

Malaysia National Report

to the Scientific Committee of the Indian Ocean Tuna
Commission for 2013

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INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

<p>In accordance with IOTC Resolution 10/02, final scientific data for the previous year was provided to the Secretariat by 30 June of the current year, for all fleets other than longline [e.g. for a National report submitted to the Secretariat in 2013, final data for the 2012 calendar year must be provided to the Secretariat by 30 June 2013)</p>	<p>YES 29 June 2013</p>
<p>In accordance with IOTC Resolution 10/02, provisional longline data for the previous year was provided to the Secretariat by 30 June of the current year [e.g. for a National report submitted to the Secretariat in 2013, preliminary data for the 2012 calendar year was provided to the Secretariat by 30 June 2013).</p> <p>REMINDER: Final longline data for the previous year is due to the Secretariat by 30 Dec of the current year [e.g. for a National report submitted to the Secretariat in 2013, final data for the 2012 calendar year must be provided to the Secretariat by 30 December 2013).</p>	<p>YES 29 June 2013</p>
<p>If no, please indicate the reason(s) and intended actions:</p>	

Executive Summary

Tuna catches contributed about 5% of total marine finfish landing in Malaysia. Neritic tuna species formed large portion of the tuna catch and they were caught mainly by two commercial fishing gears; purse seine and trawl nets. The catch of neritic tuna from the west coast of Peninsular Malaysia (Malacca Straits) showed a slight increase in 2012 to 23,767 mt from 21,765 mt in 2011. In 2012, tuna longline of Malaysian flag vessels fully operated to catch albacore tuna in the southwest of Indian Ocean where their fishing areas extended to 35° S. The fleet consisted of 5 fishing vessels and one carrier, and they unloaded and transhipped the catches at the Port Louis, Mauritius. Albacore tuna formed nearly 70% of the catches in the form of frozen tuna. Total catch of tuna in 2012 was 847 mt with the average catch rate of 17 tons/vessel/month. On catch and effort data recording, in 2012, Malaysia was able to improve quality of effort and catch data with the cooperation from the vessel operators. On observer program, it will be implemented accordingly when the size of Malaysian fleet increase to over 20 fishing vessels. However, for domestic vessels operating beyond 30 nm offshore, there are plan by the DoF to implement observer on board and logbook system. A new revised NPOA-sharks is near complete and is expected to be released and published by end of 2013. Beside, capacity building program for staff that involve in data collection at selected landing sites are continuously been carried out to improve shark data collection. On sea turtle, 2 sanctuary and information centres have regularly implementing awareness program for student and fishermen communities. Hatching program at these centres managed to release over 65,000 baby turtles back to the sea. There are several research programs on sea turtle been carried out at different areas in Malaysian waters.

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1. BACKGROUND/GENERAL FISHERY INFORMATION

Malaysia as a tropical country consist of multi-species and multi-gears fishery. There are over 100 commercial marine fish species in Malaysian waters and more than 10 type of fishing gears. Two most efficient fishing gears are trawlers and purse seines. The trawlers and purse seines contributed more than 75% of total marine catch and the rest of the catches are from traditional gears. In tuna fishery, the purse seines and trawlers catches 95% of neritic tuna and the rest by traditional gears such as trolling, hook and lines and gill nets. Tuna species represented nearly 5% of the total marine catch in Malaysian waters. The Malacca Straits and the South China Sea are the two main fishing areas which contribute most to catches and a small portion from the fishing areas in Sulu and Sulawesi sea, east coast of Sabah (Borneo continent). There are oceanic tuna fishing activities by the traditional hook and lines gear in the Sulawesi Seas. There are oceanic tuna species found in Malaysian waters, the south China Sea and Sulawesi Sea. The main species are yellowfin tuna, bigeye, albacore and skipjack. The oceanic tuna are caught by handline with small traditional inboard boats, 4-5 days per trip. There is one large tuna purse seine that catch oceanic tuna using FAD in the south China Sea. The main species are skipjack and juvenile yellowfin. Malaysian longline vessels started to operate in the Indian Ocean in 2003 using tuna longline. From 15 tuna longline vessels in 2003, the number gradually increased to 58 vessels in 2010. However, in 2011, the number of active tuna longline vessels dropped drastically to 7 vessel due to management problem faced by the vessel company. From 2012, a fleet of 5 longline from new fishing company started to operate by targeting albacore tuna. Their fishing areas were in the southwest of Indian Ocean and they unload the catches at the Port Louis, Mauritius.

2. FLEET STRUCTURE

Malaysian vessels operating in the Indian Ocean consist of only tuna longline. Their target species are tropical tuna namely yellowfin and bigeye until middle of 2011 when some of the vessel shifting the target species to tuna albacore. The vessels normally undertake a long fishing trips and all their catches were transported back to the fishing port by other large fishing vessels. Some of the vessels used fishing port from other countries such as Port Louis in Mauritius. The size of vessels vary in LOA and gross registered tonnage (GRT) from 19-65 m and 38 – 882 GRT respectively.

Table 1: Number of registered tuna longline vessels.

• Represent number of active vessels.

Year	<24 m	>24 m	Registered vessels
2003	1	14	15
2004		14	14
2005	1	18	19
2006	9	19	28
2007	9	24	33
2008	18	39	57
2009	18	44	62

2010	16	42	58
2011	1	6	23 (7*)
2012		5	5

3. CATCH AND EFFORT (BY SPECIES AND GEAR)

Catch of tuna and tuna-like species by Malaysian vessels in the Indian Ocean. The efforts represented by the number of berthing of the vessels at the fishing port. In most of the occasion, the vessels berthing at the port were carrier vessels where they pooled the catch from several fishing vessels (7-10 vessels) at the fishing grounds before they returned to the fishing port in Malaysia. The highest number of berthing was in 2007 with 110 times and since then, the number of berthing reduce steeply to 30 in 2010. In Since 2008, due to increase in operation cost, some of the Malaysian vessels moved their operations in the western Indian Ocean and land their catch at the Port Louis, Mauritius

Table 2a: Annual catch (by weight – tonnes) and effort by Malaysian longline vessels in the Indian Ocean until 2011.

YEAR	Registered Vessels	YFT	BET	MAR	SWO	SFA	SHK	ALB	MISC
2003	7	461.90	307.90	40.50	22.60		5.30		
2004	14	591.53	0.00	20.76	12.14		2.66		108.96
2005	19	2228.70	657.00	225.30	162.00		134.20		29.20
2006	28	1078.90	501.53	83.74	124.78	48.00	11.50		
2007	33	1228.93	892.81	145.66	217.13	81.14	35.24	349.62	
2008	48	1210.83	1321.79	137.76	141.86	162.17	29.01	285.46	
2009	62	970.50	1179.60	69.44	182.44	68.44	33.33	202.34	
2010	44	545.69	592.39	69.56	45.87	38.11	9.90	3.55	
2011	7	44.20	69.46	1.61	2.60	1.13	0.63	131.68	
2012	5	119.7	46.8	35.8	30.0	-	6	681.8	58.66

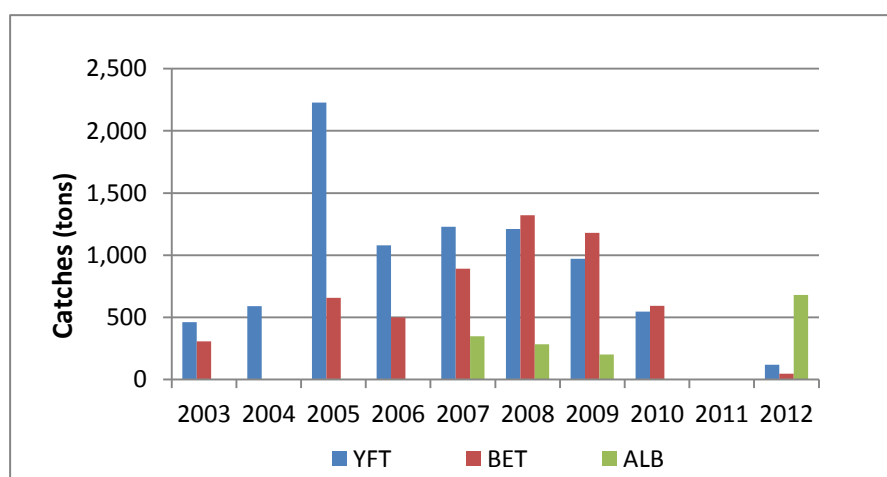


Figure 1 : Historical catch of tuna and tuna-like species by Malaysian tuna longliners.

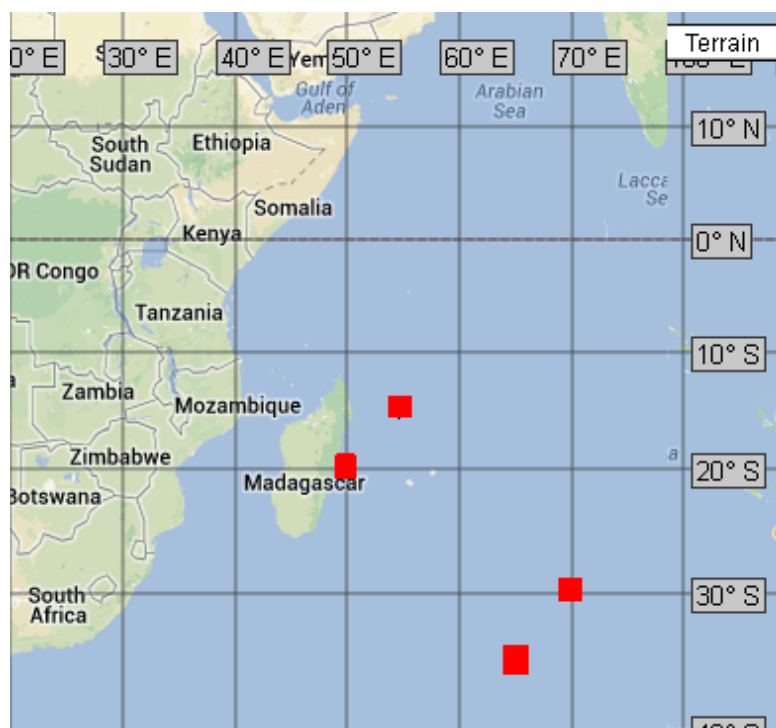


Figure 2: Map of distribution of fishing effort of 5 Malaysian long line vessels.

Table 2b : Annual landings of neritic tuna, Spanish mackerel and sharks in the Malacca Straits, under IOTC area of competence.

Year	Longtail	Kawakawa	Frigate	Com	Sharks
2001		8978*		1253	3857
2002		15510*		1373	4695
2003	12599	819	11	1088	4625
2004	8248	3934	0	1043	4603
2005	8834	2862	3	805	3469
2006	10601	6348	24	1170	4697
2007	15749	3487	0	1162	4292
2008	13692	2759	0	863	4542
2009	13764	5160	83	1463	4178
2010	14549	5598	1	1228	5501
2011	13122	8405	148	4743	1059
2012	13,260	10,478	429	4,815	1,202

* Mixed species of longtail, kawakawa and frigate.

Table2c : Catch of neritic tuna* by major fishing gears in the Malacca Straits.

Year	Trawl nets	Purse Seines	Drift/gill net	Hook & Lines
2001	63	8,590	325	0
2002	82	14,910	502	0
2003	140	12,999	291	0
2004	157	11,743	277	5
2005	206	11,182	310	1
2006	469	16,355	164	1
2007	4,322	17,742	171	0
2008	1,425	14,706	132	8
2009	664	18,182	156	4
2010	1,668	18,275	204	0
2011	1271	20,390	102	1
2012	385	23,508	273	2

* mixed species of longtail, kawakawa and frigate.

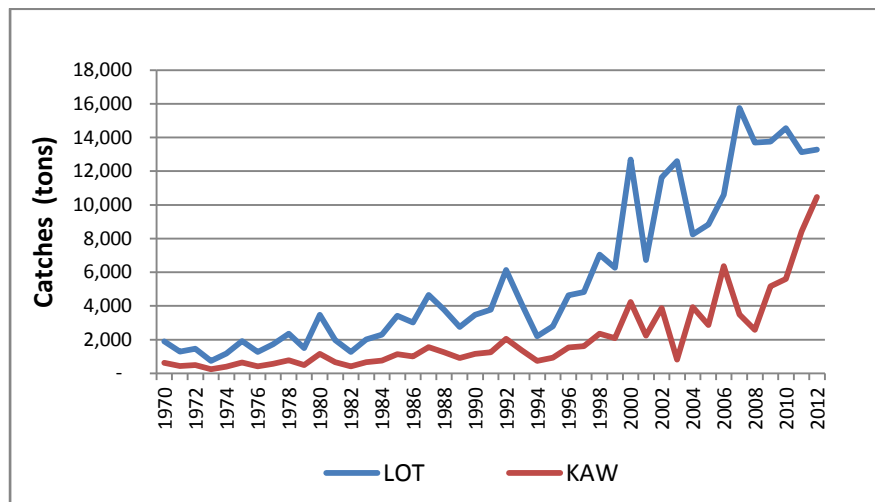


Figure 3 : Historical catch of neritic tuna (longtail, kawakawa and frigate) in the Malacca Straits.

4. RECREATIONAL FISHERY

Recreational fishery for tuna and tuna-like species is not a widely fishing games in the Malacca Straits, and they are only occasional and seasonal events. Currently there is no specific Act to regulate the recreational fishery. However, there is the Marine Recreational Fishing Regulations, promulgated under the Fisheries Act 1985 that have been gazetted and implemented. Under this regulation,

recreational fishing shall only be allowed prior to written permission issued by the Director General of Fisheries. Several species listed under the regulation in the First Schedule are prohibited from being landed. The species include 2 shark species; *Atelomycterus marmoratus* (coral catshark) and *Rhincodon typus* (Whale shark)

5. ECOSYSTEM AND BY-CATCH ISSUES

Malaysia has taken measures to reduce the impact of fishing activities on marine ecology by promoting and encouraging the use of 'eco-friendly fishing gears' as well as introducing various fishing regulations such as;

- Prohibit any commercial fishing gears from fishing below 5 nm from coast line (except anchovy purse seine) as the areas are known as breeding and nursery ground of most fish species. Zoning of fishing areas: regulation, at which fishing areas are categorised into 4 zones, and for each zone only for vessels of certain range GRT are permitted to fish.
- Implementation of 'vessel operation reports' LOV in which data of fishing activities help in the management of fisheries resources.
- To reduce by-catch, especially undersize fish, Juvenile and turtle excluding device (JTED) are promoted to the fishermen.
- Research on cod end size mess size for trawl nets have been carried out.
- Promoting the use of circle hook to the longline fishermen.

Sharks

Malaysian NPOA-Shark had been adopted and published in 2006. It was based on the guideline set by the FAO international Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks). In 2011, the work to produce a revised of NPOA-sharks has started and it is expected to be released by end of 2013. The main objective of Malaysian NPOA-Sharks is to ensure the conservation and management of sharks and their long-term sustainable use.

On legislation, Malaysia as a signatory to Convention on International Trade in Endangered Species of Wild Fauna and Flora in Washington D.C. on 3rd March 1973, introduced a CITES Act 2008 and gazetted it in 2010. Under this Act, Appendix II lists the following sharks; Family Ceterhinidae (Basking shark) -

Cetorhinus maximus, Family Lamnidae (Great white shark) - *Carcharodon carcharias* and Family Rhincodontidae (Whale shark) - *Rhincodon typus*.

Table 3: Total catch of sharks (tons) caught by the Malaysian tuna longline in the Indian Ocean

Year	Sharks
2003	5.30
2004	2.66
2005	134.20
2006	11.50
2007	35.24
2008	29.01
2009	33.33
2010	9.90
2011	0.63
2012	5.8

High number of sharks were caught by trawlers as by-catch and all the catch are sold in wholesome in the wet market. The coastal sharks species found in Malaysia waters are of small size and they are not suitable for finning. As a tropical multi-species fisheries, the Department of Fisheries find it difficult to implement single-species management such as shark species. To tackle the issue of lack of information on catch of sharks to species level, the Department of Fisheries has started to place trained staff in several fishing ports to collected detail of catch data on sharks. On legal instrument, Fisheries Act 1985, fishing regulations could be imposed when necessary for the purposed of conservation and management of the sharks.

Table 3b: Total weight (mt) of sharks caught by various fishing gears in the Malacca Straits.

	Trawl nets	Purse Seines	Drift/gill net	Hook & Lines
2001	866	0	308	55
2002	1023	0	273	50
2003	819	0	201	54
2004	754	2	216	52
2005	660	0	83	41
2006	750	81	287	38
2007	733	1	351	57
2008	608	0	130	110
2009	1,217	39	120	114
2010	1,053	1	129	45
2011	960	93	144	33

Seabirds

Malaysian longline vessels only started to fish in areas below 25° S in mid 2012. To present, no report of seabird interaction by the Malaysian fishing vessels during their fishing operation in the southeast Indian Ocean. However, the fleet's owner has been reminded about their responsibility on seabird conservation practice stated in the IOTC resolution.

Marine Turtles

Malaysia is one of the country that actively involved in the conservation program on turtles. In 2008, NPOA-Turtle was developed by the DoF as a guideline for the conservation and management of sea turtles. As one of the conservation measure to prevent possible interaction the turtles by the fishing gears especially trawlers, a device known as 'Juvenile and Turtle Excluding Device' (JTED) is developed and promoted to the fishermen to use in their trawl nets. The use of circle hook for longline is also been encouraged and promoted to the artisanal fishermen. Several joint trails and training were conducted between the government and fishermen for the use of C-hook.

There are a total of 6 Turtle Sanctuary and Information Centres throughout Malaysia and two of them are located in the west coast of Malaysia; Pantai Kerachut, Penang and Segari, Perak. Main activities of these centres are to protect natural nesting areas of turtles and hatching and release baby turtles back to the sea. Education and awareness programs were conducted for the students and public. Since year 2000 to 2012 the number of baby turtles released from Penang and Perak sanctuary centres back to the sea were 28,546 and 38,505 respectively.

Fisheries Act 1985 provides legal instrument to protect turtle and other marine mammals from any type of fishing. So far very few interaction were recorded between fishermen and turtles were reported by the traditional and commercial fishermen.

Other ecologically related species (e.g. marine mammals, whale sharks)

No record available on the number of accidently caught marine animals and whale sharks by Malaysian vessels in the Indian Ocean.

For conservation, whale shark (*Rhincodon typus*) is one out of 30 species listed as endangered marine animals in Malaysia under Fisheries (Control of Endangered Species of Fish) Regulation 1999.

6. NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

6.1. Logsheet data collection and verification (including date commenced and status of implementation)

Department of Fisheries Malaysia has yet to implement the logbooks system. Currently, all vessels operating beyond 12 nm from the shore in the Malaysian waters are compulsory to record their landings in the “Vessels Operation Report” or LOV. Data recording in the LOV is part of the vessel licencing regulation, to renew their annual licence. The operators are required to provide information based on the Vessel Operation Report (LOV) forms and submit the forms to the nearby Department of Fisheries office. This form contains detailed information on fishing areas, times/dates, catches by species, details of by-catches if any, names of ports or details of transshipments. Failure to do so, will cause the licence of the vessel to be revoked or suspended as provided under the Fisheries Act 1985. Subsequently the fisheries officers will provide the data to the IOTC.

Action has been taken to review various aspects prior to the implementation of logbook to all fishing vessels that registered under Malaysian flag in near future.

For tuna longline vessels operating beyond Malaysian EEZ, both logbook and LOV are required for the vessel operators to submit the report to the Malaysian Fisheries Authority.

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

Department of Fisheries Malaysia has successfully implemented a Vessel Monitoring System (VMS) for all highseas fishing vessels. It is based on Inmarsat, utilizing Inmarsat C, Mini C and D+/B equipments. For tuna longline vessels operating beyond Malaysian EEZ, they use Argos system for their VMS. It enables us to track a vessel’s compliance with the geographical limits contained in their license and to check position data contained in their catch and effort/transshipment reports. The installation of Mobile Transceiver Units (MTU) is mandatory under vessel licencing regulation. Failure to do so, will cause the license of the vessel to be revoked or suspended as provided under the Fisheries Act 1985. To date, all Malaysian longline have the devices installed.

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

To date, Malaysia has yet to carry out any observer programme. Capacity building for staff to implement this program is among the step taken by the Department of Fisheries. As it involves financial and additional staff, this will limit the capacity of DoF to immediately implement the program. However, serious discussion and planning have taken place to implement this program for the vessels of >70 GRT (fishing >30nm outside coastalline) operating within the EEZ Malaysia. For tuna longline vessels, observer program was not required as the fleet size was smaller then the minimum requirement suggested by the IOTC.

6.4. Port sampling programme

From 2010, permanent staff from the DoF have conducted regular sampling activities at the MITP, Penang. They are responsible to collect, process and assist tuna scientists to analyse catch data. However, since 2012, all Malaysian flag vessels unload their catches outside Malaysian port, then, no port samplings program were not carried out.

Sampling for neritic tuna and other tuna-like species is under the responsibility of Fisheries Information Management Division. Their sampling program covers all landing sites and fishing ports along the west coast of Peninsular Malaysia, only on vessels operating in the Malaysian Fisheries waters.

6.5. Unloading/Transshipment [including date commenced and status of implementation]

For neritic tuna fisheries, there were not transshipment activities among the fishing vessels as all the vessels were operating within the EEZ Malaysia and have at most one week period per fishing trip. For longline vessels operating outside EEZ, there was only one carrier of Malaysian flag authorised to carry out transshipment at sea which started November 2012. The first transshipment report was submitted to the Secretariat of IOTC on September 2013.

7. NATIONAL RESEARCH PROGRAMS

For the last 5 years only one research was carried out on tuna and tuna-like species in the IOTC fishing areas namely on neritic tuna by the Fisheries Research Institute, Kampong Acheh, Perak. The other study on oceanic tuna only involve in area of Sulawesi Sea, east coast of Sabah.

Project Title	Period	Funding	Objective	Status
Preliminary study on stock structure of kawakawa (<i>Euthynnus affinis</i>) in the Malacca Strait.	2012	National R&D Fund.	To determine stock discrimination of kawakawa in the Malacca Strait.	Presented in the WPNT 2012.
Resource and biological study on tropical tuna in Sulu and Sulawesi Sea	2012 - 2014	Ministry Science, Technology and Innovation Fund (MOSTI)	To determine landing trends, size distribution and stock discrimination of YFT and BET in Sulu and Sulawesi Sea	Ongoing.

8. IMPLEMENTATION OF SCIENTIFIC COMMITTEE RECOMMENDATIONS AND RESOLUTIONS OF THE IOTC RELEVANT TO THE SC.

Table 4. Scientific requirements contained in the Resolutions of the Commission, adopted from 2005 to 2012			
Res. No.	Resolution	Scientific requirement	CPC progress
05/05	Concerning the conservation of sharks caught in association with fisheries managed by IOTC	Paragraphs 1–12	<ul style="list-style-type: none"> Catch data of sharks submitted to the IOTC Shark finning fisheries is not allowed Shark is not a target species. Consume wholesome Revised NPOA-Sharks to be published in 2013
10/02	Mandatory statistical requirements for IOTC members and cooperating non contracting parties	Paragraphs 1–7	<ul style="list-style-type: none"> All statistical Data were submitted annually to the IOTC before due date.
10/06	On reducing the incidental bycatch of seabirds in longline fisheries.	Paragraphs 3–7	Already notified the vessel owner of the necessary mitigation to prevent incidental by-catch of seabirds. They are also required to record and record any interaction with the seabird during fishing period. Malaysian vessels only started to fish in areas south of 25°S since July 2011
11/04	On a regional observer scheme	Paragraph 9	Working on capacity building for port sampling programme and cooperation with vessel owner to place the observer onboard.
12/03	On the recording of catch and effort by fishing vessels in the IOTC area of competence	Paragraphs 1–9	<ul style="list-style-type: none"> Currently, detail information on vessel and catch obtained through LOV forms provided by the department. Update the present practice of logbook by vessel operators. Data are submitted to the IOTC by due date.
12/04	On the conservation of marine turtles	Paragraphs 3, 4, 6–10	<ul style="list-style-type: none"> Longline operators were informed to record any interaction with turtles. Research on circle hook has been carried out. The

Table 4. Scientific requirements contained in the Resolutions of the Commission, adopted from 2005 to 2012			
Res. No.	Resolution	Scientific requirement	CPC progress
			<p>use of circle hooks by fishermen for longline is encouraged. The use of TED (turtle excluding device) is encouraged to trawlers operators.</p> <ul style="list-style-type: none"> • turtles and aquatic mammals are considered endangered species under Fisheries Act 1985, thus, prohibiting fishers from catching, disturbing or harassing the animals • Establish several Turtle Conservation and Information Center throughout Malaysia including 2 in the west coast - Malacca Straits.
12/09	On the conservation of thresher sharks (family alopiidae) caught in association with fisheries in the IOTC area of competence	Paragraphs 4–8	<ul style="list-style-type: none"> • The operator having long line vessels were officially informed of the resolution and were requested to strictly implement it. •

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