

**BRIEF REPORT ON TAIWANESE TUNA LONGLINE FISHERIES
OPERATING IN THE INDIAN OCEAN**

ABSTRACT

The number of Taiwanese large-scale tuna longline vessels operating in the Indian Ocean, on average, was about 196-325 during 2001-2007. The annual catch of tuna and tuna-like species was stable and maintained at the amount about 101,012-114,389 mt during 2001-2005, but declined significantly about 40,000-50,000 mt from 2006-2007. The catch of albacore, bigeye and the yellowfin tunas accounted for more than 80% of the total catch. The major fishing grounds of this fleet located in the areas of 10°S-10°N / 30°E-95°E and 25°S-35°S / 30°E-95°E.

INTRODUCTION

There were two Taiwanese fleets, large-scale and small-scale tuna longline fleets, operating in the Indian Ocean. The large-scale tuna longline fleet targeted on albacore in mid 1970's, and then bigeye and yellowfin tuna from 1980's as super cold freezer were developed and equipped in larger new-built vessels. The small-scale tuna longline fleet originally operating in the coastal and offshore areas of Taiwan has also expanded their fishing activities to distant fishing grounds in the Pacific and the Indian Oceans in recent decades. These small vessels mainly targeted on bigeye, yellowfin, and albacore tuna.

THE LARGE-SCALE TUNA LONGLINE FISHERY

The number of Taiwanese large-scale tuna longline vessels operating in the Indian Ocean was about 196-325 during 2001-2007 (Table 1). Their catches were sold in frozen form. The annual catch of tuna and tuna-like fishes was stable and maintained at the amount about 101,012-114,389 mt during 2001-2005, but declined significantly about 40,000-50,000 mt from 2006-2007 (Table 2). The catch of BET had steadily increased from 37,000 MT in 2001 to 52,000 MT in 2003, but decreased to 30,000 MT from

2006-2007. For YFT, the catch had steadily increased from 19,000 MT in 2001 to 58,000 MT in 2005, but decreased substantially to 23,000-15,000 from 2006-2007. The reason for the dramatic decrease of catch from 2006-2007 was that Taiwan government carried out the large-scale tuna longline vessels reduction program and 107 vessels were scrapped in 2005 and 2006, and some vessels stopped fishing voluntarily from 2007 due to rocket high fuel price. The catch distribution from 2000 to 2006 is shown as figure 1. The major fishing grounds of this fleet located in the areas of 10°S-10°N / 30°E-95°E and 25°S-35°S / 30°E-95°E.

THE SMALL-SCALE TUNA LONGLINE FISHERY

However, since early 1990's, the fishing pattern of this fleet has changed. Some Taiwanese small-scale tuna longline vessels operated not only in the coastal and offshore areas but also in the Indian Ocean. In addition, these vessels also changed their fishing grounds seasonally from the Pacific Ocean to the Indian Ocean. The catches of tropical tuna species (BET and YFT) are shown in Table 3.

Data improvement programs

For the improvement of the statistical system, Taiwan has taken the following measures to collect the fishery-independent data. If more data from various sources are available, crosschecking and reviewing will be made on the Task II catch/effort data and size data to improve the accuracy of scientific information.

Port sampling

Owing that most of Taiwanese deep-sea tuna longliners unloaded their catches at overseas ports, Taiwan has launched port sampling program at major foreign landing ports since 2005. Three sampling trips in the three Oceans were made at three foreign ports in 2006 during fishing seasons. For the Indian Ocean, the sampling program was conducted in December 2006 in the Port of Louis.

Vessel Monitoring System

All of Taiwanese large-scale tuna longline vessels operating in the Indian Ocean have

been required to install VMS since 2003. The data from VMS has also been used to verify the position of logbook to improve the data quality.

Observer program

For purposes of collecting fisheries data and bycatch data, Taiwan has launched an experimental observer program since 2001. However, observers deployed on vessels fishing in the Indian Ocean commenced in 2002. In 2006 and 2007, there were 6 and 25 observers dispatched to the fishing vessels in the Indian Ocean respectively.

The observers were required to collect fishery data and size measurements on target species and record bycatch species, such as shark, seabird, sea turtle, and marine mammals.

Data collection system establishment for small-scale tuna longline fishery

To improve the coverage of logbook, Fisheries Agency has conducted a data improvement program on domestic-based small-scale tuna longline fishery. As required by the program, additional manpower- the statisticians have been deployed to local ports to collect logbooks, interview with fishermen, and conduct port-sampling program.

Table 1. The number of large-scale tuna longline vessels operating in the IO during 2001 to 2007 period.

YEAR	2001	2002	2003	2004	2005	2006	2007
No. of vessel	297	310	317	322	325	280	196

Table 2. The catches by species large-scale tuna longline vessels in the IO during 2001 to 2007 period.

YEAR SPECIE	2001	2002	2003	2004	2005	2006	2007*
ALB	26,141	20,300	11,055	9,116	6,262	3,229	2,014
BET	37,015	44,317	56,778	51,807	36,845	30,880	30,803
YFT	18,860	27,743	24,826	42,312	57,804	23,755	15,790
SWO	12,284	12,877	13,474	11,294	6,898	6,073	5,200
MLS	1,297	1,399	1,511	2,032	898	924	664
BLZ	2,155	2,333	2,883	2,737	1,706	1,693	1,197
BLM	251	336	394	140	194	223	53
BIL	600	980	1,141	1,665	1,542	1,407	1,101
SKJ	10	23	20	27	84	71	15
SHK	2,243	2,230	3,055	2,073	1,848	2,276	1,127
OTH	156	109	299	589	308	812	2,675
TOTAL	101,012	112,648	115,436	123,792	114,389	71,343	60,641

Table 3. The estimated catches of BET and YFT for Taiwan small-scale tuna longline vessels in the IO during 2001 to 2007 period.

YEAR SPECIE	2001	2002	2003	2004	2005	2006	2007*
S BET	5,056	5,894	3,248	5,112	3,367	4,935	5,342
YFT	8,053	5,428	4,894	7,481	9,804	10,922	9,918

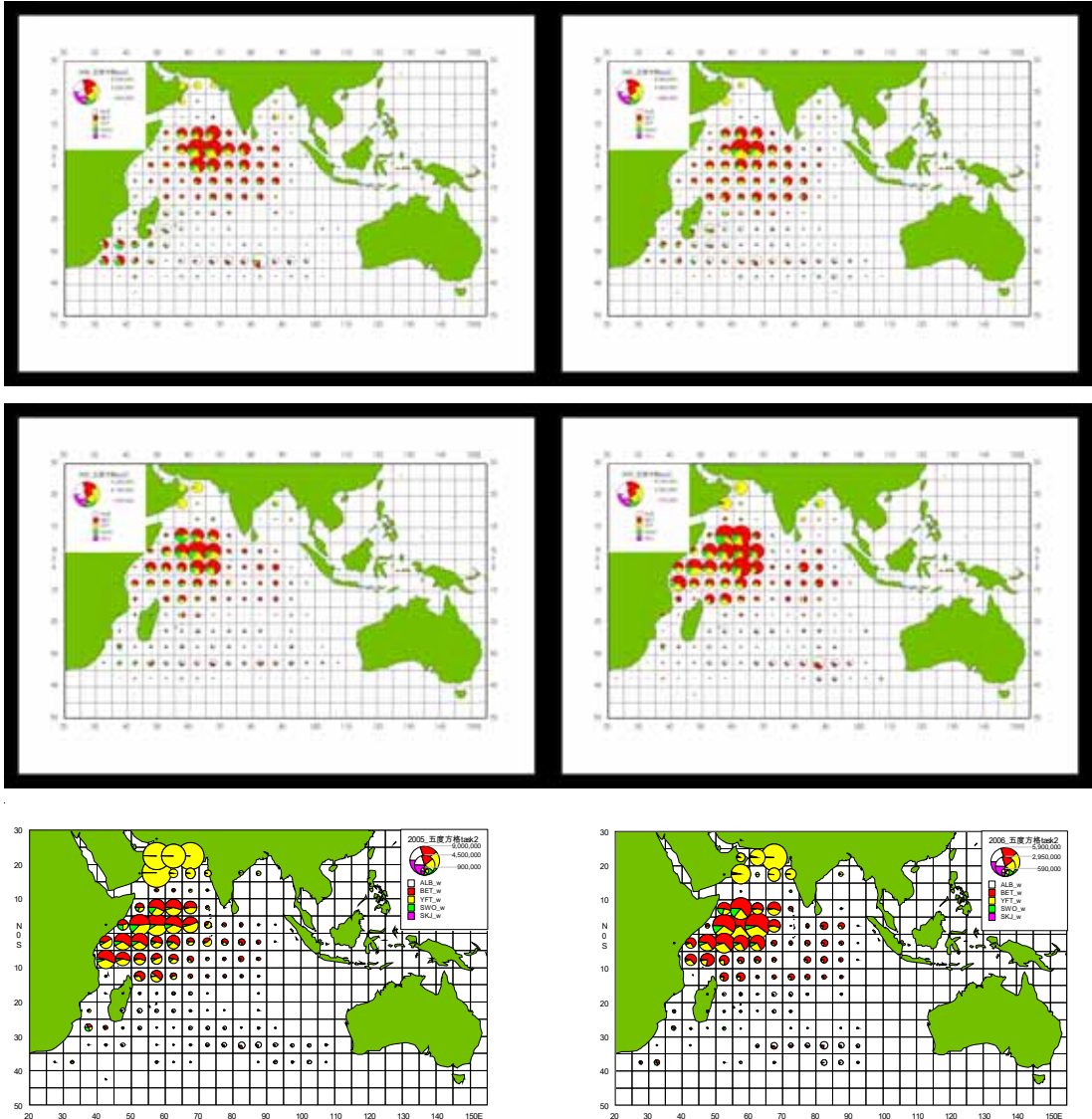


Figure 1. The catch distribution of Taiwan large-scale tuna longline vessels during 2000 to 2006 period.