



United Republic of Tanzania National Report to the Scientific Committee of the Indian Ocean Tuna Commission, 2019

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INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

In accordance with IOTC Resolution 15/02, final	YES
scientific data for the previous year was provided	
to the IOTC Secretariat by 30 June of the current	02/07/2019
year, for all fleets other than longline [e.g. for a	
National Report submitted to the IOTC Secretariat	
in 2019, final data for the 2018calendar year must	
be provided to the Secretariat by 30 June 2019)	
In accordance with IOTC Resolution 15/02,	YES
provisional longline data for the previous year	
was provided to the IOTC Secretariat by 30 June	02/07/2019
of the current year [e.g. for a National Report	
submitted to the IOTC Secretariat in 2019,	
preliminary data for the 2018 calendar year was	
provided to the IOTC Secretariat by 30 June	
2019).	
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 2019, final	
data for the 2018 calendar year must be provided	
to the Secretariat by 30 December 2019).	
If no, please indicate the reason(s) and intended activ	ons:





Executive Summary

The tuna and tuna-like fishing in Tanzanian are dominated by artisanal fleets, which use local multi-gears landing multi-species catch. Most of the fishing vessels range from 3 to 11 meters long. The main gears are manually handled drift nets and anchored gillnets, ring nets, hand line, purse seiner and long lines. Industrial fishery in the Tanzanian Exclusive Economic Zone (EEZ) are conducted by Distant Water Fishing Nations (DWFNs) using large scale purse seiner and long line vessels targeting tropical tuna such as skipjack, yellowfin and bigeye tuna. Artisanal fishery statistics from Tanzania for the year 2018 shows a nominal catch of 22,171 tons for tuna and tuna like species which is higher compared to 5,410.2 tons reported in 2015. The total number of vessels targeting tuna and tuna like in Tanzania is 6,336. The fishery is comprised of different number of fishing gears including 15,428 longline, 32,772 hand line, 3,677 anchored gill nets, 66,679 drift gillnet and 743 ring nets. The survey report shows that the weight of Skipjack was 1,292.73 tons, Kanadi 3,175.73 tons, Bigeye 593.68 tons, Swordfish 2,592.73 tons, Kawakawa 3,121.03 tons and Shark 3,087.03 tons. The Deep Sea Fishing Authority has been sign a LoU with IOTC regarding the implementation of the Regional Observer Scheme (ROS) in the United Republic of Tanzania. Under National Observer Program (NPO), observations for artisanal tuna and tuna-like and shark fisheries have been conducted in seven major landing sites in the country. However, there are no port observations or sampling recorded in year 2018 as there are no industrial fishing vessel licensed, trans-shipping or offloading fish at port. Tanzania has developed "EEZ Fisheries Research Agenda 2018-2027" to guide research that will support development and management of tuna and tuna-like fishery in Tanzanian waters. The agenda is implemented with a number of research areas, namely Biological research of tuna, tuna-like species, sharks and other living resources; Environmental research; Fishery related research; Stock assessment research; Business planning and social and economic research; and Monitoring, Control and Surveillance. Furthermore, Tanzania has drafted a National Plan of Action for the conservation and management of sharks and rays that is expected to be endorsed by 2020.





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1. BACKGROUND/GENERAL FISHERY INFORMATION

Tanzania is composed of the Government of the United Republic of Tanzania (URT) and the Revolutionary Government of Zanzibar. The Tanzania marine fishery comprises several tuna and tuna like species and sharks in its internal, territorial and Exclusive Economic Zone (EEZ). Domestic fleets targeting marine fish species in Tanzania are made up of artisanal multi-gear and multi-species fisheries operating in the shallow internal and territorial waters. Artisanal fishers fleet conduct tuna and tuna like fishing are unable to access deep waters tuna like resources because of low capacity in terms of vessel size and technology. The main gears used by artisanal fishers targeting tuna and tuna like species include hand lines, anchored and drift gillnet and ring nets. The Tanzania EEZ fisheries resources are being harvested by Distant Water Fishing Nations (DWFNs) through a licensing system. The main species of tuna and tuna like harvested in the Tanzanian waters includes highly valued species such as *Thunnus albacares* (Yellowfin tuna), *Katsuwonus* pelamis (Skipjack tuna), and Thunnus obesus (Bigeye tuna), Euthynnus affinis (Kawakawa), Auxis thazard (Frigate tuna), Scomberomorus commerson (Narrow barred Spanish mackerel), Scomberomorus guttatus (Indo-Pacific king mackerel), Sailfish and Swordfish. Large pelagic sharks in significant quantity are also found in the Tanzania EEZ. Fishery of tuna and tuna like species and shark form an important component for providing foreign earning, food security and employment in Tanzania. For instance, artisanal fishery statistics from the Fisheries Division (mainland Tanzania only) for the year 2015 shows that 5410.2, 2226.3 and 6459.6 tonnes of tuna and tuna-like species, kingfish and sharks and rays worth of about \$40,186 were caught respectively (National Fisheries report 2016). The potential total catch of tuna in Tanzania EEZ is not well documented but the reported data of purse seiners' averages 8,000 - 10,000 mt/year worth of \$16,000,000 million was reported in 2016 by Deep Sea Fishing Authority (DSFA 2016). According to Study on Tuna Fisheries Direct and Indirect Contribution to GDP and Wealth Distribution Patterns in the SWIOFC Member Countries (2019), the distribution of tuna exports from Tanzania worth a total of 38.06 USD for the top 10 market destinations in 2017.

2. FLEET STRUCTURE

Fable 1: Number of fishing gears and	vessel operated in the inner and	territorial waters during 2018
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Number of vessel	Gear type	Number of gear
6336	Longline	15,428
	Handline	32,772
	Sharknet	3,677





Gillnet	69,679
Ringnet	743

3. CATCH AND EFFORT (BY SPECIES AND GEAR)

The catch statistics in 2018 show that Kawakawa ranked high with a total catch of 3928.427 MT followed by Narrow barred Spanish mackerel (3175.694 MT) (Table 2). Tanzania did not issue any fishing licence in its EEZ, therefore there is no catch and effort data from flagged vessels during that period.

Table 2a: Nominal catch (tons) of Tuna and Tuna-like species from Artisanal fishery for year 2018

Fish Group	2011	2012	2013	2014	2015	2016	2017	2018
Yellowfin	388.521	7,702.764	4,672.44	2,133.00	5,410.2	2,598.754	0	0
Bigeye	0	0	0	0	114	106.2	0	593.68
Bill fish	1,146.44	1,411.962	0	0	2,682.3	3,451.486		2,592.682
Spanish mackerel	0	0	0	0	1,213.25	2,532.2	0	3,175.694
King fish	0	0	2,188.35	1,335.00	6,459.6	1,102.568	0	485.33
Shark &Rays	3,492.781	6,168.808	5,752.51	3,908.00	2,226.3	1,612.635	0	3,099.872
Kawakawa	0	0	0	0	0	216.2	0	3,928.427
Skipjack	0	0	0	0	0	0	0	0
Total	5,027,742	15,283.53 4	12,613.3	7,376	18,105.6 5	11,620.04 3	0	13,875.68 5

Table 2b: Annual catch (Tons) by longline (LL) and species from artisanal fisheries during 2014-2016. BET (Bigeye tuna), SWO (Swordfish), YFT (Yellowfin tuna), BLM (Black Marlin), ALB (Albacore), SFA (Sailfish), SKJ (Skipjack tuna) and other species.

Year	BET	SWO	YFT	BLM	ALB	SKH	SFA	SKJ	OTHERS
2014	1730.6	92.0	730.4	58.3	4.2	78.8	412.9	0.3	119.7
2015	1831.3	214.1	850.7	220.7	2.5	114.9	-	0.6	76.6
2016	485.9	136.6	651.9	34.1	109.0	-	10.4	55.2	110.8
2017	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-
Total	4047.8	442.7	2233	313.1	115.7	193.7	423.3	56.1	307.1





Table 2c: Annual catch (Tons) by purse seine (PS) and species during 2014-2016. BET (Bigeye Tuna), SWO (Swordfish), YFT (Yellow Fin Tuna), SM (Stripped Marine), BLM (Black Marlin), BSH (Blue Shark), ALB (Albacore), MAK (Mako Shark) and SFA (Sailfish).

Year			Species									
	BET	SWO	YFT	SM	BLM	BSH	ALB	MAK	SKH	SFA	SKJ	OTHERS
2014	1483.1	-	3946	-	-	-	-	-	-	-	4166	-
2015	749.6	-	2319				2	-	-	-	5173.1	-
2016	462	-	6814	-	-	-	-	-	-	-	8419	-
2017	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-
Total	2691.7	-	13079	-	-	-	-	-	-	-	17758.1	-

4. **RECREATIONAL FISHERY**

Tanzania has no large scale recreational fishery. Data collection program from small recreational fishers has been established recently with funding from the SWIOFish Project. Therefore, this data will be available by next year.

5. ECOSYSTEM AND BYCATCH ISSUES

5.1 Sharks 5.1.1. NPOA sharks

Tanzania has a draft for National Plan of Action (NPOA) for conservation and management of sharks and rays that is expected to be ratified by the Government by year 2020. A number of stakeholders from fishing communities including fishers and beach management units (BMUs), research and high learning institutions, ministries and non governmental organizations including WCS and WWF were involved. The NPOA will a tool to provide information on the status of Chondrichthyes in Tanzania, examine the structures, mechanisms and regulatory frameworks to guide research, management, monitoring and enforcement on shark and ray fishing and trade.

5.1.2. Sharks finning regulation

The Act and Regulations strictly prohibits neither harvesting nor sharks finning in the Tanzanian waters . There was no data on retained shark species by national fleets in the reported period.

5.1.3. Blue shark

There was no catch records on Blue shark during 2018.

Table 3. Total number and weight of sharks, by species, retained in Tanzania waters (for the most recent five years at a minimum, e.g. 2014–2018)





	2014		2015		2016	
Species	Number	Weight	Numbe	Weight	Number	Weight (kg)
		(Kg)	r	(Kg)		
Mako Shark	47	1,524	9	410	0	0
Blue Shark	1,342	3,554	1	39	0	0
Oceanic Whitetip Shark	9	220	0	0	0	0
Other Shark	38	1,091	0	0		2,210
Total	1,436	6,389	10	449	0	2,210

5.2 Seabirds

There was no data on seabird interaction with fishing activities reported as currently Tanzania because there was no any flagged vessel operated in the Tanzania EEZ during the reported period

5.3 Marine Turtles

Marine turtles are protected by law. No incidence of Marine turtle's interaction with fishing activities reported in 2018.

5.4 Other Ecological related Species (eg Marine Mammals, Whale sharks)

Harvesting of Marine Mammals and Whale sharks are prohibited by Tanzania fisheries laws. No observed catch of these marine species was reported in the past five years, 2014-2018.

6. NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

6.1. Logsheet data collection and verification

All fishing vessels (local and foreign) in the EEZ are required to report daily catches to the competente authority (Deep Sea Fishing Authority – DSFA) using log sheets. The log sheets contain all information as per IOTC resolutions requirement. On the other hand, catch information from fishing vessels are collected using using mobile phone with Fisheries Information System (FIS) and electronic Catch Assessment System (eCAS). Artisanal catch data are collected from selected landing sites in 16 districts along the entire coast. One or two landing sites are selected for collection of catch data on tuna and tuna-like species for eight days per month. The catch data are for eight days per month by trained members of Beach Management Unit (BMUs) in close supervision of Fisheries Officers. The sampling days are selected using a special formula to ensure evenly distribution of sampling days in a month. The data is clearned before analysis and extrapolation. The extrapolation is done based on number of fishers, fishing vessels and gears in the entire coastal line.

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

Tanzania installed an ARGOS VMS in 2009 that was upgraded to Themis Web VMS in 2016 to make it compatible with a range of VMS types used by most of fishing vessels in the IOTC area of competence in accordance with Resolution 15/03. Currently, there are no flagged vessels operating in the Tanzanian waters.

6.3. National Observer Program (NOP)

Tanzania has developed National Observer Program (NOP) whereas 22 fisheries observers have been trained. Tanzania deployed 3 observers in foreign longline fishing vessels (coverage was 12%) operated in its EEZ during 2017/2018. Landing site observations for artisanal tuna, tuna-like and shark fishery is





conducted in seven major landing sites in Tanzania. There was neither port observations nor transhipment of fish because of in absence of either port or fish handling facilities.

6.4. Port sampling programme

There was no port sampling because of lack of port fish handling facilities and transhipping or offloading.

6.5. Unloading/Transhipment of flag vessels

No offloading or trans-shipment took place in Tanzania ports because no any vessel unloaded its consignments in Tanzania.

7. NATIONAL RESEARCH PROGRAMS

Tanzania is now committed to undertake research that will facilitate scientific informed management of tuna and tuna-like resources in the country. To attain this goal, the country has endorsed a 2018-2027 Tuna Fisheries Research Agenda (TFRA) that aims at ensuring sustainable exploitation of tuna and tuna-like species, sharks and other living resources in Tanzanian waters'. The research agenda has five research priorities, namely biological research of tuna, tuna-like species, sharks and other living resources; environmental research; fishery related research; assessment research; business planning and social and economic research; and monitoring, control and surveillance. Tanzania government and partners inside and outside the country are implementing the agenda through a number of research activities in marine waters as shown in Table 4. Most of the research activities focusing on tuna and tuna-like species are under the support from South West Indian Ocean Fisheries Governance and Shared Growth program (SWIOFish project), Western Indian Ocean Marine Association (WIOMSA), Wildlife Conservation Society (WCS) and the Tanzania Government through the Deep Sea Fishing authority (DSFA). The Wildlife Conservation Society (WCS) in collaboration with local institutions is undertaking a research on Shark and rays assessments. Other studies carried out in the country with support of DSFA and SWIOFish include identification of potential fishing zones (PFZs) in the Territorial sea by artisanal fishers; stock status, spatial and temporal distribution of tuna and tuna-like species in the coastal waters of Tanzania mainland. Other ongoing project includes study on the economic profile of artisanal tuna and tuna-like fishery in Tanzania mainland and Stock status, spatial and temporal distribution of tuna and tuna-like species in the coastal waters of Tanzania Zanzibar. Tanzania is also preparing to conduct four researches on Tuna and Tuna-like species under the SWIOFish project. Other studies will include genetic connectivity among tuna species found in Tanzanian waters; oceanographic factors influencing tuna distribution in Tanzania water, identification of potential fishing area by using remote sensing in Tanzania marine waters; and developing sustainable pole and line fishery in Tanzania marine waters'. Furthermore, WIOMSA is funding a study on enabling sustainable exploitation of selected two tuna species (Kawakawa and Skipjack tuna) in the Western Indian Ocean region. Results from these studies are expected to improve management and benefits accrued from tuna resources to Tanzanians and national economy. To ensure sustainability of research activities for tuna and tuna-like fishery, SWIOFish project has allocated funds to establish a 'Research Grant Facility' in the country.

Table 4: Summary of National Research Programs





Research project	Period	Country involved	Total Funding (US\$)	Source	Objectives	Short description
Analysis of Stock Structure and Genetic connectivity of Tuna species in Tanzania waters	2019/2020	Tanzania	200,000	SWIOFish1	The objective of this research is 'to carry out a study on the stock structure and genetic connectivity of tuna and tuna-like species in Tanzanian waters, in order to better understand the connectivity of stocks in inshore and territorial waters with those in the Tanzanian EEZ	The project will assess the stock structure and its genetic connectivity for management and development of the Tuna fisher
Research on Oceanographic Factors Influencing Tuna & Tuna-like Species in the Tanzanian Waters	2019/2020	Tanzania	120,000	SWIOFish1	The objective of this study is to investigate physical and biological oceanographic conditions influencing the spatial-temporal distribution of available tuna and tuna-like species, and their catches in the Tanzanian waters.	The project will assess physical and biological conditions influencing availability of tuna and tuna-like catches to guide management and development plan
Identification of Potential Fishing Zone using Remote Sensing	2019/2020	Tanzania	35,000	SWIOFish	The project goal is to reduce fishing in coastal waters and improve accessibility of artisanal Fisheries.	The project is expected to help reduce fishing pressure in the near- shore areas by identifying new fishing grounds that can be accessed by fishers in the deeper waters
Enabling sustainable exploitation of Kawakawa and Skipjack in WIO region	2019/2021	Tanzania, South Africa, Kenya and Mozambi que	330,000	WIOMSA	Understanding genetic structure and connectivity of two commercially important small tuna species across the participating countries and relate this to key economic, biological and environmental information to inform management and development of this sector	The project will provide insight on the existence of resident/localized or migratory stock across WIO region and further relate it with economic, biological and environmental factors for improving management
Understanding economic profile of artisanal tuna and tuna-like fishery in Tanzania mainland	2017/2019	Tanzania mainland	50,000	SWIOFish1	Understanding social economic status of artisanal tuna and tuna- like fishery in Tanzania mainland with focus on five districts	The study will document social economic status and drivers of the artisanal fishers involved in tuna and tuna fishery to enable management strategy for the species
Stock status, spatial and temporal distribution of tuna and tuna-like species in the coastal waters of Tanzania Zanzibar	208/2020	Tanzania Zanzibar		SWIOFish1	Investigate the stock status, distribution pattern and some population biological parameters of three dominant neritic tuna in Tanzania Zanzibar	Population status and distribution will be assessed and is expected provide insight on the health of dominant neritic tuna for artisanal and recreational fishery of Tanzania Zanzibar
Stock status, spatial and temporal distribution of tuna and tuna-like species in the coastal waters of Tanzania mainland	208/2020	Tanzania mainland		SWIOFish1	Investigate the stock status, distribution pattern and some population biological parameters of three dominant neritic tuna in Tanzania mainland	Population status and distribution will be assessed and is expected provide insight on the health of dominant neritic tuna for artisanal and recreational fishery of Tanzania mainland
Economic valuation of tuna and tuna-like species fishery in Tanzania	2019/2020	Tanzania	100,000	SWIOFish1	Understanding the economic potential of tuna and tuna-like resources in Tanzanian waters	The study will assess the potential of tuna and tuna fisheries resources in the light of development and management
Developing sustainable pole and line fishery in Tanzania	2019/2020	Tanzania	100,000	SWIOFish1	Feasibility study on the potential of developing pole and line fishery in Tanzania	The study will assess the potential for developing pole and line for tuna and tuna-like species

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

Table 4. Scientific requirements contained in Resolutions of the Commission, adopted between 2011 and 2018.

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Res. No.	Resolution	Scientific requirement	CPC progress
11/04	On a regional observer scheme	Paragraph 9	URT has been sign a LoU with IOTC regarding the implementation of the Regional Observer Scheme (ROS). Tanzania has started deploying observers to flagged vessels with its fishing licences. A total of 22 fisheries observers have been trained with IOTC recognised facilitators.
12/04	On the conservation of marine turtles	Paragraphs 3, 4, 6–10	The Deep Sea Fishing Act and its Regulations articulate the obligation to implements this resolution through gear restriction.
12/06	On reducing the incidental bycatch of seabirds in longline fisheries.	Paragraphs 3–7	Tanzania implements this resolution through gear restriction. The Deep Sea Fishing Act and its Regulations also articulate the obligation to release to the sea as soon as possible.
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 protected by laws in Tanzania and when caught should be released immediately. The Deep Sea Fishing Act and its Regulations articulate the obligation to implements this resolution.
13/04	On the conservation of cetaceans	Paragraphs 7–9	Tanzania is a member of the International Whale Commission Society. However, Tanzania does not hunt, market or consider cetaceans for human consumptions.
13/05	On the conservation of whale sharks (<i>Rhincodon typus</i>)	Paragraphs 7–9	Harvesting of whale sharks is strictly prohibited by the Deep Sea Fishing Act and its regulations.
13/06	On a scientific and management framework on the conservation of shark species caught in association with IOTC managed fisheries	Paragraph 5–6	Tanzania has drafted a National Plan of Action (NPOA) for conservation and management of sharks and rays that will be endorsed by next year. However, the country continues to prohibit fishing and marketing of the resources.
15/01	On the recording of catch and effort by fishing vessels in the IOTC area of competence	Paragraphs 1–10	All fishing vessels in the EEZ are required by the Law to report their catch and other attributed information on daily basis. Data from artisanal vessels are collected on monthly basis. Data from artisanal fishing is collected using mobile phone installed with Fisheries Information System (FIS) or electronic Catch Assessment System (eCAS).
15/02	Mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs)	Paragraphs 1–7	Tanzania does report data annually in accordance with IOTC guidelines.
17/05	On the conservation of sharks caught in association with fisheries managed by IOTC	Paragraphs 6, 9, 11	Shark finning is not allowed by the national registrations. A National Plan of Action (NPOA) for conservation and management of sharks and rays will also strengthen conservation of sharks in all waters in the country.
18/02	On management measures for the conservation of blue shark caught in association with IOTC fisheries	Paragraphs 2-5	Blue shark conservation is excuted through the Deep Sea Fishing Act and Regulations where when caught should be release to the sea as soon as possible.
18/05	On management measures for the conservation of the Billfishes: Striped marlin, black marlin, blue marlin and Indo-Pacific sailfish	Paragraphs 7 - 11	Catches of data are supposed to be reported to the competent authorities. Tanzania also continues to work with other CPCs to conserve the Billfishes through research and community awareness.
18/07	On measures applicable in case of non- fulfilment of reporting obligations in the IOTC	Paragraphs 1, 4	Tanzania continues to coherently work with IOTC on reporting obligations. The country signed an agreement with IOTC aiming at strengthening management of fisheries including improving its reporting performance.





- 1. DSFA, 1998. Tanzania Deep Fishing Act.
- 2. DSFA, 2009. Tanzania Deep Fishing Regulations.
- 3. Study on Tuna Fisheries Direct and Indirect Contribution to GDP and Wealth Distribution Patterns in the SWIOFC Member Countries (2019). FINAL DRAFT REPORT AFCC2/RI-SWIOFISH PROJECT 1 P132123
- 4. URT, 2016. National Fisheries report.