

THE SEYCHELLES SEMI-INDUSTRIAL FISHERY

Rose-Marie Bargain, Vincent Lucas, Andrew Thomas *

SUMMARY

The monofilament longline fishery targeting swordfish and tuna is practised actually in Seychelles by 8 local longliners (average length of 16 metres) and foreign longliners fishing under Seychelles licenses (French and Indonesian longliners , averaging 34 metres and 25 metres in total length).

Experimental trips by SFA's research vessel were undertaken in 1994 and commercial trips started in 1995.

The total landing catch increased from 215 mt in 1996 to 456 mt in 1999.

The estimated catch rates varied from 0.64 kg/hook in 1996 to 0.92 kg/hook in 1999.

*Loss of catch due to predation by marine mammals (*pseudorca crassidens*) remains one of the major problem of this fishery. In 1999, 24 % of the total catch (109 mt of fish) was lost due to predation.*

*The main species caught by the Seychellois longliners are : swordfish (*xiphias gladius*) 60%, Yellowfin tuna (*Thunnus albacares*) 19%, Bigeye tuna (*Thunnus obesus*) 13% and other species (billfishes, sharks & common dolphin fish) 8%.*

Length frequency data are taken at the landing sites for the different species. Analysis of the length frequency distribution of swordfish from 1995 to 1999 shows that the average length has remained stable throughout the 5 years (139 cm fork length).

The females have larger sizes than the males.

INTRODUCTION

This monofilament longline fishery targeting pelagic fish: swordfish and tuna is practised actually in Seychelles by 8 local longliners (average length of 16 metres) and foreign longliners fishing under Seychelles licenses (French and Indonesian longliners, averaging 34 metres in total length).

Experimental trips were undertaken by SFA's research vessel in 1994 and 1995 and interesting results were obtained (catch rates averaging 0.9 kg/hook).

Following this research, commercial trips were considered by Seychellois operators and the first one started in October 1995.

In 1996 a second operator owning 4 vessels started fishing activity. 215 tonnes of fish were landed with an average CPUE of 0.64 kg/hook. The fishermen started facing one major problem; loss of catch due to predation presumed to be by the false killer whales (*Pseudorca crassidens*) and also partly by sharks. Fishing masters were since then asked by SFA to report on their logbooks the number of predated heads that were hauled.

Predation rate averaged around 14% of the total catch in 1996.

In March 1997 a third fishing operator invested in this fishery and 6 local longliners were active. A total of 311 tonnes were landed with an average CPUE of 0.60 kg/hook. Loss of catch by predation averaged around 27 % of the catch.

In 1998, the landed catch was 308 MT with an estimated catch rates of 0.84 kg/hook. Predation rate was estimated at 22%.

In the year 1999 a total of 456 MT was landed by 8 local longliners. The catch rate estimated was 0.92 Kg/hook with 24 % of the catch (109 MT of fish loss by predation).

The main species caught by the Seychellois longliners are: swordfish (*xiphias gladius*) 60%, Yellowfin tuna (*Thunnus albacares*) 19%, Bigeye tuna (*Thunnus obesus*) 13% and other species (billfishes, sharks & common dolphin fish) 8%.

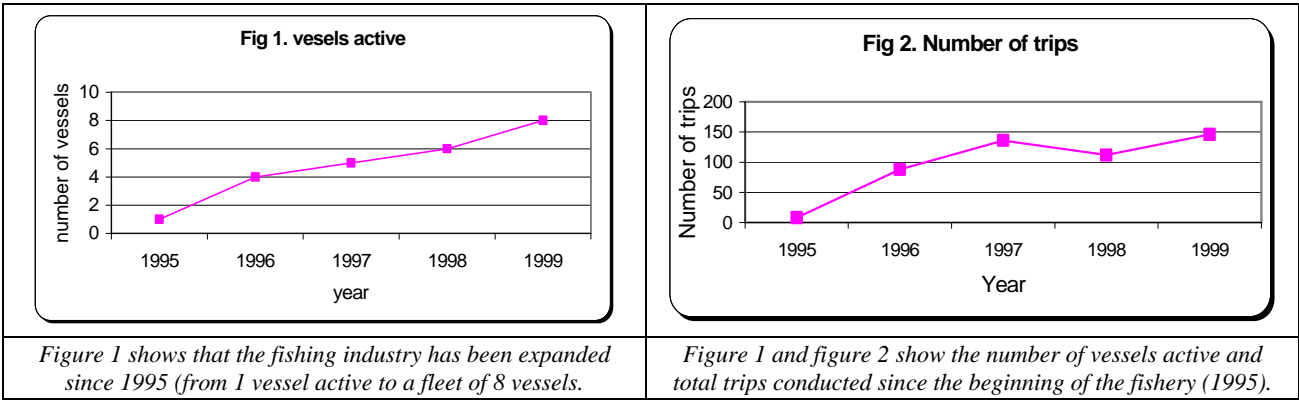
A monitoring programme has been set up by SFA to closely monitor this fishery. The catch and effort forms filled in by the fishing masters are provided in the annexe. The fish are sampled by species at the landing sites. The fishing operators provide SFA with the landed weight by species after each trip.

The French longliners have been fishing under Seychelles licences since 1993. 2 vessels (34 metres) were active. Since 1998 only one French longliner has been fishing in the Seychelles waters.

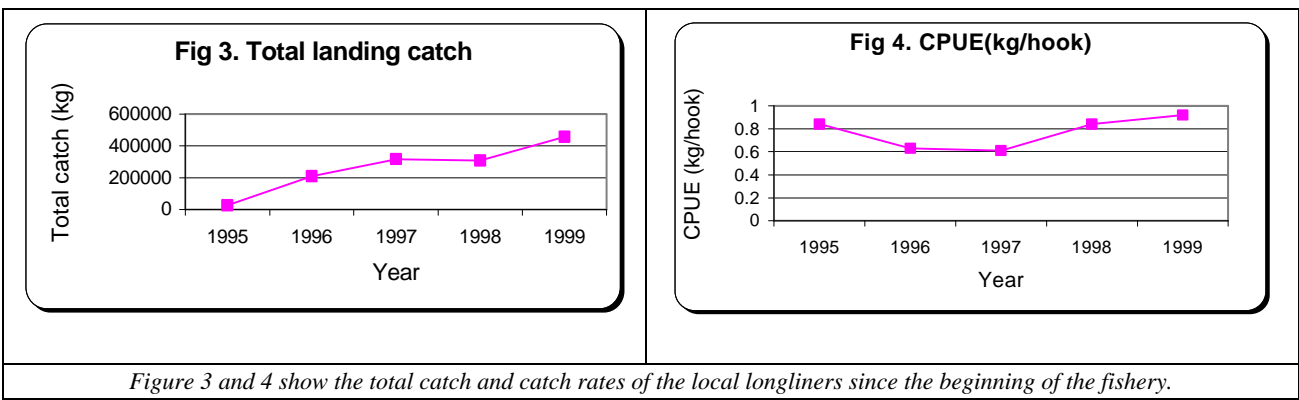
The Indonesian longliners (25 metre vessels) are fishing through joint ventures with a Seychellois operator. They started their activity in 1998. 10 vessels hold actually a Seychelles license.

The statistics analysed in this report are related to the Seychellois longliners only

1. VESSELS ACTIVE AND FISHING EFFORT (TOTAL TRIPS)

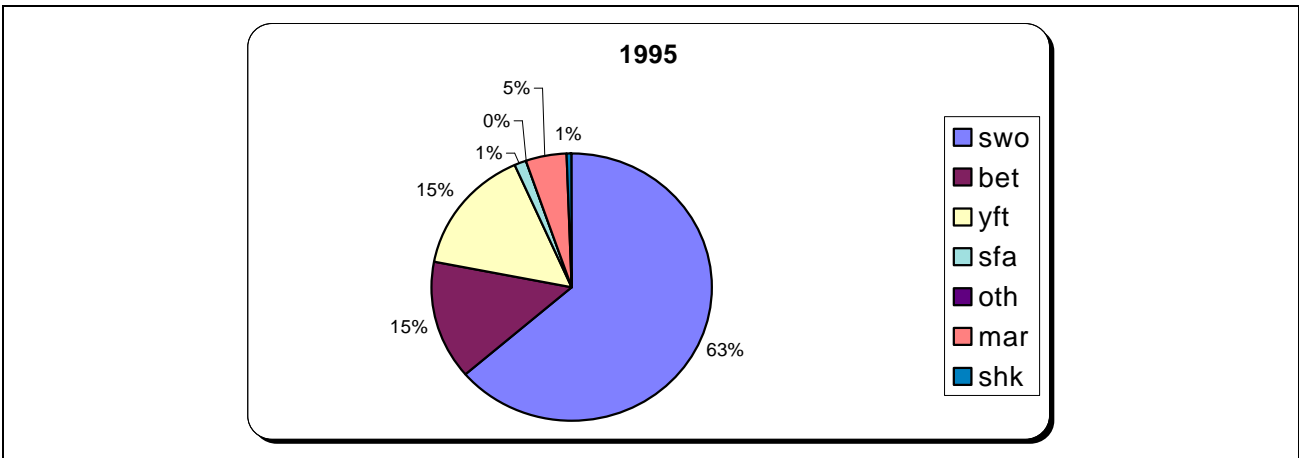


2. TOTAL CATCHES AND CATCH RATES



3. SPECIES COMPOSITION OF CATCHES

The charts in figures 5 shows the species composition of the catches from 1995 to 1999.



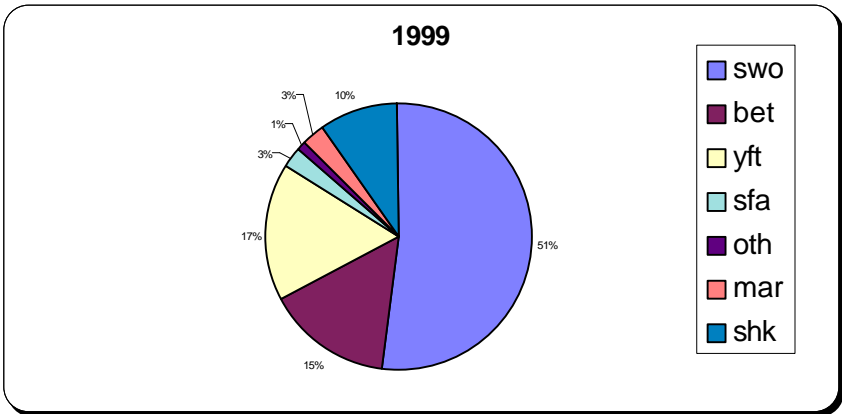
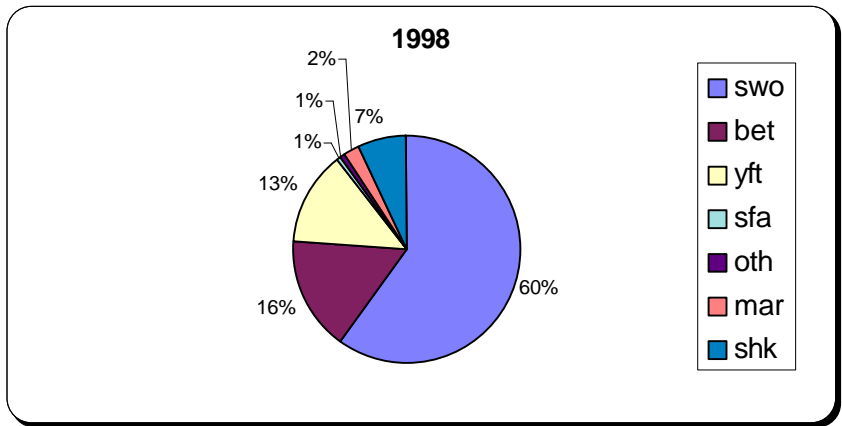
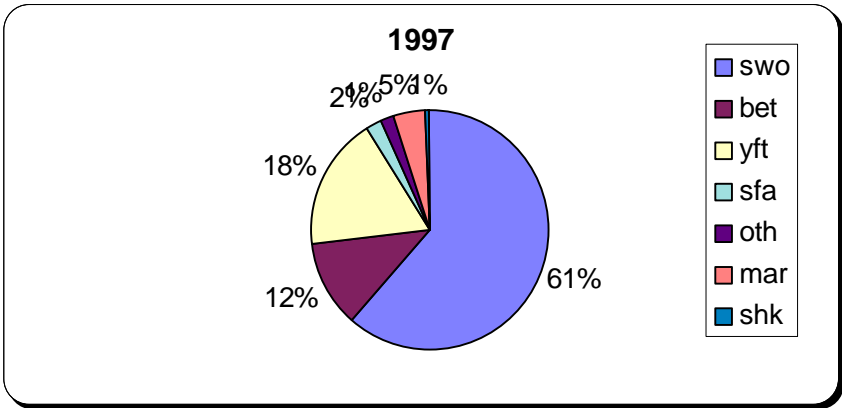
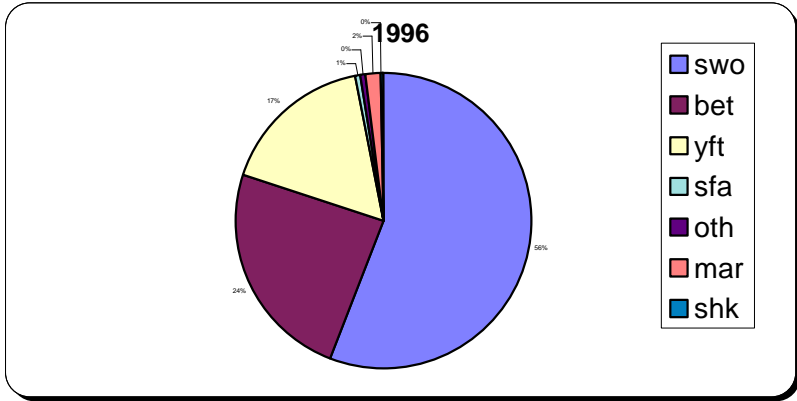
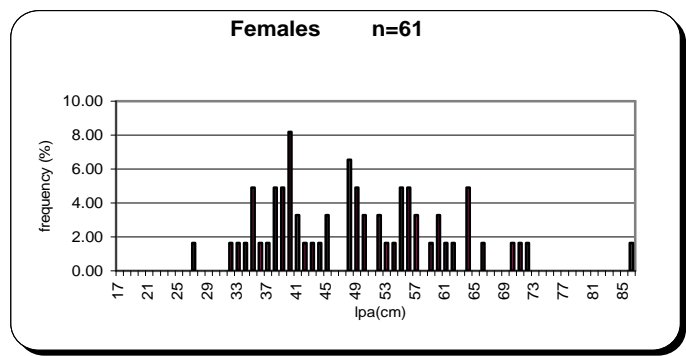
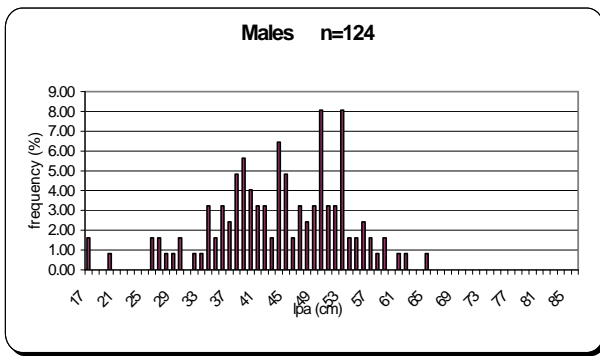
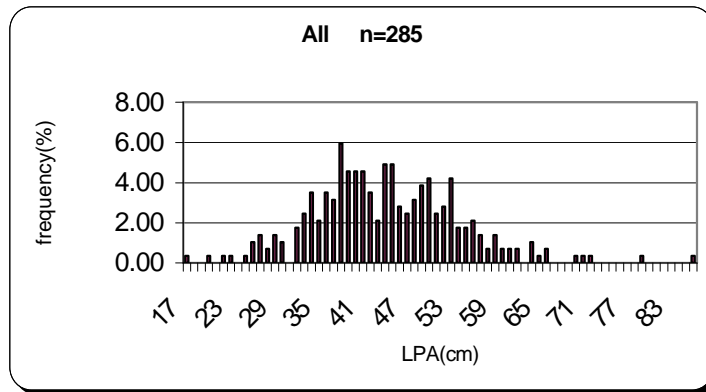


Fig 5. Species composition of catches - 1995 to 1999

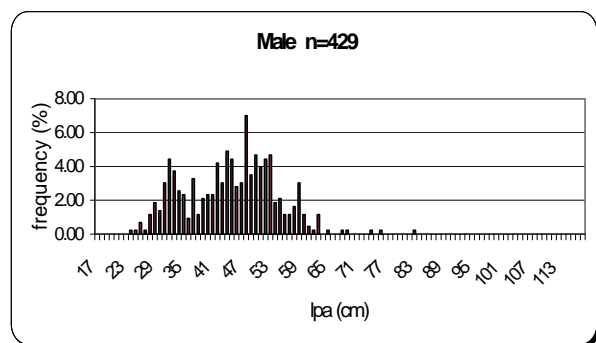
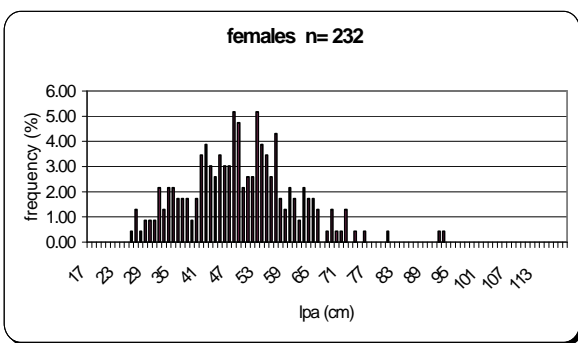
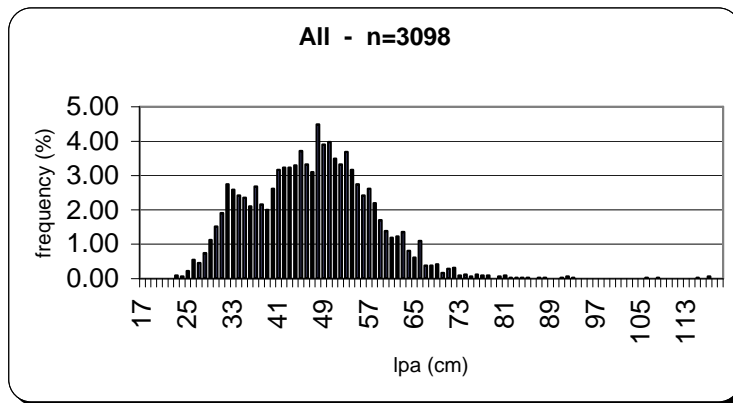
4. LENGTH FREQUENCY DISTRIBUTION

Figures 6 show the length frequency distribution of swordfish caught by the Seychellois longliners from 1995 to 1999.

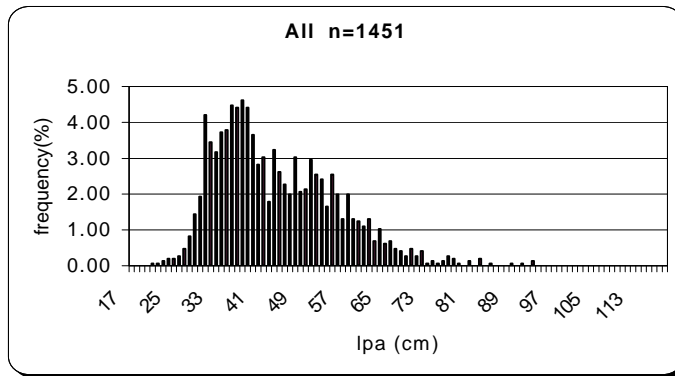
1995



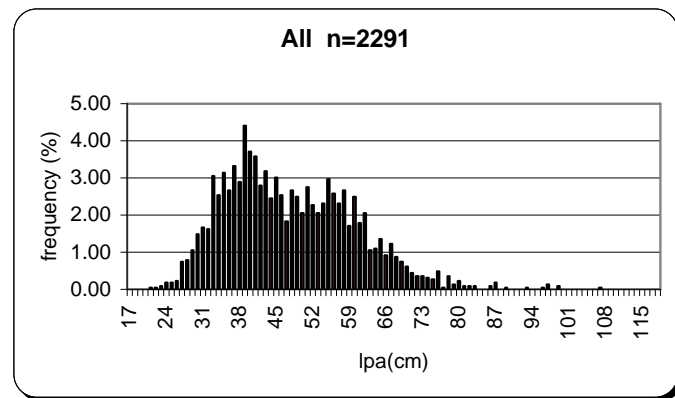
1996



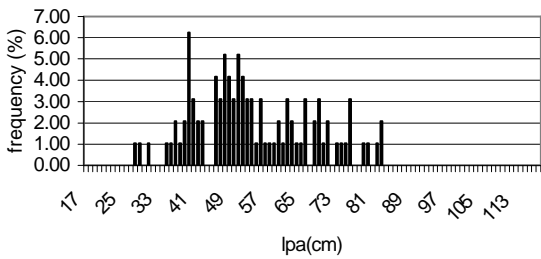
1997



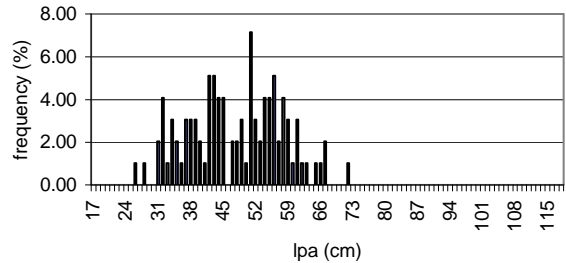
1998



female n=96



male n=98



1999

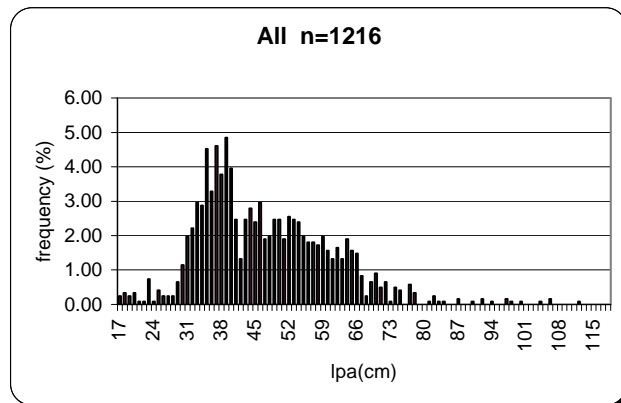


Fig 6 Length frequency distribution 1995 to 1999

ANNEXE : Logbook formats : Catch and effort forms, Landing forms