anywhere of HMS caught in the Convention Area, unless the fish is caught and transshipped entirely in archipelagic waters or territorial seas. The notices must be provided to the Executive Director by means of a device that can both send and receive data (i.e., fax or email). The notices must include the following information: (1) the name and WCPFC Identification Number of the offloading vessel; (2) the name and WCPFC Identification Number of the receiving vessel; (3) the expected product (including species and its processed state) to be transshipped, or in the case of some emergency transshipments, the actual product that has already been transshipped; (4) the estimated tonnage, by product, to be transshipped, or in the case of some emergency transshipments, the actual product that has been transshipped; (5) the date and expected location of transshipment (in decimal latitude and longitude to the nearest 0.1 degrees and accompanied by a description of the location, such as high seas or within a named EEZ), or in the case of some emergency transshipments, the actual location of the transshipment; and (6) the geographic location of the HMS catches for the offloading vessels, meaning sufficient information to identify what proportion of the catch was taken while on the high seas inside or outside the Convention Area, or within a particular EEZ. The transshipments must take place within 24 nautical miles of the location information provided in the notice.

Due to the short amount of time for providing the notice to the WCPFC Executive Director in the case of emergency transshipments (within 12 hours of completion), NMFS believes that requiring vessel owners and operators to ensure the provision of the notice directly to the WCPFC by fax or email with a copy to NMFS is the only reasonable and feasible alternative for implementing this particular provision.

For transshipments on the high seas, NMFS identified three alternatives for implementing the prior notice requirement provision. One alternative would be essentially the same as the alternative for implementing the notice of emergency transshipments, requiring vessel owners and operators to fax or email the notice directly to the WCPFC with a copy to NMFS by the required deadline (36 hours prior to the transshipment taking place). This alternative is considered in detail in this EA.

Another alternative would require vessel owners and operators to submit the notice to NMFS, in which case NMFS would submit the notice to the WCPFC at least 36 hours prior to the transshipment taking place. This alternative would require that the notice be submitted to NMFS with sufficient time for NMFS to submit the notice to the WCPFC by the due date – that is, at least one U.S. Federal business day before the 36-hour deadline, or at least 60 hours before the transshipment, with the time calculated in Hawaii Standard Time. The WCPFC Secretariat is accustomed to receiving communications from Member States, not individual vessel owners and operators, so this alternative would be in keeping

with that practice. However, this alternative may not be feasible for all transshipments on the high seas, as some vessel owners and operators may not be able to provide all of the information required in the notice so far in advance of the transshipment. Thus, this alternative has been excluded from detailed consideration in this EA.

A third alternative would give vessel owners and operators the option of either submitting the notice to NMFS at least one business day plus 36 hours in advance of the transshipment (i.e., 60 hours before the transshipment), with the time calculated in Hawaii Standard Time, or, if unable to obtain the required information so far in advance, submitting the notice directly to the WCPFC at least 36 hours in advance of the transshipment. Thus, this alternative would attempt to maintain the current practice of having NMFS provide the WCPFC with the information, rather than having individual vessel owners and operators submit information to the WCPFC, but also would allow vessel owners and operators the flexibility of submitting information directly to the WCPFC if they are unable to meet the deadline for submitting the information to NMFS. This alternative is considered in detail in this EA.

2.1.3 CATEGORY 3: OBSERVER COVERAGE FOR TRANSSHIPMENTS AT SEA

NMFS identified one alternative for implementing the at-sea observer coverage provisions of CMM 2009-06. This alternative would require vessels to provide a request for an observer 72 hours before leaving port and to carry observers for transshipments that occur at sea in the Convention Area. The specific requirements would vary slightly based on the vessel size and type of fish being transshipped, as are specified in CMM 2009-06. They are as follows:

For transshipments to receiving vessels less than or equal to 33 meters in length, and not involving purse seine-caught fish or frozen longline-caught fish, an observer would be required on either the offloading vessel or the receiving vessel.

For transshipments to U.S. receiving vessels greater than 33 meters in length and involving only troll-caught or pole-and-line-caught fish, an observer would be required on the receiving vessel (unlike the other requirements, this would not be put into effect until January 1, 2013).

For transshipments to U.S. receiving vessels greater than 33 meters in length and not involving troll-caught or pole-and-line-caught fish, an observer would be required on the receiving vessel.

For transshipments to U.S. receiving vessels less than or equal to 33 meters in length, and involving purse seine-caught fish or frozen longline-caught fish, an observer would be required on the receiving vessel.

Vessel owners or operators would be required to ensure that an observer is present before beginning transshipment, even when not required to carry an observer (e.g., the operator

of an offloading vessel would be required to verify that an observer is present on a receiving vessel that is greater than 33 meters in length for a transshipment of longline-caught fish). Owners and operators of receiving vessels would also be required to ensure that transshipments are received from only one vessel at a time for each observer that is available to monitor the transshipment.

2.1.4 CATEGORY 4: CATEGORIES OF VESSELS WITH WHICH TRANSSHIPPING AND BUNKERING MAY BE CONDUCTED

NMFS identified one alternative for implementing the provisions of CMM 2009-06 and CMM 2009-01 regarding the categories of vessels with which transshipments to and from and bunkering to and from may be conducted. This alternative would require the owner and operator of any U.S. fishing vessel used to fish for HMS to ensure that any vessel with which they (1) engage in transshipment (to or from) in the Convention Area, (2) engage in bunkering (to or from) in the Convention Area, or (3) exchange supplies in the Convention Area, falls into certain categories. The vessels must be: (1) flagged by a WCPFC Member or Cooperating Non-Member; (2) on the WCPFC Interim Register of Non-Member Carrier and Bunker Vessels, which is available at http://www.wcpfc.int/; or (3) on the WCPFC Record of Fishing Vessels, which is available at http://www.wcpfc.int/.

2.1.5 CATEGORY 5: REQUIREMENTS REGARDING NOTIFICATION OF ENTRY INTO OR EXIT FROM EASTERN SMA

NMFS identified one alternative for implementing the entry and exit notification provisions of CMM 2010-02. The owner and operator of any U.S. commercial fishing vessel would be required to ensure the submission of a notice to the WCPFC containing specific information at least six hours prior to entry and no later than six hours prior to exiting the Eastern SMA. The notices would be required to be submitted in the format specified by the Pacific Island Regional Administrator via fax or email and would include the following information: (1) vessel identification; (2) entry or exit; (3) date and time (in UTC) of anticipated point of entry or exit; (4) latitude and longitude of anticipated point of entry or exit; (5) amount of fish product on board at the time of the report, in kilograms, in total and for each of the following species or species groups: yellowfin tuna, bigeye tuna, albacore, skipjack tuna, swordfish, shark, and other; and (6) an indication of whether the vessel has engaged in or will engage in any transshipments prior to exiting the Eastern SMA. A copy of the notice would be required to be submitted to NMFS at least six hours prior to entry and no later than six hours prior to exiting the Eastern SMA.

2.1.6 CATEGORY 6: REQUIREMENTS REGARDING DISCARDS FROM PURSE SEINE FISHING VESSELS

The provisions in CMM 2009-02 modify or supplement the provisions in CMM 2008-01, "Conservation and Management Measure for Bigeye and Yellowfin Tuna in the Western and Central Pacific Ocean," for FAD prohibition periods and catch retention requirements for purse seine fishing vessels, including specific requirements for reporting discards of fish. Prior to the adoption of CMM 2009-02, NMFS issued regulations implementing the requirements for the FAD prohibition periods and catch retention specified in CMM 2008-01. Those regulations are set forth at 50 CFR 300.223 and are effective through 2011. NMFS has determined that existing regulations implementing the FAD prohibition periods and catch retention requirements under CMM 2008-01 are consistent with the related provisions of CMM 2009-02. Therefore, no additional steps need to be taken at this time to implement these provisions, except that NMFS proposes to remove the termination date applicable to the existing catch retention provision. In addition, CMM 2009-02 also contains new reporting requirements for discards of fish from purse seine vessels which would be implemented under this rulemaking.

Due to the short timeframe for submitting the discard report to the WCPFC (48 hours after any discard), NMFS believes that requiring vessel owners and operators to provide the discard report directly to the WCPFC with a copy to NMFS is the only reasonable and feasible means for implementing this particular provision. Thus, NMFS identified one alternative for the reporting requirements regarding discards from purse seine fishing vessels. The owner and operator of any U.S. purse seine fishing vessel would be required to submit a report to the WCPFC containing specific information no later than 48 hours after any discard of bigeye tuna (*Thunnus obesus*), yellowfin tuna (*Thunnus albacores*), or skipjack tuna (*Katsuwonus pelamis*) – the species required to be retained under the existing catch retention requirements – caught in the Convention Area. The reports would be required to be submitted in the format specified by the Pacific Islands Regional Administrator via fax or email. A copy of the report would be required to be submitted to NMFS as well as to the observer on board the vessel.

The existing catch retention requirements at 50 CFR 300.223(d) require U.S. purse seine fishing vessels to retain all catch of bigeye tuna, yellowfin tuna, and skipjack tuna in the Convention Area unless: (1) the fish are unfit for human consumption; (2) there is insufficient well space to accommodate all the fish captured in a given set, provided that no additional sets are made during the trip; or (3) if serious malfunction of equipment occurs. In the event that a vessel has insufficient well space to accommodate all the fish caught in a set, NMFS believes that the vessel operators and crew should be allowed to transfer the excess fish in the net to another purse seine vessel rather than having to release them. This is consistent with CMM 2008-01, which states that "excess fish taken in the last set may be transferred to and retained on board another purse seine vessel provided this is not prohibited under applicable national law." However, existing regulations at 50 CFR 300.216 prohibit purse seine vessels from conducting transshipments at sea in the Convention Area. Thus, the proposed rule would generally exclude net sharing activities from the definition of transshipment, but would prohibit net sharing except when no additional purse seine sets are made from the fishing vessel from which the fish are transferred during the remainder of the fishing trip and the vessel has

insufficient well space for the fish. NMFS identified the following three alternatives for implementation of this provision of the proposed rule:

(1) Net sharing would be restricted to between U.S. purse seine vessels.
(2) U.S. vessels would be allowed to transfer fish to both U.S. and foreign purse seine vessels, but could only accept fish via net sharing from a U.S. purse seine vessel.
(3) U.S. purse seine vessels would be allowed to transfer fish to both U.S. and foreign purse seine vessels, and could accept fish from both U.S. and foreign purse seine vessels.

The first two alternatives are analyzed in depth in this EA. Because NMFS has limited authority to enforce a last-set requirement on foreign vessels, the third alternative has been excluded from detailed consideration in this EA.

2.2 ALTERNATIVES CONSIDERED IN DETAIL

This section describes each of the alternatives considered in depth in this EA.

2.2.1 ALTERNATIVE A: THE NO-ACTION ALTERNATIVE

Under this alternative, the applicable provisions of CMM 2009-06, CMM 2009-01, CMM 2009-02, and CMM 2010-02, would not be implemented for fishing vessels of the United States engaged in commercial fishing activities in the Convention Area. The transshipment reporting requirements, notices for high seas and emergency transshipments, observer requirements for transshipments at sea, restrictions on vessels with which transshipping and bunkering may be conducted, entry and exit notifications for the Eastern SMA, and requirements regarding discards from purse seine fishing vessels would not be put into place.

2.2.2 ALTERNATIVE B: DIRECT NOTICE TO THE WCPFC

Under this alternative, for the provisions of Category 1, vessel owners and operators would be required to submit the transshipment report to NMFS no later than 10 calendar days after completion of an emergency transshipment, a transshipment of HMS on the high seas in the Convention Area, or a transshipment on the high seas anywhere of HMS caught in the Convention Area. For other transshipments, the timeframes would mirror applicable existing requirements.

For purse seine vessels licensed under the regulations implementing the Treaty, the forms would need to be submitted to NMFS within 14 days of completion of the in-port transshipment; for albacore troll vessels registered for use under 50 CFR 660.707, the form would need to be submitted to NMFS within 30 days of the transshipment; for longline vessels subject to the transshipment reporting requirements in 50 CFR Part 665, the form would need to be submitted within 72 hours of landing. For transshipments at

sea where there are no existing transshipment reporting requirements (e.g., longline vessels not subject to the transshipment reporting requirements in 50 CFR Part 665, pole and line vessels), this alternative would require the form to be submitted within 72 hours after the vessel whose owner and operator is responsible for completing the form first enters into port. For transshipments in port where there are no existing transshipment reporting requirements, this alternative would require the form to be submitted within 72 hours after completion of the transshipment.

The provisions of Category 2 under this alternative would require vessel owners and operators to provide prior notice for high seas transshipments and notices of emergency transshipments directly to the WCPFC with a copy to NMFS within the appropriate deadlines.

This alternative also would require observer coverage for transshipments at sea, including the pre-trip notification for observer placement, and would define the categories of vessels with which transshipping and bunkering could be conducted.

Under Alternative B, vessel owners and operators of U.S. commercial fishing vessels would be required to submit notice to the WCPFC at least six hours prior to entry to or exit from the Eastern SMA and submit a copy of the notice to NMFS as well.

U.S. purse seine fishing vessels would be required to comply with the discard reporting requirements, described for Category 6 above, and the exception to the prohibition on net sharing would be limited to between U.S. vessels on the last set of a transferring vessel's trip, when the vessel has insufficient well space for the fish. Vessel owners and operators would be required to ensure that the net sharing activity is recorded on the catch report forms maintained under the requirements of 50 CFR 300.34(c)(1).

2.2.3 ALTERNATIVE C: UNIFORM TIMEFRAME FOR SUBMISSION OF THE TRANSSHIPMENT REPORT; CHOICE OF PROVIDING NOTICE TO EITHER WCPFC OR NMFS

Alternative C would be the same as Alternative B for the majority of the provisions to be implemented under the proposed rule. However, under this alternative, vessel owners and operators would be required to submit the transshipment report to NMFS no later than 10 calendar days after completion of the transshipment for all transshipments and also would have the option of either submitting the notice of high seas transshipment to NMFS at least one business day plus 36 hours in advance of the transshipment (i.e., 60 hours before the transshipment), or, if unable to obtain the required information so far in advance, submitting the notice directly to the WCPFC at least 36 hours in advance of the transshipment with a copy to NMFS.

2.2.4 ALTERNATIVE D: NET SHARING WITH FOREIGN-FLAGGED VESSELS

Alternative D would be the same as Alternative B for the majority of the provisions to be implemented under the proposed rule. However, under this alternative, the exception to the prohibition on net sharing would include allowing owners and operators of U.S. purse seine fishing vessels to transfer fish to foreign-flagged purse seine vessels on the last set of a trip, as well as to U.S. purse seine vessels, when there is insufficient well space.

Table 1 below, shows how each of the alternatives analyzed in depth in this EA incorporates the Proposed Action's six categories of requirements.

Table 1: Alternatives Analyzed in Depth in the EA

Alternative	Category 1: Transshipment Reporting	Category 2: Notice for High Seas and Emergency Transshipments	Category 3: Transshipment Observers	Category 4: Transshipping and Bunkering with Authorized Vessels	Category 5: Eastern SMA Notice	Category 6: Purse Seine Discards
A	No New Requirements	None	No New Requirements	No New Requirements	None	No New Requirements
B	Different Timeframes for Submission of Form	Direct Submission to WCPFC	For At-Sea Transshipments	Transshipping and Bunkering with Authorized Vessels Only	Entry and Exit Notices Required	Reporting Requirements and Net Sharing Prohibition; Net Sharing Allowed Between U.S. Vessels on the Last Set of a Transferring Vessel's Trip
C	Uniform Timeframe for Submission of Form	Choice between Submitting to NMFS or to WCPFC	For At-Sea Transshipments	Transshipping and Bunkering with Authorized Vessels Only	Entry and Exit Notices Required	Reporting Requirements and Net Sharing Prohibition; Net Sharing Allowed Between U.S. Vessels on the Last Set of a Transferring Vessel's Trip
D	Different Timeframes for Submission of Form	Direct Submission to WCPFC	For At-Sea Transshipments	Transshipping and Bunkering with Authorized Vessels Only	Entry and Exit Notices Required	Reporting Requirements and Net Sharing Prohibition; Net Sharing Allowed Between U.S. Vessels on the Last Set of a Transferring Vessel's Trip and from a U.S. Vessel to a Foreign-Flagged Vessel on the Last Set of a Transferring Vessel's Trip

CHAPTER 3 ANALYSIS OF IMPACTS AND DESCRIPTION OF THE AFFECTED ENVIRONMENT

This chapter presents the analysis of potential environmental impacts that could arise from implementation of the proposed rule under any of the action alternatives. Section 3.1.1 describes the expected outcomes of Alternative A, the No-Action Alternative, or the expected fishing patterns and practices and the conditions that would result if the proposed rule were not put into place. The expected outcome of the No-Action Alternative represents the baseline against which the potential environmental impacts of the action alternatives can be measured. Sections 3.1.1.1 to 3.1.1.3 describe the effects on fishing patterns and practices that could result from implementation of each of the action alternatives.

The remaining sections of this chapter present the analysis of potential environmental impacts for each of the action alternatives, as well as the No-Action Alternative, that could result from the effects of each of the alternatives on fishing patterns and practices. Information regarding the affected environment is included as needed in each section. As stated in the CEQ's regulations at 40 CFR 1500.1(b) and (c), the purpose of NEPA is to provide the decisionmakers and the public with pertinent information regarding an action before the action is taken. Detailed information regarding the affected environment has been published in recent NEPA documents,[12] and that information is incorporated by reference here with summaries of applicable material included in appropriate sections. The reader is encouraged to read those documents if interested in obtaining additional information.[13] This chapter concludes with Section 3.9, which compares the environmental impacts of all of the alternatives to provide the decisionmaker and the public with a clear basis for choosing amongst the alternatives.[14]

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[12] See Environmental Assessment for the Implementation of the Decisions of the Fifth Regular Annual Session of the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean: Fishing Restrictions and Observer Requirements in Purse Seine Fisheries for 2009-2011 and Turtle Mitigation Requirements in Purse Seine Fisheries and Bigeye Tuna Catch Limits in Longline Fisheries in 2009, 2010, and 2011 (NMFS 2009a); Supplemental Environmental Assessment for the Implementation of the Decisions of the Fifth Regular Annual Session of the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean: Specific Analysis on Bigeye Tuna Catch Limits in Longline Fisheries in 2009, 2010, and 2011 (NMFS 2009b); and Environmental Assessment for the Initial Implementation of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (NMFS 2009c).

[13] These documents are available at http://www.fpir.noaa.gov/IFD/ifd_documents_data.html.

[14] See 40 CFR 1502.14.

3.1 ANALYSIS OF IMPACTS TO FISHING PATTERNS AND PRACTICES

3.1.1 ALTERNATIVE A: THE NO-ACTION ALTERNATIVE

Under Alternative A, the proposed rule would not be implemented and the provisions of CMM 2009-06 and CMM 2009-01 regarding transshipping and bunkering, the provisions of CMM 2010-02 for the Eastern SMA entry and exit notices, and the provisions regarding purse seine discards would not be put into place. Thus, owners and operators of fishing vessels that would be potentially affected by the proposed rule would not change their fishing patterns and practices in response to this action and none of the direct or indirect effects generated by the proposed rule under any of the action alternatives would result.

Vessels of the United States from the following major commercial fishing fleets that engage in HMS fishing in the Convention Area could be affected by the requirements of the proposed rule under any of the action alternatives: purse seine, longline, albacore troll, tropical troll, handline, and pole-and-line. It is believed that vessels in the tropical troll, pole-and-line, and handline fleets engage in very little, if any, transshipment activity, and the typical fishing grounds of these fleets are not near the Eastern SMA. Accordingly, these vessels are not considered in the remainder of the analysis in this EA. A brief description of each of the remaining fleets, including some material from NMFS 2009a, Section 3.2 and 3.3, NMFS 2009b, Section 3.1, and NMFS 2009c, Section 3.3,[15] follows.

3.1.1.1 THE U.S. PURSE SEINE FLEET IN THE WCPO

Purse seine fishing by U.S. vessels in the WCPO is governed by the Treaty, which is implemented domestically by regulations issued under the authority of the South Pacific Tuna Act of 1988 (SPTA) (see 50 CFR Subpart D). The purse seine fleet is also subject to regulations implemented under the WCPFCIA (see 50 CFR 300 Subpart O), and to a limited extent, regulations implemented under the Magnuson-Stevens Fishery Conservation and Management Act (MSA; 16 USC 1801, *et seq*.). The purse seine technique for catching tuna involves employing a net that is set vertically in the water, with floats attached to the upper edge and chains for weight on the lower edge. A series of rings is attached to the lower edge of the net, and a pursing cable passes through the rings, enabling a winch on board the vessel to draw the net closed on the bottom. Purse seine nets can be up to 1,600 meters or more in length and 150 meters in depth. When the net is deployed from the purse seine vessel, a large skiff attached to the end of the net is released from the stern of the fishing vessel. The purse seine vessel surrounds the school of tuna, keeping it in visual contact if on the surface, or using sonar if the school of fish drops below the surface. Once a school of fish is encircled with the net, the vessel then retrieves most of the net onto the stern of the vessel. The fish are confined in the "sack"

[15] Excerpts from NMFS 2009a, NMFS 2009b, and NMFS 2009c in this document include the citations to references from the original text. These references have been included in the list of references at the end of this document.

portion of the net, which consists of finer mesh webbing that prohibits their escape. The catch is removed from the sack, which is drawn alongside the vessel, onto the vessel with large scoops nets, or brailers, (holding one metric ton or more at a time), and then the fish are placed in brine tanks for freezing and later storage on the purse seine vessel.

Though the exact percentages vary from year to year, from 1997 through 2007, the U.S. WCPO purse seine fleet spent about 8% of its effort in the U.S. EEZ, 23% on the high seas, and the remainder in the EEZs of Pacific Island countries that are parties to the Treaty (PIPs) (unpublished NMFS data). The percentages for any given year during that period ranged from 5% to 21% for the U.S. EEZ, 18% to 30% for the high seas, and 60% to 78% for the EEZs of PIPs (unpublished NMFS data).

The number of vessels in the U.S. WCPO purse seine fishery gradually decreased from the late 1990s until 2006, and then the fleet began to rebuild into 2009. As of July 2011, there were 36 vessels in the fleet.

U.S. Purse Seine Transshipments in the Convention Area

Transshipment data for SPTT-licensed vessels from 2008-2009 are summarized in Table 2 below. All of the transshipments took place in ports within the Convention Area.

Table 2: Transshipment Activity from SPTT- licensed Vessels

Year	Number of Transshipments	Bigeye Tuna (metric tons)	Skipjack Tuna (metric tons)	Yellowfin Tuna (metric tons)	Other Product (metric tons)
2008	192	2,439	88,790	30,124	0
2009	325	2,741	196,003	20,561	13

Source: NMFS unpublished data.

Vessels licensed under the regulations implementing the Treaty are required to submit certain information regarding transshipment activities. A transshipment logsheet form must be completed for each transshipment. Logbooks are provided by the NMFS Pacific Islands Regional Administrator. These reports are known as “final outturns” and must be accompanied by an additional report of a size breakdown of the catch as determined by the receiver of the fish. The logsheet form must be submitted to the NMFS Pacific Islands Regional Administrator within two days of the completion of the transshipment as well as to the Pacific Islands Forum Fisheries Agency (FFA), which is the organization designated by PIPs to act on their behalf under the Treaty, within fourteen days of transshipment (50 CFR 300.34(c)(2)). The final outturn reports are submitted soon after the fish arrive at their ultimate destination.

For vessels licensed under the Treaty, notice must be provided to the FFA and a request must be provided to the PIP in whose port the transshipment is requested to occur at least 48 hours before each transshipment. The notification and request must include the following information: name of vessel; International Radio Call Sign (IRCS); vessel position (latitude and longitude to nearest minute of arc); weight of catch on board the vessel (in metric tons) for each of skipjack tuna, yellowfin tuna, and all other species

combined; and the date, time (in Coordinated Universal Time (UTC)), and location where such transshipment is requested to occur (50 CFR 300.34(c)(5)). When the transshipment is completed, a report must be submitted to the FFA and to the PIP in whose port the transshipment occurred. The report must include the following information: FFA Regional Register number; trip begin date; date and time (in UTC) of the transshipment; IRCS; vessel position at time of transshipment (latitude and longitude to nearest minute of arc); amount of fish transshipped (in metric tons) for each of skipjack tuna, yellowfin tuna, and all other species combined; name of vessel to which the fish were transshipped; and the destination of the transshipped fish (50 CFR 300.34(c)(9)).

Additional specific requirements for transshipment operations also apply to vessels licensed under the Treaty. As set forth at 50 CFR 300.46, these requirements include requirements for transshipments to be conducted only at the time and place authorized for transshipment by the PIPs and obligations for providing access and assistance to officers of PIPs inspecting vessels during transshipments.

U.S. Purse Seine Discards from SPTT-Licensed Vessels

As stated in Chapter 1 and Chapter 2 of this EA, NMFS implemented the catch retention requirements of CMM 2008-01, and these requirements went into effect on June 14, 2010.[16] Table 3 below provides summary information of discards from U.S. purse seine vessels licensed under the SPTT for recent years, both before and after the catch retention requirements went into effect. Vessel owners and operators are currently required to report discard information on catch report forms (50 CFR 300.34(c)(1)).

[16] As stated in Section 2.1.6, the proposed rule would remove the termination date of the catch retention requirements. Although the catch retention requirements have been effective for a limited period, these requirements have been included as part of the No-Action Alternative to represent baseline conditions. NMFS analyzed the potential environmental impacts of the catch retention requirements in NMFS 2009a (see Sections 4.1.2.4, 4.3.2, 4.3.8, 4.4.1.2, 4.5.3 of that document) and concluded that the catch retention requirements could lead to minor beneficial effects on living marine resources that would be counteracted by other factors. The removal of the termination date of the catch retention requirements would increase the probability that living marine resources could experience beneficial effects from the catch retention requirements, but overall, these effects would be minor, unquantifiable, and counteracted by other factors, as discussed throughout NMFS 2009a.

Table 3: Summary Statistics on Purse Seine Discards from 2008-2010[17]

	Number of Discard Events[18]	Number of Vessels that discarded at least once	Number of Licensed Vessels	Number of Trips	Number of Discard Events/ Trip	Number of Discard Events/ Licensed Vessel	Discards (mt)/ Trip	Discards (mt)/ Licensed Vessel
2008	679	34	40	206	3	17	9	44
2009	1377	36	39	306	5	35	9	69
Jan 1-Jun 13, 2010	227	26	37	106	2	6	3	10
Jun 14-Dec 31, 2010	58	11	36	16	4	2	4	2

Source: NMFS unpublished data.

Net sharing means the transfer of fish that have not yet been loaded on board any fishing vessel from the purse seine net of one vessel to another fishing vessel. Net sharing generally occurs on the last set of a trip when a vessel is too full to load all the fish that has been caught. However, net sharing can also occur during a trip if a malfunction leads to a vessel being unable to bring aboard the fish or freeze the fish. U.S. purse seine vessels currently engage in net sharing with other U.S. vessels as well as with foreign-flagged vessels. As there is no requirement to report net sharing events, the frequency of net sharing between U.S. vessels and with foreign-flagged vessels cannot be estimated with precision. NMFS estimates that that approximately ten percent of all U.S. purse seine trips include a net sharing event.

U.S. Purse Seine Activity in the Eastern SMA

According to the best available data, there was almost no activity by U.S. purse seine vessels in the Eastern SMA in 2010 (NMFS unpublished data).

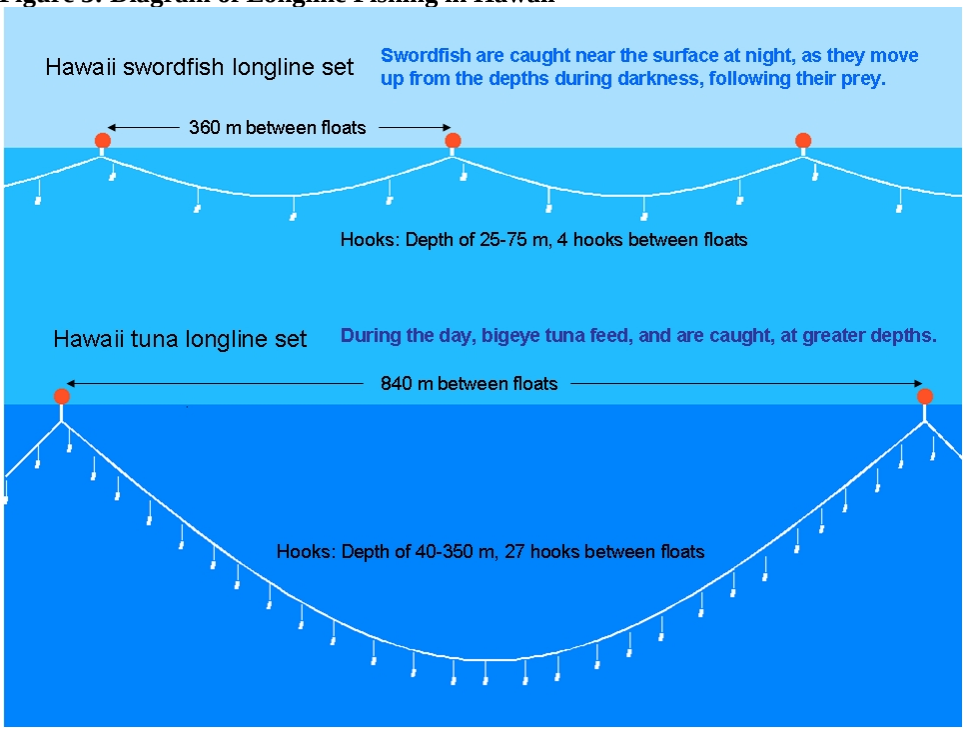
3.1.1.2 THE U.S. LONGLINE FLEETS OPERATING IN THE WCPO

The U.S. longline fleets operating in the Convention Area include the Hawaii-based fleet, the American Samoa-based fleet, the west coast-based fleet, and the Mariana Islands-based fleet. The Hawaii, American Samoa, and Mariana Islands fleets are managed under the Fishery Ecosystem Plan (FEP) for Pacific Pelagic Fisheries of the Western Pacific Region, implemented by regulations at 50 CFR Part 665, as well as by regulations implemented under the WCPFCIA at 50 CFR Part 300 Subpart O. The west coast fleet is managed under the Fishery Management Plan (FMP) for U.S. West Coast Fisheries for Highly Migratory Species, implemented by regulations at 50 CFR Part 660. Longline fishing gear consists of a main line strung horizontally, supported at regular intervals by vertical float lines connected to surface floats. Descending from the main line are branch lines, each ending in a single, baited hook. The main line droops in a curve from one float

[17] Data are complete for 2008. Data for 2009 and 2010 are not complete.
[18] Vessel owners and operators reported discards by species and reason. In a few cases, this resulted in multiple discard records for the same set; it was assumed there was only one discard event per set.

to the next and bears some number (2-25) of branch lines between floats. Fishing depth is determined by the length of float lines and branch lines, and the amount of sag in the main line between floats. Figure 3 shows a diagram of longline fishing activity for the U.S. Hawaii-based longline fleet.

Figure 3: Diagram of Longline Fishing in Hawaii



Source: Western Pacific Regional Fishery Management Council (2011).

U.S. Longline Transshipments in the Convention Area

Existing regulations at 50 CFR Part 665 require owners and operators of vessels registered for use as receiving vessels used to land or transship western Pacific pelagic management unit species (MUS) (i.e., species managed under the FEP for Pacific Pelagic Fisheries of the Western Pacific Region) that were harvested using longline gear shoreward of the outer boundary of the U.S. EEZ around American Samoa, Hawaii, Guam, the Commonwealth of the Northern Mariana Islands, or the Pacific remote island areas (this includes Palmyra Atoll, Kingman Reef, Jarvis Island, Baker Island, Howland Island, Johnston Atoll, Wake Island, and Midway Atoll), to submit transshipment forms for transshipments that take place in port or at sea. Unpublished NMFS data indicate that from 1993 through 2009 there were approximately 290 transshipments of longline-caught fish to U.S. vessels. Anecdotal information as well as a review of permitting information suggests that most, if not all, of these transshipments took place at sea. The species transshipped were primarily tunas, with some marlins, swordfish and other pelagic species also transshipped. Between 1993 and 2000, a number of the transshipments involved the receipt of shark fins from foreign-flagged vessels; after the passage of the Shark Finning Prohibition Act in 2000, such transshipments were curtailed. Due to the

limited number of transshipments per year, much of these data are confidential.[19] Table 4 below shows the number of annual transshipments, excluding transshipments involving only shark fins. The transshipment reports indicate that all recorded transshipments involving shark fins were made from foreign vessels, and, based on the vessel information that NMFS has been able to obtain, it is likely that all transshipments that involved fish other than shark fins were made from U.S. vessels. As Table 4 indicates, the number of transshipments appears to have increased in recent years.

Table 4: Transshipments of longline-caught fish to U.S. receiving vessels subject to the requirements at 50 CFR Part 665

Year	Number of Transshipments
1993	***
1994	***
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	146[20]
2002	***
2003	***
2004	***
2005	***
2006	4
2007	5
2008	5
2009	18

Source: NMFS unpublished data.
Excludes transshipments involving only shark fins. The symbols *** indicate that the data are confidential due to the low number of vessels contributing to the data.

The analysis in this EA focuses on the vessels in the American-Samoa and Hawaii-based fleets because anecdotal information suggest these fleets conduct all or most of the longline transshipment activities in the Convention Area.

[19] The WCPFCIA and implementing regulations at 50 CFR 300.220 set forth requirements for the handling of confidential information that is submitted in compliance with the requirements of MSA or WCPFCIA. In general, data from at least three vessels are necessary to develop an aggregate or summary that does not directly or indirectly disclose the identity or business of any person who submits the information.
[20] This number includes substantial transshipment activity within the American Samoa longline fleet, which did not occur in other years.

Table 5 shows the performance of the Hawaii longline fishery from 1993-2008.

Table 5: Performance of the Hawaii longline fishery, 1993-2008

Year	Active vessels	Trips	Tuna-directed trips	Swordfish-directed trips	Hooks set (million)	Total landings (mt)	Bigeye tuna landings (mt)	Sword-fish landings (mt)	Yellow-fin tuna landings (mt)
1993	122	1,192	542	319	13.0	11,342	2,121	5,909	631
1994	125	1,106	568	310	12.0	8,227	1,787	3,176	606
1995	110	1,125	682	136	14.2	10,312	2,051	2,713	979
1996	103	1,100	657	92	14.4	9,781	1,787	2,502	630
1997	105	1,125	745	78	15.6	12,320	2,449	2,881	1,141
1998	114	1,140	760	84	17.4	12,998	3,226	3,263	722
1999	119	1,137	776	65	19.1	12,872	2,719	3,100	473
2000	125	1,103	814	37	20.3	10,789	2,647	2,815	1,205
2001	101	1,034	987	4	22.4	7,167	2,356	235	1,033
2002	100	1,163	1,163	0	27.0	7,888	4,388	309	560
2003	110	1,215	1,215	0	29.9	8,008	3,593	137	823
2004	125	1,338	1,332	6	32.0	8,380	4,325	249	707
2005	124	1,496	1,397	99	35.0	10,579	4,979	1,600	737
2006	127	1,401	1,341	60	35.3	9,759	4,429	1,167	960
2007	129	1,462	1,381	81	40.2	11,204	5,779	1,715	842
2008	128	1,414	1,333	81	41.5	12,103	5,073	1,944	899

Source: Western Pacific Regional Fishery Management Council (2010).

The American Samoa Longline Limited Entry Program allows for as many as 60 vessels.

Table 6, below shows catch and effort information for the American Samoa-based longline fleet from 1993-2008.

Table 6: Performance of the American Samoa Longline Fishery, 1993-2008

Year	Active vessels	Long-line Sets	Hooks set (thousands)	Total landings (mt)[21]	Bigeye tuna landings (mt)	Skipjack tuna fish landing (mt)	Albacore tuna fish landings (mt)	Sword-fish landings (mt)	Yellow-fin tuna landings (mt)
1993	4	0	0	1.900	0.321	0.242	0.143	0.000	1.194
1994	5	0	0	1.555	0.000	0.047	0.730	0.000	0.778
1995	5	0	0	29.643	0.994	0.073	26.739	0.000	1.838
1996	12	528	99	102.450	3.947	0.199	86.305	0.360	11.640
1997	21	1,528	419	340.213	3.995	1.155	312.705	0.318	22.040
1998	26	1,754	771	518.329	10.111	18.427	446.135	1.686	41.970
1999	29	2,108	915	435.457	8.714	25.408	337.036	1.025	63.274
2000	37	2,814	1,335	754.481	21.569	14.627	630.890	0.933	86.463
2001	62	4,801	5,795	3,557.491	75.042	66.143	3,222.437	5.963	187.906
2002	58	6,872	13,096	6,892.440	196.179	244.271	5,951.722	14.861	485.407
2003	49	6,220	14,165	4,804.977	242.381	119.624	3,931.537	14.584	496.851
2004	41	4,850	11,736	3,840.621	227.375	234.633	2,479.762	9.010	889.841
2005	36	4,359	11,129	3,720.107	133.141	141.540	2,915.866	7.475	522.085
2006	31	5,069	14,263	5,127.035	200.999	213.244	4,177.884	37.927	496.981
2007	29	5,919	17,552	6,231.239	231.053	165.661	5,188.329	12.831	633.365
2008	28	4,741	14,406	4,169.949	124.239	162.704	3,540.084	6.754	336.168

Source: Western Pacific Regional Fishery Management Council (2010).

Longline vessels based on the U.S. west coast fish primarily in the eastern Pacific Ocean, but they could also fish – and conceivably transship – in the Convention Area. In the last few years, there have been very few active West coast-based longline vessels and no activity by such vessels in the Convention Area. Because of the small number of vessels in the West-coast based fleet, it is unlikely that vessels in this fleet would conduct transshipment activities.

During the last few years, there have also been a small number of vessels with permits for longline fishing based out of Guam and the Commonwealth of the Northern Mariana Islands. Due to the small number of vessels, it is unlikely that these vessels would conduct transshipment activities. However, some of these vessels may transship their catch to a receiving vessel.

U.S. Longline Activity in the Eastern SMA

Based on NMFS unpublished data, between the years 2005-2009, an average of three vessels per year from the U.S. Hawaii-based and American Samoa-based longline fleets entered and exited the Eastern SMA. Data is unavailable as to whether a particular vessel entered and exited the area once or multiple times.

[21] Total landings includes landings of bigeye tuna, skipjack tuna, albacore, swordfish, and yellowfin tuna.

3.1.1.3 THE U.S. TROLL FLEETS OPERATING IN THE WCPO

U.S. vessels that fish with troll gear in the Convention Area can be described as part of the North Pacific albacore troll fishery and the South Pacific albacore troll fishery. The South Pacific albacore troll fishery occurs almost exclusively in the Convention Area from November through April. The North Pacific albacore troll fishery occurs mostly outside the Convention Area from April through November (Childers and Betcher 2010).

U.S. vessels fish for albacore in the Pacific with troll gear (artificial lures with barbless hooks that are towed behind a vessel, also called jigs). The basic troll vessel gear consists of between eight and 12 lines towed up to 30 meters behind the vessel. Lateral spacing of the lines is accomplished by using outriggers or long poles extended to each side of the vessel with fairleads spreading three or more lines to each side, with the remainder attached to the stern. Terminal gear is generally chrome-headed jigs with varying colored plastic fringed skirts and a double barbless undulated hook. The gear is relatively inexpensive. Retrieval is done by hand or by powered gurdies, similar to salmon troll vessels.

The albacore troll fleets are managed under the FMP for U.S. West Coast Fisheries for Highly Migratory Species. Tables 7 and 8 below show catch and effort data for the U.S. North Pacific and South Pacific albacore troll fisheries, respectively, from 1990 through 2008. The information in the tables includes information regarding total activity – meaning activity both inside and outside the Convention Area.

Table 7: U.S. North Pacific Albacore Troll Fishery - Numbers of Vessels and Catch and Effort, 1990-2008

Year	Landings (metric tons)	Effort			Catch Per Unit Effort (fish/day)
		Trips	Days	Vessels	
1990	2,603	845	10,047	368	36
1991	1,845	536	9,000	172	35
1992	4,572	1590	17,202	602	50
1993	6,254	1704	21,533	608	38
1994	10,978	2135	25,979	721	62
1995	8,045	1094	26,014	471	45
1996	16,938	1,816	32,694	676	89
1997	14,252	4,000	45,477	1,172	45
1998	14,410	2,358	21,253	841	104
1999	10,060	2,555	35,454	776	35
2000	9,645	1,880	37,752	753	38
2001	11,210	2,824	25,771	964	66
2002	10,387	1,868	25,274	716	67
2003	14,102	2,370	21,621	798	75
2004	13,346	2,400	26,197	737	79
2005	8,413	1,574	24,731	565	46
2006	12,524	1,857	22,006	623	87
2007	11,887	2,212	24,000	672	70
2008	10,254	1,498	20,582	482	71

Source: Childers and Betcher (2010). The catch totals include an unknown proportion of pole and line catch.

Table 8: U.S. South Pacific Albacore Troll Fishery - Number of Vessels and Catch and Effort, 1990-2008

Year	Landings (metric tons)	Effort			Catch Per Unit Effort (fish/day)
		Trips	Days	Vessels	
1989-90	3,995	76	3,537	39	175
1990-91	5,221	78	6,997	56	101
1991-92	3,097	65	6,867	55	68
1992-93	1,036	45	4,687	44	43
1993-94	2,236	17	3,848	14	96
1994-95	1,953	29	1,894	21	147
1995-96	1,964	55	4,152	53	69
1996-97	1,617	26	3,189	26	82
1997-98	1,701	38	*5,384*	36	51
1998-99	1,241	24	2,505	21	69
1999-00	2,562	39	4,958	36	69
2000-01	2,128	39	6,377	33	45
2001-02	1,218	12	3,602	12	46
2002-03	1,678	14	2,289	14	101
2003-04	995	12	1,488	11	115
2004-05	725	8	*1,491*	8	64
2005-06	601	10	1,310	8	62
2006-07	271	6	*873*	6	65
2007-08	150	4	239	3	51

Source: Childers and Betcher (2010). Total catches for U.S. South Pacific albacore troll fishery may include catch from November and December of the previous year. Values in italics may be adversely impacted by low length-frequency sampling coverage (<0.2%). Total catches for seasons before 1996-97 may contain catch from non-U.S. vessels.

Under existing requirements, the operators of vessels in the U.S. albacore troll fleet must maintain on board the vessel a record of catch, effort, and other data on report forms provided by the NMFS Southwest Regional Administrator. All information specified on the forms must be recorded on the forms within 24 hours after the completion of each fishing day. The forms include information about at-sea transshipments. The original logbook form for each day of the fishing trip, signed and dated by the vessel operator, must be submitted to either the NMFS Southwest Regional Administrator or the appropriate state management agency within 30 days of each landing or transshipment of HMS (50 CFR 660.708(a)). Table 9 below provides a summary of at-sea transshipments from vessels in the albacore troll fleet in the Convention Area from 1990-2009. The data indicate that the majority of the transshipments were made to foreign-flagged receiver vessels. Table 10 provides specific information on the activities of these fisheries in the Convention Area from 2003-2009. The Convention entered into force in 2004; data prior to 2003 is unavailable.

Table 9: U.S. Albacore Troll Vessel At-Sea Transshipments in the Convention Area, 1990-2009

Year	Number of Transshipments	Location of Transshipment and Catch	Amount of albacore transshipped (mt)
1990	12	South Pacific	350
1991	150	South Pacific	2,468
1992	96	South Pacific	1,944
1993	19	South Pacific	317
1994	4	South Pacific	33
1994	13	North Pacific	362
1995	27	South Pacific	975
1995	71	North Pacific	1,465
1996	61	South Pacific	585
1996	124	North Pacific	2,034
1997	17	South Pacific	290
1997	139	North Pacific	2,019
1998	40	North Pacific	862
1999	143	North Pacific	1,782
2000	20	South Pacific	435
2000	25	North Pacific	953
2001	12	North Pacific	311
2002	0	NA	0
2003	13	North Pacific	318
2004	***	***	***
2005	0	NA	0
2006	0	NA	0
2007	0	NA	0
2008	0	NA	0
2009	0	NA	0
Average	39	NA	≈700

Source: NMFS unpublished data. Anecdotal information indicates that data is complete for all years, but it is possible that some transshipments during these years may not have been reported. South Pacific denotes transshipments conducted by the U.S. South Pacific albacore troll fleet and North Pacific denotes transshipments conducted by the U.S. North Pacific albacore troll fleet. All transshipments took place on the high seas. NA stands for "not applicable" and *** indicates that the data are confidential due to the low number of vessels contributing to the data.

Table 10: U.S. North Pacific and U.S. South Pacific Albacore Troll Fisheries - Number of Vessels and Landings in the Convention Area

Year	North Pacific		South Pacific		Total Landings (metric tons)
	Landings (metric tons)	Number of Active Vessels	Landings (metric tons)	Number of Active Vessels	
2003	2419	69	1573	14	3992
2004	714	28	1141	11	1855
2005	89	5	487	8	576
2006	2	3	585	8	587
2007	***	***	272	6	272
2008	***	***	150	4	151
2009	0	0	237	4	237

Source: WCPFC2008; WCPFC 2009; WCPFC 2010; *** indicates that the data are confidential due to the low number of vessels contributing to the data.

As indicated in Table 9, there have been no transshipments from albacore troll vessels in the Convention Area since 2004. Although fishing activity, and thus transshipment activity, has been low in recent years due to economic and perhaps oceanographic conditions, conditions could become more favorable for albacore troll vessels in the WCPO in the foreseeable future.

U.S. Albacore Troll Fleet Activity in the Eastern SMA

The traditional fishing grounds of U.S. vessels participating in the North Pacific and South Pacific albacore troll fisheries are in areas distant from the Eastern SMA.

3.1.2 ALTERNATIVE B: DIRECT NOTICE TO THE WCPFC

Under Alternative B, owners and operators of U.S. fishing vessels that offload or receive transshipments of HMS in the Convention Area or that offload or receive transshipments of HMS caught in the Convention Area anywhere would need to complete and to submit to NMFS a transshipment report. As stated above in 2.1.1 of this EA, existing regulations already require the submission of information regarding transshipments for most of the vessels that would be affected by this proposed rule. A new form would replace the existing transshipment logbook required under 50 CFR 665.14(c) and 50 CFR 665.801(e) for transshipments involving longline-caught fish and could, if the Treaty is revised accordingly, eventually replace the transshipment logsheet form required under 50 CFR 300.34(c)(2) for transshipments involving vessels licensed under the Treaty.

Under Alternative B, each U.S. vessel involved in a transshipment would be required to submit a complete copy of the report, meaning that owners and operators of vessels

receiving product during the transshipment would be required to obtain information from the owners and operators of vessels offloading the product about the vessels and their catch on board and vice versa. Thus, completion of the form could require closer coordination between offloading and receiving vessels than is currently needed for completion of existing transshipment reporting forms. For transshipments on the high seas or emergency transshipments that would otherwise be prohibited, vessel owners and operators would need to submit the report to NMFS no later than 10 calendar days after completion of the transshipment. For all other transshipments, if the vessel owner and operator is subject to existing transshipment reporting requirements at 50 CFR Part 300, 50 CFR Part 660, or 50 CFR Part 665, the new transshipment report form would be required to be submitted in the timeframe specified in those regulations. If the vessel owner or operator is not subject to existing requirements, for at sea transshipments the form would be required to be submitted no later than 72 hours after the vessel whose owner and operator is responsible for completing the form first enters into port; for in port transshipments the form would be required to be submitted no later than 72 hours after completion of the transshipment.

Completion and submission of the form would require vessel owners and operators to assume some new administrative responsibilities, as well as communication costs associated with submitting the form. Completion of the form is expected to take approximately 60 minutes, and submitting the form, which may be done by fax or email, although the original must be submitted by mail, is expected to cost less than one dollar. It is unlikely that these administrative responsibilities would be so burdensome or costly that they would affect the fishing patterns and practices of any individual vessel or of any fleet as a whole.

Alternative B would also require U.S. vessel owners and operators who conduct permissible transshipments of HMS on the high seas in the Convention Area and on the high seas anywhere of fish caught in the Convention Area to ensure the submission to the WCPFC a notice at least 36 hours prior to the transshipment taking place. The notice would be required to be provided by fax or email and would include the following information: (1) the name of the offloading vessel and the vessel identification markings located on the hull or superstructure; (2) the name of the receiving vessel and the vessel identification markings located on the hull or superstructure; (3) a description of the estimated amount of product being transshipped, including species, processed state, and amount in metric tons of each species; (4) the expected date and expected location of transshipment, including latitude and longitude to the nearest tenth of a degree and an indication of in which of the following areas the projected location is situated (i.e., high seas inside the Convention Area; high seas outside the Convention Area; or an area under the jurisdiction of a particular nation); and (5) required for the owner and operator of the offloading vessel only, the geographic location of the HMS catches to be transshipped, indicating the proportion of the catch caught in each of the following areas: (a) inside the Convention Area, on the high seas; (b) outside the Convention Area, on the high seas; and (c) within areas under the jurisdiction of particular nations. The transshipment would be required to take place within 24 nautical miles of the projected location provided on the notice.

Notice would also be required for emergency transshipments that would otherwise be prohibited under the proposed rule. An emergency transshipment would be defined as a transshipment conducted under circumstances of force majeure or other serious mechanical breakdown that could reasonably be expected to threaten the health or safety of the vessel or crew or cause a significant financial loss through fish spoilage. The owner and operator of each vessel that qualifies for the emergency would be required to ensure the submission of the notice directly to the WCPFC by fax or email within 12 hours of completion of the transshipment and the notice would be required to contain the same information described above for the notice for high seas transshipments, as well as a description of the reasons for the emergency transshipment.

Similar to the requirement to submit the transshipment report form, submission of the notices would require vessel owners and operators to bear the costs of some new administrative responsibilities. However, it is unlikely that these administrative responsibilities would be so burdensome or costly that they would affect the fishing patterns and practices of any individual vessel or of any fleet as a whole. Completion of the notices is estimated to take approximately 15 minutes per respondent. Some vessels may not be equipped with fax or email capabilities.

Under Alternative B, observer coverage would be required for transshipments that take place at sea in the Convention Area. The specific requirements would be dependent upon the type of vessel and the type of fish to be transshipped. The observers would be required to be from the WCPFC Regional Observer Programme (ROP) (i.e., observers authorized by the WCPFC in accordance with any procedures established by the WCPFC to undertake vessel observer duties as part of the WCPFC ROP). Observers deployed by NMFS are currently considered part of the WCPFC ROP, as the program has completed the required authorization process to become part of the WCPFC ROP.

For most transshipments, an observer would be required on board the receiving vessel. However, for transshipments to receiving vessels less than or equal to 33 meters in length, and not involving purse seine-caught fish or frozen longline-caught fish, the observer could be deployed on either the offloading vessel or receiving vessel. There would also be delayed implementation of the observer requirements for transshipments to receiving vessels greater than 33 meters in length and involving only troll-caught or pole-and-line-caught fish – an observer would be required on the receiving vessel starting on January 1, 2013. All vessel owners and operators would need to confirm that a WCPFC observer is available to monitor the transshipment before beginning the transshipment, even when the requirement to carry an observer falls on the other vessel involved in the transshipment. Owners and operators of vessels receiving transshipment would also need to ensure that transshipments are not received from more than one offloading vessel at a time unless there is a separate WCPFC observer available on either the offloading or receiving vessel to monitor each additional transshipment.

The owner and operator of a vessel requiring an observer for transshipments at sea would need to inform the NMFS Pacific Islands Regional Administrator at least 72 hours (not

including weekends and holidays) before leaving port of the need for an observer. The notice would need to include the name of the vessel, name of the operator, intended departure and return date, and a telephone number at which the owner or operator may be contacted during the business day (8 a.m. to 5 p.m. Hawaii Standard Time).

Vessels in the U.S. WCPO purse seine fleet are prohibited from conducting at-sea transshipments pursuant to 50 CFR 200.216(b), and thus, would not be subject to the observer requirements of the proposed rule.

As stated in Section 3.1.1.3 above, for vessels in the albacore troll fisheries, although fishing activity, and thus transshipment activity, has been low in recent years due to economic and perhaps oceanographic conditions, it is likely that conditions could become more favorable for albacore troll vessels in the WCPO in the foreseeable future. Using data in Table 9, an average of 39 at-sea transshipments per year were conducted from 1990-2009 by vessels in the North Pacific and South Pacific albacore troll fisheries. For troll-caught fish, the requirement to carry an observer would fall on the receiving vessel, unless the receiving vessel is less than or equal to 33 meters in length, in which case, either the offloading or receiving vessel would be required to carry an observer. However, U.S. transshipments are generally to foreign-flagged receiver vessels, expected to be larger than 33 meters in length, so the requirement to carry an observer would not be expected to fall on the U.S. vessel.

As discussed in Section 3.1.1.2 above, vessels in the Hawaii-based longline fleet have conducted at-sea transshipments in recent years and are expected to continue to do so. Using the data in Table 4, an average of 12 transshipments per year were conducted between 1993 and 2009 by U.S. longline vessels subject to the requirements of 50 CFR 665, and anecdotal information and searches of permit information indicates that all or most of these vessels were in the American-Samoa-based or Hawaii-based longline fleets. Vessels in the shallow-set sector of the Hawaii longline fishery[22] have 100% observer coverage, while vessels in the deep-set sector of the Hawaii longline fishery and in the American Samoa-based fleet have 20% observer coverage. Vessels in both the Hawaii and American Samoa longline fleets are required to provide notice to NMFS before leaving port (50 CFR 665.803)[23]; the proposed rule would allow the pre-trip notification for observer placement and the notice required under 50 CFR 665.803 to be provided simultaneously.

Given the level of observer coverage and the existing requirements, vessels in the shallow-set sector of the Hawaii-based longline fleet would be largely unaffected by the observer requirements in the proposed rule. The proposed rule under Alternative B may have the effect of requiring vessels in the deep-set longline sector of the Hawaii-based

[22] The deep-set component of the Hawaii longline fishery targets tuna species at depths generally ranging from 100 to 300 meters; the shallow-set component targets swordfish at depths generally less than 100 meters. Existing regulations in 50 CFR part 665 include definitions that distinguish these two types of fishing trips.

[23] The notice requirements for vessels in the American Samoa fleet are for vessels greater than 40 feet in length.

fleet and vessels in the American Samoa longline fleet to carry observers on trips where they do not currently carry observers. Thus, the observer requirements of the proposed rule under Alternative B may have the effect of causing some vessel owners and operators to return to port or move to areas outside the Convention Area to conduct transshipments or could cause some vessel owners and operators to forego transshipments altogether.

Situations could also arise where vessels that wish to conduct at-sea transshipments may be prohibited from doing so due to lack of having an observer on board, because they did not anticipate the transshipment prior to leaving port. However, emergency transshipments at sea (i.e., a transshipment conducted under circumstances of force majeure or other serious mechanical breakdown that could reasonably be expected to threaten the health or safety of the vessel or crew or cause a significant financial loss through fish spoilage) would be allowed without observer coverage. Overall, the observer requirements are not expected to affect the fishing patterns or practices of the shallow-set sector of the Hawaii-based longline fleet, but could cause some changes to the fishing patterns and practices of the deep-set sector of the Hawaii-based longline fleet and to the American Samoa-based longline fleet.

The proposed rule under Alternative B would also require the owners and operators of U.S. fishing vessels used to fish for HMS to ensure that any vessel with which they: (1) engage in transshipment (to or from) in the Convention Area; (2) engage in bunkering in the Convention Area; or (3) exchange supplies, falls into certain categories. The vessels must be: (1) flagged by a WCPFC Member or Cooperating Non-Member; (2) on the WCPFC Interim Register (Interim Register) of non-CCM Carrier and Bunker Vessels, which is available at http://www.wcpfc.int/; or (3) on the WCPFC Record of Fishing Vessels, which is available at http://www.wcpfc.int/. The Interim Register is scheduled to expire 60 days after the WCPFC's Regular Annual Session in 2012, unless the WCPFC decides otherwise. According to CMM 2009-01, the WCPFC expects that after the WCPFC's Regular Annual Session in 2013, the majority of carrier and bunker vessels will be flagged to WCPFC Members or Cooperating Non-Members. Thus, it is unlikely that implementation of this provision of the proposed rule will have any effect on the fishing patterns and practices of U.S. fleets operating in the Convention Area, as it is likely that all vessels with which U.S. vessels would conduct transshipments, bunkering, and other supply exchange activities would fall into the designated categories.

Under Alternative B, vessel owners and operators would be required to ensure the submission of notices to the WCPFC six hours prior to entering and six hours prior to exiting the Eastern SMA, and submit a copy to NMFS. Submission of the notices would require vessel owners and operators to bear the costs of some new administrative responsibilities. However, it is unlikely that these administrative responsibilities would be so burdensome or costly that they would affect the fishing patterns and practices of any individual vessel or of any fleet as a whole. Completion of the notices is estimated to take approximately 15 minutes per respondent. Some vessels may not be equipped with fax or email capabilities. As indicated in Section 3.1.1.2 above, U.S. longline vessels in the Hawaii and American Samoa-based longline fleets would likely be the most affected by

these requirements; an average of three vessels per year from these fleets have fished in the Eastern SMA in recent years.

Alternative B would also implement the discard reporting requirements and net sharing prohibition for U.S. purse seine vessels operating in the Convention Area, with the narrow exception for allowing net sharing between U.S. purse seine vessels on the final set of the transferring vessel's trip when there is insufficient well space for the fish. Completion of the discard report form is expected to take 30 minutes per respondent. Vessel owners and operators would then be required to ensure the submission of the form within 48 hours after any discard to the WCPFC with a copy to NMFS by fax or email. A hard copy of the report would be required to be submitted to the observer on board the vessel. As shown in Table 3 above, in recent years, there were a maximum of 35 discard events per vessel per year. Based on the incomplete data for 2010, it is likely that implementation of the catch retention requirements has substantially reduced the number of discard events per vessel. The net sharing requirements would further reduce the number of discard events per vessel, because vessel owners and operators would be able to transfer fish from nets to other U.S. vessels instead of discarding fish on the last set of the trip when the vessel is fully loaded. However, vessels that currently use net sharing to transfer fish to foreign vessels would be unable to do so. Based on NMFS unpublished data, three percent of the discards made by vessel owners and operators in 2008 and 2009 were because the vessel was fully loaded; five percent of the discards made by vessel owners and operators from January 1 to June 13, 2010 were because the vessel was fully loaded; and seven percent of the discards made by vessel owners and operators from June 14 to December 31, 2010 were because the vessel was fully loaded. Data for 2008 are complete; data for 2009 and 2010 are incomplete. Given that vessel owners and operators are currently allowed to discard their catch of target species only in limited circumstances, it is unlikely that the administrative responsibilities associated with completing and submitting the discard form would be so burdensome or costly that they would affect the fishing patterns and practices of any individual vessel or of the fleet as a whole.

The net sharing prohibition would affect the operations of U.S. purse seine vessels that currently conduct net sharing with foreign vessels or on sets other than the last set of a trip. Given that net sharing on other than the final set of a trip generally occurs only due to equipment malfunctions, and that vessel owners and operators would have the option of transferring fish to U.S. vessels on the final set of a trip if the vessel is fully loaded, it is unlikely that the net sharing prohibition would be so burdensome or costly that it would affect the fishing patterns and practices of any individual vessel or of the fleet as a whole. Moreover, the emergency transshipment provisions in the proposed rule would allow purse seine vessels to conduct emergency transshipments that would otherwise be prohibited. So, in the case of an equipment malfunction at sea, the owners and operators of purse seine vessels would generally be able to transship the fish.

Overall, the provisions of Alternative B are unlikely to substantially affect the fishing patterns and practices of the U.S. fleets operating in the WCPO. The requirements to complete and submit the transshipment report form, discard report form, and notices

would have associated costs and administrative burdens. However, these estimated costs (about one dollar for each transshipment report form and discard report form, and the costs of sending a fax or email for the notices or discard report forms – also estimated at $1.00 per respondent) and administrative burdens (an estimated 60 minutes per respondent for each transshipment report form, 30 minutes per respondent for each discard report form, and an estimated 15 minutes per respondent for each notice) would be unlikely to change the fishing patterns and practices of individual vessels or any fleets. The at-sea observer requirements could (1) cause some vessels to transship at port or outside the Convention Area when they would have otherwise transshipped at sea in the Convention Area, or (2) cause some vessels to forego transshipments altogether. The affected vessels would be primarily those in the deep-set sector of the Hawaii-based longline fleet or in the American Samoa-based longline fleet. The net sharing prohibition could also affect the operations of vessels in the U.S. purse seine fleet that currently conduct net sharing with foreign vessels or on other than the last set of a trip.

3.1.3 ALTERNATIVE C: UNIFORM TIMEFRAME FOR SUBMISSION OF TRANSSHIPMENT REPORT; CHOICE OF PROVIDING NOTICE TO EITHER WCPFC OR NMFS

As described in Chapter 2, Section 2.2.3, Alternative C would be the same as Alternative B for the majority of the provisions to be implemented under the proposed rule. However, under this alternative vessel owners and operators would be required to provide the completed transshipment report form to NMFS no later than 10 calendar days within completion of the transshipment for all transshipments. Vessel owners and operators also would have the option of either providing the notice for high seas transshipments to NMFS at least one U.S. Federal business day plus 36 hours in advance of the transshipment (i.e., a minimum of 60 hours before the transshipment), with the time calculated in Hawaii Standard Time, or, if unable to obtain the required information so far in advance, providing the notice directly to the WCPFC at least 36 hours in advance of the transshipment. This would allow vessel owners and operators flexibility in determining to whom to submit the notice. Vessel owners and operators generally submit information to NMFS, and NMFS submits the information to the WCPFC. Alternative C would be in keeping with that practice. The uniform timeframe for submission of the transshipment report form may make it easier for vessel owners and operators to remember exactly when the form would need to be submitted, but may pose some additional burdens on vessel owners and operators who are accustomed to complying with existing requirements that allow them additional time to submit transshipment reports (e.g., currently owners and operators of albacore troll vessels have 30 days within completion of the transshipment to submit the logbook form). However, because the differences between Alternative B and Alternative C would be limited to minor administrative matters, this alternative would not cause impacts to the U.S. fleets operating in the Convention Area other than the impacts discussed above for Alternative B.

3.1.4 ALTERNATIVE D: NET SHARING WITH FOREIGN-FLAGGED VESSELS

As described in Chapter 2, Section 2.2.4, Alternative D would be the same as Alternative B for the majority of the provisions to be implemented under the proposed rule. However, under this alternative owners and operators of U.S. purse seine vessels would be able to transfer fish on the final set of a trip via net sharing to foreign-flagged purse seine vessels as well as to U.S. purse seine vessels, when there is insufficient well space. Thus, this alternative would be less restrictive for U.S. purse seine vessels and would provide such vessels with an additional option for transferring fish to other vessels.

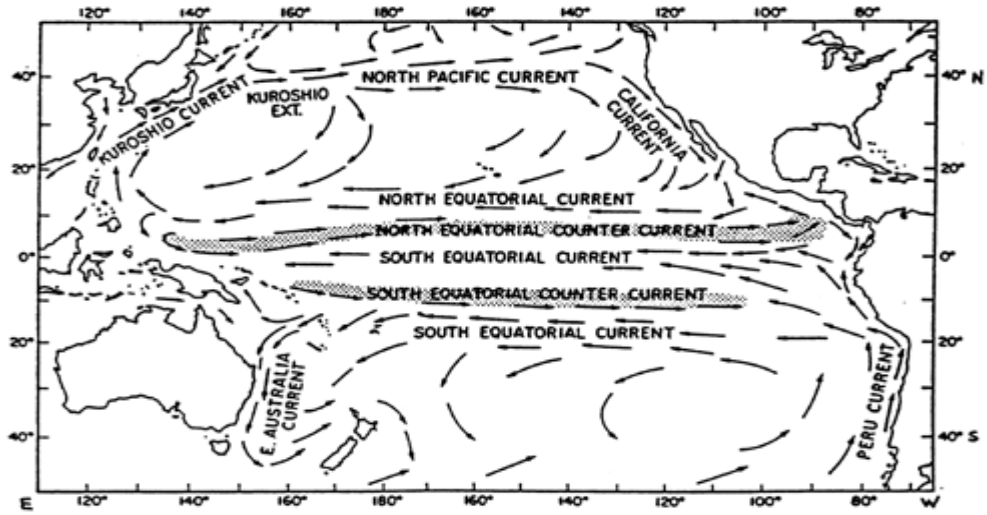
3.2 ANALYSIS OF IMPACTS TO THE PHYSICAL ENVIRONMENT

This section contains excerpts from Section 3.1 of NMFS 2009a and Section 3.1.1 of NMFS 2009c.

The physical reach of the Western and Central Pacific Fisheries Convention, or the Convention Area (as shown in Figure 1 in Chapter 1), comprises all waters of the Pacific Ocean bounded to the south and to the east by the following line: from the south coast of Australia due south along the 141° meridian of east longitude to its intersection with the 55° parallel of south latitude; thence due east along the 55° parallel of south latitude to its intersection with the 150° meridian of east longitude; thence due south along the 150° meridian of east longitude to its intersection with the 60° parallel of south latitude; thence due east along the 60° parallel of south latitude to its intersection with the 130° meridian of west longitude; thence due north along the 130° meridian of west longitude to its intersection with the 4° parallel of south latitude; thence due west along the 4° parallel of south latitude to its intersection with the 150° meridian of west longitude; thence due north along the 150° meridian of west longitude.

Figure 4 illustrates the two main subtropical gyres (the North Pacific subtropical gyre in the northern hemisphere and the South Pacific subtropical gyre in the southern hemisphere) and the other major Pacific Ocean currents.

Figure 4: The dominant ocean current systems in the Pacific Ocean



Source: Wild and Hampton (1991).

Subtropical gyres rotate clockwise in the northern hemisphere and counter clockwise in the southern hemisphere in response to trade and westerly wind forces. Due to this, the central Pacific Ocean (~20° N latitude-20° S latitude) experiences weak mean currents flowing from east to west, while the northern and southern portions of the Pacific Ocean experience a weak mean current flowing from west to east. Embedded in the mean flow are numerous mesoscale eddies, created from wind and current interactions with the ocean's bathymetry.[24] These eddies, which can rotate either clockwise or counter clockwise, typically have important biological impacts, such as creating areas of high biological productivity.

Variability within the ocean–atmosphere system results in changes in winds, rainfall, currents, water column mixing, and sea-level heights, which can have profound effects on regional climates as well as on the abundance and distribution of marine organisms. In the tropical Pacific there is a limited seasonal variation, yet there is a strong interannual variability which in turn affects the entire Pacific Ocean (Langley, Williams, Lehodey et al. 2004). The scientific community has become increasingly aware of the occurrence and importance of long-term (decadal-scale) oceanographic cycles and of their relationship to cycles in the population sizes of some species of fish (Chavez, Ryan, Lluch-Cota et al. 2003). These naturally occurring cycles can either mitigate or accentuate the impact of fishing mortality on all species, especially those targeted in HMS fisheries. El Niño Southern Oscillation (ENSO)[25] events, including meso-scale events, such as El Niño and

[24] "Mesoscale eddies are turbulent or spinning flows on scales of a few hundred kilometers" (Stewart 2005).

[25] ENSO events include the full range of variation observed between El Niño and La Niña events. El Niño is characterized by a large-scale weakening of the tradewinds and warming of the surface layers in the eastern and central equatorial Pacific. El Niño events occur irregularly at intervals of 2–7 years, although the average is about once every 3–4 years. These events typically last 12–18 months, and are accompanied by swings in the Southern Oscillation, an interannual "see-saw" in tropical sea level pressure between the eastern and western hemispheres. During El Niño, unusually high atmospheric sea level pressures develop in the western tropical Pacific and Indian Ocean regions, and unusually low sea level pressures develop in

La Niña, and shorter term phenomena such as cyclonic eddies near the Hawaiian Islands (Seki, Lumpkin, and Flament 2002), impact the recruitment and fishing vulnerability of HMS.

Climate Change

Climate change can affect the marine environment by impacting the established hydrologic cycle (a change in precipitation and evaporation rates) (Roessig et al. 2004). Climate change has been associated with other effects to the marine environment, including rising water temperatures, as well as related changes in ice cover, salinity, oxygen levels, and circulation (Intergovernmental Panel on Climate Change 2007). These effects are leading to shifts in the range of species, changes in algal, plankton, and fish abundance (Solomon et al. 2007), and causing damage to coral reefs (Scavia et al. 2002). Climate change may also be increasing the incidence of disease in aquatic organisms (Roessig et al. 2004). Studies on plankton ecosystems, demonstrate that climate change is affecting phytoplankton, copepod herbivores, and zooplankton carnivores, which cause effects to ecosystem services, such as oxygen production, carbon sequestration, and biogeochemical cycling (Richardson et al. 2004). These studies concluded that fish, seabirds, and marine mammals will need to adapt to a changing spatial distribution of primary and secondary production within pelagic marine ecosystems (Richardson et al. 2004).

Studies conducted by Perry et al. (2005) indicate that climate change is impacting marine fish distributions, which in turn may have important ecological impacts on fish as well as important impacts on commercial fisheries. How climate change can impact commercial fisheries include: (1) increases in ocean stratification leading to less primary production, which in turn leads to less overall energy for fish production; (2) decreases in spawning habitat from shifts in areas of well-mixed water zones leading to decreased stock sizes; and (3) changes in currents that may lead to changes in larval dispersals and retention, which could lead to decreases in stock sizes (Roessig et al. 2004).

None of the alternatives – implementation of the proposed rule under any of the action alternatives or the No-Action Alternative – has the potential to cause substantial direct or indirect effects upon the physical environment of the Convention Area. Alternative A, the No-Action Alternative, would not cause any effects to current fishing patterns or practices. Alternative B, Alternative C, or Alternative D could each cause minor changes to the fishing patterns or practices of the deep-set sector of the Hawaii-based longline fleet or to the American Samoa-based longline fleet, but these changes would not be expected to affect the physical environment. The potential increase in fuel use for vessels that decide to move to other locations to conduct transshipment activities, or that decide to forego transshipments and return to port more frequently, under Alternative B, Alternative C, or Alternative D would be so small (based on the data in Table 4, above,

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the southeastern tropical Pacific. Southern Oscillation tendencies for unusually low pressures west of the dateline and high pressures east of the dateline have also been linked to periods of anomalously cold equatorial Pacific sea surface temperatures sometimes referred to as La Niña (NMFS 2004).

there has been a maximum of 18 transshipments per year for the longline fleets in recent years) that any substantial contributions to climate change would not be expected.

Alternative B, Alternative C, or Alternative D could also cause some operational changes to the U.S. purse seine fleet, because owners and operators of some vessels currently conduct net sharing activities on other than the final set of a trip or with foreign-flagged vessels, but such changes are not expected to affect the physical environment. Under all of the action alternatives, the option to transfer fish via net sharing to other U.S. purse seine vessels would be available on the final set of a trip when vessels are fully loaded; net sharing on other than the final set of a trip is generally conducted only due to equipment malfunctions, and the provisions for emergency transshipments under the proposed rule would generally allow at-sea transshipments involving purse seine vessels in such situations. Under Alternative D, vessel owners and operators would also be able to transfer fish via net sharing to foreign-flagged vessels on the final set of a trip when vessels are fully loaded, so Alternative D would be expected to cause fewer operational changes to the U.S. purse seine fleet than the other two action alternatives.

3.4 ANALYSIS OF IMPACTS TO BIOLOGICAL RESOURCES (TARGET SPECIES, NON-TARGET SPECIES, TROPHIC DYNAMICS)

This section contains excerpts from Sections 3.4 and 3.5 of NMFS 2009a and Section 3.2 of NMFS 2009c, including additional or updated information, as appropriate.

3.4.1 PRINCIPAL TARGET STOCKS

Table 11 summarizes the current status of the main target stocks of U.S. vessels fishing in the Convention Area: albacore (*Thunnus alalunga)*, bigeye tuna (*Thunnus obesus)*, skipjack tuna *(Katsuwonus pelamis)*, yellowfin tuna (*Thunnus albacares)*, and swordfish *(Xiphias gladius)*. The table expresses overfishing (indicating excessively high exploitation rate) and overfished (indicating excessively low stock size) status in terms of the status determination criteria specified in the relevant FMPs or FEPs, as required by the MSA. Stock status with respect to these two criteria is presented as reported in NMFS' quarterly stock status updates (National Marine Fisheries Service 2011).

Table 11: Stock Status Summary of Main Target HMS in the Pacific Ocean

Species	Stock	Overfishing?	Overfished?
Albacore (*Thunnus alalunga)*	North Pacific	Unknown	Unknown
	South Pacific	No	No
Bigeye tuna (*Thunnus obesus)*	Pacific	**Yes**	No
Skipjack tuna *(Katsuwonus pelamis)*	Western central Pacific	No	No
Yellowfin tuna (*Thunnus albacares)*	Western central Pacific	No	No
	Eastern Pacific	**Yes**	No
Swordfish *(Xiphias gladius)*	North Pacific	No	No
Bluefin tuna (*Thunnus orientalis*)[26]	Pacific	**Yes**	No

Source: NMFS (2011).

Alternative A, the No-Action Alternative is not expected to cause changes to fishing patterns and practices, and thus, would not be expected to affect the status of main target stocks. However, if the requirements in the proposed rule were not implemented, there would be a greater risk of IUU fishing activities, which could adversely affect the stocks.

Under Alternatives B, C, or D, the at-sea observer requirements could cause some vessel owners and operators in the deep-set sector of the Hawaii-based longline fleet or in the American Samoa-based longline fleet to transship at port or at sea outside the Convention Area when they would have otherwise transshipped at sea or cause some vessel owners and operators to forego transshipments altogether. Vessels that decide to forego transshipments may either stay at sea and have their vessels fill up more quickly or return to port more frequently; in either case, there is a small possibility that implementation of the action alternatives could decrease overall fishing effort and lead to small beneficial impacts on the target stocks. Given the small number of transshipments that have taken place in these fleets in recent years (a maximum of 18 in 2009 – see Table 4) and the fact that vessels in the shallow-set sector of the fishery have 100% observer coverage, Alternative B, Alternative C, or Alternative D would not substantially affect the fishing patterns and practices of these fleets. Thus, any effects from Alternative B, Alternative C, or Alternative D on target stocks caught by the Hawaii-based longline fleet (i.e., bigeye tuna, yellowfin tuna, and swordfish) or the American Samoa-based longline fleet (albacore) would not be substantial.

The exceptions to the net sharing prohibition for the purse seine fleet under any of the action alternatives could reduce the amount of fish discarded from purse seine vessels because some vessel owners and operators are not currently conducting any net sharing. Thus, implementation of any of the action alternatives could lead to some minor beneficial effects on the target stocks if the vessel owners and operators receiving the transferred fish decreased their fishing effort, but these changes would likely be too small (net sharing would only be allowed on the final set of a trip when vessels are fully loaded and to U.S. purse seine vessels under Alternatives B and C and to U.S. purse seine vessels or foreign-flagged purse seine vessels under Alternative D) to affect the status of the target stocks. For vessels that currently conduct net sharing on other than the last set of a trip (i.e., due to equipment malfunction) or with foreign-flagged vessels, the net

[26] Not targeted by U.S. fleets.

sharing prohibition could increase the amount of fish discarded, which could lead to some minor adverse effects on the target stocks if the vessel owners and operators that typically receive the fish increase their fishing effort. Given that the option to transfer fish to U.S. vessels on the last set of a trip when the vessel is fully loaded would be available under all the action alternatives, and that any increase in discard activity and associated increase in fishing mortality would be counteracted by decreased discard activity and potential decrease in fishing effort from other vessels, any potential increase in discard activity leading to adverse effects on the target stocks would be minor. In situations involving equipment malfunctions, vessel owners and operators would also generally be able to transship the fish at sea, under the emergency transshipment prohibitions of the proposed rule. Alternative D would include the option of transferring fish on the last set of a trip when the vessel is fully loaded to foreign-flagged vessels; thus, any adverse effects to target stocks would be less under Alternative D than under the other action alternatives.

3.4.2 NON-TARGET SPECIES

The U.S. vessels that would be affected by implementation of the proposed rule under either of the action alternatives catch various non-target species in addition to the species they target, with catches of each species depending on the method of fishing. As discussed in Section 3.1.1 above, Alternative A is not expected to cause changes to current fishing patterns or practices, and thus, would not be expected to have any effects on non-target species, though there could be a greater risk of IUU fishing activities than if any of the action alternatives were implemented, which could adversely affect the stocks. Alternatives B or C could cause minor changes to the fishing patterns and practices of the Hawaii-based longline fleet or to the American Samoa-based longline fleet. As discussed in Section 3.4.1 above for target species, although these changes to fishing patterns and practices could include an overall decrease in fishing effort leading to minor beneficial effects on non-target species, these changes would likely be too small to affect the status of the stocks of non-target species.

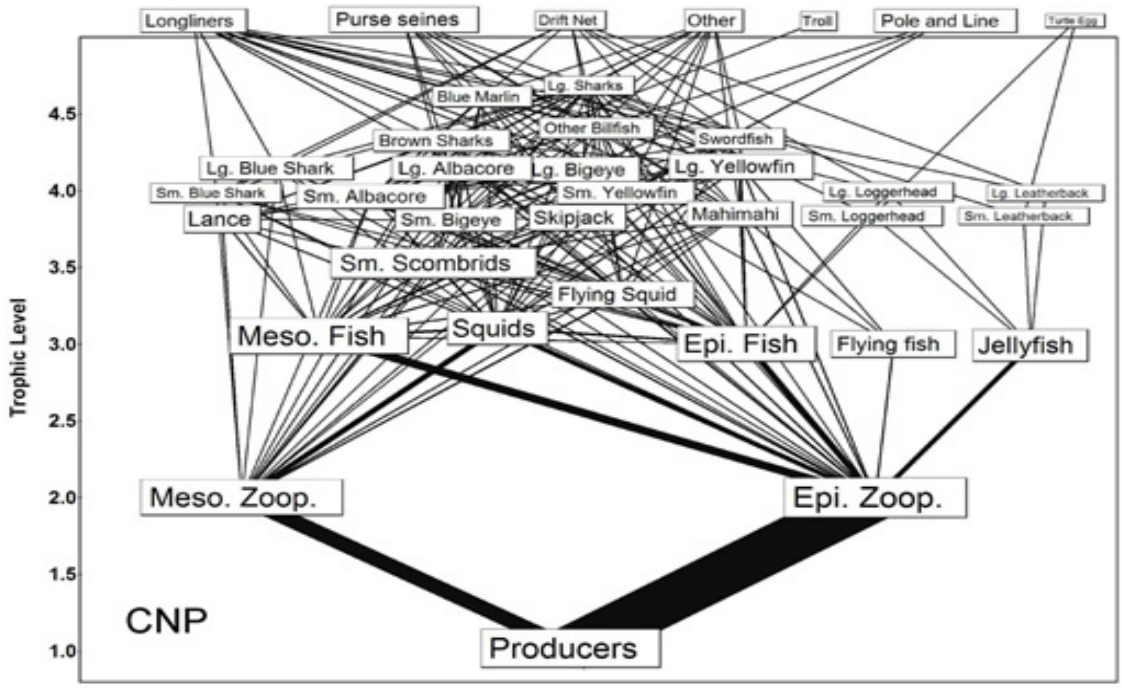
The exceptions to the net sharing prohibition for the purse seine fleet under any of the action alternatives could reduce the amount of fish discarded from purse seine vessels, because some vessel owners and operators are not currently conducting any net sharing. Thus, implementation of any of the action alternatives could lead to some minor beneficial effects on the non-target species if the vessel owners and operators receiving the transferred fish decreased their fishing effort, but these changes would likely be too small (net sharing would only be allowed on the final set of a trip when vessels are fully loaded and to U.S. purse seine vessels under Alternatives B and C and to U.S. purse seine vessels or foreign-flagged purse seine vessels under Alternative D) to affect the status of the stocks of non-target species. For vessels that currently conduct net sharing on other than the last set of a trip (i.e., due to equipment malfunction) or with foreign-flagged vessels, the net sharing prohibition could increase the amount of fish discarded, which could lead to some minor adverse effects on the non-target species if the vessel owners and operators that typically receive the fish increase their fishing effort. Given that the option to transfer fish to U.S. vessels on the last set of a trip when the vessel is fully

loaded would be available under all the action alternatives, and that any increase in discard activity and associated increase in fishing mortality would be counteracted by a decrease in discard activity and potential decrease in fishing effort from other vessels, any potential increase in discard activity leading to adverse effects on the non-target species would be minor. Alternative D would include the option of transferring fish on the last set of a trip when the vessel is fully loaded to foreign-flagged vessels; thus, any adverse effects to non-target species would be less under Alternative D than under the other action alternatives.

3.4.3 BIODIVERSITY AND ECOSYSTEM FUNCTION

Figure 5 depicts an idealized food chain model from the central North Pacific Ocean.

Figure 5: Trophic levels in the Central North Pacific Ocean



Source: Hinke, Kaplan, Aydin et al. 2004.

Understanding an ecosystem implies understanding its food web and the exchanges between the different trophic levels in the food chain. Food webs show the dynamics of biomass production and partitioning in an ecosystem. Even minor changes in abiotic factors can cause changes in the spatial distribution of primary and secondary pelagic production (Richardson, Jackson, Ducklow et al. 2004). These changes can be increases in sea surface temperatures which may lead to increases in phytoplankton abundance or decreases in phytoplankton abundance in cooler regions (Richardson, Jackson, Ducklow et al. 2004). Removing tuna by commercial fisheries or other changes in biotic factors implies possible positive effects on mid-trophic level species because competition by top

predators is eliminated so more mid-trophic level species will survive (Halpern, Cottenie, and Broitman et al. 2006).

Due to the unique recruitment history of each stock, the variability in biomass over time and among stocks is not attributed entirely to fishing (Sibert, Hampton, Kleiber et al. 2006). Cox, Essington, Kitchell et al., (2002) found that it was possible that declines in top predators could result in an increase in smaller tunas that constitute prey for the larger tunas. The magnitude of predation as a component of natural mortality is still unclear, as are the effects of fishing mortality on predation rates and abundance (Cox, Essington, Kitchell et al. 2002).

As discussed in Section 3.1.1 above, Alternative A is not expected to cause changes to current fishing patterns and practices, and thus, would not be expected to have any effects on the marine ecosystem or to affect biodiversity. Although the at-sea observer provisions under Alternative B, Alternative C, or Alternative D could cause minor changes to the fishing patterns and practices of the Hawaii-based longline fleet and the American Samoa-based longline fleet, these changes would likely be too small to affect the ecosystem or biodiversity. The reduction in discard events and any associated decrease in fishing effort from purse seine vessels under any of the action alternatives from the net sharing requirements would also likely be too small to affect the ecosystem or biodiversity, as would the increase in discard events and any associated increase in fishing effort from purse seine vessels that currently conduct net sharing on other than the last set of a trip or with foreign-flagged vessels. Moreover, under Alternative D, U.S. vessels would have the option to transfer fish via net-sharing to foreign-flagged vessels on the final set of a vessel's trip when the vessel is fully loaded.

3.5 ANALYSIS OF IMPACTS TO PROTECTED RESOURCES

This section contains excerpts from Section 3.6 of NMFS 2009a and Sections 3.2 and 3.1.3 of NMFS 2009c.

3.5.1 THREATENED AND ENDANGERED SPECIES

Table 12 includes species listed under the U.S. Endangered Species Act (ESA; 16 USC 1531 *et seq.*) that could be affected by any changes to fishing patterns and practices in the Convention Area. NMFS has jurisdiction over all the species listed except for the dugong (*Dugong dugon),* Short-tailed albatross (*Phoebastria albatrus*), Newell's shearwater (*Puffinus auricularis newelli*), Hawaiian Dark-Rumped petral (*Pterodroma phaeopygia sandwichensis*), Chatham petrel (*Pterodroma axillaris*), Fiji petrel (*Pseudobulweria macgillivrayi*), and Magenta petrel (*Pterodroma magentae*). The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over these seven species.

Table 12: Listing Status of Species in the WCPO Listed as Endangered or Threatened Under the U.S. Endangered Species Act

Scientific name	Common name	ESA
Balaenoptera musculus	Blue whale	Endangered
Balaena mysticetus	Bowhead whale	Endangered
Balaenoptera physalus	Fin whale	Endangered
Megaptera novaeangliae	Humpback whale	Endangered
Eubalaena japonica	North Pacific right whale	Endangered
Balaenoptera borealis	Sei whale	Endangered
Physeter macrocephalus	Sperm whale	Endangered
Eubalaena australis	Southern right whale	Endangered
Monachus schauinslandi	Hawaiian monk seal	Endangered
Eumetopias jubatus	Steller sea lion (western stock)	Endangered
Dugong dugon	Dugong	Endangered
Phoebastria albatrus	Short-tailed albatross	Endangered
Puffinus auricularis newelli	Newell's shearwater	Threatened
Pterodroma phaeopygia sandwichensis	Hawaiian dark-rumped petrel	Endangered
Pterodroma axillaris	Chatham petrel	Endangered
Pseudobulweria macgillivrayi	Fiji petrel	Endangered
Pterodroma magentae	Magenta petrel	Endangered
Dermochelys coriacea	Leatherback turtle	Endangered
Caretta caretta	Loggerhead turtle	Threatened/Endangered[1]
Chelonia mydas	Green turtle	Threatened
Lepidochelys olivacea	Olive Ridley turtle	Threatened
Eretmochelys imbricata	Hawksbill turtle	Endangered

Source: http://www.nmfs.noaa.gov/pr/species/esa/, 2011; http://www.fws.gov/pacificislands/teslist.html.
[1]In September 2011, NMFS and USFWS listed nine distinct population segments of loggerhead turtles. Five of the distinct population segments were listed as endangered and four were listed as threatened. The two distinct population segments in the Pacific Ocean (North Pacific and South Pacific) are listed as endangered. See 76 FR 58868.

Although the at-sea observer provisions of Alternative B, Alternative C, or Alternative D could cause minor changes to the fishing patterns and practices of the Hawaii-based longline fleet and the American Samoa-based longline fleet, these changes are not expected to be substantial. As discussed above in Section 3.1.2, the changes would include only either a reduction in the number of transshipments or a small potential shift in transshipments that take place at sea to other areas; this could lead to an overall decrease in fishing effort. Although this decrease in fishing effort could lead to a reduction in the number of interactions with ESA-listed species, meaning that there could be some minor beneficial effects to ESA-listed species, any effects from these changes in terms of catches and fishing mortality rates to protected species are expected to be so minor as to be indistinguishable from typical year-to-year variations in catches among species driven by changing oceanic and economic conditions.

The net sharing prohibition and the exceptions to the net sharing prohibition under any of the action alternatives could also lead to minor operational changes for the U.S. purse

seine fleet. However, these minor changes (a small decrease in the amount of fish discarded by some vessels that do not currently conduct net sharing on the final set of a trip when the vessel is fully loaded and a small increase in the amount of fish discarded by other vessels that currently conduct net sharing on other than the final set of a trip or with foreign-flagged vessels) would not be expected to affect ESA-listed species. As discussed above in Sections 3.1.2 to 3.1.4, any increase in fishing effort by vessels that would otherwise have received fish via net sharing (e.g., foreign-flagged vessels under Alternative B), would be counteracted by the potential decrease in fishing effort of vessels that would receive fish and that currently do not do so.

Thus, the proposed rule under any of these action alternatives would not cause any impacts to ESA-listed threatened or endangered species that have not been addressed in prior consultations.

3.5.2 MARINE MAMMALS

All marine mammals receive protection under the Marine Mammal Protection Act (MMPA; 16 USC 1361, *et seq*.). The marine mammals found in the WCPO but not listed under the ESA as threatened or endangered (i.e., not included in Table 12, above) are listed in Table 13 below. Implementation of the proposed rule under any of the action alternatives would not be expected to cause any impacts to marine mammals not previously considered or authorized by the commercial taking exemption under section 118 of the MMPA. Although the at-sea observer provisions of Alternatives B, C or D could cause minor changes to the fishing patterns and practices of the Hawaii-based longline fleet or to the American Samoa-based longline fleet, as discussed above in Section 3.1.2, these changes are not expected to be substantial and are not expected to result in any increased impacts to marine mammals. In fact, the changes could lead to an overall decrease in fishing effort, which could have some minor beneficial effects on marine mammals. The reduction in discard events from some purse seine vessels and the increase in discard events from other purse seine vessels that could be caused by the net sharing requirements under any of the action alternatives and any associated changes to fishing effort would also not be expected to be substantial, and thus, would not be expected to affect marine mammals.

Table 13: Non-ESA Listed Marine Mammals that Occur in the WCPO

Species name	Common name
Balaenoptera acutorostrata	Minke whale
Balaenoptera bonaerensis	Antarctic minke whale
Balaenoptera edeni	Bryde's whale
Berardius arnuxii	Arnoux's beaked whale
Callorhinus ursinus	Northern Fur Seal
Caperea marginata	Pygme right whale
Delphinus delphis	Short-beaked common dolphin
Eschrichtius robustus	Gray whale
Feresa attenuata	Pygmy killer whale
Globicephala macrorhynchus	Short-finned pilot whale
Globicephala melas	Long-finned pilot whale
Grampus griseus	Risso's dolphin
Hyperoodon planifrons	Southern bottlenose whale
Indopacetus pacificus	Longman's beaked whale
Kogia breviceps	Pygme sperm whale
Kogia sima	Dwarf sperm whale
Lagenodelphis hosei	Fraser's dolphin
Lagenorhynchus cruciger	Hourglass dolphin
Lagenorhynchus obliquidens	Pacific white sided dolphin
Lagenorhynchus obscurus	Dusky dolphin
Lissodelphis peronii	Southern right whale dolphin
Mesoplodon bowdoini	Andrew's beaked whale
Mesoplodon densirostris	Blainville’s Beaked Whale
Mesoplodon ginkgodens	Ginkgo-toothed whale
Mesoplodon grayi	Gray's beaked whale
Mesoplodon hectori	Hector's beaked whale
Mesoplodon layardii	Strap-toothed whale
Mesoplodon stejnegeri	Stejneger's beaked whale
Mesoplodon traversii	Spade-toothed whale
Mirounga angustirostris	Northern Elephant Seal
Orcinus orca	Killer whale
Peponocephala electra	Melon headed whale
Phocoena dioptrica	Spectacled porpoise
Phocoena phocoena	Harbor porpoise
Phocoenoides dalli	Dall's porpoise

Pseudorca crassidens	False killer whale[27]
Stenella attenuata	Pantropical spotted dolphin
Stenella coeruleoalba	Striped dolphin
Stenella longirostris	Spinner dolphin
Steno bredanensis	Rough toothed dolphin
Tursiops truncatus	Bottlenose dolphin
Ziphius cavirostris	Cuvier's beaked whale

Source: http://www.wpcouncil.org/Protected/species_mammals.html.

3.6 ESSENTIAL FISH HABITAT (EFH)

The EFH provisions (50 CFR Part 600 Subpart J) of the MSA are intended to maintain sustainable fisheries. NMFS and the Fishery Management Councils must identify and describe EFH and Habitat Areas of Particular Concern (HAPC) for each managed species using the best available scientific data and must ensure that fishing activities being conducted in such areas do not have adverse effects to the extent practicable. This process consists of identifying specific areas and the habitat features within them that provide essential functions to a particular species for each of its life stages. Both the EFH and the HAPC are documented in the FEPs established under the MSA.[28]

EFH and HAPC have been designated in the WCPO for pelagic, bottomfish and seamount groundfish, precious corals, crustaceans, and coral reef species. Table 14 lists the EFH and HAPC for species managed under the various western Pacific FEPs.

[27] NMFS completed a comprehensive status review of the Hawaiian insular false killer whale in response to a petition submitted by the Natural Resources Defense Council to list the Hawaiian insular false killer whale as an endangered species. NMFS has determined that the Hawaiian insular false killer whale is a distinct population segment that qualifies as a species under the ESA and is in danger of extinction throughout its range. NMFS has proposed to list the Hawaiian insular false killer whale as an endangered species.

[28] The FEPs being the FEP for the American Samoa Archipelago, the FEP for the Mariana Archipelago; the FEP for the Pacific Remote Island Areas; the FEP for the Hawaii Archipelago; and the FEP for Pacific Pelagic Fisheries of the Western Pacific Region.

Table 14: EFH and HAPC for Management Unit Species for the Western Pacific Region[1]

Species Group	EFH (juveniles and adults)	EFH (eggs and larvae)	HAPC
Pelagics	Water column down to 1,000 meters	Water column down to 200 meters	Water column down to 1,000 meters that lies above seamounts and banks
Bottomfish	Water column and bottom habitat down to 400 meters	Water column down to 400 meters	All escarpments and slopes between 40-280 meters, and three known areas of juvenile opakapaka habitat
Seamount Groundfish	(adults only): water column and bottom from 80 to 600 meters, bounded by 29°-35°N and 171°E-179°W	(including juveniles): epipelagic zone (0-200 meters) bounded by 29°-35°N and 171°E-179°W	Not identified
Precious Corals	Keahole, Makapuu, Kaena, Wespac, Brooks, and 180 Fathom gold/red coral beds, and Milolii, S. Kauai and Auau Channel black coral beds	Not applicable	Makapuu, Wespac, and Brooks Bank beds, and the Auau Channel
Crustaceans	Lobsters: Bottom habitat from shoreline to a depth of 100 meters Deepwater shrimp: The outer reef slopes at depths between 300-700 meters	Water column down to 150 meters Water column and associated outer reef slopes between 550 and 700 meters	All banks with summits less than 30 meters No HAPC designated for deepwater shrimp
Coral Reef Ecosystems	Water column and benthic substrate to a depth of 100 meters	Water column and benthic substrate to a depth of 100 meters	All Marine Protected Areas identified in FEP, all PRIAs,[2] many specific areas of coral reef habitat

Source: FEP for the American Samoa Archipelago, Table 20 (WPRFMC 2009).
[1] All areas bounded by the shoreline and the outward boundary of the U.S. EEZ, unless otherwise indicated.
[2] Pacific Remote Island Areas.

Implementation of the proposed rule under any of the action alternatives would not cause any adverse impacts to areas designated as EFH or HAPC or to ocean and coastal habitats. The shift in fishing patterns and practices that could be caused under Alternatives B, C, or D could result in an increased number of transshipments that take place in port, so there could be increased vessel activity in coastal or nearshore waters resulting from implementation of any of these alternatives. However, given the small number of transshipments that would be affected (a maximum of 18 transshipments in recent years), and the nature of the activity in these areas (transiting and/or transshipment), implementation of Alternative B, Alternative C, or Alternative D would not be expected to affect EFH, HAPC, or ocean and coastal habitats. The reduction in discard events from some purse seine vessels and the increase in discard events from other purse seine vessels, and any associated changes to fishing effort that could be

caused by the net sharing requirements under any of the action alternatives would not be expected to affect these areas. As discussed in Sections 3.1.2 to 3.1.4 above, any effects on fishing mortality from the net sharing provisions that could lead to effects on living marine resources would be minor; any detrimental effects would be counteracted by beneficial effects and vice versa.

3.7 NATIONAL WILDLIFE REFUGES AND MONUMENTS

Pursuant to the National Wildlife System Administration Act of 1966 (NWSAA; 16 USC 668dd, *et seq*.), USFWS carries out the mission of National Wildlife Refuges (NWRs), which is "to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans." National Monuments are designated by the President using the authority of the Antiquities Act of 1906 (16 U.S.C. 431). This act allows the President to protect areas of "historic or scientific significance." There are 10 NWRs and four National Monuments in the Convention Area: Guam NWR; Baker Island NWR; Howland Island NWR; Jarvis Island NWR; Johnston Island NWR; Kingman Reef NWR; Palmyra Atoll NWR; Rose Atoll NWR; Hawaiian Islands NWR; Midway Atoll NWR; Papahanaumokuakea Marine National Monument; the Marianas Trench Marine National Monument; the Pacific Remote Islands Marine National Monument; and the Rose Atoll Marine National Monument. The shift in fishing patterns and practices that could be caused under Alternatives B, C, or D would not be expected to affect NWRs or National Monuments in the Convention Area, as shifts in the location of transshipments or the shifts in fishing patterns and practices of vessels that decide to forego transshipments would not be expected to occur in these areas. The reduction in discard events from some purse seine vessels, the increase in discard events from other purse seine vessels, and any associated changes to fishing effort that could be caused by the net sharing requirements under any of the action alternatives also would not be expected to affect these areas.

3.8 CUMULATIVE IMPACTS ANALYSIS

A cumulative impact is defined by the CEQ's regulations at 40 CFR 1508.7 as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." And further: "cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

For the purposes of this cumulative impacts analysis, the past actions are all the fishery management actions and the actions of the fleets that have been taken in the affected environment to date, including both domestic and international management actions and actions by U.S. and foreign fleets, which together have resulted in the current management regime, current fishing patterns, and have affected the current status of the fish stocks and other living marine resources in the affected environment. Sections 3.2

through 3.7 above, describe the current status of the stocks of living marine resources and other resources in the Convention Area, which reflect the effects of the majority of past actions in the Convention Area.

Other present actions would include specific actions being taken to manage the fisheries in the Convention Area. The Western Pacific Fishery Management Council is considering several amendments to the FEP for Pacific Pelagic Fisheries of the Western Pacific Region that could affect the status of tuna stocks in the Convention Area. NMFS also plans to implement a decision of the WCPFC that would implement measures to prohibit fishing on data buoys in the Convention Area and could have some beneficial effects on species that aggregate near data buoys. NMFS plans to implement CMM 2009-06's restrictions on high seas transshipments for vessels other than purse seine vessels in a separate rulemaking.

The categories of reasonably foreseeable future actions identified here are: (1) future fishery management actions; and (2) actions that contribute to changes in oceanic conditions.

Future fishery management actions in the first category include actions taken by the United States and other nations to manage their fisheries in the Convention Area, and to some extent, the Pacific Ocean as a whole, particularly HMS fisheries. In the United States, such actions will be driven by a variety of factors, including a number of different statutes with different mandates (e.g., the MSA for federal fisheries generally, the ESA with respect to threatened and endangered marine species, the SPTA to implement the SPTT or terms and conditions as a result of a renegotiated Treaty, the WCPFCIA to implement the decisions of the WCPFC, and the Tuna Conventions Act or other appropriate authority to implement the decisions of the IATTC). Internationally and as a whole, such actions would be driven largely by, in addition to local issues and mandates, internationally agreed measures, including those adopted by the WCPFC and the IATTC. Particularly, actions of other CCMs to implement similar requirements regarding transshipping, bunkering, and the Eastern SMA, could add to the cumulative effects of implementation of this proposed rule. This could help to achieve the key objectives of the CMMs: (1) to establish procedures to obtain and verify data on the quantity and species transshipped in the Convention Area to ensure accurate reporting of catches, so that stock assessments of HMS include better data; and (2) to curtail illegal, unregulated, and unreported fishing activities.

Although specific conservation and management measures by other nations and the United States can be difficult to predict, given the fishing pressure on target stocks of HMS in the Pacific Ocean, it is likely that internationally agreed upon management measures will further constrict fishing capacity, effort, and/or catch. The consequence of such measures being implemented in the fisheries in the WCPO and the Pacific Ocean would be, generally, to improve the status of affected resources.

The second category of future actions are any anthropogenic actions that contribute to changes in oceanographic conditions. Any changes in climate patterns would likely be

associated with changes in oceanographic patterns that would have the potential to impact fishery and other biological resources. The target and non-target species that interact with the fisheries subject to this action tend to be highly migratory, wide-ranging organisms that are biologically tied to temperature regimes. Such species would be expected to respond to global or regional changes in climate and oceans in various aspects of their physiology and behavior. Examples include shifts in their geographic ranges, in the spatial (both horizontal and vertical) and temporal aspects of their migration patterns, and in their reproductive patterns. There could be interactive effects among species, such as local depletion of a given species resulting in less forage available for its predators.

As discussed throughout this chapter, the overall effects to fisheries, target stocks, non-target species, and protected resources from implementation of the proposed rule under Alternative B, Alternative C, or Alternative D would not be substantial. Under Alternatives B, C, or D there could be a potential change in current fishing patterns and practices to relocate transshipments of the Hawaii-based longline fleet or the American Samoa-based longline fleet that would otherwise take place at sea in the Convention Area. However, any effects on resources – either beneficial or adverse – would be minor. Vessel owners and operators that cannot meet the new at-sea observer requirements under any of these alternatives could decide to transship at port when they would have otherwise transshipped at sea, to transship in locations outside the Convention Area, or to forego transshipments altogether. Vessel owners and operators that decide to forego transshipments would have to return to port more frequently to land their fish as their vessels would fill up more quickly. This could reduce their fishing effort, which could have small beneficial effects on target stock, non-target species, and protected resources, as discussed above. Vessel owners and operators that decide to change their locations for transshipment to the most convenient port or to outside the Convention Area, would expend more fuel for a particular transshipment; this minor increase in fuel use (based on the number of transshipments in recent years) would not be expected to contribute substantially to climate change. The reduction in discard events from some purse seine vessels, the increase in discard events from other purse seine vessels that could be caused by the net sharing requirements under any of the action alternatives, and any associated changes to fishing effort would have negligible effects on target stocks, non-target species, or protected resources.

Other fishery management actions, both present actions and the reasonably foreseeable future management actions would be expected to cause beneficial impacts to the affected environment, though implementation of CMM 2009-06's prohibition on high seas transshipments for vessels other than purse seine vessels would directly add to the effects of Alternative B, Alternative C, or Alternative D. Vessel owners and operators that would be prohibited from transshipping on the high seas could also decide to change their locations for transshipment to the most convenient national zone or port or to forego transshipments altogether. Based on the existing transshipment data for the fleets operating in the WCPO, as discussed throughout this EA, it is unlikely that the cumulative effects would be substantial. The second category of reasonably foreseeable future actions (anthropogenic actions that lead to changes in ocean conditions, including

climate change) could cause substantial adverse impacts to the resources in the affected environment but could cause some beneficial impacts as well.

The cumulative, or additive, impacts on the affected environment from the proposed rule under any of the action alternatives, other past and present actions, and all reasonably foreseeable future actions would likely be beneficial. Due to the small size of any effects to the affected environment under any of the action alternatives, this EA concludes that implementation of the proposed rule under any of the action alternatives would not contribute to cumulative environmental impacts on the affected environment.

3.9 COMPARISON OF ALTERNATIVES

Table 15 describes the potential direct and indirect impacts from each of the alternatives to the resource categories analyzed in this EA.

Table 15: Comparison of Alternatives

Alternative	Effects to the Physical Environment	Effects to Biological Resources	Effects to Protected Resources	Effects to Fishery Participants
Alternative A (No-Action)	Direct: None Indirect: None	Direct: None Indirect: None	Direct: None Indirect: None	Direct: None Indirect: None
Alternative B (Different Timeframes for Submission of the Transshipment Report; Direct Notice to the WCPFC)	Direct: Minor Indirect: Minor	Direct: Minor Indirect: Minor	Direct: Minor Indirect: Minor	Direct: New Administrative Responsibilities; Observer Requirements; Net Sharing Prohibition with Exception to U.S. Vessels Only
Alternative C (Uniform Timeframe for Submission of Transshipment Report; Choice of Providing Notice to Either WCPFC or NMFS)	Direct: Minor Indirect: Minor	Direct: Minor Indirect: Minor	Direct: Minor Indirect: Minor	Direct: New Administrative Responsibilities; Observer Requirements; Net Sharing Prohibition with Exception to U.S. Vessels Only
Alternative D (Net-Sharing with Foreign-Flagged Vessels)	Direct: Minor Indirect: Minor	Direct: Minor Indirect: Minor	Direct: Minor Indirect: Minor	Direct: New Administrative Responsibilities; Observer Requirements; Net Sharing Prohibition with Exception to U.S. Vessels and Foreign-Flagged Vessels

As indicated in Table 15, implementation of the proposed rule under Alternative B, Alternative C, or Alternative D would likely have some minor direct and indirect effects on resources in the affected environment and would impose some new administrative responsibilities and observer requirements on fishery participants. Alternative D would be less restrictive than Alternatives B or C for the U.S. purse seine fleet; under this alternative, vessels in the fleet would have the option of transferring fish via net sharing on the final set of a trip when vessels are fully loaded to either U.S. vessels or foreign-flagged vessels.

APPENDIX A: LIST OF PREPARERS AND LIST OF AGENCIES AND OFFICES CONTACTED

List of Preparers

Name	Organization
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List of Agencies and Offices Contacted

NMFS – Headquarters – Office of International Affairs
NMFS – Pacific Islands Regional Office – Observer Program
NMFS – Pacific Islands Regional Office – Sustainable Fisheries Division
NMFS – Pacific Islands Fisheries Science Center
NMFS – Southwest Regional Office – Sustainable Fisheries Division
NMFS – Southwest Science Center
NMFS – Alaska Regional Office – Sustainable Fisheries Division
Department of State – Office of Marine Conservation
U.S. Coast Guard – 14th Coast Guard District
NOAA Office of Law Enforcement

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