Maldives Tuna Management Plan

2020

AUGUST 2020

DRAFT

Ministry of Fisheries, Marine Resources & Agriculture

Malé, Maldives
Table of Contents

List of Tables ................................................................................................................. 3
List of Figures .................................................................................................................. 3
Abbreviations .................................................................................................................. 4

Part 1: Preamble .............................................................................................................. 7
  1.1 Introduction and title ............................................................................................... 7
  1.2 Legal and Policy Framework ................................................................................... 7
  1.3 Institutional Framework ......................................................................................... 9
  1.4 Overall Purpose ..................................................................................................... 9
  1.5 Scope and Application ........................................................................................... 10
  1.6 Guiding Principles ................................................................................................. 11
  1.7 Interpretation ......................................................................................................... 12
  1.8 Entry into Force ..................................................................................................... 12

Part 2: Biology, Habitat and Distribution ................................................................. 12
  2.1 Skipjack Tuna .......................................................................................................... 13
  2.2 Yellowfin Tuna ...................................................................................................... 13
  2.3 Bigeye Tuna ........................................................................................................... 15
  2.4 Frigate Tuna ........................................................................................................... 16
  2.5 Kawakawa ............................................................................................................. 17

Part 3: Overview of the Fishery .................................................................................. 22
  3.1 Tuna catch composition and trend ........................................................................ 22
  3.2 Gears and fleets ...................................................................................................... 23
  3.3 Processing and Exports ......................................................................................... 25

Part 4: Objectives and Strategies ............................................................................... 27
  4.1 Objectives ................................................................................................................ 27
  4.2 Strategies ................................................................................................................ 27

Part 5: Tuna Management in the Maldives ................................................................. 37
  1.1 Regional Context .................................................................................................... 37
  1.2 Fisheries Management in the Maldives ................................................................. 37
  1.3 Data collection and processing ............................................................................. 38
  1.4 Licensing and catch certification ......................................................................... 39

Part 6: Management Measures of this Plan .............................................................. 40
  6.1 Establishment of a Tuna Management Advisory Committee (TMAC) ............... 40
  6.2 Licensing ................................................................................................................ 41
6.3 Restriction of Fishing Gears ................................................................. 44
6.4 Fishing Area Restrictions ..................................................................... 44
6.5 Establishing Catch Quotas ..................................................................... 45
6.6 Measures Relating to Bycatch Mitigation in Longline Fishery .................. 46
6.7 Involvement of foreign nationals in tuna fishery operations............... 48
6.8 Measures Relating to Monitoring, Control and Surveillance .................. 48
6.9 Offences and Penalties ......................................................................... 51

Part 7: Monitoring the Implementation of the Plan ..................................... 57

Part 8: Reviewing the management plan ...................................................... 57

References .................................................................................................. 58

Annex 1: Glossary ....................................................................................... 60
Annex 2. Longline fishing vessel standards .................................................. 64
Annex 3. Licensing categories, fees and period of validity ......................... 65
Annex 4. Licensing terms and conditions ................................................... 66
Annex 5. Required design of bird-scaring lines and instructions on deployment .. 75

List of Tables

Table 1 Exports of Tuna Products From 2015 to 2019 ..................................... 25
Table 2: Breakdown of each objective by strategies, actions, time-frames and responsible parties .......... 28
Table 3: List of offences and their respective penalties ..................................... 51

List of Figures

Figure 1: Historical catch trend of the three tropical tunas for the Indian Ocean (1950-2018) .................. 19
Figure 2: Historical catch trend of Frigate tuna and Kawakawa for the Indian Ocean (1950-2018)............. 20
Figure 3. Tuna catch trend (1970-2018) ........................................................................................................ 21
Figure 4. Diagram of Bird Scaring Streamer Line (Figure source: Indian Ocean Tuna Commission, Resolution 12/06) ........................................................................................................ 75
**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>APFIC</td>
<td>Asia-Pacific Fishery Commission</td>
</tr>
<tr>
<td>BOBP-IGO</td>
<td>Bay of Bengal Inter-Governmental Organization</td>
</tr>
<tr>
<td>BSL</td>
<td>Bird-Scaring Line</td>
</tr>
<tr>
<td>CCRF</td>
<td>Code of Conduct for Responsible Fisheries</td>
</tr>
<tr>
<td>CG</td>
<td>Coast Guard</td>
</tr>
<tr>
<td>CMM</td>
<td>Conservation and Management Measures</td>
</tr>
<tr>
<td>EPA</td>
<td>Environment Protection Agency</td>
</tr>
<tr>
<td>aFAD</td>
<td>anchored Fish Aggregating Device</td>
</tr>
<tr>
<td>FAD</td>
<td>Fish Aggregating Device</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
</tr>
<tr>
<td>FIS</td>
<td>Fisheries Information System</td>
</tr>
<tr>
<td>IGO</td>
<td>Intergovernmental Organisation</td>
</tr>
<tr>
<td>IOTC</td>
<td>Indian Ocean Tuna Commission</td>
</tr>
<tr>
<td>ITQ</td>
<td>Individual Transferable Quota</td>
</tr>
<tr>
<td>IUU</td>
<td>Illegal, Unreported and Unregulated</td>
</tr>
<tr>
<td>LGA</td>
<td>Local Government Authority</td>
</tr>
<tr>
<td>MCS</td>
<td>Maldives Customs Services</td>
</tr>
<tr>
<td>ME</td>
<td>Ministry of Environment</td>
</tr>
<tr>
<td>MFDA</td>
<td>Maldives Food and Drug Authority</td>
</tr>
<tr>
<td>MIRA</td>
<td>Maldives Inland Revenue Authority</td>
</tr>
<tr>
<td>MMRI</td>
<td>Maldives Marine Research Institute</td>
</tr>
<tr>
<td>MNDF</td>
<td>Maldives National Defence Force</td>
</tr>
<tr>
<td>MoED</td>
<td>Ministry of Economic Development</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Form</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>MoFMRA</td>
<td>Ministry of Fisheries, Marine Resources and Agriculture</td>
</tr>
<tr>
<td>MPS</td>
<td>Maldives Police Services</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
</tr>
<tr>
<td>RFBs</td>
<td>Regional Fisheries Bodies</td>
</tr>
<tr>
<td>RFMOs</td>
<td>Regional Fisheries Management Organisations</td>
</tr>
<tr>
<td>SWIOFC</td>
<td>Southwest Indian Ocean Fisheries Commission</td>
</tr>
<tr>
<td>TMAC</td>
<td>Tuna Management Advisory Committee</td>
</tr>
<tr>
<td>UNCLOS</td>
<td>United Nations Convention for the Law of the Seas</td>
</tr>
<tr>
<td>UNFSA</td>
<td>United Nations Fish Stocks Agreement</td>
</tr>
<tr>
<td>VMS</td>
<td>Vessel Monitoring System</td>
</tr>
</tbody>
</table>
The plan for the management of tuna in the Republic of Maldives

DRAFT

Part 1: Preamble

1.1 Introduction and title

1.1.1 Tuna Management Plan of the Maldives is made under Article 18 of the Act No. 14/2019 (Fisheries Act of the Maldives), (hereinafter referred to as the Fisheries Act), requiring the Ministry to develop and keep under review, management plans for the planning and management of fisheries governed by the Fisheries Act.

1.2 Legal and Policy Framework

1.4.1 National Legislations and policies

The regulatory and policy framework for the management of tuna fishery primarily consists of the Fisheries Act (law number 14/2019) of Maldives, regulations pursuant to the Act, and other pertinent local laws and regulations. The Fisheries Act is the primary legislation that governs the utilisation and management of marine resources within the maritime zones of the Maldives and vessels flying the flag of Maldives and fishing beyond the maritime zones of the Maldives.

The Fisheries Act of Maldives was enacted on 15th September 2019 and superseded the Fisheries Law of the Maldives No. 5/87. The Act is structured as a framework law, in that it covers the various multidisciplinary aspects of the sector and serve as the legislative backbone for the sector as a whole.
while leaving the more detailed codification to the regulations and management plans made pursuant to
the Act.

The Act applies to all Maldivian fishing vessels and foreign fishing and fishing related vessels entering
the maritime zones of the Maldives and vessels flagged to the Maldives operating beyond the maritime
zones of the Maldives. It also applies to all fishing and fishing related activities of such vessels and
Maldivian and foreign nationals on these vessels.

Other planning and policy instruments supplementing the framework for the management of tuna
resources include the Strategic Action Plan (SAP) of the Government, the Maldives National Plan of
Action to Prevent, Deter and Eliminate Illegal and the Unreported and Unregulated Fishing (NPOA -
IUU).

1.5.1 Multilateral Conventions, Agreements and Regional Fishery Management Organisations

Maldives has adopted and ratified a number of legally binding and non-binding international
instruments relating to management of the oceans and its biodiversity. The principal such instrument is
the United Nations Convention on the Law of the Sea (UNCLOS) which sets the requirement and context
for the remaining international arrangements and agreements relating to use of the oceans and resources,
most importantly fishery resources shared among states.

The United Nations Fish Stocks Agreement (UNFSA), a multi-lateral treaty signed in 1995 for the
implementation of the provisions of the United Nations Convention on the Law of the Sea relating to the
conservation and management of straddling fish stocks and highly migratory fish stocks, forms the basis
for cooperation in managing such stocks either directly or through appropriate sub-regional or regional
fisheries management organizations.

The Indian Ocean Tuna Commission (IOTC) was established in 1993 for cooperation among the Indian
Ocean coastal states and states and entities fishing for species under management of IOTC in the Indian
Ocean, to cooperate in the conservation and optimum utilization of the stocks relevant to IOTC and
encourage sustainable development of fisheries based on the stocks. This is achieved through binding
Conservation and Management Measures (CMMs) adopted by the Commission of the IOTC.

Other important RFMOs and IGOs where Maldives is a member include the South West Indian Ocean
Fishery Commission (SWIOFC), the Bay of Bengal Programme - Inter Governmental Organisation (BOBP-
IGO).

Additionally, all marine resource management in the Maldives incorporates elements outlined in the
FAO Code of Conduct for Responsible Fisheries (CCRF).
1.6.1 Trade related obligations

As an exporter of fish and fish products, Maldives fulfils a number of requirements related to the international trade of fishery products. These include those from the World Trade Organisation (WTO) and requirements from other importing countries and entities. Most notable of such requirements include; the European Union’s regulation to prevent, deter and eliminate trade in fisheries products deriving from IUU fishing into the EU (EU-IUU Regulation); EU Directives related to health, hygiene and traceability of products; the Marine Mammal Protection Act of the United States; among others.

1.3 Institutional Framework

The primary responsibility for the management of fisheries and fisheries related activities in the Maldives is vested with the Ministry of Fisheries Marine Resources and Agriculture; hereinafter referred to as the “Ministry”. It has the overall mandate of ensuring the sustainable use and development of marine and agricultural resources of the Maldives. All fisheries are administered centrally by the Ministry; however, local governments (island and atoll councils) have authority to manage the natural resources within their jurisdiction in accordance to the Fisheries Act of the Maldives and other regulations made pursuant to the Act.

Within the Ministry, key activities related to fisheries management, compliance and research that support policy decisions are carried out by the Fisheries Management Section, the Fisheries Compliance Section and the Maldives Marine Research Institute (MMRI) respectively.

In addition to the Ministry, Maldives Police Services, Maldives Customs Services and the Maldives Coast Guard department of the Maldives National Defence Force are key authorities that enforce the measures set-forth by the Act, regulations made pursuant to the Act or any such management plans.

1.4 Overall Purpose

The overall purpose of this Plan is to guide the authorities as well as stakeholders in the sustainable management and development of the fishery through establishing an effective management and monitoring structure for the harvest and trade of tuna species managed by this Plan.

The Plan comprise of key management strategies aimed to; ensure sustainable harvest of tuna resources and ecological wellbeing of the environment, through management of Maldivian flagged vessels fishing
within and outside the EEZ of the Maldives; maintain the legacy of the Maldivian tuna fishery as an
exemplary fishery with minimal environmental and ecological impacts; maximise economic benefits to
the Maldives through regulation of all the processes along the value chain; ensure equitable wealth
distribution from the fishery; strengthen monitoring, control and surveillance (MCS); and prevent labour
exploitation by employing best practices in the fishery.

1.5 Scope and Application

The scope and application of this Plan is summarised below:

1.1.1 Species
This Plan applies to the tuna species commonly harvested in the tuna fisheries of the Maldives, namely;
Skipjack tuna (*Katsuwonus pelamis*), Yellowfin tuna (*Thunnus albacares*), Bigeye tuna (*Thunnus obesus*),
Frigate tuna (*Auxis thazard*), Kawakawa (*Euthynnus affinis*) (hereinafter collectively referred to as tuna
or fish interchangeably). This plan also applies, to the extent applicable, to other non-targeted species
caught by any of the fishing methods used to harvest tunas as listed in 1.5 (d).

1.2.1 Area of Application
The area of application of this Plan is the maritime zones of the Maldives as defined by the Maldives
Maritime Zones Act (law number 6/96).

1.3.1 Parties
(a) The Plan shall apply to all parties engaged in any activities carried out in the Maldives
that may impact tuna resources, including but not limited to harvesting, processing,
storage, trading, and exporting of tuna products from the Maldives;

(b) All persons, vessels, vehicles, aircrafts, processing and export, facilities or other crafts
or places engaged in or otherwise connected with any activity within the scope of this
Plan; and

(c) All Maldivian and Maldivian flagged vessels and persons on board such vessels,
operating within the maritime zones of the Maldives and/or the high seas or
elsewhere, targeting species managed under this Plan.
1.4.1 Fishing gears
The fishing gears within the scope of this Plan are; pole-and-line, handline, longline, trolling and any other gears or methods that may emerge to fish for any of the species managed by this Plan.

1.5.1 Other related activities
The following related activities as prescribed below will also fall within the scope and the ambit of this plan:

(a) Transhipment of fish or fisheries products to a vessel or from a vessel to another place;
(b) Preserving or transporting of fish from one place to another from the time of catching or taking of fish;
(c) Storing, purchasing and processing of fish and fishery products from when they are taken from the maritime zones of the Maldives and until the time they are landed ashore;
(d) Exporting fish or fishery products;
(e) Refuelling or supplying fuel to fishing vessels or providing any activity or service in support of fishing operations; and
(f) Attempting to or preparing to carry out any of the activities set out from (a) to (e).

1.6.1 Exemption
Unless otherwise specified, the management measures in this Plan shall not apply to the following:

(a) People engaged in fishing for subsistence, and
(b) Persons or parties who are undertaking an activity within the scope of this Plan for research purposes with a valid research permit issued by the Ministry

1.6 Guiding Principles

The management strategies, measures and actions in this Plan are guided by the following Guiding Principles;

1.6.1 Precautionary approach: Timely and cost-effective measures shall be taken to safeguard ecosystems and prevent irreparable damage to them despite the lack of full scientific certainty

1.6.2 Ecosystem-based management: The various and variety of interactions within an ecosystem, including anthropogenic elements, shall be recognised as opposed to accounting for matters, species, or ecosystem services in isolation.
1.6.3 **Sustainable Development**: In developing the fishery, the needs of the present shall be met without compromising the ability of the future generations to benefit from the resource.

1.6.4 **Equity**: Resources shall be acknowledged as shared and common goods and benefits obtained from the utilisation of resources shall be shared in a fair and just manner among all through the application of transparency, legitimacy, accountability and decentralisation.

1.6.5 **Participatory Approach**: All stakeholders, particularly those who are directly affected by a policy or a measure, shall be engaged in the decision-making process to ensure inclusivity and consensus-oriented outcomes.

1.7 **Interpretation**

1.7.1 This plan shall be interpreted and applied in the context of and in a manner consistent with the Act No.14/2019 (Fisheries Act of the Maldives).

1.7.2 Unless stated otherwise, words or expressions used in this Plan have been given the meaning specified in Annex 1: Glossary.

1.8 **Entry into Force**

1.8.1 The Plan shall become effective upon the date it gets published in the government Gazette.

**Part 2: Biology, Habitat and Stock Status**

Tunas are of the Family Scombridae, subfamily Scombrinae and tribe Thunini. Tunas share the Family with other fishes such as mackerels, Spanish mackerels and bonitos. They have a tropical and subtropical distribution with some species being more coastal than oceanic. Tunas are highly migratory and predatory fishes capable of considerable speed due to their streamlined body. Information presented in this Section is **drawn from Collette and Nauen (1983), unless otherwise stated.**
2.1 Skipjack Tuna

Species name: *Katsuwonus pelamis*  
(Linnaeus, 1758)  
Family: Scombridae  
English name: Skipjack tuna  
Local name: Kalhubila mas

Skipjack tuna is an epipelagic, highly migratory oceanic fish found commonly in tropical waters in temperatures between 14.7\(^\circ\) and 30\(^\circ\) C. Depth range of skipjack tuna are from the surface to 260 m during the day but is limited to near surface waters at night. It has a strong tendency to form schools in surface waters, associated with birds, drifting objects, sharks, whales or other tuna species.

Skipjack tuna predominantly feeds on fishes, crustaceans and molluscs but is an opportunistic feeder which prey on any age available. The feeding activity peaks in the early morning and in the late afternoon.

Skipjack tuna matures at around 40 cm fork length (range 40-45 cm) with maximum length about 108 cm corresponding to a weight of 32.5 to 35.5 kg. Common length for skipjack tuna is cited to be around 80 cm which corresponds to a weight of 8-10 kg.

Skipjack tuna spawn in batches throughout the year in equatorial waters.

In the pole-and-line fishery, fork lengths between 36-65 cm were reported to comprise the majority of the catch in the early nineties (MRS, 1996).

2.2 Yellowfin Tuna
Yellowfin tuna, an epipelagic, highly migratory species with a worldwide distribution in tropical and subtropical seas in temperatures between 18° and 31°C. It has a depth range of 1-250 m, but is commonly found between 1-100 m.

It is a schooling fish and commonly schools in near-surface waters. Schooling occurs primarily by size and can be mono or multi species schools. In Maldives, adult fish are commonly associated with dolphin schools, which fishermen use to locate tunas.

Yellowfin tuna is a large fish, with maximum recorded fork length at 239 cm (Froese and Pauly, 2019), but common to 150 cm. Maximum published weight for yellowfin tuna is 200 kg and maximum reported age is 9 years (Froese and Pauly, 2019). It is known to mature as early as 50-60 cm fork length, which corresponds to 12-15 months. It has also been reported to reach maturity at 103.3 cm with a range of 78-158 cm (Froese and Pauly, 2019).

Yellowfin tuna are known to spawn throughout the year in tropical and equatorial waters and are multiple spawners, spawning every few days over the spawning period.

In the Maldives tuna fisheries, small yellowfin tuna are caught using pole-and-line while surface swimming adults and sub-adults larger than about 70 cm fork length are caught using handlines. Trolling is used to a lesser extent to catch large fish.
2.3 Bigeye Tuna

Species name: *Thunnus obesus*  
(Lowe, 1839)  
Family: Scombridae  
English name: Bigeye tuna  
Local name: Loabodu kanneli

Bigeye tuna is a highly migratory species with a worldwide distribution in tropical and subtropical waters of the Atlantic, Indian and Pacific oceans. It is an epipelagic and mesopelagic species occurring from the surface to about 250 m depth. It has been found in temperatures from 13° to 29° C, with 17° and 22° C being the optimum range.

Bigeye tuna is a schooling fish, with juveniles and small adults forming schools at the surface. The schools can be mono-specific or mixed with yellowfin or skipjack tuna. These schools maybe associated with floating objects. Adult bigeye tuna tends to stay in deeper waters.

Maximum length for bigeye tuna reported is 250 cm total length with 180 cm fork length being common. It has been reported to weight as much as 210 kg (Frimodt, 1995). The maximum reported age is 11 years (Stequert and Marsac, 1989). Bigeye tuna has been known to mature between 100 to 130 cm fork length in the Indian Ocean.

Bigeye tuna are multiple spawners and spawn throughout the year in tropical waters. Spawning may occur every 1 or 2 days over several months (Nikaido, Miyabe and Ueyanagi, 1992), over the periods of the full moon (Kailola, Williams, Stewart, Reichelt, McNee and Grieve, 1993).

Maldivian tuna fishermen are most familiar with the juvenile stages of bigeye tuna, where it is caught from mixed schools with yellowfin tuna in the pole-and-line tuna fishery. Although longline fishery catches adult fish, it is a small component of the tuna fisheries which has been conducted by foreign vessels or vessels operated by mostly foreign crew.
2.4 Frigate Tuna

Species name: *Auxis thazard* (Lacepède, 1800)
Family: Scombridae
English name: Frigate tuna
Local name: Raagondi

Frigate tuna is a highly migratory fish found in the tropical waters of the Indian, Atlantic and Western Central Pacific oceans. It is an epipelagic, oceanic as well as neritic species which forms large schools.

Frigate tuna feed on small fish, squids, planktonic crustaceans (megalops), and stomatopod larvae (Fischer et al., 1990). Spawning season of frigate tuna is known to vary with area, although in some places, it may extend throughout the year.

Frigate tuna is known to reach a maximum length of 65 cm fork length, but is common to 60 cm total length. However, frigate tuna in Maldivian pole-and-line catches were mostly in the range 27-41 cm FL (95% of the catch) in the 1994-96 period (Anderson, Waheed and Adam, 1998). Maximum published weight of frigate tuna is 1.7 kg while maximum reported age is 5 years.

In Maldivian waters, frigate tuna shows seasonal distribution. It occurs most commonly on the western side during the northeast monsoon and on the eastern side during the south west monsoon (Anderson, Waheed and Adam, 1998).
2.5 Kawakawa

Species name: *Authynnus affinis* (Cantor, 1849)
Family: Scombridae
English name: Kawakawa
Local name: Latti

Kawakawa is a highly migratory species found in warm waters of the Indo-West Pacific region. It is an epipelagic species in temperatures ranging from 18 to 29 °C. It forms multispecies schools by size, mostly with small yellowfin, skipjack and frigate tunas.

Kawakawa is known to reach a maximum length of 100 cm fork length with a common length of 60 cm FL. Although Maldivian pole-and-line catches in the 1994-96 period comprised in the 26-48 cm fork length range (95% of the catch) (Anderson, Waheed and Adam, 1998). Maximum published weight for kawakawa is 14 kg. It is known to reach maturity at around 39.8 cm with a range of 40-65cm.

Kawakawa is an opportunistic predator which feeds on fish, shrimps and cephalopods.

Spawning of kawakawa is seasonal and varies according region, although sexually mature fish maybe encountered throughout the year.

2.6 Overview of the Indian Ocean Tuna Trends and Status of the Stocks

2.6.1 Data and Information Sources

This section overviews the fisheries, fleets and gears harvesting tunas in the Indian Ocean and the status of the stocks of the species caught in these fisheries that are managed by IOTC. As tunas are highly migratory and their management falls under the IOTC, the information and data discussed in this section is from IOTC, namely the most recent reports of the Working Party on Tropical Tunas, Working Party on Neritic Tunas and the Scientific Committee. The Working Parties assess the stocks and develop
management advices, which the Scientific Committee, among other things, reviews and reports to the IOTC Commission.

2.6.2 Fisheries and Catch Trends

Large scale, industrial tuna fishing in the Indian Ocean is relatively recent. Until the arrival of purse seiners from distant water fishing nations in the mid-1980s, the Japanese, Taiwanese and Korean longline fisheries and small artisanal fisheries (pole-and-line, troll and gillnet) of coastal nations (Maldives, Sri Lanka and some others) were the major fisheries in the Indian Ocean (Miyake, Miyabe and Nakano, 2004). With the arrival purse seiners from France and Spain targeting skipjack and yellowfin tuna, Indian Ocean tropical tuna catches increased rapidly. This increase was compounded by increased catches from the Maldives pole-and-line fishery as a result of the developments that took place during 1970s and 1980s (e.g. mechanization and advancement of the pole-and-line fleet (beginning 1974), installation of Anchored FADs (beginning 1981) and development of processing facilities in the country and wider access to international markets). Other coastal countries have also increased their tuna catches, namely, fisheries of Indonesia, Sri Lanka, I.R. of Iran and India, together with Maldives, contributing 51% of the total catches of tropical tuna species. Longliners from Taiwan, Province of China and Japan are important contributors of yellowfin and bigeye tuna catches.

2.6.3 Tropical tuna catch trends

Tropical tunas (skipjack, yellowfin and bigeye) are the most important tuna species caught from the Indian Ocean. Skipjack, small yellowfin and bigeye tuna are primarily caught from surface gears such as purse seiners, pole-and-lines and gillnets. Large yellowfin tuna is caught using handline, purse seining on free schools and longline fishery catches deeper swimming large yellowfin and bigeye tunas. Of the three tropical tuna species, skipjack is the most important, comprising of 49.9% of the total tropical tuna catches in the recent five years (2014-2018). This was followed closely by yellowfin tuna (41.2%) and bigeye tuna (9.4%).

The bulk of the Indian Ocean tropical tunas are landed by a few gears; with purse seine being the most important, landing 43% of the total tropical tuna catch. Handlines and trolling (18%), pole-and-line (18%) and longline (9%) were the other gears of importance for tropical tunas.

Figure 1 presents the historical catch trend of the three tropical tunas for the Indian Ocean (1950-2018). Indian Ocean skipjack tuna catches increased substantially since the early 1980s, contributed primarily by the purse seiners and the Maldives pole-and-line fishery. Total catches increased annually until 2006 when it peaked at over 600,000 tonnes and declined since then to around 340,000 tonnes in 2012. Catches have been increasing in the following years and reached a little over 607,000 tonnes in 2018.
A similar catch trend was seen for yellowfin tuna with catch remaining stable prior to 1984 and increasing since. Yellowfin tuna catches peaked in 2004 at over 525,000 tonnes, which was followed by declining catch until 2011. Since 2012, catch of yellowfin tuna has been recovering and was about 424,000 tonnes in 2018.

Bigeye tuna catches for the Indian Ocean increased steadily from 1970’s. The increase is primarily due to the industrial longliners and European purse seiners during the 1980s. Bigeye tuna catch for the Indian Ocean peaked in the late 1990’s reaching over 162,000 tonnes. Recent catches (2014-2018) have been on average, around 92,000 tonnes.

**Figure 1: Historical catch trend of the three tropical tunas for the Indian Ocean (1950-2018)**

2.6.4 Neritic tuna catch trends

Neritic tunas are primarily caught in the coastal fisheries in the Indian Ocean. Unlike other tuna fishing basins, catches of neritic tunas represent a significant proportion of total tuna catches in the Indian Ocean (Lecomte et.al, 2017). Indian Ocean coastal countries land the bulk of frigate and kawakawa, namely, Indonesia, Iran, Sri Lanka India. Frigate and kawakawa are also important bycatch of the industrial purse seiners.

Of the neritic tunas caught in the Indian Ocean and managed by the IOTC, frigate and kawakawa are of importance to Maldives as the two are commonly targeted in the tuna fisheries. Indian Ocean frigate tuna catch was estimated to be around an average of 3,000 tonnes in the 1950’s. Since 1970’s catches increased
and peaked at over 100,000 tonnes in 2014. Since then, catches decreased slightly to about 85,000 tonnes in 2017. Kawakawa has also seen increase in catch, albeit more prominent, than frigate tuna. Kawakawa catch has been around 160,000 tonnes since 2011, which is the highest for the Indian Ocean (Figure 2).

![Graph showing historical catch trend of Frigate tuna and Kawakawa for the Indian Ocean (1950-2018)](image)

**Figure 2: Historical catch trend of Frigate tuna and Kawakawa for the Indian Ocean (1950-2018)**

2.6.5 Stock Statuses

Stock assessments for the Indian Ocean tunas are conducted at the IOTC by the Working Party on Tropical Tunas for skipjack, yellowfin and bigeye tuna and by the Working Party on Tropical Tunas for frigate and kawakawa.

The Working Party on Tropical Tunas conducted the first stock assessment for skipjack tunas in 2011 for the period 1950-2009. Based on the results, the Working Party determined that the stock of skipjack tuna was not overfished and not subject to overfishing. The assessment used Maldives pole-and-line standardized CPUE series developed for 2004-2009 as an index of abundance. The most recent assessment was conducted in 2017, based on which and other indicators, the Working Party in 2019 determined the skipjack tuna stock was not overfished and overfishing was not occurring.

The most recent stock assessment for yellowfin tuna was conducted in 2018, and stock was determined to be overfished and subject to overfishing. Yellowfin tuna stock has been in this state since 2015. To reduce the catch of yellowfin tuna and allow rebuilding of the yellowfin tuna stock, the IOTC Commission adopted the Resolution 19/01 (On an interim plan for rebuilding the Indian Ocean yellowfin tuna stock in the IOTC area of competence). The Resolution requires applicable fleets to reduce the catch of
yellowfin tuna by the applicable percent of 5, 10 or 15% of the catch reported for the reference year of 2014/2015. However, achievement of catch limitation by different fleets varied and the total catch in 2018 increased by around 9% from 2014/2015.

Bigeye tuna stock was determined to not overfished but subject to overfishing, based on the stock assessment in 2019. This was different to the previous stock determination in that the stock was not overfished and not subject to overfishing.

The IOTC Working Party on Neritic Tunas assess the status of the stocks of neritic tunas and neritic tuna like species (mackerel-seerfish) caught in the Indian Ocean. Neritic species are described as quantitatively and qualitatively data poor and therefore, their stock determination generally rely on data limited stock assessment methods and stock status indicators. Several of the neritic species of IOTC fall under this category, including frigate tuna, and its stock status remain unknown. The most recent stock assessment for kawakawa was in 2015. Based on the findings and other evidences available in 2019, the stock status for kawakawa was classified as not overfished not subject to overfishing. However, indicators relating to biomass and levels of fishing that is of concern.
Part 3: Overview of the Maldives Tuna Fishery

3.1 Tuna catch composition and trend

Four species of tunas have been commonly exploited in the centuries old tuna fisheries of the Maldives; skipjack tuna (kalhubila mas), yellowfin tuna (reendhoo uraha kanneli), frigate tuna (raagon’di) and kawakawa (latti). Maldives tuna catches were around 30,000 tonnes in 1970, when species wise data for the most common species began to be available. The catches remained somewhat stable in the following years until around 1982, from which tuna catch began a steady climb which peaked at more than 160,000 tonnes in 2006. This was followed by a 53% decline by 2010. Tuna catches has since been recovering and was almost 148,200 tonnes in 2018 (Figure 3).

![Tuna catch trend (1970-2018)](image)

By volume, skipjack tuna and yellowfin tuna, respectively, are the two most important species in the Maldives tuna fisheries. Their average contributions to the total tuna catch comprised 60% and 38% respectively, in the recent five years (2014-2018). However, historical contribution of yellowfin tuna was
much less in the national tuna landings. The increased proportion in the relatively recent history is accounted for by the handline yellowfin tuna fishery which exclusively targets large yellowfin tuna.

Of the oceanic tunas, bigeye tuna (loabodu kanneli) is caught in small quantities in the pole-and-line fishery, along with yellowfin tuna from mixed schools, especially those associated with Fish Aggregating Devices (FADs) and drifting objects. Due to its small proportion in the catch and similarity in appearance to yellowfin tuna in the size ranges caught in the pole-and-line fishery, bigeye tuna was not initially segregated from yellowfin tuna in the fishery and data collection system. Until 2013, Maldives bigeye tuna catch was estimated based on proportions derived from sampling. For the period of 2014-2018, bigeye tuna comprised an average of about 1% of all tuna landed.

Of the coastal or neritic tunas found in the Indian Ocean, frigate tuna, and kawakawa are common in the Maldives tuna catches. Majority of the neritic tuna catches are taken by the pole-and-line fishery. However, the trolling fleet was traditionally known to land the bulk of kawakawa in the Maldives (MRS, 1996). In the recent five years, both species combined have contributed an average of less than 1% to the national tuna landings. Importance of neritic species have declined over the years due to the prominence of oceanic tunas, namely skipjack and yellowfin, and the collapse of the traditional troll fishery which primarily landed frigate and kawakawa.

3.2 Gears and fleets

3.2.1 Pole-and-line

For centuries, Maldivians have used pole-and-lines to harvest surface swimming tunas, chummed to a feeding frenzy using live bait caught from the coral reefs and atoll lagoons. This traditional form of fishing is efficient and has minimal impact on the ecosystem, has remained the primary gear for tunas across the country until recently, and in the southern atolls at present. Traditionally, pole-and-line fishing was conducted off wooden hulled, sailing vessels, a masdhoni, built out of coconut lumber. The fleet became increasingly heterogenous and advanced with the development of the industry during the 70s and 80’s, most notable of which is the mechanization of the fleet that began in 1974. By 1978, over 70% of the tuna catch was being landed by mechanized pole-and-line vessels, which grew to 99% by 1984. Other drivers for the change include; installation of Anchored Fish Aggregating Devices (AFADs) that began in 1981; opening up of canneries; diversification of export markets; and socio-economic factors.

Pole-and-line remains the most important gear for tunas in the country. Of the four tuna gears, average contribution from pole-and-line to the national tuna catch was around 72% for the recent five years (2014-2018). Skipjack and yellowfin tuna comprise 99% of the the pole-and-line catch (82% and 16%
respectively), while bigeye tuna, frigate and kawakawa contributed the remaining 1%. The pole-and-line catch is mostly landed at the state and private landing ports where it is processed or exported for processing.

3.2.2 Handline

The handline yellowfin tuna fishery targets surface swimming large yellowfin tuna above 70 cm fork length (Adam and Jauharee, 2009, Adam et al., 2015, Ahusan et al., 2016) with over 80% of catch in the 102-160 cm fork length range (Ahusan et al., 2016). The commercial fishery is relatively recent and began during the period of late 90’s and early 2000 when private parties began investing in fresh tuna export businesses as a result of privatization of the fisheries sector (Adam, 2007). Prior to the establishment and commercialization of the handline yellowfin tuna fishery, traditional fisheries for large yellowfin tuna using handlines, trolling and to a lesser extent, pole-and-line existed. The fisheries were seasonal and located in the regions of Haa Alifu Atoll during January to April; Male’ during March-September; and Fuvah Mulaku and Addu Atoll during April and November (MRS, 1996).

With the opportunities for export to the Japanese sashimi and European markets, the fishery observed rapid growth, mostly in the northern and central parts of the country where it has possibly surpassed pole-and-line fishery in terms of number of vessels and fishers. Other key drivers for the expansion include the lucrativeness of the fishery and the ease of switching from pole-and-line to handline fishery as it required minimal investments and modification to the vessel. As the catch was exported fresh or frozen, landing and processing facilities for large yellowfin tuna are situated in the vicinity of Male’, the economic centre as well as where the infrastructure for export is located.

Contribution from the handline fishery to the total tuna catch was around 27% in the most recent five-year period (2014-2018). Handline is a highly targeting fishery and yellowfin tuna comprised over 96% of the catch volume in the same period. Handline caught yellowfin tunas are mostly landed at dedicated landing sites near Male’ where it is processed primarily as fresh, chilled or frozen products and exported overseas.

3.2.3 Longline

Longline is not a traditional tuna gear in the Maldives and was not employed by Maldivian fishers to harvest tunas. A licensed longline fleet which targeted bigeye and yellowfin tuna operated beyond 75 nm, within Maldives EEZ since 1985 (Anderson, Hafiz and Adam, 1996). Waters within 75 miles was reserved for the local tuna fishery. In August of 1994, all existing longline licenses were terminated by the Ministry of Trade and Industries; the authority issuing longline licenses at the time, partly due to non-compliance with the data submission requirement of the license (Anderson et. al, 1996).
Longline licensing appears to have resumed around 1997, as indicated by the catch and effort data at the Ministry. Similar to previous period, the Ministry of Trade and Industries issued the licenses. A royalty of 1US$/kg of tuna was also levied (Anderson, Adam and Rasheed, 2003). The fishery continued until May 2010 when licensing was ceased to develop a fully local longline fleet. The Ministry of Fisheries and Agriculture resumed licensing in 2011 to fully local vessels and operators to fish from 75 miles and beyond, within the Maldives EEZ. With the Longline Fishery Regulation of 2014 (No. 2014/R-388), the fishery became highly regulated and in consistent with relevant conservation and management measures of IOTC. The regulation allowed longliners to fish for bigeye and yellowfin tuna from 100 miles from the archipelagic baseline, with VMS and logbook reporting mandated. The Government of Maldives stopped licensing longliners for a third time in 2019 due to non-compliance of vessels and irregularities in the data reporting.

3.2.4 Trolling

Historically, the troll fishery was a significant component of the Maldives tuna fishery. The fleet targeted frigate and kawakawa inside and outside the atolls and was more common in the northern atolls where the target species were more abundant compared to the south of the Maldives (Anderson, Waheed and Adam, 1998). The fishery was most prominent during the period of mechanization of the pole-and-line fleet from late 1970s to early 1980s (Adam, Anderson and Hafiz, 2003). The size of the fleet peaked in 1982 with almost 3,482 vessels and had declined to 713 by 2010. Tuna catch from the troll fishing was less than 0.2% of all four tuna gears in the recent five-year period (2014-2018) amounting to almost 1,100 tonnes. Socio-economic factors are believed to have contributed to the decline of the traditional troll fishery (Adam, Anderson and Hafiz, 2003).

3.3 Processing and Exports

Tunas, primarily skipjack, was an important source of food and export commodity for Maldives throughout its recorded history. The strategic location of Maldives in the trade route of the Indian Ocean allowed Maldives to trade skipjack tuna to neighbouring and distant countries. While traditionally processed and traded as dried, skipjack tuna is exported either as frozen, fresh, chilled or canned in modern times. Main markets for skipjack tuna include Thailand, Sri Lanka, Iran, UK, Japan and Germany. Thailand is the main export market for frozen and fresh skipjack whereas canned skipjack is exported to Germany and UK. Sri Lanka is the second biggest skipjack tuna export market for the Maldives, following Thailand with dried fish and salted dried fish are the main exports.
The major portion of the yellowfin tuna caught in the Maldives is exported, while the rest is consumed locally mainly by hotels and restaurants. In the modern times, Maldives yellowfin tuna products are air freighted across the globe to international markets within days of harvest, with Japan, United Kingdom, Europe and the United States of America being the main markets. Tuna exports contributed between about 129 and 188 million US dollars to the country (Table 1) in the past five years.

*Table 1: Exports of Tuna Products From 2015 to 2019*

<table>
<thead>
<tr>
<th>Product (MT)</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canned</td>
<td>32.70</td>
<td>54.21</td>
<td>291.75</td>
<td>618.97</td>
<td>1,166.60</td>
</tr>
<tr>
<td>Dried</td>
<td>2,132.20</td>
<td>1,745.99</td>
<td>1,186.38</td>
<td>1,151.57</td>
<td>1,375.72</td>
</tr>
<tr>
<td>Dried/Salted/Brine</td>
<td>-</td>
<td>12.00</td>
<td>3.25</td>
<td>22.33</td>
<td>23.92</td>
</tr>
<tr>
<td>Fresh/Chilled</td>
<td>11,095.28</td>
<td>10,975.74</td>
<td>9,617.46</td>
<td>8,357.51</td>
<td>8,311.15</td>
</tr>
<tr>
<td>Frozen</td>
<td>25,425.15</td>
<td>28,286.18</td>
<td>53,719.42</td>
<td>45,370.78</td>
<td>37,689.84</td>
</tr>
<tr>
<td>Other</td>
<td>2,881.42</td>
<td>2,980.81</td>
<td>4,508.32</td>
<td>7,832.59</td>
<td>6,069.06</td>
</tr>
<tr>
<td>Salted</td>
<td>229.10</td>
<td>250.72</td>
<td>148.09</td>
<td>86.58</td>
<td>226.23</td>
</tr>
<tr>
<td>Smoked</td>
<td>0.04</td>
<td>282.79</td>
<td>211.36</td>
<td>8.80</td>
<td>48.90</td>
</tr>
<tr>
<td>Steamed</td>
<td>12.50</td>
<td>12.00</td>
<td>96.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Value (million USD)</td>
<td>130.89</td>
<td>128.77</td>
<td>187.48</td>
<td>167.81</td>
<td>146.07</td>
</tr>
</tbody>
</table>
Part 4: Objectives and Strategies

4.1 Objectives

The overarching goal of this Plan is to provide for the sustainable use of tuna resources of the Maldives and maintain their ecosystems for the future generations in accordance with principles of equity and good governance. Specific objectives that would achieve the overarching goal are:

(a) Ensure all activities associated with the harvest and trade of tuna are carried out in an environmentally sound manner most beneficial to Maldivians through the application of Ecosystem and Precautionary Approach to fishery management;

(b) Maximise the economic benefits from the tuna resources through improved commercial operations and by diversifying the tuna processing sector through use of modern technology

(c) Enhance contribution to food security and ensure equitable distribution of wealth generated from the fishery;

(d) Strengthen Monitoring Control and Surveillance (MCS) to prevent, deter and eliminate Illegal, Unreported and Unregulated (IUU) fishing for tuna and labour exploitation in the sector, and

(e) Ensure all management measures taken under this Management Plan facilitate Maldives to implement its national, regional and international tuna fishery management and trade obligation

4.2 Strategies

Strategies and actions to achieve the objectives in 4.1 are summarised in Table 2.
Table 2: Breakdown of each objective by strategies, actions, time-frames and responsible parties

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Time frame</th>
<th>Responsible parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Promote and maintain Maldives one-by-one tuna fishery as the primary fishing method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1.1</td>
<td>Prioritise one-by-one tuna fishery when formulating government policies</td>
<td>Long-term (5 – 10 years)</td>
<td>MoFMRA, Maldives Customs Services</td>
</tr>
<tr>
<td>1.1.2</td>
<td>Promote the traditional, one-by-one fishing methods in the global arena</td>
<td>Immediate</td>
<td>MoFMRA</td>
</tr>
<tr>
<td>1.1.3</td>
<td>Develop and implement an anchored Fish Aggregating Device (aFAD) management plan</td>
<td>Short-term</td>
<td>MoFMRA, MMRI</td>
</tr>
<tr>
<td>1.2</td>
<td>Promote fishing from free swimming schools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2.1</td>
<td>Regulate all fisheries and fisheries related activities carried out around FADs pursuant to General Fisheries Regulation, 2020</td>
<td>Immediate</td>
<td>MMRI, MoFMRA</td>
</tr>
<tr>
<td>1.2.2</td>
<td>Establish and implement a Potential Fishing Zones program to incentivise fishing from free swimming schools</td>
<td>Medium-term (3 – 5 years)</td>
<td>MOFMRA, MMRI</td>
</tr>
<tr>
<td>1.2.3</td>
<td>Enable access to financial schemes for pole and line fishers to encourage the use of technology that aid in free school fishing</td>
<td>Immediate</td>
<td>MOFMRA, SDFC, MOF, MoED</td>
</tr>
<tr>
<td>1.2.4 Increase awareness among fishers on the benefits of targeting free schools</td>
<td>Immediate</td>
<td>o MOFMRA</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>1.3 Implement best practices and support existing management measures relating to all activities associated with the harvest and trade of tuna</strong></td>
<td><strong>1.3.1 Implement and enforce restriction on the use of fishing methods or gears prohibited by the Fisheries Act or any other regulations</strong></td>
<td>Immediate</td>
<td>o MMRI o MoFMRA o MPS o CG</td>
</tr>
<tr>
<td><strong>1.3.2 Incorporate relevant IOTC Conservation and Management Measures (CMMs) into local legislation</strong></td>
<td>Immediate</td>
<td>o MOFMRA</td>
<td></td>
</tr>
<tr>
<td><strong>1.3.3 Implement and enforce the prohibition of harvesting and processing of tuna within any area protected from extractive uses by other laws and/or regulations of the Maldives</strong></td>
<td>Immediate</td>
<td>o MOFMRA o MPS o CG</td>
<td></td>
</tr>
<tr>
<td><strong>1.3.4 Implement and enforce the unlawful take, harm and trade of species protected by other laws and/or regulations of the Maldives</strong></td>
<td>Immediate</td>
<td>o MOFMRA o MPS o CG</td>
<td></td>
</tr>
<tr>
<td><strong>1.4 Minimise capture of and interactions with non-targeted and Endangered, Threatened and Protected (ETP) species in the longline fishery</strong></td>
<td><strong>1.4.1 Implement the use of mitigating measures to reduce capture of and interactions with non-targeted and ETP species</strong></td>
<td>Immediate</td>
<td>o MoFMRA o MMRI</td>
</tr>
<tr>
<td><strong>1.4.2 Monitor and study bycatch and interactions with ETP species and on ways of further reducing interactions with other species in the tuna and bait fishing operations</strong></td>
<td></td>
<td>o MMRI o MoFMRA</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>Prioritise evidence-based policymaking through the collection of biological, ecological, and socio-economic data on tuna fishery and associated resources;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5.1 Implement nationwide biological studies, size sampling, and monitoring programmes for tuna and associated resources, and report findings</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Immediate</td>
<td>MMRI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5.2 Actively participate in the scientific and management processes of IOTC and other relevant national, regional and international fisheries management bodies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Immediate</td>
<td>MMRI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5.3 Conduct a series of socio-economic (cost and earnings) surveys every 4 years to identify and understand the scale of tuna fishery in the Maldives</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Immediate</td>
<td>MOFMRA</td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td>Maintain a leading role in regional RFMOs (IOTC) and RFBs in management and conservation of Indian Ocean tuna resources;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.6.1 Engage with Indian Ocean Tuna Commission (IOTC) to amplify the interests of Indian Ocean Coastal States, especially Small Island Developing States in the management and conservation of key IOTC species</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Immediate</td>
<td>MOFMRA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.6.2 Play a leading role in advancing the interests of G16- Group of IOTC Coastal States in the process of allocation of fishing opportunities for IOTC species</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Immediate</td>
<td>MOFMRA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.6.3 Actively participate in the scientific and management processes of South Western Indian Ocean Commission (SWIOFC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Immediate</td>
<td>MOFMRA</td>
<td></td>
</tr>
</tbody>
</table>
### Objective 2: Maximise the economic benefits from the resources through improved commercial operations and diversifying the fishery processing and products and inclusion of modern technology

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Time frame</th>
<th>Responsible parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Promote and facilitate access to technology and techniques to increase profitability, improve quality, and reduce postharvest losses</td>
<td>2.1.1 Establish a financing scheme to establish Refrigerated Sea Water (RSW) systems on board fishing vessels</td>
<td>Immediate</td>
<td>o MoFMRA o Island Councils</td>
</tr>
<tr>
<td>2.1.2 Establish ice plants for easy access in key fishing regions</td>
<td>Immediate</td>
<td>o MoFMRA</td>
<td></td>
</tr>
<tr>
<td>2.1.3 Enable access to financial schemes to encourage the use of modern technology that would contribute towards reducing the cost of fishing operations and/or reduce ecosystem impacts.</td>
<td>Immediate</td>
<td>o MoFMRA o Maldives Customs Services</td>
<td></td>
</tr>
<tr>
<td>2.1.4 Facilitate the design and build of next generation ‘Masdhoani’ through finance schemes to improve quality of fish, offloading operations and reduce cost of fishing</td>
<td>Medium-term (3 – 5 years)</td>
<td>o MoFMRA o MTA</td>
<td></td>
</tr>
<tr>
<td>2.2 Promote Maldivian tuna fishery and fishery products to improve market access and stimulate greater profit margin (to rephrase)</td>
<td>2.2.1 Conduct programmes and projects in coordination with the industry and related stakeholders to maintain Marine Stewardship Council (MSC) Certification of the pole and line skipjack tuna fishery, and facilitate certification to other segments, in particular handline yellowfin tuna fishery</td>
<td>Immediate</td>
<td>o Island Councils o MoFMRA</td>
</tr>
<tr>
<td>2.2.2</td>
<td>Facilitate mechanisms, such as Fisheries Improvement Programs, for fisheries to achieve third party recognition such as Fair Trade Certification</td>
<td>Immediate</td>
<td>MoFMRA, Industry</td>
</tr>
<tr>
<td>2.2.3</td>
<td>to Promote Maldivian fish and fishery products to international markets through international fairs or any other applicable means</td>
<td>Immediate</td>
<td>MoFMRA, MSPEA</td>
</tr>
<tr>
<td>2.3</td>
<td>Support the diversification of value-added fishery products, in order to foster new market opportunities</td>
<td>2.3.1</td>
<td>Implement an import duty exemption scheme for fisheries projects aimed at improving value-addition,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.3.2</td>
<td>Carryout research aimed at diversifying value added products</td>
</tr>
<tr>
<td>2.4</td>
<td>Promote and encourage youth participation in the fishery sector</td>
<td>2.4.1</td>
<td>Coordinate with National Career Guidance Centre (NCGC) to provide career guidance focusing on fishery sector</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4.2</td>
<td>Conduct training programs on fishing and post-harvest and quality improvement.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4.3</td>
<td>Work with MNU/TVET to include training related to tuna fishing, post processing, quality and hygiene etc. in the curriculum to entice youth into the industry</td>
</tr>
</tbody>
</table>

**Objective 3:** Enhance contribution from the fishery to food security and ensure equitable distribution of wealth generated from the fishery

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Time frame</th>
<th>Responsible parties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>MoFMRA, MFDA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MoFMRA, MNU</td>
</tr>
<tr>
<td>3.1 Reduce losses along the value chain</td>
<td>3.1.1 Conduct awareness and training programs focusing on post-harvest handling of fish, quality improvement and trading activities</td>
<td>Immediate</td>
<td>MoFMRA, MFDA</td>
</tr>
<tr>
<td>3.1.2 Conduct training programmes on quality inspection, food hygiene and safety, and good manufacturing practices of fish and fishery products, with a specific focus on small and medium scale fish processors</td>
<td>Immediate</td>
<td>MoFMRA, MFDA</td>
<td></td>
</tr>
<tr>
<td>3.2 Create an enabling environment for small-scale fish processors to develop</td>
<td>3.2.1 Facilitate the implementation of mentoring and entrepreneurship programs that can effectively turn small-scale fishery processing into more profitable and sustainable ventures</td>
<td>Immediate</td>
<td>MoFMRA, MoYSCEmv</td>
</tr>
<tr>
<td>3.2.2 Conduct trainings in small fishery business management to fishing communities</td>
<td>Immediate</td>
<td>MoFMRA, Island councils</td>
<td></td>
</tr>
<tr>
<td>3.3 Ensure equitable benefits to all Maldivians and improve their livelihoods through decentralised development of tuna fishery and trade</td>
<td>3.3.1 Implement the import duty exemption scheme including the improvement of value-added tuna products and items imported for tuna harvesting vessel development</td>
<td>Immediate</td>
<td>MoFMRA</td>
</tr>
<tr>
<td>3.3.2 Support the diversification of value-added tuna products to maximise economic returns to fishers and traders</td>
<td>Immediate</td>
<td>MoFMRA</td>
<td></td>
</tr>
<tr>
<td>3.3.3 Identify and engage stakeholders to ensure that policy decisions are made through a Participatory Approach</td>
<td>Immediate</td>
<td>MoFMRA, Island councils</td>
<td></td>
</tr>
<tr>
<td>3.3.4</td>
<td>Establish, maintain, and update a fishers’ registry, <em>Masveringe Dhaifthuru</em>, to understand fishing community dependence on tuna resources</td>
<td>Immediate</td>
<td>o MoFMRA</td>
</tr>
<tr>
<td>3.3.5</td>
<td>Establish improved infrastructures and public services in accessible locations for fishers and related stakeholders</td>
<td>Immediate</td>
<td>o MoFMRA</td>
</tr>
<tr>
<td>3.3.6</td>
<td>Open up tuna processing sector to facilitate the establishment of additional fish processing facilities</td>
<td>Immediate</td>
<td>o MoFMRA</td>
</tr>
</tbody>
</table>

**Objective 4:** Strengthen Monitoring Control and Surveillance (MCS) to prevent, deter and eliminate Illegal, Unreported and Unregulated (IUU) fishing for tuna and labour exploitation in the sector

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Time frame</th>
<th>Responsible parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Enhance the existing fishery licensing system to maintain a comprehensive record of fishing fleets, processors and exporters for effective monitoring and management of the fisheries sector</td>
<td>4.1.1 Incorporate all tuna licenses into the Fisheries Information System</td>
<td>Immediate</td>
<td>o MoFMRA</td>
</tr>
<tr>
<td></td>
<td>4.1.2 Enforce licensing terms and conditions to effectively monitor fishing activities</td>
<td>Immediate</td>
<td>o MoFMRA</td>
</tr>
</tbody>
</table>
|  | 4.1.3 Conduct regular awareness and feedback programs to improve quality of logbook data received from fishers | Immediate | o MoFMRA  
  o Island councils |
|  | 4.1.4 Develop and implement an electronic catch and effort reporting mechanism | Medium-term | o MoFMRA |
|  | 4.1.5 Enhance Fisheries Information System | Immediate | o MoFMRA |
| 4.1.6 | Expand the VMS coverage to 100% of the licensed vessels above 15 meters in length. | Medium-term | MoFMRA |
| 4.1.7 | Establish and implement Electronic Monitoring for the fishing fleet to monitor 5% of licensed tuna fishery fleet (e-observer program) | Immediate | MoFMRA |
| 4.1.8 | Regularly compile and manage fishery data | Immediate | MoFMRA |
| 4.1.9 | Regularly compile and manage VMS and e-monitoring data | Immediate | MoFMRA |

| 4.2.1 | Develop and implement a National MCS Action framework | Immediate | MoFMRA |
| 4.2.2 | Implement a National Plan of Action to prevent, deter and eliminate illegal, unreported and unregulated fishing | Immediate | MoFMRA, CG, MPS |
| 4.2.3 | Recruit and station fisheries rangers in major tuna fishing areas/islands | Immediate | MoFMRA, Island councils |
| 4.2.4 | Become party to the FAO Compliance Agreement | Medium term | MoFMRA |
| 4.2.5 | Train and assign officers from relevant enforcement authorities to ensure compliance with the Fisheries Act of the Maldives, pursuant regulations and Management Plans | Immediate | MoFMRA |
| Objective 5: Implement national, regional and international fisheries management and trade obligations on the Maldives |
|---|---|---|---|
| **Strategy** | **Action** | **Time frame** | **Responsible parties** |
| 5.1 Consider and transpose obligations under International Instruments and trade related measures of Importing countries into the national legislation in a timely manner | 5.1.1 Incorporate obligations under CMMs adopted by IOTC into regulations and this Plan. | Immediate | o MoFMRA o AGO |
| | 5.1.2 Incorporate and implement advisories adopted by SWIOFC and other management bodies, to the extent possible into MPs and regulations | Immediate | o MoFMRA |
| | 5.1.3 Engage with major importing countries to fulfill trade obligations to facilitate trade of tuna products. | Immediate | o MoFMRA |
Part 5: Tuna Management in the Maldives

1.1 Regional Context

The tuna resources occurring in the Maldivian waters, on which the tuna fisheries depend on, form part of stocks distributed across the Indian Ocean. The United Nations Convention on the Law of the Sea (UNCLOS), in its Annex I, lists among others, tunas, sailfish and swordfishes as highly migratory species. Article 8 of the Fish Stocks Agreement (UNFSA), a multi-lateral treaty signed in 1995 for the implementation of the provisions of the United Nations Convention on the Law of the Sea relating to the conservation and management of straddling fish stocks and highly migratory fish stocks, forms the basis for cooperation in managing such stocks either directly or through appropriate sub-regional or regional fisheries management organizations.

The Indian Ocean Tuna Commission (IOTC), was established in 1993 for cooperation among the Indian Ocean coastal states and states and entities fishing for species under management of IOTC in the Indian Ocean, to cooperate in the conservation and optimum utilization of the stocks relevant to IOTC and encourage sustainable development of fisheries based on the stocks. This is achieved through binding Conservation and Management Measures (CMMs) adopted by the Commission. The subsidiary bodies of the Commission, Scientific Commission and Working Parties contribute to the development of management measures and stock statuses for the species of concern. Maldives became a full member of the IOTC on 13th July 2011.

1.2 Fisheries Management in the Maldives

Due to the predominance of tuna fisheries throughout the Maldives’ history, fisheries management and data collection has been centred around and influenced by tunas and tuna fisheries. This is evidenced, for example, by the fact that catch, and effort data collection was initiated from the tuna fisheries. Species specific catch data was being reported as early as 1970, while non-tuna catch (reef fish, sharks etc) were reported by other non-taxonomic groupings; for example, reef fish was reported as groups of 1, 2 and 3, depending on the size of the fish in the initial data collection system.

A separate ministry to manage the fisheries of the Maldives was first formed in 1968 as the Ministry of Agriculture and Fisheries; which was later split in 1972 to form the Ministry of Fisheries (Anderson, Adam and Rasheed, 2003). Prior to these, fisheries matters were the responsibility of the Ministry of Home Affairs (Anderson, Adam and Rasheed, 2003). Over the course, fisheries and agriculture has been the mandate of the same ministry, albeit with minor name changes. The fisheries and agriculture ministry was named Ministry of Fisheries, Marine Resources and Agriculture in 2018.
The Fisheries Management Section (FMS) of the Ministry has the sole responsibility of managing the marine fisheries of the Maldives. The Section is responsible for formulating policies, regulations and guidelines for sustainable use of the fishery resources. The Compliance Section is responsible for licensing and Monitoring, Control and Surveillance related matters.

1.3 Data collection and processing

Systemic fishery data collection in the Maldives began in 1959, when the Government of Maldives required reporting of tuna catch from the islands in three categories of fish (large skipjack; small skipjack and yellowfin; frigate and kawakawa). In 1966, the system expanded to report catches from *radhu dhoni* (trolling vessel) in addition to *masdhoni* (tuna vessel) (Anderson, 1986). Then in 1970, reporting was required in five categories: large skipjack, small skipjack, yellowfin tuna, kawakawa and frigate tuna (Anderson, Adam and Rasheed, 2003). Catch of reef fish (i.e. all other species) were also reported beginning 1970 (Anderson, 1986). Mechanization of the pole-and-line fleet began in 1974 and catches from mechanized and sailing vessels were segregated beginning 1979 (Anderson, 1986). From 1992, catches of “large” yellowfin tuna, which were surface swimming sub-adult to adult tunas caught mostly by handline and trolling began to be collected. Other notable events in the catch and effort data collection include acquiring non-tuna catch (billfishes; sharks; and reef fishes in three size groupings, small, medium and large fishes); and introduction of logbooks for the tuna fisheries (pole-and-line, handline and longline) in 2010, which was later revised and re-introduced in 2013.

The Maldives fishery data collection system was a complete enumeration system where the fishermen reported daily catches to a designated person at their respective Island Offices who compiled the information into a “Monthly Fishing Report” and forwarded to the then, Statistics and Data Management Section of the Ministry (Anderson, Adam and Rasheed, 2003). Additionally, a second, “Monthly Fisheries Report 2” was used to report other fishery related information such as export of fishery products from the island, numbers of fishers, registered vessels, and numbers of fish caught by other means (for example beach seining) (Anderson, Adam and Rasheed, 2003). This system of reporting was adequate for the time as it was custom to count the days catch for distribution among the crew and owners (Anderson, 1986), and the trips were single day trips and the catch was mostly landed at the home island. The system of data reporting remained until January 2017, but was gradually being phased out since introduction of the logbooks in 2010. At present fishery catch and effort data are reported through logbooks from the pole-and-line, handline, longline, reef fish and grouper fisheries.

Fishery data collection and management is the responsibility of the Statistics Unit of the Fisheries Management Section. The Unit is further responsible for timely submission of fishery data and information to national and international agencies as required. The web enabled, fishery information system, *Keyolhu*, where all catch and effort data are recorded and compiled, forms the hub of fishery
data collation and processing at the Ministry. The system also facilitates vessel registration, issuing of fishing and fish processing licenses, entry of fish purchase data by the commercial tuna processing and export companies as well as issuance of catch certificates required for export of tuna and tuna products.

1.4 Licensing and catch certification

Fishery licensing in the Maldives began in November 2009 with the enactment of the Regulation for Licensing Commercial Fishing, Fish Processing for Exports and Aquaculture, 2009. The regulation required all fishing vessels, fishing for the purpose of exporting fish or with the intention of offloading fish to a fish processing facility, and all commercial fish processing facilities to hold a valid license.

Even before the licensing regulation of 2009, the Ministry has been licensing vessels to conduct longline fishing within the Maldives EEZ. Licensing was ceased in 2010, and resumed in 2011 to local vessels and operators to fish from 100 miles and beyond, within the Maldives EEZ. The Ministry enacted the Longline Fishery Regulation (Number 2014/R-388) to strengthen the management of the longline fishery, which contained provisions geared towards strengthening MCS and data reporting from the fishery and allowed the fishery to operate on the high seas.

Implementation of catch documentation scheme began in 2010 to fulfil compliance with the EU-IUU Regulation. The scheme is implemented for tuna (yellowfin, bigeye and skipjack) caught by Maldivian fishing vessels, processed by domestic companies, and exported to the EU and elsewhere.
6.1 Establishment of a Tuna Management Advisory Committee (TMAC)

6.1.1 Pursuant to section 20 of the Fisheries Act of the Maldives, an advisory committee (herein referred to as the Committee) shall be established to advise on policy matters to the Minister relating to conservation, management, sustainable development, research, and trade of tuna.

6.1.2 The Committee shall be appointed by the Minister within three months of implementation of the plan, and shall comprise of the following members:

(a) Chairperson (a representative of the Ministry)
(b) A representative from MMRI
(c) Three representatives from each of the tuna fisheries in the Maldives
(d) Two representatives from tuna processors and exporters
(e) A representative from the Ministry of Environment
(f) A representative from the Ministry of Economic Development
(g) A representative from the Coast Guard, Maldives National Defence Force
(h) A representative from the Maldives Customs Service
(i) A representative from the Maldives Police Service
(j) Two representatives from locally registered fisheries NGOs

6.1.3 The Ministry shall make a public announcement to call for Expression of Interest for the following Committee positions:

- Representatives of tuna fishers
- Representatives of tuna processors and exporters
- Representatives of the NGOs

6.1.4 The Fisheries Management Section of the Ministry shall execute the responsibilities of the Secretariat of the Committee, including hosting meetings, maintenance of records of the discussions.

6.1.5 The Committee, if needed, may invite specialists/advisors, additional representatives from the Industry, or relevant government agencies, regional or international organisations / institutions to specific meetings to assist in the deliberations.
6.1.6 The Committee shall meet on a biannual basis with special meetings to be called by the Chairperson when urgent matters arise.

6.1.7 The quorum for a meeting of the Committee shall be 7 of committee members.

6.1.8 The mandate of the committee shall be:

(a) Monitoring the implementation of the Plan and providing advice to the Minister on a biannual basis;
(b) Deliberation of policy matters relating to tuna fishery;
(c) Review Maldives Fleet Development Plan submitted by Maldives to the IOTC
(d) Reviewing technical and policy reports pertaining to the tuna fishery;
(e) Advising on management measures in response to the outcomes and recommendations from the technical reports and stakeholder consultations.
(f) Updating Minister on the implementation of the plan on a bi-annual basis.

6.2 Licensing

6.2.1 The following parties operating within the tuna fishery and trade will require a license:

(a) All commercial fishing vessels targeting tuna
(b) All tuna processing facilities
(c) All fishery related activities as described in 1.5.5 of the Plan

6.2.2 The commencement of licensing for trolling vessels under section 6.2.1 (a) shall be 6 months from the date on which the Plan is published in the Government Gazette.

6.2.3 Notwithstanding 1.16.2.1 (b) The following facilities shall be exempt from licensing requirement:

(a) Facilities with a daily processing and storage capacity under 500kg
(b) Cafés and restaurants
(c) Parties preparing products from processed fish (canned, dried, smoked, salted etc)

6.2.4 The general process of application for, and issuance of the licenses shall be in accordance with the procedures set forth in the Licensing Regulation 2020.

6.2.5 Prior to application for a fishing license, the applicant shall ensure the following requirements are met:
(a) Pre-requisites for application for troll fishing license:
   - The fishing vessel is to be registered at the Maldives Transport Authority
   - The vessels must have a valid Seaworthiness Certificate issued by the Maldives Transport Authority;

(b) Pre-requisites for application for pole-and-line and handline fishing license:
   - The fishing vessel is to be registered at the Maldives Transport Authority
   - The vessels must have a valid Seaworthiness Certificate issued by the Maldives Transport Authority;
   - The vessel must have a valid hygiene certification issued by the Maldives Food and Drug Authority

(c) Pre-requisites for application for longline fishing license:
   All pre-requisites in part (b) along with the following requirements will be applicable to longline vessels:
   - Marking and identification of vessel should be accordance with Vessel and Gear Marking Guideline published on the Ministry's website;
   - Vessel must have safe and decent living conditions for the crew in accordance with the provisions in Annex 2: Longline fishing vessel standards;
   - Vessel must be equipped with a functioning Vessel Monitoring System (VMS) and Electronic Monitoring system approved by the Ministry;
   - Hold minimum amount of Individual Transferable Quota corresponding to vessel gross tonnage as stated in section 6.5.2 (h) of this Plan.

(d) Pre-requisites for application for collector vessel license:
   - The fishing vessel is to be registered at the Maldives Transport Authority;
   - Vessel shall be owned by a licensed skipjack tuna processing or landing facility
   - Vessel must be equipped with a functioning Vessel Monitoring System (VMS) and Electronic Monitoring system approved by the Ministry

(e) Pre-requisites for application for reefer vessel license:
   - The fishing vessel is to be registered at the Maldives Transport Authority;
   - The vessel must have a valid hygiene certification issued by the Maldives Food and Drug Authority
   - Vessel must be equipped with a functioning Vessel Monitoring System (VMS) approved by the Ministry
(f) A fishing license shall only be issued after ensuring respective pre-requisites are met.

6.2.6 Prior to application for a processing license, the applicant shall ensure the following requirements are met:

(a) Pre-requisites for the application for a general Processing License:

- Processing activity shall be approved by the Ministry in accordance with the Project Regulation (confirm name);
- The vessel must have a valid hygiene certification issued by the Maldives Food and Drug Authority;

(b) Pre-requisites for the application for the license to process using filtered smoke and carbon monoxide (CO) license:

All provisions of part (a) along with the following requirements shall apply:

- Facility and equipment shall be in accordance to standards and regulations stated in (a) of this part and National Standard for Carbon Monoxide Treated Fish (MFDA-FCD STAN 03-2017).
- A HACCP based system shall be established in the facility

(c) A license for processing using filtered smoke and CO should only be issued following the inspection stated in part (c) of this section, and ensuring compliance of the facility.

6.2.7 Licensing categories shall vary based on scale and nature of operations. The categories, details of the licence fees and the period of validity of licenses are summarised in Annex 3: Licensing categories, fees and period of validity.

6.2.8 None of the aforementioned licenses under this plan are be transferable.

6.2.9 Licenses should be renewed as per the Licensing regulation (2020) and renewal shall be subject to annual or biennial reviews and payment of the license fee.

6.2.10 Pursuant to Section 36 (a) of the Fisheries Act, foreign vessels will not be licensed to fish within the maritime zones of the Maldives.

6.2.11 Licensing Terms and Conditions for the licenses required within the scope of this Plan are in Annex 4: Licensing Terms and Conditions.
6.2.12 Where there is a need, the Ministry may change the conditions at the time of renewal or within the licence period. Any such changes shall be publicly announced.

6.3 Restriction of Fishing Gears

Fishing for tuna should not involve any of the following types of fishing methods, gears or chemicals prohibited by the Fisheries Act and the Regulation No. 2020/R-75 General Fisheries Regulation

(a) Purse seine fishing;
(b) Gillnet fishing;
(c) Trawl net fishing;
(d) Fishing using an explosive, poison or such other chemical; and
(e) Use of spear guns

6.4 Fishing Area Restrictions

6.4.1 Areas closed for tuna fishing are:

(a) All areas protected under Fishery Management Plans made pursuant to the Fisheries Act;
(b) All areas protected from extractive uses under other laws and regulation.
(c) With exception of Pole-and-line fishing, within 3 nautical miles around FADs pursuant to Regulation No. 2020/R-75 General Fisheries Regulation
(d) Conducting longline fishing within 100 (one hundred) miles from the archipelagic baseline of the Maldives; and in the Indian Ocean high seas south of 25 degrees South latitude in the IOTC area of competence
(e) Within one nautical mile of a data buoy

6.4.2 Should a Licensee contravene any of the aforementioned provisions, such party shall be liable to penalties stipulated in respective laws, regulations or management plans and does not prevent further penalisation under this Plan.
6.5 Establishing Catch Quotas

6.5.1 In the event where the IOTC requires states to maintain catches of a species within a certain limit, the Ministry will establish a mechanism to ensure fair, equitable and just access to the resource(s).

6.5.2 Regardless of a requirement by IOTC to reduce catches, the Ministry shall allocate Individual Transferable Quotas (ITQ) for the longline fishery as described below:

(a) The Ministry shall set an Individual Transferable Quota (ITQ) for bigeye tuna that can be caught using longlines. The Ministry shall refer to the Longline Fleet Development Plan submitted by Maldives to the IOTC when advising an ITQ amount.

(b) Before 15th of October, the Ministry must announce the ITQ amount and open for expression of interest for the provision of ITQ for the subsequent year. Quota year shall be from 1st January to 31st December.

(c) Base price for quotas shall be USD 250 per 5 metric tons.

(d) Quota year shall be from 1st January to 31st December.

(e) Eligibility for an ITQ are:

- Shall be a Maldivian national.
- Companies with 100% Maldivian shareholders formed in accordance with Act No. 10/96 (Law of the Companies in Maldives)
- Partnerships (excluding foreigners) that are made pursuant to "Law on Partnerships" No.13/2011

(f) Minimum ITQ amount that shall be purchased are:

<table>
<thead>
<tr>
<th>Vessel Category</th>
<th>Minimum ITQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 100 gross tonnage</td>
<td>5 t per month for the quota period</td>
</tr>
<tr>
<td>Between 100 and 150 gross tonnage</td>
<td>10 t per month for the quota period</td>
</tr>
<tr>
<td>Between 150 and 200 gross tonnage</td>
<td>15 t per month for the quota period</td>
</tr>
<tr>
<td>Between 200 and 250 gross tonnage</td>
<td>20 t per month for the quota period</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Gross Tonnage</th>
<th>Quota per Month for the Quota Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 250 and 300</td>
<td>25 t per month for the quota period</td>
</tr>
<tr>
<td>Above 300</td>
<td>40 t per month for the quota period</td>
</tr>
</tbody>
</table>

(a) Where the total of all requested ITQs exceed the allocated amount for that year, quotas shall be distributed via an auction whereby the minimum quota price shall be set at USD 250 per 5 metric tons.

(b) A single party shall not bid for more than 15% of the total ITQ

(c) Any remaining quota from the initial sale can be purchased at any time during the quota year.

(d) Quota (for the quota period) shall be transferable only under the administration of the Ministry through the application of the "Form to apply for permission to sell quota issued for longline fishing" where 15% of the of the sale price of the quota shall be credited to the Ministry.

(e) If it is found that quota is purchased to be sold to a third party for the sole purpose to generate revenue, the respective quota shall be cancelled without compensation, and the parties involved in, or any businesses that the party(ies) are part of will be banned from purchasing and/or holding a quota for a period of five years.

(f) All non-targeted and bycatch species caught shall be accounted for within the quota amount.

(g) Where composition of non-target and bycatch species exceeds 30% of the ITQ, an additional fee of USD 250 per additional metric tonne of such species shall be charged.

(h) Unused ITQ at the end of the year shall not be rolled over to the next year.

6.6 Measures Relating to Bycatch Mitigation in Longline Fishery

6.6.1 Measures to reduce bycatch and mortality of marine turtles and sharks

(a) During retrieval of longline, all live shark bycatch shall be released immediately without additional harm. Sharks dead at the time of retrieval shall be brought to shore and declared to a fisheries ranger or an observer of the Ministry. In addition to the
head, skin, organs and carcass will be considered as a whole shark when declaring shark bycatch.

(b) All sharks shall be landed with their fins naturally attached to the shark carcass.

(c) Turtles caught in the longlines must be released immediately without additional harm. Vessels shall carry line cutters and de-hookers in order to facilitate the appropriate handling and prompt release of marine turtles caught or entangled.

(d) All incidents involving marine turtles and sharks, including live and dead bycatch should be recorded in the logbooks and reported as specified by the Ministry.

(e) Branch lines of the longline gears should be set at a depth of at least 60 meter from the surface.

6.6.2 Measures to reduce bycatch and mortality of seabirds

Longline fishing vessels must use at least one measure stated below to reduce the incidental catch and mortality of seabirds in their operations.

(a) Night setting with minimum deck lighting: Setting of longlines shall not be carried out between nautical dawn and before nautical dusk with minimum deck lighting.

(b) Bird-scaring lines (Tori lines): Bird-scaring lines (BSL) shall be deployed during the entire longline setting to deter birds from approaching the branch line. Required design of BSL and instruction for their deployment are summarised in Annex 5.

(c) Line weighting: All branch lines must be weighted prior to setting. Specification for weighting are:

- Minimum of 45 grams weight attached to all branch lines;
- Less than 60 grams weight must be within 1 metre of the hook;
- 60 grams or greater and less than 98 grams must be within 3.5 metres of the hook; and
- 98 grams or greater must be within 4 metres of the hook

6.6.3 Measures to reduce interactions and mortality of marine mammals

(a) Offal shall be discarded at locations and times away from active fishing to allow marine mammals to feed away from catch
(b) Vessels shall accurately record and report frequency of incidental mortality and serious injury of marine mammals during the fishery operation through the logbooks.

(c) In the event where any unintentional catch of marine mammals or any other ETP species occur, the animals should be released immediately without harming, using a method that will result in minimal harm while releasing or de-hooking;

6.7 Involvement of foreign nationals in tuna fishery operations

6.7.1 Involvement of foreign nationals shall be permitted to categories 1,2 and 3 pole-and-line and/or handline fishing vessels only.

6.7.2 Involvement of foreign nationals on board vessels stated in section 6.7.1 shall be restricted to 2 (two) people, where scope of involvement shall be limited to vessel maintenance such as housekeeping, cooking and watch-keeping.

6.7.3 For longline fishing vessels, with the exception of a trained master, engineer or a captain, all crew must be Maldivian nationals.

6.7.4 All foreign nationals must have a valid work permit issued by the relevant authority.

6.8 Measures Relating to Monitoring, Control and Surveillance

6.8.1 Record of fishing vessels and owners

The ministry shall maintain a comprehensive and up to date record of all licensed fishing vessels and owners.

6.8.2 Reporting

(a) All parties that has been issued with Licenses to carry out any activities within the scope of this plan should provide, to the Ministry, its fishery statistical data, and, purchase and processing information respectively as applicable.

(b) All parties with a valid license shall comply with the reporting requirements stated in the respective licensing terms and conditions:
6.8.3 Vessel Monitoring System (VMS)

(a) All licensed vessels shall install and keep in operation a VMS that meets standards and specifications set out by Ministry, as stated below:

- Vessels of 24 meters and above in overall length (effective from 6 months from the Implementation of this Plan)
- Vessels between 20 to 24 meters in overall length (effective from 12 months from the implementation of this Plan)
- Vessels between 15 to 20 meters in overall length (effective from 18 months from the implementation of this Plan)

(b) VMS must remain switched on at all times, while out fishing and/or docked at a port

(c) VMS should not be switched off without a prior written approval by the Ministry.

(d) Master shall ensure that that vessel does not leave port if the VMS is not functional.

(e) In the event where the VMS stops functioning, the Master or vessel owner shall immediately notify the Ministry in writing and follow the procedures for manual reporting as outlined by the relevant regulations.

6.8.4 Observers and E-monitoring

(a) The Ministry, if deemed necessary, has the right to place observers at the vessel’s expense. The Ministry shall however, notify this to the licensee at least 48 hours prior to departure of the vessel

(b) All vessels shall fully cooperate with the observer(s) and other authorised officers in performing their duties pursuant to the Fisheries Act and Regulation No. 2020/R-75 General Fisheries Regulation

(c) The Ministry, has the right to install and keep in operation an Electronic Monitoring system in pole and line and handline vessels

(d) All longline vessels are required to install and keep in operation an Electronic Monitoring system that meet the Ministry’s standards.
(e) The Electronic Monitoring System must remain switched on at all times during the fishing operations.

(f) The Electronic Monitoring system should not be switched off without a prior written approval by the Ministry.

(g) In the event where Ministry finds and notifies the Master or vessel owner that the Electronic Monitoring system is not functional, the Master shall ensure that that vessel does not leave port until Ministry issues a written approval.

(h) In the event where the Master or the vessel owner finds that the Electronic Monitoring system has stopped functioning, the Master or vessel operator shall immediately notify the Ministry in writing.

6.8.5 Catch certification

(a) Each tuna consignment destined for export shall be accompanied by a catch certificate issued by the Ministry.

(b) A fee of MVR 75 shall be charged for each certificate.

(c) Application for the catch certificate shall be submitted via the Fisheries Information System, Keyolhu.

(d) Exporters shall record via Fisheries Information System (FIS), Keyolhu daily fish purchases pertaining to but not limited to the following information:

- Details of the licensed party from whom the fish was purchased
- Vessel that harvested the fish
- Purchase date
- Species and their respective weight and quantity
6.9 Offences and Penalties

6.9.1 Acting in contravention of any of the above management measures and/or conditions of a licence is an offence.

6.9.2 Where an offence under this Plan has been committed by any person on board a fishing vessel, the master and/or owner and/or operator of such vessel shall each also be deemed to be guilty of that offence.

6.9.3 Where an offence under this Plan has been committed by a company or partnership, every director and every staff of that company and every person of the partnership directly connected with the activity resulting in the offence shall each be guilty of that offence.

6.9.4 Penalties for non-compliance shall be applied as per Table 3.

6.9.5 If an offence is repeated for a third time, the licence of the offender shall be revoked and the offender shall not be issued a new license for a period of three.

6.9.6 Procedures for penalisation shall be in accordance with the Regulation No. 2020/R-74, Regulation on Administration and Financial Penalties for Fisheries Related Offences.

Table 3: List of offences and their respective penalties

<table>
<thead>
<tr>
<th>Offence</th>
<th>Fine (MVR)</th>
<th>Repeated offence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaging in troll fishing without a valid license</td>
<td>2,5000</td>
<td>-</td>
</tr>
<tr>
<td>Engaging in any pole-and-line and handline fishing without a valid license</td>
<td>20,000</td>
<td>-</td>
</tr>
<tr>
<td>Engaging in longline fishing without a valid license</td>
<td>30,000</td>
<td>-</td>
</tr>
<tr>
<td>Operating a carrier vessel without a valid license</td>
<td>40,000</td>
<td>-</td>
</tr>
<tr>
<td>Failure to carry license on-board</td>
<td>1000</td>
<td>MVR 1000 each time</td>
</tr>
<tr>
<td>Failure to carry logbooks</td>
<td>750</td>
<td>MVR 500 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Violation</td>
<td>Penalty</td>
<td>Additional Penalty</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>---------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Failure to submit trip logs to the Ministry as conditioned by the fishing licence</td>
<td>750 MVR</td>
<td>up to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Provision of inaccurate or falsified logbook data to the Ministry</td>
<td>10,000 MVR</td>
<td>up to the previous fine (up to MVR 50,000)</td>
</tr>
<tr>
<td>Harvesting, retaining on-board, storing on-board, transhipping, transporting to a landing facility or land any of the species protected by Regulation No. 2020/R-75, General Fisheries Regulation</td>
<td>Penalty will be calculated as 4 times the market value of the species and based on the quantity and its importance to the ecosystem, also by vessel type</td>
<td>-</td>
</tr>
<tr>
<td>Retaining on-board, storing on board, tranship or landing, Indian Ocean Striped Marlin, Black Marlin and Indo Pacific Sailfish smaller than 60cm lower-jaw fork length, and any part or whole carcass of mobulid rays</td>
<td>10,000 MVR</td>
<td>up to the previous fine (up to MVR 50,000)</td>
</tr>
<tr>
<td>Using aircrafts or any type of aerial vehicles/drones as fishing aids</td>
<td>2,500 MVR</td>
<td>up to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Transhipping without a permit granted by the Ministry</td>
<td>50,000 MVR</td>
<td>MVR 10,000 in addition to the previous fine (up to MVR 400,000)</td>
</tr>
<tr>
<td>Failure to cooperate with Enforcement Officers, Fisheries Rangers and Fisheries Observers</td>
<td>1000 MVR</td>
<td>MVR 700 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Dispose any non-biodegradable waste or chemicals into the sea during fishing operation</td>
<td>3000 MVR</td>
<td>MVR 1000 in addition to the previous fine (up to MVR 10000)</td>
</tr>
<tr>
<td>Abandoning or discarding fishing gear (nets and/or longlines) into the sea</td>
<td>10,000 MVR</td>
<td>MVR 1000 in addition to the previous fine (up to MVR 100,000)</td>
</tr>
<tr>
<td>Using unmarked gears (longlines)</td>
<td>3000 MVR</td>
<td>MVR 500 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Offences related to general processing license and its terms and conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For the purpose of penalties, general processing activities shall be categories as below:</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Category A</strong>: For facilities processing and storage capacity below 5 metric tons;</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Category B</strong>: For facilities processing and storage capacity between 5 and 15 metric tons;</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Category C</strong>: Facilities processing and storage capacity above 15 metric tons; and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category A facilities processing for export or sale to exporters without a valid license:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For the remaining categories the fine shall be:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Category B: 3 times more than the amount of fine imposed for category A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Category C: 4 times more than the amount of fine imposed for category A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category A facilities purchasing fish from vessels without a fishing license</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For the remaining categories the fine shall be:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- For category B: 2 times more than the amount of fine imposed for category A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- For category C: 3 times more than the amount of fine imposed for category A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violating purchase limit</td>
<td>MVR 2000 per every additional ton processed</td>
<td>-</td>
</tr>
<tr>
<td>Landing fish to the facility without prior receipt of logbooks</td>
<td>2,000</td>
<td>MVR 500 in addition to the previous fine (up to MVR 20,000)</td>
</tr>
<tr>
<td>Failure to submit daily purchase reports to the Ministry as conditioned by the licence</td>
<td>1,000</td>
<td>MVR 500 in addition to the previous fine (up to MVR 50,000)</td>
</tr>
<tr>
<td>Provision of inaccurate or falsified purchase information to the Ministry</td>
<td>5,000</td>
<td>MVR 500 in addition to the previous fine (up to MVR 50,000)</td>
</tr>
<tr>
<td>Offences related to enforcement and cooperation</td>
<td>MVR 700 in addition to the previous fine (up to MVR 10,000)</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>----------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Breaching confidentiality of data from fishers</td>
<td>MVR 20,000 each time</td>
<td></td>
</tr>
<tr>
<td>Offences related to processing using filtered smoke and carbon monoxide (CO) license and its terms and conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engaging any processing activities using filtered smoke and carbon monoxide without a valid license</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>Carrying out processing activities other than processing using filtered smoke and carbon monoxide</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>Purchasing fish from vessels without a fishing license</td>
<td>10,000</td>
<td></td>
</tr>
<tr>
<td>Exporting or attempting to export CO or filtered smoke treated fish to countries that do not allow importation of such products</td>
<td>100,000 and license shall be revoked, and no new licenses shall be issued for 6 months</td>
<td></td>
</tr>
<tr>
<td>Selling or attempting to sell CO and filtered smoke treated fish to the domestic market</td>
<td>10,000</td>
<td></td>
</tr>
<tr>
<td>Failure to submit daily purchase information to the Ministry as conditioned the licence</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>Breaching the confidentiality of the data received from fishers as a part of a requirement from the Ministry and sharing such data with any other party besides the Ministry</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>Failure to establish a traceability system as condition by the license</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>Offences related to restricted gears and areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of any gears prohibited by the Fisheries Act</td>
<td>400,000</td>
<td></td>
</tr>
<tr>
<td>Offence Description</td>
<td>Fine</td>
<td>Additional Fine</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>--------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Fishing beyond the maritime zones of the Maldives without such a license</td>
<td>75,000</td>
<td>MVR 10,000 in addition to the previous fine (up to MVR 400,000)</td>
</tr>
<tr>
<td>Fishing within the jurisdiction of another country</td>
<td>150,000</td>
<td>MVR 10,000 in addition to the previous fine (up to MVR 400,000)</td>
</tr>
<tr>
<td>Fishing within 3 nautical miles around FADs</td>
<td>5,000</td>
<td>MVR 500 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Licensed longline vessels fishing inside 100 miles from the archipelagic baseline of the Maldives</td>
<td>50,000</td>
<td>MVR 1000 in addition to the previous fine (up to MVR 100,000)</td>
</tr>
<tr>
<td>Fishing in an area where fishing is prohibited under the Fisheries Act, or any other laws or regulations of the Maldives</td>
<td>5,000</td>
<td>MVR 500 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Intentionally fishing within one nautical mile of or interacting with a data buoy</td>
<td>2,500</td>
<td>MVR 500 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Conducting fishing or engaging in any related activities using any other gear except pole-and-line within 3 nautical miles around FADs</td>
<td>5000</td>
<td>-</td>
</tr>
<tr>
<td><strong>Offences related to bycatch mitigation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Failure to comply with bycatch mitigation measures of this Plan (LL vessels)</td>
<td>5,000</td>
<td>MVR 1000 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td><strong>Offences related to VMS and e-monitoring</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switching off or tampering with VMS and/or e-observer system</td>
<td>5,000</td>
<td>MVR 1000 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Departing without prior Ministry’s approval</td>
<td>2,500</td>
<td>MVR 1000 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Quota violation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offence</td>
<td>Fine</td>
<td>Additional Fine</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Exceeding quota amount</td>
<td>MVR 2,500 per every additional ton caught</td>
<td></td>
</tr>
<tr>
<td>Other offences</td>
<td>5,000 per person</td>
<td>-</td>
</tr>
<tr>
<td>Employing a foreign national to in contravention of this Plan</td>
<td>1,000</td>
<td>MVR 500, in addition to the previous fine (up to MVR 5000)</td>
</tr>
<tr>
<td>Foreign national engaging in tuna fishing vessels in contravention of this</td>
<td>1,000</td>
<td>MVR 500, in addition to the previous fine (up to MVR 5000)</td>
</tr>
<tr>
<td>Failure to cooperate with enforcement officers, fisheries rangers and fisheries observers</td>
<td>1000</td>
<td>MVR 700 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Acting in contravention of the Fisheries Act and/or any regulation or management plan made pursuant to the Fisheries Act</td>
<td>As stated in the regulation or management plan</td>
<td></td>
</tr>
</tbody>
</table>
Part 7: Monitoring the Implementation of the Plan

7.1 The Ministry is responsible for the implementation and enforcement of this management plan as per Table 2.

7.2 The Ministry shall formulate a plan of action to monitor and ensure compliance and enforcement of all management measures.

7.3 The Maldives Marine Research Institute shall formulate a plan of action to guide all research activities that the institute is responsible for under this Plan.

Part 8: Reviewing the management plan

8.1 This Plan shall be reviewed and revised at least every three years by the Ministry.

8.2 The Ministry shall engage with tuna fishing communities, licence holders, processors, exporters and other stakeholders in the review process.

8.3 Upon review, if and where applicable, management measures shall be revised, or new measures put in place based on scientific findings and other relevant data and/or requirements from regional and international bodies and export markets.

8.4 Notwithstanding part 8.3, where there is an immediate need to revise any part(s) of the Plan the Ministry shall carry out such revisions in consultation with the Committee.

8.5 The Maldives Marine Research Institute shall advise the Ministry on biological and ecological aspects of the fishery to be incorporated in reviewing of the Plan.
References


## Annex

### Annex 1: Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) By-catch</td>
<td>All non-targeted species caught or interacted during tuna fishing, including those species which are:</td>
</tr>
<tr>
<td></td>
<td>(a) Retained on-board;</td>
</tr>
<tr>
<td></td>
<td>(b) Incidentally taken but discarded; and</td>
</tr>
<tr>
<td></td>
<td>(c) Incidentally affected by interacting with fishing equipment but not taken.</td>
</tr>
<tr>
<td>(b) Captain</td>
<td></td>
</tr>
<tr>
<td>(c) Commercial fishing activities</td>
<td>All fishing activities of catching tuna for commercial profit</td>
</tr>
<tr>
<td>(d) Data buoy</td>
<td>Consistent with IOTC resolution 11/02 “On the Prohibition of Fishing on Data Buoys”, floating devices, either drifting or anchored, that are deployed by governmental or recognised scientific organisations or entities for the purpose of electronically collecting and measuring environmental data, and not for the purpose of fishing activities.</td>
</tr>
<tr>
<td>(e) Enforcement officer</td>
<td>Any officer designated pursuant to Section 57 of this Act to enforce regulations made under this Act.</td>
</tr>
<tr>
<td>(f) Fisheries Ranger</td>
<td>Persons who are appointed for and by the Ministry under Section 58 of the Act No. 14/2019 (Fisheries Act of the Maldives).</td>
</tr>
<tr>
<td>(g) Fishing</td>
<td>(1) Searching for the purpose of catching, taking, killing and harvesting of fish;</td>
</tr>
<tr>
<td></td>
<td>(2) Attempting to search for, catch, take, kill or harvest fish;</td>
</tr>
<tr>
<td>(h) Fishing vessels</td>
<td>Any type of vessel, ship or any other thing which is used for fishing, which has been prepared for fishing, or which is usually used for fishing or related activities.</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(i) Handline fishing</td>
<td>Any fishing activity that uses a single line with a hook at the end of the line.</td>
</tr>
<tr>
<td>(j) High-seas</td>
<td>Waters outside the maritime zones of the Maldives</td>
</tr>
<tr>
<td>(k) Illegal, Unreported and Unregulated fishing</td>
<td>A fishing and related activities in contravention of international fisheries planning and management measures as defined under regulations pursuant to the Fisheries Act.</td>
</tr>
<tr>
<td>(l) Logbook</td>
<td>Any instruments used to record data on fishing trips, including catch and effort data, submitted electronically or via any other medium determined by the Ministry</td>
</tr>
<tr>
<td>(m) Longline fishing</td>
<td>Any fishing activity that uses a gear in which short lines (branchlines or droppers) carrying hooks that are attached to a longer main line at regular intervals suspended horizontally in at a pre-determined depth with the help of surface floats.</td>
</tr>
<tr>
<td>(n) Lower jaw-fork length</td>
<td>Projected straight distance from the tip of the lower jaw to the shortest caudal ray (fork of the caudal fin).</td>
</tr>
<tr>
<td>(o) Management plans</td>
<td>The plan with regard to fisheries planning, management and development in relation to Chapter Three of the Fisheries Act.</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(p) Maritime zones of the Maldives</td>
<td>Maldives internal waters, archipelagic waters, territorial sea and exclusive economic zones as stipulated in the</td>
</tr>
<tr>
<td>(q) Master</td>
<td>Any person holding the most responsible position at any given time on-board a fishing vessel</td>
</tr>
<tr>
<td>(r) Minister</td>
<td>The minister responsible for fisheries, including aquaculture.</td>
</tr>
<tr>
<td>(s) Neritic tunas</td>
<td>Small tunas that are commonly found in the coastal waters. The IOTC manages six neritic tuna species, of which Frigate tuna (<em>Auxis thazard</em>; raagondi) and Kawakawa (<em>Euthynnus affinis</em>; latti) is of relevance to this MP.</td>
</tr>
<tr>
<td>(t) Offence</td>
<td>Administrative offences prescribed in this Plan.</td>
</tr>
<tr>
<td>(u) Operator</td>
<td>Each person who controls, operates or instructs the vessel, including the owner, charterer, master and any party who benefits economically or financially from the operation of the vessel.</td>
</tr>
<tr>
<td>(v) Pole-and-line fishing</td>
<td>Any fishing activity that uses a barbless hook and line attached to a pole.</td>
</tr>
<tr>
<td>(w) Precautionary measures</td>
<td>In the absence of complete information based on scientific research or where a matter has not been proved, measures adopted to manage the natural resources in a sustainable manner considering the possibility of an adverse outcome if such measures are not taken.</td>
</tr>
<tr>
<td>(x) Processing</td>
<td>Activities undertaken to package, pack or bring any change to fish in order to preserve fish for a long period.</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| (y) Processing facilities | Lands, buildings, or such other places on or in which:  
(1) fish or aquaculture products are cleaned, packaged, dried, salted, chilled, frozen or otherwise processed for sale in and outside the Maldives; or  
(2) fish or aquaculture products are stored for the purposes of packaging, canning, drying, cleaning, salting, chilling, freezing or otherwise for processing for sale in and outside the Maldives. |
| (z) Troll fishing | Any fishing activities with one or more fishing lines, baited with lures drawn through the water, targeting tunas. |
| (aa) Tropical tunas | Those that are found in warm tropical waters. Tropical tunas of concern to this MP are; Skipjack tuna (*Katsuwonis pelamis*; kalhubila mas), Yellowfin tuna (*Thunnus albacares*; reendhoo uraha kanneli), Bigeye tuna (*Thunnus obesus*; loabodu kanneli) |
| (bb) Vessel Owner | The person who fulfils the duties and obligations of, represents as having the rights of, or accepts the obligations of, whether in personal capacity or through another person, the owner; and person or persons associated with the owner, or the manager, director or secretary of a legal entity. |
| (cc) | |
### Annex 2. Longline fishing vessel standards

<table>
<thead>
<tr>
<th>Headroom</th>
<th>Headroom shall not be less than 190 centimetres in any space - or part of any space - in such accommodation, where it is satisfied that this is reasonable and will not result in discomfort to the fishers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openings into and between accommodation spaces</td>
<td>There shall be no direct openings into sleeping rooms from fish rooms and machinery spaces, except for the purpose of emergency escape. For vessels of 24 metres in length and over, there shall be no direct openings, except for the purpose of emergency escape, into sleeping rooms from fish rooms and machinery spaces or from galleys, storerooms, drying rooms or communal sanitary areas; that part of the bulkhead separating such places from sleeping rooms and external bulkheads shall be efficiently constructed of steel or another approved material and shall be watertight and gas-tight.</td>
</tr>
<tr>
<td>Insulation</td>
<td>Accommodation spaces shall be adequately insulated; the materials used to construct internal bulkheads, panelling and sheeting, and floors and joinings shall be suitable for the purpose and shall be conducive to ensuring a healthy environment. Sufficient drainage shall be provided in all accommodation spaces.</td>
</tr>
<tr>
<td>Emergency escape</td>
<td>Emergency escapes from all crew accommodation spaces shall be provided as necessary.</td>
</tr>
<tr>
<td>Ventilation</td>
<td>Shall be equipped with a system of ventilation for accommodation, which shall be controlled so as to maintain the air in a satisfactory condition and to ensure sufficiency of air movement in all weather conditions and climates. Ventilation systems shall be in operation at all times when fishers are on board.</td>
</tr>
<tr>
<td>Lighting</td>
<td>In any part of the accommodation space available for free movement, the minimum standard for such lighting shall be such as to permit a person with normal vision to read an ordinary printed newspaper on a clear day.</td>
</tr>
<tr>
<td>Sleeping rooms</td>
<td>For vessels of 24 metres in length and over but which are less than 45 metres in length, the floor area per person of sleeping rooms, excluding space occupied by berths and lockers, shall not be less than 1.5 square metres. For vessels of 45 metres in length and over, the floor area per person of sleeping rooms, excluding space occupied by berths and lockers, shall not be less than 2 square metres. Individual berths of dimensions not be less than 190 by 70 centimetres shall be provided. Mattresses shall be of a suitable material.</td>
</tr>
<tr>
<td>Sanitary facilities</td>
<td>For all fishers who do not occupy rooms to which sanitary facilities are attached, there shall be provided at least one tub or shower or both, one toilet, and one washbasin for every four persons or fewer.</td>
</tr>
</tbody>
</table>
## Annex 3. Licensing categories, fees and period of validity

<table>
<thead>
<tr>
<th>Licensing Category</th>
<th>Duration (months)</th>
<th>Fee (MVR)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fishing License</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Exclusively Pole and line fishing for sale to an exporter</td>
<td>12</td>
<td>1500</td>
</tr>
<tr>
<td>2. Exclusively handline yellowfin fishing for sale to an exporter</td>
<td>12</td>
<td>1500</td>
</tr>
<tr>
<td>3. Tuna fishing using both pole and line and handline for sale to an exporter</td>
<td>12</td>
<td>2500</td>
</tr>
<tr>
<td>4. Tuna fishing for domestic sale</td>
<td>24</td>
<td>1200</td>
</tr>
<tr>
<td>5. Longline bigeye tuna fishing</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>License year and quota year will be the same (January 1st - December 31st)</em></td>
<td>12</td>
<td>3000</td>
</tr>
<tr>
<td><strong>Processing License</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. All facilities processing for export or offered for sale to exporters:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ With a daily purchasing capacity below 5 metric tons</td>
<td>12</td>
<td>2000</td>
</tr>
<tr>
<td>▪ With a daily purchasing capacity between 5 and 15 metric tons</td>
<td>12</td>
<td>5000</td>
</tr>
<tr>
<td>▪ With a daily purchasing capacity between 15 and 30 metric tons</td>
<td>12</td>
<td>10,000</td>
</tr>
<tr>
<td>▪ With a daily purchasing capacity above 30 metric tons</td>
<td>12</td>
<td>15,000</td>
</tr>
<tr>
<td>7. All facilities processing for domestic sale with a daily purchasing capacity:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Below 5 metric tons</td>
<td>24</td>
<td>200</td>
</tr>
<tr>
<td>▪ Between 5 and 15 metric tons</td>
<td>24</td>
<td>500</td>
</tr>
<tr>
<td>▪ Between 15 and 30 metric tons</td>
<td>24</td>
<td>1000</td>
</tr>
<tr>
<td>▪ Above 30 metric tons</td>
<td>24</td>
<td>2000</td>
</tr>
<tr>
<td>8. All facilities processing for export or offered for sale to exporters, using filtered smoke and carbon monoxide</td>
<td>12</td>
<td>15000</td>
</tr>
<tr>
<td><strong>Related Activities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Collector vessels</td>
<td>24</td>
<td>500</td>
</tr>
<tr>
<td>10. Carrier/reefer vessels</td>
<td>24</td>
<td>3000</td>
</tr>
</tbody>
</table>
Annex 4. Licensing terms and conditions

Terms and Conditions for Fishing Licenses

1. Conditions for pole-and-line, handline fishing license and troll fishing

Every fishing license shall be subjected to the following Terms and conditions.

(a) License:

The vessel shall engage in fishing and related activities, during such periods and in such places, as indicated in the license.

The Master must maintain a fisheries logbook applicable to the fishing activity for which the vessel is licensed to.

(b) Reporting requirements

The Master shall record daily catch and fishing information;

The Master shall ensure the information recorded in the logbooks is complete, accurate and true;

If the catch is intended for export or for sale to an exporter, the Master shall ensure handing over of catch logs to a designated person at the landing facility prior to off-loading of catch.

the Master shall submit the catch logs to Ministry or any other place designated by the Ministry no later than 10 days after completing the fishing trip, If the catch is sold to a party other than an exporter,

In the event where the Ministry begins implementation of electronic catch reporting, the Master shall record and send the information in the manner required by the Ministry.

(c) Prohibited activities.

The Vessel Owner and/or Master and/or Operator shall refrain from, and ensure crew of the vessels refrain from engaging in any of the activities listed below:

Targeting and harvest any species of fish protected under the Fisheries Act, regulations made pursuant to the Act, management plans and or by other laws or regulations in any form.

Retaining on-board, storing on-board, transhipping, transporting to a landing facility or land any of the species protected by other laws or regulations in any form.

Retaining on-board, storing on board, tranship or landing, Indian Ocean Striped Marlin, Black Marlin and Indo Pacific Sailfish smaller than 60cm lower-jaw fork length.

Retaining on-board, transhipping, landing, storing, any part or whole carcass of mobulid rays.
Using aircrafts or any type of aerial vehicles and/or aerial drones as fishing aids

Intentionally fishing within one nautical mile of or interacting with a data buoy, which includes, but is not limited to, encircling the buoy with fishing gear; tying up to or attaching the vessel, or any fishing gear, part or portion of the vessel, to a data buoy or its mooring; or cutting a data buoy anchor line.

Pursuant to Regulation No. 2020/R-75 General Fisheries Regulation, conducting fishing or engaging in any related activities within 3 nautical miles around FADs, except for pole and line fishing.

Acting in contravention of any measures in this Plan or the Fisheries Act or any of the regulations or management plans pursuant to the Act or any pertinent laws or regulations

(d) Bait fishing

Master shall ensure all activities related to bait fishing are carried out in accordance with provisions of the Bait Fishery Management Plan

(e) Fishing area

Shall operate strictly within the maritime zones of the Maldives as defined by Act no.: 6/96 (Maldives Maritime Zones Act)

(f) Transhipment

Shall not carry out any at-sea transhipment.

Port transhipment activities shall only be carried out with a collector vessel or a fish purchasing vessels authorized by the Ministry to operate within the territory of the Maldives, in accordance with applicable regulation or this Plan.

(g) Catch landing

All catch should be landed at a landing facility/port/ collector vessel within the maritime zones of the Maldives

(h) Cooperating with Enforcement Officers, Fisheries Rangers and Fisheries Observers

Master and/or Vessel Owner should fully cooperate with all enforcement officer(s), fisheries ranger(s), and fisheries observer(s) and other authorised officers in performing their duties pursuant to the Fisheries Act and General Fisheries Regulation.

(i) Vessel Monitoring System (VMS) and Electronic Monitoring

Master and Vessel Owner Shall act in accordance with the measures relating to VMS and electronic monitoring applicable to the vessel

(j) Observing Best Practices
Master and or vessel owner (operator) shall not dispose off any non-biodegradable waste or chemicals into the sea.

Master and or vessel owner shall strive to prevent Abandoned, Lost or otherwise Discarded Fishing Gear (ALDFG), and shall report to Ministry any gear lost at sea.

(k) Other

The Vessel Owner shall ensure that the Master is provided with the necessary resources and facilities to comply with the obligations of the Master set forth in this Plan and regulations made pursuant to the Fisheries Act.

2. Conditions for Longline fishing license

In addition to the conditions subjected to pole-and-line, handline and troll fishing licenses applicable to longline fishing license, all longline fishing licenses are subjected to the following specific conditions:

(a) Vessel marking
- The vessel shall display applicable identification markings at all times while fishing. Marking shall be displayed on both sides of the vessel with clear and identifiable characters.

(b) Gear marking
- License number shall be clearly displayed on all radio buoys, other buoys and floats with clear, identifiable characters and shall be non-erasable.

(c) Displaying radio call signs
- Radio call sign issued by the telecommunications authority shall be clearly displayed on:
  - The house of the vessel
  - On both ends of the vessel

(d) Fishing area
- The vessel shall only conduct fishing operations beyond 100 (one hundred) nautical miles from the archipelagic baseline of the Maldives.

- All longline vessels are allowed to fish in the Indian Ocean high seas north of 25 degrees South latitude.
(e) **At sea reporting**

- All vessels with a valid fishing license to operate outside the maritime zones of the Maldives shall submit a Departure Form to the Ministry prior to leaving departure port.

- Every fishing vessel shall provide a crew list (Including name, nationality, and ID/PP No.) to the Ministry prior to its departure from port, and maintain a copy of the crew list on-board the vessel at all times.

(f) **Other**

- Master shall act in accordance with part 5.6 *Bycatch Mitigation Measures in Longline Fishery part* of this Plan

- The **Operator** shall ensure that the **Master** is provided with the necessary resources and facilities to comply with the obligations of this Plan, the Fisheries Act and pursuant regulations.

- Operator and **Master** shall ensure vessel carry appropriate medical equipment and medical supplies for the service of the vessel, taking into account the number of fishers on board, the area of operation and the length of fishing trip

- All crew on board shall be given reasonable access to communication facilities, to the extent practicable.

---

### Conditions for processing license

#### 1. Conditions for general processing license

In addition to any other applicable conditions, every license issued to processing facilities shall be subjected to the following Terms and conditions

**(a) License**

- The facility shall only be used for such processing activities, during such periods and in such places, as indicated in the licence;

- The fish processed at such establishment shall not exceed the total quotas provided to that establishment, including those relating to species and quantity

- Licensee must keep the license (or a certified copy) at the facility at all times, and must produce it at the request of any fisheries enforcement officer(s) and / or a Fisheries Ranger
(b) **Facility, methods and conditions of processing**
- The methods and conditions of processing shall be in accordance with regulations and guidelines of Maldives Food and Drug Authority (MFDA)
- Processing premises, equipment, packaging materials and tools may be subject to random inspections by the Ministry.

(c) **Assisting Ministry with Log books**
All individuals and parties with this licence shall:
- Assist the Ministry in dissemination of the logbook (provided by the Ministry) to vessels landing at their respective ports;
- Facilitate collection of log sheets at the point of landing;
- Treat all data sheets collected as confidential and shall not disclose any information to any person/s or organization.
- Licensee must collect daily catch log sheets from vessels prior to off-loading of catch and forward (every 14 days) the log sheets to the Ministry or any other any other place designated by the Ministry

(d) **Reporting requirements**
- All individuals and parties with this licence should submit a purchase report to the Ministry as per the ‘Data Reporting Guideline’ of the Ministry
- Licensee shall record fish purchase information pertaining to but not limited to; vessel from which the catch was bought, fishing date, fishing area and species and their respective weight and report the information in a manner and period specified by the Ministry.
- Licensee shall ensure the information recorded is complete, accurate and true

(e) **Cooperating with enforcement officers, fisheries rangers and fisheries observers**
- The licensee should fully cooperate with all enforcement officer(s), fisheries ranger(s), and fisheries observer(s) and other authorised officers in performing their duties pursuant to the Fisheries Act and General Fisheries Regulation.

(f) **Prohibited activities**
- Purchasing and processing fish for the purpose of export, from vessels without a valid license;
- Buying or landing of species that are not indicated in the license issued to the vessel;
- Carrying out any processing activities that are not indicated in the license;
2. **Conditions for processing of fish using filtered smoke and carbon monoxide**

In addition to the conditions subjected to general processing licensing conditions applicable to processing using filtered smoke and carbon monoxide, such licenses are subjected to the following specific conditions:

(a) **License**
- The facility shall only be used for such processing of using filtered smoke and carbon monoxide, during such periods and in such places, as indicated in the licence.
- Licensee must keep the license (or a certified copy) at the facility at all times, and must produce it at the request of any authorised officer or an official from MFDA.

(b) **Permit issued by Maldives Food and Drug Authority**
- Licensee shall ensure possession of a valid permit issued by MFDA for processing of fish using filtered smoke and carbon monoxide. Where the MFDA permit expires within the period of the processing license, the processing license shall be temporarily suspended until renewal of the MFDA permit.

(c) **Methods and conditions of processing and product specifications**
- The methods and conditions of processing should be in accordance with regulations and guidelines established by Maldives Food and Drug Authority (MFDA).
- Processing premises, equipment, packaging materials and tools may be subject to random inspections by the Ministry and MFDA at the licensee’s expense.
- In addition to requirements from the importing country, all CO treated products shall comply with specifications stipulated in the following standards and regulations:
  - National Standard for Carbon Monoxide Treated Fish (MFDA-FCD STAN 03-2017);
  - National Standard for Labelling Pre-packaged Food (MFDA-FCD STAN 4-2014);
  - General Principle for Food Hygiene (MFDA-FCD GP 1-2018); and

(d) **Record keeping and reporting**
- Licensee shall record fish purchase information pertaining to but not limited to; vessel from which the catch was bought, fishing date, fishing area, species and their respective weight, weight of processed fish and weight exported and report the information in a manner and period specified by the Ministry.
- Unless otherwise stated by the Ministry, the aforementioned information shall be archived for a period of minimum 5 (fiver) years.

(e) **Prohibited Activities**
- Purchasing and processing from vessels without a valid license;
- Carrying out any processing activities that are not indicated in the license;
- Selling or attempting to sell CO and filtered smoke treated fish to the domestic market;
- Exporting or attempting to export CO and filtered smoke treated fish to countries that do not allow the importation of such products.
(f) Cooperating with enforcement officers, fisheries rangers and fisheries observers
  - The licensee should fully cooperate with all enforcement officer(s), fisheries ranger(s), and fisheries observer(s) and other authorised officers in performing their duties pursuant to the Fisheries Act and General Fisheries Regulation.

(g) Responsibilities
  - Pursuant to the National Standard for Carbon Monoxide Treated Fish (MFDA-FCD STAN 03-2017) licensee shall ensure effective procedures are in place to deal with any food safety hazard and to enable the complete, rapid recall of any implicated lot of the export product from the border or on market. Recalled product(s) will be held under supervision of an authorised officer until they are destroyed.
  - Licensee shall establish a traceability system that would allow to fully trace the processed product back to its origin.
  - All CO and filtered smoke treated products shall be labelled in accordance with National Standard for Labelling Pre-packaged Food (MFDA-FCD STAN 4-2014);
  - The label on the products shall display “This product is Carbon Monoxide treated” for CO treated fish and “This product is filtered smoke treated” on fish processed using filtered smoke. The characters on the label shall be clear and in English.

Conditions for related activities

1. Conditions for collector vessels

All collector vessel licenses are subjected to the following specific conditions

(a) License
  - The vessel shall only be used for such processing activities, during such periods and in such places, as indicated in the licence;
  - The Captain of the vessel must keep the license (or a certified copy) at the facility at all times, and must produce it at the request of any fisheries enforcement officer(s) and/or a Fisheries Ranger.
(b) **Assisting Ministry with Log books**

All individuals and parties with this licence shall:

- Assist the Ministry in dissemination of the logbook (provided by the Ministry) to vessels landing at their respective ports;
- Facilitate collection of log sheets at the point of landing;
- Treat all data sheets collected as confidential and shall not disclose any information to any person/s or organization.
- Licensee must collect daily catch log sheets from vessels prior to off-loading of catch and forward (every 14 days) the log sheets to the Ministry or any other any other place designated by the Ministry.

(c) **Reporting requirements**

- All individuals and parties with this licence should submit a purchase report to the Ministry as per the ‘Data Reporting Guideline’ of the Ministry
- Licensee shall record fish purchase information pertaining to but not limited to; vessel from which the catch was bought, fishing date, fishing area and species and their respective weight and report the information in a manner and period specified by the Ministry.
- Licensee shall ensure the information recorded is complete, accurate and true

(d) **Cooperating with enforcement officers, fisheries rangers and fisheries observers**

- The licensee should fully cooperate with all enforcement officer(s), fisheries ranger(s), and fisheries observer(s) and other authorised officers in performing their duties pursuant to the Fisheries Act and General Fisheries Regulation.

(e) **Prohibited activities**

- Purchasing fish without a valid license;
- Purchasing fish from a vessel without a valid license;
- Carrying out any activities that are not indicated in the license;
- Retaining on-board, storing on-board, transhipping, transporting to a landing facility or land any of the species protected by other laws or regulations in any form.

(f) **Operating areas**

- Carrier vessels shall only operate (purchasing fish from vessels) inside a harbour of an island or area within 2 nautical mile from the outer reef edge of an island.

(g) **Vessel Monitoring System (VMS) and Electronic Monitoring**

- Master and Vessel Owner Shall act in accordance with the measures relating to VMS and electronic monitoring applicable to the vessel.
1. **Conditions for collector vessels**

- The vessel shall not be used for any other fishing, processing or related activities.
- The vessel shall load or transfer fish only from a licensed processing or landing facility.
- Retaining on-board, storing on-board, transhipping, transporting to a landing facility or land any of the species protected by other laws or regulations in any form.
Annex 5. Required design of bird-scaring lines and instructions on deployment

Bird-scaring lined design:

- The bird-scaring line shall be a minimum of 100 m in length and if less than 150 m in length will include an object towed at the seaward end to create tension to maximise aerial coverage. The section above water shall be a strong fine line of a conspicuous colour such as red or orange.

- The above water section of the line shall be sufficiently light that its movement is unpredictable to avoid habituation by birds and sufficiently heavy to avoid deflection of the line by wind.

- Streamers for the bird-scaring line shall be made of material that is conspicuous and produces an unpredictable lively action (e.g. strong fine line sheathed in red polyurethane tubing) and shall be suspended in pairs from a robust three-way swivel attached to the bird scaring line and shall hang just clear of the water.

- There shall be a maximum of 5 m between each streamer pair.

- The number of streamers shall be adjusted for the setting speed of the vessel, with more streamers necessary at slower setting speeds.

Figure 3. Diagram of Bird Scaring Streamer Line (Figure source: Indian Ocean Tuna Commission, Resolution 12/06)
Deployment of bird-scaring line

- The line shall be deployed before longlines enter into the water.
- The line should have an aerial coverage of at least 100 metres. To achieve this coverage, the line shall be suspended from a point a minimum of 5 metres above the water at the stern on the windward side of the point where the branch line enters the water.
- The bird scaring line shall be set so that streamers pass over baited hooks in the water. The position of the object towed shall be maintained so as to ensure, even during crosswinds, that the aerial extent of the bird-scaring line is over the branch line as far astern of the vessel as possible.
- Because there is the potential for line breakage and tangling, spare bird scaring lines shall be carried on-board to replace damaged lines and to ensure fishing operations can continue uninterrupted.