



Trend in the activities of Industrial fishing vessels licensed to operate inside the Seychelles EEZ (1995 – 2003)

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Abstract

This document contains summary statistics of purse seiners and longliners licensed to operate inside the Seychelles EEZ. It summarises activities during 2003 compared with previous years. Statistics include licences issued, catch, effort and fishing ground exploited.

1- Introduction

Industrial fishing activities began in the Seychelles waters in the early 1950's with the Distant Water Fishing Nations (DWFN) longlining for tuna in the Western Indian Ocean (WIO). This was initiated by the Japanese and soon followed by the Taiwanese (1954) and the Koreans (1960). Longliners from European Union countries (Britain, France and Spain) applied for licenses to fish in the Seychelles Exclusive Economic Zone in 1993.

The number of licences issued annually has continuously increased during the 90's. A total of 418 licences were issued to longliners during 2003.

Purse seining activities began in 1983 when French and Spanish fleets moved from the tropical Atlantic to the Western Indian Ocean. The main fishing nation involve in purse seining in the WIO are those operating under the European Union Agreement (French, Spanish and Italian) taking over 60 percent of the annual licences. Seychelles registered purse seiners (French and Spanish origin) started fishing in 1997 and in 2003 11 vessels were flying Seychelles flag.

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2 - PURSE SEINE FISHERY

2.1 Licence information

Table 1 below lists out the number of vessels licensed to fish in the Seychelles EEZ by country from 1997 to 2003.

During the year 2003 the number of vessels licensed per month ranged between 47 and 50, giving a mean of 49 vessels licensed per month, similar to the previous year.

70 % of the licenses issued were to vessels fishing under the EU agreement (Spain, France, Italy).

Others includes Panama, Iran, Mayotte, Netherland Antilles and Belize

Table 1. Average number of purse seiners holding licenses to operate in the Seychelles EEZ.

Country / Year	1997	1998	1999	2000	2001	2002	2003
European Union	42	39	38	34	34	34	33
Seychelles	5	5	5	6	9	7	10
Others	12	12	13	10	7	8	6
Total	59	56	56	50	50	49	49
Vessels Active (mean)	52	51	48	45	46	47	42

According to logbooks received at the SFA, during 2003, the number of vessels active per month ranged between 37 and 44. The average number of vessels active recorded was 42 compared to 47 vessels during 2002.

2.2 Nominal Catch and specific composition

Table 2 below shows the total catch, catch rates and specific composition of the catch reported, from 1997 to 2003.

Table 2. Overall Fishing effort, Catches and CPUE reported from 1997 to 2003.

Year	Total Catch (Mt)	Catch Rate Mt/Day	Yellowfin		Skipjack		Others	
			Catch	%	Catch	%	Catch	%
1997	271,100	17.41	71,370	26	171,404	63	28,326	11
1998	252,595	16.35	69,905	28	151,894	60	38,796	12
1999	331,424	23.66	87,659	26	213,182	64	30,583	10
2000	330,340	24.71	118,738	36	191,912	58	19,690	6
2001	296,141	21.77	112,097	37	161,107	54	22,937	9
2002	379,253	28.88	127,156	33	218,415	57	33,682	10
2003	407,684	34.54	196,388	48	190,224	47	21,072	5

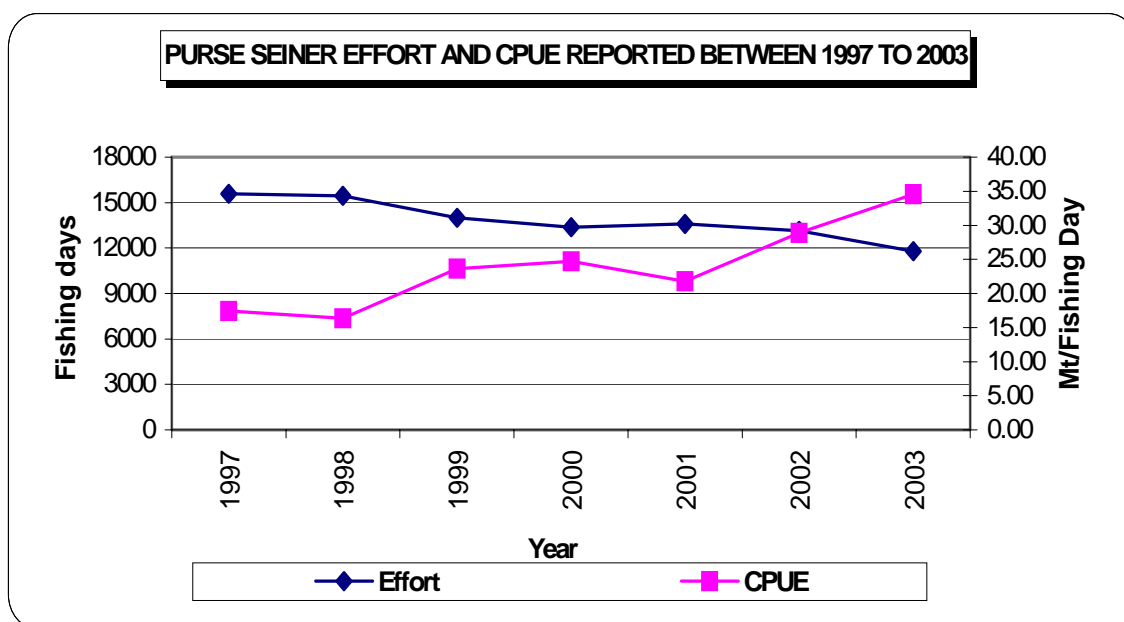
Based on logbook and transshipment data, the total catch reported for 2003 is estimated at 407,684 Mt compared to 379,253 Mt recorded for the year 2002. This represents an increase of 7 %.

Yellowfin replaced skipjack as the dominant species caught during 2003. An increase of 54 % (28,431 Mt) was recorded in the Yellowfin catches. The catch of skipjack dropped by about 13 % (28,191 Mt) during 2003.

A fishing effort of 11,804 days was recorded in 2003. The fishing effort reported during the year 2002 was 13,131 fishing days. This represents a decrease of about 10 % or 1327 days. The average catch rate reported was 34.54 Mt/day for the year 2003 compared with 28.88 Mt/day recorded in 2002.

Figure 1 illustrates the trend in fishing effort and catch rates reported by Seychelles registered vessels from 1997 to 2003.

Figure 1. Trend in fishing effort and catch rates from 1997 to 2003.



2.3 Activities of Seychelles Registered Vessels

Table 3 below shows the fishing effort, total catches and catch rates reported by Seychelles registered Purse seiners from 1997 to 2003.

Table 3. Fishing effort, total catches and catch rates reported by Seychelles registered Purse seiners.

Année	Effort	CPUE	YFT	SKJ	BET	OTH	Total
1997	502	17.11	2772	4940	870	0	8582
1998	1445	14.06	7405	10704	2026	183	20318
1999	1307	21.93	9823	15846	2972	17	28657
2000	1106	23.48	11556	11604	1850	952	25962
2001	2034	20.66	12924	26147	2848	112	42031
2002	1791	28.14	16135	31063	3087	116	50401
2003	2249	32.78	33349	36802	3358	233	73742

The total catch reported by Seychelles registered Purse seiners during the year 2003, is estimated at 73,742 Mt, that is, 46% (50,401 Mt) greater than what was reported for the year 2002.

Skipjack was the dominant species caught by the Seychelles registered purse seiners during 2003. However an increase of 107 % was recorded in the catch of Yellowfin.

The fishing effort recorded for 2003 is 2249 days. This represents an increased of 26% (458 days) compared to the 1791 days reported during the year 2002.

The average catch rate reported was 32.78 Mt/day compared with 28.14 Mt/day recorded in 2002. Figure 2 below shows the trend in reported catch and figure 3 shows trend in CPUE from 1997 to 2003.

Figure 2. Trend in catches reported by Seychelles registered purse seiners.

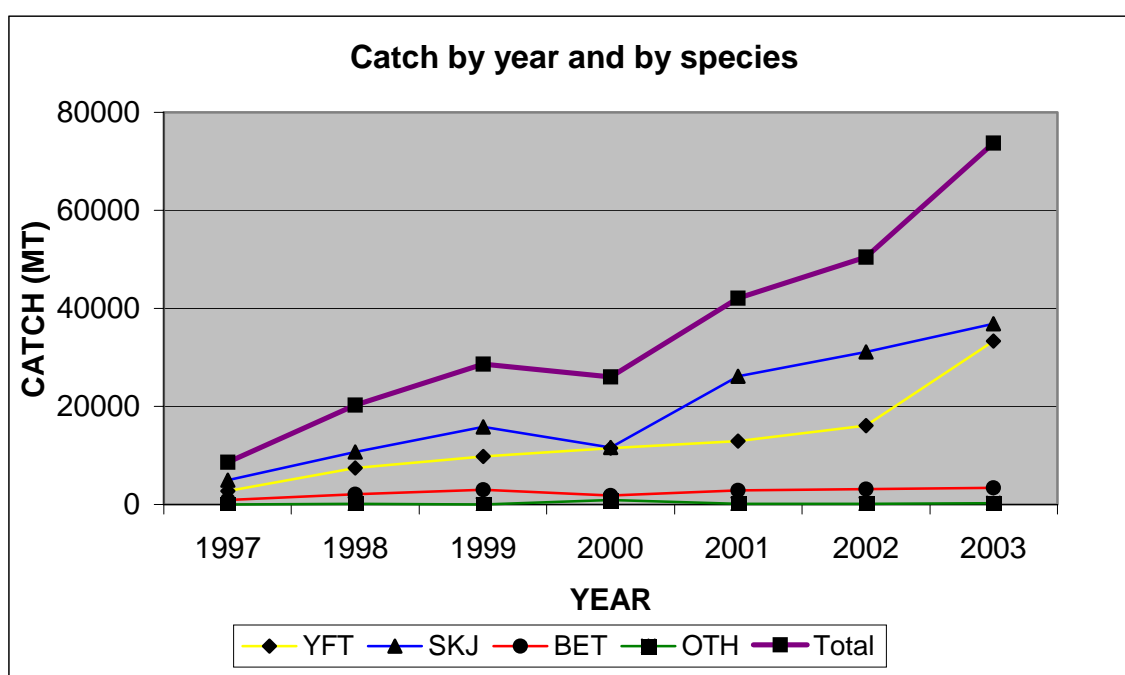
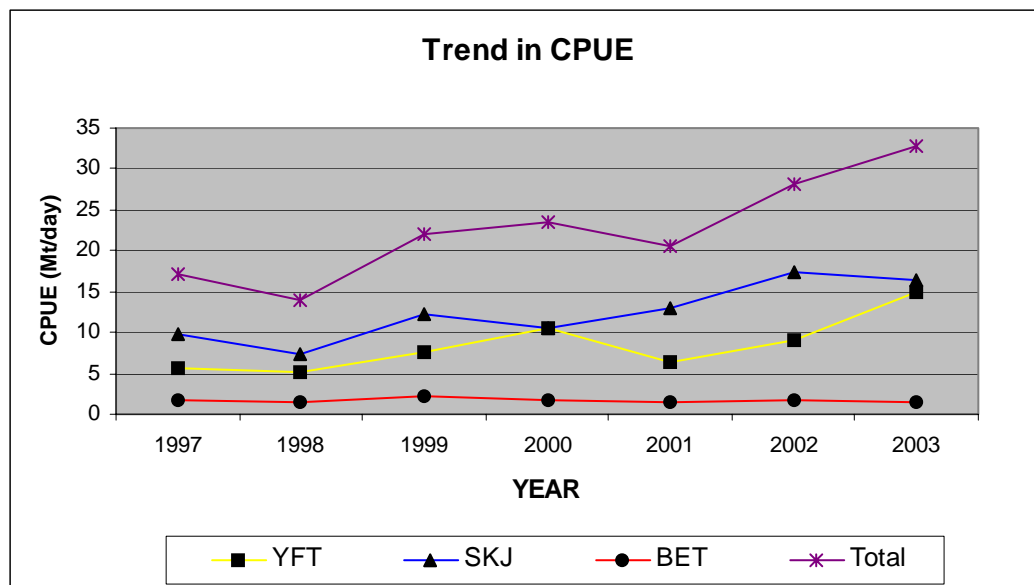


Figure 3. Trend in CPUE reported by Seychelles registered purse seiners.

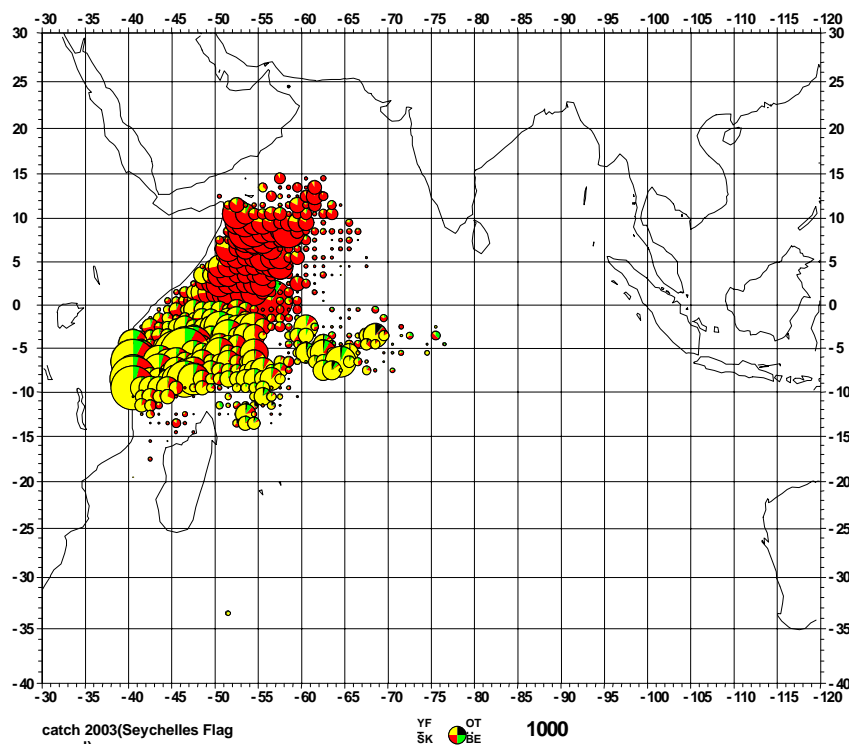


Fishing grounds exploited

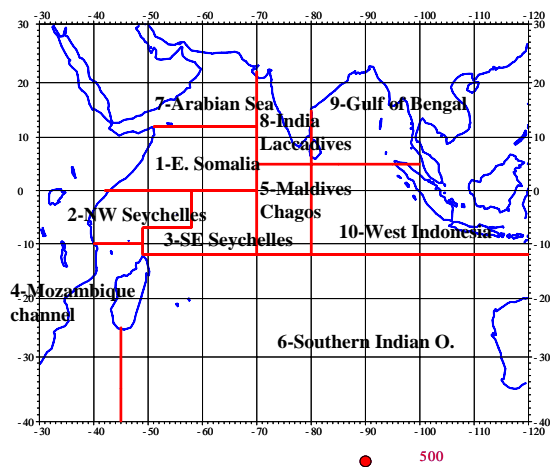
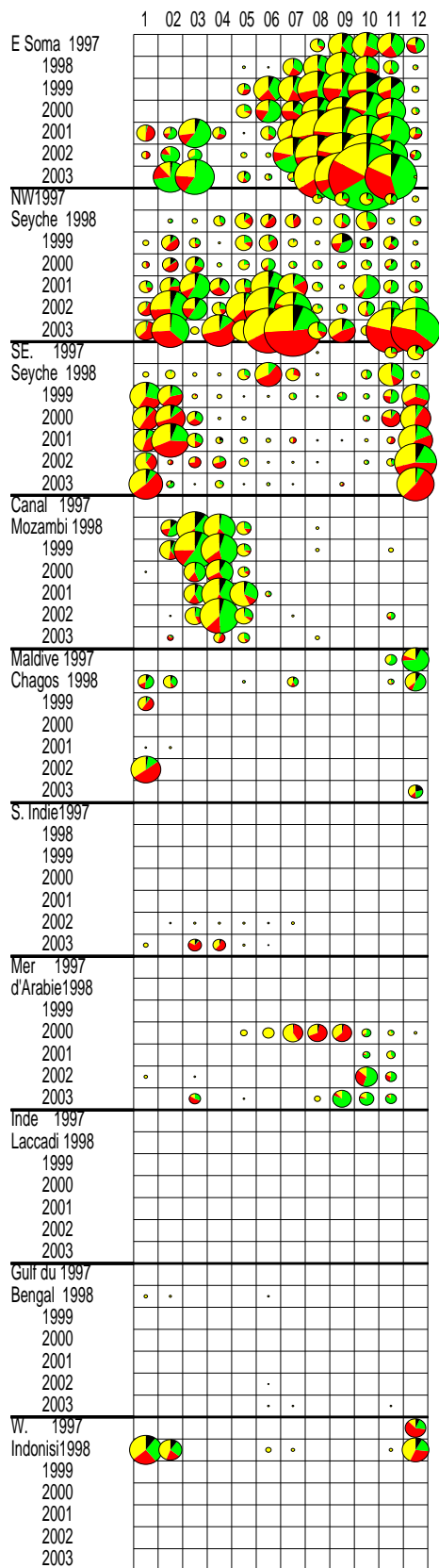
Map 1 shows the distribution of catch reported by Seychelles registered purse seiners during 2003.

Map 2 shows the distribution of catch reported by Seychelles registered purse seiners by year, month and Zone ET from 1997 - 2003. Map 3 shows the same data for catch reported on FADs and on free schools.

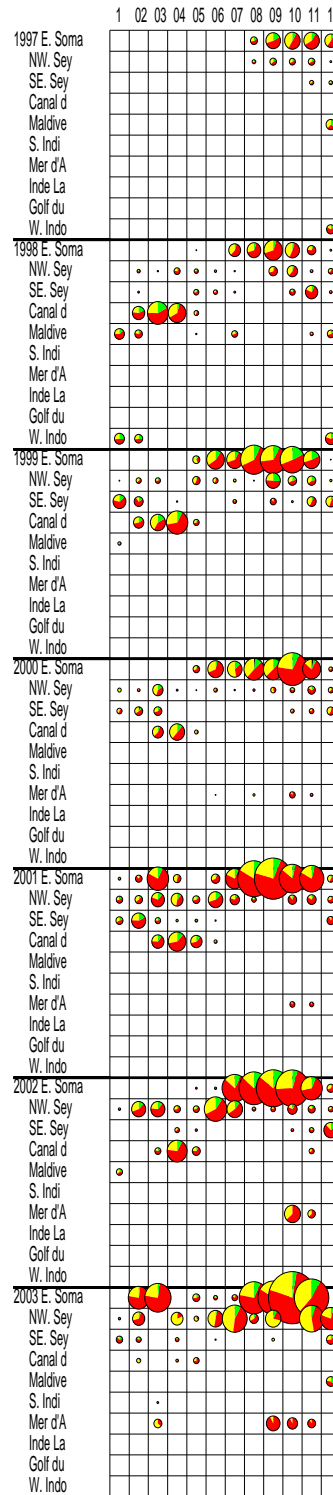
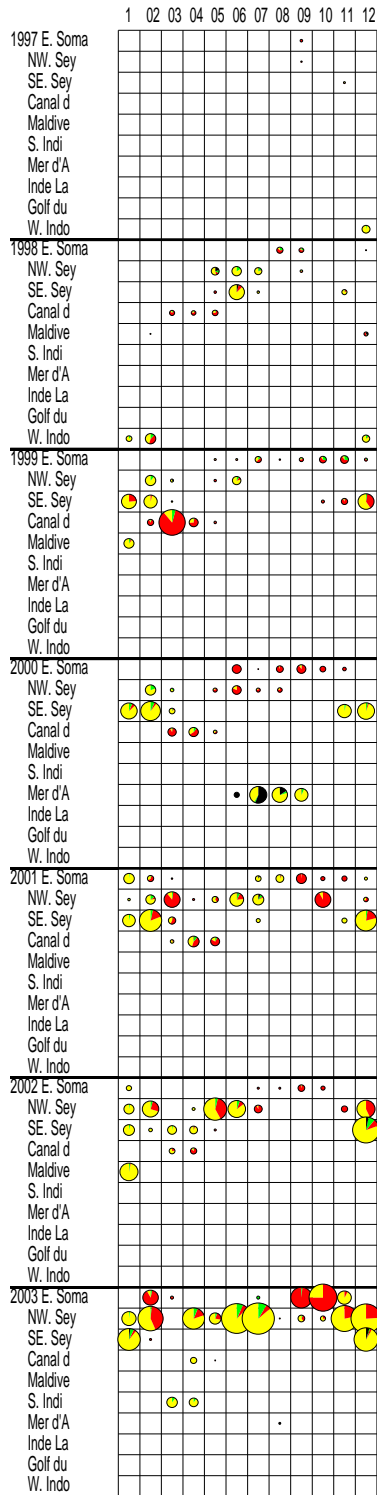
Map 1. Distribution of catch reported by Seychelles registered purse seiners during 2003.



Map 2. Distribution of catch reported by Seychelles registered purse seiners by year, month and Zone ET from 1997 - 2003.



Map 3. Distribution of catch reported on FADs and on free schools by Seychelles registered purse seiners by year, month and Zone ET from 1997 - 2003.



YET OTH SKI BET 100

1. Catch on Fads (Seych)

YET OTH SKI BET 100

1. Catch on Free School (Seychelles)

2.4. Transshipment and landings

Port Victoria remained the principal transshipment port during 2003. A total of 359,136 Mt of tuna was transhipped or landed here, representing 88 % of the total catch reported for that year. This represents an increase of 8 % when compared to 2002. Table 4 shows transshipment and landing made in port Victoria from 1997 to 2003.

Table 4. Transshipment or landings made in port Victoria from 1997 to 2003.

Country / Year	1997	1998	1999	2000	2001	2002	2003
EU	156,907	102,350	183,487	192,497	177,792	238,145	260,952
SEYCHELLES	4,601	14,541	21,650	18,590	34,808	44,940	67,639
OTHERS	38,471	34,701	52,310	58,586	35,854	49,775	30,545
TOTALS	199,979	151,592	257,447	269,673	248,454	332,860	359,136

3- Industrial longline fishery

3.1 Licence information and logbook returns

A total of 418 licences were issued to 268 longliners during the year 2003, compared to 190 licenses issued to 137 longliners in 2002. This shows an increase of 120 % and 96 % in the number of licences issued and the number of vessels respectively. Table 5 shows that the number of licences taken by Taiwanese and Japanese vessels increased by 112 % and 58 % respectively. South Korean vessels took 43 licences during 2003.

Table 6 shows the number of Japanese vessels licenced to fish in the Seychelles EEZ and their logbook coverage from 1995 to 2003. After a drop in 2000, the numbers have increased from 23 to 45 vessels in 2003.

Table 5. Licences issued to longliners from 1995 to 2003.

Country / Year	1995	1996	1997	1998	1999	2000	2001	2002	2003
South korea	50	103	75	3	14	28	4		43
Japan	17	38	61	69	60	43	83	57	90
Taiwan	137	198	208	107	130	69	142	133	282
Spain			11	10	12	13			2
Others	4	3	5	6	12	12	12		1
Total Licences	208	342	360	195	228	165	241	190	418
Individual Vessels	159	202	275	149	170	135	162	137	265
% Log Returned	11	19	31	64	56	36	51	62	56

Table 6. Japanese longliners licensed to fish in the Seychelles EEZ and their logbook coverage.

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Individual vessels	14	26	43	41	34	23	30	33	45
Log returned	17	26	25	38	35	25	33	37	25
% Coverage	100	68	44	55	58	58	41	65	28

3.2 Catches and Catch rates

These statistics only represent a small sample of longliners activity in the WIO because:

- *Not all longliners fishing in the WIO have a license to fish in the Seychelles EEZ and therefore are under no obligation to report to SFA.*
- *Some Distant Water Fishing Nations (DWFN) provide SFA with log sheets covering their activity in the whole Indian Ocean while others confine their reports to the Seychelles EEZ.*

The preliminary analysis of year 2003 data shows that the reported catch is currently 6,273 Mt, obtained from a fishing effort of approximately 12 million hooks. The CPUE reported for that period is 0.52 Mt/1000 hooks. The total reported catch for 2002 is now 6,797 Mt obtained from a total fishing effort of approximately 15.4 million hooks. The average catch rate reported is now 0.44 Mt/1000hooks.

2.3 Activities of Japanese Longliners licensed to fish in the Seychelles EEZ.

Figure 4 shows the trend in fishing effort from 1995 to 2003. Fishing effort have remained more or less stable over recent years.

Figure 4. Trend in fishing effort from 1995 to 2003.

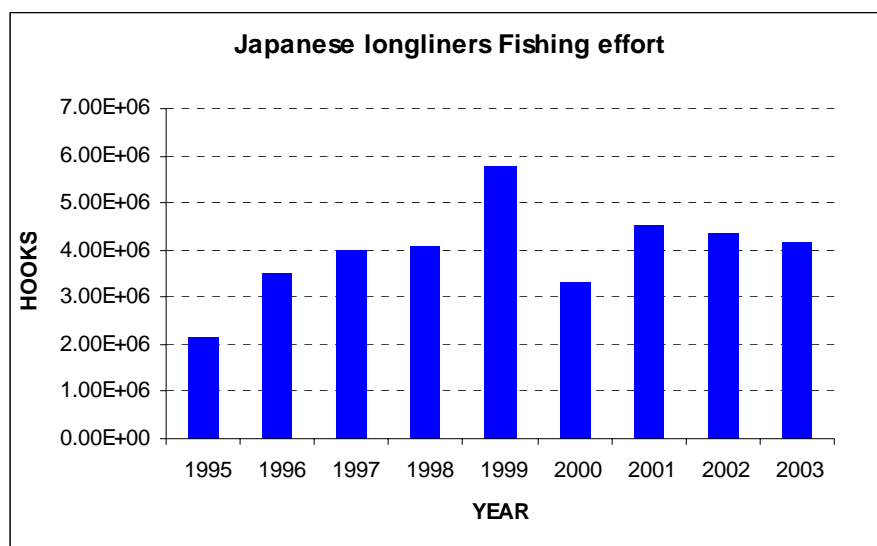


Figure 5 shows the trend in yellowfin and bigeye catches from 1995 to 2003. The catch of yellowfin has increased from 1583Mt in 2002, to 2130 Mt in 2003.

Figure 6 shows the trend in CPUE. An increase in CPUE on yellowfin was recorded during 2003. It increased from 0.36Kg/hooks in 2002 to 0.51Kg/hooks in 2003. The CPUE for bigeye and other species were more or less stable

Figure 5. Trend in catches reported by Japanese longliners from 1995 to 2003.

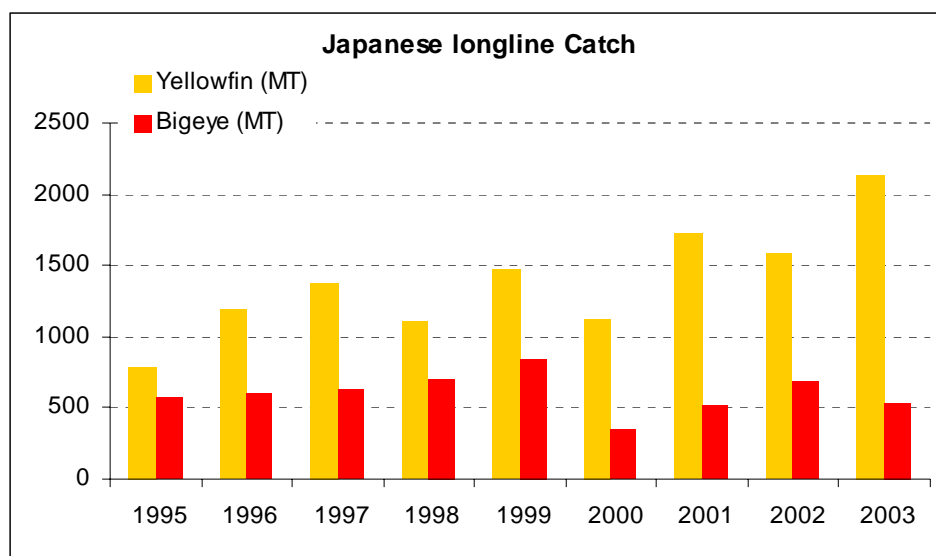
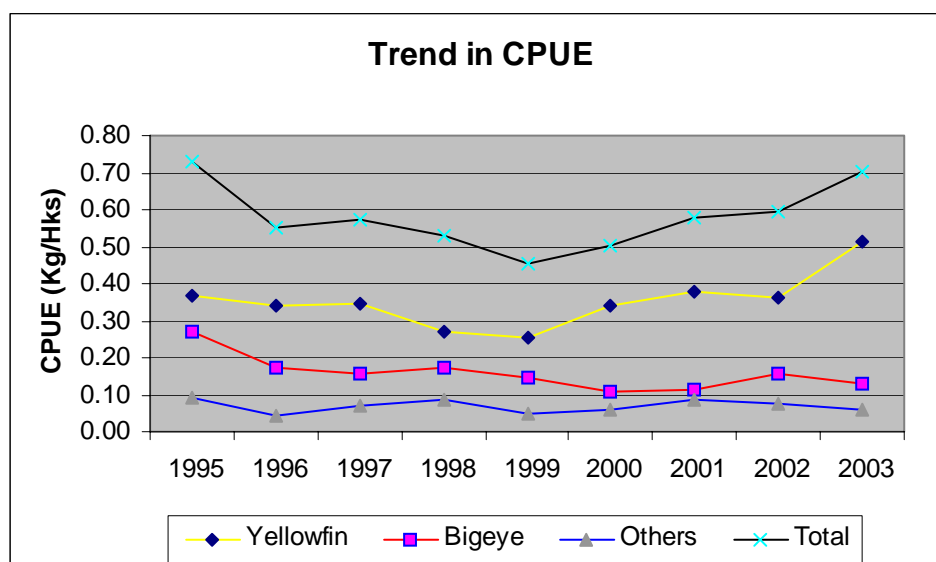


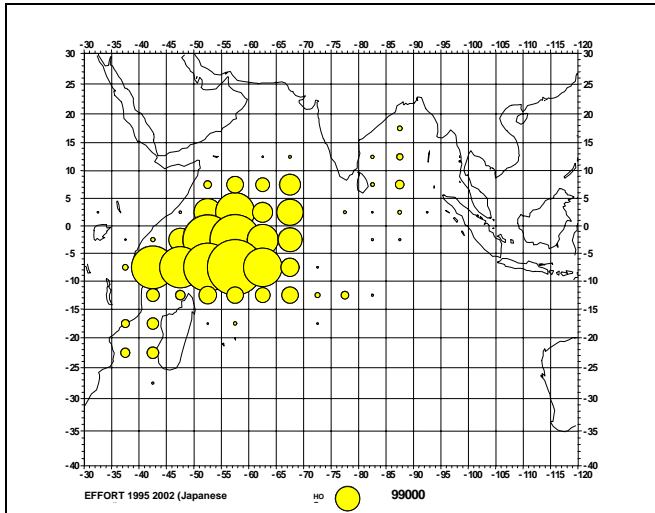
Figure 6. Trend in CPUE reported by Japanese longliners from 1995 to 2003.



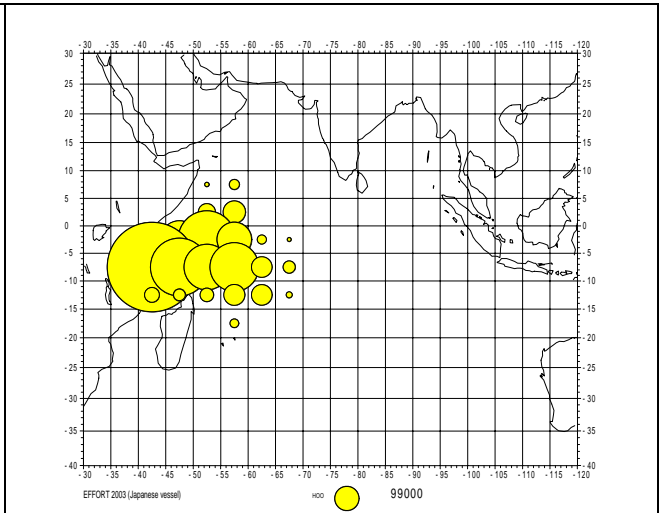
Note: Many of these figures presented here (especially the most recent) are subject to revision as more data becomes available to the SFA.

Maps 4 and 5 shows 5° * 5° distribution of fishing effort reported by Japanese longliners licensed to operate inside the Seychelles EEZ

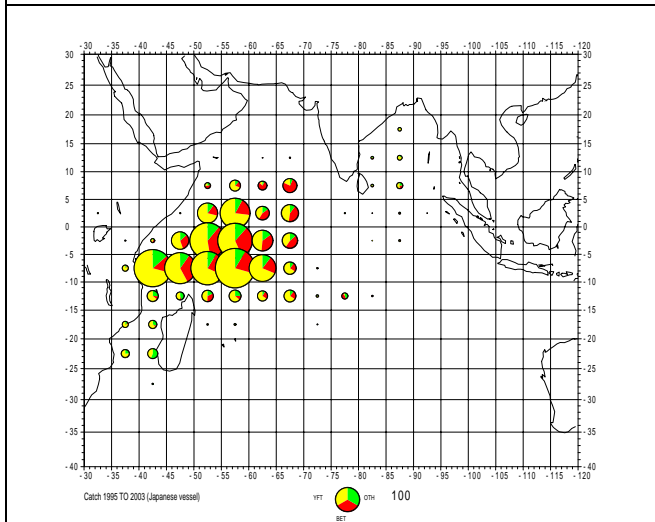
Maps 6 and 7 shows 5° * 5° distribution of catches by species reported by Japanese longliners licensed to operate inside the Seychelles EEZ



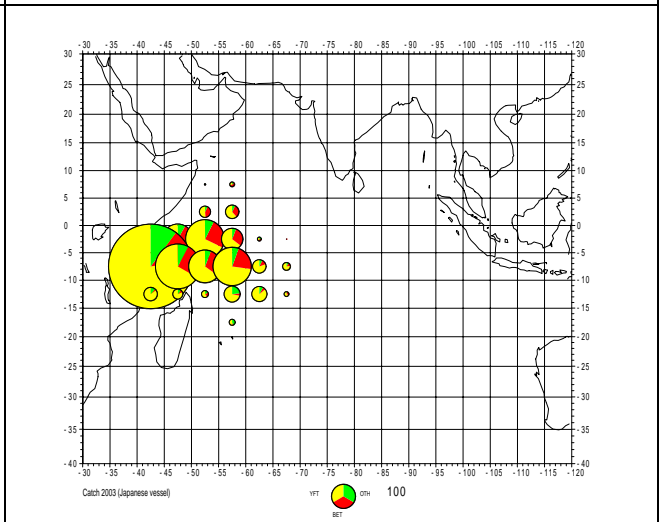
Map 4. Distribution of mean effort reported from 1997-2003.



Map 5. Distribution of effort reported for 2003.



Map 6. Distribution of mean catch reported from 1997-2003.



Map 7. Distribution of catch reported for 2003.