China National Report to the Scientific Committee of the Indian Ocean Tuna Commission for 2009

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INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

ANNUAL FISHERIES INFORMATION

The National Report shall include the following, completed text box on the cover page of the report:

In accordance with IOTC Resolution 10/02, scientific data was provided to the IOTC by 30 June [Current Year] for all fleets other than longline. Longline data was provided on 30 Dec [Previous Year] for final data from longline fleets operating in the high seas, and 30 June [Current Year] for provisional data.	[YES] – [June 12, 2010 data to the Secretariat] [YES] – [June 12, 2010 data to the Secretariat]
If no, please indicate the reason(s) and intended actions:	

1) SUMMARY

Longlining is the only fishing method used by Chinese vessels to catch tuna and tuna-like species in the IOTC waters. The number of longliners operating in the Indian Ocean reduced from 46 in 2008 to 32 in 2009 due to piracy, with the main fishing area of 40 ºE ~ 85ºE and 5ºN ~15ºS. Chinese fishing fleet caught 4500MT of tunas in 2009, 36.6 % lower than the previous year, among which 2661 MT of bigeye tuna, 453 MT of yellowfin tuna, 241 MT of swordfish , 241 MT of blue shark, 75 MT of shortfin mako, 56 MT of oceanic whitetip shark ,389 MT of albacore and 196 MT of other fishes.

Two observers were placed on board the tuna longliners in the Indian Ocean in 2009, covering the area of 15°00´S~ 32°00´S and 60°00´E ~ 80°00´E. 100 % log book coverage has been implemented and 80% of the log books have been returned by the end of November 2010. China provided length frequency data for four species(ALB, BET, YFT and SWO) caught by longliners operating in IOTC waters.

2) GENERAL FISHERY INFORMATION

Longlining fishing has been the only fishing method applied by the mainland China fishing fleets for tuna and tuna-like species in the IOTC waters since the development of the tuna fishery in the Indian Ocean in 1995. A hundred twenty longline fishing boats were recorded at the peak time in 1998, which mainly consisted of small non-professional boats reconstructed from trawlers or gill-netters operated along Chinese coastal waters before reconstruction. After 1998 number of fishing boats reduced with year due to the poor management, low economic performance and fishing ground shift to other Oceans. Total number of tuna fishing boats registered with IOTC Secretariat reduced to 93 in 2001 and further down to 63 in 2002. The number of fishing boats active reduced from 46 in 2008 to 32 in 2009, among which 27

belongs to the larger scale deep frozen longliners due to the piracy especially after the tuna longliner "Tian Yu 8" was attacked by the pirate and held hostage in November 2008. The tuna longline fishing operation has been seriouly affected by the piracy during last years, more tuna fishing vessels moved out of the IOTC waters in 2010. The deep freezing tuna longliners usually operated in waters between 40 ~ 90ºE and 20ºN ~ 40ºS before 2008. In 2009, however, the fishing effort was shifted to eastern part of IOTC and distributed obviously in scattered way (see Fig 1).

3) CATCH AND EFFORT (BY SPECIES AND GEAR)

The total nominal catch of tuna and tuna-like species in the IOTC waters in 2009 is 4508.2 MT in round weight, 36.5 % reduction compared with that in 2008 (see table 1). The catch of BET decreased from 4963 MT in 2008 to 2661 MT in 2009 and that of the yellowfin tuna (YFT) from 898 MT to 453 MT accordingly.

Catch of SWO reduced sharply in 2009 compared with 2008. Catch of blue shark and shortfin mako in 2009 are reported as 241 MT and 75 MT respectively.

Table 1. Catch of tuna and tuna-like species in round weight(MT)

Species	2006	2007	2008	2009
YET	3,857	2,825	**897.6**	453
BET	8,702	7,167	**4,962.9**	2661
SWO	775	450	**418.7**	240.9
ALB	56	116	**158**	389
SBF	-	0	**0**	-
SHX	-	146	**0**	-
Blue shark			**341.2**	241
Shortfin mako			**64.9**	75
Oceanic Whitetip	-	-	**-**	56
BIL	266	80	**151**	-
Blue Marlin				75.9
Stripe Marlin				87
Black Marlin				33
OTH	1189	106	**102.6**	196.4
Total	14858	10890	**7097.4**	4508.2

Note: since 2009, BIL data are separated by blue marlin, striped marlin and black marlin.

4) FLEET STRUCTURE

Tuna fishing fleet consists of large scale deep freezing tuna longiners (40m and over in LAO) and ice fresh tuna longline fishing boats. The total number of tuna longliners reduced from 67 in 2006 to 46 in 2008 and further down to 32 in 2009, 52% reduction during the last four years due to the shifting of most icefresh tuna boats. During the same time, the number of large scale deep freezing longliners decreaed from 41 in 2007 to 27 in 2009. Ice fresh tuna longliners operated only in November to December 2009 in the high seas of southern areas of Indian Ocean. Deep longliners operated in the IOTC year around. The size of the fishing fleet is showed in Table 2b and Table 2c.

Table 2a. Number of Chinese Longline Tuna Fishing Fleet in 2006 - 2009 in the Indian Ocean

Year	2006	2007	2008	2009
Ice fresh	**26**	**25**	**16**	5
Deep freezing	41	41	30	27
Total	67	67	**46**	32

Table 2b. Chinese Longline Tuna Fishing Fleet in the Indian Ocean by LOA(2009)

LOA (m)	30-39	40-49	0ver 50	Sum
Number	4	24	4	32

Table 2c. Chinese Longline Tuna Fishing Fleet in the Indian Ocean by GRT(2009)

GRT	200-299	300-399	400-499	500-599	600-699	700-799	**sum**
Number	4	2	4	8	13	1	**32**

5) IMPLEMENTATION OF SCIENTIFIC COMMITTEE RECOMMENDATIONS

China reports to IOTC Secretariat the Information of the authorized vessel list and active vessel list. All the deep freezing tuna longliners have been equipped with VMS system. Observers continue to be placed on Chinese longline vessels fishing in the eastern Indian Ocean to monitor catch and effort reporting.The Bigeye tuna statistical document programme has been implemented in the export and import of bigeye tuna. China also much concerned the protection of the sharks, sea birds and sea turtles in the tuna longline fishery and many measures have been taken in reducing the incidental catch of the sharks, sea birds and sea turtles and to collect information about the bycatch species. All the fishing companies have been required to equipped with scaring line and turtle de-hookers, to replace the J-hooks with circle hooks, to implement log book system and fill detailed information about shark species caught incidentally in the log book.

China participates in the IOTC Scientific Committee and the associated working parties and submits the national report to the IOTC Secretariat. In WPTT 2010, Chinese scientists presented four papers. Complete data were provided to the IOTC for statistical reporting in June 2009 including size-frequency data of the main target tunas (bigeye tuna, yellewfin tuna, albacore and swordfish.

6) ECOSYSTEM AND BYCATCH ISSUES [essential]

- Sharks (including NPOA-shark, shark finning and interactions)

According to the log book information, the total number of blue shark, shortfin mako and oceanic whitetip shark caught by Chinese fleet in 2009 are 5009,1696 and 1346 respectively. Those data have been submitted to IOTC.

Table 3. Total number of sharks, by species, retained by Chinese fleet in the IOTC area of competence from 2006 to 2009)

Species	2006	2007	2008	2009
Blue shark			7417	5009
Shortfin mako			1853	1696
Oceanic Whitetip	-	-	-	1346

- Seabirds (including NPOA-seabird, recovery plan and interactions)

Most Chinese longline vessel operated in the tropical areas of IOTC. Only five ice fresh longliners ever operated in the temperate ocean in the southern Indian Ocean. According to log book returned and observer report, no sea bird mortality was recorded.

- Sea turtles (including recovery plan and interaction)

No sea turtle was reported to be incidentally caught by Chinese longline vessels in 2009

7) NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

a. Logbook data collection and verification (including date commenced and status of implementation)

The pilot logbook data submission system started in 2005 in order to obtain more detailed information about catch and fishing effort as required by the IOTC Secretariat. In 2006 Fisheries Bureau, Ministry of Agriculture required all fishing boats to fill logbook as required format by announcing that implementation of logbook system would be considered as one of the main factors for renewing the fishing permission and licenses. Under the support of the Branch of Distant Water Fisheries of China Fisheries Association and cooperated by the tuna fishing companies, the Logbook system has been carried out smoothly as normal data collection work. Since 2009, 100% logbook coverage collection for longline fishery has been carried out. So far about 80% of the log books have been returned to Shanghai Ocean University by the Bureau of Fisheries. All the information of those log books are put into the distant water fishery data Base set by Shanghai Ocean University.

b. Vessel Monitoring System (including date commenced and status of implementation)

All the deep freezing longliners have been equipped with VMS system.

c. Scientific Observer programme (including date commenced and status; number of observer, include percentage coverage by gear type)

Under authorization by the Bureau of fisheries, Ministry of Agriculture, the tuna technical working group of SOU has been in charge of the national tuna observer program in the Pacific Ocean, Atlantic Ocean and Indian Ocean. China began to implement tuna Scientific Observer programme in IOTC in 2002. So far, the program has been carried out normally under the fully cooperation of the Branch of Distant Water Fisheries of China Fisheries Association and supported by Shanghai Ocean University. 2-3 observers have been dispatched each year since then. Graduate students majoring in marine fisheries science & technology, marine fisheries resources from Shanghai Ocean University (the former name Shanghai Fisheries University) have been chosen to take the mission as tuna scientific observers. In 2008 three observers have been dispatched on board the tuna longliners operating in the IOTC water between 15°00´S~ 32°00´S and 60°00´E ~ 80°00´E. In 2009, two observers worked on board the deep freezing longliner for albacore in the southern Indian Ocean. During the mission (between Sept. 2008 and April 2009) , they covered the waters 12°00´S ~ 32°01´S, 69°00´E ~ 78°12´E. and recorded 460 individuals of bigeye tuna and 183 individual of albacore.

In 2010, one observer has been dispatched to deep freezing longliner "Tian Xiang 16", which operated in high seas of southern Indian Ocean. The observer worked on board the fishing vessel between 20 July and 30 September, covering areas of S33°35′~S36°07′ , E30°05′~E34°05′The data recorded included the weight and length by species, fishing effort (number of hooks deployed) .Species caught included bigeye tuna,yellowfin tuna and albacore, Swordfish, Striped marlin ,escolar, Oilfish, blue shark, Shortfin mako ,opah, dolphinfish, Rays bream, pelagic stingray, Longnose lancetfish and etc. The species composition and length frequency data is on the way of processing. The complete observer report will be summated to the IOTC Secretariat at the beginning of next year.

8) NATIONAL RESEARCH PROGRAMS

Under the support of the Bureau of Fisheries, Ministry of Agriculture, a two year research project has been jointly carried out by Dalian Tuna Longline Fishing Company, Rong Cheng fishing Company and Shanghai Ocean University for the knowledge of albacore fishing ground in the southern water of IOTC in 2008 and 2009. The planed survey area was at 4°57′ to 32°15′ S and 59°10′ to 84°10′ E. Though the project has not well followed the schedule and realized the designed purpose due to many factors including the piracy, some basic environmental factors and the biological information for bigeye tuna and Albacore have been obtained.

9) RECREATIONAL FISHERY

There is no recreational fishery in IOTC in China

10) LITERATURE REFERENCES

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4. *Song, L.,Wu, Y*Developing an integrated habitat index for yellowfin tuna (*Thunnus albacares*) in the Indian Ocean based on longline fisheries data, .IOTC-2010- WPTT-51.
5. *Tong, Y. and Chen, Y* .Management strategy evaluation for bigeye tuna in Indian Ocean. IOTC-2010-WPTT-52.

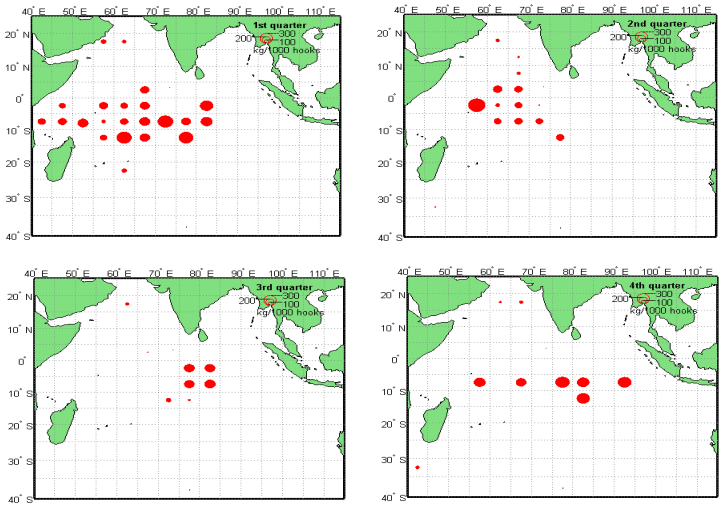

Fig 1 BET CPUE by season in IOTC waters (2009)

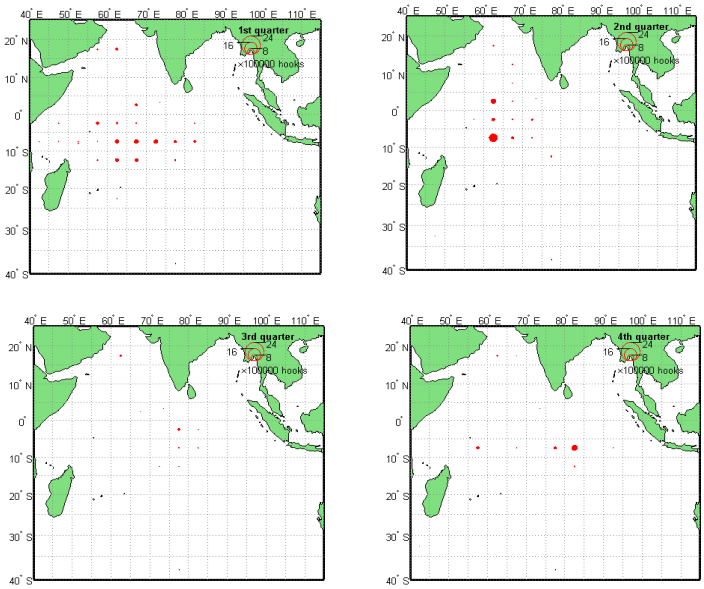

Fig 2 longline effort by Season in IOTC waters (2009)