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Somali National Report to the Scientific Committee of the Indian Ocean Tuna Commission, 2018

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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 2018, final data for the 2017 calendar year must be provided to the Secretariat by 30 June 2018)	Yes DD/MM/YYYY
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 2018, preliminary data for the 2017 calendar year was provided to the IOTC Secretariat by 30 June 2018). **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 2018, final data for the 2017 calendar year must be provided to the Secretariat by 30 December 2018).	NO DD/MM/YYYY
If no, please indicate the reason(s) and intended actions: Somalia does not have any Pure seine or Longliners operating under its flag, and the only fleet currently operating in Somalia is a small artisanal fleets ranging from 3 – 10 m made of glass reinforced plastic or wood operating in coastal waters. Therefore, Somalia has taken actions to improve the catch data collection system for pelagic fisheries. Project Kalluun – a partnership between MFMR, FAO, Secure Fisheries, and City University (CU) – will pilot new fisheries data collection and community engagement. Its objective is to strengthen the data collection, processing, and reporting system to enhance the quality of data by increasing coverage and representativeness. Efforts have been made to improve sampling area selection, train data collectors on sampling and species identification, and revise data forms. Special attention was paid to identify and record species managed by the IOTC.	

Executive Summary [Mandatory]

Somali has the longest coastline in Africa (3,330km) and an EEZ of 1,165,500 Km2, there is potential to sustainably increase employment, food security, nutrition and revenues from its fisheries but there is currently no unified fisheries management. The fishery resources in Somali waters are said to be one of the richest in the African continent.

The marine fisheries can be further divided into offshore (conducted by foreign vessels), coastal or artisanal (limited to waters of the relatively narrow continental shelf, operated by traditional vessels and vessels with outboard/inboard engines) and Houri by traditional boats. The fishing seasons of Somali waters is governed by the monsoon winds that occur in the calendar year between May and September. In this period, high waves and strong winds force small and medium size commercial boats not to call at Somali ports. The fishing days of the artisanal fishery varies between 220-240 days per year while the offshore fishing vessels were forced to change their fishing ground, gear or target species.

Large pelagic species including tuna and tuna-like species such as yellow-fin, big-eye, skipjack, and mackerel are the most highly priced species locally. Although they are highly migratory, the traditional fishing grounds for these species are found along the Indian Ocean from latitude 05 to 100 N due to upwelling that occurs twice annually in the period of southwest monsoons. It is also known that there are good fishing opportunities in the Gulf of Aden and Indian Ocean for tuna during the Southwest monsoon in the deeper waters.

Besides, there is no MCS of the marine resources and centralize data collection system on marine products on both inshore and offshore fisheries. Strengthen its capacity in development and implementation of central database along its coast for artisanal fishery is the key priority areas in Somalia.

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1. BACKGROUND/GENERAL FISHERY INFORMATION

Somali fisheries offer great potential for growth to improve coastal livelihood security. The Federal Government of Somalia, regional governments, and the international community have prioritized coastal industries, especially fisheries, in their planned development efforts. Previous and current efforts have been predominantly concentrated in the most populated coastal cities, but there are many opportunities to create projects in underserved areas that will improve local food and economic security while delivering long-term benefits and positive returns on investment.

Though the Somali Fisheries Law requires logbooks in order for domestic or foreign fishers to receive a fishing license, [1] there is currently no uniform or coordinated way for data to be collected from small- scale fishers, either through sampling schemes or through direct catch reporting. On board observers are not feasible on small vessels. Data collection at landing sites would generate needed information on the status of fisheries and ensure fishers are following regulations. These programs could be unannounced and randomized by site to maximize spatial coverage and minimize costs. Funding for these programs could come from revenue generated by license fees, and the international community, in consultation with local fisheries, could be involved in funding and training.

Therefore, Somalia has taken several actions to improve the catch and effort data collection system for artisanal fisheries. Project Kalluun – a partnership between MFMR, FAO, Secure Fisheries, and City University (CU) – will pilot new fisheries data collection and community engagement. Its objective is to strengthen the data collection, processing, and reporting system to enhance the quality of data by increasing coverage and representativeness. Efforts have been made to improve sampling area selection, train data collectors on sampling and species identification, and revise data forms. Special attention was paid to identify and record species managed by the IOTC.

Project Kalluun will expand throughout Somalia. Fisheries Inspectors working for MFMR have partnered with CU marine science students to collect foundational catch data (e.g., species, length, weight, boat metrics) based on a standardized form. The study has originated in Liido and Hamarweyne as a pilot area; later (it is hoped), the model will be introduced to all other waters in Somalia.

2. FLEET STRUCTURE

Somalia does not have any Pure seine or Longliners operating under its flag, and the only fleet currently operating in Somalia is a small artisanal fleets ranging from 3 – 10 m made of glass reinforced plastic or wood operating in coastal waters. With the exception small artisanal fishing fleet, Somalia does not have any fishing vessels targeting tuna and tuna-like species in the Indian Ocean Glazer, et al. (2015). There is no vessel of or above 24m, or less than 24m fishing outside of the Somali EEZ, targeting tuna and tuna-like species and flagged in Somalia, and therefore there is no Somali vessel on the IOTC Record of Authorized vessels. The Somali artisanal fleet does not specialize in targeting tuna and tuna-like species and catch IOTC species on an opportunistic basis like many other artisanal fisheries of the Indian Ocean.

For the artisanal fleet, the number of fishermen and fishing vessels is largely unknown, however, through an FAO project, Somalia has started to registered fishermen and so far a total of 65,144 fishermen have been registered. More than half are reported to own their fishing boats and 50% are members of fishing cooperatives was estimated at about 3,464 motorized fiberglass vessels (6-10 meters), 110 sail boats and 726 houris (5-meter canoes), suggesting that there may currently be in the order of 4,300 vessels of all types (Table 5.). Boats are categorized into four types accordingly to the Local Boat Name.

The boats used in most sites is fiberglass skiffs with an outboard engine. For landing sites along an open coastline, fiberglass skiffs allow easy beaching and landing from a sandy beach. Boats with inboard engines often moor at sea and therefore usually require protected harbors. Dhows and sail vessels are found only in the south while houri, a rowing boat, is the most commonly used boat in Somalia. (See Table 1.)

[1] Article 12 & 6

Table 1. Distribution of boat types

Local Boat Name	Definition
Saxiimad/Baaraforde/Faara boota	Fiberglass skiff with outboard
Volvo/Laash	Fiberglass with inboard
Houri	Wooden boat without engine
Shuraac	Sail
Dhow	Dhow Motorized
Sambuk	Wooden boat with inboard engine

Table 2. Numbers of boats by type counted during 2017

Boat Type	Total
Motor boats (inboard and outboard engine	3,464
Houris	836
Totals	**4,300**

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

	2013	*2014*	*2015*	*2016*	*2017*	*2018*
Purse Seiner	0	0	0	0	0	0
Longliners	0	0	0	0	0	0
Artisanal	Unknown	Unknown	Unknown	Unknown	3,080	4,300

3. CATCH AND EFFORT (BY SPECIES AND GEAR)

Somali artisanal fleet composed of small motorized and non-motorized fishing boats with a length varying from 3 – 10m. The artisanal fleet is operating in coastal areas, mainly within 12 to 15 nm from the coast. The fleet is targeting both demersal and pelagic species, including highly migratory species, mainly with gillnets and hand-lines. In 2015, FAO with funding Japan, Switzerland and the European Union deployed 25 anchored Fish Aggregating Device (FAD) along the Indian Ocean in cooperation with the federal and regional ministries of fisheries. (FAO 2014)

Though data are currently insufficient for a comprehensive scientific assessment of the health of Somali fisheries, existing tools can inform decisions on where and how fisheries development should proceed. Somalia has taken several actions to improve the catch and effort data collection system for pelagic fisheries. Project Kalluun – a partnership between MFMR, FAO, Secure Fisheries, and City University (CU) – will pilot new fisheries data collection and community engagement.

Project Kalluun will expand throughout Somalia. Fisheries Inspectors working for MFMR have partnered with CU marine science students to collect foundational catch data (e.g., species, length, weight, boat metrics) based on a standardized form. The study has originated in Liido and Hamarweyne as a pilot area; later (it is hoped), the model will be introduced to all other waters in Somalia.

During 2017, two students visited fish markets at Liido and Hamarweyne in Mogadishu every month. They identified, counted, and recorded the fish they found for sale at the market. In some cases, fish were identified to species, but in some cases, fish were identified at higher taxonomic levels (species were aggregated). This project provides some of the first quantitative data about fish catch from waters near Mogadishu in decades. While market data cannot help measure catch per unit effort, it is a first step toward understanding relative abundance of fish in Somali waters (Table 7), identification of species targeted by the Somali artisanal fleet (Table 8), and estimates of monthly variability in fish availability (Table 3 and Figure 1). Sheikheile et. (2018)

Species managed by the IOTC were commonly found for sale in these two Mogadishu-based markets (Table 1). Kawakawa, King mackerel, yellowfin tuna, skipjack tuna, billfishes, and bigeye tuna appeared in the top quartile (23%), by numbers, of the fish sold in these markets. Other commonly-caught fish include coral-associated coastal fishes (spinefoots), sea bream, jacks, snappers, and emperors) and pelagic fishes (sharks, bonita, mahi-mahi, and ladyfish).

Counts of fish for sale give a biased view of fish targeted by fishers and does not account for the effort expended to catch fish. For example, one spinefoot fish (family Siganidae) weighs less than one kilogram, whereas a kawakawa can weigh up to 14 kilograms.

Monthly occurrence provides a different perspective on abundance or availability of fish to the Somali markets. Table 2 shows the number of months in 2017 that a species or type of fish appeared in the markets analyzed. Kawakawa, yellowfin tuna, and king mackerel (all IOTC-managed species) appeared in 11 of 12 months. On the other hand, the smaller coastal fishes such as spinefoots, emperors, and seabreams appeared during only eight or fewer months of the year Sheikheile et. (2018).

Table 2. Annual catch and effort by gear and primary species in the IOTC area of competence. Include a 'not elsewhere indicated – NEI' category for all other catches combined. [Note: Multiple tables may be required e.g. **Table 2a, 2b, 2c).**

N/A

Figure 1. Historical annual catch for the national fleet, by gear and primary species, for the IOTC area of competence for the entire history of the fishery/fleet.

N/A

Figure 2a. Map of the distribution of fishing effort, by gear type for the national fleet in the IOTC area of competence (most recent year e.g. 2017).

N/A

Figure 2b. Map of the distribution of fishing effort, by gear type for the national fleet in the IOTC area of competence (average of the 5 previous years e.g. 2013–2017).

N/A

Figure 3a. Map of distribution of fishing catch, by species for the national fleet, in the IOTC area of competence (most recent year e.g. 2017).

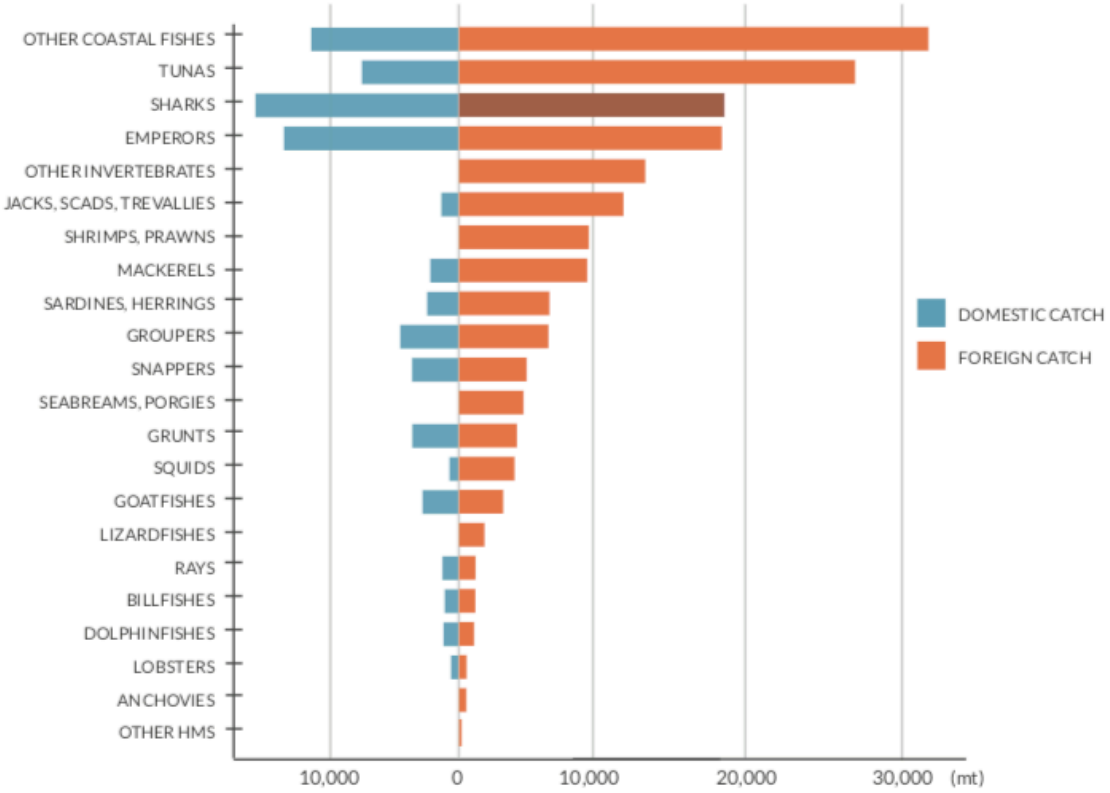
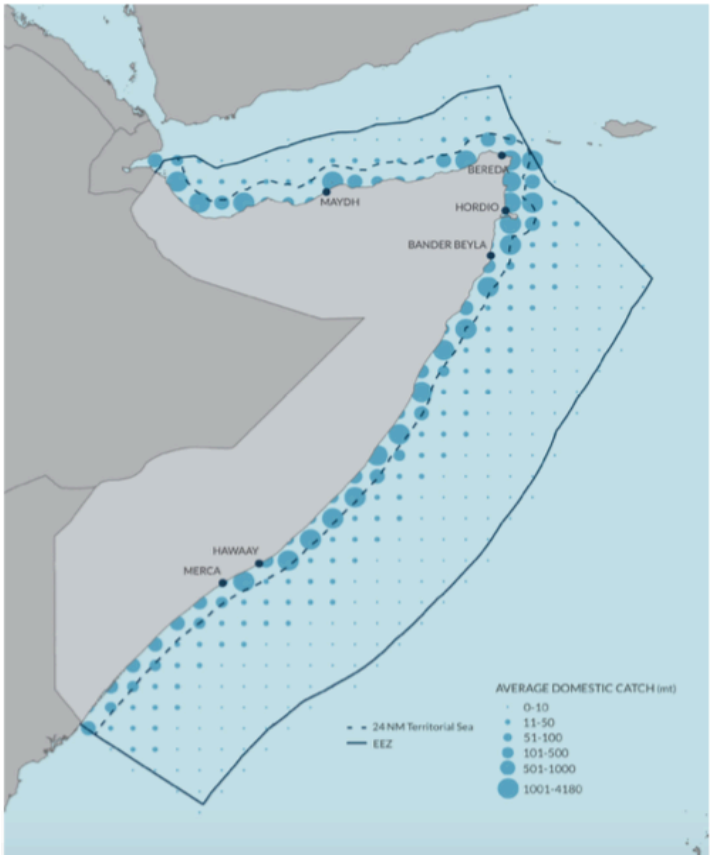


Figure 3b. Map of distribution of fishing catch, by species for the national fleet, in the IOTC area of competence (average of the 5 previous years e.g. 2013–2017). **[Mandatory]**



4. RECREATIONAL FISHERY

There is no recreational or sport fishery in Somalia

5. ECOSYSTEM AND BYCATCH ISSUES

The Somali Fisheries Law defines the protection of provisions on endangered species, including sharks, seabirds, marine mammals and marine turtles. Somali has drafted National Fisheries Development Policy (NFDP) and waiting for cabinet approval such will be the first edition of its kind developed by Ministry of Fisheries since the amendment of the Somalia Law. The aim of this policy is to increase the management and conservation of fish stock and marine mammals in Somali waters.

5.1. SHARKS

Shark fishing is a traditional activity and has been undertaken in Somali waters for centuries. Various species of sharks and rays are targeted by artisanal fishers for both fins and meat. Fishing methods include gillnets and longlines. Sharks are targeted by the Somali artisanal fleet and shark – shark products are fully utilised in Somalia and are landed whole with fins attached. Landed sharks (is well processed) are finned, beheaded, and gutted and the meat is then incised, washed with seawater, salted, and dried.

Additionally, Somalis export shark meat to Kenya, Tanzania where it is generally a cheap source of animal protein for human consumption. Nonetheless, it has been fishing for long-time and currently Somalia is in the process of developing the National Plan of Action (NPOA) for sharks to preserve the long-term health of marine ecosystems, protect their livelihoods and concentrating fishing efforts on other species. Education initiatives and investments around sustainable fishing practices has made to help redirect fishing efforts to other desirable but fast-spawning fishes like sardines, anchovies, herrings, and sustainably fished tuna.

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. 2013–2017).

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. 2013–2017). Where available, include life status upon released/discard.

5.2. SEABIRDS

Seabird bycatch does not occur in the artisanal fishery and has not been observed in IUU fisheries.

5.3. MARINE TURTLES

Of the seven species of sea turtles worldwide, five live in Somali waters, as there is no specific strategy has yet been developed in Somalia regarding marine turtles, and no data is available on marine turtle bycatch in Somalia.

5.4. OTHER ECOLOGICALLY RELATED SPECIES (E.G. MARINE MAMMALS, WHALE SHARKS)

The government sets a series of rules based on scientific advice to reduce overfishing. These fisheries rules are those which are included within the Fisheries Law and apply to all people across the Somalia. There is more than one version of the Fisheries regulations in circulation at present. MFMR notes that the Fisheries regulations are due for updating it is anticipated that regulations will be reviewed when the New Law is gazetted. Readers of this manual should check with MFMR for any updates.

Table 5. Observed annual catches of species of special interest by species (seabirds, marine turtles and marine mammals) by gear for the national fleet, in the IOTC area of competence (for the most recent five years at a minimum, e.g. 2013–2017 or to the extent available).

N/A

6. NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

6.1. LOGSHEET DATA COLLECTION AND VERIFICATION

The Ministry of Fisheries is giving much emphasis to the collection and processing of good standard data. Good management practices are essential for sustainability of fisheries. In these respect Somalia is assuming its responsibilities both as a coastal state and Port State and is cooperating with regional and international fisheries bodies for proper management of fisheries resources. Currently, there is no vessel of or above 24m or less than 24m fishing outside of the Somali EEZ flagged by Somali. There are 31 Chinese longliners licensed by the ministry to fish highly migratory species inside the Somali EEZ and will start their operation in the middle of November 2018. The logsheet data collection system is in place by these fleets.

6.2. VESSEL MONITORING SYSTEM (INCLUDING DATE COMMENCED AND STATUS OF IMPLEMENTATION)

Currently, there is no vessel of or above 24m or less than 24m fishing outside of the Somali EEZ flagged by Somali. There are 31 Chinese longliners licensed by the ministry to fish highly migratory species inside the Somali EEZ and will start their operation in the middle of December 2018. All these vessels will be deployed VMS on board from December 2018.

6.3. OBSERVER PROGRAMME

There is no vessel of or above 24m, or less than 24m fishing outside of the Somali EEZ, flagged by Somali. No observer programme is implemented for the Somali artisanal fleet. However, with the support of FAO, Somali observers have been trained in 2015, for the deployment on board for the current licensed longliners.

Table 6. Annual observer coverage by operation, e.g. longline hooks, purse seine sets (for the most recent five years at a minimum, e.g. 2013–2017 or to the extent available).

N/A

Figure 4. Map showing the spatial distribution of observer coverage.
N/A

6.4. PORT SAMPLING PROGRAMME

Currently, there an ongoing pilot project on improving Somali fisheries data collection and community engagement. Its objective is to strengthen the data collection, processing, and reporting system to enhance the quality of data by increasing coverage and representativeness. Efforts have been made to improve sampling area selection, train data collectors on sampling and species identification, and revise data forms. Special attention was paid to identify and record species managed by the IOTC.

Sheikheile et. (2018), during 2017, two students visited fish markets at Liido and Hamarweyne in Mogadishu every month. They identified, counted, and recorded the fish they found for sale at the market. In some cases, fish were identified to species, but in some cases, fish were identified at higher taxonomic levels (species were aggregated). This project provides some of the first quantitative data about fish catch from waters near Mogadishu in decades. While market data cannot help measure catch per unit effort, it is a first step toward understanding relative abundance of fish in Somali waters (Table 7) and (Table 8), identification of species targeted by the Somali artisanal fleet and estimates of monthly variability in fish availability.

Table 7. Number of individuals measured, by species and gear] **[Mandatory]**

English name	Somali name	Count
Spinefoots	Saanfiid	3617
Kawakawa	Dhiiglow	2385
King mackerel	Yuumbi Cadde	1830
Spotted mackerel	Saynab	1780
Sea bream	Tartabo	1253
Yellowfin tuna	Jeedar	1035
Jacks	Shiiran	774

Skipjack tuna	Sanuuro	712
Spotted fish	Majabto	601
School shark	Jeerjeer	455
Emperors	Dhuubaani	382
Striped bonita	Shaamshuuter	364
Shark	Libaax	357
Red fish	Booray	296
Billfishes	Daanburi	275
Mahi-mahi	Sucbaan	255
	Madaxgoys	247
Sturgeon fish	Xabkoole	233
	Dhabaqo	220
Lady fish	Dooldool	203
	Yuumbi Baxrayd	187
Longface emperor	Huriwaa	184
	Boorad	137
Bigeye tuna	Roobmawaaye	120
Sky emperor	Dhag-gaduud	119

Table 8. Number of months in 2017 a fish appeared in the Hamarweyne or Liido market for sale. This indicates the relative abundance on a temporal scale for each fish type. Data reported represent only fish that appeared in six or more months. An additional 77 fish types appeared in at least one month during 2017.

English name	Somali name	Hamarweyne	Liido	Average
Kawakawa	Dhiiglow	12	11	11.5
Yellowfin tuna	Jeedar	11	11	11
King mackerel	Yuumbi Cadde	11	11	11
Mahi-mahi	Sucbaan	12	8	10
Jacks	Shiiran	10	9	9.5
Billfish	Daanburi	11	7	9
	Yuumbi Baxrayd	8	10	9
	Aarjoo	9	7	8
Spinefeet	Saanfiid	11	5	8
	Baalalay	6	9	7.5
Shark	Libaax	9	6	7.5
Cobia	Taqo\ Silqo	9	6	7.5
	Wayanbuuro	9	6	7.5
	Faray	10	4	7
	Gaduudow (Jikojiif)	10	4	7
Spotted fish	Majabto	10	4	7
Spotted mackerel	Saynab	9	5	7
Emperors	Dhuubaani	8	5	6.5
Longface emperor	Huriwaa	8	5	6.5
	Mayaanso	10	3	6.5
Skipjack tuna	Sanuuro	5	8	6.5
Sea bream	Tartabo	8	5	6.5
Surgeon fish	Xabkoole	8	5	6.5
	Cambarshe	6	6	6
	Madaxgoys	8	4	6

6.4. **Unloading/Transhipment** [including date commenced and status of implementation]

Somalia does not have a sampling system in port or at landing sites for the moment to collect statistics on its artisanal fleet.

7. NATIONAL RESEARCH PROGRAMS

Due to lack of fund and capacity in the country, no research is being carried out since the fall of the last government in 1991 but Somalia is keen to participate to regional research project on tuna and tuna-like species, and will cooperate to its maximum capacity with such initiative.

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 2011 and 2017.

Res. No.	Resolution	Scientific requirement	CPC progress
15/01	On the recording of catch and effort by fishing vessels in the IOTC area of competence	Paragraphs 1–10	There an ongoing pilot project partnership between MFMR, FAO, Secure Fisheries, and City University (CU) – will pilot new fisheries data collection and community engagement. Its objective is to strengthen the data collection, processing, and reporting system to enhance the quality of data by increasing coverage and representativeness.
15/02	Mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs)	Paragraphs 1–7	There an ongoing pilot project partnership between MFMR, FAO, Secure Fisheries, and City University (CU) – will pilot new fisheries data collection and community engagement. Its objective is to strengthen the data collection, processing, and reporting system to enhance the quality of data by increasing coverage and representativeness.
15/05	On conservation measures for striped marlin, black marlin and blue marlin	Paragraph 4	Marlin species (striped, blue and black) are considered secondary species however, level of catches are unknown for the artisanal fleet.
13/04	On the conservation of cetaceans	Paragraphs 7– 9	The government sets a series of rules based on scientific advice to protect whale sharks. These fisheries rules are those which are included within the Fisheries Law and apply to all people across the Somalia. There is more than one version of the Fisheries regulations in circulation at present. MFMR notes that the Fisheries regulations are due for updating it is anticipated that regulations will be reviewed when the New Law is gazetted.
13/05	On the conservation of whale sharks (*Rhincodon typus*)	Paragraphs 7– 9	The government sets a series of rules based on scientific advice to protect whale sharks. These fisheries rules are those which are included within the Fisheries Law and apply to all people across the Somalia. There is more than one version of the Fisheries regulations in circulation at present. MFMR notes that the Fisheries regulations are due for updating it is anticipated that regulations will be reviewed when the New Law is gazetted.
13/06	On a scientific and management framework on the conservation of shark species caught in association with IOTC managed fisheries	Paragraph 5–6	The government sets a series of rules based on scientific advice to protect shark species. These fisheries rules are those which are included within the Fisheries Law and apply to all people across the Somalia. There is more than one version of the Fisheries regulations in circulation at present. MFMR notes that the Fisheries regulations are due for updating it is anticipated that regulations will be reviewed when the New Law is gazetted.
12/09	On the conservation of thresher sharks (family alopiidae) caught in association with fisheries in the IOTC area of competence	Paragraphs 4–8	The fisheries law makes provision for the protection of cetaceans in Somali waters. Other provisions included in the fisheries regulations. Somalia has started mobilization of banning Thresher Sharks to be retained.
12/06	On reducing the incidental bycatch of seabirds in longline fisheries.	Paragraphs 3–7	The government sets a series of rules based on scientific advice to protect incidental bycatch of seabirds. These fisheries rules are those which are included within the Fisheries Law and apply to all waters across the Somalia. There is more than one version of the Fisheries regulations in circulation at present. MFMR notes that the Fisheries regulations are due for updating it is anticipated that regulations will be reviewed when the New Law is gazetted.

Res. No.	Resolution	Scientific requirement	CPC progress
12/04	On the conservation of marine turtles	Paragraphs 3, 4, 6–10	The government sets a series of rules based on scientific advice to protect marine turtles. These fisheries rules are those which are included within the Fisheries Law and apply to all waters across the Somalia. There is more than one version of the Fisheries regulations in circulation at present. MFMR notes that the Fisheries regulations are due for updating it is anticipated that regulations will be reviewed when the New Law is gazetted.
11/04	On a regional observer scheme	Paragraph 9	The government sets a series of rules based on scientific advice on observer scheme. These fisheries rules are those which are included within the Fisheries Law and apply to all waters across the Somalia. There is more than one version of the Fisheries regulations in circulation at present. MFMR notes that the Fisheries regulations are due for updating it is anticipated that regulations will be reviewed when the New Law is gazetted.
05/05	Concerning the conservation of sharks caught in association with fisheries managed by IOTC	Paragraphs 1–12	Somalia does not have a fleet on which observers shall be deployed. Somalia currently is implementing to improve artisanal fisheries data collection sampling system at landing sites that is feasible for its artisanal fleet with an improved fisheries database and database management system.
16/06	On measures applicable in case of non-fulfilment of reporting obligations in the IOTC	Paragraph 1	Somalia is working with its partners to develop its fisheries management capacities, including data collection system. At the moment, there an ongoing pilot project partnership between MFMR, FAO, Secure Fisheries, and City University (CU) – will pilot new fisheries data collection and community engagement.

9. LITERATURE CITED

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