

## TANZANIA National Report to the Scientific Committee of the Indian Ocean Tuna Commission, 2013

Authors

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### INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

<p>In accordance with IOTC Resolution 10/02, final scientific data for the previous year was provided to the Secretariat by 30 June of the current year, <b>for all fleets other than longline</b> [e.g. for a National report submitted to the Secretariat in 2012, final data for the 2012 calendar year must be provided to the Secretariat by 30 June 2013)</p>	<p>NO Report to the Scientific Committee submitted by Tanzania</p>
<p>In accordance with IOTC Resolution 10/02, provisional <b>longline data</b> for the previous year was provided to the Secretariat by 30 June of the current year [e.g. for a National report submitted to the Secretariat in xx, preliminary data for the 2012 calendar year was provided to the Secretariat by 30 June 2013].</p> <p><b>REMINDER:</b> Final longline data for the previous year is due to the Secretariat by 30 Dec of the current year [e.g. for a National report submitted to the Secretariat in 2011, final data for the 2012 calendar year must be provided to the Secretariat by 30 December 2013].</p>	<p>NO No Report to the Scientific Committee submitted by Tanzania</p>
<p><b>If no, please indicate the reason(s) and intended actions:</b> a single management regime (authority) to oversee all fisheries activities beyond the 12 nautical miles Territorial sea was established 2009. This authority started work in February 2010. However, most of our fleets are artisanal restricted to 6 nm from the shoreline.</p>	

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## **Executive Summary [Mandatory]**

Presently the national fleet of Tanzania is all artisanal characterized by multi-species, multi-gear and multi-cultural fisheries. Most of the fishing takes place within 6 nm from shore predominantly on reef areas. However a small number of boats are involved in the fisheries of tuna, bill fish and sharks, using manually handled drift gill nets and long lines. The catch data is collected in terms of weight of fish group and is not based on gear type, vessel size and duration of fishing operations.

Statistics from the Fisheries Departments for both Zanzibar and the main land Tanzania for the year 2012, shows 7702, 1411 and 6169 tonnes for tuna, billfish and sharks and rays were caught respectively. However, recreational fishing data are missing and the available catch data is missing geographic position, type of gear and effort.

Logsheet data started to be collected in 2002 from all licensed EEZ fishing vessels and a Vessel Monitoring System has been monitoring the Tanzania EEZ since 2009.

There have been no Observer and Port sampling programmes because Tanzanian Ports does not have facilities for handling commercial deep sea fishing vessels. No transshipment of fish cargo is allowed in our waters.

Current research programmes are focusing on the potential of establishing a national fleet for small pelagics and tuna and tuna like species in the Exclusive Economic Zone with the aim of reducing the rapidly increasing fishing pressure within the inshore waters.

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

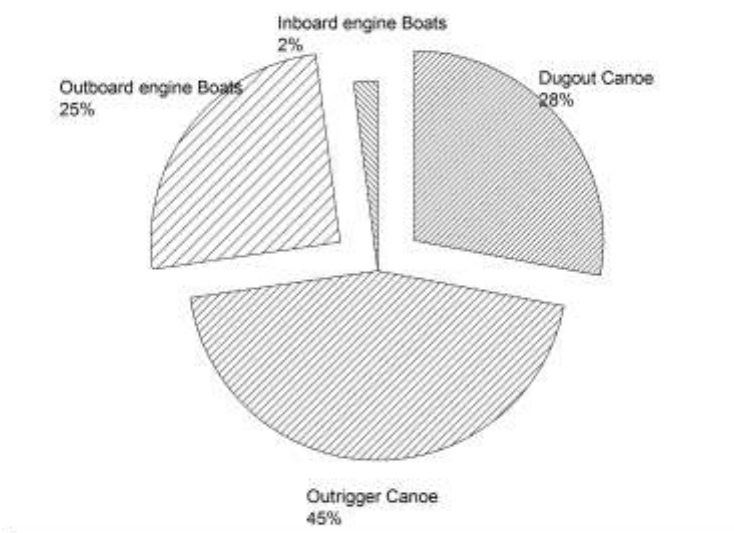
Presently the national fleet of Tanzania is all artisanal. The fleet is involved in highly diverse fisheries that include crustaceans, cephalopods, and mixed coral reef fish species, small pelagic, sharks, tuna and tuna like species. It is composed of different types of fishing boat that varies from un-motorised dugout canoes of 3m to boats of 11 meters with inboard engine. All the fishing takes place within the territorial waters, mostly not more than 6nm from shore and predominantly on reef areas.

The fishing gear used includes Gill nets, hand lines, long line, purse seine and trawl nets that are all manually handled.

### **2. FLEET STRUCTURE**

No information by gear type, vessel size and duration of fishing operations is available. According to the last nationwide frame survey (2008) the artisanal fleet is comprised of 4259 dugout canoes, 6815 outrigger canoes, 3842 boats powered by outboard engines and 313 boats powered by inboard engine. All the canoe vessels fish within near shore reef area, while the powered boats are involved in the fisheries of small pelagic and tuna and tuna like species using mixed gear. Collected data at landing sites is not categorized according to the gear type even though only long lines and gill nets are used in the fishery of tuna and tuna like species. The fleet is also not categorized according to boat size.

Dugout Canoe	4259
Outrigger Canoe	6815
Outboard engine Boats	3842
Inboard engine Boats	313



**Figure 1:** Number of vessels operating in the Tanzania Territorial waters

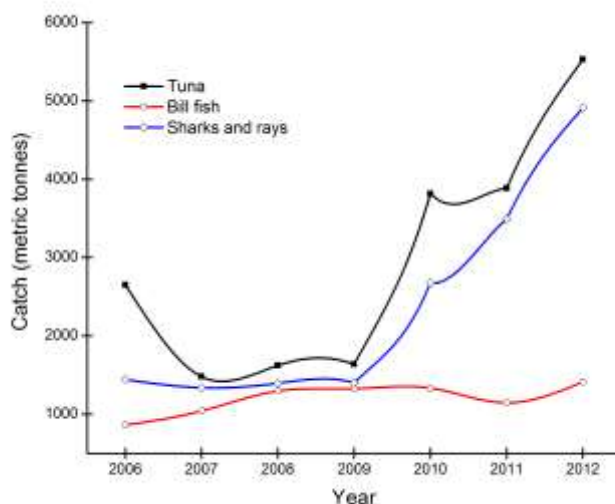
### 3. CATCH AND EFFORT (BY SPECIES AND GEAR)

As explained above, the artisanal fishery of Tanzania is mixed fisheries taking place within the territorial waters mostly within 6 nautical miles from shore and predominantly on reef areas. However, some motorised boats are involved in the fisheries of yellow fin tuna and bill fish (still within 6 nautical miles) using manually handled drift gill nets and long lines.

The catch data is collected in terms of weight (by family) and the effort is categorized neither by gear nor by fishing vessels as the same vessels are also involved in other fisheries and use mixed gear.

**Table 2.** Annual catch of primary families in the IOTC area of competence from 2006-2012 values in metric tonnes

Fish Group	2006	2007	2008	2009	2010	2011	2012
Tuna	2651.396	1480.978	1623.314	1637.408	3815.244	3887.521	7702.764
Bill fish	860.507	1041.001	1295.357	1325.684	1334.284	1146.440	1411.962
Sharks & rays	1442.86	1338.514	1394.587	1399.846	2676.028	3492.781	6168.808



**Figure 1.** Historical annual catch in the EEZ of primary families, for the IOTC area of competence for the entire history of the fishery/fleet. Bill fish data are from Zanzibar only.

**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.* 2012) [**Not available**]

**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.* 2005-2012) [**Not available**]

**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.* 2012) [**Not available**]

**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.* 2005-2012). [**Not available**]

- NOTE:**
- (1) The data for Bill fish could only be obtained from the Department of Fisheries Zanzibar while it was not available from the Department of Fisheries Mainland. The Tuna, sharks and rays data (2010-2012) is a combination of the data from the two Departments.
  - (2) Maps of distribution of fishing effort and fishing catch are not available because the fleet do not operate with any kind of a positioning system.

#### 4. RECREATIONAL FISHERY [NOT AVAILABLE]

#### 5. ECOSYSTEM AND BYCATCH ISSUES

##### Sharks

Discussions on NPOA – are ongoing and Terms and Conditions related to protected sharks contained within EEZ fishing licenses.

**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.* 2007 to 2012].

[See Figure 1; available data do not consist of number of sharks but weight of sharks and rays grouped together (as obtained from the Department of Fisheries Zanzibar and Tanzania Mainland)]

**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.* 2007 to 2012). Where available, include life status upon released/discard. [*Note: Multiple tables may be required for this item.*] [**Not available**]

### Seabirds

Discussions for the NPOA – Seabirds are ongoing and Terms and Conditions related to seabird protection contained within EEZ fishing licenses.

### Marine Turtles

Discussions for the NPOA – Seabirds are ongoing and Terms and Conditions related to seabird protection contained within EEZ fishing licenses.

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

Not available.

**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.* 2007 to 2012 or to the extent available] [**Mandatory**]

## 6. NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

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

It is a requirement for licensed vessels to provide logsheet data, when they enter Tanzania water (entry report) daily catch report and when they leave Tanzanian waters (exit report). Data commenced to be since 2002 and functioning to date.

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

It is a requirement for licensed vessels to have on board a VMS system that is linked to the Deep Sea Fishing Authority Operational Room. Commenced on February 2009 and functioning to date.

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

**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.* 2007 to 2012 or to the extent available) [**No observer program currently in place**]

**Figure 4.** Map showing the spatial distribution of observer coverage. [**No observers program currently in place**] [*Recommended spatial resolution = 1 x 1 degree grid*]

### 6.4. Port sampling programme [including date commenced and status of implementation]

**Table 7.** Number of individuals measured, by species and gear] [**No port calls of fishing vessels in Tanzania**]

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

No unloading has taken place because Tanzanian Ports have no facilities for handling commercial deep sea fishing vessels. Transshipment at sea in Tanzania EEZ forbidden by law.

## 7. NATIONAL RESEARCH PROGRAMS [Desirable]

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

Title	period	countries	Budget	Funding source	Objective	Description
1. FADs deployment in SWIOFP representative countries	2011-2021	Tanzania	9694 USD	GEF	To remove pressure on inshore fish demersal stocks	8 units have been deployed and effort are underway to deploy more units under the public-private sector partnership
2. Application of remote sensing on I identification of potential fishing habitats for pelagic species in the continental shelf of Tanzania	2011-2012	Tanzania	21640 USD	EU	To identify potential fishing ground for small fish pelagic ( <i>Rastrelliger kanagurta</i> ) in the Tanzanian continental shelf	There is a decline in fish catch in shore waters of Tanzania which is exacerbated by increase in human population and demand in fish protein. Currently, fishers cannot venture offshore due to poor fishing craft, and because of uncertainty in finding potential fishing ground. It is therefore important to find and map the preferred oceanographic environmental habitats of the main fish species in Tanzania for the enhancement of fish catches, while conserving the inshore fish resources for sustainable fishery. *Data verification process is underway to compare satellite information with ground truth, however, the project time has been extended.
3. Remote Sensing and GIS for identification of Potential Fishing Zones for Tuna and Bill fish in waters of Zanzibar	2011-2012	Tanzania	23,000 USD	EU	Identification of potential fishing grounds for Tuna and Bill fish	The fishery of Zanzibar is mainly artisanal (99%). It takes place within 2-4 nm from shore and around the same traditional fishing grounds. A steady and rapid increase of fishermen in recent years is indicating that these areas are being overfished. While there has been an 86% increase in the number of fishermen and 84% increase of fishing gear over the past 7 years, there only has been a 19% increase in annual catches. It follows then that in order for the fishery to be sustainable new fishing areas need to be identified and subsequently exploited.

## 8. IMPLEMENTATION OF SCIENTIFIC COMMITTEE RECOMMENDATIONS AND RESOLUTIONS OF THE IOTC RELEVANT TO THE SC. [Mandatory]

**Table 9.** Respond with progress made to recommendations of the SC and specific Resolutions relevant to the work of the Scientific Committee – the Secretariat to provide a table for completion no later than 60 days prior to the next SC meeting.

No.	Resolution	Scientific requirement	CPC progress
05/05	Concerning the conservation of sharks caught in association with fisheries managed by IOTC	Paragraphs 1–12.	Discussions for NPOA - Sharks ongoing and related Terms and Conditions contained within EEZ fishing licenses.
08/04	Concerning the recording of catch by longline fishing vessels in the IOTC area	Paragraph 1–3.	Data for LSTLV for the year 2012 missing. Inshore fisheries data not categorized by fishing gear.
09/06	On marine turtles	Paragraphs 2, 8, 11, 12, 13 and 14.	Discussions on NPOA – Marine turtles are ongoing and related Terms and Conditions contained within EEZ fishing licenses.
10/02	Mandatory statistical requirements for IOTC members and cooperating non contracting parties	Paragraphs 1–7.	Data from inshore artisanal fisheries is sometimes incomplete and not categorized by gear and by vessel types.
10/06	On reducing the incidental bycatch of seabirds in longline fisheries.	Paragraph 7.	Discussion for NPOA - Seabirds are ongoing and related Terms and Conditions contained within EEZ fishing licenses.
10/12	On the conservation of thresher sharks (family Alopiidae) caught in association with fisheries in the IOTC area of agreement	Paragraphs 6 and 7.	Review of fisheries regulations in progress.
11/04	On a regional observer scheme	Paragraph 9.	No observers program being implemented at present.

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**9. LITERATURE CITED [Mandatory]**

1. Tanzania Artisanal Fisheries Frame Survey (2012).
2. Zanzibar Fisheries data 2012