Malaysia National Report to the Scientific Committee of the Indian Ocean Tuna Commission, 2020

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INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

In accordance with IOTC Resolution 15/02, final scientific data for the previous year was provided to the IOTC Secretariat by 30 June of the current year, **for all fleets other than longline** [e.g. for a National Report submitted to the IOTC Secretariat in 2021, final data for the 2020 calendar year must be provided to the Secretariat by 30 June 2021)	YES 30/06/2021 Revised report sent on 27/07/2021
In accordance with IOTC Resolution 15/02, provisional **longline data** for the previous year was provided to the IOTC Secretariat by 30 June of the current year [e.g. for a National Report submitted to the IOTC Secretariat in 2021, preliminary data for the 2020 calendar year was provided to the IOTC Secretariat by 30 June 2021). **REMINDER:** Final longline data for the previous year is due to the IOTC Secretariat by 30 Dec of the current year [e.g. for a National Report submitted to the IOTC Secretariat in 2021, final data for the 2020 calendar year must be provided to the Secretariat by 30 December 2021).	YES 30/06/2021 Revised report sent on 27/07/2021
If no, please indicate the reason(s) and intended actions:	

Executive Summary [Mandatory]

Total catch of marine fish from Malaysian waters in 2020 were 1.38 million mt, a slight decreased 5.48% compared to 1.46 million in 2019. The total landing in 2020 were attributed to the catch from 48,826 registered vessels with trawlers, purse seines, drift nets contributed large percentage of the catches. In 2020, marine fish production from the west coast of Peninsular Malaysia (Malacca Straits) contributed 777,365 mt (56.20%) out of the total catch. The remaining catches were from the South China Sea and Sulu Celebes Seas, east coast of Sabah. Coastal fisheries produced 84% (1,169,200 mt) and 16% (214,098 mt) from deep-sea fisheries.

Therefore, there is an emphasis by the government to develop tuna fisheries not only in coastal waters, but also in offshore waters within the Exclusive Economic Zone (EEZ). Tuna fisheries, which include both oceanic and neritic tuna, are targeted to be developed in the near future. The second Strategic Development Plan for Tuna Industries 2012-2020 was launched end of 2013. Draft of the third Strategic Development Plan for Tuna Industries 2021-2030 are being developed.

During the early 1980s, small tuna (as neritic tuna were called then) were only caught as by-catch by gill nets and purse seines. When tuna purse seines were introduced in 1987, the neritic tuna fisheries started to develop. A tagging experiment on neritic tuna carried out in South China Sea showed that 50% of the recaptured tuna came from the purse seine operators. Initially purse seine operators visually searched for tuna schools. Gradually, some of these operators started to use lights to aggregate fish. Following complaints from other fishermen, the use of lights was regulated and limited to less than 30 kilowatts.

Neritic tuna contributes 76,396.27 MT (5.54%) of Malaysia's marine fish landings in 2020. Purse seiners are the most important fishing gear in neritic tuna fisheries, especially the 40-69.9 GRT (Zon C) and >70 GRT (Zon C2) vessel size, with longtail tuna dominated the landings followed by kawa kawa and frigate tuna. In the year 2020, neritic tuna landings in west coast Peninsular Malaysia amounted to 12,633.13 mt; decreasing by 27.81% compared to 17,500 mt in 2019. Meanwhile landings of neritic tuna in Malaysia ranged from 60,000 mt to 80,000 mt (2016-2020). The highest catch was recorded in 2019 with 87,400 mt respectively. There was a decreasing trend in landings from 2002 to 2005 before an increasing trend until 2008. Landings of neritic tuna in Malaysia appear to have stabilized from 2010 to 2018.

The catch of oceanic tuna in 2020 from the Indian Ocean showed a 6.43% increased from 2,289.30 mt in 2019 to 2446.73 mt in 2020. Albacore showed an increasing of 11.13% from 1,618.65 mt in 2019 to 1821.41 mt in 2020. Albacore tuna formed nearly 75% of the total catches in the form of whole frozen tuna meanwhile, Yellowfin contributed 15.3% and Bigeye 10.25% of total catches in frozen and gutted forms.

The revised NPOA- Sharks II is published in 2014 and sharks and endangered species listed in the CITES also listed in Malaysia CITES Act 2008. On sea turtle, four (4) turtle conservation and information centres have regularly.

implementing awareness program for student and fishermen communities in the states of N.Sembilan, Perak, Penang and Melaka. Hatching program at these centers 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 and the ongoing projects are c-hook and satellite tracking.

Malaysia have updated the national logbook to include all the species as requested in Resolution 19/04 for longliners and purse seiners, and monitor tuna landing and inspection at port by Port Inspector. DOF Malaysia also monitoring and tracking the deep-sea and tuna vessels using National VMS.

Under resolution 19/06, Malaysia longliners transhipped at sea monitor by the IOTC observer under ROP. Malaysia participated in the Regional Observer Program in 2018 for carrier vessel and fishing vessel to monitor transhipment at sea. DOF Malaysia also have installed CCTV on every vessel as a tool for EMS as an alternative for observer on board.

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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 catch 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 is caught by handline with small traditional inboard boats, 4-5 days per trip. 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 vessels due to management problem faced by the vessel company.

From 2012-2020, Malaysia continue to develop their tuna fleets a fleet of 6 tuna longline vessels and 1 carrier vessel from a 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. After Malaysia open two designated tuna port in February 2016 (Penang Port & Langkawi Port), tuna longline vessels from 2 fishing company were registered 13 tuna longline vessels phase by phase (2016-2020) as Malaysian Fleets and operate in the East of Indian Ocean area and their catches were landed in Penang port. By the end of 2020, 19 longline tuna vessels and one (1) carrier vessel were authorized to operate in the IOTC area of competence. DOF Malaysia are committed on managing the fleet and complying with the conservation and management measures (CMM) and manage to get 78% on compliance level in 2020.

2. FLEET STRUCTURE

6 from 19 tuna longline vessels are operating in Southwest Indian Ocean (WIO) and another 13 tuna longline vessels operating in the East of Indian Ocean (EIO). For vessels operating in EIO, their target species are tropical tuna namely yellowfin and bigeye tuna and land their catches in Penang Port monthly. Meanwhile the vessels operating in WIO their target species is albacore. The vessels normally undertake a long fishing trips and all their catches were transported back to the designated port in Port Louis, Mauritius by carrier vessels.

One (1) carrier vessel was registered under Malaysia Flag and operated in area of West Indian Ocean served for the six (6) longline vessels fishing in the area. Under resolution 19/06, Malaysia longliners transhipment at sea monitor by the IOTC observer under ROP. Malaysia participated in the Regional Observer Program in 2020, but due to Covid-19 Pandemic, IOTC set on the temporary suspension of observer deployments under the IOTC Regional Observer Programme (IOTC REF: 2020-063).

The size of fishing vessels operating in the IOTC area of competence varies in LOA and gross tonnage (GT) from 25m-36m and 70GT – 204GT respectively.

Table 1: Number of authorised fishing vessels (AFV) operating in the IOTC area of competence, by gear type and size

Year	<24 m	>24 m	Registered vessels	Gear Type
2012	-	5	5	Longline (LL)
2013	-	5	5	Longline (LL)
2014	-	10	10	Longline (LL)
2015	-	5	5	Longline (LL)
2016	-	10	10	Longline (LL)
2017	-	19	19	Longline (LL)
2018	-	19	19	Longline (LL)
2019	-	17	17	Longline (LL)
2020	-	19	19	Longline (LL)

3. CATCH AND EFFORT (BY SPECIES AND GEAR)

Catch of tuna and tuna-like species by Malaysian fishing vessels were based on the fishing operations in the East Indian Ocean (EIO) and West Indian Ocean (WIO). The efforts represented by the number of berthing of the vessels at the fishing port and fishing hooks. In WIO, the vessels berthing at the port were carrier vessel where they pooled the catch from several fishing vessels (6 vessels) at the fishing grounds before they returned to the fishing port in Mauritius. For fishing operation in EIO, the fishing vessels berthing at Penang port every month for tuna landing with the average landing of 60 – 80 metric tonnes monthly. For fishing hooks, based on the logbook records, one vessel used 1800 – 3000 hooks for each fishing operations.

Table 2. Annual catch and effort by gear and primary species in the IOTC area of competence.

Year	No of Vessel	Gears	CE	YFT	BET	MARL	SWO	SFA	SHK	ALB	MISC
2012	5	LL	Hooks	119.7	46.8	35.8	30	1.1	6	661.8	58.7
2013	5	LL	Hooks	107.5	32.3	31.5	22.3	-	-	107.5	100.9
2014	5	LL	Hooks	77.3	60.1	25.4	93.1	-	-	713.9	76.3
2015	5	LL	Hooks	161.7	60	24.6	116.7	-	-	1049.1	126.7
2016	10	LL	Hooks	155.9	124	33.5	41.6	-	4.7	1330.6	107.2
2017	19	LL	Hooks	383.6	172.5	-	82.3	1.7	-	1607.2	281.9
2018	19	LL	Hooks	446.3	228.6	-	112.2	20.7	-	1792.5	247.9
2019	17	LL	Hooks	419.6	235.3	72.1	169.7	16.1	6.1	1618	242.9
2020	19	LL	Hooks	374.4	250.9	106.2	148.7	9.3	-	1821.4	286.6

Figure 2a. Map of the distribution of fishing effort by Tuna Longline for the national fleet in the IOTC area of competence for the year 2020.

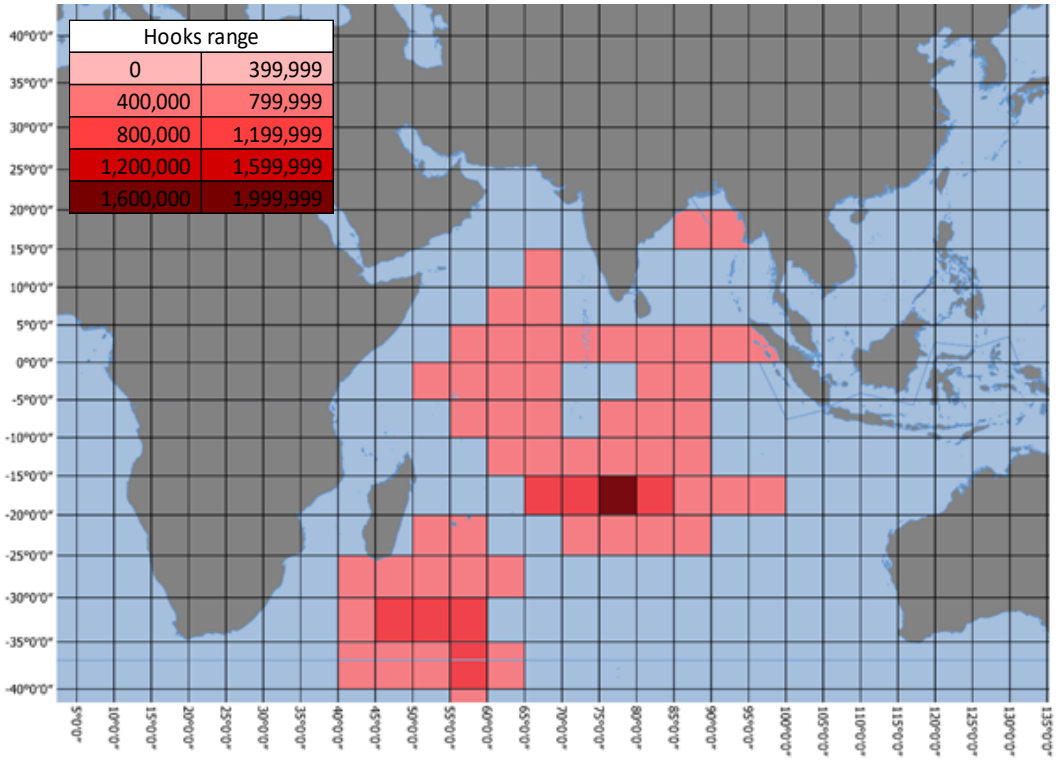


Figure 2b. Map of the distribution of fishing effort by tuna longline for the national fleet in the IOTC area of competence from year average of 5 previous years 2016–2020.

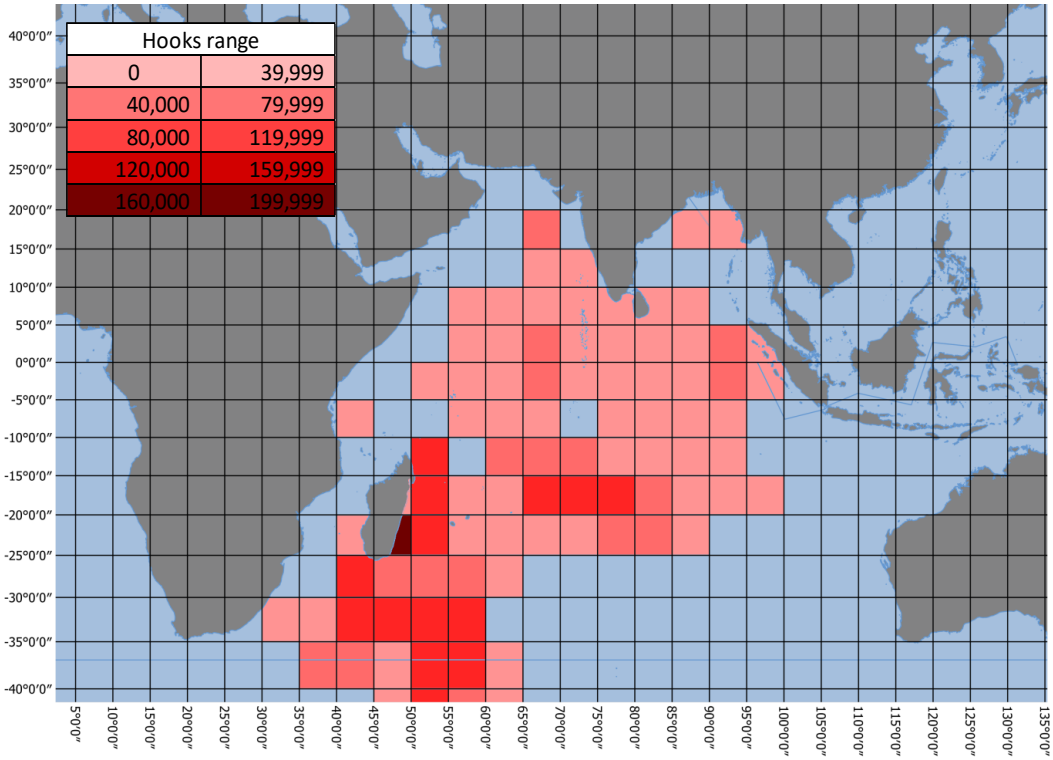
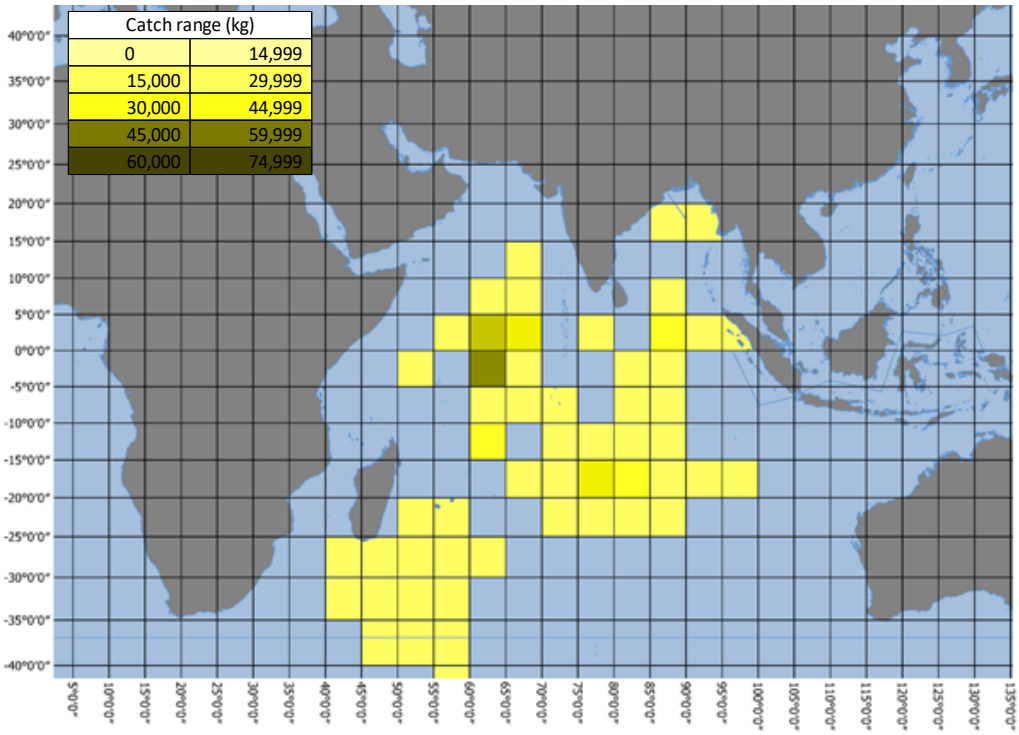
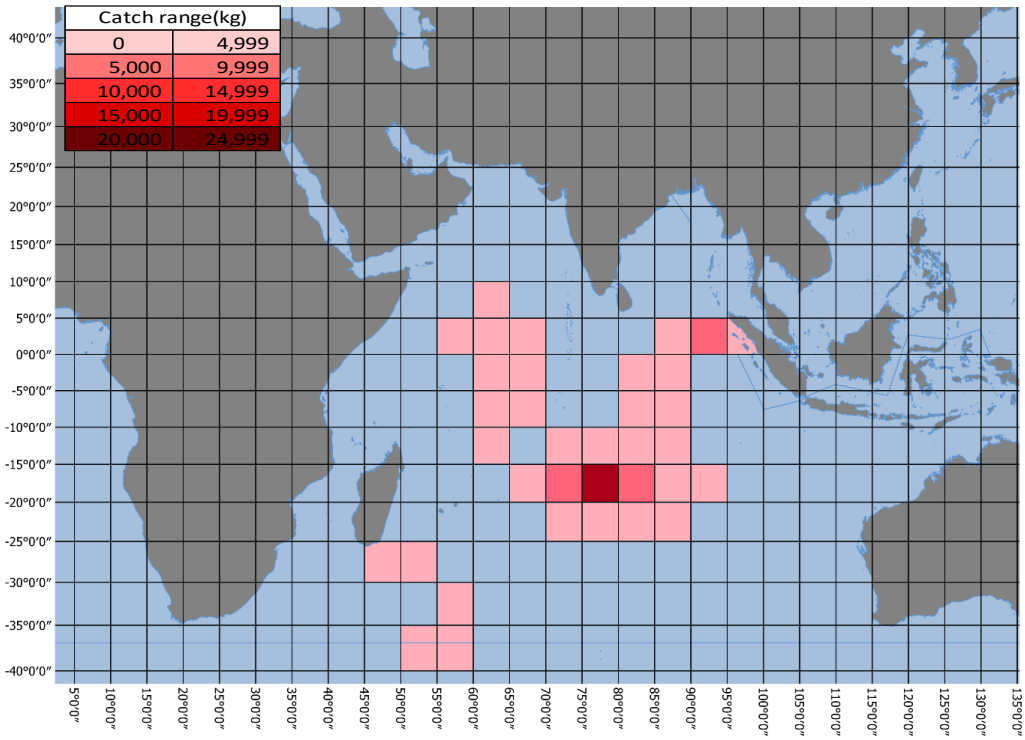


Figure 3a. Map of distribution of fishing catch, by species for the national fleet, in the IOTC area of competence for the year 2020.

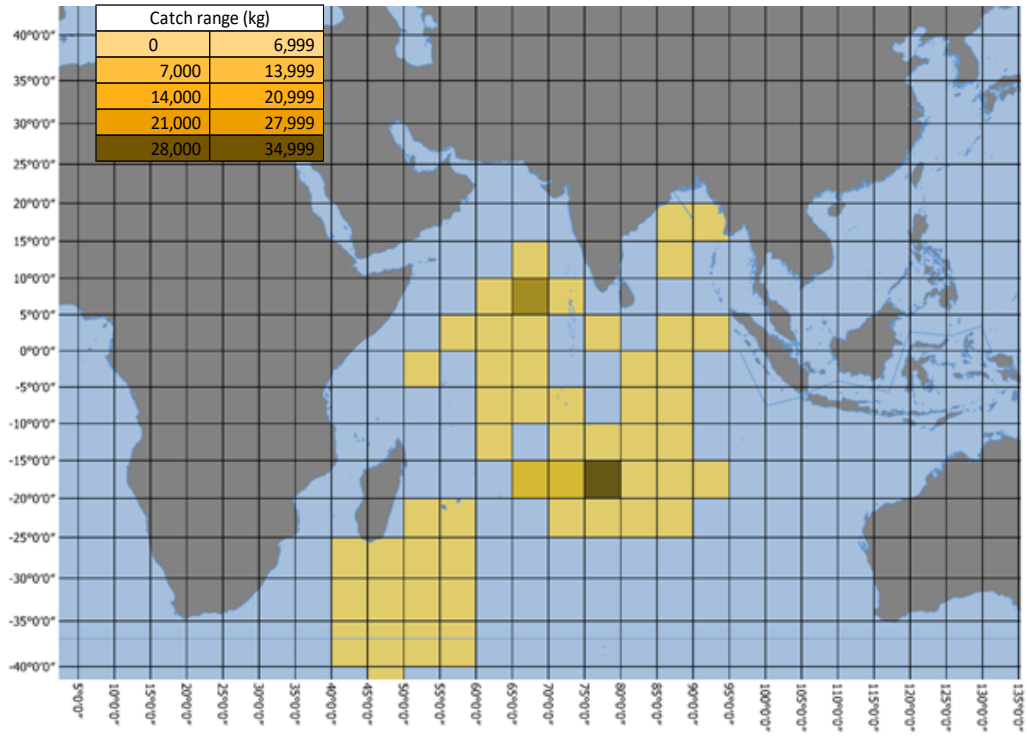
YELLOWFIN CATCH DISTRIBUTION 2020



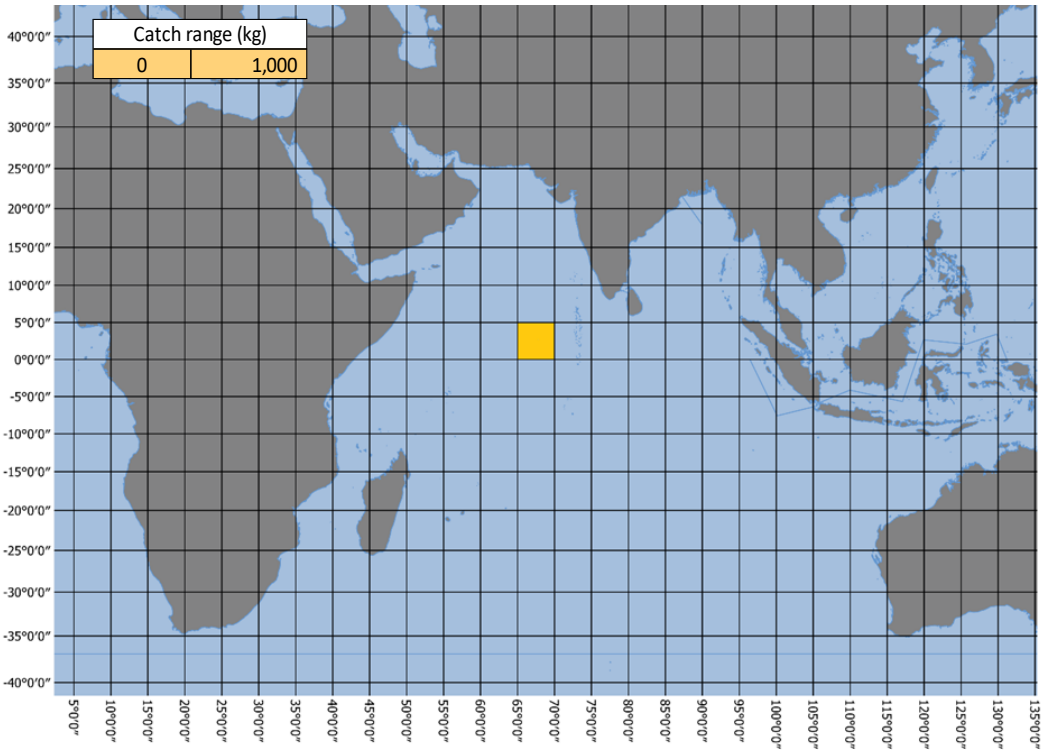
SWORDFISH CATCH DISTRIBUTION 2020



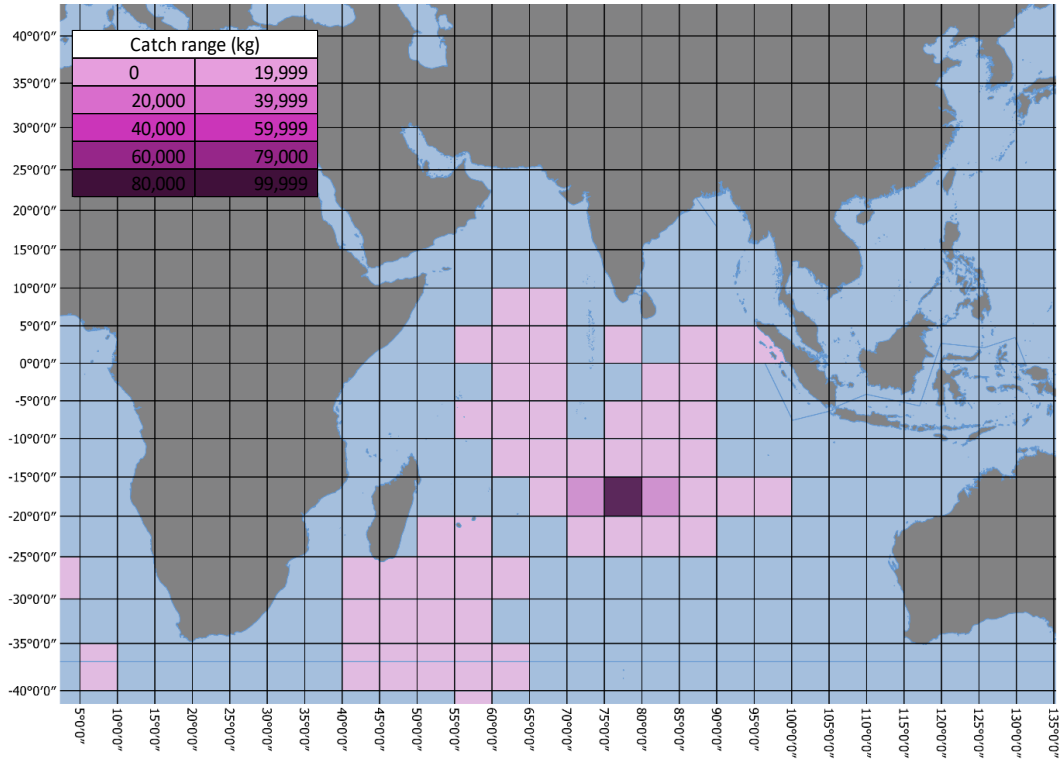
BLUE MARLIN CATCH DISTRIBUTION 2020



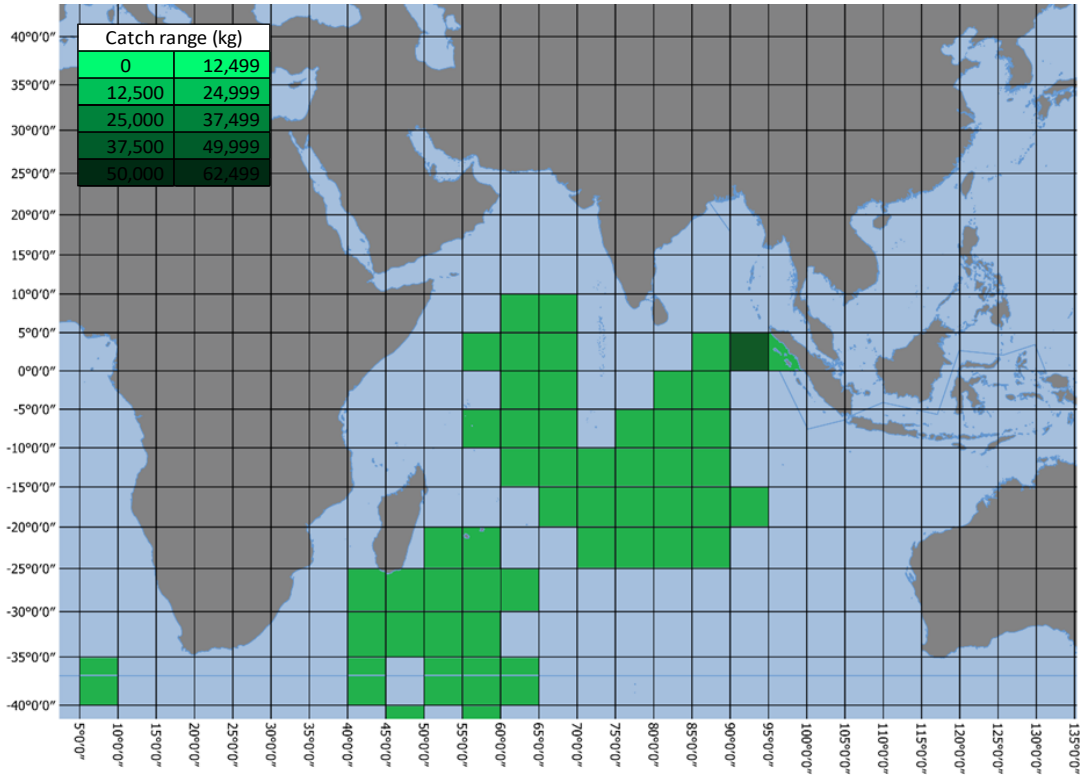
SHORTBILL SPEARFISH CATCH DISTRIBUTION 2020



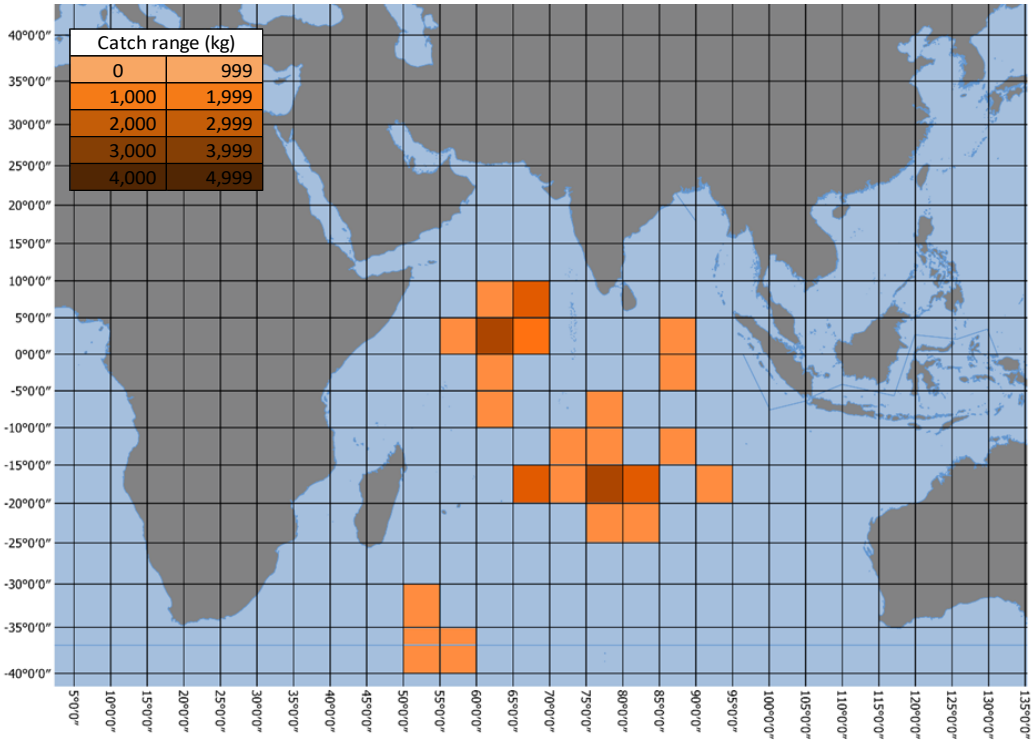
OTHER BONY FISH CATCH DISTRIBUTION 2020



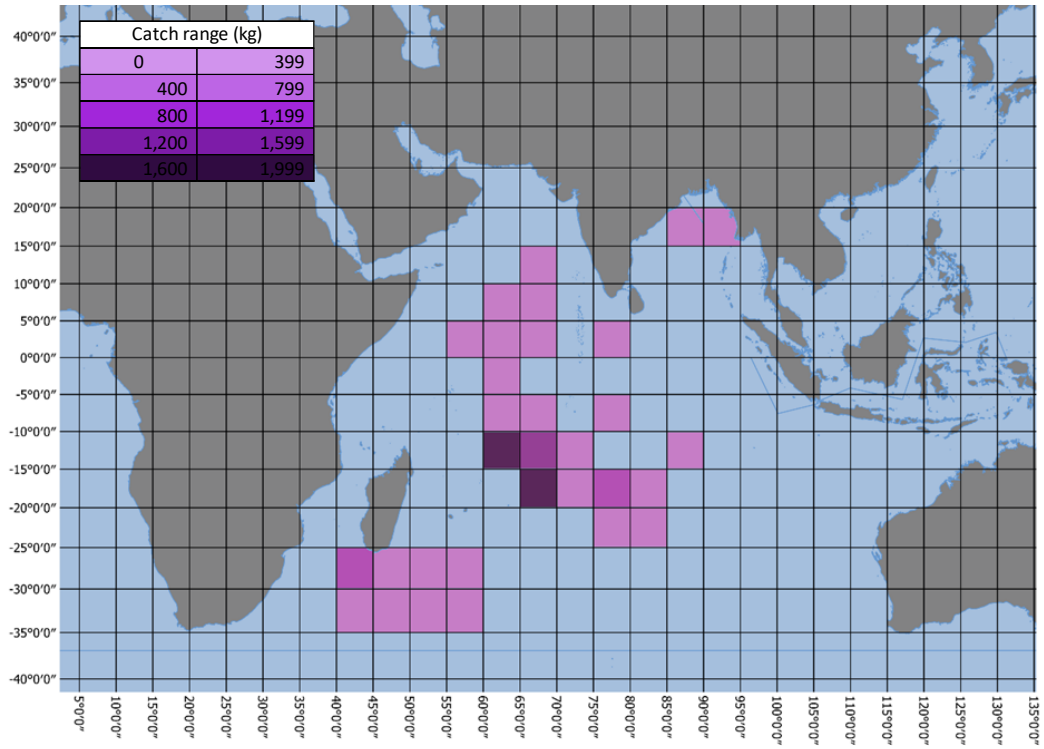
BIGEYE TUNA CATCH DISTRIBUTION 2020



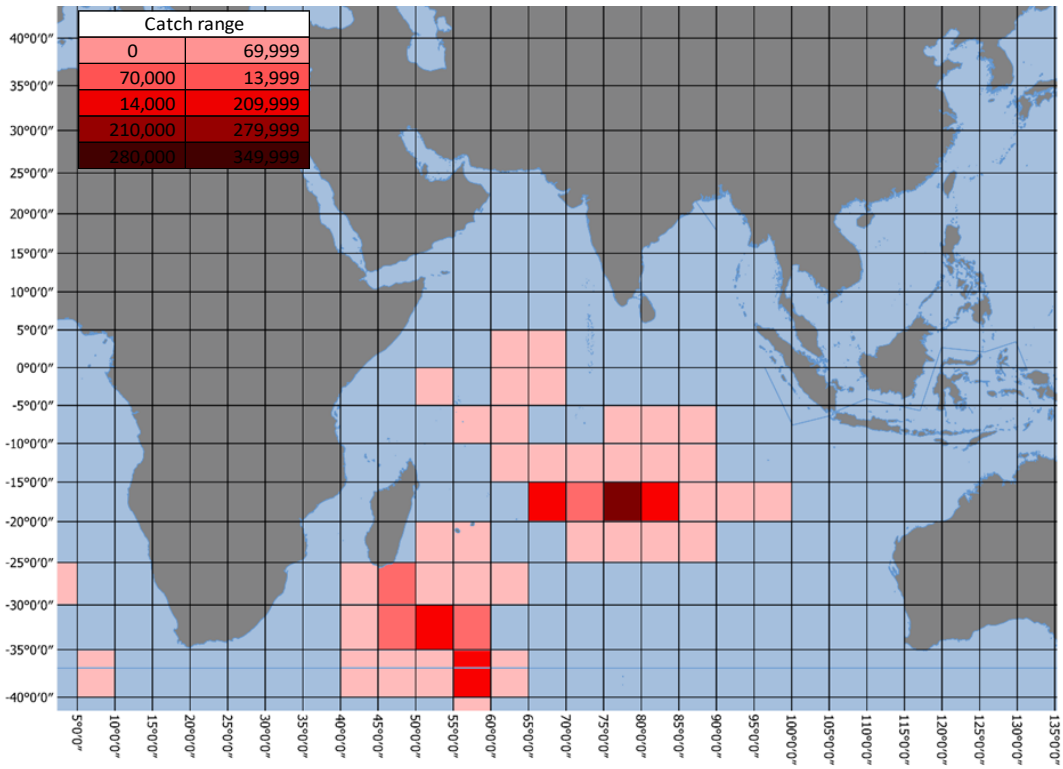
BLACK MARLIN CATCH DISTRIBUTION 2020



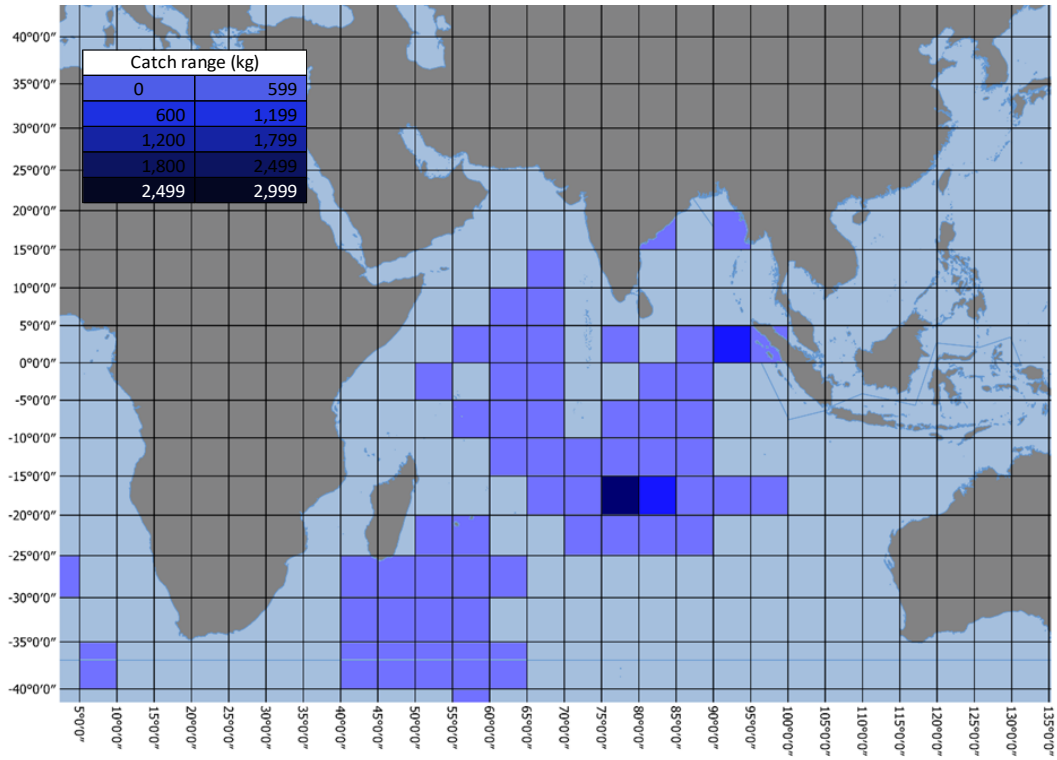
STRIPED MARLIN CATCH DISTRIBUTION 2020



ALBACORE CATCH DISTRIBUTION 2020



SKIPJACK CATCH DISTRIBUTION 2020



INDO-PACIFIC SAILFISH CATCH DISTRIBUTION 2020

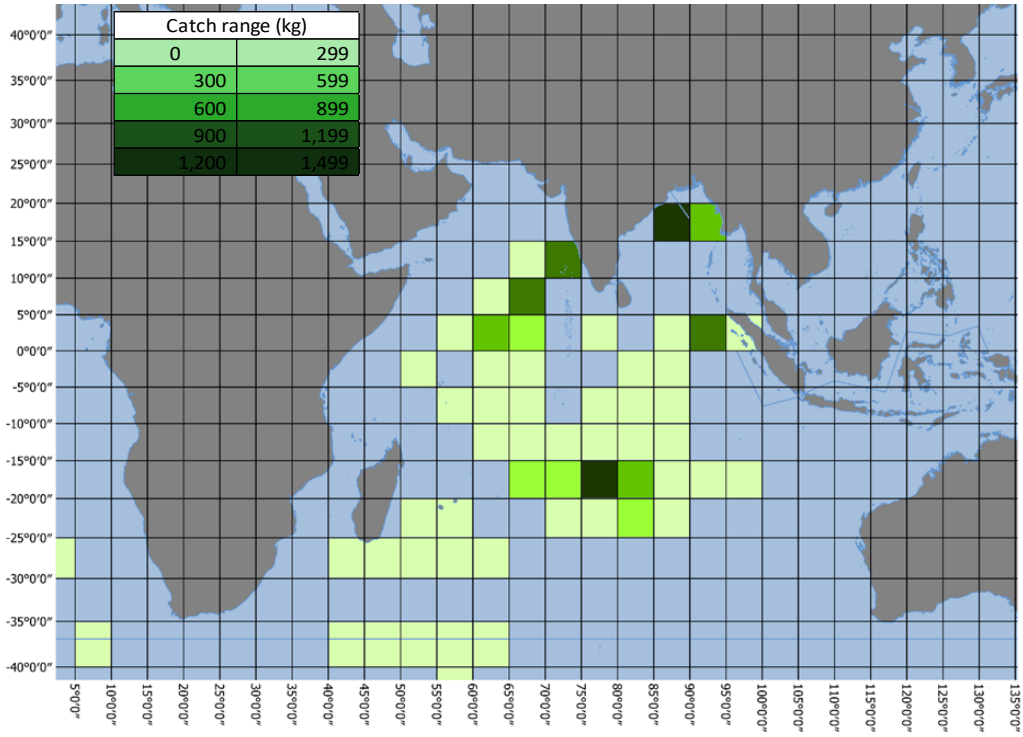
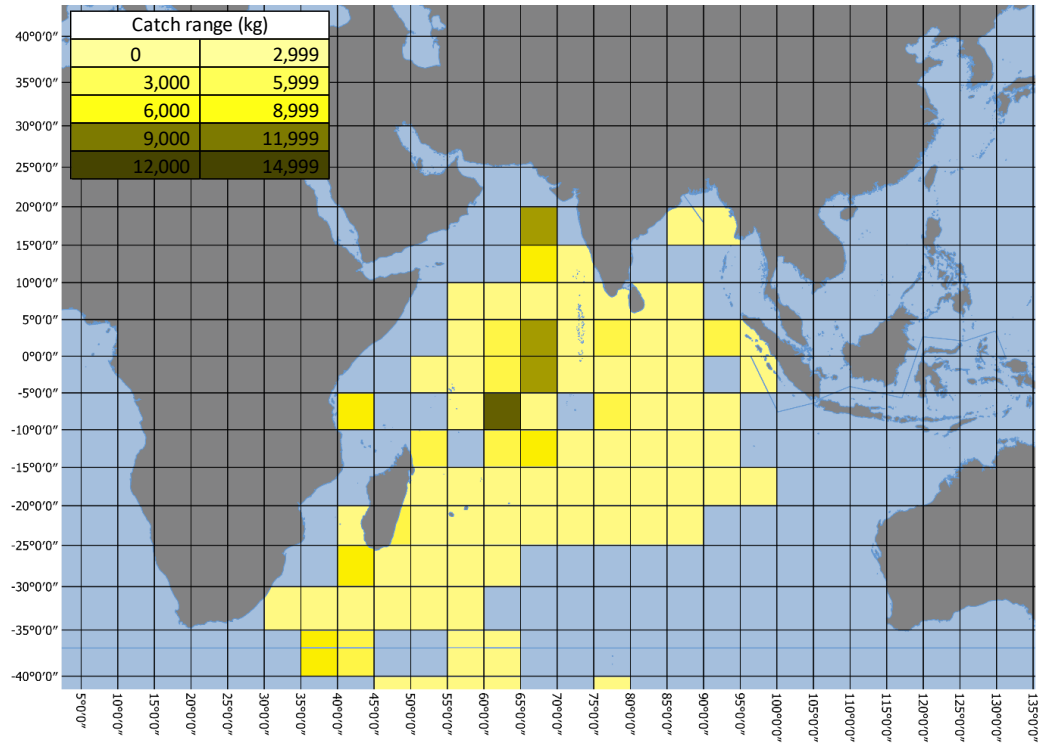
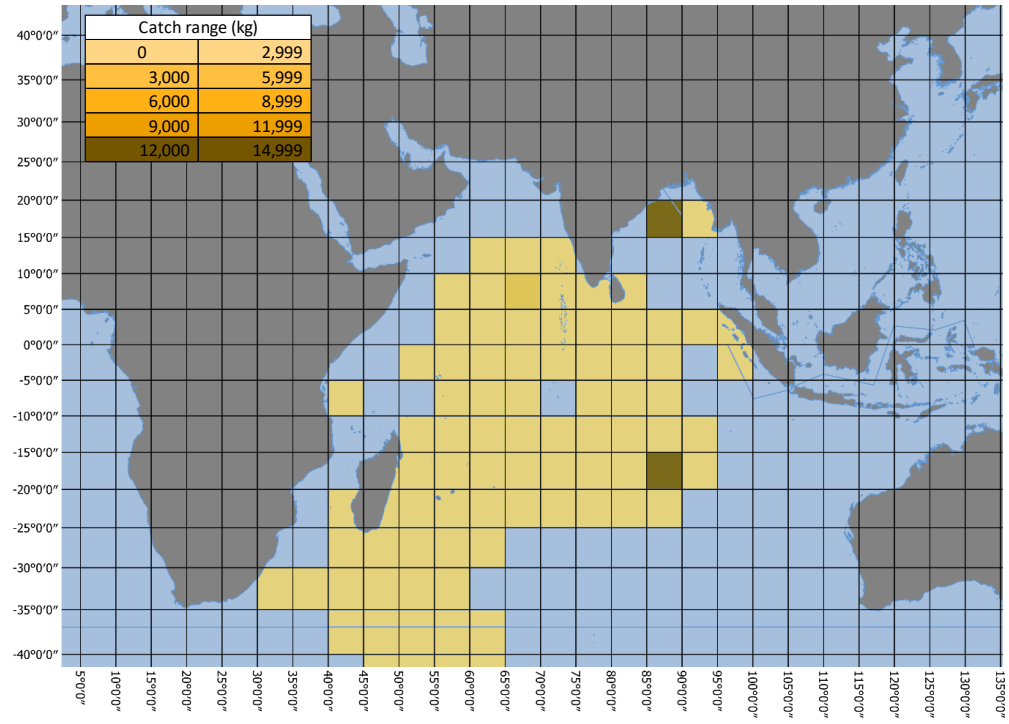


Figure 3b. Map of distribution of fishing catch, by species for the national fleet, in the IOTC area of competence average of the 5 previous year 2016–2020.

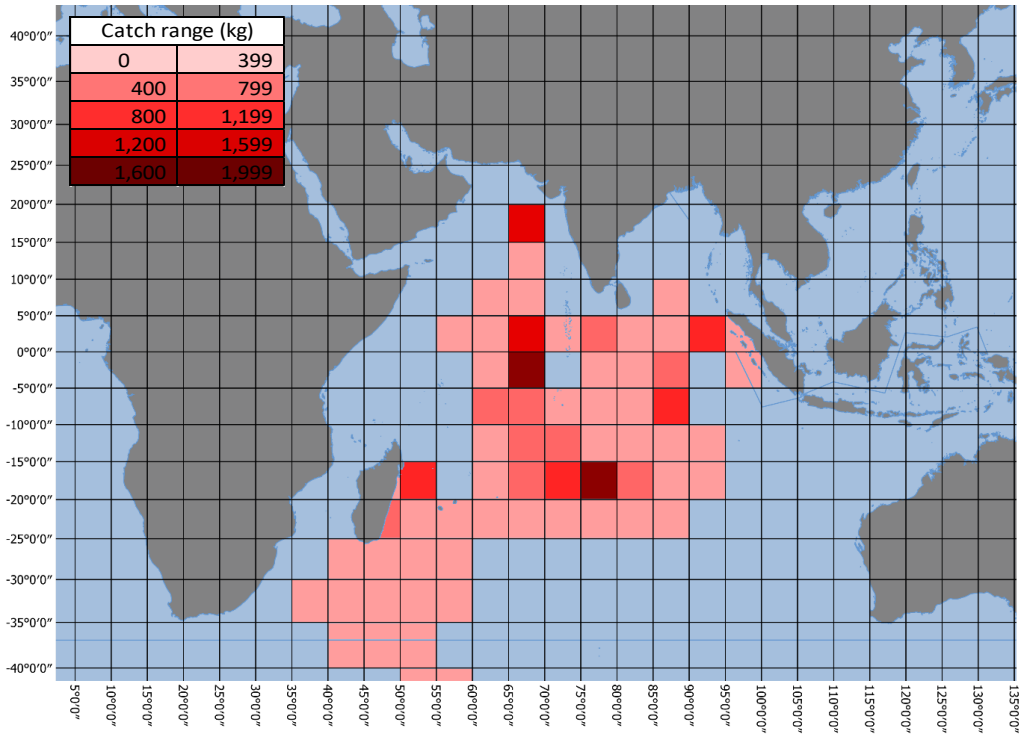
YELLOWFIN AVERAGE CATCH DISTRIBUTION 2016-2020



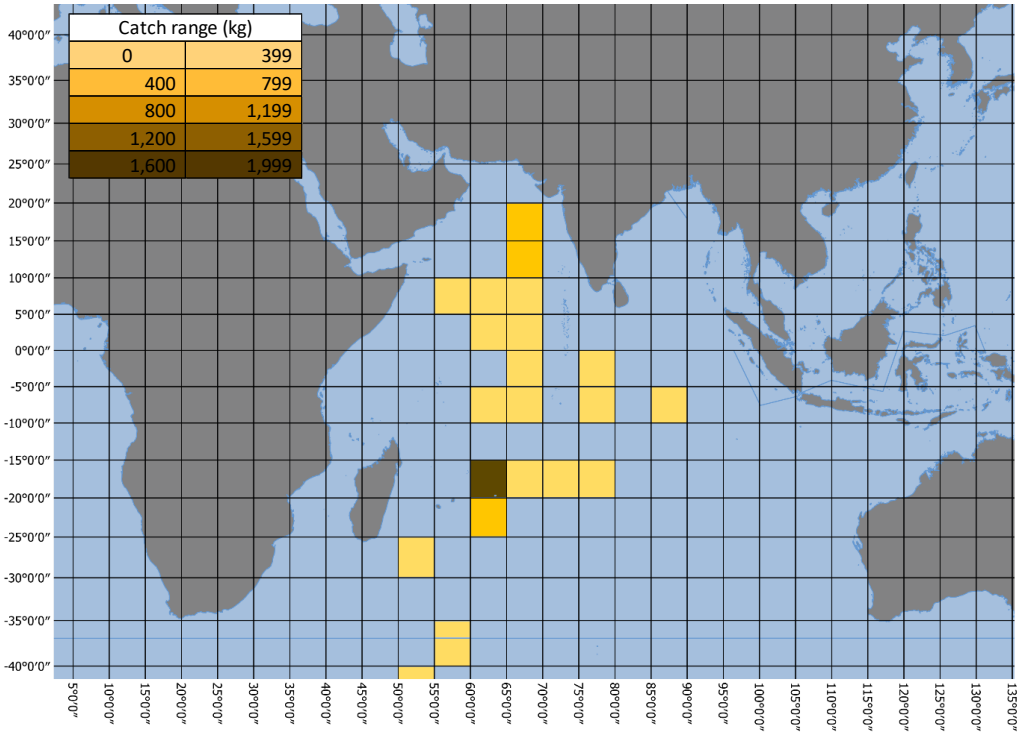
SWORDFISH AVERAGE CATCH DISTRIBUTION 2016-2020



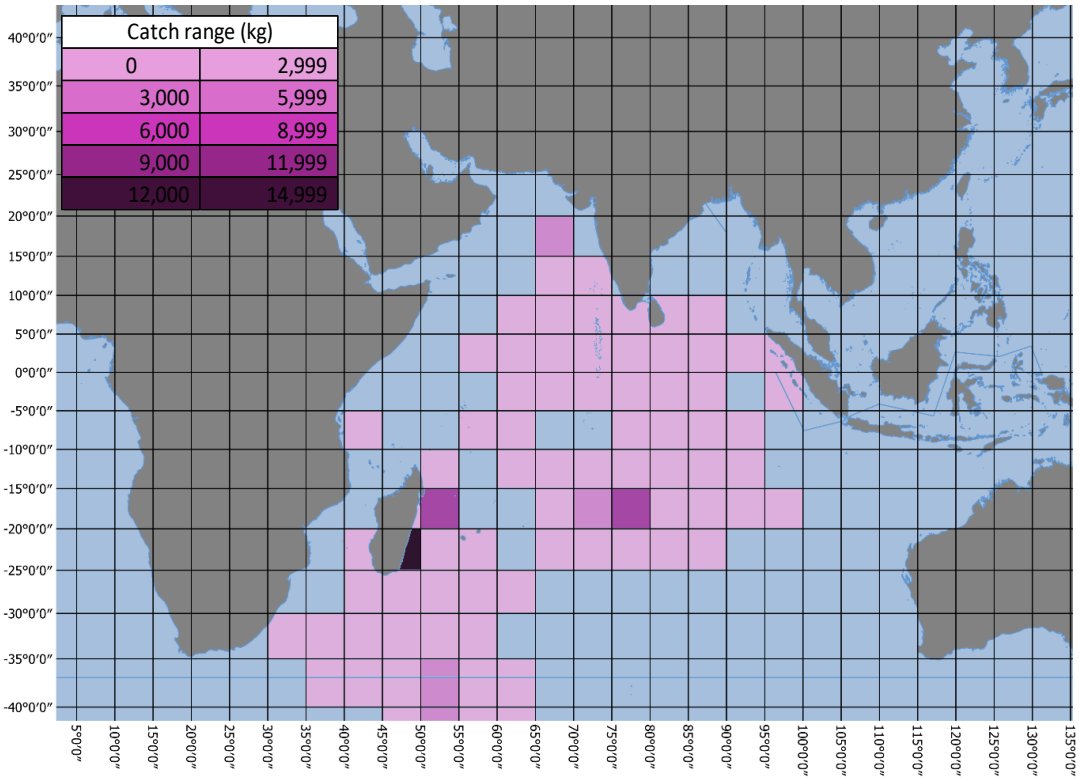
BLUE MARLIN AVERAGE CATCH DISTRIBUTION 2016-2020



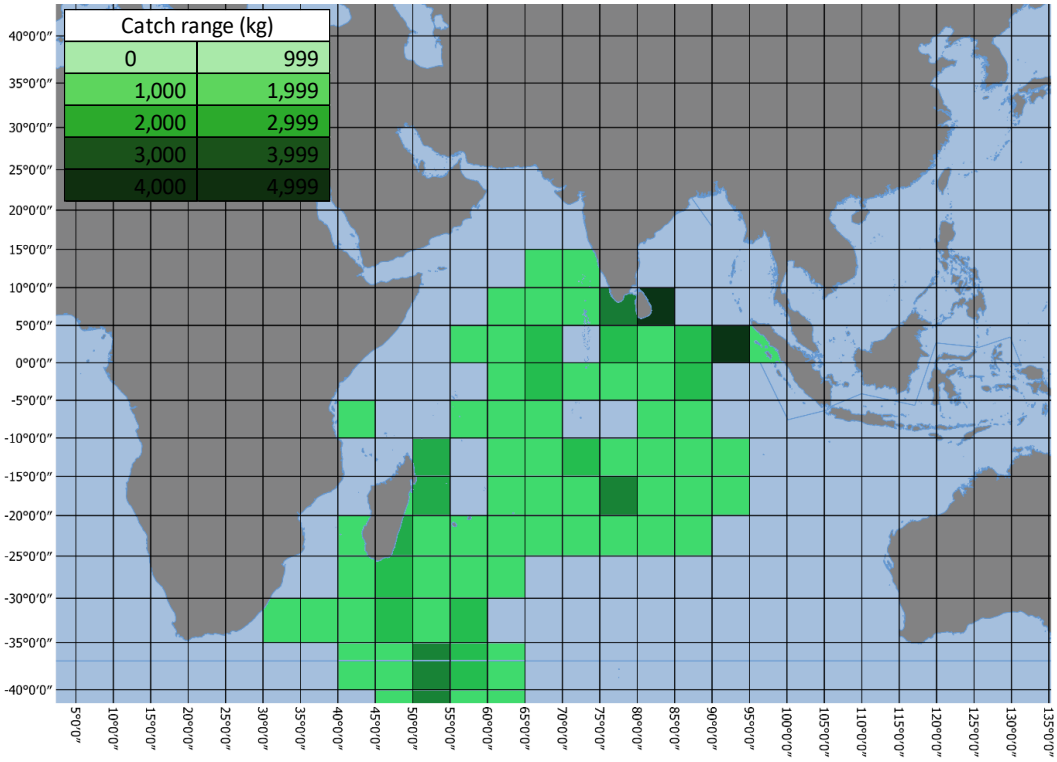
SHORTBILL SPEARFISH AVERAGE CATCH DISTRIBUTION 2016-2020



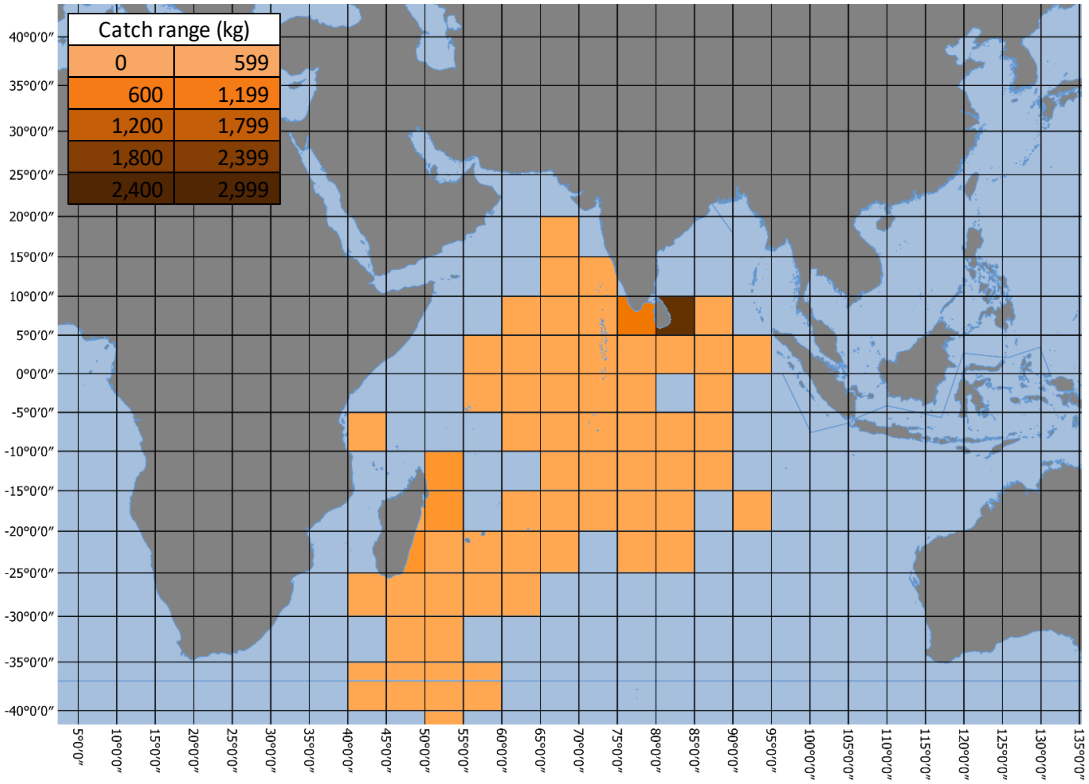
OTHER BONY FISH (MZZ) AVERAGE CATCH DISTRIBUTION 2016-2020



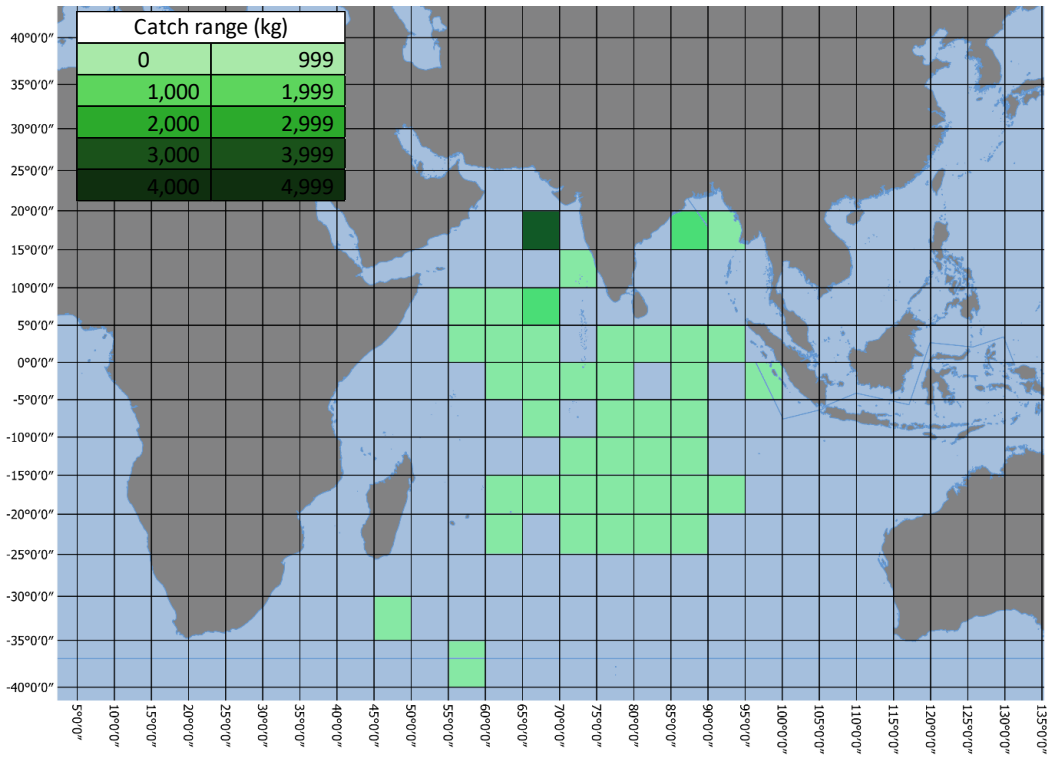
BIGEYE TUNA (BET) AVERAGE CATCH DISTRIBUTION 2016-2020



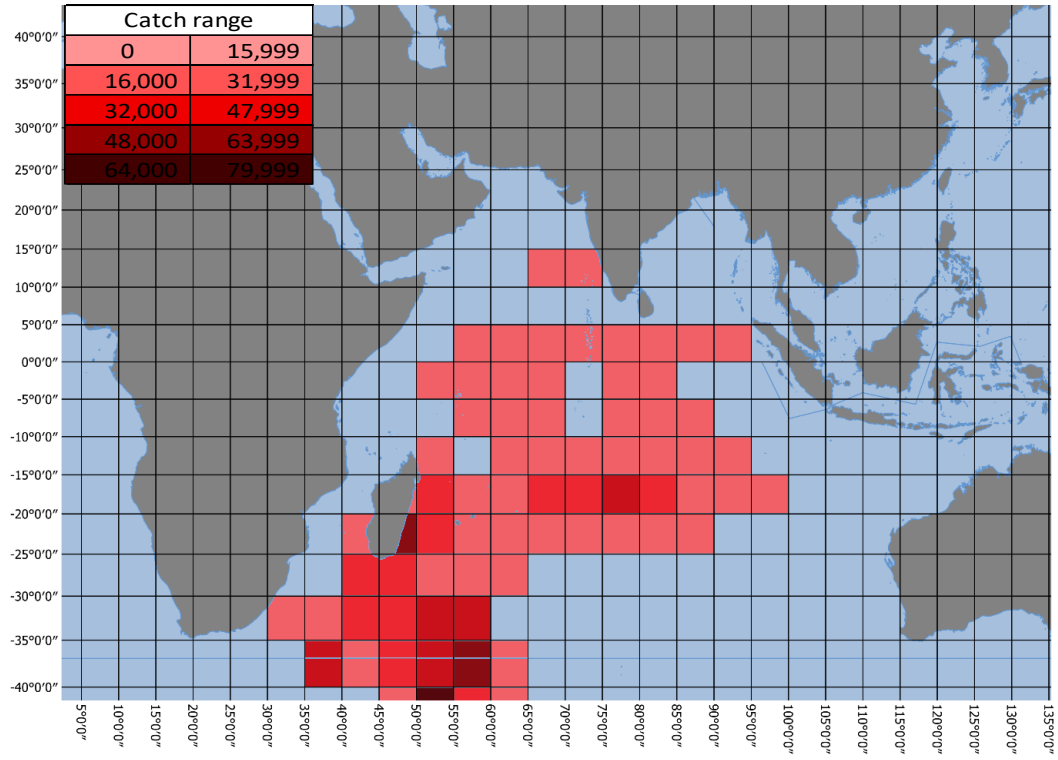
BLACK MARLIN (BLM) AVERAGE CATCH DISTRIBUTION 2016-2020



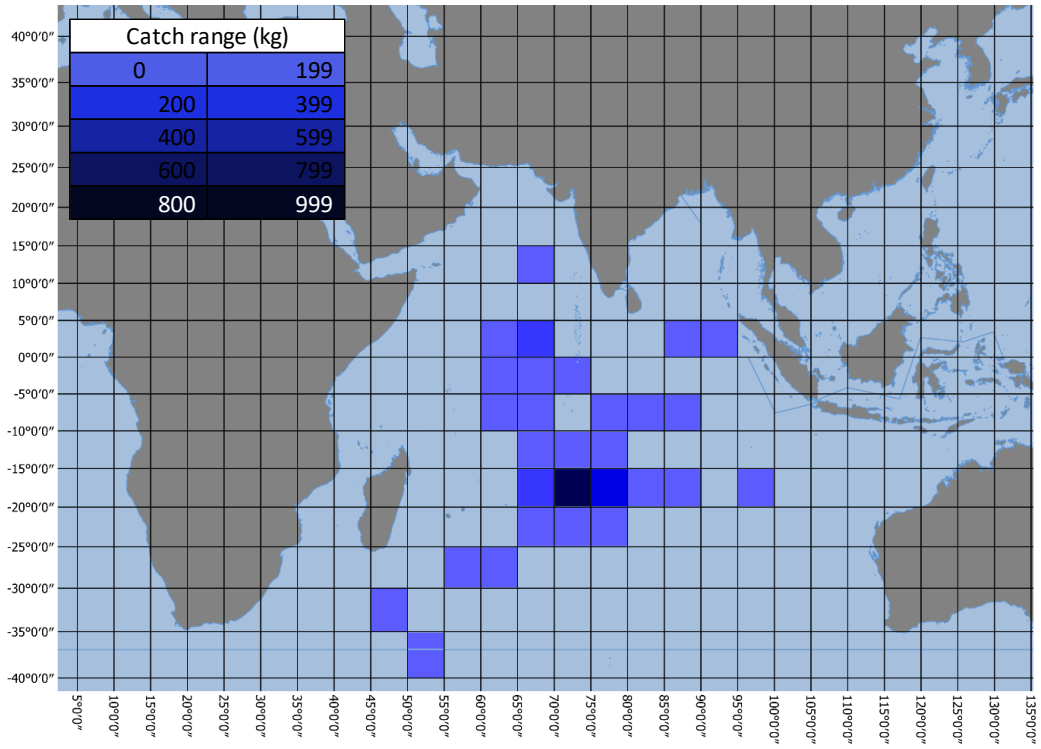
STRIPED MARLIN (ML S) AVERAGE CATC H DISTRIBUTION 2016-2020



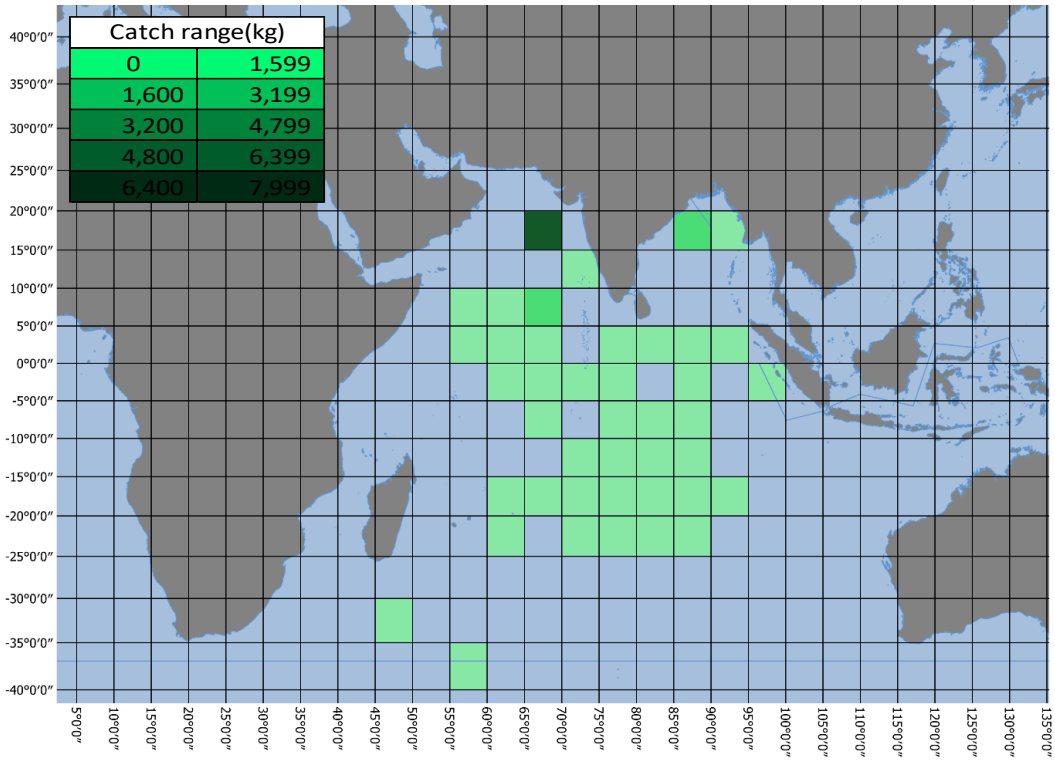
ALBACORE (ALB) AVERAGE CATCH DISTRIBUTION 2016-2020



SKIPJACK (SKJ) AVERAGE CATCH DISTRIBUTION 2016-2020



INDO PACIFIC SAILFISH (SFA) AVERAGE CATCH DISTRIBUTION 2016-2020



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. Regulation for recreational fisheries in Malaysia is being drafted, Risk Impact Analysis (RIA) were done involving the stakeholders. 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). In recent event, DOF had taken a step to regulate the recreational fishery by imposing regulation such as permit for the event, and information on catches should be submitted to the Department of Fisheries which include individual weight and length by species.

5. ECOSYSTEM AND BYCATCH 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 commercial fishing gears from fishing below 1nm (Conservation zone) from coast line as the areas for aquaculture activities, cockle culture and fisheries communities' activities only. Zoning of fishing areas: regulation, at which fishing areas are categorized into 4 zones, and for each zone only for vessels of certain range GRT and gears are permitted to fish.
- Fisheries Regulations on prohibition of method of fishing, Fisheries Regulations on endangered species, Fisheries Regulations on prohibited areas.
- Implementation of vessel operation report LOV for deep sea fisheries and landing survey for coastal fisheries 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.
- Enforcement on mesh size of cod-end for trawl nets of 38mm have been enforced.
- Promoting the use of circle hook to the longline fishermen.
- NPOA Sharks II, NPOA Turtles, NPOA Dugong

5.1 Sharks

Sharks are not a target species for longliners operating in high seas. In 2020 based on logbook record by the captain, there are a few sharks interaction recorded for release alive and discarded dead. During inspection and interview at landing sites the crew had inform that sharks had been trapped during fishing operations but they were released the sharks back to sea to reduce the risk of death.

5.1.1. NPOA 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 2014, the revised NPOA-Sharks II was officially gazetted and

published. The main objective of Malaysian NPOA- Sharks is to ensure the conservation and management of sharks and their long- term sustainable use.

5.1.2. Sharks finning regulation

On legislation, Malaysia as a signatory to Convention on International Trade in Endangered Species of Wild Fauna and Flora in Washington D.C. and on 3rd March 1973, Malaysia introduced a CITES Act 2008 and gazetted it in 2010. Under this Act, all sharks under Appendix I and Appendix II lists the following sharks; Sawfishes (Pristidae spp., 7 species) Family Cetorhinidae (Basking shark) - *Cetorhinus maximus*, Family Lamnidae (Great white shark) - *Carcharodon carcharias*, Oceanic whitetip shark (*Carcharhinus longimanus*), Porbeagle shark (*Lamna nasus*), Scalloped hammerhead shark (*Sphyrna lewini*), Great hammerhead shark (*Sphyrna mokarran*), Smooth hammerhead shark (*Sphyrna zygaena*), Silky shark (*Carcharhinus falciformis)*, Thresher sharks (*Alopias* spp*.)* and Family Rhincodontidae (Whale shark) - *Rhincodon typus*. All 9 Devil ray *(Mobula* spp*.)* are included in the updated list of CITES Appendix II.

National Regulation (Licensing Condition) 2015 stated no shark finning is allowed and No Shark Fin Campaign were conducted regularly for public awareness.

In the Terms and Condition of the ATF, no. 19: The Master of this vessel shall fully utilise their entire catches of blue sharks if accidentally caught any and the sharks has died. The master shall ensure the removal of shark fins on board is prohibited for the shark landed fresh. The total weight of onboard shark fins landed frozen shall not be more than 5% of the total weight of shark on board.

5.1.3. Blue shark

As required by the Resolution 18/02 Para 4, Blue sharks catch data are recorded in the logbook under the Bycatch Table. The captain of the vessel will record the bycatch for release alive or discarded dead and send the logbook weekly electronically to DOF. Malaysian Fleet vessel did not target blue sharks and no landing of blue sharks were recorded which are monitored by port inspector at landing port.

Table 3: Total number and weight of sharks, by species, retained by the national fleet in the IOTC area of competence (for the most recent five years at a minimum, e.g. 2016–2020).

Year	SHARKS weight	Numbers
2016	4.73 mt	-
2017	-	-
2018	-	-
2019	-	-
2020	-	-

Table 4: Total number of sharks, by species, released/discarded by the national fleet in the IOTC area of competence (for the most recent five years at a minimum, e.g. 2016–2020). Where available, include life status upon released/discard.

	Blue Shark (BSH)		Mako Shark (MAK)		Porbeagle Sharks (POR)		Hammerhead Sharks (SPN)		Silky Sharks (FAL)		Thresher Sharks (THR)		Oceanic Whitetip Sharks (OCS)		Tiger Shark (TIG)		Crocodile Shark (PSK)		Great White Shark (WSH)		Other Sharks (SKH)	
YEAR	R	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D
2016																						
2017																						
2018																						
2019																						
2020	1054	122	4	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	100	60

5.2 Seabirds

Malaysian longline vessels only started to fish in areas below 25° S in mid of 2012. In 2020, only 6 Malaysian AFV operated south of 25˚S. all 6 vessels have applied 2 types of mitigation measures recommended by the IOTC which are tori lines and fast sinking lines. No report of seabird interaction by the Malaysian fishing vessels in the logbook during their fishing operation in the southeast Indian Ocean. However, the fleets owner has been reminded about their responsibility on seabird conservation practice stated in the IOTC resolution. One National Workshop on Seabirds has been conducted in Malaysia on 20th September 2018. To date, Malaysia still does not develop NPOA-Seabird.

Table 5: Malaysia seabird mitigation measures on tuna longline operating below 25° S

Seabirds mitigation measures	No of Vessels
vessels operated south of 25˚S	6
bird scaring lines	6
line weighting	6
night setting	0

5.3 Marine Turtles

Malaysia is one of the countries that actively involved in the conservation program on turtles. In 2008 the NPOA-Marine Turtle was published and becomes a guideline for the conservation and management of sea turtles. As one of the conservation measures 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 join trails and training were conducted between the government and fishermen for the use of C-hook.

There are a total of 26 Turtle Hatcheries Centres throughout Malaysia and seven (7) turtle conservation and information centres in Malaysia have regularly implementing awareness program for student and fishermen communities. Four (4) centres are located in the west coast of Malaysia; Padang Kemunting (Melaka), Pantai Kerachut (Penang) Port Dickson (N.Sembilan) 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.

Fisheries Act 1985 section 27 provides legal instrument to protect marine turtle and marine mammals from any type of fishing. However, there is separate legal instrument on state level that cover marine turtles as stated in the Federal Constitution. So far very few interactions were recorded between fishermen and turtles reported by the traditional and commercial fishermen.

From the logbook report and observer transhipment report for vessels operating in the IOTC area of competence, there is no interaction of marine turtles recorded in 2020. No data on captures/released recorded by the fishing vessels.

Table 6: Malaysia marine turtles interaction from logbook bycatch release and discard

YEAR	Seabirds		Marine Mammals (MAM)		Marine turtle (TTX)		Manta and Devil rays (MAN)		Pelagic Stingray (PLS)	
	R	D	R	D	R	D	R	D	R	D
2016										
2017										
2018										
2019										
2020	0	0	0	0	0	0	0	0	0	0

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

No record of interaction reported for 2020 by the Malaysian tuna fishing vessels operated in Indian Ocean. Reported cases in Malaysian Fisheries Waters mostly on marine mammals sighted at sea or stranded by the beach and all reports are handled by Department of Fisheries Malaysia.

Under the Fisheries Regulation on (Control of Endangered Species of Fish) Regulation 1999, 5 group of endangered species listed (30 which are dugong group, whale group, dolphin group, whale shark group and clams group. Whale shark (*Rhincodon typus*) is one out of 30 species listed under Fisheries (Control of Endangered Species of Fish) Regulation 1999.

Table 7: Observed annual catches of species of special interest by species (seabirds, marine turtles and marine mammals) by tuna longline vessel for the national fleet, in the IOTC area of competence for the previous 5 years 2016–2020.

YEAR	Seabirds		Marine Mammals (MAM)		Marine turtle (TTX)		Manta and Devil rays (MAN)		Pelagic Stingray (PLS)	
	R	D	R	D	R	D	R	D	R	D
2016	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-
2020	0	0	0	0	0	0	0	0	0	0

6. NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

6.1. Logsheet data collection and verification

As the need for conservation of the national marine resources increases, the need for more and better-quality data on how these resources are utilized also increases. One of the most useful types of data is catch per unit effort. To meet these needs, Department of Fisheries Malaysia has started in **September 2017** to implemented vessel logbook programs and these programs were initiated for the longline fisheries and in 2019, national logbook is extended to high seas purse seine fisheries. Malaysia have updated the national logbook to include all the species as requested in Resolution 19/04, and monitor tuna landing and inspection at port by Port Inspector. Fishermen are required to report the numbers of each species caught, the numbers of animals retained. release alive or discarded dead (longline gear is non-selective and unwanted or prohibited species such as, marine mammals, sea turtles, seabirds, must be returned to the water), the location of the set, the types and size of gear, and the duration of the set. Because some of the needed catch/effort information for pelagic longline fisheries remains the same for the entire trip (i.e., it would be redundant to report it for every set), a supplemental form is used to report this type of data. Information on the port and date of departure and return, date of landing, number of sets, number of crew, are reported on the Trip Summary form. In addition, information on costs associated with the trip can be reported on this form. Information on the quantity caught for each species, area of catch, type and quantity of gear, the dealer and location (country and state where the trip is unloaded), the duration of the trip (time away from dock), an estimate of the fishing time, and the number of crew are also included on this form.

At the same time, all vessels operating beyond 30 nm from the shore (deep-sea vessels) 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 licensing regulation, to renew their annual license. 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 and names of ports. Failure to do so, will cause the license 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.

To date, Malaysia have not implemented the e-logbooks as there are still improvement to be made. Therefore in 2020, road tours and training has been done by the Department of Fisheries Malaysia on the introduction of e-logbooks.

6.2. Vessel Monitoring System

Department of Fisheries Malaysia has successfully implemented a Vessel Monitoring System (VMS) for all deep-sea and tuna fishing vessels. VMS/MTU for deep sea vessel is based on Inmarsat, utilizing Inmarsat C, Mini C and D+/B equipment. For tuna longline vessels operating in high seas, they use Argos and Iridium system for their VMS and monitor on CLS Themis Web. Monitoring and tracking of deep-sea and tuna vessels using National VMS are conducted daily to make sure compliance with the geographical limits contained in their license and to check position data contained in their catch and effort/transhipment reports.

The installation of Mobile Transceiver Units (MTU) is mandatory under vessel licensing regulation since January 2012. 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 and active.

6.3. Observer scheme

To further improve quality of tuna catch data, DOF Malaysia plans to implement observer onboard for purse seine vessels fishing in the domestic waters. Due to the lacking of financial resources (insufficient fund), the lacking of man power (staff) or human capacity and communication problem within captain and crew, the observer onboard program planning are still under consideration.

DOF Malaysia also have installed CCTV on all 19 fishing vessels as a tool for EMS and as an alternative for observer on board. SOP for monitoring of CCTV has been develop as a guidelines for monitoring catch and bycatch.

CCTV monitoring programmes started as pilot project in 2018 & 2019. Until 2020, 11 tuna vessels installed CCTV under the Department of Fisheries Malaysia (DOF) and 6 tuna vessels installed CCTV under the Indian Ocean Longline Tuna FIP (Fishing Improvement Project).

The CCTV monitoring and reporting were done by DOF staff in Penang Fisheries Office for the duration of 3 – 6 months voyage. The hard disc will be taken from the vessels to the office once the vessel coming back to Penang Port, Malaysia for landing purposes and replaced with a new / empty disc for the next voyage.

Although Malaysia has yet to conduct Observer scheme as required by Resolution 11/04, there are 6 fishing vessels involved in a programme for Transhipment by large- scale fishing vessels which indirectly being monitored by observer. Under resolution 19/06, Malaysia longliners transhipped at sea monitor by the IOTC observer under ROP. Malaysia participated in the Regional Observer Program in 2020 for carrier vessel and fishing vessel to monitor transhipment at sea but, due to Covid 19 Pandemic, transshipment are allowed by the IOTC Secretariat without the attendance of Observer on Board.

6.4. Port sampling programme

From 2010, permanent staff from the DOF has conducted regular sampling activities at the MITP, Penang. They are responsible to collected, process and assist tuna scientists to analyse catch data. However, since 2012 until middle 2016, all Malaysian flag vessels unload their catches outside Malaysian port, then, no port samplings program were carried out. The port sampling program were resumed conducted after Malaysia register two designated tuna port in 2016 (Penang Port and Langkawi Port). **Starting 2017** onwards, 13 tuna fishing vessels unload their catches at Penang Port. Monitoring of tuna landing and inspection at port by Port Inspector also carried out for Malaysian tuna fishing vessels and foreign tuna fishing vessels unloading in Malaysia designated tuna port.

Sampling for neritic tuna for research purpose have been done monthly (12 month) **since 2015**. 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. The sampling was taken by researchers and enumerators. The port sampling data at landing site covers 70% of landing and taken by Fisheries officer of DOF Malaysia

Table 8: Number of vessel trips or vessels active monitored, by species and gear

No	Vessel	Date of landing	Gears	Species Monitored												
				YFT	BET	ALB	SKJ	SWO	MLS	BUM	BLM	SFA	SSP	OIL	WAHOO	MAHI2
1	FAJAR 11	17/01/2020	LL	2,408.80	4,783.80	86,078.50	1,822.90	9,171.50	438.80	234.80	3,022.40	266.80	373.80	9,265.20	1,889.00	162.50
2	FAJAR 6	30/01/2020	LL	2,285.60	1,687.40	40,760.20	1,215.70	-	325.00	105.30	696.00	46.40	77.60	5,945.90	743.20	9.60
3	IBU WIRA 3	31/01/2020	LL	4,785.50	1,346.50	-	-	48,780.00	392.00	-	5,578.30	6,391.00	705.00	916.00	124.00	-
4	FAJAR 13	03/02/2020	LL	1,550.70	1,603.30	48,039.50	1,710.00	2,410.40	1,026.00	101.90	1,749.90	217.40	149.20	4,308.30	1,201.20	-
5	FAJAR 17	07/02/2020	LL	1,871.90	641.80	45,483.20	2,722.20	1,480.40	395.70	122.90	1,470.50	-	187.40	2,131.10	1,081.70	28.40
6	FAJAR 2	13/02/2020	LL	1,638.80	1,489.30	44,712.90	2,633.00	1,171.80	630.30	65.20	1,011.70	54.30	230.20	2,386.40	1,163.60	52.30
7	FAJAR 1	20/03/2020	LL	2,764.00	3,418.00	75,800.00	1,328.00	2,778.00	-	3,565.00	-	58.00	-	4,235.00	514.00	-
8	FAJAR 7	03/04/2020	LL	1,980.20	2,116.30	37,740.00	2,153.50	1,170.00	279.00	1,595.00	372.00	336.00	140.00	3,228.60	1,065.00	44.00
9	FAJAR 6	29/04/2020	LL	4,364.00	4,447.00	36,040.00	602.00	1,252.00	882.00	-	308.00	319.00	-	3,610.00	696.00	-
10	FAJAR 8	18/05/2020	LL	7,006.00	6,937.00	64,020.00	1,393.00	2,434.00	-	3,543.00	658.00	357.00	81.00	3,009.00	950.00	-
11	FAJAR 9	19/05/2020	LL	11,807.00	7,464.70	59,180.00	1,484.00	3,911.00	-	6,700.00	934.00	179.00	150.00	5,575.00	1,404.00	-
12	FAJAR 17	09/06/2020	LL	20,055.50	14,541.60	255.00	1,963.85	1,817.45	710.00	-	1,413.00	648.55	87.00	4,124.30	258.55	-
13	FAJAR 13	10/06/2020	LL	10,915.40	4,892.66	34,474.60	1,090.05	1,772.30	900.25	321.40	2,500.35	380.42	170.50	5,059.45	1,099.85	-
14	FAJAR 1	11/06/2020	LL	-	18,798.00	1,709.70	1,506.00	2,209.70	741.00	-	3,023.10	506.00	165.00	6,382.70	573.00	32.00
15	FAJAR 3	12/06/2020	LL	14,324.00	5,500.00	70,541.00	650.00	3,837.00	858.00	-	7,266.00	604.00	-	6,425.00	1,515.00	-
16	FAJAR 6	30/06/2020	LL	2,413.00	28,242.00	-	724.00	1,743.00	1,811.00	-	1,410.00	390.00	-	5,889.00	108.00	-
17	IBU WIRA 3	03/07/2020	LL	47,760.00	-	2,198.00	80.00	2,110.00	4,884.00	-	-	698.00	-	3,727.00	701.00	-
18	FAJAR 11	21/07/2020	LL	8,192.00	18,139.00	58,794.00	2,485.00	4,105.00	-	1,495.00	3,585.00	1,111.00	-	13,466.00	1,869.00	216.00
19	FAJAR 7	03/08/2020	LL	6,420.90	17,332.00	4,969.00	1,295.80	2,353.40	1,289.80	-	1,514.00	-	-	4,969.00	558.00	-
20	FAJAR 17	18/08/2020	LL	183.00	1,237.00	2,819.00	8.00	546.00	93.00	-	276.00	-	-	1,172.00	223.00	-
21	FAJAR 1	10/09/2020	LL	4,060.00	13,206.00	47,926.00	-	5,081.00	247.00	157.00	2,635.00	-	-	10,931.00	2,460.00	-
22	FAJAR 2	16/10/2020	LL	391.00	12,964.00	23,287.00	720.00	5,982.00	-	686.00	1,488.00	590.00	-	11,474.00	1,698.00	-
23	FAJAR 6	16/10/2020	LL	37.00	12,137.00	20,699.50	616.00	2,876.00	-	374.00	871.50	198.00	-	10,796.00	1,366.00	-
24	FAJAR 13	20/10/2020	LL	224.80	9,081.80	19,900.00	389.70	4,857.10	589.20	158.50	750.30	893.10	-	11,615.60	1,948.20	-
25	FAJAR 7	26/11/2020	LL	174.20	5,185.20	31,270.60	1,265.60	2,632.70	135.60	466.00	1,460.90	384.70	79.20	7,320.20	1,525.00	-
26	FAJAR 17	01/12/2020	LL	195.50	2,537.50	21,380.00	532.20	2,713.10	631.70	-	581.40	291.50	-	5,586.70	904.30	-
27	FAJAR 9	03/12/2020	LL	1,143.00	12,870.20	46,880.00	611.10	9,690.00	523.00	1,257.30	2,440.80	445.00	-	15,850.10	3,269.40	-
28	FAJAR 8	11/12/2020	LL	4,122.50	5,679.40	45,300.00	65.70	6,185.30	543.90	1,401.80	2,594.60	806.80	153.60	11,528.30	2,745.20	-
TOTAL				**163,074.30**	**218,278.46**	**970,257.70**	**31,067.30**	**135,070.15**	**18,326.25**	**22,350.10**	**49,610.75**	**16,171.97**	**2,749.50**	**180,926.85**	**33,653.20**	**544.80**

Table 9: Number of individuals measured, by species and gear] **[Mandatory]**

No.	Vessel landing in Malaysia Port	Date of Inspection	Landing (KG)	Gears	No of Individual Measured (unit)			
					YFT	BET	ALB	SKJ
1	Fajar 6	31/1/2020	53,897.90	LL	3	4	43	3
2	Fajar 13	3/2/2020	64,068.20	LL	5	5	48	3
3	Fajar 17	7/2/2020	57,617.20	LL	4	1	44	3
4	Fajar 2	13/2/2020	57,239.80	LL	3	3	50	3
5	Fajar 8	18/5/2021	90,388.00	LL	8	7	64	2
6	Fajar 9	19/5/2020	98,788.70	LL	13	10	57	2
7	Fajar 17	9/6/2020	45,874.80	LL	23	20	5	3
8	Fajar 13	10/6/2020	63,577.23	LL	2	19	35	3
9	Fajar 1	11/6/2020	52,904.10	LL	22	20	3	3
10	Fajar 3	12/6/2020	111,520.00	LL	15	10	10	2
11	Ibu Wira 3	3/7/2020	62,158	LL	45	0	0	9
12	Fajar 7	3/8/2020	42,305.00	LL	11	18	7	2
13	Fajar 17	18/8/2020	6,557.00	LL	2	2	5	1
14	Fajar 1	10/9/2020	86,703.00	LL	8	15	50	3
15	Fajar 6	16/10/2020	50,320.00	LL	2	14	25	2
16	Fajar 13	20/10/2020	48,460.10	LL	2	8	20	2
17	Fajar 7	26/11/2020	51,899.90	LL	2	5	35	2
18	Fajar 17	1/12/2020	35,353.90	LL	2	5	21	3
19	Fajar 9	3/12/2020	94,980.00	LL	11	4	48	3
		TOTAL	**1,174,612.83**		**183**	**170**	**570**	**54**

6.5. Unloading/Transhipment of flag vessels

Under resolution 19/06, 6 Malaysian longliners were allowed to do transhipment at sea on the Malaysian Carrier Vessel and monitored by the IOTC observer under ROP since **June 2012**. Malaysia participated in the Regional Observer Program in 2020 but there are temporary suspension of observer deployments under the IOTC Regional Observer Programme due to Covid-19 Pandemic (IOTC REF: 2020-063). All data were declared by the Carrier vessel captain (Kha Yang 333) and record information of transhipments from LSTLV as outlined by the Commission. Data of weight by species and location of transhipment were submitted to the IOTC Secretariat for all transhipment. All transhipment was done in the South WIO and the carrier vessels enter Port Louis, Mauritius for unloading. No infraction recorded under ROP in 2020.

13 other Malaysian longliners are not involved in the transhipment activities and unloading their catches at Penang Port, Malaysia every month and monitored by the Port Inspectors**.**

Table 10: Quantities by species and gear landed in ports located in the IOTC area of competence (Penang Port)

No	Vessel	Date of landing	Gears	Species Monitored												
				YFT	BET	ALB	SKJ	SWO	MLS	BUM	BLM	SFA	SSP	OIL	WAHOO	MAHI2
1	FAJAR 11	17/01/2020	LL	2,408.80	4,783.80	86,078.50	1,822.90	9,171.50	438.80	234.80	3,022.40	266.80	373.80	9,265.20	1,889.00	162.50
2	FAJAR 6	30/01/2020	LL	2,285.60	1,687.40	40,760.20	1,215.70	-	325.00	105.30	696.00	46.40	77.60	5,945.90	743.20	9.60
3	IBU WIRA 3	31/01/2020	LL	4,785.50	1,346.50	-	-	48,780.00	392.00	-	5,578.30	6,391.00	705.00	916.00	124.00	-
4	FAJAR 13	03/02/2020	LL	1,550.70	1,603.30	48,039.50	1,710.00	2,410.40	1,026.00	101.90	1,749.90	217.40	149.20	4,308.30	1,201.20	-
5	FAJAR 17	07/02/2020	LL	1,871.90	641.80	45,483.20	2,722.20	1,480.40	395.70	122.90	1,470.50	-	187.40	2,131.10	1,081.70	28.40
6	FAJAR 2	13/02/2020	LL	1,638.80	1,489.30	44,712.90	2,633.00	1,171.80	630.30	65.20	1,011.70	54.30	230.20	2,386.40	1,163.60	52.30
7	FAJAR 1	20/03/2020	LL	2,764.00	3,418.00	75,800.00	1,328.00	2,778.00	-	3,565.00	-	58.00	-	4,235.00	514.00	-
8	FAJAR 7	03/04/2020	LL	1,980.20	2,116.30	37,740.00	2,153.50	1,170.00	279.00	1,595.00	372.00	336.00	140.00	3,228.60	1,065.00	44.00
9	FAJAR 6	29/04/2020	LL	4,364.00	4,447.00	36,040.00	602.00	1,252.00	882.00	-	308.00	319.00	-	3,610.00	696.00	-
10	FAJAR 8	18/05/2020	LL	7,006.00	6,937.00	64,020.00	1,393.00	2,434.00	-	3,543.00	658.00	357.00	81.00	3,009.00	950.00	-
11	FAJAR 9	19/05/2020	LL	11,807.00	7,464.70	59,180.00	1,484.00	3,911.00	-	6,700.00	934.00	179.00	150.00	5,575.00	1,404.00	-
12	FAJAR 17	09/06/2020	LL	20,055.50	14,541.60	255.00	1,963.85	1,817.45	710.00	-	1,413.00	648.55	87.00	4,124.30	258.55	-
13	FAJAR 13	10/06/2020	LL	10,915.40	4,892.66	34,474.60	1,090.05	1,772.30	900.25	321.40	2,500.35	380.42	170.50	5,059.45	1,099.85	-
14	FAJAR 1	11/06/2020	LL	-	18,798.00	1,709.70	1,506.00	2,209.70	741.00	-	3,023.10	506.00	165.00	6,382.70	573.00	32.00
15	FAJAR 3	12/06/2020	LL	14,324.00	5,500.00	70,541.00	650.00	3,837.00	858.00	-	7,266.00	604.00	-	6,425.00	1,515.00	-
16	FAJAR 6	30/06/2020	LL	2,413.00	28,242.00	-	724.00	1,743.00	1,811.00	-	1,410.00	390.00	-	5,889.00	108.00	-
17	IBU WIRA 3	03/07/2020	LL	47,760.00	-	2,198.00	80.00	2,110.00	4,884.00	-	-	698.00	-	3,727.00	701.00	-
18	FAJAR 11	21/07/2020	LL	8,192.00	18,139.00	58,794.00	2,485.00	4,105.00	-	1,495.00	3,585.00	1,111.00	-	13,466.00	1,869.00	216.00
19	FAJAR 7	03/08/2020	LL	6,420.90	17,332.00	4,969.00	1,295.80	2,353.40	1,289.80	-	1,514.00	-	-	4,969.00	558.00	-
20	FAJAR 17	18/08/2020	LL	183.00	1,237.00	2,819.00	8.00	546.00	93.00	-	276.00	-	-	1,172.00	223.00	-
21	FAJAR 1	10/09/2020	LL	4,060.00	13,206.00	47,926.00	-	5,081.00	247.00	157.00	2,635.00	-	-	10,931.00	2,460.00	-
22	FAJAR 2	16/10/2020	LL	391.00	12,964.00	23,287.00	720.00	5,982.00	-	686.00	1,488.00	590.00	-	11,474.00	1,698.00	-
23	FAJAR 6	16/10/2020	LL	37.00	12,137.00	20,699.50	616.00	2,876.00	-	374.00	871.50	198.00	-	10,796.00	1,366.00	-
24	FAJAR 13	20/10/2020	LL	224.80	9,081.80	19,900.00	389.70	4,857.10	589.20	158.50	750.30	893.10	-	11,615.60	1,948.20	-
25	FAJAR 7	26/11/2020	LL	174.20	5,185.20	31,270.60	1,265.60	2,632.70	135.60	466.00	1,460.90	384.70	79.20	7,320.20	1,525.00	-
26	FAJAR 17	01/12/2020	LL	195.50	2,537.50	21,380.00	532.20	2,713.10	631.70	-	581.40	291.50	-	5,586.70	904.30	-
27	FAJAR 9	03/12/2020	LL	1,143.00	12,870.20	46,880.00	611.10	9,690.00	523.00	1,257.30	2,440.80	445.00	-	15,850.10	3,269.40	-
28	FAJAR 8	11/12/2020	LL	4,122.50	5,679.40	45,300.00	65.70	6,185.30	543.90	1,401.80	2,594.60	806.80	153.60	11,528.30	2,745.20	-
TOTAL				**163,074.30**	**218,278.46**	**970,257.70**	**31,067.30**	**135,070.15**	**18,326.25**	**22,350.10**	**49,610.75**	**16,171.97**	**2,749.50**	**180,926.85**	**33,653.20**	**544.80**

Table 11: Quantities by species and gear transhipped in ports located in the IOTC area of competence

No	Port of transhipment	Name of Vessel	Date of transhipment	ALB	BET	BLM	BUM	OIL	MLS	SWO	YFT	TOTAL
1	Port Louis	Kha Yang 35	06/01/2020	6910	1145	340	580	2514	30	1521	6443	19483
2	Port Louis	KHA YANG 3	06/01/2020	9211	665	120	400	2909		1744	769	15818
3	Port Louis	KHA YANG 1	06/01/2020	8018	0	460	740	2423	30	1400	1530	14601
4	Port Louis	KHA YANG 9	06/01/2020	8378	445	120	150	2547	80	1502	1375	14597
5	Port Louis	KHA YANG 7	07/01/2020	10585	550	0	0	2153	570	1937	1417	17212
6	Port Louis	KHA YANG 5	07/01/2020	11926	820	350	1050	3748	60	1175	2366	21495
7	Port Louis	KHA YANG 333	25/04/2020	375460	0	0	0	0	0	0	0	375460
8	Port Louis	KHA YANG 333	29/05/2020	582624	0	0	0	0	0	0	0	582624
9	Port Louis	KHA YANG 333	25/06/2020	325680	14824	0	0	0	0	0	11336	351840
10	Port Louis	KHA YANG 333	27/07/2020	420639	17736	0	0	0	0	11240	9404	459019
11	Port Louis	KHA YANG 333	03/10/2020	423245	11965	0	220	3310	430	0	12420	451590
12	Port Louis	KHA YANG 333	29/10/2020	226400	8444	0	0	0	0	0	18316	253160
13	Port Louis	KHA YANG 333	04/12/2020	163630	9195	0	0	0	0	12990	65035	250850

6.6. Actions taken to monitor catches & manage fisheries for Striped Marlin, Black Marlin, Blue Marlin and Indo-pacific Sailfish

In the Terms and Condition of the ATF, No 18: The Master of this vessel shall not retain on board, trans-ship, land, any specimen smaller than 60 cm Lower Jaw Fork Length (LJFL) of any of the following species; Striped Marlin, Black Marlin, Blue Marlin and Indo Pacific Sailfish and shall ensure that all necessary steps have been taken to guarantee the safe release of unintentionally or accidentally caught.

DOF Malaysia includes report of Size Frequency (SF) in the logbook for all tuna and tuna like Species. From the logbook SF record, the average length (LJFL) are between 100 cm – 200 cm.

Table 12: Length (LJFL) by species recorded from report of size frequency

Species	Lower LJFL (cm)	Higher LJFL (cm)
Striped Marlin	151	214
Black Marlin	136	234
Blue Marlin	121	256
Indo Pacific Sailfish	122	178
Sword Fish	90	245

6.7. Gillnet observer coverage and monitoring

In the Terms and Condition of the ATF, No.5: All Malaysia tuna fishing vessels are not allowed to use fishing gears other than the licensed gears. Large-scale driftnets shall be prohibited. No large-scale driftnet is licensed in the Malaysian Waters. For small drift net vessel, 30% of field sampling are collected for data analysis.

6.8 Sampling plans for mobulid rays

Mobulid Rays are protected under **section 27 Fisheries Act 1985** and Fisheries (Control of Endangered Species of Fish) (Amendment) Regulations 2019. In the Terms and Condition of the ATF, No 15: The Master of this vessel: (i) is prohibited from using the vessel to target mobulid rays, sharks, or turtle; and (ii) shall ensure that all necessary steps have been taken to promote the live release. To date, no national research has been conducted on mobulid rays. No Mobulid rays found in the Malacca Straits.

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.

For additional, the size frequency of oceanic tuna was provided by the fishing vessels in the logbook and some of the oceanic tuna were measured at the landing site by the Port Inspector.

7.1. National research programs on blue shark

No specific national research programs on blue sharks.

7.2. National research programs on Striped Marlin, Black Marlin, Blue Marlin and Indo-pacific Sailfish

No national research programs on Striped Marlin, Black Marlin, Blue Marlin and Indo-pacific Sailfish.

7.3. National research programs on sharks

Research collaboration with SEAFDEC to undertake the management issues on sharks in Malaysia.

7.4. National research programs on oceanic whitetip sharks

No specific national research programs on oceanic whitetip sharks.

7.5. National research programs on marine turtles

As one of the conservation measures 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 join trails and training were conducted between the government and fishermen for the use of C-hook.

There are a total of 26 Turtle Hatcheries Centres throughout Malaysia and seven (7) turtle conservation and information centres in Malaysia have regularly implementing awareness program for student and fishermen communities.

7.6. National research programs on thresher sharks

No specific national research programs on thresher sharks.

Table 13: Summary table of national research programs

Project title	Period	Countries involved	Budget total*	Funding source	Objectives	Short description
Landing and biology of longtail and kawakawa tuna in the northeast of peninsular Malaysia	2014-2021	Malaysia	RM 1,000,000	National R&D Fund.	Landing trend by Species and spawning season of kawakawa	On going
Landing of Oceanic Tuna in West Malaysia	2014 - 2021	Malaysia	RM 1,000,000	National R&D Fund.	Landing trend by Species of oceanic tuna	On going

*(1 USD = RM 4.15)

8. Implementation of Scientific Committee Recommendations and Resolutions of the IOTC relevant to the SC.

Table 14: Scientific requirements contained in Resolutions of the Commission, adopted between 2012 and 2020.

Res. No.	Resolution	Scientific requirement	CPC progress
11/04	On a regional observer scheme	Paragraph 9	Malaysia has communicated with IOTC Secretariat on the Support for the implementation of the IOTC Regional Observer Scheme. DOF Malaysia also have installed CCTV on every vessel as a tool for EMS as an alternative for observer on board.
12/04	On the conservation of marine turtles	Paragraphs 3, 4, 6–10	Sea turtle is protected under section 27, Fisheries Act 1985 and Malaysia has published the National Plan of Action for Conservation and Management of Sea Turtles. The NPOA is currently being reviewed for further improvement. Malaysia has sets requirement in the license and ATF terms and condition for all fishing vessels to carry line cutters and de hookers on board. Release and discard table also included in the updated logbook for recording any interaction with the species.
12/06	On reducing the incidental bycatch of seabirds in longline fisheries.	Paragraphs 3–7	Malaysia requires all vessels operating in the area south of 25°S to take mitigation measures as required under license condition and ATF. All Malaysian flag fishing vessels are using weighted branch lines and tori lines as the mitigation measures on seabirds when operating in areas south of 25 °S.
12/09	On the conservation of thresher sharks (family alopiidae) caught in association with fisheries in the IOTC area of competence	Paragraphs 4–8	Any interaction of shark species includes Families Alophiidae to be recorded by the tuna longline operators. Fishing, storing or retaining on board, transhipping or landing in whole or in part, any of the following sharks shall be prohibited: species of the family Alopiidae; and Oceanic whitetip shark.

Res. No.	Resolution	Scientific requirement	CPC progress
			Release and discard table also included in the updated logbook for recording any interaction with the species.
13/04	On the conservation of cetaceans	Paragraphs 7– 9	Under Malaysian Fisheries Act 1985, Fisheries Regulation on (Control of Endangered Species of Fish) Regulation 1999, cetacean under dolphin group were protected. Release and discard table also included in the updated logbook for recording any interaction with the species.
13/05	On the conservation of whale sharks (*Rhincodon typus*)	Paragraphs 7– 9	Under Malaysian Fisheries Act 1985, Fisheries Regulation on (Control of Endangered Species of Fish) Regulation 1999, whale shark (Rhincodon typus) were protected and listed in Malaysia CITES Act 2008. Release and discard table also included in the updated logbook for recording any interaction with the species.
13/06	On a scientific and management framework on the conservation of shark species caught in association with IOTC managed fisheries	Paragraph 5–6	Each Malaysian tuna longline vessels fishing in the Indian Ocean have been provided with booklet on shark species identification for them to records any interaction and to report to the fisheries authority. Sharks and rays listed in CITES also listed in the Malaysia CITES Act 2008. Release and discard table also included in the updated logbook for recording any interaction with the species.
15/01	On the recording of catch and effort by fishing vessels in the IOTC area of competence	Paragraphs 1–10	Malaysia have updated the national logbook to include all the species as requested in Resolution 15/01 and submitted to the Secretariat in 2017 and in 2019 for purse seine. The updated logbook includes mandatory to provide size frequency and interaction with protected species. For vessels <24m, operating within EEZ, data collection using Vessel Operating Activity (LOV) and researcher enumerator.

Res. No.	Resolution	Scientific requirement	CPC progress
15/02	Mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs)	Paragraphs 1–7	Malaysia has started compiling data on size frequency for coastal fisheries from year 2017 – 2019. Malaysia had submitted the catch and effort data to the Secretariat as required under data to the secretariat as required under resolution 15/02. The size frequency of oceanic tuna was provided by the fishing vessels in the logbook and some of the oceanic tuna was measured at the landing site by the Port Inspector.
17/05	On the conservation of sharks caught in association with fisheries managed by IOTC	Paragraphs 6, 9, 11	Interaction on shark species by Malaysian tuna longliners were recorded in bycatch logsheet for release/discard. For shark species caught by within EEZ waters, the majority are from demersal species which are not listed under endangered species. The Master vessel shall ensure that all necessary steps have been taken to guarantee the safe release of shark that is unintentionally caught and report all incidents of the shark releases, including the status at time of release.
18/02	On management measures for the conservation of blue shark caught in association with IOTC fisheries	Paragraphs 2-5	National logbook includes reporting on blue shark, released/discarded and size frequency. No specific national research programs on blue sharks.
18/05	On management measures for the conservation of the Billfishes: Striped marlin, black marlin, blue marlin and Indo-Pacific sailfish	Paragraphs 7 – 11	National logbook includes reporting on blue shark, released/discarded and size frequency. No specific national research programs on blue sharks.
18/07	On measures applicable in case of non-fulfilment of reporting obligations in the IOTC	Paragraphs 1, 4	National logbook includes reporting on shark species, released/discarded and size frequency. Malaysia sent full set of data reporting in 2020 including data on zero catches.

Res. No.	Resolution	Scientific requirement	CPC progress
19/01	On an Interim Plan for Rebuilding the Indian Ocean Yellowfin Tuna Stock in the IOTC Area of Competence	Paragraph 22	Malaysia longliners catches of yellowfin tuna for 2020 were below 5000 mt.
19/03	On the Conservation of Mobulid Rays Caught in Association with Fisheries in the IOTC Area of Competence	Paragraph 11	Mobulid Rays are protected under section 27 Fisheries Act 1985 and Fisheries (Control of Endangered Species of Fish) (Amendment) Regulations 2019. To date, no national research has been conducted on mobulid rays.

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