Philippines National Report to the Scientific Committee of the Indian Ocean Tuna Commission, 2013

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INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

In accordance with IOTC Resolution 10/02, final scientific data for the previous year was provided to the Secretariat by 30 June of the current year, for all fleets other than longline [e.g. for a National report submitted to the Secretariat in 2013 final data for the 2012 calendar year must be provided to the Secretariat by 30 June 2013)	Not applicable. The Philippine fleet which operated in the IOTC convention area was composed of longline vessels only even though there are purse seine vessels listed in its authorized list. The purse seine fishing fleet has remained inactive in the IOTC convention area.
In accordance with IOTC Resolution 10/02, provisional longline data for the previous year was provided to the Secretariat by 30 June of the current year [e.g. for a National report submitted to the Secretariat in 2013, preliminary data for the 2012 calendar year was provided to the Secretariat by 30 June 2013). REMINDER: Final longline data for the previous year is due to the Secretariat by 30 Dec of the current year [e.g. for a National report submitted to the Secretariat in 2013, final data for the 2012 calendar year must be provided to the Secretariat by 30 December 2013).	YES/Submitted to IOTC on July 2013
If no, please indicate the reason(s) and intended actions:	

Executive Summary

This Report contains the following information:

1. Background/General fishery information
2. Tuna Fisheries
3. Fleet Structure
4. Catch and effort

1. Background/General fishery information

Fishery is an important component of the agricultural sector in the Philippines. Marine fishery is an important source of protein, livelihood and export earnings for the Philippines. In 2011, total marine catch by the Philippine commercial fleet was estimated to 1,032,820 million tons which accounted for about 20.76% of the total fisheries production. (Bureau of Agricultural Statistics [BAS] 2012).

The fisheries sector came down with 2.32 percent less output in 2012. From last year's record of 4,973,587.75 metric tons, the 2012 volume of production was placed at 4,858,097.10 metric tons. Municipal fisheries and aquaculture posted 3.88 percent and 2.54 percent reductions in their volumes of production, respectively. Commercial fisheries gained 0.23 percent in volume of production.

Commercial fisheries production in 2012 reached 1,035,213.92 metric tons. This was 2,393.80 metric tons more than last year's record of 1,032,820.12 metric tons. Production declined by 9.12 percent in the first quarter and by 0.59 percent in the second quarter. However, these were offset by the increase of 4.68 percent during the third quarter and 6.39 percent in the fourth quarter of 2012.

The increased demand for fish from rapidly growing population and increasing exports has substantially increased fishing pressure on the marine fishery resources in the past two decades. The major key issues facing the fisheries sector are resource depletion and environmental degradation. Declining catch rates and the levelling off of marine landings also supports these conclusions.

Philippines is still one of the top fish producing countries in the world. Over an estimated 1.5 million people depend on the fishing industry for their livelihood. Philippines is also considered a major tuna producer in the Western and Central Pacific Ocean (WCPO). The fishing industry's contribution to the country's Gross Domestic Products (GDP) in 2009 was 2% and 2.4% at current and constant prices, respectively (Philippine Fisheries Profile, 2010).

Also in 2010, the foreign trade performance of the fishery industry gave a net surplus of 616 million dollars. With a total export value of 803 million US dollars and import value of 187 million US dollars. Tuna remained as the top export commodity with a collective volume of 106,449 MT for fresh/chilled/frozen, smoked/dried, and canned tuna products valued at US $337.719 million. Canned tuna, though, constitutes bulk of tuna products being exported. In general, tuna export increased by 2% in terms of volume and 3% in terms of value. Major markets for this commodity include USA, UK and Germany. (Philippine Fisheries Profile, 2010).

Chilled/frozen fish comprised the bulk of the total import in terms of value. Tuna, mackerel and sardines are the major import fish commodities in 2010. Tuna has the largest import share of 32% with an import value of US $59.1 million. Chilled/frozen tuna were mostly supplied by Papua New Guinea 8 %; Taiwan (ROC) 10%; Japan 4.3%; Singapore, 1% and Korea, 6%. (Philippine Fisheries Profile, 2010).

The Philippine marine fisheries is conventionally subdivided into municipal (small-scale) and commercial fisheries on the basis of vessel gross tonnage. Municipal fisheries include capture operations using boats less than 3 GT and those that do not involve the use of watercraft. A license is issued by the municipality where the boat is registered. Fishing permits are also issued to fishing boats by the municipality where they intend to fish. Commercial fisheries include capture fishing operations using vessels of 3 GT and above. Commercial fishing vessels are required to secure a commercial fishing vessel and gear license from the Bureau of Fisheries and Aquatic Resources (BFAR) before they can operate. With the implementation of the Local Government Code in 1992, the coastal waters within 15 km from the shoreline are now considered as municipal waters and commercial fishing is not allowed within this area.

The commercial sector commonly use bagnets, purse seines and ringnets for catching small pelagics while municipal fishers dominantly use gillnets, beach seines and round haul seines. Roundscads, sardines, anchovies, mackerels and bigeye scad, round herring and fusiliers dominate small pelagic catches in the Philippines. There are six tuna species that dominate the Philippine landings, i.e. yellowfin tuna (Thunnus albacares), bigeye tuna (Thunnus obesus), skipjack tuna (Katsuwanos pelamis), eastern little tuna (Euthynnus affinis), frigate tuna (Auxis thazard) and bullet tuna (Auxis rochei). The most common gears used by the commercial sector for catching these tuna species are purse seines and ringnets while the municipal fishers use hook-and-line or handline. All these gears are operated jointly with fish aggregating devices (FAD) locally known as payao.

2. Tuna Fisheries

Twenty-one species of tuna have been recorded in the Philippine waters but only six are caught in commercial quantity and form the basis of tuna fishing industry. Of the six, only five form the bulk of catches and are listed in Philippine fisheries catch statistics, namely: yellowfin (Thunnus albacares), skipjack (Katsuwanos pelamis), eastern little tuna or kawa-kawa (Euthynnus affinis), bigeye tuna (Thunnus obesus) and frigate tuna (Auxis thazard). Tuna-like fishes recorded in Philippine waters include swordfish, Xiphias gladius, and a number of istiophorid fishes. Their catch is relatively low compared to the tuna catch.

Skipjack and yellowfin are found throughout the year in all Philippine waters but are abundant in Moro Gulf, Sulu Sea and Celebes Sea off Mindanao Island. This is indicated by large landings of these species in seaports and other fish landing areas in General Santos City in South Cotabato and in Zamboanga City where a number of tuna canneries are sited. But these days, tunas are coming from other parts of the country and are traded to General Santos City for better price.

There is a difficulty in differentiating bigeye tuna (Thunnus obesus) and yellowfin tuna (Thunnus albacares) with a size of less than 60 cm. Similar difficulties is observed in differentiating frigate tuna (Auxis thazard) and bullet tuna (Auxis rochei).

Yellowfin tuna (tambakol/bariles)

Yellowfin tuna (Thunnus albacares) is an oceanic species occurring above and below the thermoclines. They school primarily by size, either in monospecific or multi-species groups. Larger fish frequently school with porpoises, also associated with floating debris and other objects. Feed on fishes, crustaceans and squids. It is sensitive to low concentrations of oxygen and therefore is not usually caught below 250 m in the tropics. Peak spawning occurs during the summer, in batches. Encircling nets are employed to catch schools near the surface. Marketed mainly frozen and canned, but also fresh and smoked. Highly valued for sashimi.

Skipjack tuna (gulyasan)

Skipjack tuna is found in offshore waters. Larvae of skipjack tuna is restricted to waters with surface temperatures of 15°C to 30°C. Exhibit a strong tendency to school in surface waters with birds, drifting objects, sharks, whales and may show a characteristic behavior like jumping, feeding, and foaming.

Feed on fishes, crustaceans, cephalopods and mollusks. Cannibalism is observed to be common. Preyed upon by large pelagic fishes. Also taken by trolling on light tackle using plugs, spoons, feathers, or strip bait. Marketed fresh, frozen or canned. Also dried-salted and smoked. Spawns throughout the year in the tropics and eggs their released in several portions.

Bigeye tuna (tambakol/bariles)

Bigeye tuna occurs in areas where water temperatures range from 13°- 29°C, but the optimum is between 17° and 22°C. Variation in occurrence is closely related to seasonal and climatic changes in surface temperature and thermocline. Juveniles and small adults school at the surface in mono-species groups or mixed with other tunas, may be associated with floating objects. Adults stay in deeper waters. Eggs and larvae are pelagic. Feed on a wide variety of fishes, cephalopods and crustaceans during the day and at night. Meat is highly prized and processed into sashimi in Japan. Marketed mainly canned or frozen, but also sold fresh.

Eastern Little tuna (katchorita/tulingan)

Occurs in open waters but always remains close to the shoreline. The young tuna may enter bays and harbors. Forms multi-species schools by size with other scombrid species comprising from 100 to over 5,000 individuals. A highly opportunistic predator feeding indiscriminately on small fishes, especially on clupeoids and atherinids but also on squids, crustaceans and zooplankton. Generally marketed canned and frozen; also utilized dried, salted, smoked and fresh.

Frigate tuna (tulingan)

Epipelagic in neritic and oceanic waters. Feeds on small fish, squids, planktonic crustaceans (megalops), and stomatopod larvae. Because of their abundance, they are considered an important element of the food web, particularly as forage for other species of commercial interest. Preyed upon by larger fishes. Marketed together with other tunas. Marketed fresh and frozen. Also utilized dried, salted, smoked and canned.

Bullet tuna (tulingan)

Adults are principally caught in coastal waters and around islands. Forms schools. Feeds on small fishes, particularly anchovies, crustaceans (especially crab and stomatopod larvae) and squids. Because of their abundance, they are considered an important element of the food web, particularly as forage for other species of commercial interest. Also caught with encircling nets and troll lines. Marketed fresh and frozen and also dried or salted, smoked and canned.

Major Tuna Fishing Gears

A variety of fishing gears are used to catch tuna. The use of purse seines, ringnets and handlines are usually accounted for over 65% of the annual tuna catch. The tuna fisheries catch in 2010 was caught by: purse seine, 44%; ringnet, 15%; handline, 6% and other gears, 35%. The Philippines has small fleet of longline fishing vessels operating outside of Philippine waters. (3rd Philippine/ WCPFC Annual Tuna Catch Estimates Review Workshop, May 2011).

Except for the large commercial purse seine and ringnet boats (250-490GT) that are capable of offshore and deep-sea fishing, most of the tuna fishing fleets operate in the near shore waters. Most of these boats operating near shore catch young tunas, as well as small pelagic fishes (particularly roundscads, sardines, bigeye scads and moonfishes) which are harvested in the same surface fishing operation using net (Pagdilao et al. 1993; Barut 1999).

The payao has been singled out as the important factor that triggered the phenomenal development of the tuna fishing industry. The effectiveness and efficiency of payao in attracting tuna (especially yellowfin and skipjack) greatly reduced the time spent in searching and fishing for commercial volumes. Both commercial and municipal fishers use payao in attracting tunas and oftentimes share the same payaos deployed in fishing grounds (Figure 8 B 9). The commercial fishing boat operators catch the surface aggregating juveniles, while the municipal fishers, with the use of handlines, catch adult yellowfin (110-150 cm) occupying the deeper water column (Aprieto 1995b).

The extensive use of payao, may be rapidly removing the undersized juveniles from the stocks altering migration and feeding patterns of tunas in the Philippine waters. Moreover, many coastal countries have adopted the payao in tuna fishing. Tuna studies in Mindanao waters show that more than 90% of the yellowfin and skipjack tuna landed by purse seine, bagnet and ringnet are less than 12 months old (Aprieto 1995a, 1995b).

Fishing Vessels

Tuna fisherfolks uses various types of fishing boats ranging from traditional dugout which are propelled by wooden paddles to large steel hulled vessels which are fully equipped with modern fishing equipment for long distance fishing. Traditional boats represent the municipal fishing sector with vessels less than 3 GT in size, and under the jurisdiction of the Local Government Units (LGUs). While the latter comprises the commercial sector with vessels (> 3GT) are required to fish outside municipal waters, beyond 15km off the shoreline and are required to secure commercial fishing vessel license (CFVL) at the Bureau of Fisheries and Aquatic Resources which is subject to renewal every three (3) years. With the implementation of RA 9379 or the Handline Fishing Law, this gives a

separate category for the handline vessels which were formerly considered under the municipal fishing vessels.

As a member of the Western and Central Pacific Fisheries Commission (WCPFC), the Indian Ocean Tuna Commission (IOTC), and International Commission for the Conservation of Atlantic Tunas (ICCAT); a Cooperating Non-member to the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the Philippines implements its obligations under the respective regional conventions and conservation and management measures adopted by these organizations. The Philippines also recognizes its commitment to cooperate within the framework of other regional organizations and arrangements which may have an impact on tuna fisheries management policies such as the Asia Pacific Fisheries Commission (APFIC), Southeast Asian Fisheries Development Council (SEAFDEC), Asia Pacific Economic Cooperation (APEC), and Regional Plan of Action to Promote Responsible Fishing Practices Including Combating Illegal, Unreported and Unregulated Fishing (RPOA), and the Coral Triangle Initiative (CTI).

3. Fleet Structure

Philippine tuna fishing fleet

Tuna fisherfolks uses various types of fishing boats ranging from traditional dugout which are propelled by wooden paddles to large steel hulled vessels which are fully equipped with modern fishing equipment for long distance fishing. Traditional boats represent the municipal fishing sector with vessels less than 3 GT in size, and under the jurisdiction of the Local Government Units (LGUs). While the latter comprises the commercial sector with vessels (> 3GT) are required to fish outside municipal waters, beyond 15km off the shoreline and are required to secure commercial fishing vessel and gear license (CFVGL) at the Bureau of Fisheries and Aquatic Resources which is subject to renewal every three (3) years. With the implementation of RA 9379 or the Handline Fishing Law, this gives a separate category for the handline vessels which were formerly considered under the municipal fishing vessels.

There were a total of 46 purse seine and 24 longline Philippine flagged fishing vessels in the list of authorized fishing vessels in the IOTC. Of the 46 purse seine fishing vessels, 17 are over 500 GT, 15 are over 250 but smaller than 500GT while 14 are less than 250GT. Of the 46 longline fishing vessels, 15 are over 500 GT while the remaining longline fishing vessels are over 250 GT. Only 14 longline fishing vessels were active in the year 2012.

Table 1: Number of vessels operating in the IOTC area of competence, by gear type and size

Table 1

Type of Vessel	Number of FVs Registered/Authorized			
	<250GT	>250GT but <500GT	>500GT	Total
Longline	0	9	15	24
Purse Seine	14	15	17	46
Total	14	24	32	70

4. Catch and effort (by species and gear)

Though the Philippine has a list of purse seine and long line fleets registered with the IOTC these have remained inactive. It operates a fleet of long line for the five most recent years. The main target specie is bigeye tuna.

Table 2.Annual catch and effort by gear and primary species in the IOTC area of competence. It includes data for the historical annual catch for the national fleet composed of only longline FVs with BET as the primary target species, for the IOTC area of competence for the entire history of the fishery/fleet. It includes data indicative of the area of operations and distribution of fishing effort.

4.a Recreational fishery [Mandatory]

[A description of recreational fishing activities in the Convention Area. Include information on catches if available]

The Philippines does not have any recreational fishing activity in the IOTC Convention area.

4.b Ecosystem and bycatch issues

We have submitted our NPOA on Sharks to the Science Manager.

5.1 Sharks

The Philippines has a NPOA-sharks previously sent via e-mail to IOTC through Dr. David Wilson on October 3, 2011. There is no national policy on shark finning. However, there were previous efforts at legislating some national policy on sharks which include prohibition on fining. These were House Bill 00778 entitled AN ACT BANNING THE CATCHING, SALE, PURCHASE, POSSESSION, TRANSPORTATION AND EXPORTATION OF ALL SHARKS AND RAYS IN THE COUNTRY AND FOR OTHER PURPOSES and HB05412 entitled AN ACT BANNING THE CATCHING, SALE, PURCHASE, POSSESSION AND TRADE OF ALL SHARKS AND RAYS, THEIR DERIVATIVES AND BY-PRODUCTS IN THE PHILIPPINES filed during the 15th Congress. However, these never because a Republic Act.

Table 3: Total number and weight of sharks, by species, retained by the national fleet in the IOTC area of competence (for the most recent five years at a minimum, e.g. 2008–2012).
This is contained in our summary of catches.

Table 4: Total number of sharks, by species, released/discarded by the national fleet in the IOTC area of competence (for the most recent five years at a minimum, e.g. 2008–2012).
All sharks caught were retained and is included in our summary of catches.

5.2 Seabirds [Mandatory]

The Philippines does not have an NPOA on seabirds. However, the strategy as regards seabirds is to apply the following mitigating measures The fishing company operators were instructed CPCs to seek ways to avoid by catch of seabirds across all fishing areas. One method was to ensure that fishing shall be

conducted in such a way that hooklines sink beyond the reach of seabirds as soon as possible after they are put in the water and the other is the use of tori lines. From Table 2, one can see that for the year 2012, no Philippine longline vessels were fishing South of 25°S.

5.3 Marine Turtles

There were no reported interactions with Marine Turtles. The Philippines has not yet provided legislation on the implementation of the FAO Guidelines to reduce sea turtle mortality in fishing operations. However, the fishing companies had been informed on IOTC RESOLUTION 12/04 on the Conservation of Marine Turtles. What the Philippines has done so far as regards Marine and Sea Turtles is to provide protection to its nesting spots all over the Philippines prohibit the catch. Also Sea turtles are protected under Philippine law and catching them is punishable by at least 12 years in jail.

5.4 Other ecologically related species.

Table 5.Observed annual catches of species of special interest by species
Kindly see Summary of catches

National data collection and processing systems

6.1. Logsheet data collection and verification

Catch data is transmitted by fishing vessel captains/master every week to the fishing vessel operators/companies. These data are then submitted to the BFAR on a monthly basis. Verification is usually conducted after every year.

6.2. Vessel Monitoring System (including date commenced and status of implementation)

The Philippines has an existing and operational VMS which began official operations on October 19, 2009. The coverage includes all fishing vessels targeting tuna/tuna like species operating outside of waters under national jurisdiction.

6.3. Observer programme

The Philippines' regional observer program commenced officially on May 2010 when the Western and Central Pacific Fisheries Commission Officially granted accreditation of its program. However, the preparation commenced a year prior with the WCPFC providing training assistance. Since the Observer Program is geared towards compliance with WCPFC requirements, there are still no available observers for the IOTC operations.

Table 6. Annual observer coverage by operation, e.g. longline hooks, purse seine sets (for the most recent five years at a minimum, e.g. 2008–2012 or to the extent available).

Not applicable as there is no available observer for the IOTC Convention area.

Figure 4. Map showing the spatial distribution of observer coverage. Not applicable for the reasons stated above.

6.4. Port sampling programme [including date commenced and status of implementation]

Not applicable as the fishing vessels operating in the IOTC Convention are not unloading in any Philippine port.

Table 7. Number of individuals measured, by species and gear] [Mandatory]

6.4. Unloading/Transhipment

In 2012, there were 15 in port transhipment at 8 at sea transhipment.

2. National research programs

Research activities covering target and non-target species such as all tunas found in the Philippines and its interaction with its prey and predators is an ongoing activity in the Philippines in collaboration with SEAFDEC and WCPFC. The MV DA-BFAR, the research vessel of the BFAR conducts these research activities. However, these activities may be derailed on some occasions when this vessels needs to conduct relief operations arising from calamities such as the recent Typhoon Yolanda [International code name "Haiyan"]. It was on its usual preparatory activities leading towards its role as a research platform for the coming sardines closure for the period December 1 of every year till March 1 of the succeeding year when it was recalled to parts of Mindanao where its was tasked to transport some 300 tons of relief goods and urgent supplies to ravaged areas on November 18, 2013. It set sail the next day for Region 8 [Island of Samar and Leyte]. After discharging its cargo in selected areas, it served as the command center for relief operations while the land based command center was being rehabilitated and prepared as there were no electricity nor any other available utilities on land.

Table 8.Summary table of national research programs, including dates.
Not applicable as there is not existing research program in the IOTC Convention area.

Project title	Period	Countries involved	Budget total	Funding source	Objectives	Short description
No research activities in the IOTC Convention area.						

3. Implementation of Scientific Committee Recommendations and Resolutions of the IOTC relevant to the SC.

Table 9.Respond with progress made to recommendations of the SC and specific Resolutions relevant to the work of the Scientific Committee

Res. No.	Resolution	Scientific requirement	CPC progress
05/05	Concerning the conservation of sharks caught in association with fisheries managed by IOTC	Paragraphs 1–12	All sharks caught by FVs are retained as whole. Please take note of file Summary of catches in 2012 where there is a monthly statistical data of catches of blue sharks.
10/02	Mandatory statistical requirements for IOTC members and cooperating non contracting parties	Paragraphs 1–7	Fishing vessel operators are instructed to submit data to Bureau of Fisheries and Aquatic Resources [BFAR] on a monthly basis. These were then seasonably sent to the IOTC.

Res. No.	Resolution	Scientific requirement	CPC progress
10/06	On reducing the incidental bycatch of seabirds in longline fisheries. Reminder: Resolution 12/06 will supersede Resolution 10/06 on 1 July 2014	Paragraphs 3–7	The fishing company operators were instructed CPCs to seek ways to avoid by catch of seabirds across all fishing areas. One method was to ensure that fishing shall be conducted in such a way that hooklines sink beyond the reach of seabirds as soon as possible after they are put in the water and the other is the use of tori lines. From Table 2, one can see that for the year 2012, no Philippine longline vessels were fishing South of 25°S. Thus, only one method was utilized.
11/04	On a regional observer scheme	Paragraph 9	For reasons that the Philippines still lack the number of observers needed, there were no Observers on board Philippine flagged FVs.
13/03	On the recording of catch and effort by fishing vessels in the IOTC area of competence	Paragraphs 1–11	2012 Catch and effort submitted to IOTC on July 2013
12/04	On the conservation of marine turtles	Paragraphs 3, 4, 6–10	The Philippine flagged FVs were previously instructed to comply with the provisions of Recommendation 05/08 *On Sea Turtles* and Resolution 09/06 *On Marine Turtles.* Philippine flagged fishing vessels did not have any interaction with any marine or sea turtles.
12/09	On the conservation of thresher sharks (family alopiidae) caught in association with fisheries in the IOTC area of competence	Paragraphs 4–8	The Philippine flagged FVs were previously instructed to comply with the provisions of Resolution 10/12. There were no interaction with Thresher sharks in 2012.

4. Literature cited

Bureau of Agricultural Statistics [BAS] 2012

Philippine Fisheries Profile, 2010

TUNA STATISTICS IN THE INDIAN OCEAN

SUMMARY OF CATCH REPORT FOR 2012

CATCH BY SPECIES (specify in top row)

MONTH 2012	TOTAL TONS	BET *T. Obesus* kgs.	YFT *T. Albacares* kgs.	SBFT *T. Maccoyii* kgs.	ALB *T. ALALUNGA* kgs.	SWO *X. Gladuis* kgs.	S. MAR *T. Audax* kgs.	BSH *Prionace glauca* kgs.	OTHERS *OTH* kgs.
JANUARY	74,386	68,378	5,765	-	-	-	243	-	-
FEBRUARY	145,698	109,068	22,208	-	10,079	3,543	800	-	-
MARCH	87,367	70,735	10,297	-	5,061	955	319	-	-
APRIL	208,875	178,059	7,511	-	11,329	11,976	-		-
MAY	241,273	228,344	2,629	-	9,980	-	-	320	-
JUNE	212,076	185,532	6,566	-	9,328	10,358	-	292	-
JULY	268,879	257,498	5,882	-	5,175	-	-	324	-
AUGUST	334,961	259,616	34,239	-	5,904	29,006	5,786	410	-
SEPTEMBER	285,331	223,772	37,313	-	9,106	11,036	3,609	495	-
OCTOBER	265,076	236,127	21,766	-	6,722	-	-	461	-
NOVEMBER	313,457	296,494	12,294	-	1,324	-	3,345	-	-
DECEMBER	308,616	250,713	41,155	-	11,929	-	4,819	-	-
TOTAL	2,745,996	2,364,336	207,625	-	85,937	66,875	18,921	2,302	-

TOTAL UNIT OF TONNES: 2,795.209

TWO THOUSAND SEVEN HUNDRED NINETY FIVE POINT TWO HUNDRED NINE TONNES