



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

September 2013

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INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

<p>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)</p>	<p>YES 26/04/2013</p>
<p>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].</p> <p>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].</p>	<p>YES 26/04/2013</p>
<p>If no, please indicate the reason(s) and intended actions:</p>	



Executive Summary

The Belize flagged vessels that target tuna and tuna like species in the Indian Ocean Tuna Commission (IOTC) Convention area are all long line fishing vessels. These vessels all foreign owned and operate primarily in this area which is outside the jurisdiction of Belize's territorial waters; however, they are all licensed to operate on the high seas or in the EEZ of other States under licensing agreements. In 2012, our fleet fluctuated between 4 to 8 long line tuna fishing vessels and one (1) refrigerated reefer carrier which operated mainly between 10°- 40°S and 55° - 75°E.

Together, our vessels caught 52.5 m/t of Albacore tuna, 69.7 m/t of Yellowfin Tuna, 391.3 m/t of Bigeye Tuna, 32.4 m/t of Swordfish, 2.1 m/t of Black Marlin, 28.9 m/t of Blue Marlin, 6.7 of Stripped Marlin, 11.5 m/t of by-catch species consisting of Moonfish, Sailfish, Oilfish and Wahoo, 2.2 m/t of Blue Shark and 2.1 m/t of Moro Shark. There have been 47% reductions in our overall catches from 1257 m/t in 2007 to 599 m/t in 2012. There was a shift in the main target species in 2012 from Albacore to Bigeye has always been the main target species for our vessels from 2007 to 2011 followed by Bigeye Tuna, Yellowfin and Swordfish. The number of active long liners and levels of fishing effort have declined significantly in recent years due to reduced profitability, principally resulting from reduced fish prices and increased operating cost.

The average size of our vessels from 2007 to 2011 has fluctuated over the years from a low of 88gt to a high of 628gt. There has also been a reduction in the number of vessels operating in the area from 10 vessels in 2007, 9 in 2008, 6 in 2009 and 7 in 2010 and 2011.

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1. BACKGROUND/GENERAL FISHERY INFORMATION

Belize is located in the Western Caribbean and bordered on the north by Mexico, on the east by the Caribbean Sea and on the south and the west by Guatemala. The fishing industry makes an important contribution to Belize's gross domestic product, primarily

from exports of lobster, conch and shrimp. This sector is characterized locally as a commercial artisanal industry with the local/domestic fleet being comprised of open boats, sailing sloops and canoes. The high seas fishing fleet is solely industrial and is comprised primarily of longline tuna vessels, but also has a few trawlers, purse seiners and transshipment vessels. Our fleet in the IOTC area comprises of only long line vessels.

The fishing industry in Belize has been successful primarily due to its ability to adapt to both local and global changes, allowing it to capitalize on benefits of certain policies and maintain levels of operation and activities in the sector which are vital to its continued growth.

Belize is not a coastal State within the Convention area. Our foreign owned fishing vessels are licensed in accordance with our national legislation for operation on the high seas or EEZs of other States. All fisheries are regulated through our High Seas Fisheries Act, 2003 and other legally binding regulations.

The Belize Fisheries Department of the Ministry of Forestry, Fisheries and Sustainable Development is tasked with the responsibility to manage our high seas fishing fleet in coordination with the International Merchant Marine Registry of Belize. Issues relating to quotas, vessel allocations, management plans and regional and international matters are determined jointly by both Administrations.

The management regime of our high seas fishing fleet is currently under review through the revision of the High Seas Fishing Act, where our regulatory framework for the effective management of our high seas fishing fleet is being reviewed for further development and strengthening.

Belize's statistical reports summarize the activities of our long line fleet which operates in the IOTC Convention Area. In 2012 our fleet consisted of up to 8 long line fishing vessels having an average of 1688 gt and 1 transshipment vessel having 1891 gt. These vessels all operated in Western Indian Ocean.

2. FLEET STRUCTURE

The fleet which operates in the IOTC Convention area generally comprises of lone line fishing vessels, which range between 88 to 628gt.

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

Year	Gear Type	Size (gt)				Number of vessels
		0-50	51-200	201-500	500+	
2012	Long Line		3	1	4	8
2011	Long Line		6		1	7
2010	Long Line		6		1	7
2009	Long Line		6			6
2008	Long Line		6	2	1	9
2007	Long Line		7	2	1	10
2006	Long Line		6	2		8

3. CATCH AND EFFORT (BY SPECIES AND GEAR)

In 2012, our fleet which operated mostly in the Western part of the Convention area and comprised of 8 long line tuna vessels. These vessels targeted mostly, Albacore, Bigeye Tuna, Yellowfin Tuna, Swordfish and Marlin; and also caught Shark as a bycatch. This description is remains characteristic of the main activities of our vessels for the past several years

Table 2. Annual catch and effort data by gear and primary species in the IOTC area of competence. A 'not elsewhere indicated – NEI' category is included for all other catch combined.

Year	Effort (Hooks)	No. of Vessels	Albacore (m/t)	Bigeye (m/t)	Yellowfin (m/t)	Swordfish (m/t)	Marlin (m/t)	Sharks (m/t)	NEI**
2012	212354	5	52.473	391.292	69.657	32.367	37.600	4.369	11518
2011	94268	7	164.229	9.634	13.9	2.536	9.603	1.833	n/a
2010	101468	7	141.125	31.456	14.362	6.689	1.663	0	n/a
2009	86010	6	160.879	15.838	51.259	22.200	1.797	0	n/a
2008	184135	9	296.258	120.179	91.353	74.65	7.074	9.824	n/a
2007	203422	10	885.033	149.995	113.841	65.772	19.629	22.399	n/a
2006	1778*	8	631	30	127	22	8	0	n/a

*NB: Effort for the year 2006 is number of fishing days. Belize at that time had not yet implemented data requirements for number of hooks used.

**Bycatch species 'not elsewhere indicated' (NEI) includes: Moonfish, Oilfish, Sailfish and Wahoo.

Figure 1. Historical annual catch for the national fleet, by gear and primary species, for the IOTC area of competence for the entire history of the fishery/fleet.

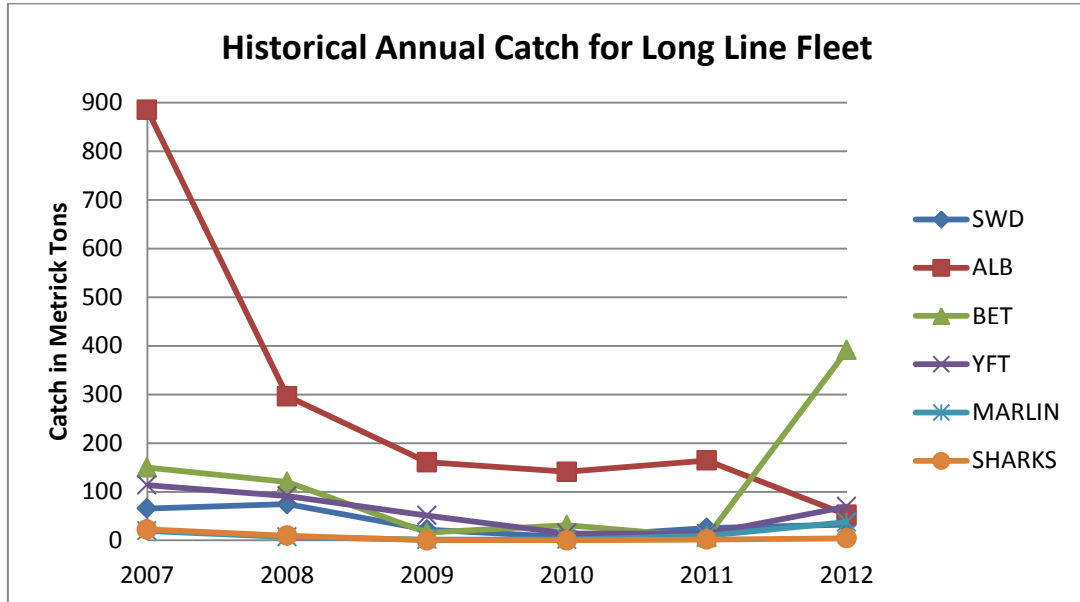


Figure 2a. Distribution of fishing effort, by gear type for the national fleet in the IOTC area of competence (2012).

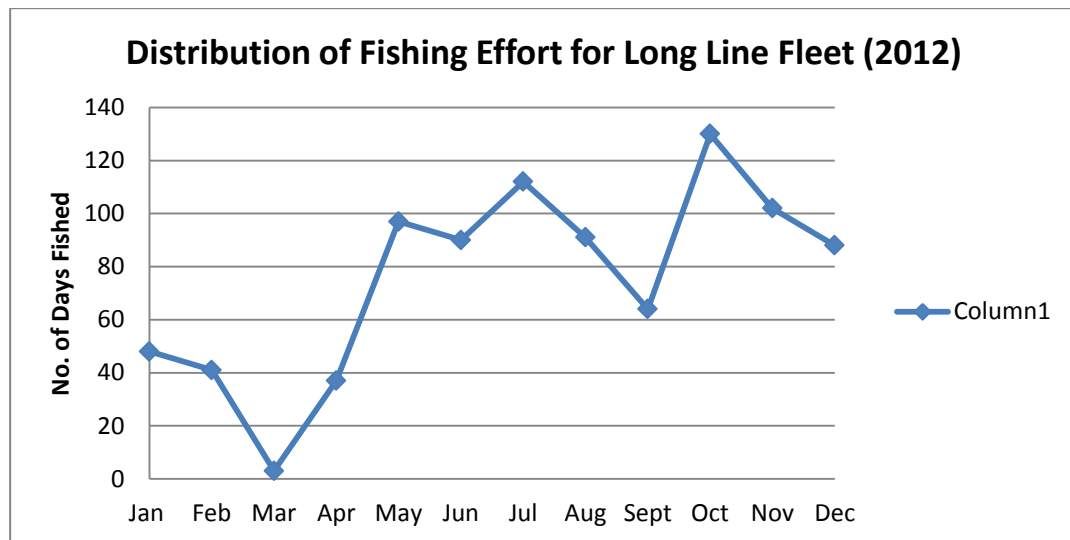


Figure 2b. Distribution of fishing effort, by gear type for the national fleet in the IOTC area of competence (average of the 5 previous years e.g. 2008–2012)

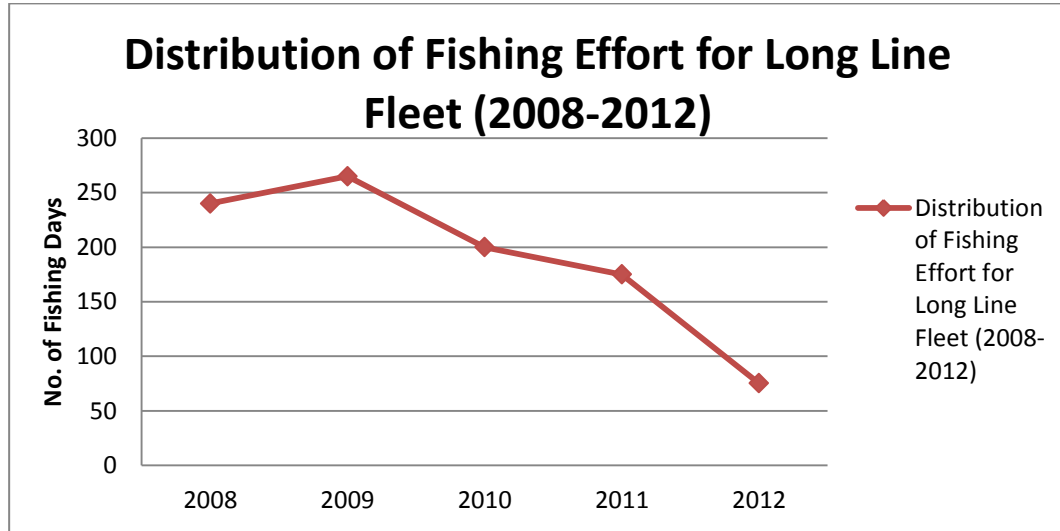


Figure 3a. Map of distribution of fishing catch, by species for the national fleet, in the IOTC area of competence (most recent year e.g. 2012).

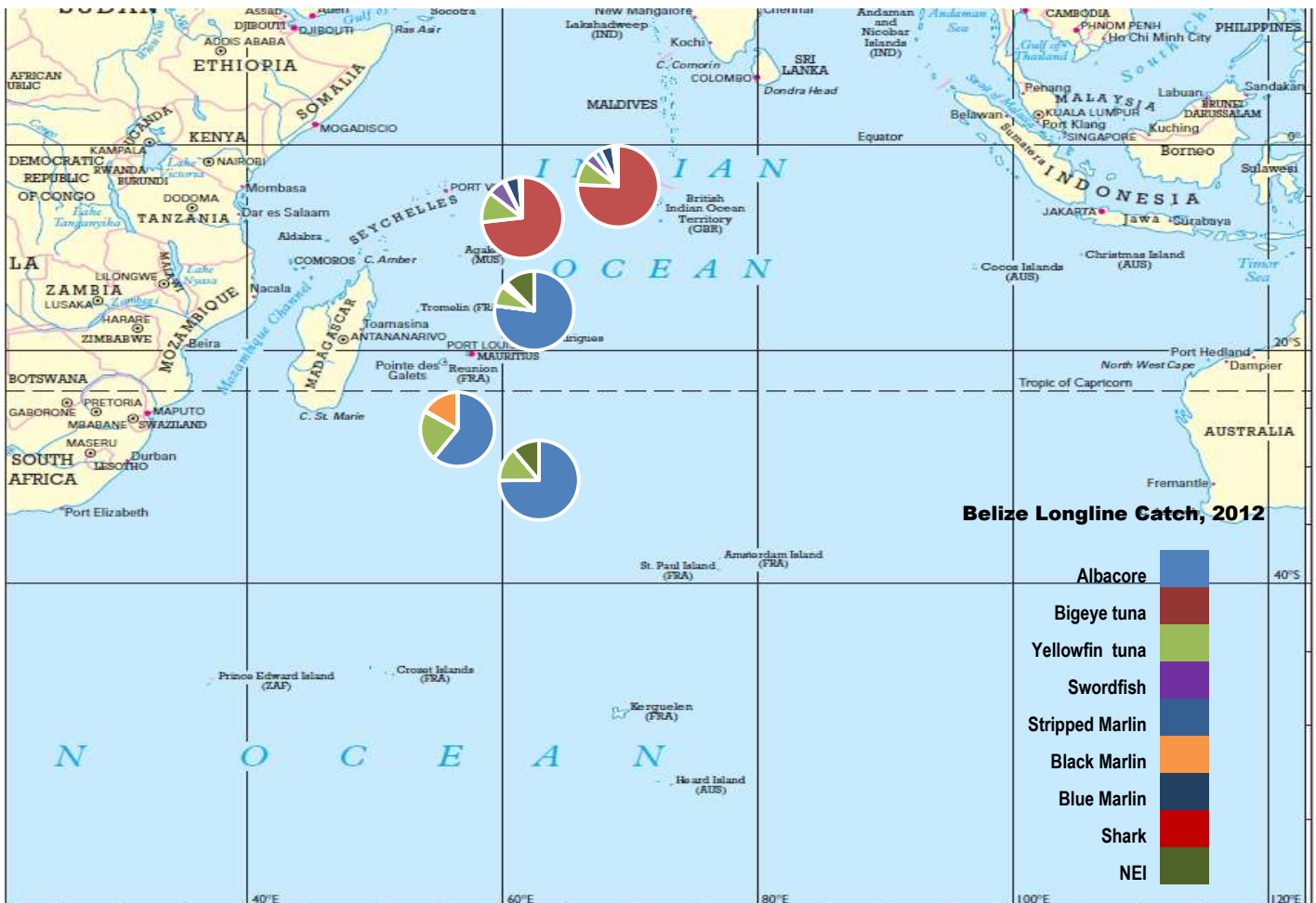
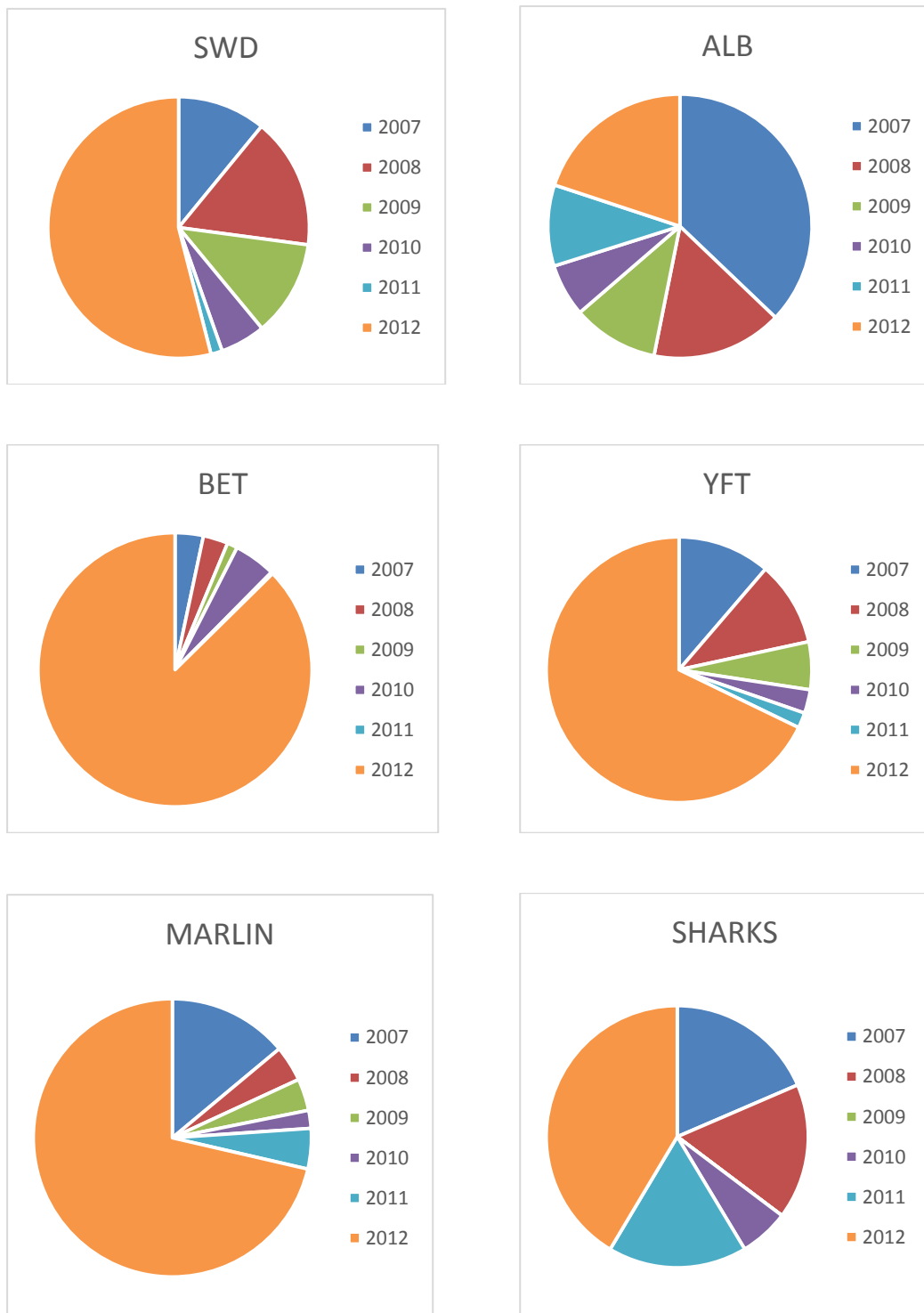


Figure 3b. Distribution of fishing catch, by species for the national fleet, in the IOTC area of competence (average of the 5 previous years e.g. 2008–2012)



4. RECREATIONAL FISHERY

Belize flagged fishing vessels do not engage in recreational fishing activities in the IOTC Area of competence as Belize is not a coastal state in this area.

5. ECOSYSTEM AND BYCATCH ISSUES

Ecosystem monitoring was standardized and regularized in 2003. The Ecosystems Management Unit (EMU) of the Fisheries Department consists of the marine reserves and the Conservation Compliance Unit (CCU). The new management paradigm has shifted from specific species and site protection to the protection of entire ecosystems and the regulation of the activities within those systems.

Some of the key environmental issues affecting the Belize fisheries sector include unplanned urban and tourism development, introduction of invasive species, risk from climate change and water pollution by agricultural activities. These are all in relation to our domestic fisheries.

With respect to our fishing vessels operating on the high seas in the Convention area, we ensure that all fishing activities are conducted in accordance with the recommendations of the scientific committee in order to ensure sustainable harvest of regulated stocks. Belize by-catch procedure is also determined based on the scientific recommendation e.g. our fishing vessels operators are encouraged to implement a catch and release system for seabirds and sea turtles, while other by catch species can be retained for sale or consumption.

5.1 Sharks

In an effort to comply with the FAO Code of Conduct, Belize has developed a NPOA shark and is currently conducting a national consultation on this document for the inclusion of our high seas fishing fleet. Full adoption of the NPOA Sharks is expected in the first half of 2014 considering the adoption of the High Seas Fishing Act, 2013. Nonetheless, in compliance with RFMO resolutions, Belize has in place legislation for the banning of shark finning as well as management measures for regulated shark fisheries.

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).

Year	Blue Shark		Moro Shark	
	No	Weight (kg)	No.	Weight (kg)
2008	180	4693	149	3465
2009	-	-	-	-
2010	22	645	-	-
2011	64	1833		
2012	54	2210	68	2132

Note: Our shark catches have decreased over the years. This is partially as a result of the lines currently being utilized by our vessels. Our longline fleet which operates in the Convention area utilizes nylon filament lines as opposed to the wire leaders normally used in shark fishing. Additionally our shark catches have only been caught as bycatches.

5.2 Seabirds

Our Longline and Trawler Fishing Vessels are required to use mitigation measures in order to avoid or reduce the mortality of seabirds.

Our Administration requires Longline Fishing vessels to implement one or more of the mitigation measures as outlined in the IOTC's Resolution on this topic. Currently our vessels operating in the Convention area utilizes weighted branch lines and night setting with minimum deck lighting measures for both seabirds and sea turtles.

Crewmembers are required to adopt measures aimed at ensuring that seabirds captured alive during longline fisheries are released alive and in as good condition as possible and that wherever possible hooks are removed without jeopardizing the life of the seabird concerned.

5.3 Marine Turtles

Belize is a contracting party to the Inter American Commission for the Conservation and Protection of Seas Turtles (IAC) and is in full compliance with all resolution and reporting obligations on sea turtles. We encourage a strict catch and release program for our vessels fishing on the high seas.

Our Administration has implemented the following measure in accordance with the relevant RFMO and international regulations.

For Longline Fishing Vessels we require:

- a. Use of circle hooks.
- b. Carry on board and, when sea turtle interactions occur, employ the necessary equipment, such as: de-hookers, line cutters, and scoop nets for the prompt release of incidentally caught sea turtles.
- c. Continue to improve fishing techniques, e.g.: appropriate combinations of circle hooks and bait, setting depth, gear specifications, fishing practices, as well as other measures to reduce the bycatch, injury and mortality of sea turtles.
- d. Crew members are required to adopt measures aimed at ensuring that sea turtles captured alive during long lining are released alive and in as good condition as possible and that wherever possible hooks are removed without jeopardizing the life of the sea turtle concerned.

5.4 Other ecologically related species

Belize had adopted management measures in accordance with IOTC's resolutions for the protection of marine mammals and whale sharks. Our vessels are require to report all interaction with these managed species, and it is noteworthy that there has been no such interactions reported in 2012.

6. NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

6.1. Logsheet data collection and verification

Belize commenced its data reporting requirements in 2003. Fishing vessel owners/operators are required to submit data of their fishing operations based on our format for such reporting which includes a detailed fishing log and fishing vessel voyage report showing the information regarding positions, times/dates, sets, catches by species including weights and sizes, start times, number of hooks etc., details of discards, by-catches etc., species unloaded, names of ports or details of transshipments. A bonded logbook program was also implemented in 2011 for all our vessels. This

logbook is required be kept on-board the vessel at all times and be filled in by the master on a timely basis. Additionally, catch estimates must be submitted electronically by all fishing vessels on a monthly basis.

6.2. Vessel Monitoring System

In 2003, Belize successfully implemented a Vessel Monitoring System for all our High Seas Fishing and refrigerated cargo vessels which operate outside Belize's territorial waters, irrespective of length or size. This satellite based system utilizes Inmarsat C, Mini C and D+ equipment. Our provider is Polestar Space Applications Limited who utilizes an automatic, real time service called Purplefinder Vessel Management Solutions that is accessible via a web based interface. This reporting system complies with the requirements of the RFMOs in whose Convention Areas we have a presence. Our system provides 6 positions reports daily and in some areas vessels are required to report on an hourly basis.

The monitoring is carried out by our High Seas Fisheries Unit whose Head Office is located in Belize. It enables us, inter alia, to track a vessel's compliance with the geographical limits contained in their license and to check position data contained in their catch and effort/transshipment reports.

6.3. Observer programme

Belize has engaged in negotiations with an independent and accredited consortium of observers to provide the necessary observer coverage for our fleet of vessels. The launch of this observer program is of top priority and Belize hopes to have the program fully implemented by mid-2014.

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

As Belize is not a coastal state in the IOTC Area of competence, we do not have a port sampling program in effect. Nonetheless, Belize is currently undertaking a comprehensive review of the management of its high seas fishing fleet with the intent to strengthen control over the fleet. The implementation of a port sampling program for its IOTC vessels will be considered for development under this management review. It is envisaged that this program will come into effect with the commencement of our observer program by mid-2014.

6.5 Unloading/Transshipment

Of the small fleet which Belize has operating in the IOTC area only one vessel engage in transshipment at sea, and Belize is a member of IOTC's ROP and utilizes their observers for transshipments. None of our vessels transshipment at port.

7. 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 [to be updated annually to include most recent Conservation and Management Measures adopted by the Commission].

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	Statistical data for shark catches are reported to IOTC annually. Belize has implemented management measures to require the full utilization of sharks caught in association

Res. No.	Resolution	Scientific requirement	CPC progress
			with its tuna fishery as a strict shark finning ban requires that all sharks be landed with their fins naturally attached, partially cut and folded.
10/02	Mandatory statistical requirements for IOTC members and cooperating non contracting parties	Paragraphs 1-7	Belize reports nominal and catch and effort data for the fisheries activities of its vessels operating in the IOTC convention area. This data, together with the necessary size data is reported to the Commission in accordance with this resolution.
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	Belize has implemented management measures to reduce the incidental bycatch of seabirds in long line fisheries. This was done through the implementation of a legally binding fishing vessel circular. In July 2011.
11/04	On a regional observer scheme	Paragraph 9	Belize has engaged in negotiations with an accredited consortium of observers for the implementation of this resolution. This program is envisaged to be fully effected by mid-2014 at which time Belize will be able to fully comply with this Resolution.
13/03	On the recording of catch and effort by fishing vessels in the IOTC area of competence	Paragraphs 1-11	The recording and subsequent reporting of necessary catch and effort data of Belize flagged fishing vessels in the IOTC Area of competence is recorded and reported to the Commission in accordance with this resolution.
12/04	On the conservation of marine turtles	Paragraphs 3, 4, 6-10	Belize has issued a fishing vessel circular in accordance with this resolution to mitigate interactions with sea turtles and further required that any such interaction be reported to this Administration. No such interactions has been reported since the implementation of this management measure.
12/09	On the conservation of thresher sharks (family alopiidae) caught in association with fisheries in the IOTC area of competence	Paragraphs 4-8	Belize has issued a fishing vessel circular in accordance with this resolution to prohibit fishing of this thresher shark, and the reporting of any interaction with this species.