

Seychelles Fishing Authority Annual Report 2011



Annual Report

2011



Seychelles Fishing Authority

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ACRONYMS

AFIA	Agricultural and Fisheries Incentives Act (2005)
AMESD	African Monitoring of Environment for Sustainable Development
AMPED	Aires Marines Protégées pour Espèces qui se Déplacent beaucoup
ASCLME	Agulhas-Somali Current Large Marine Ecosystem
BSFC	British/Seychelles Fisheries Commission
CAS	Catch Assessment Survey
CBS	Central Bank of Seychelles
CCA	Concessionary Credit Agency
COFI	Committee on Fisheries
CPUE	Catch Per Unit of Effort
DBS	Development Bank Seychelles
DoE	Department of Environment
EAF	Ecosystem Approach to Fisheries
EC	European Commission
EDF	European Development Fund
EEZ	Exclusive Economic Zone
ESA	Eastern and Southern Africa
EU	European Union
FADs	Fish Aggregating Devices
FDF	Fisheries Development Fund
FIA	Fisheries Incentives Act
FMC	Fisheries Monitoring Centre
GEF	Global Environment Facility
GST	Goods and Services Tax
ICCAT	International Commission for the Conservation of Atlantic Tunas
IFREMER	Institut Français de Recherche pour l'Exploitation de la Mer
IOC	Indian Ocean Commission

IOSSS	Indian Ocean Swordfish Stock Structure
IOT	Indian Ocean Tuna
IOTC	Indian Ocean Tuna Commission
IUU	Illegal, Unreported and Unregulated
LMEs	Large Marine Ecosystems
MADE	<u>M</u> itigating <u>A</u> dverse <u>E</u> cological impacts of open ocean pelagic fisheries
MASMA	Marine Science for Management
MCS	Monitoring, Control and Surveillance
MCSS	Marine Conservation Society Seychelles
MENR	Ministry of Environment and Natural Resources
MNRI	Ministry of Natural Resources and Industry
MSA	Maritime Safety Administration
NODC	National Oceanographic Data Centres
NSB	National Statistics Bureau
NDEA	National Drug Enforcement Agency
ODINAFRICA	Ocean Data and Information Network for AFRICA
OFCF	Overseas Fisheries Cooperation Foundation
PSM	Port State Measure
PV	Patrol Vessel
RFSP	Regional Fisheries Surveillance Project
SADC	Southern African Development Community
SCA	Seychelles Concessionary Agency
SCG	Seychelles Coast Guard
SEnPA	Small Enterprise Promotion Agency
SEYPEC	Seychelles Petroleum Company
SFA	Seychelles Fishing Authority
SLA	Seychelles Licensing Authority
SNPA	Seychelles National Park Authority
SPDF	Seychelles People Defence Force
SOTN	Seychelles Ocean Temperature Network

SWIOFP	South West Indian Ocean Fisheries Project
VMS	Vessel Monitoring System
WIOMSA	Western Indian Ocean Marine Sciences Association
YES	Youth Enterprise Scheme

FOREWORD

The Annual Report for 2011 covers a year with significant successes for the Seychelles Fishing Authority (SFA). Through a number of support facilities such as the construction of infrastructure and granting of capital loans, SFA was in a position to assist more entrepreneurs willing to enter the ever-growing semi-industrial longline fishing sector.

During 2011, SFA concentrated on its policy to develop and implement more sustainable fishing practices and continued to work in close collaboration with the various local stakeholders in order to implement this policy.

Although the problem of piracy in our waters is still a major concern, Port Victoria continued to maintain its position as the main tuna landing/transshipment port in the Western Indian Ocean. With the continued efforts of SFA, the Seychelles Coast Guard and our international partners, the piracy threat has been closely monitored and kept under control.

In 2011, we are proud to announce that Seychelles through SFA and the European Union under the Fisheries Partnership Agreement reached a consensus on the development of a Fisheries Sectoral Programme for 2012. We will continue to work in close collaboration with our international partners, such as the EU and Japan, to improve productivity, efficiency and pursue infrastructure developments in order to ensure that we derive the maximum economic benefits from the fisheries sector.

These achievements and improvements in our infrastructure would not have been feasible without the dedication of the hard working SFA staff. SFA is committed to building up its manpower capacity through various trainings and workshops organized locally, regionally and internationally. SFA is providing financial support for three students studying for their BSc degrees and two students studying for their MSc degrees at overseas universities. SFA has also signed a memorandum of understanding with the

University of Seychelles to provide financial support to students studying for their bachelor degree in Environmental Science with a specialized module in Fisheries.

I am confident that SFA is prepared to meet any new challenges that it will face in the future and will continue to serve its objective of promoting “*Responsible Fishing for Sustainability*”, whilst striving to maintain its position as one of the pillars of our economy.

Finally, I would like to take this opportunity to thank all SFA staff for their hard work and dedication during the year and for their contribution in making the year 2011 a very successful year that we should all be proud of.



Finley Racombo
Chief Executive Officer

1. STRUCTURE AND FUNCTIONS

The SFA was incorporated on the 31st August 1984 by the Seychelles Fishing Authority (Establishment) Act, although it had physically been in existence since September 1983 when the Seychelles Industrial Fishing Authority (SIFA) was formed. The first Chief Executive of SFA was Mr Maxime Fayon. The Authority was established at a time of intense fisheries development, especially in foreign industrial tuna fishing. It was created to develop the fishing industry to its fullest potential and to safeguard the resource base for sustainable development. It absorbed personnel from the defunct Fisheries Division and the Fishing Development Company (FIDECO) and became the executive arm of the Government in the field of fisheries.

SFA works closely with the Ministry of Natural Resources and Industry (MNRI), which replaced the Ministry of Environment and Natural Resources (MENR) in 2010. The functions of the SFA as defined in article (5) of the Seychelles Fishing Authority (Establishment) Act are:

- To promote, organise and develop fishing, fishing industries and fishing resources in Seychelles.
- To assist in the formulation of national policy with respect to fishing, fishing industries and fishing resources and in the implementation of that policy.
- To conduct negotiations, engage in meetings, seminars or discussions, with regard to fishing or fisheries and the establishment or operation of fishing industries, whether at a national or international level, on behalf of the Republic.
- To identify the manpower training requirements of Seychelles with regard to fishing and fishing industries.

Subject to this Act, the Authority has the power to do all things necessary or convenient in connection with, or incidental to, the performance of its functions and, in particular the Authority may:

1. Own, lease or dispose of movables or immovables.
2. Form companies under the Companies Act.
3. Enter into partnership or joint-ventures.
4. Act as agent for the purpose of the management of any business or enterprise, or for any other purpose.
5. Hold shares in, or debentures of any company.
6. Carry on any business or enterprise for or in connection with:
 - a. fishing or fisheries
 - b. processing, transporting, handling, marketing or distributing fish or fish products
 - c. exporting fish or fish products
 - d. the sale of equipment or apparatus to be used for fishing, or
 - e. Any other matter relating to its functions where, in the opinion of the Authority, the carrying out of such a business or enterprise is in the best interest of the Republic.
7. Conduct surveillance operations, in conjunction with the Department of Defence, in relation to fishing operations in the Exclusive Economic Zone (EEZ) or in waters adjacent to the continental shelf.
8. Monitor the catch of all fishing vessels, and
9. Carry out scientific and development research

SFA is unique in that it is an organization with management, planning, development, scientific and training functions.

SFA is a Parastatal Organisation whose Board of Directors is appointed by the President.

2. ECONOMIC CONTRIBUTION OF THE FISHERIES SECTOR

2.1 General Observations

Mixed results were observed in the fisheries sector for the year 2011. Total domestic production declined, as did the total volume of fish and fish products exported. On the other hand, revenue generated from the industrial tuna fishing activity and the value of exports reached a record level. As a result, gross revenue generated by the fisheries sector and related activities increased to a new high.

The artisanal catch in 2011 increased by 10.79% over the previous year compared to a decline of 14.05% in 2010. This indicates a rise in the amount of fish available for domestic consumption and export. However, this did not reflect in the price of fish in 2011, as although more fish was available on the market, prices still increased as seen in Figure 2.1 below. In 2011, the price of fish increased by 14%, albeit a lesser percentage than the 27% increase registered in 2010.

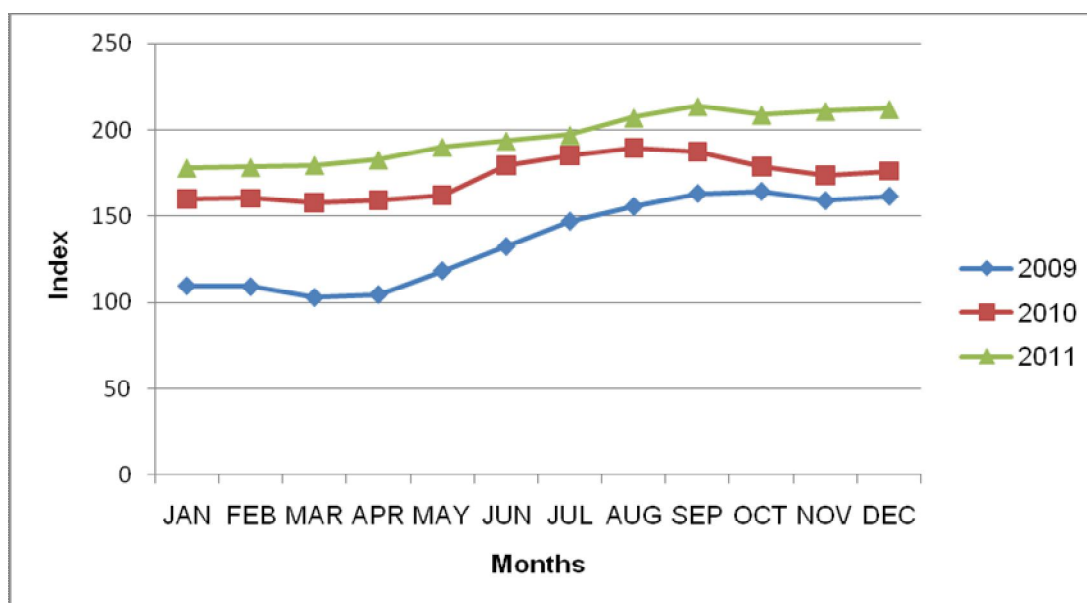


Figure 2.1 Monthly Price Index of Fish 2009-2011

The semi-industrial sector did not perform as well as the previous year with total production decreasing by 19.42%.

Concerning trade, both export receipts and import expenditure increased in 2011 compared to the previous year. However, in terms of volume, exports decreased slightly whereas imports increased. Nonetheless, the fisheries sector retained its position as the main foreign exchange earner for the country.

2.2 Employment

Direct and indirect employment in fisheries and related sectors was estimated to be approximately 5,000 people in 2011, representing around 11% of total formal employment in the country.

The Indian Ocean Tuna (IOT) canning factory was by far the largest single employer in the country with a workforce of over 2,500 workers. The number of full and part-time commercial fishers varied between 1,300 and 1,400 primarily due to the seasonal mobility associated with this sector. In 2011, 150 people were employed in the sea cucumber fishing industry and the Seychelles Fishing Authority as a Parastatal, employed 122 people. During the year, a maximum of 69 Seychellois seamen made at least one trip on board purse seiners. Employment in the fisheries sector also includes people employed in fish processing, export activities, net repairs and ship chandelling.

2.3 Production of Fish and Fish Products

In 2011, domestic production of fish and fish products remained relatively constant at 33,404 MT, showing only a slight improvement of 0.23% over 2010 (Table 2.1).

Table 2.1 Total production of fish and fish products 2009-2011(MT)

(MT)	2009	2010	% change	2011	% change
Artisanal Catch	3,019.10	2,595.00	-14.05	2,875.00	10.79
Semi-Industrial Catch	329.00	295.00	-10.33	237.70	-19.42
Canned Tuna	30,824.00	30,338.00	-1.58	30,152.00	-0.61
Smoked Fish	28.40	29.60	4.23	29.40	-0.68
Others	60.20	70.00	16.28	110.00	57.14
Total Domestic Catch	34,310.70	33,327.60	-2.87	33,404.10	0.23
Purse Seine Catch*	68,339.40	75,786.60	10.90	63,211.60	-16.59
Longliner Catch*	8,323.10	6,659.00	-19.99	7,565.80	13.62
Subtotal (2)	76,662.50	82,445.60	7.54	70,777.40	-14.15
Fish Meal	5,168.00	7,863.00	52.15	4,088.00	-48.01
Fish Oil	826.00	915.00	10.77	767.00	-16.17
Subtotal (3)	5,994.00	8,778.00	46.45	4,855.00	-44.69
Grand Total	116,967.20	124,551.20	6.48	109,036.50	-12.46

*Seychelles flag vessels

The artisanal catch recovered slightly from a 14.05% decrease in 2010 to a 10.79% increase in 2011. Despite the improvement, a catch of 2,875 MT was recorded in 2011, a figure lower than the 3,019 MT landed in 2009. Following relatively high landings in 2009, output from the semi-industrial fishery has been on the decline since, and in 2011, a decrease of 19.42% was registered. This was due to the fact that there were only four semi-industrial fishing vessels active in 2011, compared to nine vessels in 2010 (see section 3.3).

As in previous years, canned tuna remained the dominant commodity produced, accounting for 90% of total domestic production in 2011. Other productions, which includes dried sea cucumber and shark fins, increased by 57% to reach a record 110 MT in 2011, compared to 70 MT in 2010.

During 2011, seven Seychelles registered purse seiners landed a total catch of 63,211 MT of tuna, which represents a 16.59% decrease from the 75,786 MT caught by the eight

Seychelles registered purse seiners in 2010. This translates to an average catch of 9,030 MT per purse seiner in 2011, compared to 9,473 in 2010. On the other hand, the catch from Seychelles registered longliners increased by 13.62% to 7,566 MT in 2011, compared to the 6,658 MT caught in 2010. This is a result of the increase in the number of Seychelles flagged long-line vessels from 11 in 2010 to 15 in 2011.

Fish meal is a by-product produced from the tuna factory trimmings, and fish oil is obtained during the reduction process by which fish meal is produced. Therefore, the two are correlated, and hence a decrease in production of fish meal results in a decrease in the production of fish oil. In 2011, production of fish meal dropped by 48% to reach 4,088 MT. This was because production stopped in the last two quarters of 2011. Hence, fish oil production also dropped by 16.17% to 767 MT in 2011.

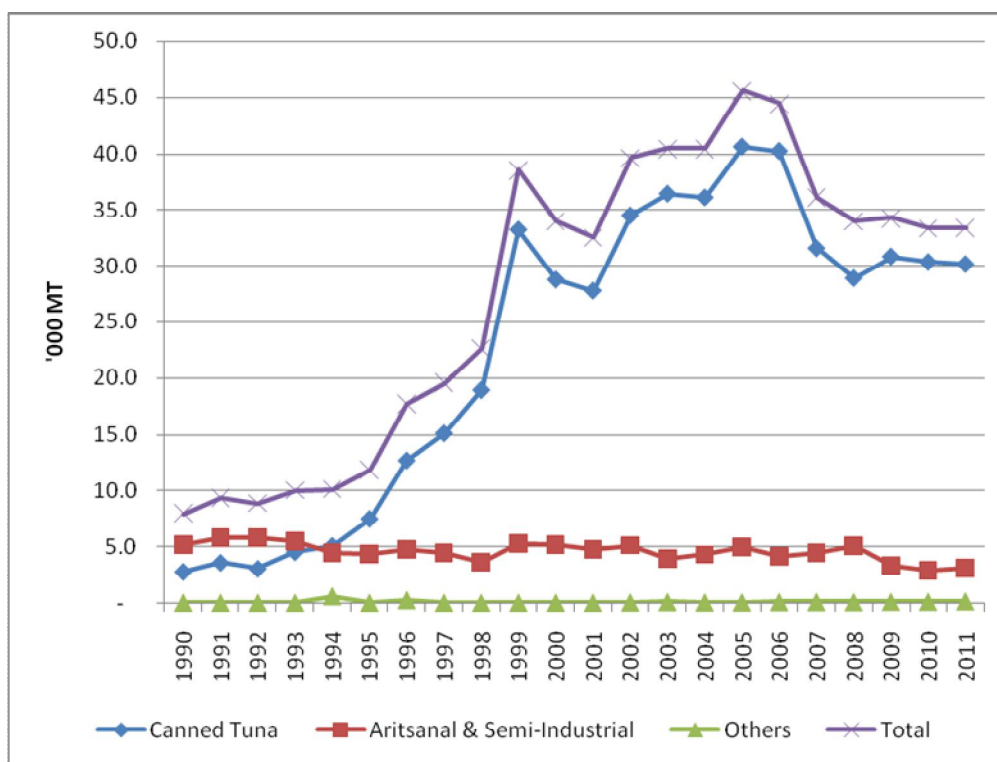


Figure 2.2 Trends in the Production of Fish and Fish Products 1990-2011

Figure 2.2 illustrates the trend in the domestic output of fish and fish products over the last two decades, revealing a high correlation between total output and canned tuna. For the past three years, total output has remained fairly constant, with no significant fluctuations in the production of canned tuna. The production of dried sea cucumber, shark fins and smoked fish remained relatively insignificant in contrast to their economic importance. Moreover, since 2009, the artisanal and semi-industrial catch decreased but has remained stable for the next two years (i.e. 2010 and 2011).

2.4 Revenue From the Industrial Tuna Fishery

Industrial tuna fishing activity continued to increase in importance in the economy, as illustrated by the revenue generated in Table 2.2. Gross income from this sector is derived mainly from foreign fishing vessels' expenditure on goods and services in Port Victoria, as well as through payments for licences and financial compensation. In 2011, gross expenditure reached SR1.456.55 billion, a 14.9% increase from the expenditure of SR1.297.21 billion earned in 2010.

Table 2.2 Main sources of revenue from the industrial tuna fishing activity 2009-2011 (SR million)

(SR Million)	2009	2010	% change	2011	% change
Vessel Expenditure	1,157.00	1,145.00	-1.04	1,290.00	12.66
Company Expenditure	12.11	19.55	61.44	19.84	1.48
Seamen Compensation	0.54	0.51	-5.32	0.58	13.73
Licence Fees, Excess Catch, EU Compensation	229.00	132.15	-42.29	146.13	10.52
Total	1,398.65	1,297.21	-7.25	1,456.55	12.28

Spending by vessels remained the most important source of revenue from industrial tuna fishing activity, accounting for approximately 89% of all revenue from this sub-sector in 2011. In 2011, vessel expenditure increased by 12.66% from the previous year to reach SR1.290 billion. Contributing to this increase was the rise in the price of fuel from US\$820/MT at the end of 2010 to US\$980 by the beginning of 2011 (Figure 2.3).

In 2011 data received from Seychelles Petroleum Company (SEYPEC) indicate that 140,917 MT of fuel were purchased by purse seiners, reefers, longliners and supply vessels compared to 135,205 MT in 2010. However, it should be noted that these figures are underestimated as at the end of 2009, SEYPEC started providing bunkering services at sea using its new tanker, Seychelles Paradise, and SFA did not have access to this information.

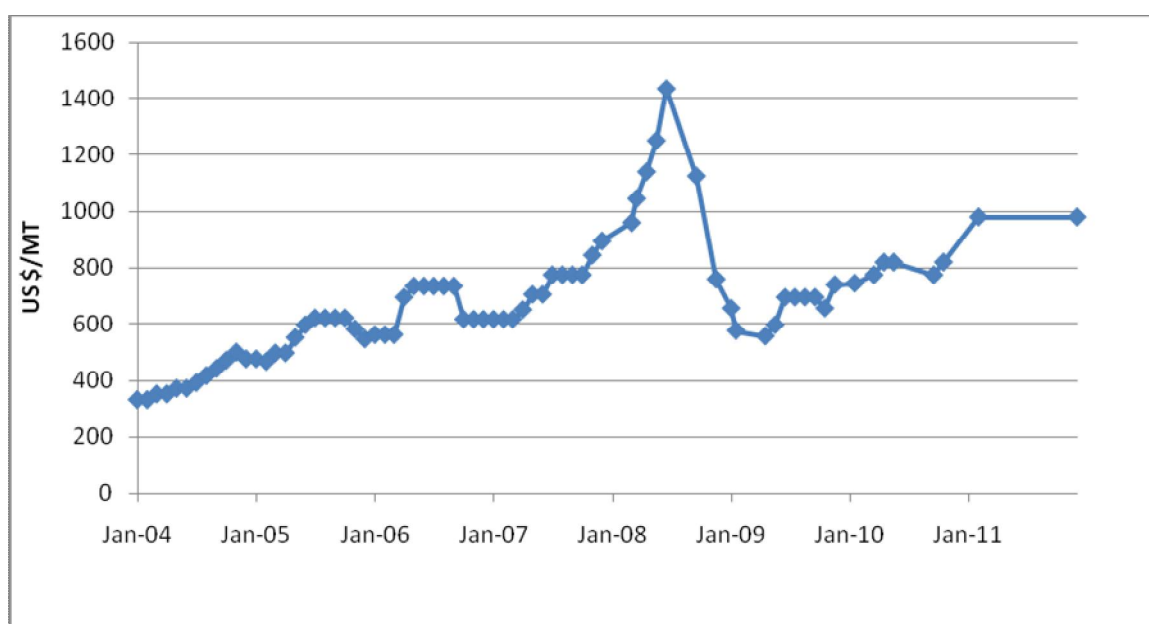


Figure 2.3 Price of fuel quoted by SEYPEC Jan 2004 –Dec 2011

A slight increase of 1.48% was registered in spending by foreign fishing companies based in Port Victoria. Seamen compensation also remained fairly stable, increasing by 13.73% or SR70,000.00. Seamen compensation is a fee which ship-owners are obliged to pay under the Seychelles/EU protocol when a tuna purse seiner fails to take at least two Seychelles seamen on board when fishing in Seychelles' waters. The fee is calculated using a flat rate per day multiplied by the amount of days that the fleet operated in Seychelles' waters.

Figure 2.4 below shows the trend observed in total revenue since the 1990. Up until 2009, there was a general upward trend in total revenue earned from the industrial tuna fishing

activities. However, due to the piracy threat, activity in that sector decreased in 2009 and 2010 but has since shown signs of recovery as revenue increased slightly in 2011.

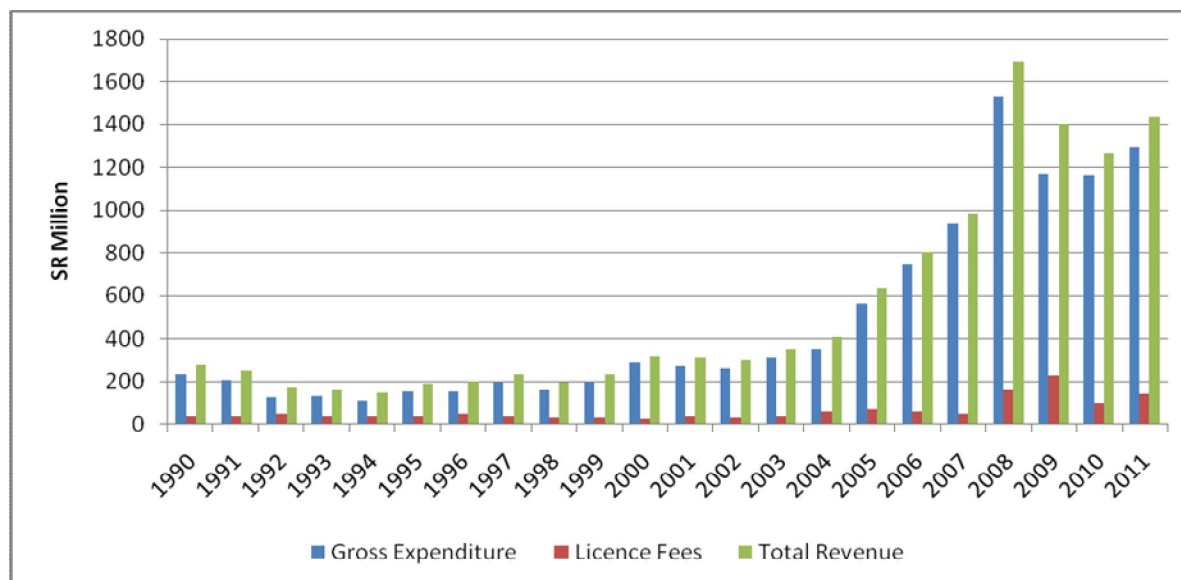


Figure 2.4 Revenue from industrial tuna fishing activity

Note: This figure does not take into account various discounts offered by SEYPEC on fuel purchase by vessel-owners.

2.5 Trade in Fish and Fish Products

2.5.1 Exports of fish and fish products

Exports of fish and fish products constitute an important source of foreign exchange earnings for the country. In addition, processing of fish into exportable products generates a significant amount of employment and income. The volume of products exported increased by 2.37% in 2011, whilst the value of exports increased by 23%. The volume exported increased from 37,356 MT in 2010 to 38,241 MT in 2011, whilst the value rose from SR2.566 to SR3.165 billion.

Dried shark fins and sea cucumber exports increased by 57% with its value also increasing by 76%. Due to the limited number of countries supplying the global market with this product, there has been a continuous rise in prices paid for sea cucumber over the years which has positively impacted on its export price. However, there are currently management measures in place, e.g. a closed season, to prevent over exploitation of this resource.

In 2011, for the first time since 2007, an increase of 7.82% was recorded in the volume of canned tuna exported, bringing volume of canned tuna exported to 31,283 MT in 2011 compared to 29,015 MT in 2010. The value of canned tuna exports also increased, from SR2.382 in 2010 to SR3.001 billion in 2011. This translates into a 16.84% increase in the price per tonnes, from SR82,111 per MT in 2010 to SR95,939 per MT in 2011. The piracy threat has caused the supply of tuna to the canning factories to decrease as purse seiners shifted their operation from the Indian Ocean to the Atlantic Ocean. This in turn caused an increase in the price of canned tuna on the EU market which is Seychelles' main destination for canned tuna exports.

In 2011, the volume of fish meal exported decreased by 24.5% from 7,050 MT in 2010 to 5,323 MT, with its value also decreasing from SR85.5 to SR73.1 million, representing a 15% decrease. A similar situation existed for the export of fish oil, which registered a decrease of 16.17% from 915 MT in 2010 to 767 MT in 2011. The value of fish oil exports decreased by 21%, from SR40.4 in 2010 to SR32.4 million in 2011.

In 2011, there was a slight increase in the value of fish and fish products in terms of total domestic earnings. The value increased from 92% in 2010 to 94% in 2011, again illustrating the importance of marine product exports for foreign exchange earnings. Europe remained Seychelles' primary market for fish and fish products, with canned tuna being the dominant commodity. Other than exporting to the EU, Seychelles also exported to Reunion, Mauritius, U.S.A and the Middle East. South-east Asian markets such as

China, Japan and Singapore also constituted an important market for Seychelles', particularly for dried sea cucumber and shark fins.

Table 2.3 Volume and value of fish and fish products exported, 2010-2011

	2010		2011		% change	
	MT	SR '000	MT	SR '000	MT	SR '000
Fresh and Frozen Fish	306	26,225	203	18,788	-33.66	-28
Canned Tuna	29,015	2,382,456	31,283	3,001,272	7.82	26
Dried Shark Fins & Sea Cucumber	70	30,560	110	53,902	57.14	76
Total	29,391	2,439,241	31,596	3,073,962	7.50	26
Total Domestic Exports		2,640,500		3,284,052		
% of Domestic Exports		92%		94%		
Fish Meal	7,050	85,821	6,645	91,302	-5.74	6
Fish Oil	915	40,928	767	32,379	-16.17	-21
Grand Total	37,356	2,565,990	38,241	3,165,264	2.37	23

2.5.2 Imports of fish and fish products

During 2011, an increase in both the volume and value of fish and fish products imported was registered. The main product, frozen tuna was destined for the IOT canning factory for canning, fish-meal and fish oil production. The other commodities imported were supplies for the hotel and local market and bait for the domestic fishing industry.

The volume of fish and fish products imported increased by 4.44% to reach 68,712 MT in 2011. In 2011, total expenditure on imports to the country increased by 67.12%, from SR 965 million in 2010 to a record SR1.6 billion. This implied a 60% increase in the average price of fish products imported, from SR14, 670.00 to SR23, 473.00 per MT. The increase in the price of frozen fish (tuna) contributed to the major increase in the price of general imports.

Frozen fish, namely tuna, the main raw material for the canning factory remained the dominant import commodity, accounting for over 99% of total fish imports and fish products in terms of volume and approximately 98% in terms of value. In 2011, frozen

tuna imports amounted to 68,440 MT, a 4.32% increase from 2010. As piracy still remained a threat in the Seychelles' waters, many of the purse seiners that had moved to the Atlantic Ocean have still not returned to the Indian Ocean, resulting in a reduction of raw material available locally for production.

The most significant increases in 2011 were recorded for the imports of prepared and preserved fish as well as fish fillets and other fish products. The volume of imports of prepared and preserved fish increased by 251% to reach a record 16.54 MT in 2011 and that of fish fillets and other fish products by 213% to reach 3.72 MT. Overall, the volume of imports of fish and fish products in 2011 was 68,712 MT, a 4.4% increase from 2010. In terms of value, there was a 67.12% increase in 2011, making a total outlay to the country of SR1.6 billion compared to SR965,000 in 2010.

Table 2.4 Volume and value of fish and fish products imported, 2010-2011

	2010		2011		% change	
	MT	SR '000	MT	SR '000	MT	SR '000
Frozen, Fresh, Chilled	4.63	376.59	3.88	587.03	-16.16	55.88
Fish, Frozen	65,607	948,230	68,440	1,578,862.00	4.32	66.51
Fish, Fillets, and other fish meat	1.19	164.61	3.72	522.88	212.86	217.66
Fish, dried, salted or in brine	12.60	787.45	17.81	2,120.62	41.31	169.30
Molluscs and Crustaceans	158.04	15,140.29	229.86	29,066.04	45.44	91.98
Fish prepared and preserved	4.71	409.99	16.54	1,724.84	251.17	320.70
Total	65,787.73	965,109	68,712	1,612,883	4.44	67.12

2.6 Foreign Currency Flows

Trade in fish and fish products and other related activities constitute an important growth and income generating activity for the national economy. These activities have a major

influence on the country's balance of payment as a substantial portion of the country's current inflow of foreign exchange is derived from fish trading activities.

In 2011, the volume of consumable domestic production of fish reached 33,404 MT, increasing by 0.23% over 2010. Although the export of fish and fish related products decreased by 1.17% to 36,919 MT, the volume of imports for the same year increased by 4.4% to 68,712 MT.

In terms of value, gross value of exports in 2011 was SR3.14 billion, representing a 23% increase from 2010 and the gross value of imports also increased by a much higher margin of 67% to reach SR1.61 billion. This translates in a gross balance of trade surplus in fish and fish products of SR1.53 billion for 2011. However, it should be noted that this balance of trade figure only takes into account fish and fish products imported and not other inputs required by the fishing industry which would imply a much lower net currency inflow.

Table 2.5 The gross inflow of foreign exchange generated by the fisheries sector, 2010-2011

Foreign Currency Flows	2009	2010	% change	2011	% change
(SR '000)					
Visible Exports	3,142,212	2,565,990	-18.34	3,147,020	22.64
Revenue from Industrial Tuna Fishing	1,398,649	1,265,290	-9.53	1,453,820	14.90
Gross Inflow from fisheries (a)	4,540,861	3,831,280	-15.63	4,600,840	20.09
Current Account Receipts (b)	12,291,100	10,627,800	-13.53	14,126,000	32.92
(a) as a % of (b)	37%	36%		33%	

As observed in Table 2.5 above, the gross inflow from fisheries made up 33% of current account receipts in 2011, decreasing by 3% over 2010. This was due to the fact that although gross inflow from fisheries improved by 20% in 2011, current account receipts increased by a slightly larger margin of 33%.

Official figures from the Central Bank of Seychelles indicate that in 2011, gross earnings from fisheries and fisheries related activities surpassed gross earnings from the tourism industry. This essentially highlights the economic importance of the fisheries sector and shows that it could in fact be the number one pillar of our economy. Furthermore, official figures from the Central Bank of Seychelles indicate that from 2007 to 2010 gross earnings from fisheries and fisheries related activities surpassed gross earnings from tourism (see table 2.5). The importance of the fisheries sector in the development of the country is highlighted, and, there is a potential in the future to further develop the industry through value addition and the development of the semi-industrial fishing sector.

3. INDUSTRIAL AND SEMI INDUSTRIAL TUNA FISHING ACTIVITIES

3.1 The Purse Seine Fishery

3.1.1 Catches, fishing effort, catch rates and species composition

In 2011 the total catch in the Western Indian Ocean by purse seiners holding licences to fish inside the Seychelles EEZ was estimated at 258,361 MT, compared to 279,244 MT in 2010. This represent a decrease of 7% in the total catch reported compared to the previous year.

The fishing effort in 2011 was estimated to be 9,558 fishing days which represents only a 3% increase when compared with the 9,318 fishing days reported for 2010. The overall monthly catch rates in 2011 ranged from 11.25 to 45.63 MT/fishing day. The average catch rate was 27.03 MT/fishing day which is slightly lower than the 29.97 MT/fishing day for 2010.

Skipjack and yellowfin tuna accounted for 49% and 43% of the total catch respectively. The catch of skipjack dropped by 17% whilst the catch of yellowfin increased by 7% (Table 3.1).

Table 3.1 Tuna catch statistics for the last ten years

Year	Total Catch	Catch Rate	Yellowfin		Skipjack		Others	
	(MT)	MT/Day	Catch	%	Catch	%	Catch	%
2002	378,027	28.74	128,206	34	217,847	58	31,975	8
2003	408,366	34.87	197,782	48	189,566	46	21,018	5
2004	358,258	30.03	201,727	56	137,103	38	19,428	5
2005	389,256	29.16	176,322	45	190,053	49	22,882	6
2006	389,935	26.8	145,596	37	224,065	57	20,274	5
2007	245,670	16.45	92,034	37	132,238	54	21,399	9
2008	278,956	21.1	112,724	40	137,330	49	28,903	10
2009	262,719	24.02	84,821	32	150,420	57	27,478	10
2010	279,244	29.97	103,127	37	153,782	55	22,334	8
2011	258,361	27.03	110,574	43	127,150	49	20,637	8

In term of catches by national fleet, the, Spanish, French and Seychelles' fleet all recorded a decrease of 8%, 10% and 17% in their total catch respectively. The catch of the Spanish fleet decreased from 137,386 MT in 2010 to 126,009 MT in 2011. The catch from the Seychelles registered fleet decreased from 75,787 MT in 2010 to 63,212 MT in 2011 and the catch from the French fleet decreased from 47,102 MT to 42,530 MT during the period under review (Table 3.2).

Table 3.2 Tuna catch statistics by country of registration for 2010 to 2011

Country	2010			2011		
	Catch (MT)	Effort	CPUE	Catch (MT)	Effort	CPUE
Spain	137,386	3,879	35.42	126,009	3,839	32.83
France	47,102	2,132	22.1	42,530	2,108	20.17
Seychelles	75,787	2,323	32.63	63,212	2,347	26.94
<u>Others*</u>	18,969	985	19.26	26,610	1264	21.06
Total	279,244	9,318	29.97	258,361	9,558	27.03

* Others represent other countries and include Thailand (2010) and Mayotte (2010-2011)

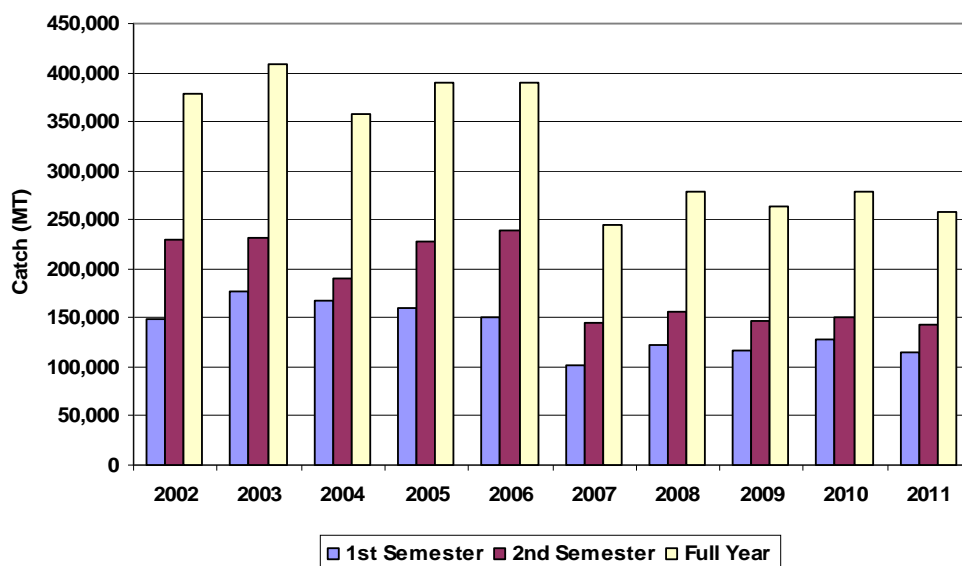


Figure 3.1 Total catch reported by purse seiners licensed to fish in the Seychelles waters, from 2002 – 2011

Between 2003 and 2007 an increasing trend has been observed in the purse seine fishing effort whilst the CPUE has decreased. A reversal in the trends for both the CPUE and fishing effort was observed from 2007 to 2010. From 2010 and 2011, the CPUE then decreased slightly from 29.97 MT/Fishing day in 2010 to 27.03 MT/Fishing day in 2011 whilst the fishing effort increased slightly from 9,318 fishing days in 2010 to 9,558 fishing days in 2011 (Figure 3.2).

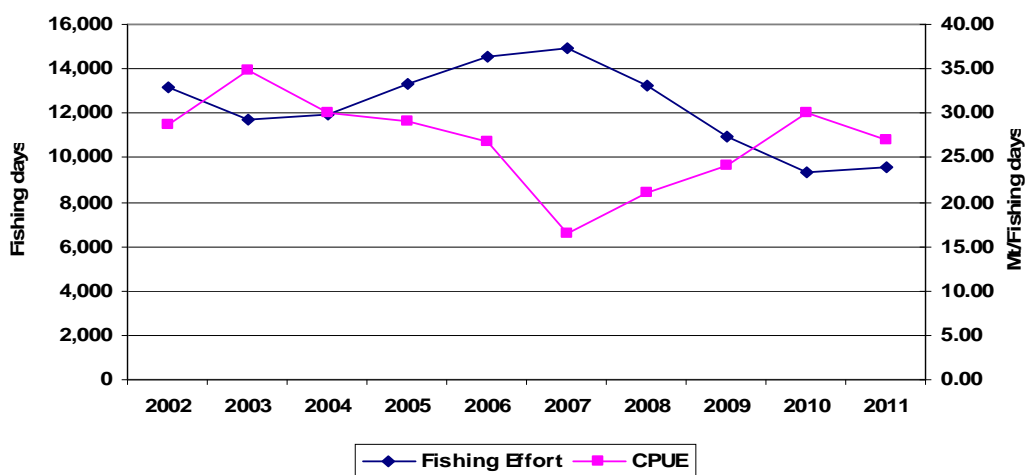


Figure 3.2 Total effort (fishing days) and catch rates (MT/fishing day) reported by purse seiners licensed to fish in the Seychelles waters, from 2002 – 2011

3.1.2 Fishing grounds exploited

Figures 3.3a and 3.3b show the distribution of catches reported by purse seiners (holding licences to operate in Seychelles waters) in the Western Indian Ocean by 1° square, for 2010 and 2011 respectively.

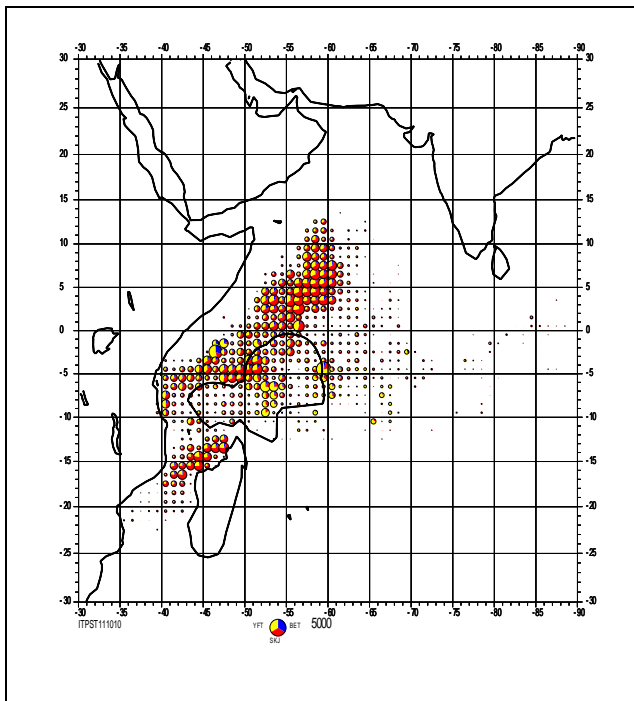


Figure 3.3a Purse Seine total catch by 1° square, 2010

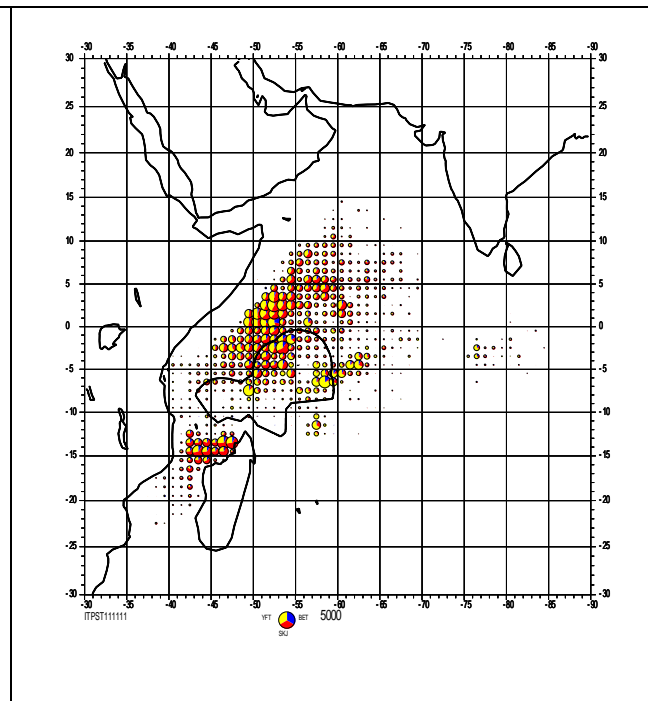


Figure 3.3b Purse Seine total catch by 1° square, 2011

3.1.3 Transshipment and landings in Port Victoria

In 2011, a total of 61,386 MT of tuna was landed and 151,952 MT was transhipped in Port Victoria, giving a total of 213,338 MT of tuna transhipped/landed. This represents 83% of the total tuna caught during that year (Table 3.3). Overall, a 9% decrease in the total tuna transshipment/landings was recorded during 2011 when compared to the 235,206 MT transhipped/landed during the previous year.

In comparison to other regional ports, 21,753 MT were transhipped/landed in Diego Suarez (Madagascar) 21,311 MT were transhipped/landed in Port-Louis (Mauritius) and 1,959 MT was transhipped/landed in Mombasa.

Table 3.3 Transshipment and landings in Port Victoria by country, for 2010 and 2011

Country	2010		2011	
	Transshipment/ Landings	% Of Catch*	Transshipment/ Landings	% Of Catch*
Spain	117,124	85	113,497	90
France	42,483	90	34,669	82
Mayotte	11,785	64	9,351	35
Seychelles	63,703	84	55,821	88
Thailand	110	18		
Total	235,206	84	213,338	83

* Total tuna transhipped/ landed in Port Victoria by country as percentage of their total catch

Table 3.4 Transshipment and landings by ports for 2008 and 2011

Port	2008	2009	2010	2011
Diego Suarez	22,872	34,157	27,370	21,753
Maurice	4,483	11,214	11,339	21,311
Mombasa	1,348	3,327	4,832	1,959
Seychelles	250,253	211,594	235,206	213,338
Others	-	2,426	498	-

3.2 The Longline Fishery

This section summarises the activities of longliners licensed to operate inside the Seychelles EEZ for the years 2002 to 2011. Figures presented here for the years 2002 to 2010 may be different to previously published figures as the data has been revised as more logbooks have been received by SFA for these years.

It must be noted that prior to 2003, the number of logbooks returned to SFA was very low (<50%). There has been a remarkable increase in logbooks return since 2003 (Table 3.5).

3.2.1 Fishing effort catches, fishing effort, catch rates and species composition

In 2011, the total catch reported by industrial longliners licensed to fish inside the Seychelles EEZ was estimated at 8,257 MT obtained from a fishing effort of 17.7 million hooks, thus giving a mean catch rate of 0.47 MT/1000 hooks (Table 3.5). This represents a slight decrease of 4% in total catch corresponding to a decrease of 20% in fishing effort when compared to the previous year.

In term of species composition, bigeye tuna remained the dominant species caught by industrial longliners accounting for 54% of the total catch, whilst yellowfin made up only 17% of the total catch for 2011.

Table 3.5 Catch statistics reported to the SFA for the last ten years

Year	Logbook returned (%)	Total catch (MT)	Fishing effort (Million hooks)	Catch Rate (MT/1000 hooks)	Yellowfin		Big eye		Others	
					Catch	%	Catch	%	Catch	%
2002	42	17,481	28.7	0.61	5,499	31	7,837	45	4,145	24
2003	56	18,661	34	0.55	7,642	41	7,519	40	3,500	19
2004	71	24,432	46.6	0.52	9,451	39	11,695	48	3,286	13
2005	75	29,301	60	0.49	13,706	47	12,391	42	3,205	11
2006	82	18,096	45.1	0.4	6,562	36	8,614	48	2,920	16
2007	84	16,601	40.8	0.41	4,145	25	8,933	54	3,523	21
2008	84	11,806	30.3	0.39	1,833	16	6,832	58	3,141	27
2009	81	10,221	25.2	0.4	881	9	5,112	50	4,228	41
2010	84	8,603	22.22	0.39	845	10	4,604	54	3,150	37
2011	86	8,257	17.72	0.47	1366	17	4,473	54	2,418	29

*Others means other species which include mainly swordfish and other billfish (Marlins, Sailfish), and Sharks.

During 2011, the catch by the Seychelles fleet increased by 14%, from 6,658 MT during the previous year to 7,566 MT whilst catch for Taiwanese fleet decreased by 65%, from

1,841 MT to 650 MT (Table 3.6). This correspond to a significant reduction in fishing effort from the Taiwanese fleet.

Table 3.6 Catch statistics reported by country for 2010 and 2011

Country	2010			2011		
	Fishing Effort (Million Hooks)	Catch (MT)	Catch Rate (MT/1000 Hooks)	Fishing Effort (Million Hooks)	Catch (MT)	Catch Rate (MT/1000 Hooks)
Belize	0.08	29	0.38	0.00	0	0
Oman	0.15	74	0.49	0.09	33	0.38
Philippines	0.00		0	0.02	8	0.46
Seychelles	17.63	6658	0.38	16.33	7566	0.46
Taiwan (ROC)	4.37	1841	0.42	1.28	650	0.51
Total/Average	22.22	8,603	0.39	17.72	8,257	0.47

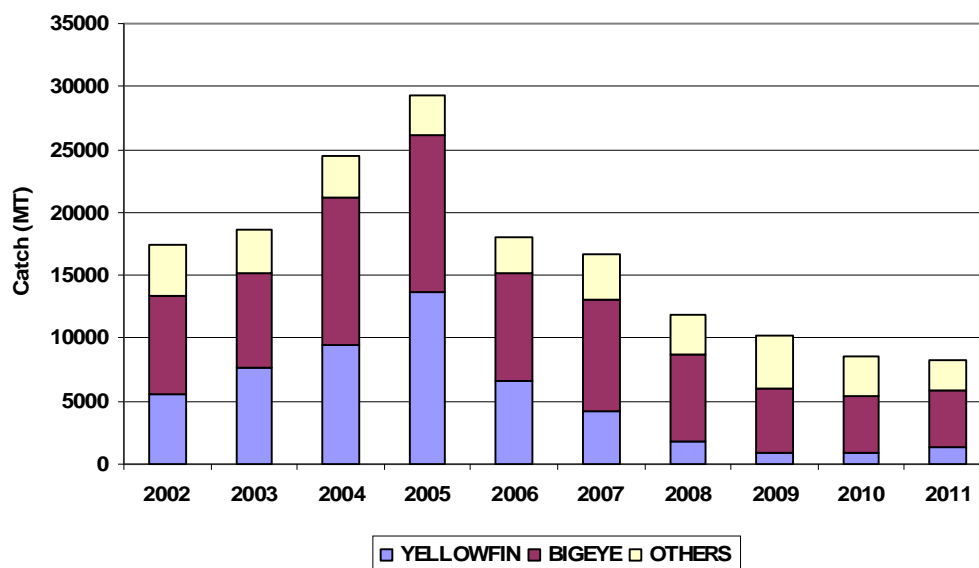


Figure 3.4 Total catch reported by longliners licensed to fish in the Seychelles waters, from 2002 – 2011

Since 2002, the CPUE of longliners operating in Seychelles waters has been on a decreasing trend whilst the fishing effort was on the increase but has however decreased sharply from 60 million hooks in 2005 to 22 million hooks 2010. The fishing effort continued to decrease to 17 million hooks in 2011 (Figure 3.5). The CPUE remained more or less constant around 0.40 MT/1000 hooks, during the period 2007 to 2010. However in 2011, the CPUE increased to 0.47 MT/1000 hooks.

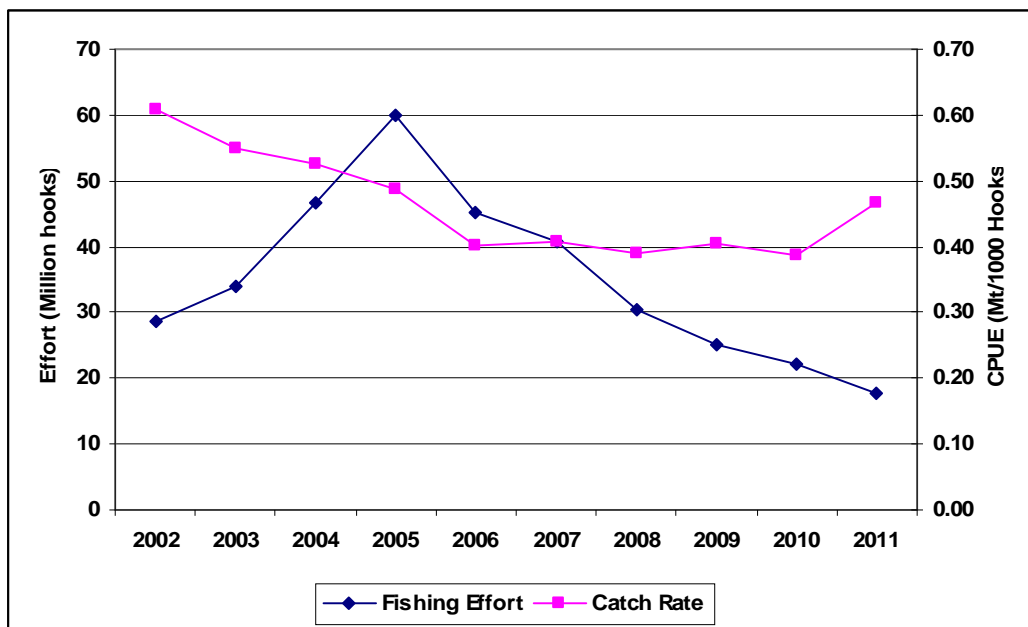


Figure 3.5 Total effort (fishing days) and catch rates (MT/1000 hooks) reported by longliners licensed to fish in the Seychelles waters, from 2002– 2011

3.2.2 Fishing grounds exploited

Figures 3.6a and 3.6b show the distribution of catches reported by longliners (holding licences to operate in Seychelles waters) in the Western Indian Ocean by 1° square, for 2010 and 2011 respectively. Fishing activities concentrated in the south and in the east, away from the east African Coast where Somalian pirates are more active.

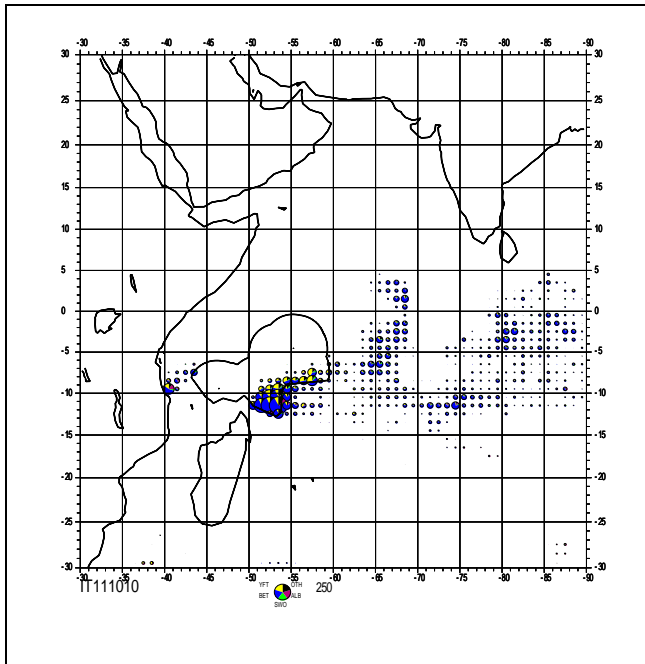


Figure 3.6a Distribution of catches reported by industrial longliners by 1° square, 2010.

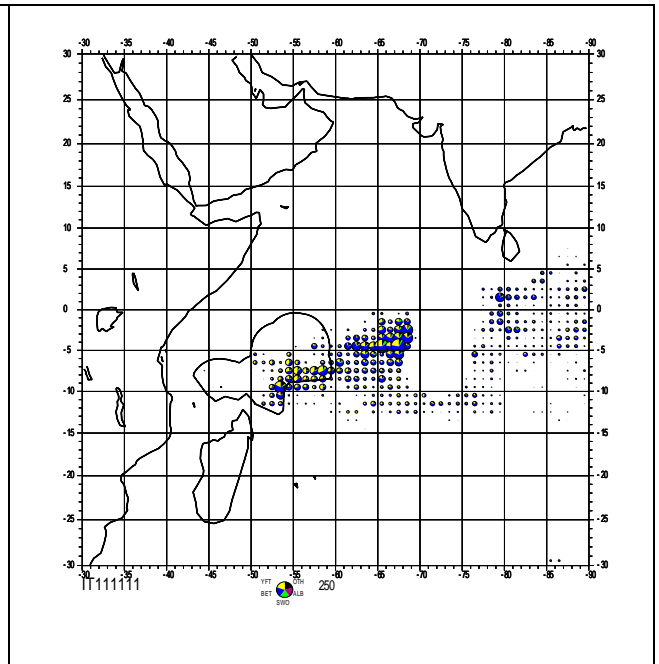


Figure 3.6b Distribution of catches reported by industrial longliners by 1° square, 2011

3.3 The Semi-industrial Fishery

3.3.1 Vessels active and fishing effort

In 2011, four semi-industrial vessels conducted a total of 55 longline fishing trips (for tuna and swordfish) compared with 107 trips conducted by nine local vessels in 2010. This represents a 49% decrease in the number of fishing trips targeting tuna and swordfish.

The fishing effort (number of hooks set) also decreased by 43%, from 506,334 hooks in 2010 to 289,540 hooks in 2011 (Figure 3.7).

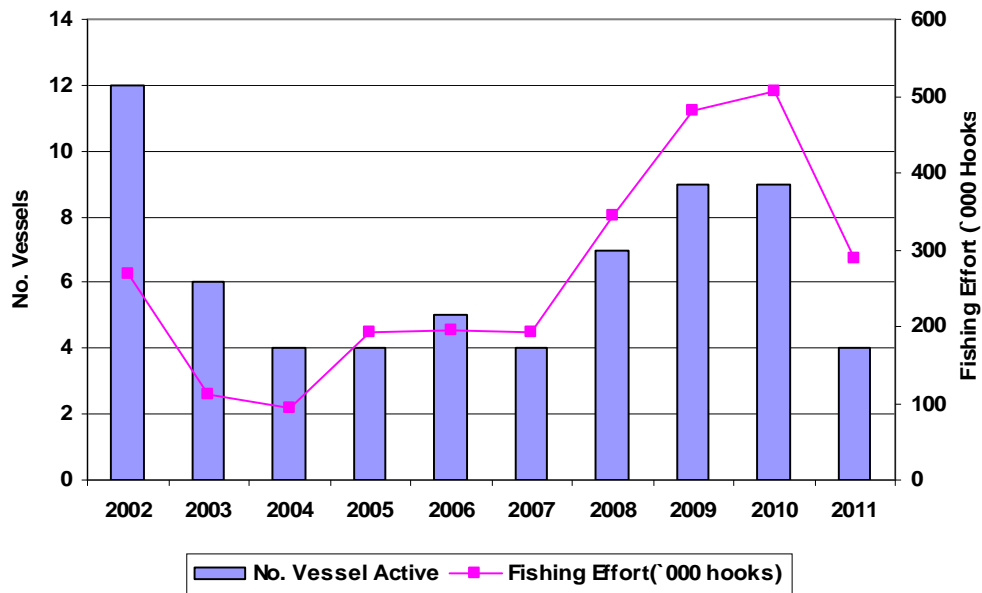


Figure 3.7 Trend in number of vessels and fishing effort from 2002 – 2011

3.3.2 Total catch and catch rates

The total catch by the local semi-industrial fleet for 2011 was estimated at 237.7 MT compared to 294.8 MT in 2010 (Table 3.7), representing a decrease of 19% from the previous year.

The catch rate for 2011 was estimated at 0.82 MT/1000 hooks compared to 0.58 MT/1000 hooks for 2010 (Figure 3.8). The swordfish CPUE increased from 0.37 MT/1000 hooks in 2010 to 0.49 MT/1000 hooks in 2011. The CPUE of yellowfin and bigeye tuna also increased from 0.11 MT/1000 hooks and 0.05 MT/1000 hooks to 0.16MT/1000 hooks and 0.08 MT/1000 hooks respectively. Yield reported for the 2011 fishing season is slightly better than what has been reported for the previous 3 years. However, the CPUE for 2011 is still much lower than what was recorded for the 2005 – 2007 period.

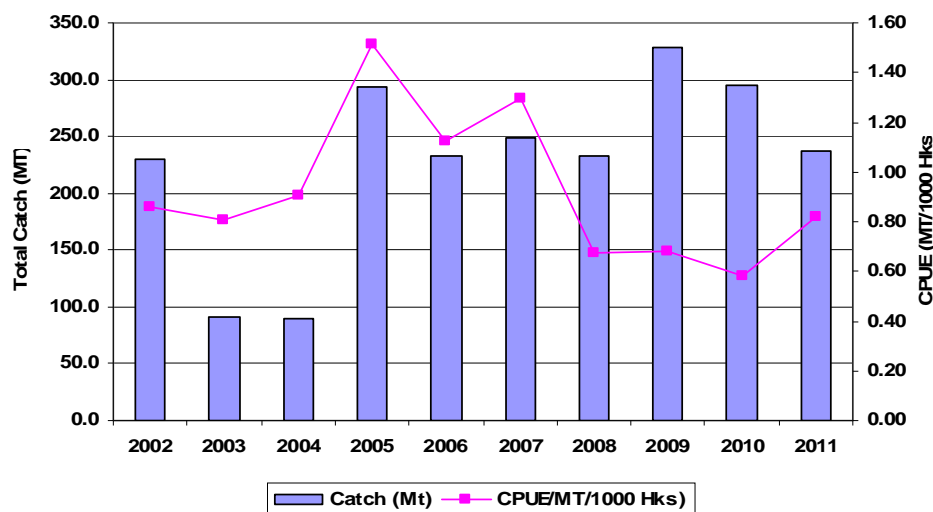


Figure 3.8 Total landed catch and catch rates reported from 2002 to 2011

3.3.3 Species composition

The species composition reported for the period from 2002 to 2011 is given below in table 3.7. In 2010, swordfish remained the dominant species caught by the semi-industrial fishery, accounting for 59% of the total catch whilst tuna (yellowfin & bigeye) made up 29% of the total catch.

Table 3.7 Species composition of the total catch (MT) reported from 2002 to 2011

Year	Swordfish	Yellowfin	Bigeye	Sailfish	Marlin	Shark	Others	Total
2002	135.1	41.9	24.1	7.6	3.9	14.8	2.9	230.3
2003	65.5	13.1	11.4	0.4	0.3	0.1	0.0	90.9
2004	71.1	7.4	7.2	0.7	0.4	3.2	0.2	90.2
2005	168.0	49.8	55.8	5.1	2.0	11.7	1.8	294.2
2006	107.9	40.1	47.7	3.3	2.3	31.1	0.4	232.8
2007	111.1	70.2	55.5	2.6	1.9	4.6	2.7	248.5
2008	97.9	43.7	58.6	7.2	3.2	22.2	0.6	233.3
2009	169.9	67.7	59.2	14.5	5.3	11.6	0.7	329.0
2010	185.7	57.9	26.1	4.9	11.8	6.3	2.1	294.8
2011	140.7	46.5	23.1	4.8	6.9	15.0	0.8	237.7

4. ARTISANAL FISHERY

4.1 Catch Assessment Survey (CAS)

Based upon output from the CAS, which has been implemented since 1985, this section of the report reviews the performance of the major artisanal fisheries for 2011 and summarizes major trends.

In 2011, catches generated by the artisanal fisheries showed an improvement over the previous year, with 2,870.1 MT of fish landed. This represents an 11% increase over 2,595.4 MT landed in 2010. However, landings remained lower than the long term (26-years) average annual catch of 4,306 MT, (Figure 4.1). Compared to 2010, landings on Mahe increased by 266 MT (11%), whereas landings on Praslin increased by only 8 MT (3%). The decline in catch during the past three years was partly due to the reduction in fishing effort (Figure 4.2). From 2008 to 2011, in term of fishing effort, the harpoon, handline and net fishery recorded a decrease of 71%, 40% and 6% respectively. Another factor contributing toward the decline in catch was the effect of the Somali piracy activities inside of the Seychelles EEZ. As a result artisanal fishers are going out less often and on shorter trips because of the fear of attacks by pirates.

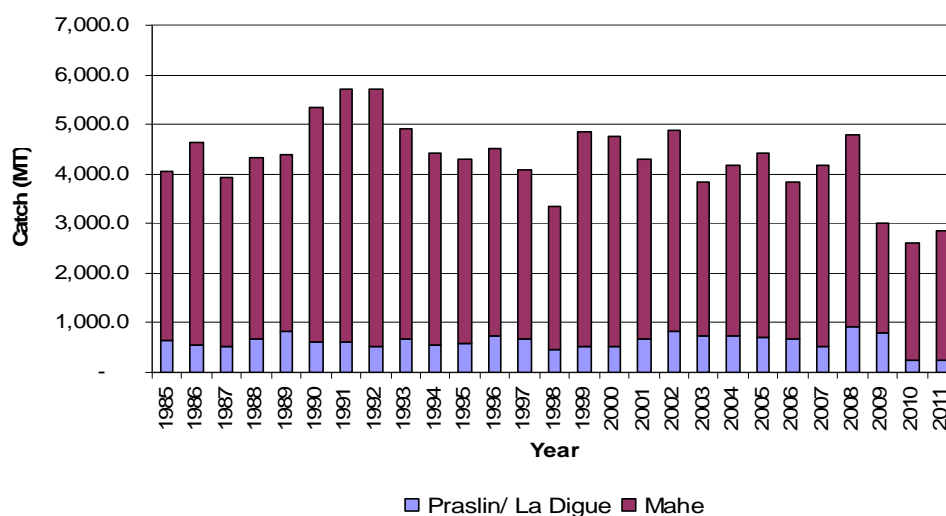


Figure 4.1 Total artisanal fishery catch (MT) on Mahe and Praslin/La Digue, 1985-2011

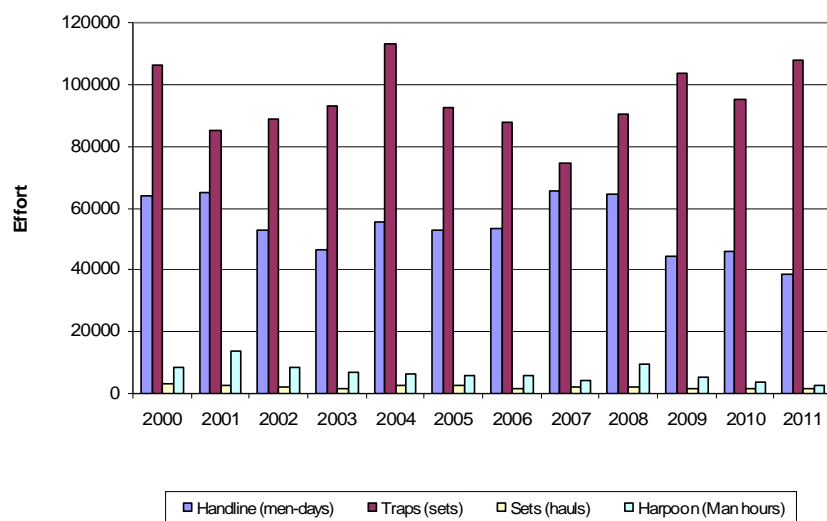


Figure 4.2 Fishing effort for the major gear types for 2000-2011

As determined from monthly mean estimates of the number of vessels in operation, whereby the maximum value is used as an indicator of fleet activity for the year, the fishing activities of whalers, schooners and dropline vessels increased in 2011 compared to 2010, whilst those of pirogues and outboard vessels have decreased. The logbook returns from the sport fishery continued to be nil, precluding any estimates of the number of vessels engaged in that fishery (Table 4.1).

Table 4.1 Maximum mean monthly number of fishing vessels in operation, 2006 – 2011

Vessel Type	2006	2007	2008	2009	2010	2011
Pirogue*	27	22	19	19	16	15
Outboard*	242	243	293	324	316	294
Whaler	94	105	107	113	105	106
Schooner	26	22	22	27	27	32
Sport	**	**	**	**	**	**
Dropline	4	5	3	2	1	5

*Includes part time fishing vessels. ** Data not available due to poor logbook returns

The composition of the total artisanal catch by vessel category was typical of the long-term trends, with whalers dominating catches, followed by outboards and schooners (Table 4.2)

Table 4.2 Percentage of annual catch landed by major vessel types, 2006 – 2011, including foot fishermen

Boat Type	2006	2007	2008	2009	2010	2011
Pirogue	2.1	0.7	0.6	1.1	0.7	0.5
Outboard	28.2	24.9	25.4	37.5	33.8	33.1
Whalers	56.8	63.4	64.3	47.5	47.8	51.8
Schooners	11.4	9.3	8.9	13.3	17.1	12.9
Foot fishers	0	0.3	0.8	0.6	0.5	0.4
Dropline vessels	0.6	1.4	0	0	0	1.3
Research vessels	0.1	0.1	0	0	0	0

In term of species composition, trevally (*Carangoides* and *Caranx spp.*) and red snapper (*Lutjanidae*) were the two species group dominating the catch for 2011 (Table 4.3). Catches of trevally increased from 675 MT in 2010 to 828 MT in 2011 whereas catches for red snapper decreased slightly from 561 MT to 504 MT. Catches of emperors, groupers, mackerels and jobfish all recorded increases of 57%, 29%, 26% and 14% respectively, compared to the previous year whilst the rabbitfish (Cordonier) catch decreased by 3% from 255 MT to 248 MT (Table 4.3).

Table 4.3 Species composition (%) of the artisanal catch, 2006 - 2011

Species Group		Percentage (%) of total annual catch					
English/Scientific	Kreol	2006	2007	2008	2009	2010	2011
Trevally (<i>Carangoides</i> spp.)	Karang	19.9	19	25.8	17.9	26.2	28.87
Red snapper (<i>Lutjanus</i> spp.)	Bourzwa, Bordomar	26.7	29.5	22	20.4	21.6	17.57
Jobfish (<i>Aprion virescens</i>)	Zob gri	15.5	15.8	15.8	16.9	13.6	14.03
Emperors (<i>Lethrinus</i> spp.)	Kaptenn	4.4	4.6	7.2	7.2	3.7	5.31
Bonito (<i>Euthynnus affinis</i>)	Bonit	1.9	1.9	3.1	5	1.8	2.97
Groupers (<i>Epinephelus</i> spp.)	Vyey	3.2	3.8	3.2	2.7	3	3.51
Rabbitfish (<i>Siganus</i> spp.)	Kordonnyen	7.2	5.1	4	7.3	9.8	8.62
Mackerel (<i>Rastrelliger</i> sp.)	Makro dou	4.8	7.5	6.1	2.9	6.7	7.63
Others		16.4	12.8	12.8	19.7	13.6	11.49
Total annual catch (MT)		3845	4181.4	4777.1	3019.1	2595.4	2870.1

4.2 Lobster fishery

Following two consecutive years that the lobster fishery had been closed, the Ministry of Natural Resources and Industry together with SFA re-opened the fishery for the 2010/2011 season. The fishing season was opened for a period of three months (i.e. from the 15th December 2010 to the 14th March 2011) with a limit of 20 licences for Mahe, Praslin and La Digue. The two previous seasons (i.e. 2008/2009 and 2009/2010 season) had been closed as a precautionary approach, to allow stocks to recover.

An analysis of the catch indicates a drop 38% in landings with estimate of 2.4MT reported for the 2010/2011 fishing season compared to 3.9 MT reported for the 2007/2008 season. The main reason for the decline in the catch was due to under-reporting. Out of 20 licences issued, nine license holders did not submit a single logbook.

Typical of previous seasons, the catch composition of lobsters was dominated by pronghorn spiny lobster (*Panulirus penicillatus*), which accounted for 69% of the total catch, followed by long-legged spiny lobster (*Panulirus longipes*) with 29% of the total catch.

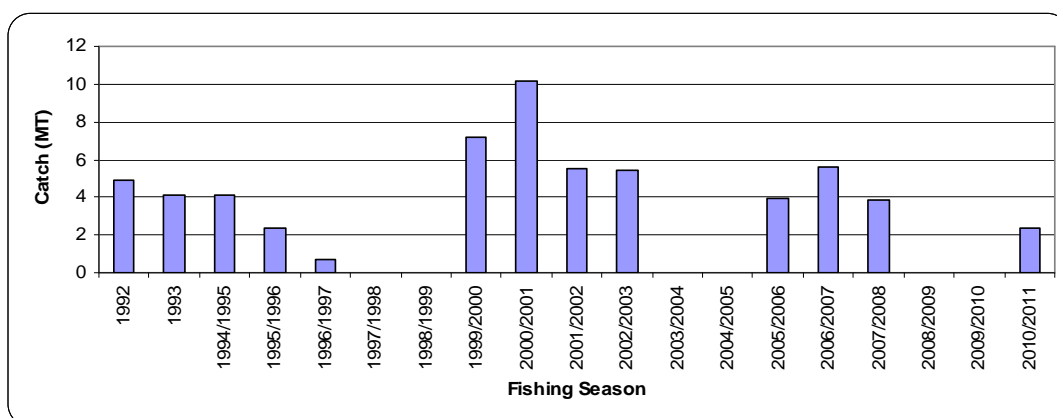


Figure 4.3 Total lobster fishery catch per season, from 1992 to 2010/2011

4.3 Sea Cucumber Fishery

The rapid development of the sea cucumber fishery in recent years is mainly due to the increase in demand, and consequently the higher prices being paid, on Asian and even local markets, for dried sea cucumbers. Fishers target mainly three species of sea cucumber i.e. teat fish (pentard, white teatfish and prickly red), which fetch the highest price on the market and a few other species such as black teat, sandfish and yellow surfish. The number of sea cucumbers harvested annually has shown a sharp increase over the past 6 years (Table 4.4) from 338,792 pieces in 2006 to 642,404 units in 2011. In 2011 a 21% increase in number of seacucumber landed was recorded compared to the previous year. Pentard was the dominant species accounting for 54% of the total sea cucumber harvested, followed by white teat (18%). A significant increase of 133% was recorded for the species *Thelenota ananas* (prickly redfish). Sandfish and pentard also recorded an increase of 23% and 14% respectively from the previous year.

Table 4.4 Number of sea cucumbers harvested for the year 2006 - 2011

Year	Black Teat	Sandfish	White Teat	Prickly Red	Pentard	Others	Total
2006	10,371	2047	39,361	15,873	165,002	106,138	338,792
2007	7,868	433	57,812	19,674	181,657	63,214	330,658
2008	5,687	1842	57,084	21,272	155,674	24,650	266,209
2009	6,230	303	134,978	44,885	290,285	13,950	490,631
2010	31,434	1639	125,472	35,480	306,725	30,452	531,202
2011	10,764	2018	117,791	82,710	348,431	80,690	642,404

5. AQUACULTURE

5.1 Aquaculture Development

5.1.1 Black Pearl Seychelles Ltd. Operations

Black Pearl Seychelles Ltd. is the only aquaculture farm still in operation in Seychelles. The farm is privately owned and has been farming pearls since 1995 on Praslin in the Curieuse Marine National Park. The farm has ventured into various small scale pilot projects since its inception, including the cultivation of giant clams (*Tridacna maxima*) for live ornamental export and keeping reef fishes for displaying purposes. The farm receives a significant number of tourist visitors per day when most of the sale of pearl occurs. Giant clams were being exported to aquariums in Europe for ornamental purposes, but due to high mortality rates (approx. 50%) during transportation, the farm is phasing out this operation.



Figure 5.1 Pearl oyster grow-out

The culture system for pearl oysters currently being used consists of 10 individual longlines adjacent to each other supported afloat by several buoys. Some of the longlines are either used to attach and hold in place “spat collectors” or “growing pouches” depending on the growing phases. The longlines are held in place by screw-anchors at the bottom that prevents the whole system from being displaced with the current. The concession area is accessible by boat from the land-based facility at Amitié in about 30 minutes. The oysters have to be transported to Amitié and back for regular cleaning and for grafting.

6. RESEARCH PROJECTS

6.1 From Behavioural Ecology, to Spatial Management for the Conservation of Sharks in the Seychelles (SEYSHA)

The SEYSHA project which started in early 2010 uses acoustic telemetry (acoustic receivers and tags) to study the distribution and migration of coastal sharks around the inner granitic islands. A network of 39 acoustic listening stations (Vemco VR2) has been deployed at various sites around the inner granitic islands of the Seychelles. The sites were chosen after interviewing fishers and dive operators to collect empirical data on potential key habitats. The strategy of the project is to tag several shark species so as to reflect the multispecies component of the shark community in these waters, such as grey reef sharks (*Carcharhinus amblyrhynchos*), tiger shark (*Galeocerdo cuvier*), bull sharks (*Carcharhinus leucas*) and hammerhead sharks (*Sphyrnidae* sp.). Tagging is currently ongoing with a total of 36 tagged sharks so far nearly attaining a planned target of 40 sharks. Most of the tagged sharks were in the average of 1m in total length, with the biggest being a 1.5m grey reef shark. A poster presenting the programme and the preliminary data collected was presented at the 2011 WIOMSA symposium in Mombasa.

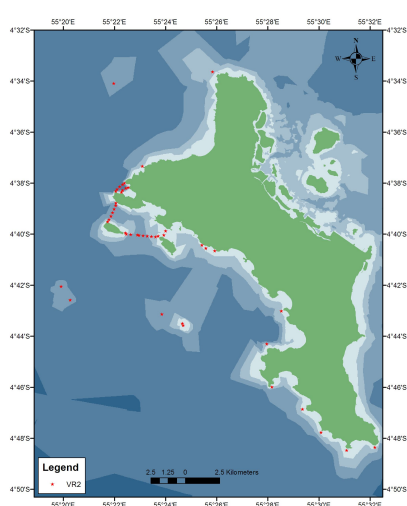


Figure 6.1(a) Map showing network of Acoustic Receivers (Red dots)



Figure 6.1(b) Juvenile shark being tagged with acoustic tags

In September 2011, data from nine Vt2 stations were recovered and a total of three tagged sharks were detected at the stations, with one shark being picked up on three different stations over a period four months and on some days visiting several stations located 3.2 Km apart and within a few hours of each other. There may be a need to reposition the receivers or expanding the network as detection is quite low. In this regards we are collaborating with another NGO (MCSS) to expand the network of receivers and to tag a number of sharks in the Baie Ternay Marine Protected Area (MPA). Furthermore, following the two fatal shark attacks August 2011, it has been recommended that more research be conducted on sharks, particularly large individuals of tiger, bull and hammerhead sharks, and to include some open beaches around the inner granitic island. The Shark Research Foundation – Seychelles (SRF-S) was created in late 2011, to develop and oversee the implementation of shark related research in Seychelles waters. The SRF-S is made up of representatives from government (SFA, SNPA, DoE), non-governmental organisations as well as other interested individuals. Funds have been secured from various sources to undertake research on sharks.

6.2 South West Indian Ocean Fisheries Project (SWIOFP) and Agulhas-Somali Current Large Marine Ecosystem (ASCLME) Programme

SWIOFP focuses on transboundary fisheries resources, including migratory fish and straddling fish stocks, and aims to promote the sustainable use of those resources through the adoption of an Ecosystem Approach to Fisheries (EAF) in the Agulhas and Somali Current Large Marine Ecosystems (LMEs). Activities under this project were initiated in late 2008. Unfortunately, this coincided with the sharp increase in piracy activities causing the project to be delayed further. Seychelles being seriously affected by the piracy threat, the only offshore research activity undertaken under the ASCLME programme was a multi-disciplinary ecosystem survey by the R/v Dr. Fridtjof Nansen. This survey which was carried out on the Mascarene and Seychelles plateaux in November 2008 involved the participation of two SFA staff. More recently, in March 2011, Seychelles received

oceanographic equipment which is being used to complement the inshore oceanographic monitoring program. The equipment includes:

- 1 Niskin bottle, 1 x messenger
- 1 YSI (Temperature, conductivity, Salinity and depth Sensor)
- 1 GPS
- 200 m rope on a small drum

The SFA was nominated as the institution to store and maintain the equipment and make them available to any potential national users under the ASCLME policy. The ASCLME also provided training in the use of the equipment with a training course held in Mauritius from the 8th to the 16th April 2010. Mr. Calvin Gerry, the physical oceanographer at SFA had the opportunity to attend the training and, in turn he is the person responsible to train national scientists in the use of the equipment.

The SWIOFP project, Year 3 which began in October 2010, was expected to be dominated by at sea research surveys to collect new information to complete data gaps identified during Year 1. Many of the constraints experienced in Year 2 had not been resolved in Year 3, hence many of the planned activities were either delayed, postponed, or cancelled.

In March 2011, the SWIOFP held its mid-term review meeting where a consultant from Poseidon Aquatic Resources Management Ltd presented the midterm review report. The consultant concluded that the project implementation to date was unsatisfactory. He highlighted some of the most important reasons for the slow progress in the project implementation which included amongst others:

- the failure to establish a fully-functioning RMU prior to the commencement of the project and thereafter slow and staggered recruitment of the RMU staff ;
- slow initial disbursement of the GEF grant to the project ;

- capacity weaknesses of many of the project management structures and individuals on which the project relies so heavily for implementation (e.g. the NMUs, RCCs, NCCs, etc);
- the rise of piracy in the region which has severely hampered the planning and implementation of research cruises ;
- problems with the speed of both procurement and disbursement of funds and
- the implementation difficulties arising from a project covering nine countries, three official languages a very large geographical area.

The Steering Committee discussed ways to improve the project implementation and came up with a number of recommendations. More commitment from government and implementing institutions was called for.

Concerning the various Components related to the project; Seychelles is fully involved in all Components except Component 2 (Assessment and sustainable utilization of crustaceans). Activities under Component 1 were dominated by consolidation and uploading of fisheries data into Stat-base. RCC -1 conducted a working visit to Seychelles and together with the NCC-1 for the Seychelles worked on Stat-base. Data uploading for the Seychelles is now nearly complete. As far as Component 3, after a lack of activities in Year 3 and 4, dropline surveys plan and data collection protocols have been prepared. Activities under Component 4 were dominated by the procurement of research equipment and research cruises. Hook timers, temperature dept recorders and pop-up satellite tags were procured for experimental longline cruises.

An experimental longline fishing cruise was undertaken on a South African vessel (RV Ellen Khuzwayo) during the last quarter of 2011 where they managed to tag 10 swordfish with 4 swordfish recording data logging in excess of 60 days.

An acoustic and pelagic trawl survey was undertaken on the RV Dr. Fridtjoff Nansen in December 2010 around Mauritius and on the south of the Mascarene plateau, to assess resources of small pelagic in the area. Several junior scientists from the region (one from the Seychelles) participated in this cruise which was also very useful for regional capacity building.

With regards to the development of anchored FAD fishery in SWIOFP member countries, FAD building materials were procured from PLK Marine in June 2011. In Seychelles, six anchored FAD's were deployed in November 2011, in coastal areas (a maximum of 3 Km from the shore in waters approximately 50 metres deep) around the inner granitic islands, to attract medium sized pelagic fish such as tuna, dorado, kingfish, rainbow-runner etc., and make them more accessible to local fishers. It should be pointed out that stakeholders from the fishing industry, particularly artisanal fishers, were consulted with regards to the suitable locations for FADs deployment. Research on distribution, stock discrimination and biological reference point of key resources associated with anchored FADs is planned for 2012.

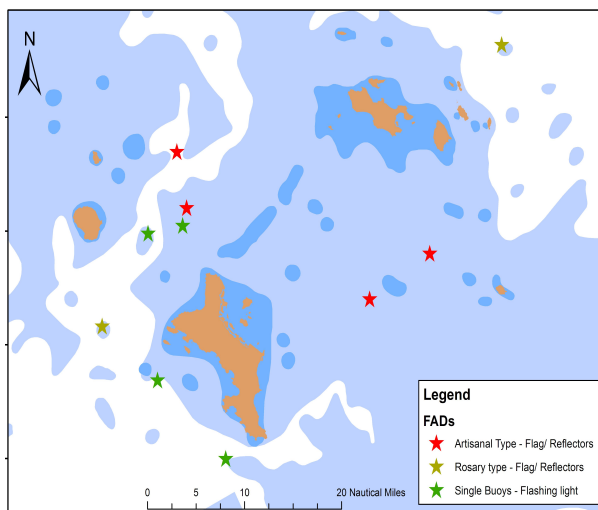


Figure 6.2(a) Map of showing FADs locations on the Mahe Plateaux



Figure 6.2(b) A rosary type FAD

6.3 Mitigating ADverse Ecological Impacts of Open Ocean Pelagic Fisheries (MADE)

Activities under the MADE project began in 2008 with a kick-off meeting in Genoa, Italy. This international project involves 13 research institutes from 8 countries of the Mediterranean Sea, Atlantic and Indian oceans. The project is funded by the European Commission Seventh Framework Programme, and the main goals of the project are threefold: to gain appropriate knowledge on the biology and ecology of by-catch species; to propose measures to mitigate adverse impacts of fisheries targeting large pelagic fish in the open ocean (purse seiners using FADs and longliners); and to assess the situation by which FADs are believed to have impacted upon the ecology and behaviour of tropical tuna and other marine species.

As with SWIOFP, research activities in the Western Indian Ocean were severely curtailed by the piracy threat and MADE has had to adapt and modify its original plans. The project has just over one year to go until completion and most field activities are winding down. A small symposium and annual meeting were held at SFA in September 2011 involving all consortium partners. There has been good progress in all of the main activities, including: behavioural and biological studies on sharks; behavioural studies on other FAD associated species; development of ecological baits and FADs; evaluation of by-catch handling protocols; identification of by-catch hotspots; and experimental longline configurations to reduce by-catch of sharks and juvenile swordfish. There is also an ongoing analysis of high seas MPAs for highly migratory species in combination with AMPED. An international symposium on by-catch mitigation is planned as the final project activity in late 2012.

6.4 Indian Ocean Swordfish Stock Structure (IOSSS)

Swordfish has traditionally been fished by longliners from distant water fishing nations, but in the past 15 years several coastal countries in the region (Mauritius, Reunion, Seychelles) have developed their own national fishing fleet to fish this resource. Recognising that there was a lack of biological data (age, sex ratio, gonad maturity stages) to carry out accurate stock assessments and the potential of local depletion existed especially in the Southwest Indian Ocean, the IOTC recommended that priority should be given to the collection of more biological data as well as determining the stock structure of swordfish in the Indian Ocean.

During 2009 and 2010 the SFA in collaboration with L'IFREMER and other regional partners worked on a regional program (Indian Ocean Swordfish Stock Structure, IOSSS), to obtain an improved understanding of the biology of the Indian Ocean Swordfish Stock(s). The study looked at growth, reproduction and genetic parameters in swordfish. In March 2009, six technicians received training from three scientists from IFREMER on - *Otolith extraction*, - *Sex identification and determination of maturity stages of gonads* and - *Onboard data collection protocol*. However, it has not been possible to deploy observers on the commercial longliners during 2009 and 2010 due to security concerns (the piracy threat). SFA collaborated with longline skippers and vessels owners to collect gonad samples at sea and conducted port sampling during landing to collect genetic samples as well as other data. Analysis of the data collected was completed in 2011 and presented at the IOTC Working Party on Billfish.

6.5 WIOMSA MASMA Project: Incorporating Reef Fish Spawning Aggregations into Optimal Designs for no-take Fishery Reserves

SFA has been very successful in obtaining competitive research grants from the Western Indian Ocean Marine Science Association (WIOMSA). The first research grant SFA

obtained from the MASMA Programme of WIOMSA was to support research on spawning aggregation-based fisheries in Seychelles between 2003 and 2006. In 2008, SFA was successful in obtaining a further MASMA grant (US\$200,000), this time to lead a team of institutions from Kenya and Zanzibar in research focused on providing the necessary data and tools for the assessment and management of spawning aggregation-based fisheries in the region. Field work for the project was carried out in all of the three countries in 2009, 2010 and 2011 with monitoring of *Siganus sutor* ('kordonnyen blan'), *Epinephelus fuscoguttatus* ('vyey goni') and *Epinephelus polyphkadion* ('vyey masata') spawning aggregations, using acoustic telemetry technology and underwater visual census. An indicator framework for assessing the vulnerability of aggregation-based fisheries was developed and tested, as was a model for predicting the effects of management measures, including no-take reserves. The work on *Siganus sutor* is being implemented in collaboration with the 'Praslin Fishermen Association' to support the ongoing project by UNDP-GEF SFA and the 'Praslin Fishermen Association' in developing a co-management plan for the Praslin inshore fisheries. The co-management plan is expected to be developed in 2012 and will involve a consultative and participatory approach targeting all stakeholders.

6.6 WIOMSA MASMA Project: The Spatial Behaviour of Artisanal Fishers. Implications for Fisheries Management & Development

SFA collaborated with an international research team on a third MASMA-funded project between 2008 and 2011. The objective of this project was to use a range of methods to understand the various factors that influence the spatial behaviour of artisanal fishers in Seychelles and Kenya and to investigate evidence for perceived or realized spill over benefits to fishers from Marine Protected Areas. During 2009 and 2010, the project conducted structured interview-based surveys and participatory fishing effort for conducting mapping and catch monitoring surveys in Seychelles and Kenya. Field studies continued into 2011 and the data were analysed to yield information on spatial behaviour,

factors affecting fisher's decision-making and spatial patterns for fisheries in areas both inside the MPAs' boundaries and adjacent to it.

The project was seeking answers about how fishers distribute their fishing effort over a fishing ground and how it can affect the ecological impact and the economic performance of fisheries. This distribution can be influenced by a number of social, economic, and institutional factors such as technology, management, and fishers' knowledge. Many fisheries development and management interventions invariably alter the spatial distribution of fishing effort. Success of interventions such as protected areas and attempts to encourage fishing effort to move offshore, often rest on largely untested assumptions about fishers' spatial behaviour and their willingness or ability to change it. Thus, understanding spatial distribution of fishing effort is increasingly recognised as an important tool for fisheries management. However, the spatial behaviour of fishers is poorly understood, especially for artisanal fisheries in developing countries. The vast majority of research into fishers' spatial behaviour has been conducted for large-scale fisheries, which are able to make use of large volumes of data obtained through vessel monitoring systems that are frequently installed on many industrial fishing vessels. In developing countries, however, these vessel monitoring systems are not used and little empirical work has been carried out to explore fishers' spatial behaviour.

This project accomplished the following activities:

1. Reviewed the extent to which the spatial behaviour of fishers has been evaluated.
2. Examined the distribution of fishing effort for artisanal fishers in Kenya.
3. Explored how fishers chose their fishing sites in Kenya and Seychelles.
4. Examined displacement of fishing effort in Kenya and Seychelles.
5. Examined evidence for spill over of catch from marine reserves.

6.7 Recovery Dynamics of Inner Seychelles Coral and Fish Communities

Local scientists from SFA and the Seychelles National Parks Authority have continued their collaboration with an international team of scientists, lead by Dr. Nicholas Graham from Newcastle University (UK), on a regional study of the impact of the 1998 mass coral bleaching event on reef fish communities and fisheries. Based on sites first surveyed by SFA and Newcastle University (Dr. Simon Jennings) in 1994, and, on continued monitoring of highly replicated sites spanning over 21 locations, the scientific knowledge obtained from this project is improving our understanding of the recovery processes of the inner Seychelles reef system. In 2011, the team spent several weeks in Seychelles surveying the coral reef monitoring sites originally established by Simon Jennings et al. The sites have now been monitored in 1994, 2005, 2008 and 2011. The collected data will be analysed and the results will be published in the near future.

6.8 African Monitoring of Environment for Sustainable Development (AMESD)

AMESD is a project that has the objective of helping African countries improve the management of their natural resources by providing remote sensing equipment and data. For the countries of the Indian Ocean, the theme is ‘coastal and marine management. This implies environmental data (e.g. sea surface temperature, ocean colour) which is monitored by satellite and is freely disseminated to participating countries.

In May 2011 the satellite station was installed at SFA to receive the relevant data. This station will facilitate access to oceanographic related data at a national level as it is intended to be an autonomous system whereby the station will receive the data, process and derive some basic products that can be used by potential users. However the system at SFA is not currently fully operational as there are some updates to be done on the system. The update is scheduled for early 2012 whereby a new version of the operating system will be provided.

6.9 Ocean Data and Information Network for AFRICA (ODINAFRICA)

The ODINAFRICA project has the objective of promoting the sustainable management of marine and coastal resources through information, data and product sharing and is currently in its fourth phase. The objectives of this phase are to strengthen the National Oceanographic Data Centres (NODC) and marine related institutions. To contribute to this project, SFA aims to develop an online National Marine Atlas and an E-Repository. The Marine Atlas will allow users to create their own maps from fisheries and marine ecosystem-related data available in Seychelles, while the E-Repository provides online access to related publications, reports and books. For the atlas we are currently working on the baseline data which will be the core of the atlas as well as on the free available coastal and marine data. A first draft of the system was made available to national partners involve in the project for comment and to provide feedback on the system. Whereas the E-Repository is still in the development and input stage of the system.

6.10 Seychelles Ocean Temperature Network (SOTN)

The Seychelles Ocean Temperature Network' was an initiative under Seychelles Second National Communication to the United Nations Framework Convention on Climate Change aimed to establish a collaboration network between public, private and NGO organisations in Seychelles for monitoring and sharing of ocean temperature data. The network had 16 members by 2010 and had deployed over 49 temperature loggers within Seychelles; 37 around the Inner Islands, ten in the Amirantes and two at the Farquhar Atoll. The temperature data will be used to provide information for studies of coral reef ecology and monitor and predicts possible bleaching events.

7. FISHERIES DEVELOPMENT

7.1 Credit Facilities to the Fisheries Sector

Table 7.1 below, summarises the number of loans and their value granted to the fisheries sector for the years 2010 and 2011. The table only provides information on loans from the Credit Concessionary Agency (CCA) and the Development Bank of Seychelles (DBS) as no information could be obtained for loans granted by the commercial banks.

Table 7.1 Number and value of loans approved by CCA and DBS 2010-2011

	2010			2011			% change		
	CCA	DBS	Total	CCA	DBS	Total	CCA	DBS	Total
Number of loans approved	25	24	49	36	25	61	44	4.17	24.49
Values of loans approved (SRM)	2.655	6.560	9.215	2.485	4.898	7.383	-6.4	-25.34	-19.88

From 2009 to 2011, an increasing trend in the total number of loans granted by DBS and CCA can be observed (see Figure 7.1).

According to Table 7.1, although loans granted by CCA have increased from 25 in 2010 to 36 in 2011, representing a 44% increase, the value of the loans fell by approximately 6.4% from SR2.655 million in 2010 to SR2.485 million in 2011. From Figure 7.2, it can be inferred that although there was a small drop in value of loans from CCA in 2011 compared to 2010, the value of loans from CCA remained fairly constant compared to loans granted by DBS. This is because the Ministry of Finance makes available a fixed budget to CCA which it uses to grant small loans to the fisheries sector mainly for repair, maintenance and purchasing of equipment. When the budget is fully utilised, no more loans are approved. This was the case in 2010 when funds were spent by August. However, in 2011, due to the lesser value of loans, funds lasted throughout the whole year. Hence, there was an increase in the number of loans but a reduction in the value of loans granted.

The number of loans granted by DBS also increased, marginally, from 24 in 2010 to 25 in 2011. In terms of value, there was a 25.34% decrease from SR6.560 million in 2010 to SR4.898 million in 2011. This in turn impacted the total value of loans granted in 2011 which showed a 19.88% decrease compared to 2010, despite a 24.49% increase in the number of loans. In 2010, interest rate for loans taken from DBS dropped from 15% in January to 8.5% in December, which could explain the record value of loans taken in 2010. Interest rates in 2011 remained constant at 8.5% up to August and then increased to 10% in September.

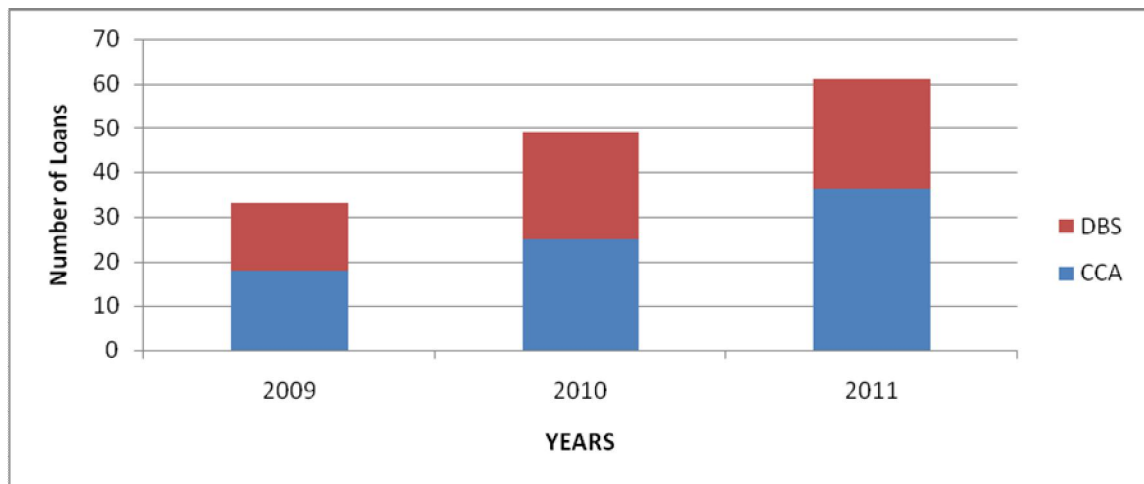


Figure 7.1 Number of loans granted by DBS and CCA, 2009-2011

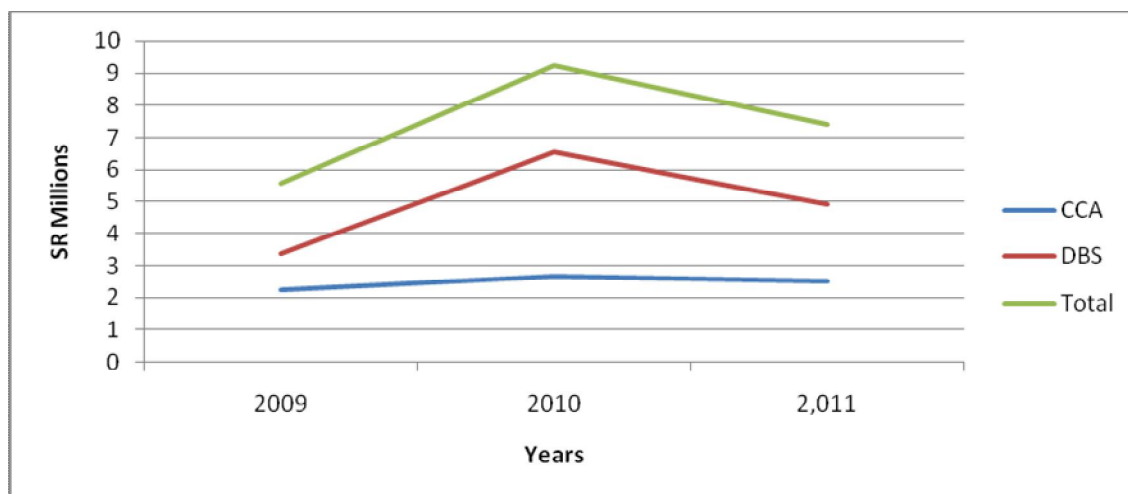


Figure 7.2 Value of loans granted by DBS and CCA 2009-2011

7.2 Fisheries Incentives

7.2.1 GST and trades tax concessions

As illustrated in Table 7.2, in 2011, there were 239 applications for GST and Trades Tax concessions, with a CIF value of SR18.8 million received under the FIA for imported material. This included various items such as engines, commercial vehicles, equipments and spare parts. Applications were received from boat-owners (individuals as well as companies) and from companies processing and exporting fish and other related products.

Although the number of applications received increased from 180 in 2010 to 239 in 2011, the CIF value decreased from SR23.4 million in 2010 to SR18.8 million in 2011. One reason for this could be due to the lower value of items being imported in 2011 as compared to 2010, as exchange rates remained fairly constant in 2010 and 2011.

Table 7.2 Applications and CIF value for concessions under FIA

	2010	2011
No. of Applications	180	239
CIF VALUE (SR M)	23.4	18.8

7.2.2 Registration

In 2011, the total numbers of new registrations with SFA were as follows; 120 fishers, 60 boat-owners, and 7 processor/exporters compared to 86 fishers, 48 boat-owners, and 2 processor/exporters in 2010. Therefore in 2011 there were a total of 1039 fishers, 716 boat-owners and 21 processors/exporters registered with SFA.

There are various incentives for registering with SFA including the “Sickness Benefit Scheme” for fishers which compensate full time fishers if they fall sick or are unable to work and the fuel incentive scheme for boat-owners. Registered fishing companies,

including processors/exporters, benefit from GST, Trades Tax and Business Tax concessions on imported goods as well as GOP exemptions for foreign workers that they employ.

7.2.3 Fisheries Development Fund

The Fisheries Development Fund (FDF) was launched in July 2009 and has an allocation of Euro 2.7 million. It is funded by the European Union's sectoral support Programme for Seychelles, under the EU/Seychelles Protocol. This fund aims to boost investment in fisheries, including value addition and processing, purchasing of new long-line vessels, as well as upgrading existing longline vessels.

The fund is managed jointly by the Seychelles Fishing Authority (SFA) and the Development Bank of Seychelles (DBS). Investors wanting to apply for a loan under the FDF must first submit a project memorandum to SFA for approval. This application is then forwarded to DBS which has responsibility for the administration of the loan. It should be noted that the guarantee and security for the loans has to meet the criteria set by DBS.

Loans under this fund have a 3% annual interest rate with a period of repayment which should not exceed 10 years and are available exclusively to Seychellois investors or joint partnerships, where the majority shareholder is Seychellois. Investors are asked to contribute a minimum of 5% of the total project cost.

This fund has been set up at a crucial time when emphasis is being placed on the development of the fisheries sector in Seychelles to its full potential in order to obtain the maximum economic benefits from living marine resources. Presently, the semi-industrial longline fishing sector is landing approximately 300 tonnes of fish per year; but with the launching of this fund, landings are expected to increase to approximately 1,500 tonnes within the next two years.

Two loans for a total value of SR9.1 million were approved in 2011 under the FDF. Certain amendments were made to the conditions of the loans, for example as the percentage for the personal contribution decreased from 15% to 5%, the grace period increased from 9 months to 12 months and in addition there were changes in the required guarantee and security for the loan. Therefore, it is expected that in 2012, there will be an increase in the demand for loans from the Fisheries Development Fund as more favourable financial terms generate interest from investors.

7.3 Processing Quay - Victoria

Work to rehabilitate the processing quay at Victoria which had started in 2010 was completed during the first quarter of 2011. The quay facility which is now 98 meters long is 45 meters longer than before. It now has an unloading shed and the area is lighted at night with solar powered lights. The water draft alongside is 3.5 meters at Average Chart Datum (ACD) and fishing boats of 30 meters LOA can now berth and be serviced alongside. In order to improve mooring space, four buoys with sinkers have been installed to the west of the jetty so that fishing vessels that are not working can moor. The project was officially inaugurated by the Minister for Natural Resources and Industry, in June, 2011.



Figure 7.3 Processing Quay -Victoria

7.4 Fuel Sub Station Zone 6

As part of government's ongoing effort to improve the infrastructure for the fisheries sector, work to construct a new fuel sub-station was initiated during the first quarter of 2011. The project was tendered out and "Allied Builders" was the successful contractor for the project with "Universal Architect" chosen as the consultant. When completed, fishers will be able to purchase both benzene and diesel. The fuel storage capacity for benzene and diesel is each 13000 litres.

7.5 Access Channel

Before the start of the S E Monsoon, the Coast Guard, the Department of Environment and the Seychelles Fishing Authority conducted an exercise at Anse Gaulette, Mahe to improve the only access channel which exist in the area. The exercise involved dynamiting grown coral heads that were impeding safe passage to and from the fishing grounds. The exercise can be qualified as a success.

7.6 Navigational Aids

A total of ten navigational lights have been installed in dangerous access channels around Mahe and Praslin. The main objective of these navigational lights is to improve safety at sea when negotiating these access channels in poor weather conditions or at night. During the first quarter of 2011, these lights were all serviced, repaired and the damaged ones replaced. The solar powered light has an average life expectancy of five years.

7.7 Victoria Fuel Station

SFA presently has only one facility based in Victoria Fishing Port which sells diesel fuel only. During the course of 2011 a cumulative number of 1921 fishing boats were

serviced. Altogether a total of 777,464 litres of fuel were sold valued at SR14,982,222.00. In 2011, sales of fuel at the depot increased by over 16% compared to 2010. The table below gives an indication of the sales of fuel for the last four years.

Table 7.3 Fuel sales at SFA Depot 2008-2011

SFA Fuel Depot	2008 (SR)	2009 (SR)	2010 (SR)	2011	TOTAL (SR)
Sales of fuel	6,038,543.00	11,243,384.00	12,478,506.00	14,982,922.00	44,743,355.00
TOTAL (SR)	6,038,543.00	11,243,384.00	12,478,506.00	14,982,922.0	44,743,355.00

7.8 Fuel Refund Claims

Under the above scheme artisanal fishers and those in the semi industrial fishing sector continued to benefit from a refund of SR8/litre for fuel purchased and used for commercial fishing purposes. During 2011, SFA received and processed 3952 claims and a total of SR19,982,245.00 was refunded. This sum however, was less than what was paid compared to 2009 and 2010.

Table 7.4 Fuel claims for 2008-2011

	2008	2009	2010	2011	TOTAL
Fuel Claims Processed	1,119	6,134	5,649	3,952	16,854
Fund Disbursed (SR)	3,284,891	20,719,788.00	23,410,217.00	19,982,245.00	67,397,141.00

7.9 Ice Plants

The Seychelles Fishing Authority has five ice plants all producing plate ice which is sold to fishers at a subsidized price. Whilst the public pays SR80 for 50 kg of ice, fishers only pay SR30. During 2011 three of the ice plants, namely the one at Providence - Zone 6, at Belombre and at Anse a La Mouche were managed by the SFA whilst the management of

the Anse Royale and Praslin ice plant have been privatized since 2008. The table below provides receipts for the sales of ice for 2011, as well as for the three previous years.

Table 7.5 Sale of ice for 2008-2011

	2008 (SR)	2009 (SR)	2010 (SR)	2011 (SR)	TOTAL (SR)
Anse a La Mouche	58,040.00	81,510.00	208,180.00	195,920.00	543,650.00
Anse Royale	168,100.00	65,660.00	-	354,680.00	588,440.00
Baie Ste Anne	-	149,475.00	-	271,850.00	421,325.00
Bel Ombre	-	-	100,930.00	275,930.00	376,860.00
Providence			163,085.00	1,069,920.00	1,233,005.00
TOTAL (SR)	226,140.00	296,645.00	472,195.00	2,167,920.00	3,162,900.00

8. MONITORING CONTROL AND SURVEILLANCE

The Monitoring Control and surveillance (MCS) Section is comprised of two sub-units. These are: The Monitoring and Control Unit and the Enforcement Unit.

The Monitoring Unit is composed of the Fisheries Monitoring Centre (FMC) and the Fisheries Control Unit.

The Fisheries Monitoring Centre (FMC) deals with the compliance of all fishing vessel's reporting requirements, Vessel Monitoring System (VMS), validation of statistical documents for ICCAT, IOTC, EU and Non-EU catch certificates.

The Fisheries Control Unit is responsible for the processing of fishing licences. The Enforcement Unit carries out all inspectorate duties with regards to port state inspection, land inspection, sea and air surveillance duties pertaining to national and regional requirements.

The main objectives of the Fisheries Control Unit include:

- To ensure compliance to the fisheries Act and regulations, Fisheries agreement and protocols;
- To provide supports to local partners such as the Seychelles Coastguard (SCG) and the National Drug Enforcement Agency (NDEA);
- To work with countries of the region to improve MCS implementation in a regional effort to eliminate IUU fishing activities;
- To ensure compliance to the Licensing Act and Regulations;
- To ensure compliance to international legal framework plus the IOTC resolutions that has been endorsed by the Seychelles.

8.1 Fisheries Monitoring Centre (FMC)

8.1.1 Vessel Monitoring System (VMS)

With the integration of the new VMS software (Themis), SFA's VMS data transfer operation became fully compatible to send and receive data through HTTPS and SMTP protocols. The Themis platform was further upgraded in May 2010 with Version 2.5.1. The 2.5.1 version will be upgraded by version 2.9 by the end of 2011.

A technical team at the FMC ensures the operation of the FMC servers on a daily basis, plus the installation and maintenance of VMS mobiles installed on the local fleet and the inspection of VMS mobiles on Seychelles' and foreign flagged fishing vessels.

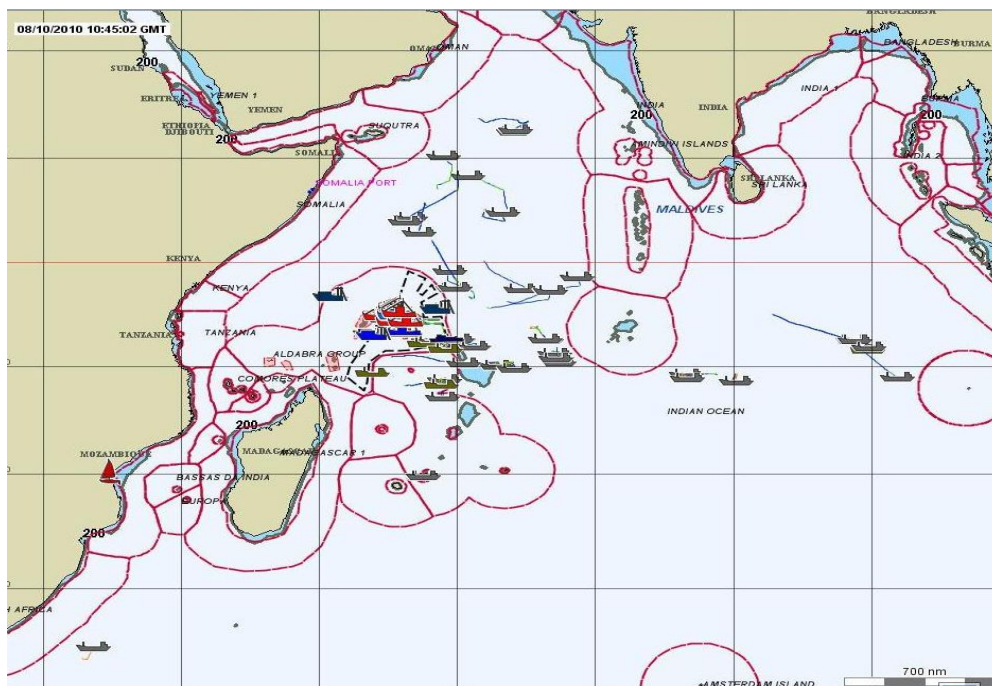


Figure 8.1 Screen capture of Themis viewer platform

The Vision software has been temporarily installed at the Seychelles Coastguard which will be replaced by the Meta software that is a Themis compatible software, developed by

CLS. This will avoid duplication of data inputs and possible errors between the software's.

The total VMS data transmission continued to increase over the years and Table 8.1 below illustrates data transmission records for different fleets which took licences to fish in Seychelles waters in addition to Seychelles' flagged vessels during 2011.

In 2009, most industrial Seychelles longline vessels were installed with both Inmarsat-C and Argos system and this increased the data output for this category of vessels.

Table 8.1 VMS data transmission records per vessels flags

VMS DATA TRANSMISSION RECORD PER FLAG								
Vessels Flag	2004	2005	2006	2007	2008	2009	2010	2011
FRANCE	90,398	90,800	109,969	130,466	106,417	55,498	99,557	89,981
CHINA	15,515	20,368	3,864	4,913	9,163	6,484	55	897
JAPAN	102,226	179,207	159,815	125,248	108,799	5,788	384	0
SEYCHELLES Flag Artisanal Vessels	101,319	140,024	174,100	250,895	242,972	326,684	296,895	327,297
MAYOTTE	0	0	1,965	7,240	7,206	23,724	23,408	20,799
SEYCHELLES Flag Industrial Vessels	204,215	249,566	301,662	338,297	399,348	388,695	548,902	563,362
SPAIN	36,517	56,635	73,974	76,431	58,915	49,618	51,262	45,864
TAIWAN	161,290	403,472	202,566	161,572	125,712	172,683	189,070	159,433
PANAMA	6,274	0	0	0	0	0	0	0
OMAN	0	0	314	0	0	8,118	2,545	2,233
NETHERLAND	1,252	2,755	3,993	0	0	0	0	0
BELIZE	451	151	1,517	0	1,388	0	0	0
PHILIPPINES	2,300	1,533	567	0	0	77	0	732
ITALY	1,107	2,724	3,157	2,523	0	0	0	0
KOREA	20,282	22,079	26,376	629	1,532	4,049	0	0
THAILAND	0	0	0	0	3,564	20,197	5,548	0
TOTAL	745,150	1,171,319	1,065,845	1,100,221	1,067,024	1,494,319	1,238,580	1,210,598

8.1.2 VMS on local fishing fleet

The number of local fishing vessels installed with Inmarsat-C transceivers by the end of 2010 was 190 and 35 vessels were earmarked for installation in 2011. The number of support services provided by the SFA to assist vessels in distress has decreased annually from nine in 2009 to 13 in 2010 and nine in 2011.

Table 8.2 below shows the number of maritime distress alerts received by the Seychelles Coast Guard.

Table 8.2 Breakdowns and maritime distress alerts received by the Coast Guard for 2009 - 2011

	2009	2010	2011
BREAKDOWNS	9	13	9
DISTRESS	10	19	20

8.1.3 VMS on industrial fishing vessels

All industrial vessel reports were satisfactorily during 2010-2011 and no major compliance actions were undertaken.

8.1.4 Innocent passage

A total of eighteen requests for innocent passages were approved by the SFA for 2010. For 2011 this figure was reduced to three. This reduction is partly due to the threat of piracy that is deterring fishing activities in the north and northwest of the southern Western Indian Ocean area. This drop can be attributed to a reduction in activity by Far East fishing vessels in the Indian Ocean, particularly in the Northern part.

8.1.5 Entry and exit reports

The EU fishing vessels continued to show poor compliance in reporting their daily entry and exit position to the FMC, hence placing an extra work load on the FMC staff, who have to request missing data and seek follow up information.

8.1.6 Transhipment

The SFA has continued to authorise transhipment at sea in line with the IOTC resolution 09/03 in combination with the IOTC observer programme of which Seychelles is participating.

8.1.7 Longliner transhipment

All Seychelles longliners that carry out transhipment at sea or in foreign port have to seek prior authorisation from SFA in line with IOTC resolution 09/03. In 2010, a total of 113 transhipments were carried out at sea, whilst 112 transhipments were carried out in 2011.

Table 8.3 Total number of transhipments carried out at sea 2010 - 2011

	2010	2011
Total No. of Transhipments	113	112
Total No. of kg Transhipped	48470	6985.41

8.1.8 Purse seiner transhipment

All Seychelles and EU seiners' carried out the majority of their transhipment in Port Victoria, hence maintaining Port Victoria as the most active tuna transhipment port in the region.

8.1.9 Statistical document

Since 2002, Seychelles has been validating statistical document for ICCAT and IOTC. As of the 1st January 2010 when COUNCIL REGULATION (EC) No 1005/2008 came into force SFA successfully implemented the catch certificates as per article 12 of the regulation. During 2010-2011 there was continuous improvement in the implementation of the EU/IUU regulations, especially from processing products whereby partial certificates were introduced for partial processing of products from the industrial tuna fishery.

During 2009, 555 statistical documents and 246 Certificates of Origin were verified with VMS data prior to their validation.

During 2010, a total of 1465 catch certificates and statistical documents were validated for export, of which 526 were EC/IUU catch certificates. All requests for validation are scrutinised for their authenticity in relation to VMS and logbook data as well as for landed catch and transshipment declarations, where appropriate.

For 2011, a total of 2457 catch documents were validated for export certificates which represents an increase of 168% of catch documents validated when compared with 2010.

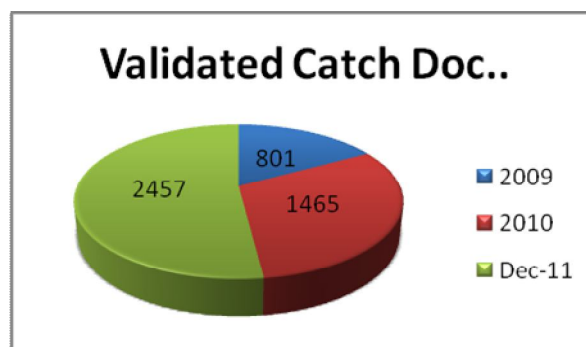


Figure 8.2 Graphical illustrations of validated Catch Certificates for the period 2009-2011

Table 8.4 shows the total number of fish exported in 2011 by country as per validated catch certificates.

Table 8.4 Destination of the catch for the semi-industrial and artisanal fishing vessels

2011	
Country of Export	Quantity (Kg)
United Kingdom	70,507.2
Reunion	16,877.30
Germany	4,822.80
France	2,912.10
Germany/Frankfurt	1064.4
Mauritius	92,144.90
Australia	1040.9
U.A.E	18,812.50
Sri Lanka/Colombo	219
Hong Kong	2,369.90
Iran	19,934
China	1417
USA	4946.26

8.1.10 Data exchange

During 2011, data exchange between Seychelles and Reunion (CROSS REU) have continued to progress with weekly exchanges. Further to that, data exchange also took place during regional fisheries surveillance missions.

The SFA is also optimistic of further data exchanges under the SADC regional MCS program and the Smart Fish MCS component of the 10th EDF for ESA IO member state.

8.2 Fisheries Control

In the past SFA's responsibility was limited to compliance verification and approval of the licences. To issue or revoke a fishing licence was the responsibility of the Seychelles Licensing Authority (SLA).

Since 25th September 2010, the SFA has been legally responsible for the issuance of fishing licences, but due to limited office space and human capacity constraints, the SFA is unable to discharge such responsibility until such times that these constraints are addressed.

8.2.1 Industrial sector

The number of licences issued by SFA in 2009-2011 is reflected in Table 8.5 below. There was an overall reduction in the number of licences issued to all countries and surprisingly, Japanese fishing vessels have not applied for any fishing licences since April 2009.

Table 8.5 Number of industrial fishing licensed issued per country 2009-2011

Country	2009	2010	2011
Spain	20	18	17
Belize	0	1	0
Iran	0	0	1
Oman	1	1	0
China	2	0	0
France	14	8	8
Italy	1	0	0
Korea	8	0	0
Japan	23	0	0
Mayotte	3	5	5
Philippines	1	0	1
Seychelles	24	27	28
Taiwan (ROC)	28	29	43
Thailand	5	0	0
Total	130	89	103

Concerning the type of vessels that applied for industrial fishing licences, the drop in the number of licences is largely reflected in the drop in the number of longliners from the Far East.

Table 8.6 Type of fishing vessels that applied for industrial fishing licences 2009-2011

Vessel Type	2009	2010	2011
Supply vessels	10	9	7
Purse Seiners	51	25	37
Longliners	69	56	58
Total	130	90	102

Table 8.7 Licence Fees

Type of vessel	Duration	Amount	Currency
Longliner			
Sey/Taiwan	1 Year	24,000	USD
	6 Month	17,500	USD
Purse Seiner			
Sey. Flagged	1 Year	90,000	USD
French/Spanish (EU Agreement)	1 Year	61,000	EURO
Private Agreement	1 Year	120,000	USD
Supply Vessel	1 Year	5,000	USD

8.2.2 Local fishing licences

In 2011, a total of 420 local fishing licences were issued. 250 licences were issued for open deck Mini Mahe fishing vessels which remaining the dominant type of licences

issued. In view of the extremely large discrepancy between the two years the accuracy of the data presented could be dubious. This can be attributed to the lack of information concerning the number of licences issued by the Seychelles Licensing Authority (SLA). SFA can only update its database from information issued by SLA. This is a concern that needs to be addressed between SFA and SLA.

Table 8.8 Type of local licensed issued for 2009 – 2011

Boat Type	2009	2010	2011
Catamaran	3	3	2
Seadog	9	11	8
Longliner (semi-industrial)	15	17	15
Lekonomi	30	29	26
Lavenir	28	32	24
Schooner	66	65	58
Whaler	50	54	37
Mini Mahe	334	290	250
Total	535	501	420

8.2.3 Sea cucumber licences

The number of sea cucumber licences has remained constant over the years whereby the number is capped at 25 licences. The total number of sea cucumber exported by processors for 2011 was 624,987.

8.2.4 Lobster licences

Lobster fishing season reopen in 2010/2011, a limit of 20 licences was given for the three main island Mahe, Praslin and La Digue. See section 4.2 for more details.

8.3 Fisheries Surveillance

This is an area that is lacking in both manpower and equipment but on the other hand there have been major improvements in terms of sea patrol and port state control. Land based monitoring and port state control remains an area that needs to be reviewed as well as the type of inspection conducted.

In the framework of the regional fisheries surveillance programme, SFA inspectors have received training in the field of inspection at sea, radio telecommunication, and procedures for safety at sea. Compliance observer training and port state inspections are areas that have been targeted for future training.

8.3.1 Port state control

Port state control has been one of the strong points of Seychelles even before the creation of the MCS section. Despite this fact the overall approach to port state control was reviewed in 2009, concentrating on an investigative rather than an informative approach. The results have been positive since several infractions have since been detected. In a specific case, it resulted in the Iranian flagged fishing vessel “Persian Sheila” being included in the IUU list of IOTC for fishing in the IOTC Convention Area without authorisation.

Nevertheless, there is still a need to improve port state inspection so that it can be brought in line with the requirements of the FAO Port State Measure (PSM) and the IOTC PSM resolution.

Table 8.9 Number of fishing vessels inspected in Port Victoria by country and type of vessel for 2011

2011				
Flag	Purse Seiner	Longliner	Supply Vessel	Others
China				
France	75			
Italy				
Japan				
Korea				
Seychelles	68		19	
Spain	115		12	
Taiwan				
Thailand				
Iran				
Mayotte	3			
Dominica				
Russia				
Mauritius				
Total	261		31	

8.3.2 Compliance inspection

Compliance inspection is carried out on all Seychelles flagged industrial vessels to ensure compliance as per FAO requirement for port state responsibility. Given that most distant water longline fishing vessels does not use port Victoria as their base port. The inspection is carried out upon registration and prior to issuance of the Certificate of authorisation to fish outside of Seychelles waters. Most of the inspections are carried out in foreign ports,

particularly, Jurong in Singapore, Port Louis in Mauritius and Colombo in Sri Lanka. This inspection is repeated every two years to ensure continuous compliance for all Seychelles vessels.

Table 8.10 Seychelles' flagged fishing vessel Compliance inspection in foreign ports between 2009 and 2011

Year	Purse seiner	Longliner	Supply Vessel
2009	-	8	-
2010	-	5	-
2011	-	6	-

8.3.3 Land patrol

Land patrols targets mainly landing sites around the three main islands: Mahe, Praslin and La Digue. The main purpose of land patrols are:

- Inspections of boats upon licence application;
- Inspection with regards to fuel claims;
- Inspection of sea cucumber landing at authorised landing sites;
- Inspection at point of export of sea cucumber;
- Monitoring of the Lobster fishery;
- Investigation on report of illegal activities;
- Periodic inspection at beach landing sites.

8.3.4 Regional fisheries surveillance

The Regional Fisheries Surveillance Project (RFSP) financed by the EU and other member states under the management of the IOC was extended for another year in 2011. Another three year extension has also been proposed for the coming years.

Twenty nine regional patrols have been planned since November 2007 up to November 2011, covering all jurisdictions of the Indian Ocean Commission member states.

With the implementation of the RFSP and the allocation of a budget financed by the Seychelles Government for joint fisheries and piracy patrol, Seychelles has since 2007 improved its efficiency in the surveillance of its EEZ, as illustrated in table 8.11.

Table 8.11 Records of patrol conducted between 2007 and 2011

Patrol	YEARS				
	2007	2008	2009	2010	2011
Sea	7 days	38 days	107 days	110 days	91 days
Air	3.2 hrs	74.6 hrs	216. hrs	40 hrs	6hrs

8.3.5 Patrol vessels

The Seychelles Coast Guard have two long range patrol vessels, the ‘PV Andromache’ and ‘PV Topaz’. The two vessels were fully engaged in piracy patrols since February 2009. Hence, SFA was left with no other alternative but to lease a vessel for fisheries patrol so as to meet our national and regional objectives. The Patrol vessel that was leased was the “Maya Dugong”, owned by Silhouette Cruise Com. Ltd.

8.3.6 Aircrafts

SFA has been utilising the Seychelles’ People Defence Force (SPDF) aircrafts for fisheries surveillance. Availability of the aircrafts was again limited, in particular during 2010-2011 because of aircrafts involvement in piracy surveillance. The arrival of a new Twin Otter plane for the Airwing Section of the Seychelles People Defence Forces did not alleviate this problem.

8.3.7 Vessel apprehended

A number of factors has contributed to more effective monitoring surveillance and control, particularly an increase in air and sea patrol, capacity building of MCS personal (VMS department) and greater collaboration from the fishing communities. Those have resulted in a number of vessels being apprehended in recent years for IUU activities as well as breach of licence condition.

Table 8.12 shows records of vessels apprehended since 2010 to December 2011. It should be noted that no arrest were made in 2011.

Table 8.12 Records of vessel apprehended since 2010 to date

DATE	Vessel/Captain/ owner	NATIONALITY	CHARGE	ZONE	OUTCOME
12 Jan 2010	Iranian vessel – Al Naveed	Iranian	Fishing inside the Seychelles waters without a valid fishing license	Sey EEZ Mahe Plateau	Vessel compounded at \$95,000.00
12 Jan 2010	Iranian vessel – Al Fahad	Iranian	Fishing inside the Seychelles waters without a valid fishing license	Sey EEZ Mahe Plateau	Vessel compounded at \$95,000.00
12 Jan 2010	Iranian vessel – Al Zaid	Pakistani	Fishing inside the Seychelles waters without a valid fishing license	Sey EEZ Mahe plateau	Vessel compounded at \$95,000.00
12 Jan 2010	Iranian vessel – Al Asad	Pakistani	Count I Fishing inside the Seychelles waters without a valid fishing license Count II Escape from lawful custody	Sey EEZ Mahe Plateau	The captain is being prosecuted and vessels detained in Port Victoria
July 2010	Chun Ying no 323	Seychellois	Breach of COA	Outside Sey waters	Compounding SR.1,000,000
11 Oct 2010	Drennec	French	Breach of licence condition (fishing in Restricted area)	Restricted Zone 6 in Sey EEZ	Compounding SR.500,000
12 Oct 2010	Talenduic	French	Breach of licence condition (fishing in Restricted area)	Restricted Zone 6 in Sey EEZ	Compounding SR.500,000
4 Nov 2010	Xixili	Seychellois	Breach of licence condition (fishing in Restricted area)	Outside Sey waters	Compounding SR.500,000
17 Dec 2010	Indian Star	Seychellois	Breach of licence condition (fishing in Restricted area)	Outside Sey waters	Compounding SR.1,000,000

8.3.8 Piracy

With the increase in the threat of piracy since early 2009, the numbers of industrial fishing vessels taking licences have been drastically reduced. The number of industrial fishing vessel licences decreased from 140 licences in 2008, to 130 licences in 2009, to 89 licences in 2010 and only increased to 100 licences in 2011.

Concerning the local fishery the threat of piracy has forced local semi-industrial longliners to restrict their fishing activities within or just beyond the Mahe plateau, hence increasing fishing pressure within this area.

8.3.9 Regional MCS effort

Two main regional MCS projects are ongoing in the region. These are: The establishment of the SADC Regional MCS Centre based in Maputo, Mozambique and the MCS component of the EU 10th European Development Fund (EDF) for the ESA-IO countries. The MCS component financed under the EDF has now been named the Smart Fish Project.

9. INTERNATIONAL CO-OPERATION

9.1 EU/Seychelles Fisheries Partnership Agreement

Following several rounds of negotiations carried out in 2010, on the 18th January 2011 a new Protocol under the existing Fisheries Partnership Agreement (FPA) between the Seychelles and the European Community (EC) came into force. The new three-year Protocol which will end on the 17th January 2014, is for a total financial contribution of Euro 16.8 million. This financial contribution comprises of two specific components (i) an annual amount of Euro 3.380 million for access to the Seychelles EEZ by the EC fishing vessels, and (ii) another specific yearly component of Euro 2.200 million for the support and implementation of the Seychelles' sectoral fisheries and maritime policy.

The reference tonnage under the new Protocol was set at 52,000 tonnes per year compared to 63,000 tonnes per year under the previous Protocol. This was mainly due to the reduced catch by the EC fleets in the Seychelles EEZ as a result of the piracy threat during the preceding years.

The new Protocol makes provisions for an increase in the number of licensed tuna purse seiners under the FPA from 40 to 48 whilst the number of eligible licensed tuna longliners was maintained at 12.

With regards to the specific financial support for the implementation of Seychelles' sectoral fisheries and maritime policy, both parties met in February 2011 in Mauritius. The parties followed established procedures of the Joint Committee provided for under the Agreement to agree on projects and activities identified by Seychelles for implementation for the duration of the Protocol. This comprised of three priorities that both parties agreed on for financing, i.e. (i) Improved fisheries management for the artisanal and industrial fisheries, (ii) Fisheries infrastructure development, and (iii)

capacity building. The meeting was jointly headed by the Chairperson of the SFA for Seychelles and by the Head of Unit, Bilateral Agreements and Fisheries Control in International Waters, Directorate General of Maritime Affairs and Fisheries for the EC.

A budget to the value of Euro 10.032 million was adopted for 2011 which comprises of funds brought forward from the previous Protocol and Euro 2.220 for the Protocol year 2011. Major projects and activities identified under the priority for improving fisheries management and industrial fisheries included:

- development of management plans for specific fisheries;
- support for research being conducted by SFA;
- support for artisanal fisheries infrastructure and fishers associations and projects;
- support for a soft loan for reviving the semi-industrial fisheries;
- development of value addition for fisheries products, and
- financing for fisheries sea and air patrols to deter illegal fishing activities.

Concerning infrastructure development, priority was given for building a tuna fishing quay so as to reduce congestion and maintain Port Victoria as a major tuna landing and transshipment port in the Western Indian Ocean. In addition, priority was also given to the development of the fish processing sector and increased value addition of fish products through the constructing of processing facilities at the Providence and Bel Ombre fishing ports.

Concerning the capacity building requirements of SFA, funds were allocated for various training of SFA personnel including funding of three staff to follow BSc courses overseas in fisheries.

9.2 British/Seychelles Fisheries Commission (BSFC)

This Commission was established in 1995 to promote, facilitate and coordinate conservation and scientific research. As established by the Agreement, the Commission met for its yearly meetings, which alternates between Seychelles and the UK (London). This was the 16th meeting of the Commission which was preceded as scheduled by the 23rd meeting of the Scientific Sub-Committee (SSC). The SSC and Commission meeting was jointly headed by the Deputy CEO for Seychelles, and the Deputy Managing Director of Marine Resource Assessment Group (MRAG) for the UK.

The SSC and the Commission focussed on the review of the offshore fisheries between 2009 and 2010, where it was noted that in 2010, there was a shift in areas of operations that could be attributed to both the effect of piracy and to the La Nina phenomenon. Both parties agreed to pursue the observation of the changes in the fishing pattern so as to reach more definitive conclusions.

Concerning the environmental monitoring of inshore fisheries, the Commission agreed to collaborate further for ongoing research. These included: research on sea cucumber, spatial effects and impacts of Marine Protected Areas (MPA's) including the examination of decision making rules and collaboration on species identification of tunas and sharks and the potential for developing a joint shark identification guide for inshore and reef species. Seychelles has offered to train personnel in acoustic tagging since it already has considerable experience in this field. The possibility of establishing a joint tagging programme in the future which would monitor the migration of fish between the two Indian Ocean regions was also discussed. Other projects being undertaken were also discussed and experience shared with both parties reaffirming their support for the actions taken by their respective governments to combat and address the problems of illegal fishing activities in the Indian Ocean. The parties have continuously worked together, and, collaborated closely within the framework of the IOTC.

9.3 Indian Ocean Tuna Commission (IOTC)

Staff from the Research and management Sections have actively participated in the different scientific and technical workshops, working parties, as well as in the annual Commission meetings.

The IOTC activities for 2011 kicked off with the first technical meeting on devising criteria's for the implementation a quota allocation for the main tuna species targeted within IOTC's jurisdiction. This was agreed based on a resolution adopted by the IOTC at its 14th Commission meeting in South Korea in 2010. The technical meeting was held in Mombasa, Kenya in February 2011 and was attended by most members of the IOTC.

Allocation of quotas for interested fishing partners is often one of the most complex and controversial decisions in fisheries management. Quota allocation is necessary when a total allowable catch (TAC) is set for any species to ensure the equitable distribution of catches and fishing opportunities among fishing States. *Essentially the TAC sets the size of the cake and the quota allocation system decides what share of the cake each party will receive.* Quota systems are particularly challenging to implement in international fisheries in particular for shared and highly migratory fish stocks.

Seychelles presented and defended a proposal on criteria's it perceived as equitable in establishing such a quota system. In brief, the Seychelles' proposal was based on a principle that all historical catches taken from the EEZ of a coastal State regardless of whether it was fished by the coastal State or a foreign flag fleet should be attributed to that coastal State, whilst all historical catches taken on the high seas should be attributed to the flag State whose fleet made the catch. The other proposal of a different principle tabled at the first technical meeting, which was presented by a distant water fishing nation was based on the principle that all historical catches regardless of where they were taken,

be it in a coastal State EEZ or on the high seas, should be attributed to the State whose flag vessel's made the catch.

It was felt by most coastal State at the first meeting that the Seychelles proposal was more in their interest than a proposal on flag state principle for obvious reason. However, the meeting could not reach a consensus on the different principles and it was agreed to have a second technical meeting prior to the Commission meeting in 2012.

At the 15th Session of the IOTC meeting held in Colombo, Sri Lanka in March 2011, the main focus was on the report of the 14th Session of the Scientific Committee (SC), whereby the stock status of the different targeted tuna species were discussed and recommendations of the SC evaluated. The Commission also noted the substantial negative consequences of the effects of piracy on the activities of certain fleet as well as the level of observer coverage for the area. The poor observer coverage is depriving the SC of vital information, particularly with regards to the level of by-catch. Seychelles has also been affected by the piracy threat which has had a direct impact on the implementation of its national observer programme in 2011.

The Commission also addressed the issue of compliance to IOTC conservation and management measures as reported by the 8th Session of the Compliance Committee. Seychelles was generally compliant to most of the adopted resolutions, apart from ensuring that adopted IOTC resolutions are prescribed into national laws. This will be facilitated by the enactment of the revised Fisheries Bill which is being prepared for final enactment.

9.4 South West Indian Ocean Fisheries Commission (SWIOFC)

The South West Indian Ocean Fishery Commission (SWIOFC) which is an FAO body, was established in 2004. It is a regional fisheries advisory body for coastal States in the

South West Indian Ocean region with the main objective of promoting the sustainable utilization of living marine resources in the area of the Commission's jurisdiction and to address problems of fisheries management and development faced by members. The regional office for the Commission is located in Harare, Zimbabwe.

At the Fifth Session of the SWIOFC held in the Maldives in 2011, the Commission noted the work that had been carried out since the fourth session, considered the report of the Scientific Committee and reflected on the status of fisheries resources. The Commission decided to draw attention to depleted stocks, discussed the relevant outcome of the Committee for Fisheries (COFI) and that of the meetings of the regional fisheries bodies. In addition, it examined the performance review of the Commission, reflected on the extent of implementation of the Ecosystem Approach to Fisheries, endorsed a project proposal for regional support to strengthen governance and sustainably managed fisheries to alleviate poverty, and approved a work programme for the Commission.

As for the performance review of the Commission, members were required to express their views on the past performance of the Commission, and, in particular on possible ways on how to improve it in the future. The assessment of the Commission was with regards to its basic objectives and functions, as established in its statutes, specifically in Article 4 and, in particular to promote the sustainable utilization of living marine resources in the area of its jurisdiction, through proper management and development.

In September 2011, in Maputo, Mozambique, the SWIOFC held an adhoc special session right after the 4th Session of the SWIOFP's Regional Policy and Steering Committee RPSC, since the RSPSC is overseen by SWIOFC. The adhoc special session was to address the transition after the termination of SWIOFP as SWIOFC was seen as a possible body to assist, co-ordinate and absolve some activities of SWIOFP for the benefit of the region.

9.5 Southern African Development Community (SADC)

In 2011, SFA attended several workshops and technical committees organised by SADC. The first of such meetings was organised on the 28th January 2011 and was attended by SFA and the Ministry of Foreign Affairs for the national SADC liaison, where the topic of discussion was SADC's protocol on Finance and Investment (FIP). From the 2nd to 9th March 2011, SFA attended a Technical Committee meeting on fisheries organised by SADC, held in Gaborone, Botswana which discussed various fisheries issues which were supposed to have been discussed and, in some cases approved by the senior official meeting and ministerial meeting that normally follows the FTC. An SFA representative attended a SADC TFCA workshop about the Transfrontier Conservation Areas (TFCAs) programme aimed at setting in operation the SADC TFCA framework that was approved by the Integrated Committee of Ministers (ICM) in 2007. The workshop was held in Johannesburg, South Africa, on the 24th to the 25th March 2011.

In April 2011 two SFA representatives attended a regional workshop and a fisheries technical committee meeting in Gaborone, Botswana. The workshop reviewed the consultancy report and provided the necessary input.

From the 12th to the 14th September 2011, a workshop was held in Maputo, Mozambique organised by SADC to discuss how the Fisheries Task Force should combat IUU Fishing.

A workshop was held at the Ephelia Resort from the 10 -14 October, organised by The Division of Risk and Disaster Management (DRDM) of The Department of Environment to discuss disaster risk management. Participants included representatives from SADC, United Nations Agencies, international cooperating partners, NGO's, donors and civil society. The objective of the workshop was to decide on the required preparedness measures necessary for any possible emergencies related to floods and droughts, during the 2011/2012 rainy/cyclone season. Finally, a workshop was held at the ICCS in

November with the Department of Industry to discuss the SADC Protocol on science, technology and innovation.

9.6 South West Indian Ocean Fisheries Project (SWIOFP)

Seychelles being a member of SWIOFP, SFA has to discuss its involvement concerning grants, training, workshops, technical meetings, etc. On the 10th January 2011, SFA agreed to loan SWIOFP equipment (a CTD profiler) but on condition that SWIOFP handled the cost of shipping the equipment including the cost of insurance, duties or customs clearing fees or/and compensation for any damage incurred to these equipment.

In March 2011, SFA attended a SWIOFP meeting in Male, Maldives. This technical workshop concerned a mid-term review on where focal points from each member countries of SWIOFP and the regional component coordinator met to review the progress made, highlight constraints and discusses possible solutions. Secondly, the first special session of the SWIOFP regional and policy Steering Committee was held where members discussed extension of projects, the lack of commitment from government officials involved in the project and participation to the workshop, meetings and training.

Finally, the 5th Session of the SWIOFC Commission meeting was held which discussed the challenges facing the Commission, particularly the risk of duplication of regional projects by different actors. There was a common concern raised by countries of the region with respect to fisheries and the need to adopt a concerted approach to tackle those concerns. This meeting took place from 13th to 16th March 2011.

On the 13th April 2011 SFA and SWIOFP approved a grant application by Mr. Brandon Lee, in South Africa, for a SWIOFP MSc research grant – Regional component 4 – Pelagic. The Approved grant was worth US\$10,000 annually extending over two years. On the 4th May 2011, SFA took delivery of FAD construction materials worth 18,815.17

Euros, ordered under the framework of SWIOFP component 4 to Seychelles. This project also involved the participation of other regional countries including, Comoros, Kenya, Mauritius, Mozambique, Madagascar, and Tanzania. SFA representatives attended the SWIOFP/ EAF-NANSEN Ecosystem Approach to Fisheries (EAF) training scheduled on the 8th August 2011 to 3rd September 2011 at Rhodes University, Grahamstown, South Africa.

From 23rd to 29th September 2011 SFA attended the SWIOFP work plan and budget meeting at Maputo, Mozambique. The 4th session of the regional policy and steering committee meeting was also held. The participants were the country focal person, the regional component coordinator, the national component coordinator for components, 1, 2, 3, 4, 5 and 6 and the SWIOFP project accountant. On 7th December 2011, Seychelles and other member countries of SWIOFP attended the SWIOFP's GEF TF Grant No. TF056039 Extension Meeting for reallocation of funds for Kenya. Seychelles's contribution included \$173,828.16 in Goods and Services, \$2,000 in consultancy services, \$86,777.36 for training and workshops, and \$173,937.48 for operating costs. The total cost of the grant is \$12 Million.

9.7 African, Caribbean and Pacific Group of States Fish II Programme (ACP FISH II)

SFA and ACP fish II mostly interact via workshops, technical meetings, projects and etc. On the 1st February 2011, SFA approved the implementation of the project "STUDY IDENTIFYING POTENTIAL SITES FOR FISHERIES DEVELOPMENT ON PRASLIN ISLAND" to the company Poseidon aquatic Management Ltd. Secondly, on the 7th March 2011, SFA participated in the ACP Fish II assessment phase of the project "Strengthening the implementation of the IOTC Protocol state measure resolution". The overall objective of this project was to strengthen the implementation of the IOTC PSMR through assessment of the readiness of the legal frameworks. On the 5th April 2011, SFA

representatives and Mr. Tim Huntington of Poseidon Aquatic Resources Management Ltd, meet with Seychelles National Parks Authority (SNPA) for the ACP Fish II Project, to discuss the study for assessing and identifying potential sites for fisheries investment on Praslin Island.

Participants also included representatives from the following organisations: the Praslin Fishermen Association, Praslin Development Fund, Seychelles National Parks Authority, Seychelles Investment Bureau, Development Bank of Seychelles, Seychelles Tourism Board, Seychelles Bureau of Statistics, Ministry of National Development, Ministry of Investment and Natural Resources, Ice Plant operators, MNA`s for Praslin and officials from the Public Utilities Corporation.

SFA organized a workshop on the 26th April 2011 at the Nature Seychelles Office on Praslin Island. The workshop was about the implementation of the project by ACP Fish II “Study for Investment assessment needs and identifying potential sites for fisheries development on Praslin Island”. SFA approved the final technical report of the study carried out by Mr. Tim Huntington of Poseidon Aquatic Management Ltd on the 17th May 2011.

From the 9th to the 15th April 2011, IOTC consultants Ms Judith Swan and Mr. Per Erik Bergh assessed the legal framework for empowering the implementation of the IOTC PSMR. The project was to assist some coastal CPC`s to implement the IOTC Port State Measures resolution, “Strengthening implementation of the IOTC Port State measures through assessment and training in five countries: Mauritius, Mozambique, Seychelles, Tanzania and Kenya”.

From the 16th to the 20th May 2011, SFA attended a workshop about “Strengthening the implementation of the IOTC Port state measures resolution through assessment and training in five countries i.e Mauritius, Mozambique, Seychelles, Tanzania and Kenya.

This project has two phases including the assessment phase where the needs, requirements and gaps within national legislation and capacity were analyzed with a training period.

Finally, from the 7th to the 11th November 2011 two SFA representatives attended the ACP Fish II programmed, 2nd Monitoring workshop in Gaborone, Botswana. The workshop concerned the ACP Fish II Steering Committee, ACP Fish II communication event and reception, programmed monitoring and training for preparing the terms of reference within the EDF project cycle.

9.8 Indian Ocean Commission (IOC)

On the 8th June 2011 The African Development Bank held discussions on how the members IOC can improve their integration with the African continent in the spirit of regional strategy. The panel included the director of the project, an infrastructure specialist, a commercial and private sector specialist, an environmental and development specialist, a social specialist and a capacity and institution specialist.

Finally, SFA attended a workshop in Bagamoyo, Tanzania, in December 2011, on the financing agreement between the European Union and the Indian Ocean Commission for granting the application process. The workshop was represented by focal points on Monitoring Control Surveillance (MCS) and/or Coast Guard/navy personnel that have the duty to plan and coordinate fisheries patrol and a representative to discuss the financial aspect.

10. INFORMATION AND TECHNOLOGY SERVICES

10.1 Documentation Services

10.1.1 Acquisitions

The Documentation Centre's holdings continued to increase during 2011. Sixty eight new publications were added to the collection. Additionally, SFA is receiving publications in electronic format. Most of the publications were acquired through exchange programmes.

10.1.2 Library management

A total of 582 new records were catalogued in the library database in 2011, and, 115 documents were loaned to both SFA staff and external users. The total number of records in the SFA database now stands at 6193.

During the year 2011, the Documentation Centre embarked on a new project - the development of an Institution Repository where the 'AgriOcean DSpace' will replace the current Library Management software 'InMagic DB/TextWorks' which the Documentation Centre has been using for the past ten years. DSpace provides the basic requirements for small libraries, such as cataloguing and providing open access to publications.

10.1.3 Publications

DAW, T.M.; ROBINSON, J.; GRAHAM, N.A.J. (2011) Perceptions of trends in Seychelles artisanal trap fisheries: comparing catch monitoring, underwater visual census and fishers' knowledge. *In: Environmental Conservation 38(1): 75-88*

EVERETT, B.I.; VAN DER ELST, R.P.; OKEMWA, G.; FONDO, E.; KHADUN, S.; RAMKISSOON, S.; MOHIT, R.; SANTANA-AFONSO, P.; NGOCA, G.; DORIZO, J.;

ASSAN, C.; ROBINSON, J.; JIDDAWI, N. (2010) WIOFish database: A catalogue of small-scale fisheries of the western Indian Ocean; Annual Report, September 2010, 132 pp.

KOLOGY, D.; ROBINSON, J.; LUCAS, V. (2010) Swordfish catch rate standardisation for the Seychelles semi-industrial and industrial longline fleets. *In: IOTC Proceedings, IOTC-2010-WPB-04*

ROBINSON, J.; GUILLOTREAU, P.; JIMENEZ-TORIBIO, R.; LANTZ, F.; NADZON, L. DORIZO, J.; GERRY, C.; MARSAC, F. (2010) Impacts of climate variability on the tuna economy of Seychelles. *In Climate Research No.43 p149-162*

ROBINSON, J.; SAMOILYS, M.; GRANDCOURT, E.; JULIE, D.; CEDRAS, M.; GERRY, C. (2011) The importance of targeted spawning aggregation fishing to the management of Seychelles' trap fishery. *In: Fisheries Research, 112 p.96-108*

SEYCHELLES FISHING AUTHORITY (2011) Overview of Fisheries Management Projects *In: Twenty Third Meeting of the British/Seychelles Fisheries Commission Scientific Sub-committee Meeting, 4 pp.*

SEYCHELLES FISHING AUTHORITY (2011) Overview of Research Projects *In: Twenty Third Meeting of the British/Seychelles Fisheries Commission Scientific Sub-committee Meeting, 11 pp.*

SEYCHELLES FISHING AUTHORITY (2011) Result of the Catch Assessment Survey (CAS) 2010 and Research Activities for Artisanal Fisheries. *In: Twenty Third Meeting of the Scientific Sub-committee of the British/Seychelles Fisheries Commission, 16 pp.*

SEYCHELLES FISHING AUTHORITY (2011) Summary of Activities of the Seychelles Industrial and Semi-Industrial Fisheries for the year 2010. *In: Twenty Third Meeting of the British/Seychelles Fisheries Commission Scientific Sub-committee Meeting, 20 pp.*

SEYCHELLES FISHING AUTHORITY (2011) Seychelles Fisheries Monthly Bulletin (January-December 2011)

SEYCHELLES FISHING AUTHORITY (2011) Seychelles Fishing Authority: Tuna Bulletin, Year 2008, 37 pp.

10.2 Information Technology

Since 2011, the ICT Section has not ventured into any major updates or upgrades due to financial constraints and the current system was maintained. During the third quarter of the year, SFA's ISP kokonet faced difficulties in providing internet access, which obliged SFA to switch its internet service provider to Cable & Wireless.

A connection was given to the Coast Guard to assist in locating all vessels in Seychelles waters so as to combat the piracy threat. A link was established via the internet from SFA to the Coast Guard premises which is being maintained by the MCS department.

As mail traffic increased due to SMTP traffic from the Themis system SFA's mail server had to be replaced from exchange 2003 to exchange 2010 on a server 2008 platform. The reason for this particular upgrade is due to the possibility of a simpler mail server clustering from exchange 2010 in order to provide mail redundancy in case of failure by one system.

Finally, the SFA is collaborating with IFREMER on a project to implement a new database system (CAS) for the Artisanal fishery to supersede the Artfish system that have been in used for more than 25 years.

11. FINANCE

For the financial year starting on the 1st of January 2011 was fully subsidised by the government with a budget of SCR23 million. The budget allocation is shown in the chart below.

Seychelles' contribution to IOTC as a member state was catered for under the other costs voted within this subvention, which covered a total of SCR1.3million.

The fuel incentive scheme budgeted outside SFA's funds increased by another 15% compared to the previous year.

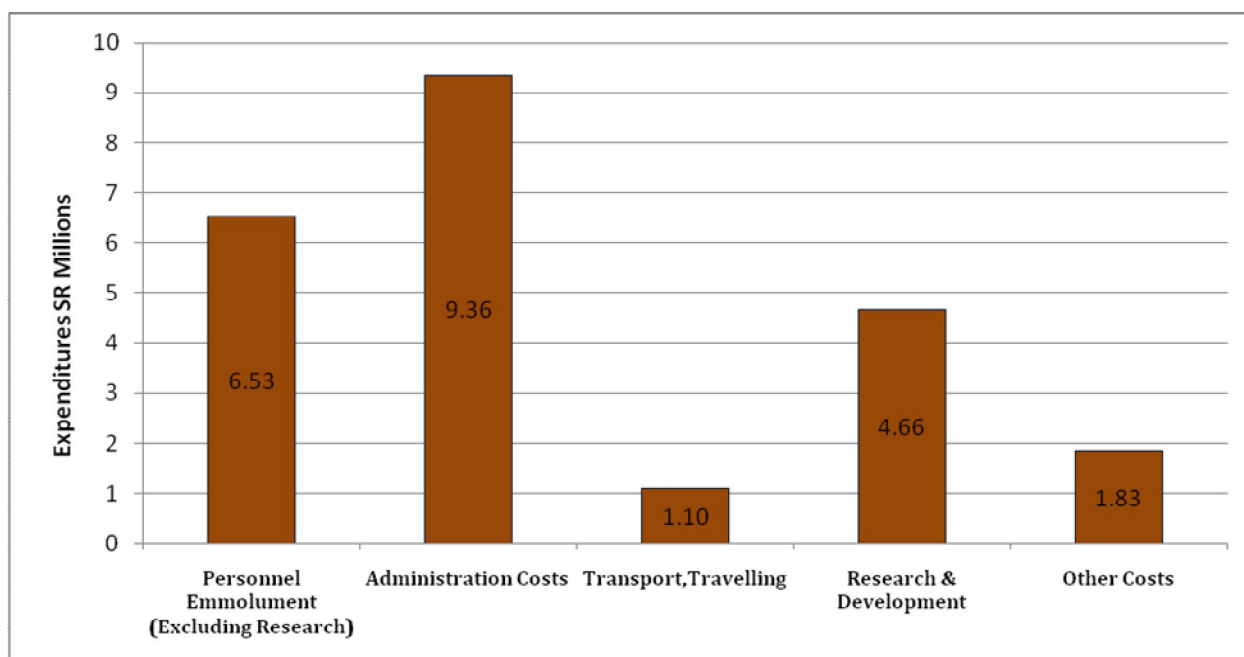


Figure 11.1 Budget allocation

Please note that the figures above are indicative until the final audit report.

12. STAFFING AND ADMINISTRATION

12.1 SFA's New Structure

SFA's new organization has been in preparation in 2011 and is expected to be implemented in 2012.

The proposed SFA structure which will be comprised of five (5) Divisions is being finalized and there have been a few changes with regards to the Divisions. The Project Section has been extended to incorporate the Port Administration Unit.

Another Division is also being proposed. This is the Fisheries Management and Evaluation Division which will be headed by a Chief Fisheries Officer.

This Division will be comprised of the following sections:

- A Fuel Incentive Scheme Section headed by a Fuel Claim Officer,
- The Fisheries Management Section headed by a Senior Fisheries Officer
- The Monitoring and Evaluation Section which will be headed by a Senior Manager

The new structure will be as follows:

Secretariat Division

There will be five sections and nine units under the Secretariat Division which will be comprised of the following:

- A Secretariat Section
- An IT and Library Services Section

- A Project and Port Development Section (Port Development Unit, Project Unit, Development and Assessment Unit)
- A Human Resources and Administration Section (Human Resource, Administration and Support Services)
- A Finance Section (Recurrent Unit and Project Unit)
- A Procurement Section

Fisheries Research Division

The Fisheries Research Division will be comprised of two sections and one unit.

- The Secretariat Section
- The Fisheries Research Section (Research Vessel Unit)

Fisheries Economic and Information Division

There will be three Sections under this Division and one Unit

- A Secretariat Section
- A Fisheries Economic Section
- A Statistics Management Section (Statistics Collection Unit)

Monitoring Control and Enforcement Division

This Division will have three sections and one Unit

- A Secretariat Section
- A Monitoring Control Section (Vessel Monitoring System Management Unit)
- An Enforcement Section

Fisheries Management and Evaluation Division

There will be three Sections and one Unit

- A Secretariat Section
- A Fisheries Management Section
- A Monitoring and Evaluation Section
- Fuel Incentives Unit

Upon completion of the establishment register, staff will be placed on a nominal roll according to their respective Divisions and Sections and will be informed in writing accordingly along with their new job descriptions.

12.2 SFA New Schemes of Service

The new Schemes of Service which is in its final draft has been forwarded to the Department of Public Administration for comments. SFA is hopeful that its new structure and the Schemes of Service will be operational by 2012.

12.3 Staff Movement

SFA's management is pleased to note that there was a reduction in the high staff turnover in 2011, compared to the two previous years. The reduction is remarkable as there has been a significant improvement in SFA's management.

There was a change in the management of the Monitoring Control and Surveillance Section whereby the Manager left to join an international organization. The Section is presently being managed by the deputy Managing Director and a senior officer is managing the FMC Unit.

SFA has recruited new staff at all levels, both on Mahé and Praslin as shown in table 12.1.

Recruitment has concentrated in the technical sections including the Fisheries Research Division, the Secretariat Section, the Project and Port Administration Section and the MCS Section.

Table 12.1 Recruitment made in 2011

Divisions/Sections/Units	2011
Secretariat	5
Fisheries Management	3
Monitoring Control & Surveillance	3
ICT	0
Fisheries Economic & Information	3
Fisheries Research & Development	1
Fisheries Administration	0

12.4 Training and Development

SFA continued to place emphasis on staff training and development and did its utmost to train staff in order to achieve organizational goals and objectives. Training and workshops varied from local to international, short term and long term courses. Staff also attended in-house training and workshops.

The training policy is in its final draft and awaiting approval from SFA Management.

In order to enhance productivity in the workplace, the HR Section of SFA is in the process of introducing the 'Performance Management System'. A request will be sent to DPA to create a new HRD Unit under the Human Resource and Administration Section to deal mainly with training and development and overseas missions. The PMS will also include Induction programs, Succession Plans and a Performance Appraisal System.

Two SFA staff began their BSc degrees in 2011 and two more graduates were bonded with SFA as they pursued their studies at the MSc level. They are due to return to SFA in 2013.

In 2011, amongst other overseas/local courses attended, over 50 staff attended international/local short courses and workshops conducted both in-house and at external venues.

Emphasis will be placed on the training of technical staff in order to achieve higher qualifications i.e. BSc and MSc degrees as well as in other relevant fields so as to enhance capacity building. Staff members that do not meet the necessary entrance requirements to be admitted to Universities will follow adhoc training courses locally, with the objective of meeting university entrance requirements.

Table 12.2 Overseas Training

NAME	Description of Training	Date and Place
Andrew Souffe	Scholarship – BSC Fisheries & Aquatic Science; a 3 year Course	February 2011 (University of Namibia)
Selma Edmond	Short Training – Career Development/Training Analysis & Impact Assessment Course	March 2011 (Management Training Consultancy) Dubai
Petrina Esparon	Advance Accounting Auditing & Taxation & Treasury Management	March 2011 (Management Training Consultancy) Dubai
Kethsia Georges & Bernadette Marie	International Certificate in Purchasing & Supply Understanding Purchasing Principles Selecting the right supplier; Effective Negotiation in P&S Managing Inventory Business environment for P & S	April 2011 (Management Training Consultancy) Oman September (Management Training Consultancy) Oman April 2011 (Management Training Consultancy) Doha July 2011 (Management Training Consultancy) Oman

Jude Gabriel & Roddy Allisop	Technical training “Administration and Operation of Themis System”	June 2011 (College Localization Satellites) France
Julie Jean	Leadership development in Fisheries (Fisheries Management)	June to November 2011 (Kagoshima University) Japan
Christianne Sultan, Cecile Botsoie & Gerard Ernesta	“Séminaire sur la Gestion des Pêches Maritimes pour les Pays Africains, Francophone”	July/August 2011 (Xiamen China)
Denise Mathiot	Effective Record and Management Seminar	July 2011 Modern Management Institute (Kenya)
Max Racombo, Christianne Sultan, Jude Moustache, Ivan Sinon, Georges Biscornet , Rupert Payet, Yashim Marday, Eric Derjaques, Edward Thelermont, Juan Marimba & Cruzet Morel	Safety in Industrial Plant	August 2011 (Management Training Consultancy) Seychelles (in house)
Sabrena Lawrence	Coastal Fisheries Management (Training Programme under technical Cooperation with the Government of Japan)	August to October 2011 (JICA) Japan
Bernadette Gill	Managing Libraries and Documentation Centres	September 2011 (ESAMI) Windhoek Namibia
Sabrina Lou-Toy	Foundation Certificate in Science &Engineering	September 2011 –September 2012 (LIC) Liverpool U.K
Jude Gabriel	Dreamweaver Web Design and MTCITP Server Administrator	September to October 2011 (Ingram Micro Asia) Singapore
Cindy Assan & Slim Dogley	Configuring, Managing & trouble Shooting MS Exchange server 2010 and Customised Programming for MS Access	December 2011 – Ingram Micro (Singapore)

12.5 Overseas Duty Trip

There was an increase in fisheries related activities and SFA's participation in meetings, forums and workshops have been high during 2011.

Junior managers and supervisors were given the utmost opportunities and exposure to international meetings and forums.

Table 12.3 Duty Travel

Name of Participants	Description of Mission	Date/Place of mission
M-Antoinette Saminadin	Compliance Inspection on Seychelles Flag Vessel "YUTUNA" 17 th	17 th 18 th January 2011 (Colombo)
Michel Labrosse	23 rd Fisheries surveillance mission on board the "OSIRIS"	25 th January to 11 th February 2011 (Mauritius)
Finley Racombo, Roy Clarisse & Jan Robinson	29 th Session of the FAO Committee on Fisheries Meeting (COFI)	31 st January to 04 th February 2011 (ROME)
Jude Talma	24 th Mission: Technical meeting of the Fisheries Surveillance Project	07 th to 08 th February 2011 (Mauritius)
Veronique Herminie, Michel Nalletamby, Finley Racombo, Jude Talma, Andre Gabriel & Roy Clarisse & Vincent Lucas	EU Seychelles Fisheries Partnership Agreement, Joint Committee Meeting	09 th to 11 th February 2011 (Mauritius)
Roy Clarisse, Vincent Lucas and Jan Robinson	IOTC Technical Committee on Allocation Criteria	16 th to 18 th February 2011 (Nairobi Kenya)
Sonny Naiken	24 th Regional Fisheries Patrol in the South West Indian Ocean on board the "OSIRIS"	18 th February to 10 th March 2011 (Reunion Isle)
M. Antoinette Saminadin	Compliance Inspection on Seychelles Flagged vessel	21 st to 27 th February 2011 (Mauritius)

Elisa Socrate	EAF Implementation in the SWIOFC Area	22 nd to 26 th February 2011 (Pretoria South Africa)
Michel Marguerite	TRINNEX Indian Ocean 2011 workshop	22 nd to 23 rd February 2011 (Mauritius)
Danny Julie	Instrumental longline training cruise	27 th February to 03 rd March 2011 (Reunion Isle)
Finley Racombo, Roy Clarisse, Vincent Lucas, Jan Robinson, Jude Talma, Elisa Socrate & Rondolph Payet	15 th Session of the IOTC Commission	18 th to 22 nd March 2011 (Sri Lanka)
Roy Clarisse & Vincent Lucas	SWIOFC mid Term Meeting First Special Session of the Regional Policy and Steering Committee Meeting	08 th to 15 th March 2011 (Maldives)
Michel Marguerite	Programme Monitoring Workshop for South Africa ACP FISH II	15 to 16 th March 2011 (Maputo Mozambique)
Sonny Naiken	24 th Regional Fisheries Patrol in the South West Indian Ocean on Board "OSIRIS"	18 th February to 10 th March 2011 (Reunion Isle)
Jude Talma	20 th Regional Focal Point Meeting (COI)	07 th to 08 th March 2011 (Madagascar)
Denise Mathiot	ODINAFRICA Marine Information Management Workshop	4 th to 8 th April 2011 Lome (Togo)
Michel Marguerite & Jude Talma	Regional Workshop and SADC Fisheries Technical Meeting	18 th to 21 st April 2011 (Gaborone Botswana)
Sonny Naiken & Christopher Laurence	Capacity Building Workshop (Port State Measures)	18 th to 21 st April 2011 (South Korea)
Cindy Assan	Annual T3 Workshop (Tropical tuna data management)	26 th to 29 th April 2011 (Canary Islands)
Kethsia Georges	Capacity building workshop for the data buoy cooperation panel UNDO ASCLME	2 nd to 6 th May 2011 (Mauritius)

Michel Marguerite	3 rd European Tuna Conference	2 nd to 3 rd May (Belgium Brussels)
Roy Clarisse	Project Final Meeting and TXOTX Final Workshop	10 th 14 th May (Bilbao, Spain)
Calvin Gerry	AMESD –IOC Regional workshop and “e-station”	09 th 13 th May 2011 (Mauritius)
Finley Racombo	Launching of “Programme IRFS/PECHE”	15 th to 16 th June 2011 (Mauritius)
Michel Labrosse	Compliance Inspection on Seychelles’ Flagged vessel “Indian Star”	18 th to 21 st June 2011 (Singapore)
Roy Clarisse & Vincent Lucas	3 rd Joint Meeting of Tuna RFMO’s (Kobe III)	11 th to 15 th July 2011 (San Diego USA)
Jude Talma	“Plan Régional de Surveillance de Pêche dans le Sud Ouest De L’Océan Indien” - 23 rd Regional Focal point Meeting (COI)	11 th July 2011 (Mauritius)
Cindy Assan	SWIOFP Component – Working session on bibliographic database and STATBASE	18 th to 22 nd July 2011 (Mombasa , Kenya)
Calvin Gerry	02 nd AMESD Forum and ODINAFRICA Coastal and Marine Atlas Workshop	20 th to 29 th July 2011 (Mauritius)
Sonny Naiken	Compliance Inspection on Seychelles Flag Vessel “Shoko No.18”	25 th to 27 th July 2011 (Singapore)
Sonny Naiken	28 th regional patrol on board “ATSANTSA”	27 th August to 12 th September 2011 (Madagascar)
Calvin Gerry	5 th Session of the International Coastal Atlases Network (ICAN-V) UNESCO/IOC	31 st August to 02 nd September 2011 (Oostend, Belgium)
Andre Gabriel & Loreen Esther	SWIOFP/Financial Meeting	01 st to 03 rd September 2011 (Mombassa Kenya)

Marie Antoinette Saminadin	Compliance Inspection on Seychelles Flag Vessel “JAIN YUNG No. 262”	06 th to 13 th September 2011 (Mauritius)
Freddy Lesperance & Roy Clarisse	SADC meeting of Fisheries Working Groups	12 th to 16 th September 2011 (Maputo Mozambique)
Michel Labrosse	Regional Surveillance Patrol- South West Indian Ocean	12 th to 30 th September 2011 (Mauritius)
Carmel Rene	Compliance Inspection on Seychelles flagged vessel “Evergold No.1”	17 th to 20 th September 2011 (Singapore)
Cindy Assan , Elisa Socrate, Andre Gabriel & Roy Clarisse	SWIOFP Work Plan and Budget Meeting and 4 th Session of the Regional Policy Steering Committee	23 rd to 29 th September 2011 (Maputo Mozambique)
Roddy Allisop	24 th Regional Focal point Meeting (COI)	26 th September 2011 (Mauritius)
Michel Marguerite, Wendy Perreau & Finley Racombo	MCS Capacity and Governance Review –Regional Workshop and National Consultations	27 th to 30 th September 2011 (Mauritius)
Wendy Perreau & Elisa Socrate	23 rd Session of the Scientific Sub Committee Meeting and 16 th Session of the British Fisheries Commission	11 th to 13 th October 2011 (London U.K)
Carmel Rene	Compliance Inspection On Seychelles flag vessel (Longliner Fishing)	14 th to 16 th October 2011 (Singapore)
Cindy Assan	13 th Working Party on tropical tuna and 7 th Working Party on ecosystem and “by-catch”	15 th to 28 th October 2011 (Maldives)
Maria Cedras	Workshop for Fisheries in Space Project	17 th to 22 nd October 2011 (Mombasa Kenya)
Freddy Lesperance & Roy Clarisse	“4eme Réunion de la Cellule de Coordination Régionale Elargie	20 th to 21 st October 2011 (Mauritius)

Jan Robinson, Gregory Berke, Calvin Gerry, Jude Bijoux & Vincent Lucas	WIOMSA 7 th Scientific Symposium	24 th to 29 th October 2011 (Mombasa Kenya)
Danny Julie	WIOMSA 7 th Scientific Symposium and MASMA evaluation workshop	24 th October to 02 nd November 2011
Ricky William & Sonny Naiken	29 th Regional Patrol in the South West Indian Ocean “Maya Du Gong”	26 th October to 07 th November 2011 (Seychelles)
Michel Marguerite	ACP Fish II Project Monitoring Workshop	07 th to 11 th November 2011 (Maputo Mozambique)
Khurlsen Gonzalves	29 th Regional Patrol on board “Tendromaso”	11 th to 19 th November 2011 (Mauritius)
Sabrina Laurence	SWIOFC Working Group on Demersal Fisheries Resources	14 th to 18 th November 2011 (Mombasa Kenya)
Mr. Sonny Naiken	National high seas patrol, Seychelles EEZ	14 th to 28 th November 2011
Sonny Naiken	30 th Regional Patrol on board “ATSANTSA”	01 st to 12 th December 2011 (Majunga)
Calvin Gerry	ODINAFRICA scientific Symposium on the Contribution of Ocean Data and Information Management and Sustainable Development	30 th November to 01 st December 2011 (Senegal)



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