



**Bangladesh National Report to the Scientific  
Committee of the Indian Ocean Tuna Commission,  
2024**

**Department of Fisheries (DoF)  
Ministry of Fisheries and Livestock  
Bangladesh**

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**INFORMATION ON FISHERIES, RESEARCH AND STATISTICS**

<p>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, <b>for all fleets other than long line</b></p>	<p>Yes 30/06/2024</p>
<p>Similarly, in accordance with IOTC Resolution 15/02, provisional <b>long line data</b> for the previous year was provided to the IOTC Secretariat by 30 June of the current year. <b>REMINDER:</b> Final long line data for the previous year is due to the IOTC Secretariat by 30 Dec of the current year</p>	<p>Yes 30/06/2024</p>
<p>If no, please indicate the reason(s) and intended actions:</p>	

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## Executive Summary

Tuna and tuna-like other highly migratory species have become high priority in the list to the Government of Bangladesh (GoB) for a couple of years especially being after demarcation of sea boundary with the neighbours that lead to open up the access of Bangladeshi fishers to the ABNJ. But it is not possible yet to take this opportunity by harnessing tuna and tuna-like fishes from expanded EEZ and high seas because of initiation stage of such fishing industry. Simultaneously, the study of tuna and tuna-like fishes of Bangladesh marine waters are one of the most poorly studied areas of the world although it possesses high potentiality. Proper attention is needed in every aspect of exploitation, handling and processing, export and marketing, as well as in biological and institutional management strategies. Therefore, a pilot project has been launched to find out the opportunity of tuna and tuna-like fishes from Bangladesh marine waters and ABNJ on a pilot basis. Basically, there is no specific tuna fishery in Bangladesh. Tuna and tuna-like fishes are by catch from industrial fishing vessels (trawler), as well as by artisanal mechanized fishing vessels. Statistically, it shows that tuna and tuna-like fishes (mackerels) comprise about 3.83% (5597 MT) in industrial sector and 1.77% (9454 MT) in artisanal mechanized sector in the year 2022-23. Still bill fishes are reported as “other marine fish” in the fish logbooks. Nowadays, the catch and effort data system for marine sector is being developed by Sustainable Coastal and Marine Fisheries Project (SCMFP) through FAO and it seems that after few years’ species wise data for tuna and tuna-like fishes will be available. This report, thereby tried to articulate in a frame as per format of commission incorporating a salient feature of the marine fisheries of Bangladesh. Besides, there was no reporting of sea bird interactions with the both industrial and artisanal fishery during the reporting period. Similarly, there was no reporting of mortality of sea turtles, marine mammals and whale sharks, which are protected under existing rules and regulations of Bangladesh.

## **1. BACKGROUND/GENERAL FISHERY INFORMATION**

The contribution of marine resources to the growth, prosperity and employment generation has been remarkably addressed at the highest tiers of the government in Bangladesh. Marine Fisheries is a major source of food security for millions of coastal fishers' and households, who also propagate further multiplier employment in ancillary activities including fish processing and marketing. The coastline of the country comprises about 710 km extending from the tip of Teknaf in the south-east to the south-west coast of Satkhira. The historic settlement of Maritime dispute with Myanmar and India through the verdicts of the International Tribunal for the Law of the Sea (ITLOS) and International Court of Arbitration (ICA) established sovereign rights of Bangladesh to explore, exploit and manage living and non-living resources of the Bay of Bengal within 1,18,813 sq. km area (DoF, 2015).

Bangladesh has vast marine fisheries resources with 475 species of fish, 36 shrimp, 5 lobsters, 12 crabs and 33 sea cucumbers and a lot of aquatic fauna and flora. The artisanal sector plays a vital role in marine fisheries production of Bangladesh. This sector contributes 80.57% of the production targeting Hilsa, Bombay duck, Ribbon fish, Croakers, Catfish, Sardines, and Thread Fin Breams etc. as major groups. The industrial sector contributes to only 19.43% of the total marine production with demersal and pelagic fin fish and shrimp catches (DoF, 2022). To elucidate present stock biomass in Bangladesh marine waters, a survey and research vessel R.V. Meen Sandhani has been added into country's fishing fleet in the year June 2016.

Shrimp, demersal and pelagic surveys are being carried out through this research vessel from 2016-17 fiscal year, which provided stock status of some commercially important species in 2019. In parallel, stock biomass and Maximum Sustainable Yield (MSY) of industrial shrimp and fish stock based on trawl catch log has been elucidated in 2018 and 2019 (Barua *et al.*, 2018, & Barua, 2019). Though, a number of surveys conducted since 1958 to 1984, proved the potentialities of ground fish, shrimp and pelagic stock. It is very important to know the actual stock of pelagic, ground fish and shrimp in the new boundary of Bangladesh and existing area of her as well.

The average of last 10 year's production shows that the industrial fishery based on trawl fishery (shrimp and fish trawl) contributes around 20% of the total marine production and the artisanal small-scale fisheries contributes 80% of the total marine landings. There is lack of data on sustainable harvest of marine fisheries resources. Besides, due to poor socioeconomic conditions and lack of alternate income source of fisher folk, maintaining sustainable harvest of marine fisheries resources has become very difficult. Management of marine fisheries of Bangladesh has focused predominantly on industrial trawler fleets, with limited attention being paid to artisanal sectors. This has led to uncontrolled expansion of fishing efforts, which has put forward the sector in crisis of artisanal fishers are overfishing. The poor putting more and more nets of fine mesh to survive, which exerts excessive pressure on the fish stocks and increasingly catching

less valued and under-sized juvenile and consequently, fish stocks are plummeting, which outweigh the sustainable strategy taken by government.

The marine capture fisheries of Bangladesh consist of complex and multispecies in nature. This sector contributes 13.82% of the total fish production of Bangladesh (DoF, 2023), despite of a sizable marine and brackish water area under the EEZ. The strategic development of this sector has been initiated for properly addressing the concern of the sector by the GoB. Bangladesh is very much concerned about the conservation of marine fisheries resources and is keen to develop deep water fishing to increase the fish production as an alternate to demersal fishing. For this, the Government has already taken measures such as conversion of bottom trawlers to midwater trawlers, suspension on increase of trawlers and implementation of season ban for 65 days from 20 May to 23 July and 22 days hilsa ban during peak breeding season of hilsa.

There are generally fished several species of tunas where mostly are neritic tunas. These are Frigate tuna (*Auxis thazard*), Bullet tuna (*Auxis rochei*), Eastern little tuna/kawakawa (*Euthynnus affinis*), Big eye tuna (*Thunnus obesus*), Long tail tuna (*Thunnus tonggol*) and Skipjack tuna (*Katsuwonus pelamis*). The abundance of Yellowfin tuna (*Thunnus albacares*) is incidental. Though small in sizes, *Katsuwonus pelamis*, *Thunnus tonggol* and *Auxis rochei* are usually shown in the catch log of trawlers and *Euthynnus affinis*, *Auxis thazard* and *Thunnus obesus* are caught in coastal waters by artisanal gill nets and hooks & lines as by catch. Mackerels including Indo-Pacific King mackerel (*Scomberomorus guttatus*) and Narrow-barred Spanish mackerel (*Scomberomorus commersoni*) are substantially caught by industrial trawlers and mechanized artisanal vessels. Other tuna-like bill fishes are Sword fish (*Xiphias gladius*), Indo-Pacific sailfish (*Istiophorus platypterus*), Black marlin (*Istiompax indica*), and Wahoo (*Acanthocybium solandri*) reported in both industrial and artisanal landings.

## **2. FLEET STRUCTURE**

The marine fisheries sector of Bangladesh is divided into three sub-sectors: industrial, mechanized and artisanal. There was active 232 industrial fishing trawlers and around 30 thousand mechanized boats in fishing fleet of Bangladesh (DoF, 2023). The artisanal boats relatively engaged to use of simple gear such as gillnets, set bag nets, trammel nets, hooks & lines by the array of mechanized and non-mechanized boats. Non-mechanized boat is engaged in daily fishing by nature in very low depth close to coastline with 3-5 fishermen. Mechanized boat is typically fishing for 5 to 10 days within 40 m depth contour using ice facilities. The number of fishermen varies from 10 to 25 based on types of gear used.

Industrial trawlers are of two kinds including freezer and iced (wooden hull) trawlers, being engaged in fishing in the EEZ of Bangladesh. Freezer trawlers are divided into shrimp and fish trawlers. Fish trawlers are also of two types like demersal and mid-water trawlers. All wooden hull trawlers have chilling facilities and almost all steel hull trawlers have freezing facilities for

preservation of their caught fish. The industrial fishing fleet has a capacity of gross tonnage ranged between 56-148 MT for wooden hull and 251-668 MT for steel hull trawlers. The overall length is ranged from 18.5-26.50 m for wooden hull trawlers and 34-54 m for steel hull trawlers. The engine powers are varied from 420-600 BHP for wooden hull and 716-1850 BHP for steel hull, but mostly within 500-1000 BHP. These industrial trawlers are mainly engaged in harvesting demersal fish and shrimp, but in recent years mid-water trawlers have been added to the fleet for fishing small pelagic species.

The fish trawlers use mostly high opening bottom trawls from the stern side with 60 mm mesh size at the cod-end. The head-rope length in the fish trawler fleet varies from 18 m to 32 m. Almost all the trawlers are equipped with modern navigations, communication and fish finding equipment. Trawl fishing has been restricted by ordinance to operate beyond 40 m depth contour. The smaller wooden trawlers usually sail for 15 days and steel-hull vessels for 30 days in one trip. They usually complete 5-6 hauls in a day taking 3.0-3.5 hours per haul (Barua *et al.*, 2014). But the number of hauling and fishing days substantially depends on weather, sea worthiness and functioning of trawler itself. Shrimp trawlers usually have 150-250 gross tonnage capacity including main engine power of 500-900 BHP. The maximum day of fishing per trip is 30 days.

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

Fishing type	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
a) Shrimp Trawler	32	30	32	37	37	30	27	32	33
b) Fish Trawler	175	174	169	216	218	190	184	199	199
Sub-total	207	204	201	253	255	220	211	231	232
a) Mechanized boat (MB)	33859	32859	32859	32859	32859	32859	32859	32859	29358
b) Non-Mechanized boat (NMB)	33810	34810	34810	34810	34810	34810	34810	34810	-
Sub-total	67669	67669	67669	67669	67669	67669	67669	67669	29358
a) Gill net	115028	119958	118353	118353	37190	37190	37190	37190	25992
b) Set Bag net (SBN)	40824	40824	42429	42429	20750	20750	20750	20750	2932
c) Long line (Hooks & Lines)	11863	11863	11863	11863	3225	3225	3225	3225	93
d) Trammel net	422	422	422	422	131	131	131	131	-
e) Other gear	15640	15640	15640	15640	6373	6373	6373	6373	341
Sub-total	183777	188707	188707	188707	67669	67669	67669	67669	29358



Table 1(b): National fleet structure based on 2021-22 report

Industrial Fishing vessel over 24 m					Artisanal Fishing vessel below 24 m				
Type of trawler	Number	Gear used	Species caught	Tuna and Tuna-like fish	Vessel type	Number	Gear used	Species caught	Tuna and Tuna like fish caught
Shrimp trawler (steel hull of 30-43 m LOA, 450-750 BHP)	32	shrimp trawl	Shrimp and fish as by catch	no	Mechanized	29358	Gill net, MSBN <sup>1</sup> Bottom hook and line for Jew fish	Hilsa, different species of shrimp jew pomfret, anchovies, ribbon etc.	Neritic tuna and tuna like fish is caught in Hilsa gillnet which is not estimated
Fish trawler (steel and wooden hull 24-54 m LOA, 520-1450 BHP)	77	fish trawl	Mixed species mainly sardines, croakers, catfish, redfish, ribbon fish etc.	about 5-6 % of tuna and tuna-like fishes					
Mid water trawler (steel hull, 36-45m LOA, 1050-1850 BHP)	122	Mid water trawl	Mixed species mainly sardines, croakers, catfish, redfish, ribbon fish etc.	about 7-8% of tuna and tuna-like fishes					

<sup>1</sup> Marine Set Bag net

Table 1(c): Gear and their operation

Name	Species caught	Depth of operation
Trawl	Tiger and other penaeid shrimps, Catfish, Jew fish, ribbon fish, mackerels, scads etc	40-100 m
Gill net	Hilsa, Indian salmon, mackerels, pama croaker, grunters etc	8-10 m (fixed), up to 30 m (drift nets) up to 80 m (bottom set gill net)
MSBN	Penaeid shrimps, anchovies, bombay duck, clupeids, sea perch	10-30 m
Bottom long line	Sciaenid	10-30 m
Beach seine	Small penaeid shrimps, clupeids, anchovies, sciaenids	8-10 m

### 3. CATCH AND EFFORT (BY SPECIES AND GEAR)

The marine fishing sector is governed by the Marine Fisheries Act, 2020 and followed by subsequent Rules. No fishing vessel is allowed in fishing without valid license in Bangladesh marine waters. All industrial trawlers and mechanized fishing boats are required to have license for fishing. The trawlers are allowed to catch fish/shrimp in area of no shallower than 40 m depth. Mechanized fishing boats are allowed to fishing within 40 m depth. Industrial fishing fleet has mandatorily to take sailing permission (SP) from Marine Fisheries Office (MFO) under Department of fisheries (DoF) by submitting supporting documents and stipulated fee.

Submission of catch log and tally sheet of previous trip is prerequisite during application for sailing permission. Vessels are randomly inspected by personnel of MFO of DoF before and after completion of trip as shore-based inspection. The Monitoring, Control and Surveillance (MCS) activities for industrial fishing fleets are well monitored by the patrolling vessel of Bangladesh Navy (BN) and Bangladesh Coast Guard (BCG). Recently, personnel from MFO of DoF are being on board as observer in the patrolling vessel of BN and working in concert with them. As the demersal fishes are under pressure, the focus of fishing towards pelagic resources are increasingly being observed after conversion of bottom water trawlers into mid water trawlers.

Table 2(a): Fish Production 2017-18 to 2021-22

Year	Marine production (MT)	No of trawlers	Industrial (MT)	No of Boats	Artisanal (MT)
2017-18	654687	253	120087	M 32859, NM 34810	534600
2018-19	659911	255	107236	M 32859, NM 34810	552675
2019-20	671104	220	115354	M 32859, NM 34810	555750
2020-21	681239	211	119121	M 32859, NM 34810	562118
2021-22	706030	231	137170	M 32859, NM 34810	568860
2022-23	679385	232	146037	M 29358 NM 0	533348

\*M-Mechanized, \*NM-Non mechanized

Table 2(b): Industrial Fisheries species wise catch (MT)

Species/Group	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Shrimp	3682	2733	2436	3069	3301	2970
Hilsa	11060	12300	9616	7781	11046	8138
Tuna & tuna –like fish	-	-	-	7893	12102	5597
Sardine	40936	27421	16154	33869	37720	50783
Bombay duck	6050	2656	6494	6936	2787	1444
Indian Salmon	0	0	0	0	0	0
Pomfret	849	849	1205	1355	1137	1725
Croaker	3862	5020	6271	15385	5080	5665
Cat fish	2735	3010	5223	5116	4198	4928
Sharks and Rays	549	724	602	5400	3915	294
Others	50364	52523	67353	32317	55884	64493
<b>Total</b>	<b>120087</b>	<b>107236</b>	<b>115354</b>	<b>119121</b>	<b>137170</b>	<b>146037</b>

Table 2(c): Artisanal Fisheries species-wise catch (MT)

Species/Group name	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Shrimp	45165	40016	40380	43228	44305	43793
Hilsa	273440	278016	294950	305812	310825	291874
Tuna & tuna –like fish	-	-	-	14237	9047	9454
Sardine	550	835	660	650	712	717
Bombay duck	69035	65445	64255	64986	79873	80498
Indian Salmon	487	295	177	163	199	200
Pomfret	11050	10155	8818	7859	10343	10327
Jew fish	31565	36580	35672	33280	36276	37089
Cat fish	6720	8445	8387	7083	10368	10377

Shark & Ray	3425	3550	2771	2828	3102	3057
Other fish	93163	109338	99680	81992	63810	45962
<b>Total</b>	<b>534600</b>	<b>552675</b>	<b>555750</b>	<b>562118</b>	<b>568860</b>	<b>533348</b>

**Figure 1a:** Historical annual catch by industrial trawler fleet (gear-wise), for the IOTC area of competence from 2017-18 to 2022-23.

**Figure 1b:** Historical annual catch by artisanal fleet (gear-wise), for the IOTC area of competence from 2017-18 to 2022-23.

**Figure 2a:** Distribution of fishing effort, by gear type for the national fleet in the IOTC area of competence.

**Figure 2b.** Trend of industrial fishing efforts, by gear type for the national fleet in the IOTC area of competence.

**Figure 3b: Distribution of marine industrial fish catches by major species/group in 2022-23**

#### **4. RECREATIONAL FISHERY**

There is no record of recreational fishery in Bangladesh marine waters.

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## 5. ECOSYSTEM AND BY CATCH ISSUES

The coastal zone of Bangladesh is categorized as tropical maritime climate. Four distinct seasonal weather patterns including dry-winter, pre-monsoon, monsoon and post-monsoon period are prevailed. Precipitation continues from late May up to mid of October. The protection of environment is to key to mitigation of climate change relating planning. The marine environment is a huge carbon store. It will continue to be carbon store when the integrity of the ocean environment is maintained in terms of biodiversity and all the endemic flora and fauna is able to survive. In this way it can absorbs shocks to changes its ecosystem. Pollution controls, maintaining the unique composition of flora and fauna at all levels and depth are imperative of this condition. So, responsible ecosystem-based fisheries management is the key to climate change adaptation and mitigation measure in fisheries sector.

Fin fish species are non-target species in catch composition of shrimp trawl as by-catch, which now accounts for approximately 35%-40% of total catch (Hoq *et al.*, 2013). In previous days, high level of discarded fin fish was reported and rose to approximately 70% of total catch (Lamboeuf, 1987). Subsequently, regulation has framed banning on discarded by-catch at sea, the use of prescribed mesh size for trawlers, gillnets and set bag nets. There is no by-catch in true sense as almost all fish caught are brought ashore as alternate use of fishes which are not consumed directly. Discarding of trash fish/by-catch at sea is forbidden by technical guidelines for marine fisheries management, 2023. The main reason is generated high valued market of dried low-priced trash fish as reasonable protein source for established poultry and aquaculture industry.

### 5.1. Sharks

In Bangladesh, it is not a targeted fishery, rather a by-catch of hilsa and Indian salmon fishery. There is no fishing zone demarcation for shark fisheries. Artisanal fishers are allowed to fish from shoreline to 40 m depth zones and industrial fish trawlers are allowed to fish beyond 40 m depth zones. Sharks are mainly caught by artisanal fishery with drift gill nets, used for catching hilsa and Indian salmon, set bag nets, long lines and trammel nets within 10-80 m depth ranges. Shark products are exported and foreign currency is earned.

A National Conservation Strategy (NCS) for Sharks and Rays in Bangladesh is in drafting process by the Department of Forest. The priorities of the NCS are to significantly improve the long-term survival of threatened sharks and rays in Bangladesh and ensure the sustainability of fisheries vital to the food security and livelihoods of coastal communities. Research, policy, capacity building, education and governance interventions are proposed for implementing the conservation strategy and measuring its effectiveness.

**5.1.1. NPOA sharks:** Draft version of the National Plan of Action (NPOA) for the conservation of sharks has been developed by the Bay of Bengal Large Marine Ecosystem (BOBLME) programme in 2014 and hand overed to the Ministry of Fisheries and Livestock. Now, the Department of Fisheries is reviewing the instrument to consider all concerned issues and the IOTC requirements to address of the key national strategies related to



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conservation of sharks. After review process, it would be submitted to the Ministry of Fisheries and Livestock for final approval.

**5.1.2. Sharks finning regulation:** All sharks and rays found in the EEZ of Bangladesh are listed as Schedule-1 and Schedule-2 under the Wildlife (Conservation and Security) Act 2012 accordingly. Species under Schedule-1 are strictly protected; killing, landing, buying and selling, or eating are prohibited. Sharks defining on board is prohibited by the technical guidelines for marine fisheries management, 2023 (instruction no 12, by-catch management).

**5.1.3. Blue shark:** Blue Shark is listed in the schedule-2 under the Wildlife (Conservation and Security) Act 2012. Species under Schedule-2 are strictly protected; killing, landing, buying and selling, or eating are permitted by the approval of Department of Forest. There is no species wise collection of data for shark, and rays in national database, though there were some data on species wise for a specific region in previous years, which was mentioned in previous year reports. However, very little amount of shark, and rays in industrial catch, which was 294 MT (0.20%) in annual industrial catch of 2022-23. But, the artisanal landing of shark, and rays was 3057 MT (0.57%) of total artisanal catch in 2022-23.

## 5.2 Seabirds

There is no long liner and purse seiner in Bangladesh. So, there were no reported instances of sea bird interactions in any of the Bangladesh marine fishery.

## 5.3 Marine Turtles

All the five species of marine turtles occurring in Bangladesh marine waters are listed in the Schedule-I of the Bangladesh Wildlife (Conservation and Security) Act 2012. Turtle Extruder Device (TED) is used in shrimp trawlers to let the turtle out during bottom fishing. TED is mandatory for all shrimp trawlers by the Marine Fisheries Rules, 2023 (rule no. 10(17)). Demersal fish trawlers are being modified to Mid-water trawlers gradually. It is necessary to introduce provision of reporting the catch of turtle in fish trawl and gillnet fisheries and take measures to reduce catch and survival of turtle.

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

Other ecologically related species (marine mammals, whale sharks) shall not be hunted, killed or captured according to the Bangladesh Wildlife (Conservation and Security) Act 2012. For the protection and conservation of marine mammals and other marine animals, it is well noted on Marine Fisheries Rules, 2023 (rule no. 10(21 & 23)) and the technical guidelines for marine fisheries management, 2023 (instruction no 12, by-catch management).

## 6. NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

### 6.1. Log sheet data collection and verification

IOTC species have been included to the fishing log sheet and it is mandatory to submit catch log, as well as catch report of previous trip to the MFO of DoF for each voyage to take sailing permission for next trip. Every industrial catch log, as well as catch report has been checked and verified by inspectors.

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## **6.2. Vessel Monitoring System**

There were 133 trawlers under Vessel Monitoring System (VMS) but now plan has taken to implement new VMS interface and hopefully, every industrial vessel and a specific percentage of mechanized fishing boats will come under VMS/AIS system within short possible time by the finance of Sustainable Coastal and Marine Fisheries Project (SCMFP), DoF, Bangladesh. The Vessel Monitoring System is now incorporated to legal framework under technical guidelines for marine fisheries management, 2023 (instruction no. 14 (1 & 2)).

## **6.3. Observer programme**

No conventional observer scheme yet to on-board to monitor industrial fishing. The national fishing fleet is fully depending on BN and BCG for fishery protection at sea. But, officers of Marine Fisheries Office of DoF were on board as observer in the patrolling vessel of BN on test basis. Though, it is not continued after 2 operations in 2016. Then, it was carried out by BCG ship in January 2019. Though, it was not continued by BCG ship since then. But it has now implemented as a pilot basis in industrial trawl fleet on a randomize fashion through SCMFP. Under SCMFP, 45 numbers of onboard observers have been deployed. However, longline and purse seine are not operating yet in the fleet. The Observer programme is now incorporated to legal framework under technical guidelines for marine fisheries management, 2023 (instruction no. 14(6)).

## **6.4. Port sampling programme**

Marine Fisheries Survey Management Unit (MFSMU) of DoF has mandate to conduct port sampling for artisanal fisheries. Artisanal port sampling has been conducting by the support of SCMFP project through 200 plus landing sites along the 710 km coastline of Bangladesh.

## **6.5. Unloading/Transshipment**

Both unloading by foreign fishing vessels and sea transshipment are not permitted in Bangladesh marine waters under the prevailing rules/regulations.

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

Not yet taken action to monitor catches and manage fisheries for Striped Marlin, Black Marlin, Blue Marlin and Indo-pacific Sailfish.

## **6.7. Gillnet observer coverage and monitoring**

More than 2.5 km long gill net has been banned by the legal framework under technical guidelines for marine fisheries management, 2023 (instruction no. 02 (IV & V)). Observing of gill nets is done by the inspectors at Marine Fisheries Surveillance Check-post at Patanga, Chattogram.

## **6.8. Sampling plans for mobulid rays**

On behalf of the Department of Forest, Wildlife Conservation Society (WCS) of Bangladesh is doing the job.

## **7. NATIONAL RESEARCH PROGRAMS**

### **7.1. National research programs on blue shark**

Not yet but it has plan to take in near future.

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

Not yet but it has plan to take in future.

### **7.3. National research programs on sharks**

Various research programs on shark have taken sporadically by various organizations and now have taken initiative by DoF to articulate them in a coordinated way.

### **7.4. National research programs on oceanic whitetip sharks**

Not yet but it has plan to take in future.

### **7.5. National research programs on marine turtles**

Some research organizations have conducted research on turtles but not accumulated them and plan has taken to articulate them in an organized way.

### **7.6. National research programs on thresher sharks**

Not yet but it has plan to take in future.

Table 8. Summary table of national research programs, including dates.

Project title	Period	Countries involved	Budget total	Funding source	Objectives	Short description
Sustainable Coastal and Marine Fisheries Project (SCMFP)	2019-2023	Bangladesh	USD281.60M	World Bank and GoB	Strengthening capacity of national marine fisheries sector	Stock assessments, abundance/biomass estimation using research and survey vessel RV Meen Sandhani and various biological and oceanographic studies are being carried out.
Pilot Project for Extraction of Tuna and Similar Pelagic Fish in the Deep Sea	July 2020 to June 2023	Bangladesh	BDT61.7Cr	GoB	To create trained and skilled manpower for deep-sea tuna and homogeneous fishing	Under this pilot project to procure tuna long liners, tuna and similar fish will be caught from deep-sea and international waters.

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

**Table 9.** Scientific requirements contained in Resolutions of the Commission, adopted between 2012 and 2019.

Res. No.	Resolution	Scientific requirement	CPC progress
12/04	On the conservation of marine turtles	Paragraphs 3, 4, 6–10	TED is used in shrimp trawlers. Demersal fish trawlers are modifying to Mid-water trawlers gradually. It has planned to introduce provision of reporting the catch of turtle in fish trawl and gillnet fisheries and take measures to reduce catch and increase survival of turtle.
12/06	On reducing the incidental bycatch of seabirds in longline fisheries.	Paragraphs 3–7	No tuna long liners yet and no reporting of catching seabirds by national fishing fleet.
12/09	On the conservation of thresher sharks (family alopiidae) caught in association with fisheries in the IOTC area of competence	Paragraphs 4–8	Thresher sharks are strictly protected under Schedule-1 of the Wildlife (Conservation and Security) Act 2012; killing, landing, buying and selling, or eating are prohibited.
13/04	On the conservation of cetaceans	Paragraphs 7–9	No purse seine, so not applicable. In addition, cetaceans are protected under the Wildlife (Conservation and Security) Act 2012
13/05	On the conservation of whale sharks ( <i>Rhincodon typus</i> )	Paragraphs 7–9	No purse seine or FAD, so not applicable. In addition, whale sharks are protected under Schedule-1 of the Wildlife (Conservation and Security) Act 2012; killing, landing, buying and selling, or eating are prohibited.
13/06	On a scientific and management framework on the conservation of shark species caught in association with IOTC managed fisheries	Paragraph 5–6	NPOA for shark is under development process, which may incorporate the IOTC requirements.
15/01	On the recording of catch and effort by fishing vessels in the IOTC area of competence	Paragraphs 1–10	Have well-organized recording system includes catch log in industrial fishery and plan to introduce electronic system there. Simultaneously, it is now mandatory to maintain catch log in mechanized fishing boat and must submit them for taking sailing permission (SP) of next trip as per Marine Fisheries Act 2020.
15/02	Mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting	Paragraphs 1–7	Have statistical report of industrial, mechanical and artisanal fishing.

Res. No.	Resolution	Scientific requirement	CPC progress
	Parties (CPCs)		
17/05	On the conservation of sharks caught in association with fisheries managed by IOTC	Paragraphs 6, 9, 11	NPOA for shark is under development process, which may incorporate the IOTC requirements.
18/02	On management measures for the conservation of blue shark caught in association with IOTC fisheries	Paragraphs 2-5	NPOA for shark is under development process, which may incorporate the IOTC requirements.
18/05	On management measures for the conservation of the Billfishes: Striped marlin, black marlin, blue marlin and Indo-Pacific sailfish	Paragraphs 7-11	Not yet but it has plan to take action in future.
18/07	On measures applicable in case of non-fulfilment of reporting obligations in the IOTC	Paragraphs 1,4	As a CPC, Bangladesh trying to comply all reporting templates asked by IOTC.
19/01	On an Interim Plan for Rebuilding the Indian Ocean Yellowfin Tuna Stock in the IOTC Area of Competence	Paragraph 22	There are no Long Liner and Purse Seiner in Bangladesh, as well as, yet there is no YFT reported in trawl fishery.
19/03	On the Conservation of Mobulid Rays Caught in Association with Fisheries in the IOTC Area of Competence	Paragraph 11	Mobulid Rays are strictly protected under Schedule-1 of the Wildlife (Conservation and Security) Act 2012; killing, landing, buying and selling, or eating are prohibited. In addition, NPOA for shark is under development process, which may incorporate the IOTC requirements.
21/01	On an Interim Plan for Rebuilding the Indian Ocean Yellow Tuna Stock in the IOTC Area of Competence (if not provided under Res 19/01 above)	Paragraph 23	There are no Long Liner and Purse Seiner in Bangladesh.
22/04	On a regional observer scheme	Paragraph 12	There are no Long Liner and Purse Seiner, as well as no high sea fishery in Bangladesh.

**9. LITERATURE CITED**

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