



## Regulatory Impact Review

### Implementation of Inter-American Tropical Tuna Commission Resolutions Adopted in 2011

September 2011

#### Management Objectives of the Rule and Statement of the Problem

As a Contracting Party to the 1949 Convention and a member of the IATTC, the United States is legally bound to implement the decisions of the IATTC. The Tuna Conventions Act (16 U.S.C. 951-961) authorizes the Secretary of Commerce, in consultation with the Secretary of State and the Secretary of the Department of Homeland Security, to promulgate such regulations as may be necessary to carry out the obligations of the United States, including the decisions of the IATTC. The authority to promulgate regulations has been delegated to NMFS.

The IATTC convened its 82<sup>nd</sup> meeting in July 2011 and adopted twelve new resolutions. This proposed rule would implement three of the resolutions adopted at the 82<sup>nd</sup> meeting, including the Resolution on Tuna Conservation 2011-2013 (C-11-01), the Resolution Prohibiting Fishing on Data Buoys (C-11-03), and the Resolution Prohibiting the Retention of Oceanic Whitetip Sharks (C-11-10). All of the other resolutions that were adopted in 2011 either do not require further rulemaking or will be implemented in a separate subsequent rulemaking.

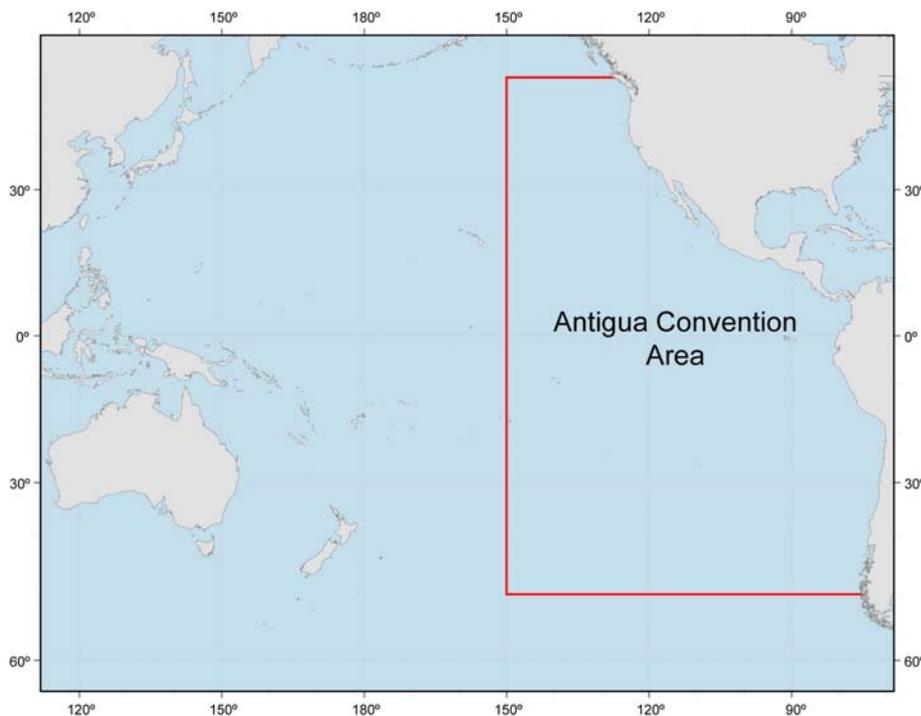
The Resolution on a Multiannual Program for the Conservation of Tuna in the Eastern Pacific Ocean in 2011-2013 is very similar to the tuna conservation measure adopted by the IATTC in 2009 (IATTC Resolution C-09-01). The United States implemented IATTC Resolution C-09-01 in November 2010 (74 FR 61046, November 23, 2009). Similar to Resolution C-09-01, the main objectives of Resolution C-11-01 are to not increase the fishing mortality of yellowfin tuna (*Thunnus albacares*) and to reduce the fishing mortality of bigeye tuna (*Thunnus obesus*) in the IATTC Convention Area over the period 2011-2013. The measures are based in part on the recommendations and analysis of IATTC scientific staff and the 2011 stock assessments of bigeye and yellowfin tuna completed by IATTC staff.

The Resolution Prohibiting Fishing on Data Buoys was adopted to reduce vandalism and damage to data buoys caused by fishing vessels that often leads to loss of data critical to weather forecasting, tsunami warnings, search and rescue efforts, and research of the marine environment.

The IATTC Resolution on the Conservation of Oceanic Whitetip Sharks Caught in Association with Fisheries in the Antigua Convention Area was adopted to reduce the fishing pressure on oceanic whitetip sharks (*Carcharhinus longimanus*) which are caught incidentally and targeted in some oceanic and coastal fisheries. The IATTC scientific staff showed estimates

during the 2011 IATTC meeting illustrating a dramatic decline in the catch per unit of effort of this species which may be indicative of a decline in the population of this species in the EPO.

The proposed action area is the IATTC Convention Area, which includes the waters bounded by the coast of the Americas, the 50° N. and 50° S. parallels, and the 150° W. meridian. This area includes the U.S. west coast Exclusive Economic Zone (EEZ); however, most of the fishing that would be affected by the proposed action occurs on the high seas in the IATTC Convention Area.



**Figure 1. Map of IATTC Convention Area.**

### Description of the Fisheries Impacted

The data buoy and oceanic whitetip shark provisions in the proposed rule would apply to owners and operators of U.S. vessels targeting HMS in the IATTC Convention Area. This includes, longline, purse seine, troll and baitboat, drift gillnet, harpoon, and recreational fishing vessels. The Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP) provides a detailed description of the baseline environment for most U.S. HMS fisheries operating in the EPO and the reader is referred to that document for further insight<sup>1</sup>. Some of the data buoy provisions also specifically apply to longline and purse seine vessels.

The following are descriptions of the fisheries that have the potential to be affected; potential impacts are discussed in the following section:

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<sup>1</sup> Available on the Pacific Fishery Management Council website: [http://www.pcouncil.org/highly-migratory-species/fishery-management-plan-and-amendments/#hms\\_fmp](http://www.pcouncil.org/highly-migratory-species/fishery-management-plan-and-amendments/#hms_fmp)

### **Hawaii Longline Fishery**

In 2009, the U.S. Hawaii-based longline fleet consisted of 131 FMP-permitted vessels. Out of these 131 vessels, 117 also had a high seas fishing permit (issued under the HSFCA). Vessels range from 16 to 25 m in length and can carry an average of 98 mt of fresh fish. Crew size ranges from four to six. The maximum duration of a fishing trip for vessels targeting tuna for the fresh fish market in Hawaii is three weeks. Some of the newer vessels in the fleet are larger and have onboard ice systems, allowing for greater range than in the past.

There are relatively few large-scale longline vessels (vessels over 24 m in length) in the fleet. From 2005-2008, there was an annual average of 18 large-scale longline vessels with reported catches of bigeye tuna in the EPO (combining shallow-sets and deep-sets). For the same time period, there has been an annual average of 27 large-scale longline vessels with reported catches of bigeye tuna in the WCPO. In 2008, there were 29 large-scale longline vessels in the Hawaii longline fleet with reported catches of bigeye tuna in the EPO.

In recent years, Hawaii's commercial pelagic fisheries have been greatly affected by a series of court decisions that led to the adoption of regulatory measures primarily aimed at conserving federally-listed ESA species. In 2001, the total catch and ex-vessel value decreased by about 3,747 mt and \$20.1 million, respectively, primarily as a result of the implementation of court-ordered measures that eliminated the swordfish portion of the Hawaii longline fishery (Table 3-2). Swordfish, the largest component of the landings by volume in 2000, was a negligible component of the fishery from 2001 until the reopening of the swordfish shallow-set fishery in 2004. For these reasons, the period prior to 2005 is probably not a good indication of future fishing activity. Consequently, the analysis in Chapter 4 focuses on fishing patterns and performance from 2005 through 2008.

In 2006, the Hawaii-based longline fleet landed 9,775 mt for an ex-vessel value of approximately \$54 million. This total represents an average gross revenue per vessel in 2006 of about \$403,000, compared to the 2005-2007 average of \$444,000 per vessel.

### **West Coast Longline Fishery**

Longline vessels based on the U.S. West Coast fish primarily in the EPO and at the current time are restricted to fishing outside of the west coast EEZ. Given this restriction, there have been very few active west coast-based longline vessels since 2004 except for a single west-coast-based vessel which has been operating out of southern California ports since 2005. This vessel primarily targets tuna species using DSLL gear with a percentage of swordfish and other HMS taken incidentally. This vessel is considered a large-scale longline vessel. At the present time, DSLL fishing by west-coast-based vessels must take place outside of the U.S. EEZ. The high operational costs, time constraints and safety considerations of fishing outside the EEZ will most likely keep participation in this fishery at a minimum. Data (landings and ex-vessel numbers) collected are confidential for this fishery given that there has been only one participant since 2005.

### **Purse Seine Fishery**

There are two components to the U.S. tuna purse seine fishery in the EPO: large vessels (greater than 400 short tons (st)<sup>2</sup> carrying capacity) and smaller vessels (equal to or less than 400 st carrying capacity). The smaller U.S. purse seine vessels range from carrying capacity class size 2-5. Purse seine vessels class size 3 and under would be exempt from the proposed rule.

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<sup>2</sup> The IATTC uses short tons in its stock status reports. 400 short tons is equal to about 363 metric tons.

The fleet of large vessels fishing in the EPO has been greatly reduced over the past 20 years. At the height of the fishery in the 1970s, the California-based fleet consisted of 140 vessels larger than 100 gross registered tons (Gillet, *et al.* 2002). In the 1960s and 1970s the vessels of the fleet experienced restrictions on their activities, including: conservation controls resulting in short fishing seasons in the usual EPO fishing grounds, implementation of 200-mile extended jurisdictions of Latin American countries and expansion of fishing fleets in several of those countries, and adoption of U.S. domestic legislation in the early 1970s that protected dolphins. These and other factors motivated many U.S. purse seine vessels to begin fishing in the western and central Pacific Ocean (see Figure 3-4; Gillet, *et al.* 2002).

As of August 2011, there were eight U.S. purse seine vessels listed on the IATTC Vessel Register; five are class size 6 (greater than 363 mt carrying capacity), one is class size 5 (273 - 363 mt carrying capacity), and two are class sizes 1-3 (less than 182 mt carrying capacity). Since 2004, only two U.S. purse seine vessels class sizes 4-6 have made landings each year on average. From 2005-2008, less than three vessels made landings, thus the landings and revenue data from these years are confidential and cannot be released. Additional large-scale vessels could enter the EPO fishery as there is currently no limited entry program for purse seine vessels operating under the HMS FMP<sup>3</sup>. U.S. purse seiners typically target skipjack and yellowfin tuna found in association with drifting logs/flotsam or fish aggregating devices (FADs). In addition, U.S. purse seiners set on unassociated free-swimming schools of tuna (“school sets”).

The fish caught by the U.S. EPO purse seine fleet are frozen on board and either delivered directly to canneries or transhipped to carriers that deliver them to canneries. Deliveries are made to canneries in both the United States (American Samoa) and foreign nations (Ecuador, Mexico, Tahiti, Colombia, Costa Rica). The canned product then enters global markets.

Estimates of ex-vessel revenues in the U.S. purse seine fishery in the EPO since 2005, which would be indicative of current conditions, are confidential and may not be publicly disclosed because of the small number of vessels in the fishery. However, there are two class size 5, and three class size 6 purse seine vessels active in the IATTC Convention Area. Purse seine vessels class size 5 would be considered small business entities (revenues equal to or less than \$4 million per year). It is estimated that from 2004-2008, the majority, if not all, class size 5 U.S. purse seine vessels have had revenues of less than \$0.5 million per year<sup>4</sup>. Class size 6 vessels are categorized as large business entities (revenues in excess of \$4 million per year). It is estimated that large purse seine vessel typically generate about 4,000 to 5,000 mt of tuna valued at about \$4 to \$5 million per year<sup>5</sup>.

### **Albacore Troll and Baitboat Fishery**

The west-coast based U.S. albacore fishery is comprised of vessels that predominately troll for albacore using jigs, and to a lesser extent live bait. Together, these gears (and other hook and line gears used to target albacore, see above) are known as surface hook-and-line gear and account for the bulk of West Coast albacore landings and ex-vessel revenues. Ex-vessel revenues for the west coast surface hook-and-line fishery have ranged from about \$4 million (in 2009 dollars) to \$55 million from 1981 to 2009. In recent years (2005-2009), annual ex-vessel revenues have averaged about \$23 million (in 2009 dollars).

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<sup>3</sup> The United States is bound by a capacity limit agreed upon by the IATTC of 8,969 mt of total carrying capacity in the U.S. purse seine fleet operating in the IATTC Convention Area.

<sup>4</sup> According to data obtained from PacFIN by NMFS in June 2009.

<sup>5</sup> According to data provided by the IATTC to NMFS in June 2009.

The bulk of the U.S. catch is canned as white meat tuna at canneries in American Samoa and Puerto Rico. A small amount of the catch finds its way into the fresh fish trade, which is a significant income to these participants. The North Pacific troll fishery operates across the North Pacific and along the U.S. West Coast both inside and outside of the EEZ. The total estimated number of vessels landing albacore peaked at more than 2,000 in the mid-1970s. Fewer vessels have been active in recent years with an average of 623 vessels with west coast commercial HMS landings from 2005-2009.

### **Drift Gillnet Fishery**

The thresher shark/swordfish drift gillnet (DGN) fishery initially developed in southern California in 1977. Currently, the DGN fishery is one of six West Coast HMS fisheries managed by the Pacific Council through the HMS Fishery Management Plan (FMP), with many of the existing State regulations and laws pertaining to the fishery adopted into the FMP. In 2009, 49 DGN vessels landed 250 mt of swordfish and 48 mt of common thresher shark. The California drift gillnet fishery now operates primarily outside of state waters to about 150 miles offshore, ranging from the U.S Mexico border in the south to northward of the Columbia River depending on sea temperature conditions. Because of seasonal fishing restrictions, and the seasonal migratory pattern of swordfish, about 90 percent of the annual fishing effort occurs between August 15 and December 31. Depending on where they fish, drift gillnet vessels primarily land fish in San Diego, San Pedro, Ventura, Morro Bay, Monterey, Moss Landing, and San Francisco Bay area ports where it is sold in the fresh fish market providing high quality, locally-caught fish for the restaurant trade. Ex-vessel revenues for the west coast DGN fishery have ranged from about \$239 thousand (in 2009 dollars) to almost \$8 million from 1981 to 2009. In recent years (2005-2009), annual ex-vessel revenues have averaged about \$2 million (in 2009 dollars).

### **West Coast harpoon fishery**

The California harpoon fishery dates back to the early 1900s. The harpoon fishery used to account for the bulk of swordfish landings into California but was supplanted by the DGN fishery in the 1980s. Participation in the harpoon fishery peaked in 1978 with 309 vessels landing over 11,000 mt before being largely displaced by the more efficient DGN fishery. Since that time, the harpoon fleet has declined substantially with 27 vessels landing 49 mt of swordfish in 2009. Fishing effort is concentrated in the coastal waters off San Diego and Orange Counties with peak landings in August. This fishery is highly dependent on suitable environmental conditions to be able to locate and harpoon swordfish on the surface, and participation is not expected to change. Given the selective gear used in this fishery, bycatch is practically non-existent. In addition to the 49 mt of swordfish, PacFIN landings for harpoon gear in 2009, there was 1 mt of HMS sharks reported, which is likely thresher and mako shark.

### **West Coast HMS recreational fisheries**

Recreational anglers in California target HMS species in the EPO. Fishing occurs in the EEZ waters of the United States as well as in Mexico aboard commercial passenger fishing vessels (CPFV) and private boats. Fishery statistics are compiled by the Recreational Fisheries Information Network (RecFIN) and from CPFV logbooks required by State regulations and/or per HMS FMP regulations. Some limited observer data exists for HMS bycatch on recreational charter boat trips but the sample size is very small and was unavailable for review at the time of this assessment.

### **West Coast HMS CPFV fleet**

Recreational anglers in California harvest swordfish primarily from private fishing boats with the occasional catch on CPFVs. In 2004, approximately two swordfish were caught and kept by recreational fishermen on board CPFVs fishing in the U.S. EEZ, whereas in 2005 there was no catch reported for swordfish.<sup>6</sup>

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<sup>6</sup> Data source: California Commercial Fisheries Information System, CPFV logbook data.

With the exception of sharks, most HMS and non-target finfish are caught by anglers fishing from CPFVs based in southern California and fishing primarily in the Mexican EEZ. In 2009, CPFV anglers fishing in Mexican waters landed 30,463 albacore, 8,810 bluefin, 68,273 yellowfin, and 6,328 skipjack tuna based on CPFV logbook records. A total of 8 mako sharks and 3 unidentified marlin were also landed. In 2009, CPFV anglers fishing in the U.S. EEZ off California landed 3,141 albacore, 1,944 bluefin, 5,300 yellowfin, and 1,611 skipjack tuna based on CPFV logbook records. A total of 43 mako sharks, 11 blue sharks, 39 thresher sharks, 4 striped marlin, and 1,289 dorado were also landed.

### **West Coast HMS private boat fleet**

For recreational anglers fishing in the U.S. EEZ, Title 14 of the CDFG Code limits the take of a number of HMS: common thresher, mako, and blue sharks, and swordfish - two per day; striped marlin – one per day. For other HMS, there are either no limits or there is an overall bag limit of 20 fish of mixed species with no more than 10 fish of any one species. Anglers may possess more than the limit depending on the length of the fishing trip. Fishing occurs in the EEZ waters of the United States, primarily off the southern California coast, as well as in Mexico. A typical fishing season for HMS begins in the spring and continues to late fall depending on the oceanographic conditions present in a given year. Private anglers are not required to keep a daily fishing log on their vessels so catch estimates are based on California Recreational Fisheries Survey interviews of anglers returning to port. Generally, it is recognized that catch and effort estimates for the private anglers are underestimated due to the lack of sampler access to private marinas where many private vessels are berthed. Catch estimates for private boats are for vessels fishing exclusively in the U.S. EEZ. Many private vessels fish in the EEZ of Mexico but the number and catch by these vessels is unknown. In 2009, west coast recreational private boat anglers fishing in the U.S. EEZ caught approximately 76,800 albacore, 200 bluefin, 1,500 yellowfin, and 300 skipjack tuna. According to RecFIN estimates, a total of 400 mako sharks, 1,700 common thresher sharks, and 100 blue sharks were caught.

## Description of the Proposed Action and Each Alternative

### **Proposed Action**

The proposed action is to implement the following measures in the IATTC Convention Area:

- i) Establish a 500 mt annual catch limit for bigeye tuna caught by longline vessels greater than 24 m in length overall in 2009, 2010, and 2011;
- ii) Prohibit fishing for skipjack, bigeye, and yellowfin tunas in the IATTC Convention Area for a period of 62 days in 2011 and beyond by purse seine vessels class sizes 4-6 (class size 4 purse seine vessels would be allowed to make one fishing trip of up to 30 days duration during the specified closure periods, provided that the vessel carries an observer of the On-Board Observer Program of the Agreement on the International Dolphin Conservation Program (AIDCP));
- iii) Prohibit fishing for skipjack, bigeye, and yellowfin tunas by purse seine vessels class sizes 4-6 within the area of 96° and 110° W. longitude and 4° N. and 3° S. latitude from 0000 hours on September 29 to 2400 hours on October 29;
- iv) Continue to require that all skipjack, bigeye, and yellowfin tunas caught by applicable purse seine vessels are retained and landed except if considered unfit for human consumption for reasons other than size in 2010 and 2011 (a single exemption of this shall be the final set of a trip, when there may be insufficient well space remaining to accommodate all the tuna caught in that set);
- v) Prohibit all U.S. vessels targeting HMS in the IATTC Convention Area from retaining onboard, transshipping, landing, storing, selling, or offering for sale any part or whole carcass of oceanic whitetip sharks, and require vessel

- owners/operators to release unharmed, to the extent practicable, oceanic whitetip sharks when brought alongside vessels;
- vi) Prohibit all U.S. fishing vessels that are used to target HMS from interacting with data buoys;
  - vii) Prohibit U.S. longline and purse seine vessels that are used to fish for HMS from deploying fishing gear within one nautical mile of an anchored data buoy;
  - viii) Prohibit U.S. fishing vessels used to target HMS from taking onboard a data buoy unless specifically authorized or requested to do so by the entity responsible for the data buoy;
  - ix) Require U.S. fishing vessels used for fishing for HMS that become entangled with data buoys to remove the entangled fishing gear with as little damage to the data buoy as possible.

## **Alternatives Considered**

### ***Alternative 1 - No Action***

Under this alternative, the United States would not implement decisions agreed upon by the IATTC in 2011. The United States would not satisfy its international obligations as a member of the IATTC and under the 1949 Convention for the Establishment of an Inter-American Tropical Tuna, to which it is a Contracting Party.

### ***Alternative 2 - (Preferred) –***

Implement three of the decisions agreed upon at the 2011 IATTC meeting, including Resolution C-10-01, C-10-03, and C-10-10, as outlined in the proposed action. This would satisfy U.S. obligations to implement decisions of the IATTC in a timely manner and according to the provisions agreed to in the resolutions. The proposed rule very closely mirrors the required components of these three binding IATTC resolutions and includes minimal measures developed using agency discretion.

### **Estimated Costs**

In the case of the data buoy provisions, it is unlikely that this rulemaking will result in a significant change in fishing operations as NMFS is unaware of U.S. fishing vessels interacting with data buoys in the past, or U.S. longline or purse seine vessels deploying gear within one nautical mile of anchored data buoys in the IATTC Convention Area. If, in the past, there have been vessels fishing within one nautical mile of anchored data buoys, the longline and purse seine measures could result in some negligible affects to the operating costs of vessels in terms of a potential increase in search time if there is less fishing success when not fishing around anchored buoys. Also, such vessels would have to avoid fishing in areas where anchored data buoys are located, which would slightly reduce the available fishing grounds and could cause some shift in the spatial distribution of fishing effort. Operators and crew would also be required to take additional precautions when encountering data buoys anywhere in the Convention Area, which could create new burdens that could increase operating costs by increasing the time spent at sea. For example, the operator and crew of any vessel that has gear that becomes entangled with a data buoy would need to make sure to disentangle the gear carefully, in order to cause as little damage to the data buoys as possible. However, since the measures are limited to fishing around anchored data buoys and longline and purse seine vessels would still be able to fish in

essentially the same fishing grounds as long as they avoid the 3.14 nm<sup>2</sup> circle around each anchored data buoy, it is likely that there will be no real changes in fishing operations or associated revenues.

The longline and purse seine fleets that currently fish around anchored data buoys could also see some change in the composition of their catch due to no longer being allowed to fish around anchored data buoys that can act as fish aggregating devices; however, this is rather unlikely. This could lead to an increase in the proportion of yellowfin tuna and a decrease in the proportion of bigeye tuna, skipjack tuna, and other species that tend to be caught around floating objects. Some studies suggest that seabirds, sea turtles, and marine mammals aggregate in association with floating objects, so there could be some minor beneficial effects on protected resources from implementation of the proposed rule. However, this is difficult, if not impossible, to estimate and in all likelihood there will not be changes in fishing operations and catch compositions resulting from the proposed rule. In addition, purse seiner vessels would still be able to fish using fish aggregating devices (FADs) that they deploy and longline vessels tend to avoid fishing around anchored buoys to prevent damage to gear.

The oceanic whitetip shark conservation measures are also unlikely to result in changes to fishing operations as U.S. fisheries that target HMS rarely retain, transship, land, or sell this species in the IATTC Convention Area. The Hawaii longline fishery (both deep-set and shallow-set sectors) catches the majority, if not all, of the oceanic whitetip sharks caught by U.S. fisheries that target HMS in the IATTC Convention Area. According to observer data from 1995-2010 for the U.S. longline fleet based out of Hawaii, the majority (90.1 percent) of observed sets caught zero oceanic whitetip sharks. On average, 0.141 oceanic whitetip sharks were caught per set during the same time period. Since 2000, there has been a national ban on shark finning which has greatly increased the number of sharks, including oceanic whitetip sharks, that are released after being caught rather than retained. From 2004-2006 only 4.9 percent and 1.7 percent of the oceanic whitetip sharks that were caught were retained in the deep-set and shallow-set longline fisheries, respectively. The overwhelming majority of the oceanic whitetip sharks (99.3 percent) caught on observed fishing trips in this fishery are caught outside of the IATTC Convention Area, west of 150° W. longitude (latitudes pooled). Thus, these provisions are not expected to result in any change in fishing operations or any significant reduction in associated revenues.

The tuna conservation measures would specifically affect longline vessels over 24 meters length overall and U.S. purse seine vessels class sizes 4-6 fishing for yellowfin, bigeye, and skipjack tunas in the Convention Area. There are only slight adjustments being made to the existing tuna conservation measures and an extension of the effective period, thus impacts to vessel owners are expected to be minimal. The bigeye tuna quota in the longline fishery will remain at 500 mt and remain in force for 2012 and 2013. This quota has not been reached in 2009 or 2010 and it is not expected to be reached in 2011. In addition, the EPO purse seine closure will be shortened by 11 days in 2011 and remain in force for 2012 and 2013, the purse seine vessel owners will be given a choice as to when to implement the closure giving them greater flexibility while maintaining the same level of conservation, and the tuna retention measures will be extended to 2012 and beyond.

The total number of affected longline vessels is approximated by the average number of U.S. large-scale longline vessels that have caught bigeye tuna in the EPO in 2005-2010. In each of the years 2005 through 2008, the number of large-scale longline vessels that caught bigeye in the EPO was 18, 8, 18, and 30, respectively. Thus approximately 19 longline vessels on average have the potential to be affected by this proposed rule, if adopted. The majority of the longline vessels that may be affected by this proposed rule are based out of Hawaii and American Samoa. There is also one longline vessel based out of California that would be affected by the proposed rule. These longline vessels target bigeye tuna using deep sets, and during certain parts of the year, portions of the Hawaii and American Samoa fleet target swordfish using shallow sets.

Most of the Hawaii and American Samoa fleets' fishing effort has traditionally been in the WCPO, but fishing has also taken place in the EPO. The proportion of the large-scale longline vessels annual bigeye tuna catches that were captured in the EPO from 2005 through 2009 ranged from about 5 percent to 26 percent, and averaged 19 percent. As an indication of the size of businesses in the fishery, average annual fleet-wide ex-vessel revenues during 2005-2009 were about \$63 million. Given the number of vessels active during that period (128, on average), this indicates an average of about \$490,000 in annual revenue per vessel, thus all of the businesses affected by the longline measures would be considered small business entities.

For the purpose of projecting baseline conditions for the longline fishery under no action, this analysis relies on fishery performance from 2005 through 2010, since prior to 2005 the longline fishery regulations underwent major changes (the swordfish-directed shallow-set longline fishery was closed in 2001 and reopened in 2004 with limits on fishing effort and turtle interactions). Bigeye tuna landings from 2005 through 2010 suggest that it is unlikely that the proposed limit would be reached in any of the years during which the limit would be in effect. The proposed limit, 500 mt, is less than the amount landed by large-scale longline vessels in any of the years between 2005 and 2010 (inclusive). Specifically, in the years 2005 through 2010, the approximate annual landings of bigeye tuna by large-scale longline vessels fishing in the IATTC Convention Area was 166, 51, 118, 325, 204, and 408 mt respectively. Thus, it is estimated that even with a large increase in the catch rates of bigeye tuna in the IATTC Convention Area the 500 mt catch limit would not be reached in any of the applicable years (2011-2013).

In summary, all entities affected by the bigeye quota in longline fisheries are believed to be small entities, so small entities would not be disproportionately affected relative to large entities. In addition, this part of the proposed rule is not likely to have a significant impact on a substantial number of small entities because it is unlikely that the bigeye landings limit that would be imposed on large-scale longline vessels would be reached in any given year.

#### Purse Seine Fishery

The total number of affected purse seine vessels is approximated by the current number of U.S. purse seine vessels class size 4-6 authorized to fish in the IATTC Convention Area. As of August 2011, there were eight U.S. purse seine vessels listed on the IATTC Vessel Register; five are class size 6 (greater than 363 mt carrying capacity), one is class size 5 (273 - 363 mt carrying capacity), and two are class sizes 1-3 (less than 182 mt carrying capacity). Thus six purse seine vessels may be affected by the proposed rule in the near future. There is also the potential for other U.S. purse seine vessels based out of the WCPO to become authorized to fish in the EPO;

however, there are capacity limits on purse seine vessels fishing in the EPO and it is estimated that at a maximum 15 additional vessels could be added to the current authorized list of active purse seine vessels. Purse seine vessels class sizes 5 and 6 usually fish outside U.S. waters and deliver their catch to U.S. (e.g., American Samoa) or foreign (e.g., Ecuador, Mexico, Colombia, Costa Rica) ports. Skipjack and yellowfin tuna are the primary target species in the purse seine fishery, and bigeye tuna is incidentally targeted. Class size 6 vessels are required to have 100 percent observer coverage, while class size 5 vessels are not required to carry an observer. Purse seine vessels class size 5 or smaller would be considered small business entities (revenues equal to or less than \$4 million per year). It is estimated that from 2004-2010, the majority, if not all, class size 5 U.S. purse seine vessels have had revenues of less than \$0.5 million per year. Class size 6 vessels are categorized as large business entities (revenues in excess of \$4 million per year). A large purse seine vessel typically generates about 4,000 to 5,000 mt of tuna valued at about \$4 to \$5 million per year.

It is estimated that purse seine sets would be prohibited for 17 percent of the year in 2011-2013 (62 day closure/365 days), thus catches would be expected to be affected accordingly unless effort was shifted to areas outside of the Convention Area during the closure period, or to different times of the year when there is no closure. The affected vessels are capable of fishing outside of the closure area (i.e., in the WCPO) during the closure period and/or for the remainder of the year, since the fishery continues year round, and vessels tend to use relatively short closures (such as these) for regular vessel maintenance. Fishing in the WCPO may produce additional costs to some of the affected vessels that are based out of the U.S. West Coast and primarily fish in the EPO due to the increase in costs associated with fishing further away from port. In addition, there is a FAD purse seine closure period in the WCPO from July 1 to September 30 in 2011 that further constrains purse seine fishing effort in the WCPO. The closure may be extended into 2012 and beyond depending on the tuna conservation and management measures that are adopted by the WCPFC at their annual meeting in December 2011. Other factors that have the potential to inhibit these vessels from fishing outside of the IATTC Convention Area include licensing availability and costs, and effort limits for purse seine vessels fishing in the WCPO. It is assumed that fishing in the WCPO is the only practical geographic alternative for these vessels. Purse seine vessels fishing in the WCPO under the South Pacific Tuna Treaty (SPTT) are required to license their vessels; the maximum number of licensed vessels allowed in the U.S. purse seine fishery in the WCPO is 40 and currently there are 37 licensed vessels as of September 2011. The vessel registration fee is about \$3,250 per vessel. The five class size 6 purse seine vessels that are authorized to fish in the Convention Area are already registered under the SPTT. It may not be economically viable for the class size 5 purse seine vessels to register under the SPTT and fish in the WCPO because of the smaller carrying capacity and the increased costs associated with fishing far from port.

In summary, one small business entity and five large business entities may be affected by the purse seine measures, thus small entities would not be disproportionately affected relative to large entities. In addition, this part of the proposed rule is not likely to have a significant impact on a substantial number of small entities because only one small business entity may be affected and it is estimated that its fishing effort will not change much from the status quo.

The impacts of this rule are too minimal to be significant under E.O. 12866, as described below.

To meet the requirements of Executive Order 12866 (E.O. 12866), NMFS requires that a Regulatory Impact Review (RIR) be prepared for all regulatory actions that are of public interest. This review provides an overview of the problem, policy objectives, and anticipated impacts of the action, and ensures that management alternatives are systematically and comprehensively evaluated such that the public welfare can be enhanced in the most efficient and cost-effective way. In accordance with E.O. 12866, the Office of Management and Budget reviews regulations deemed significant, which means: (1) likely to have an annual effect on the economy of more \$100 million or to adversely affect in a material way the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or state, local, or tribal governments or communities; (2) likely to create a serious inconsistencies or otherwise interfere with any action taken or planned by another agency; (3) likely to materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of recipients thereof; or (4) likely to raise novel or policy issues arising out of legal mandates, or the principles set forth in the Executive Order.

