# Seychelles National Report to the Scientific Committee of the Indian Ocean Tuna Commission, 2015

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# INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

In accordance with IOTC Resolution 15/02,	YES
final scientific data for the previous year was	
provided to the IOTC Secretariat by 30 June of	30/06/2015
the current year, for all fleets other than	
longline [e.g. for a National Report submitted	
to the IOTC Secretariat in 2015, final data for	
the 2014 calendar year must be provided to the	
Secretariat by 30 June 2015)	
In accordance with IOTC Resolution 15/02,	YES
provisional <b>longline data</b> for the previous year	
was provided to the IOTC Secretariat by 30	30/06/2015
June of the current year [e.g. for a National	
Report submitted to the IOTC Secretariat in	
2015, preliminary data for the 2014 calendar	
year was provided to the IOTC Secretariat by	
30 June 2015).	
<b>REMINDER:</b> Final longline data for the	
previous year is due to the IOTC Secretariat by	
30 Dec of the current year [e.g. for a National	
Report submitted to the IOTC Secretariat in	
2015, final data for the 2014 calendar year must	
be provided to the Secretariat by 30 December	
2015).	
If no, please indicate the reason(s) and intended a	ctions:

#### **EXECUTIVE SUMMARY**

The Seychelles National Report summarizes activities of the Seychelles' fishing fleet targeting tuna and tuna-like species in the WIO for the year 2014 in comparison with previous years. It also summarizes research, and data collection related activities as well as actions undertaken in 2014 to implement Scientific Committee recommendations and IOTC Conservation and Management Measures.

The Seychelles purse seine fleet which increased from 7 vessels in 2013 to 11 vessels in 2014. The number of supply vessels also increased from 4 to 6 vessels during the same period. In general nominal effort has been on a downward trend over the past 4 previous years. However in 2014, fishing effort increased by 300 days (17%), and this can be attributed to the increase in the number of purse seine vessel.

The total annual catch reported by the purse seine fleet increased slightly by 5% from 57,324MT in 2013 to 60,225MT in 2014. This was achieved from a fishing effort of 2,109 fishing days thus giving a mean catch rate of 28.57MT/Fishing day . Skipjack was the dominant species caught, accounting for 53% of the total catch and yellowfin accounted for 39% of the total catch. Catches of skipjack tuna increased by 23% whilst catches for yellowfin tuna decreased by 11% from 2013 to 2014.

Four more fishing vessels joined the Seychelles Industrial longline fleet in 2014 making a total of 36 vessels. The total catch reported by the industrial longline fleet for 2014 is estimated at 10,487 MT representing a 8% drop in catches with 9% decreased in fishing effort when compared to 2013.

In term of species composition, bigeye tuna remained as the dominant species caught by this fleet for the past five years, accounting for an average of 58% of the total catch, even though catches of this species decreased by 17% in 2014 when compared to 2013. The estimated catch rate remained more or less the same at 0.49 MT/1000 hooks in 2014.

The semi industrial longline fleet reported a total catch of only 82MT in 2014, representing a decrease of 69% over the 226 MT reported in 2013. The fishing effort also decreased by 70% from 398,770 hooks set to 118,973 hooks. The decreased in catch and effort may be attributed to problems encountered with the export of swordfish on EU market due to its high level of mercury. This lead most semi industrial vessels to switch to targeting demersal species instead of pelagic fish.

SFA is implementing various actions to improve the quantity and quality of data collected from its fleet targeting tuna and tuna-like species in the Indian Ocean. Actions include improved logbook, review and upgrade of data collection and management system and implementation of National Scientific Observer Programme.

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#### 1. BACKGROUND/GENERAL FISHERY INFORMATION

The Republic of Seychelles is an archipelago of around 115 islands scattered over an exclusive economic zone of 1.37 million km<sup>2</sup> in the WIO. Typical of small-island developing states, marine resources are of significant social, economic and cultural importance. Apart from tourism, the country has limited opportunities for land-based development, and as a result, the fishing industry is a major contributor to the economic development of the country. The economic importance is derived from its role as a source of employment, contribution to production, food security and income generation, trade and foreign exchange generation and government revenue.

Since the mid 1980's the Seychelles have been granting access to foreign flagged vessels to fish for tuna and tuna like species inside of the Seychelles EEZ through various access agreements. Seychelles registered vessels, initially purse seiners, started operating in 1997, followed in 1999 with industrial longliners. A small scale semi-industrial longline fleet also started operation in 1995.

The Seychelles Fishing Authority (SFA) was incorporated in August 1984, and since it was set up, the SFA has been implementing data collection programme, mainly to collect catch and effort information via logbook system, as well as port sampling programmes to collect data on transhipments, landings, size frequencies and species composition.

Port Victoria is the home base for the WIO purse seiners and the Seychelles semi-industrial longline fleet, hence the activities of those fleet are covered almost 100%. On the other hand, distant water industrial longline vessels seldom use Port Victoria as their port of transhipment, making it difficult to obtain good logbook coverage, transhipment/ landings as well as size frequency data. The Seychelles is however participating in the regional Observer Scheme to monitor transhipment at sea. Furthermore an at sea scientific observer programme is currently being implemented.

The Seychelles National Report summarizes activities of the Seychelles' industrial purse seine and longline (industrial and semi-industrial) fleet in the WIO, reported over the past 5 years. It also summarizes research, and data collection related activities as well as actions undertaken in 2014 to implement Scientific Committee recommendations and IOTC resolution.

### 2. FLEET STRUCTURE

Table 1a. Shows the number of Seychelles registered purse seiners, supply vessels, industrial and semi-industrial longliners for the period 2010 to 2014. The number of Seychelles registered purse seiners increased from 9 vessels in 2010 to 11 vessels in 2014. The Seychelles registered longliners also increased from 32 vessels to 36 vessels between 2013 to 2014. The number of Seychelles registered supply vessels and semi industrial vessels decreased between 2010 to 2013 and increased from 2013 to 2014.

Table 1a. Number of	Sevchelles registere	ed vessel for the	period 2010 to 2014

Year	Purse seiners	Supply vessels	Longliners	Semi-Industrial
2010	9	7	27	9
2011	8	6	24	4
2012	8	3	32	7
2013	7	4	32	6
2014	11	6	36	9

Table 1b.Seychelles registered vessels by size (GT) as reported to IOTC in 2014

GT	Purse seiners	Supply vessels	Longliners	Semi-Industrial
<50	1		1	6
51-100	-		-	3
101-500	-	4	14	-
501-1000	-		22	-
>1000	11		-	-

#### 3. CATCH AND EFFORT

# 3.1 Purse Seine Fishery

Table 2a summarizes the total annual catches by species, fishing effort and catch rates for the Seychelles purse seine fleet reported over the 2010 to 2014 period. A gradual decline in catches was reported between 2010 and 2012. Overall catches dropped by 33% over this period. The catch has since then been increasing gradually. In 2014, the catch increased by 5% from 57,324 MT in 2013 to 60,255 MT in 2014 (Table 2a and Figure 1a)

The annual trend in fishing effort in term of fishing days has been on an overall downward trend over the 2010 to 2013 period, partly due to the reduction in the number of purse seiners during that period. However 2014 the nominal effort increased by 300 days (17%) when compared to the previous year.

Historically skipjack tuna dominated the catches of the Seychelles flagged purse seiners in the Western Indian Ocean (WIO). However between period 2012 to 2013 yellowfin replaced skipjack tuna as the dominant species.

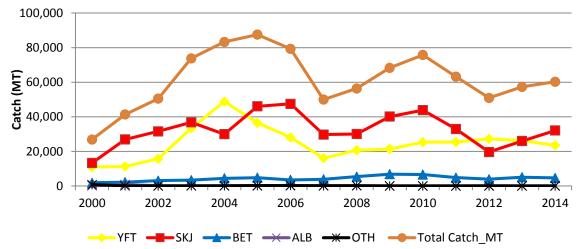
In 2014, skipjack was the dominant caught, accounting for 53% of the total catch whilst yellowfin tuna made up 39% of the total catch of the Seychelles flagged purse seiners in WIO. Catches of yellowfin tuna decreased by 11% from 26,231 MT in 2013 to 23,463 MT in 2014 whilst catches of skipjack tuna increased by 23% from 25,997MT in 2013 to 32,104 MT in 2014.

Catch rate have followed a similar trend to the total annual catch with a decreasing trend between 2010 to 2012 then increased in 2013 to 31.69 Mt/Fishing days. In 2014, the catch rate stands at 28.57 Mt/Fishing days.

**Table 2a**. Seychelles flag purse seine annual catch, fishing effort and catch rates reported between 2010 and 2014.

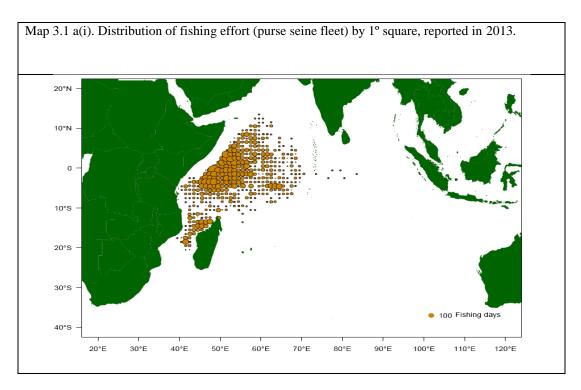
Year	Fishing Days	Catch Rate	YFT	SKJ	ВЕТ	ALB	NEI	Total
2010	2,323	32.63	25,330	43,828	6,602	14	12	75,787
2011	2,347	26.94	25,371	32,962	4,837	29	13	63,212
2012	2,133	23.88	27,220	19,641	3,928	148	1	50,938
2013	1,809	31.69	26,231	25,997	5,045	49	2	57,324
2014	2,109	28.57	23,463	32,104	4,636	45	7	60,255

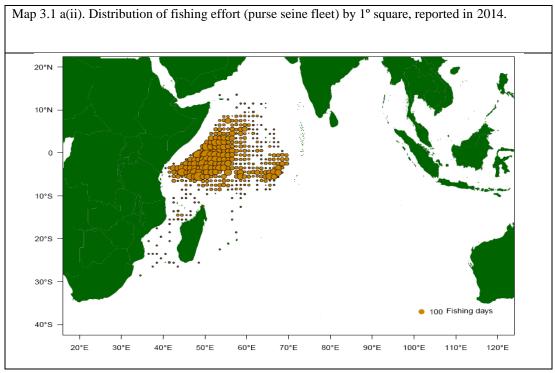
#### Trend in annual catch by species (Purse seine)

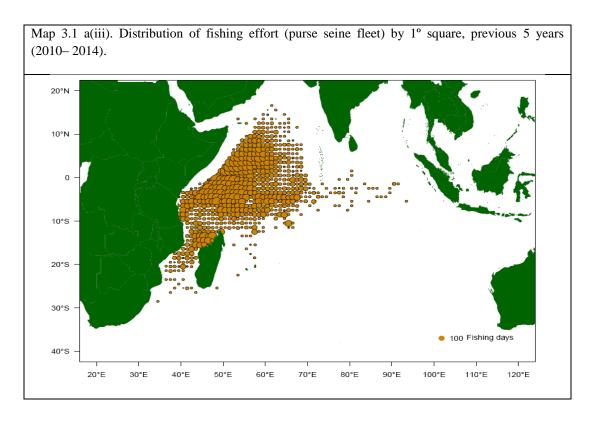


**Figure 1a**. Trends in annual catches by species for Seychelles' purse seine fleet reported for the period 2000-2014

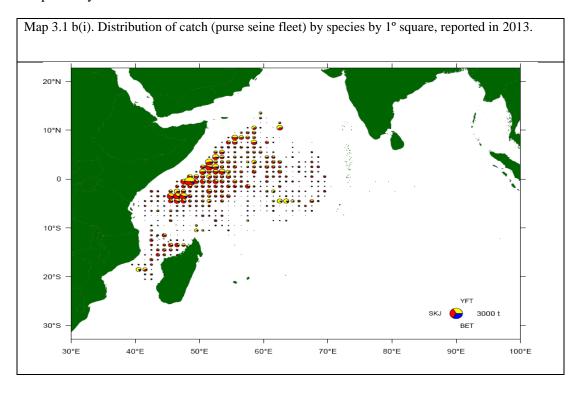
Maps 3.1 a(i), a(ii) and a(iii) show the distribution of fishing effort by 1° square reported by Seychelles purse seine fleet for 2013, 2014 and for the previous 5 years (2010 – 2014) respectively.

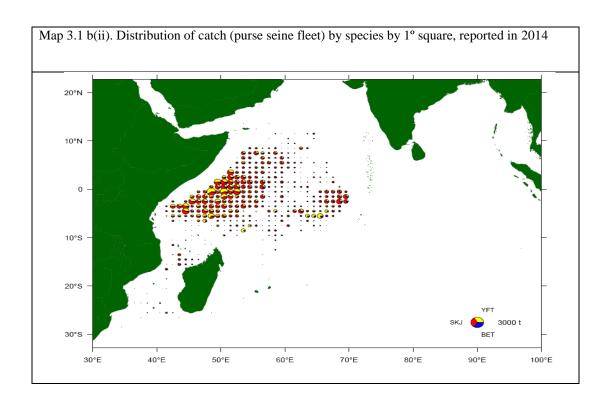


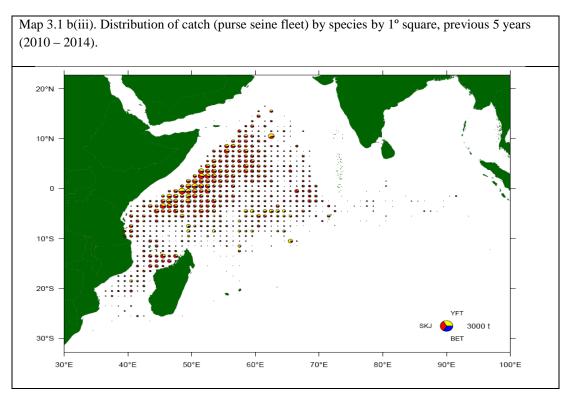




Maps 3.1 b(i), b(ii) and b(iii) show the distribution of catches by 1° square reported by Seychelles purse seine fleet for 2013, 2014 and for the previous 5 years (2010 – 2014) respectively.







# 3.2 Industrial Longline Fishery

Table 2b summarizes total yearly catch by species, fishing effort and catch rates reported by the Seychelles industrial longline fleet during period 2010 to 2014.

The reported fishing effort in terms of the number of hooks set showed an increasing trend between 2010 and 2013 (from nearly 17 million hooks set to 23 million hooks). This increase in fishing effort is partially due to the increase in the number of industrial longliners. The number of industrial longliners increased from 27 in 2013 to 32 in 2013. In 2014, fishing effort decreased slightly to about 21 million hooks set.

The total catch increased from 6,659 MT in 2010 to 15,116 MT 2012 and has since then been on a decreasing trend. For the year 2014, the Seychelles registered industrial longliners reported an estimated catch of 10,487 MT representing a drop of 8% in catches, with 9% decrease in fishing effort when compared to 2013. In term of species composition, bigeye tuna has remained the dominant species caught by this fleet for the past five years, accounting for an average of 58% of the catch. In 2014, the reported catch of yellowfin tuna increased by 37% when compared to the previous year (figure 2a).

NEI consist of albacore, sailfish, and unspecified species. In 2014, the unspecified species category accounted for 13% of the total catch whilst albacore accounted for only 1% of the total catch.

Following an increase in catch rate to 0.77 MT/1000 hooks in 2012, the average catch rate reported in 2013 decreased to reach 0.47 MT/1000 hooks .In 2014, the catch rate remained more or less the same as for 2013 at 0.47 MT/1000 hooks

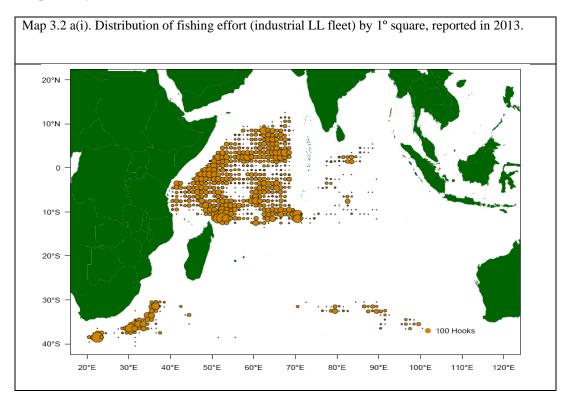
**Table 2b.**Annual catch, fishing effort and catch rates reported by Seychelles industrial longline fleet from the years 2010 - 2014

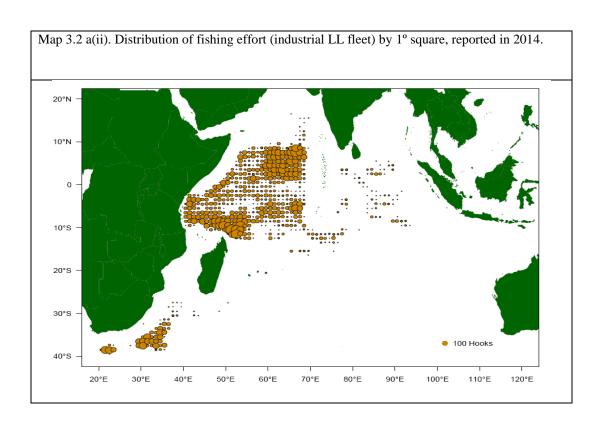
	Fishing Effort	Catch rate							
Year	(million hooks)	(Mt/1000 hooks)	YFT	BET	BET SWO	MAR	SHK	NEI	Total
2010	17.63	0.38	527	3,384	409	214	282	1,841	6,659
2011	16.33	0.46	1,184	4,082	396	285	283	1,337	7,566
2012	19.56	0.77	1,220	10,749	1,082	1,109	389	567	15,116
2013	23.48	0.49	1,177	6,193	945	564	392	2,160	11,431
2014	21.29	0.49	1,615	5,139	948	665	576	1,544	10,487

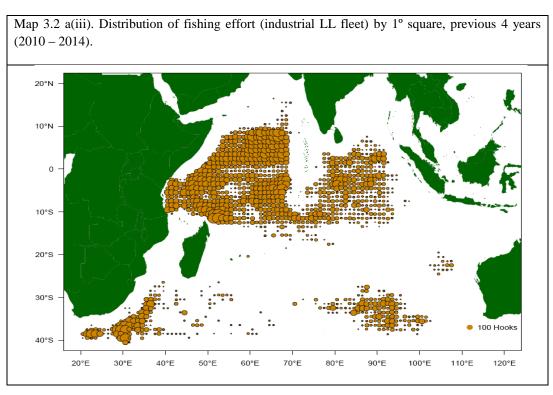
#### Trend in catch by species (Industrial LL) 16,000 14,000 12,000 Catch (MT) 6,000 (MT) 6,000 4,000 2,000 2000 2002 2004 2006 2008 2012 2014 2010 BET **→**SWO $\rightarrow$ MAR <del></del> SHK **─**NEI

# **Figure 2a**. Trends in annual catch by species reported by the Seychelles industrial longline fleet for period 2000-2014

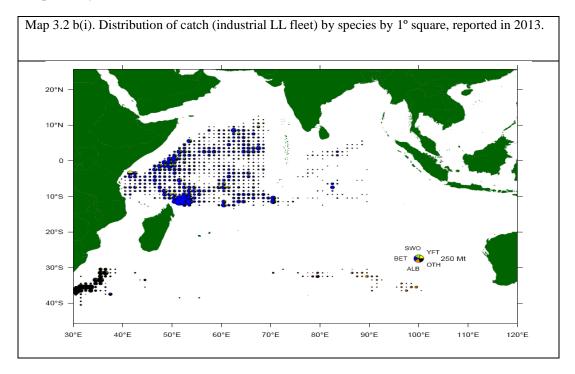
Maps 3.2 a(i), a(ii) and a(iii) show the distribution of fishing effort by 1° square reported by Seychelles'industrial longline fleet for 2013, 2014 and the previous 5 years (2010 – 2014) respectively

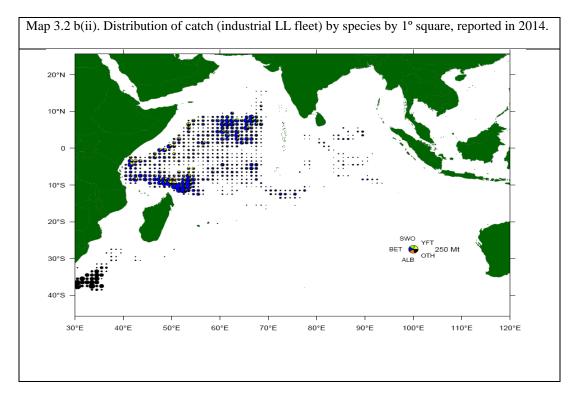


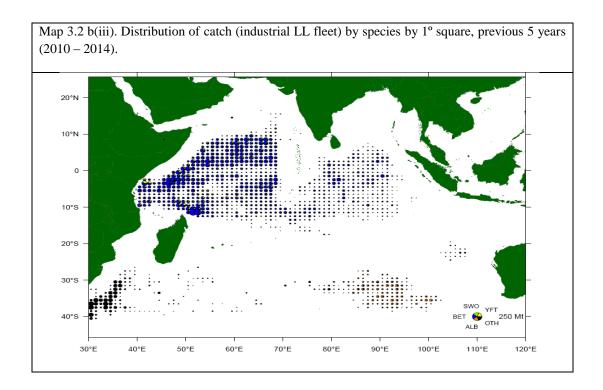




Map 3.2 b(i), b(ii) and b(iii) show the distribution of catches by species by  $1^{\circ}$  square reported by Seychelles' industrial longline fleet for 2013, 2014 and the previous 5 years (2010 – 2014) respectively.







# 3.3 Semi Industrial Fishery

Table 2c summarizes the fishing activities of the locally based semi-industrial longline fleet from 2010 to 2014. The fishing effort in terms of hooks set, has been on an increasing trend following a drop by 43% in 2011. However in 2014, a total of 118,973 hooks were reported to have been set, representing a decreased of 70% when compared to 2013. Catch has been more or less constant from 295Mt in 2010 to 262 Mt in 2013. Similar to the fishing effort, catches also decreased in 2014, by 69% to only 82Mt. The sharp drop in fishing effort and catch may be attributed to problems encountered with export of swordfish on EU market due to its high level of mercury. This lead most semi industrial vessels to switch to targeting demersal species instead of pelagic fish.

Swordfish dominated the catch composition accounting for an average of 61% of the total reported catch for the period 2010-2013.In 2014, despite the difficulties encountered with export of swordfish on EU market , swordfish dominated the semi industrial fishery catches accounting for 71% of the total catch followed by yellowfin tuna (19%) . The catch rate increased from 0.58 Mt/1000hooks in 2010 to 0.82 Mt/1000hooks in 2012, then decreased to 0.69 Mt/1000hooks in 2014.

**Table 2c**.Catch, fishing effort and catch rates reported by the Semi Industrial longline fleet between 2010 and 2014.

Year	Effort (Hooks)	Catch rate (MT/1000 hooks)	swo	YFT	BET	SFA	MAR	SHK	NEI	Total
2010	505,534	0.58	58	26	186	5	12	6	2	295
2011	287,938	0.83	46	23	141	5	7	15	1	238
2012	330,466	0.82	47	38	159	3	9	14	1	271
2013	398,770	0.66	55	24	162	3	5	12	0	262
2014	118,973	0.69	15	5	58	1	1	2	-	82

## Trend in annual catch by species (Semi-Industrial LL) Catch(Mt) → YFT → BET → SWO → SFA → MAR → SHK → NEI → Total

**Figure 1c**. Trends in annual catch by species reported by the Semi Industrial longline fleet between the period 2000 and 2014.

#### 4. RECREATIONAL FISHERY

A logbook system was introduced several years ago for the Seychelles Recreational Fishery. However returns were relatively low and subsequently drop to zero. The management of vessel involved in recreational fishing activities does not fall under the responsibility of the Seychelles Fishing Authority, making it difficult to implement a logbook system. SFA is currently reviewing its data collection system for the domestic fishery, and is working in close collaboration with relevant stakeholders to develop and implement a more effective system that will cover all the important sectors including the sport fishing sector which target tuna and tunalike species.

SFA have also endorsed its first co-management plan with stakeholders in the artisanal dermarsal line and trap fishery. One of the action under this plan is the setting up of community based monitoring which also include data collection by fishers. This initiative could be extended to other sectors and would permit the collection of finer-scaled data.

#### 5. ECOSYSTEM AND BY CATCH ISSUES

#### Sharks

The Seychelles Fishing Authority has initiated the process to review the Seychelles National Plan of Action for the Conservation and Management of Sharks (NPOA) 2007-2011 and to develop the second NPOA 2015-2019.

The review is necessary to assess the implementation success of the NPOA and report on the effectiveness of this plan of action and provide an updated assessment of the conservation and management efforts for sharks.

#### (Shark Finning) Regulations, 2006 exist.

These Regulations place restrictions on the removal of fins of all species of shark on board of foreign-owned or local fishing vessels of a total length of 24 metres or more fishing within or outside the Seychelles Waters. Removal of fins requires an authorisation of the Seychelles Fishing Authority. The Regulations prescribe rules relative to processing and disposal of sharks on board of a vessel. Only a given percentage of weight of fins may be landed. All fishing vessels arriving at the port of destination in the Seychelles shall declare the quantities of shark fins and products on board of the vessel.

#### Seabirds

The Seychelles islands are nesting grounds for about 18 species of seabirds. To date, Seychelles does not have a NPOA on seabirds in place. Seychelles has a domestic semi industrial longline fleet (nine vessels active in 2014) and there have been no reports of interactions with seabirds. On the other hand, the industrial longline fleet has been advised to avoid sea birds hotspots and if they do fish south of 25°S to use the mitigation measures recommended by the IOTC resolution 12/06. Fishing activities of the Seychelles industrial longlines fleet have been declining in areas south of 25°S in recent years. The logbook has been upgraded to record interactions and to date no interaction have been reported.

#### **Marine Turtle**

Several marine turtle monitoring programmes are coordinated by a number of different non-governmental organisations (NGOs) (SIF, Nature Seychelles and MCSS) to monitor turtle population in Seychelles. Under the national fisheries legislation, it is illegal to catch, kill or retain green turtle and hawksbill turtle. The Seychelles fleet (purse seine, industrial longline and semi-industriallongline) have not reported any interactions with marine turtles via logbook. However data on interaction if and when they occur will be collected via our at sea observer programme current being implemented. If a turtle is unintentionally caught fishers are encouraged to return the turtle to sea

## **Other Ecologically Related Species**

Not Applicable

# 6. NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

# 6.1 Logbook

A logbook system collecting catch and effort and other relevant data (such as bycatch, environmental data) exist for the following fisheries targeting tuna and tuna like species

- **Industrial longline:** From early 80's to 2012 (<70% annual coverage with 89% for more recent years)
- **Industrial purse seine:** 1984 to date (95 100% annual coverage)
- **Semi-industrial longline:** 1995 to date (95 100% coverage)

Logbook are reviewed as and when the required to cater for new obligation as they arise.

# **6.2 Vessel Monitoring System**

Since 2003, one of the prerequisite for any Seychelles registered vessel to be authorized to target tuna and tuna-like species in the WIO is to have an operational Vessel Monitoring System. VMS

reports are being automatically transmitted to the Fisheries Monitoring Centre (FMC) at SFA on an hourly basis. VMS information collected are use to validate logbook data.

#### **6.3 Scientific Observer Programme**

At sea deployment of observers on industrial tuna purse seiners under the framework of the Seychelles National Scientific Observer Programme continued in 2014. A total of 18 deployments were completed on Seychelles Purse seiners in 2014 covering a total of 744 observation days. SFA is currently undergoing verification of all data compiled to be submitted to the IOTC secretariat along with observer reports by December this year.

In 2014 a total of 45 observers were trained under the National Observer Programme by SFA. Training of more observers for expansion of the programme is anticipated in 2015.

#### **6.4 Port sampling programme**

Port sampling is a routine and ongoing activity for the purse seine and semi-industrial longline fleet. On the other hand the distant water industrial longline fleet does not land in Port Victoria; hence there are currently no port sampling programmes for those vessels. However size frequency data are being recorded by the crew and transmited to the Seychelles Fishing Authority.

SFA is planning to undertake a comprehensive assessment of the local sport/recreational fishery within the next 2 years. The main objective of the assessment is to develop a framework within which the sport / recreational fishery can be monitored, controlled and managed.

#### 6.5 Unloading/Transhipment

Collection of transshipment and landing forms from fish processing companies for the purse seine fishery and the semi-industrial longline fishery is an ongoing activity with a 95 -100% coverage for each fleet. On the other hand, the distant water industrial longliners rarely land in port Victoria, making monitoring of transhipments/ landing difficult. However we do receive information on landing in foreign ports. Seychelles is also participating in the IOTC regional observer scheme to monitor transhipment at sea on carrier vessels.

#### 7. NATIONAL RESEARCH PROGRAMS

SFA is working with IFREMER to develop a new data collection and management system for the Artisanal Fishery. In the same line IOTC and the OFCF programme supported the SFA to assess the existing Catch Assessment Survey system in 2013. The recommendations from the report will be incorporated in the new system.

Table 8:Summary table of national research programs

Project title	Period	Countries involved	Budget total	Funding source	Objectives	Short description
Balancing risks with benefits associated with consumption of swordfish: from local to global case study (CONSWO)	Sep 2013- Dec 2016	Seychelles	505,000€	EU	(i) to investigate the extent and sources of contamination of swordfish throughout the Western Indian Ocean and in particular in Seychelles surrounding waters (ii) the main endogeneous and/or exogeneous factors affecting bioaccumulation of chemicals in large pelagic populations (iii) to find the actual risk/benefit balance associated with swordfish and tuna consumption in the Western Indian Ocean and worldwide.	This project is investigating factors that affect the level of Persistent, Bioaccumulative and Toxic (PBTs) substances in large pelagic fish species (special focus on the swordfish (Xiphias gladius)) targeted by the Seychelles semi-industrial long liners.
Estimation of Maternal effects On the sustainability of large pelagic populations (EMOTION)	Feb 2012-Dec 2015	France and Seychelles	200,000€	French Research Agency (ANR)	I) understand the process governing the growth of tropical tunas with a particular focus on acceleration/deceleration phases and sexual dimorphism ii) describe the major characteristics of spawning for the three main species of tropical tunas in the Indian ocean to estimate their reproductive potential iii) describe the processes of energy allocation to reproduction in tropical tunas iv) test the hypothesis of a maternal effect as a function of life history traits	Aimed at testing and quantifying maternal effect on large pelagic species. The study is targeting females of 3 main exploited tuna species from the Indian Ocean i.e. the yellowfin (Thunnus albacores), the skipjack (Katsuwonus pelamis) and the bigeye (Thunnus obesus)
Changes in the biochemical composition of tropical tunas and its effects on meat quality (CANAL)	Nov 2012-Oct 2015	France and Seychelles	300,000€	MW Brands / France Filiere Peche (FFP)	To investigate the spatio- temporal variability in the biochemical composition of the three principal market tropical tunas (skipjack tuna, yellowfin tuna and bigeye tuna) and to evaluate its impact on meat quality	Spatio-temporal variability of tuna meat quality and biochemical composition of the tunas was observed by analysis of total proteins, total fat, lipid class composition, and fatty and amino acids profiles. Additional information regarding tuna reproduction and diet were obtained through

						histological and stable isotope analyses
Genetic structure and migration of albacore tuna (GERMON)	Nov 2013- May 2015	France, South Africa, Seychelles	25,000€	IRD/European Fisheries Fund (EFF)	To investigate the genetic population structure, migration routes, reproductive biology and diet of the albacore tuna in the Western Indian Ocean.	Albacore tuna specimens were selected for genetic analysis, for study on reproductive biology through the analysis of sexratio and condition indices' variability, and analysis of histology and fecundity. The diet of albacore tuna has been investigated through stomach content analysis and stable isotope analysis in liver and white muscle. Finally, the contamination of the white muscle of albacore tuna with trace metals and persistent organic pollutants (POPs) has been analyzed on 451 and 89 specimens.
Contaminant bioaccumulation in Seychelles marine food web (SEYFISH)	2015 onwards	Seychelles	100,000€	IRD/EU	To determine the level and extent of contamination in different marine species representative of major functional trophic groups characteristic of typical habitats and largely exploited in Seychelles waters.	Targeted contaminants are the regulated persistent toxic substances including heavy metals (mercury, cadmium and lead) and persistent organic pollutants (POPs, Stockholm Convention). The processes of bioaccumulation and trophic transfer will be investigated through the combined analysis of trophic tracers and contaminants in biota.

# 8. IMPLEMENTATION OF SCIENTIFIC COMMITTEE RECOMMENDATIONS AND RESOLUTION OF THE IOTC RELEVANT TO THE SC

9. **Table 9**. Scientific requirements contained in Resolutions of the Commission, adopted between 2005 and 2015.

Res. No.	Resolution	Scientific requirement	CPC progress
15/02	Mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs)	Paragraphs 1–7	Seychelles has been regularly providing catch, effort, and size data for its purse seine, industrial and semi-industrial longline fleets and catch data of artisanal fishery to the secretariat in the required formats
13/04	On the conservation of cetaceans	Paragraphs 7–9	The Authority informed vessels owners and operators of this resolution and prohibit their flagged vessels from intentionally setting a purse seine net around a cetacean in the IOTC area of competence. Moreover they have been instructed on the best practice guidelines for the safe release and handling of cetaceans developed by the IOTC Scientific Committee. It is also incorporated in their license condition on the certificate of Authorization.
13/05	On the conservation of whale sharks (Rhincodon typus)	Paragraphs 7– 9	The Authority informed vessels owners and operators of this resolution and prohibit their flagged vessels from intentionally setting a purse seine net around whale shark in the IOTC area of competence. Moreover they have been instructed on the best practice guidelines for the safe release and handling of whale shark developed by the IOTC Scientific Committee. It is also incorporated in their license condition on the certificate of Authorization.
13/06	On a scientific and management framework on the conservation of shark species caught in association with IOTC managed fisheries	Paragraph 5–6	The concern fleet (s) has been notified of the requirement of IOTC resolution 13/06 and the need to comply and report interactions. Logbook have been modified to report interaction including releases.
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 Authority informed vessels owners and operators of this resolution and were encouraged to report data for catches of sharks. It is also incorporated in their license condition on the certificate of Authorisation. The Authority informed vessels owners and operators of this resolution and the proposed mitigation practices as well as the steps to be undertaken in case of incidental capture.
12/06	On reducing the incidental bycatch of seabirds in longline fisheries.	Paragraphs 3–7	The Authority informed vessels owners and operators of long line fisheries of this resolution and were encouraged to report data for catches of sharks. It is also incorporated in their license condition on the certificate of Authorisation.

Res. No.	Resolution	Scientific requirement	CPC progress
12/04	On the conservation of marine turtles	Paragraphs 3, 4, 6–10	Under the current fisheries legislation, it is illegal to fish, catch or kill green turtle and hawksbill turtle. Several marine turtle monitoring programmes are coordinated by a number of different nongovernmental organisations to monitor turtle population in Seychelles. The Authority informed vessels owners and operators of this resolution and the proposed mitigation practices as well as the steps to be undertaken in case of incidental capture. Modification of logbook for reporting interaction with marine turtle is to be implemented. It is also incorporated in their licence condition of the certificate of Authorization.
11/04	On a regional observer scheme	Paragraph 9	A total of 18 deployments were completed on Seychelles Purse seiners in 2014 covering a total of 744 observation days. SFA is currently undergoing verification of all data compiled to be submitted to the IOTC secretariat along with observer reports by December this year
05/05	Concerning the conservation of sharks caught in association with fisheries managed by IOTC	Paragraphs 1–12	The Authority informed vessels owners and operators of this resolution and were encouraged to report data for catches of sharks. It is also incorporated in their license condition on the certificate of Authorisation.

# 10. LITERATURE CITED

SEYCHELLES FISHING AUTHORITY (2007) Seychelles national plan of action for the conservation and management of sharks,  $59~\rm pp.$ 

National Bureau of Statistics, Statistical Bulletin, Population and vital statistics. No: 2 of 2013. August 2013.