Maldives Diamondback Squid Management Plan 2020

AUGUST 2020
DRAFT

Ministry of Fisheries, Marine Resources & Agriculture
Malé, Maldives
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<tr>
<td>CG</td>
<td>Coast Guard</td>
</tr>
<tr>
<td>EPA</td>
<td>Environment Protection Agency</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>LGA</td>
<td>Local Government Authority</td>
</tr>
<tr>
<td>MCS</td>
<td>Monitoring, Control and Surveillance</td>
</tr>
<tr>
<td>MCS*</td>
<td>Maldives Customs Service</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>
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<tr>
<td>MoED</td>
<td>Ministry of Economic Development</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>NBS</td>
<td>National Bureau of Statistics</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<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>TAC</td>
<td>Total Allowable Catch</td>
</tr>
<tr>
<td>TAE</td>
<td>Total Allowable Exports</td>
</tr>
</tbody>
</table>
Maldives Diamondback Squid Management Plan

Part 1: Preamble

1.1 Introduction and Title

1.1.1 This Management Plan shall be cited as “Maldives Diamondback Squid Management Plan” (hereinafter referred to as the Plan).

1.1.2 The Plan is made pursuant to Article 18 of the Act No. 14/2019 (Fisheries Act of the Maldives) and constitutes a regulation made under this Act.

1.1.3 The Plan provides for the management of the fishery stated in Section 17 (a) (9) of the Act No. 14/2019 (Fisheries Act of the Maldives).

1.1.4 The Plan is the primary guiding document that provides direction on the management of sea cucumber fishery in the Maldives.

1.2 Scope and Application

1.2.1 Species and Activities

(a) The Plan applies to the species *Thysanoteuthis rhombus*, commonly known as diamondback squid (DBS).

(b) The Plan shall apply to all activities carried out in the Maldives that may impact diamondback squid resources, including but not limited to harvesting, processing, storage, trading, and exporting of DBS products from the Maldives.

1.2.2 Parties

(a) The Plan applies to all person(s) engaging in all activities targeting species listed in 1.2.1 (a).

(b) The Plan also applies to all persons, vessels, processing, and export facilities or places engaged in or otherwise connected with any activity within the scope of this Plan.
1.2.3 Exemption

The management measures in this Plan shall not apply to 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 under Research Regulation 2020.

1.3 Guiding Principles

1.1.1 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.

1.1.2 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.

1.1.3 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.

1.1.4 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.

1.1.5 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.

1.4 Interpretation

1.4.1 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).

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

1.5 Entry into Force

This Plan shall come into force six months following its publication on the Government Gazette.
Part 2: Biology, Habitat and Behaviour

2.1 Biology

The diamondback squid, *Thysanoteuthis rhombus* (Troschel, 1857), *Thuthi boavadhilamas* in Dhivehi language, is the only species in the family Thysanoteuthidae. The common name for this species is derived from its large, distinctive diamond-shaped fin which occupies the whole length of the mantle. They can grow up to 100 – 130 cm, reaching a body weight of 30 kg (Roper and Jereb 2010). The mantle lengths of 59 diamondback squids caught in a resource survey conducted in the Maldives in 2016 varied between 35 – 82 cm (weight range: 1.60 – 16.8 kg) (Ministry of Fisheries and Agriculture et al. 2017).

Sexes can be distinguished visually from specific features such as the structure of oviducts in females and size of the Needham sac, gonad, and penis in males (Nigmatullin et al. 1991). They have a short life-span of one year and they begin to mature at the age of 6 – 9 months, when the male reaches 45 – 50 cm and the female reaches 50 – 60 cm in mantle length (Nigmatullin et al. 1995). Gonads of females are comparatively heavier than of males, and have been observed to increase in size sharply after the mantle length reaches 60 cm. For instance, in the Maldives, the gonads of males caught in November 2016 weighed 20.8g on average, while the female gonads weighed 270g on average (Ministry of Fisheries and Agriculture et al. 2017). *Thysanoteuthis rhombus* is one of the fastest growing squid species, and their growth rate is accelerated by increases in temperature (Forsythe 2004; Miyahara et al. 2006).

Mating of diamondback squids occur in “head to head” position (Roper and Jereb 2010). They spawn gelatinous, planktonic, cylindrical shaped egg masses with pink-violet embryos that are distributed in a double spiral in the outer surface of the formation (Figure 1) (Nigmatullin and Arkhipkin 1998). *Thysanoteuthis rhombus* is one of the few species in which planktonic egg masses are observed. The spawning period may last up to 2 to 3 months (Nigmatullin et al. 1995).

*Figure 1: An egg mass of diamondback squid (Nimoho et al. 2014)*
2.2 Habitat and Behavioural Traits

Diamondback squids inhabit tropical and subtropical oceanic waters around the world, where water temperature is typically above 20°C (Nigmatullin and Arkhipkin 1998). They occur at around 600 – 800 meters during the day and ascend to near surface water at night for feeding and reproductive purposes (Nigmatullin et al. 1995). Their distribution and migration depend on the oceanic currents and surface circulation. Thysanoteuthis rhombus does not usually swim actively, but undulates slowly using its long, broad, diamond-shaped fins. However, when threatened, the squid is capable of exhibiting quick bursts of speed (Roper and Jereb 2010). They have a unique social organisation, where throughout their life cycle, they occur in pairs constituting a male and a female of the same size.

Juveniles feed on crustaceans, small cephalopods and fishes, while adults prey on non-active mid water fishes. Predators include different species of ommastrephid squids, dolphin fish, lancet fish, various species of tuna (e.g. Thunnus albacares, Thunnus obesus, and Thunnus alalonga), sharks, and mammals such as dolphins.
Part 3: Overview of the Diamondback Squid Fishery

3.1 Fishery

Diamondback squid fishery is a new and emerging fishery in the Maldives, with approximately 13-15 commercial vessels engaged in the fishery. Before this fishery was introduced and promoted by the Ministry, deep sea fishing had hardly been practiced in the country. In the interest of diversifying Maldives fishery products, upon the government’s request, a research was conducted in 2015 to explore the potential of commercial exploitation of deep-sea resources (Ministry of Fisheries and Agriculture et al. 2017). The findings of this study confirmed the occurrence of DBS in the country and informed on its spawning season as well as the distribution of the resource within the coastal areas of the Maldives. During the resource survey, a total of 59 individuals of DBS (500.5 kg) was caught at around 5-15 nautical miles from the atoll rim, where the water depth varied between 1500 – 2000 meters (Ministry of Fisheries and Agriculture et al. 2017). The catch was highest near Raa Atoll (17 DBS) and Lhaviyani Atoll (10 DBS).

Following this, the Ministry launched a pilot project in 2016 to introduce the commercial fishing of DBS and announced the availability of ten sets of specialised fishing gear for sale. The Ministry also carried out educational programmes on the fishery and usage of gear for the ten parties who purchased the equipment.

The typical method of fishing involves the use of a bottom-set vertical longline (BVLL) - a 500 meter dropline with two large squid jigs attached at the bottom end and a pressure float with a flagpole at the top end (Figure 2). Squids are attracted to the water-resistant light that is attached to the main line.
3.2 Processing & Export

Once the DBS is harvested, it is gutted, packed in polythene bags and chilled in ice. The suggested ratio of ice to squid is 1:1 (kg). The product can be retained on vessel in ice for a maximum period of five days. After processing the meat, the product is stored at a temperature of -5°C. The meat of DBS is consumed in Japan as a premium delicacy priced at 20-30 USD per kg compared to 8-10 USD per kg elsewhere. However, to date, DBS has not yet been exported from the Maldives and is only sold to local markets and restaurants. Currently, there is only one commercial party that is involved in DBS processing in the country.
Part 4: Purpose, Objectives and Strategies of the Plan

4.1 Overall purpose

4.1.1 The overall purpose of the management plan is to:

(a) Establish an effective management and monitoring structure for the diamondback fishery and ensure future generations benefit from resources;

(b) Ensure long-term benefits to the people of Maldives through the responsible management of the fishery; and

(c) Act as the primary basis for guiding the authorities as well as stakeholders in the sustainable development of the fishery and trade.

4.2 Objectives and Strategies

4.2.1 The plan comprises of five specific objectives;

(1) Ensure that the harvesting, processing and trading of diamondback squid is carried out in an environmentally sound manner most beneficial to Maldivians through the application of principles of sustainability, ecosystem-based management and the Precautionary Approach;

(2) Implement Monitoring, Control and Surveillance and strengthen data collection and data reporting mechanisms for the diamondback squid fishery and trade;

(3) Prioritise evidence-based policymaking through the collection of biological and socio-economic data on diamondback squid fishery and associated resources;

(4) Ensure equitable benefits to all Maldivians and improve their livelihoods through improvement of commercial operations of DBS fishery and trade;

(5) Increase education and awareness amongst stakeholders and the general public.

4.2.2 Strategies and actions developed to achieve these objectives are summarised in Table 2.
<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Time frame</th>
<th>Responsible parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Adopt precautionary approach for the management of the fishery in the absence of reliable biological or fishery data</td>
<td>1.1.1 Apply minimum harvest / export size limits on diamondback squids to allow them to grow and reach maturity before being susceptible to capture</td>
<td>Long-term (5 – 10 years)</td>
<td>MMRI, MoFMRA</td>
</tr>
<tr>
<td></td>
<td>1.1.2 Establish an input control mechanism by limiting the number of fishing licences</td>
<td>Immediate</td>
<td>MMRI, MoFMRA</td>
</tr>
<tr>
<td>1.2 Promote the use of environmentally friendly gears and techniques in the diamondback squid fishery</td>
<td>1.2.1 Implement and enforce the restriction on the use of any fishing method or gear prohibited by the Act No.14/2019 (Fisheries Act of the Maldives) or any other regulations</td>
<td>Immediate</td>
<td>MoFMRA, MPS, MNDF-CG</td>
</tr>
<tr>
<td></td>
<td>1.2.2 Regulate the use of gear in DBS fishery</td>
<td>Long-term (5 – 10 years)</td>
<td>MMRI, MoFMRA</td>
</tr>
<tr>
<td>1.3 Maintain a leading role in Regional Fishery Bodies (RFBs) and relevant Intergovernmental Organisations (IGOs) in management and conservation of diamondback squids</td>
<td>1.3.1 Actively participate in the scientific and management processes of SWIOFC and other relevant regional and international bodies</td>
<td>Immediate</td>
<td>MoFMRA, MMRI</td>
</tr>
</tbody>
</table>
Objective 2: Implement Monitoring, Control and Surveillance and strengthen data collection and data reporting mechanisms for diamondback squid fishery and trade

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Time frame</th>
<th>Responsible parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Establish an effectively controlled and monitored trade flow</td>
<td>2.1.1 Establish licensing arrangements for harvesters to effectively monitor diamondback squid catch rates and effort and obtain other important fishery dependent data</td>
<td>Immediate</td>
<td>o MoFMRA o Local Councils</td>
</tr>
<tr>
<td></td>
<td>2.1.2 Establish licensing arrangements for DBS processing facilities to effectively monitor methods and scale of processing</td>
<td>Immediate</td>
<td>o MoFMRA o MFDA</td>
</tr>
<tr>
<td></td>
<td>2.1.3 Establish registration arrangements in Fisheries Information System (FIS), <em>Keyolhu</em>, to control and monitor DBS trade</td>
<td>Immediate</td>
<td>o MoFMRA o MCS*</td>
</tr>
<tr>
<td></td>
<td>2.2 Establish an efficient documentation scheme for the diamondback squid fishery and trade</td>
<td>2.2.1 Require harvesters to submit catch-log data to the Ministry</td>
<td>Immediate</td>
</tr>
<tr>
<td></td>
<td>2.2.2 Require any facilities processing diamondback squids or trading to exporters to maintain and submit purchase records to the Ministry</td>
<td>Immediate</td>
<td>o MoFMRA</td>
</tr>
<tr>
<td></td>
<td>2.2.3 Require exporters to maintain and submit purchase records to the Ministry, and apply for a catch certificate for each consignment they intend to export</td>
<td>Immediate</td>
<td>o MoFMRA</td>
</tr>
<tr>
<td>Objective 3: Prioritise evidence-based policymaking through the collection of biological and socio-economic data on diamondback squid fishery and associated resources</td>
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<tr>
<td><strong>Strategy</strong></td>
<td><strong>Action</strong></td>
<td><strong>Time frame</strong></td>
<td><strong>Responsible parties</strong></td>
</tr>
<tr>
<td>3.1 Improve data collection on biological and socio-economic aspects of diamondback squid fishery to support evidence-based policymaking</td>
<td>3.1.1 Implement nationwide size sampling or monitoring programmes for deep sea resources, including diamondback squids</td>
<td>Long term (5 – 10 years)</td>
<td>o MMRI</td>
</tr>
<tr>
<td></td>
<td>3.1.2 Gather geographical information on fishing grounds using catch logs and field surveys in order to study the spatio-temporal exploitation patterns in diamondback squid fishery</td>
<td>Short-term (1 – 3 years)</td>
<td>o MoFMRA o MMRI</td>
</tr>
<tr>
<td></td>
<td>3.1.3 Conduct series of socio-economic surveys to identify and understand the scale of diamondback squid fishery in the Maldives</td>
<td>Immediate</td>
<td>o MoFMRA</td>
</tr>
</tbody>
</table>
### Objective 4: Ensure equitable benefits to all Maldivians and improve their livelihoods through improvement of commercial operations of DBS fishery and trade

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Time frame</th>
<th>Responsible parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Diversify the commercial fisheries sector</td>
<td>4.1.1 Incentivise private investment for oceanic fisheries or deep-sea fishery, particularly for longline fishery targeting diamondback squid</td>
<td>Long term (5 – 10 years)</td>
<td>MoFMRA</td>
</tr>
<tr>
<td>4.2 Identify and engage stakeholders to ensure that policy decisions are made through a Participatory Approach</td>
<td>4.1.2 Establish, maintain, and update a fishers’ registry, Masveringe Dhaftaru, to understand fishing community dependence on DBS resources</td>
<td>Immediate</td>
<td>MoFMRA, Local councils</td>
</tr>
<tr>
<td></td>
<td>4.1.3 Engage with stakeholders and take their views and feedback into account in the implementation of management measures</td>
<td>Immediate</td>
<td>MoFMRA</td>
</tr>
<tr>
<td></td>
<td>4.1.4 Work in close liaison with key DBS fishing communities and traders</td>
<td>Immediate</td>
<td>MoFMRA, Local councils</td>
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</tbody>
</table>

### Objective 5: Increase education and awareness amongst stakeholders and the general public

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<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Time frame</th>
<th>Responsible parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Promote awareness and understanding of the diamondback squid fishery and its contribution to the Maldives economy</td>
<td>5.1.1 Based on data availability, compile and disseminate information on: • status of stocks; • fishing operations; • exports; and • revenue to Maldives</td>
<td>Annual</td>
<td>MMRI, MoFMRA, MoED, MIRA, MCS, NBS</td>
</tr>
</tbody>
</table>
Part 5: Management measures

In the best interest of DBS fishing communities, it is critical that timely management measures are introduced through legislative instruments so that this resource is sustainably managed to the benefit of stakeholders and future generations. To achieve this, the following are proposed.

5.1 Establishment of an advisory committee

5.1.1 An advisory committee will be established to advise on policy matters to the Ministry relating to DBS fishery conservation, management, sustainable development, research, and trade (herein referred to as the Committee).

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

(a) A Chairperson (representative of the Fisheries Department)
(b) A scientist from MMRI
(c) 1 representative of DBS harvesters
(d) 1 representative of DBS processor
(e) A representative from the Ministry of Environment
(f) A representative from the Maldives Customs Service
(g) A representative from the Maldives Police Service
(h) A representative from the Ministry of Economic Development
(i) A representative from Local Government Authority
(j) A representative from a relevant locally registered NGO

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

- Representatives of DBS harvesters;
- Representative from the NGO

5.1.4 The Fisheries Management Section of the Ministry shall execute the responsibilities of the Secretariat, including the maintenance of minutes and sharing of relevant documents with Committee members prior to meetings.
5.1.5 The Committee may invite specialists/advisors, representatives of the industry, or relevant government agencies, relevant regional or international organisations / institutions to specific meetings.

5.1.6 The Committee will meet on a biannual basis with special meetings to be called by the Chairperson when urgent matters arise.

5.1.7 The quorum for a meeting of the Committee shall be six members.

5.1.8 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) Discussion of policy matters relating to the DBS fishery;
(c) Reviewing technical and other reports pertaining to the DBS fishery;
(d) Advising on management measures in response to the outcomes and recommendations from the technical reports and stakeholder workshops.

5.2 Licensing

5.2.1 The following parties operating within the DBS fishery and trade must acquire a license:

(a) All commercial fishing vessels;
(b) All commercial parties that perform any form of processing of DBS.

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

5.2.3 Prior to application for a Fishing Licence, the applicant shall ensure that the following requirements of the vessel are met:

(a) Vessel is registered at the Maldives Transport Authority;
(b) Vessel has a seaworthiness certificate issued by the Maldives Transport Authority.
(c) Vessel has a valid hygiene certificate issued by the Maldives Food and Drug Authority.

5.2.4 The total number of DBS fishing licences shall be capped at sixty (60) vessels.

5.2.5 The Ministry shall, in consultation with the Committee and stakeholders, devise a system to administer, sub-divide and allocate the licences amongst interested vessels.
5.2.6 Terms and conditions of Fishing Licence are:

(a) Licence

- The licensee must keep the license (or a certified copy) on board the vessel at all times.

(b) Fishing area

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

(c) Catch reporting

- The captain must ensure that a logbook is kept onboard the vessel at all times and is produced at the request of a fisheries ranger or enforcement officer.
- The captain shall ensure accurate and timely catch log reporting to the Ministry as per the data reporting guideline published on the Ministry’s website.
- All information provided in this manner shall be true, complete, and accurate.
- Failure to submit the log or provision of inaccurate or falsified information is an offence.

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

- The licensee should cooperate with all enforcement officer(s), fisheries ranger(s) and fisheries observer(s), as defined by the Act No.14/2019 (Fisheries Act of the Maldives) of the Maldives and the Regulation No. 2020/R-75 (General Fisheries Regulation).

(e) Prohibited activities

The captain shall refrain from and ensure crew of the vessels refrain from, engaging in any if the activities listed below:

- Fishing within designated protected areas under any other Laws or regulations or management plans of the Maldives, as per harvesting restrictions.
• Conduct commercial fishing operation targeting any other fish species, other than that specified in the license.

• Targeting any species of fish protected under the Act No.14/2019 (Fisheries Act of the Maldives) or any other Laws, regulations and management plans.

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

• Conducting fishing or engaging in any related activities within 300 nautical miles around FADs.

• Employment of foreign nationals in the direct harvesting of DBS;

• Disposal of non-biodegradable waste or chemicals into the sea;

• Acting in contravention of any measures in this Plan or the Act No. 14/2019 (Fisheries Act of the Maldives) or any of the regulations or management plans pursuant to the Act or any pertinent laws or regulations.

5.2.7 Prior to application for a processing licence, the applicant shall ensure that the following requirements are met:

   (a) Processors must be of Maldivian nationality or if the processing party is a company, it must be registered in the Maldives.

   (b) The processing facility has a valid hygiene certificate issued by the Maldives Food and Drug Authority.

5.2.8 Terms and conditions of processing licence are:

   (a) **Processing Sites and Facilities**

   • A separate licence shall be acquired for each processing site or facility.
(b) Purchasing

- All purchases made under this licence must be from a licensed DBS fishing vessel.

(c) Methods and conditions of processing

- 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.
- The licensee may carry out salting of other tuna like species in the facility.

(d) Reporting

- All individuals and parties with this licence should submit a purchase report to the Ministry on a monthly basis as per the data reporting guideline published on Ministry’s website.
- Purchase report must include, but not be 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
- All information provided in this manner shall be true, complete, and accurate.
- Failure to submit the log or provision of inaccurate or falsified information is an offence.
- Licensees shall maintain the confidentiality of the data received from fishers as part of a requirement from the Ministry and not share such data with any other party besides the Ministry.
(e) Cooperating with enforcement officers, fisheries rangers and fisheries observers

- The licensee should cooperate with all enforcement officer(s), fisheries ranger(s), and fisheries observer(s) as defined by the Act No.14/2019 (Fisheries Act of the Maldives) and the Regulation No. 2020/R-75 (General Fisheries Regulation).

(f) Prohibited activities

- Processing a species without a valid licence.
- Retaining in a processing facility any species, part of species, or products made out of parts of species that are banned from extraction or trading is an offence.
- Acting in contravention of any measures in this Plan or the Act no.: 14/2019 (Fisheries Act of the Maldives) or any of the regulations or management plans pursuant to the Act or any pertinent laws or regulations.

5.2.9 Details of the licence fees and the period of validity of the licences are summarised in Table 3.

*Table 2: Details of licence categories, their respective fees and period of validity*

<table>
<thead>
<tr>
<th>Category</th>
<th>Duration</th>
<th>Fee (MVR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishing Vessels</td>
<td>12 months</td>
<td>100</td>
</tr>
<tr>
<td>Processing Facilities</td>
<td>12 months</td>
<td>100</td>
</tr>
</tbody>
</table>

5.2.10 The licences issued under this Plan shall not be transferable.

5.2.11 Licences should be renewed as per the Licensing Regulation 2020 and renewal will be subject to annual reviews and payment of the licence fee.

5.2.12 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.
5.3 Best Practices

(a) The collection of DBS should not involve any methods of fishing that are prohibited by the Act No.14/2019 (Fisheries Act of the Maldives) and any pursuant regulations to it.

(b) In the event where any unintentional catch of marine mammals or protected species occur, the animals should be released immediately without harming, using a method that will result in minimal harm while releasing.

5.4 Involvement of foreign nationals in DBS fishery operations

No foreign national shall be engaged in harvesting of DBS for commercial purposes.

5.5 Export requirements

5.5.1 Ownership of export operations

Diamondback squid exporters must be of Maldivian nationality or if the exporting party is a company, it must be registered in the Maldives.

5.5.2 Purchasing

(a) Exporters shall ensure that all processed purchases are made from a licensed party

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

- Details of the licensed party from whom the fish was purchased;
- Individual or vessel that harvested the fish;
- Purchase date;
- Weight
5.5.3 **Packing conditions**

(a) The package of DBS shall be clearly labelled with quantity (number of pieces & weight) of the product and the licence number of the exporter.

(b) DBS product for export shall be packed in accordance with the quality standards required by the Maldives Food and Drug Authority.

(c) Exporters shall prepare a packing list that reflects the aforementioned information for each consignment.

5.5.4 **Catch certificate**

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

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

(c) Each request for a catch certificate must be accompanied by its respective packing list.

5.5.5 **Prohibited activities**

(a) Breaching the confidentiality of the data received from fishers as part of a requirement from the Ministry and sharing such data with another party besides the Ministry.

(b) Acting in contravention of any measures in this Plan or the Act No.14/2019 (Fisheries Act of the Maldives) or any of the regulations pursuant to the Act is an offence.

5.6 **Precautionary measures**

5.6.1 Where the Ministry finds evidence or has been advised that the populations of diamondback squids is under stress or at a critical risk of being overfished, the Ministry, in consultation with MMRI and the Committee, may take precautionary management measures not stated in this Plan to protect the wild stock.
5.6.2 These measures include the following:

(a) Declaring the closure of a specific area within Maldives and prohibiting the extraction of diamondback squids from the no-take zone;
(b) Prohibiting the capture, processing or export of a specific species of diamondback squid;
(c) Implementing size requirements of diamondback squids that can be harvested / exported;
(d) Implementing a catch or an export quota;
(e) Impose other restrictions on activities that may affect diamondback squid stocks.

5.7 Offences and Penalties

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

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

5.7.3 If an offence is repeated for a third time, the licence of the offender shall be revoked and withheld for a period of 3 months.

5.7.4 Procedures for penalisation shall be in accordance with the Regulation No. 2020/R-74 (Regulation on Administrative 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>Using a prohibited method to harvest DBS (licensed vessel)</td>
<td>3000</td>
<td>MVR 1000 in addition to the previous fine (up to MVR 50,000)</td>
</tr>
<tr>
<td>Engaging in commercial DBS fishery without a valid licence</td>
<td>3000</td>
<td>MVR 500 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Harvesting, retaining on-board, storing on-board, transhipping, transporting to a landing facility or landing any of the species protected by other laws or regulations of the Maldives</td>
<td>2000</td>
<td>MVR 700 in addition to the previous fine (up to MVR 5000)</td>
</tr>
<tr>
<td>Conducting fishing or engaging in any related activities within 3 nautical miles around FADs.</td>
<td>5000</td>
<td>MVR 500 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Foreign national engaging in harvesting of reef fish for commercial purposes</td>
<td>1000</td>
<td>MVR 300 in addition to the previous fine (up to MVR 5000)</td>
</tr>
<tr>
<td>Employing a foreign national to harvest reef fish resource for commercial purposes</td>
<td>3000</td>
<td>MVR 1000 in addition to the previous fine (up to MVR 10000)</td>
</tr>
<tr>
<td>Failure to submit trip logs to the Ministry as conditioned by the fishing licence</td>
<td>750 per trip</td>
<td>MVR 200 in addition to the previous fine (up to MVR 10000)</td>
</tr>
<tr>
<td>Engaging in fish processing without a valid licence</td>
<td>5000</td>
<td>MVR 2000 in addition to the previous fine (up to MVR 30000)</td>
</tr>
<tr>
<td>Trading, processing, retaining in a processing facility or displaying any species, part of species, or products made out of parts of species that are banned from extraction or trading</td>
<td>2000</td>
<td>MVR 700 in addition to the previous fine (up to MVR 5000)</td>
</tr>
<tr>
<td>Failure to submit reports/information to the Ministry as conditioned by the processing licence</td>
<td>1000</td>
<td>MVR 300 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Provision of inaccurate or falsified information to the Ministry</td>
<td>3000</td>
<td>MVR 500 in addition to the previous fine (up to MVR 10,000)</td>
</tr>
<tr>
<td>Sharing of data received from fishers with any other party besides the Ministry.</td>
<td>5000</td>
<td>MVR 500 in addition to the previous fine (up to MVR 10000)</td>
</tr>
<tr>
<td>Attempting to export a billfish product without a catch certificate</td>
<td>5000</td>
<td>In addition to the fine, blacklist the exporting party and withhold the</td>
</tr>
<tr>
<td>Exporting or attempting to export a billfish species in contravention of the size limits stipulated in this Plan</td>
<td>5000</td>
<td>In addition to the fine, blacklist the exporting party and withhold the issuance of catch certificates for 3 months</td>
</tr>
</tbody>
</table>
Part 6: Implementation of the Plan

6.1 The Ministry is responsible for the implementation and enforcement of this Plan as per Table 2.

6.2 The Ministry shall also work closely with other key stakeholders, in particular enforcement agencies, to monitor and ensure compliance and enforcement of all management measures.

6.3 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 7: Reviewing the Management Plan

7.1 This Plan shall be reviewed and revised every five years by the Ministry.

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

7.3 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.

7.4 Notwithstanding Section 7.3, 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.

7.5 The Maldives Marine Research Institute shall monitor catch and catch rates to inform the review process.
References


## Annex

### Annex 1: Glossary

<table>
<thead>
<tr>
<th>(a) Commercial fishing</th>
<th>Fishing or Harvesting for the purpose of obtaining a financial benefit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Enforcement officer</td>
<td>Any officer designated pursuant to Section 57 of the Act no.: 14/2019 (Fisheries Act of the Maldives) to enforce regulations made under this Act.</td>
</tr>
<tr>
<td>(c) Fisheries Ranger</td>
<td>Persons who are appointed for and by the Ministry under Act No. 14/2019 (Fisheries Act of the Maldives).</td>
</tr>
</tbody>
</table>
| (d) Fishing / Harvesting | (1) searching for the purpose of catching, taking, killing and harvesting of fish;  
(2) attempting to search for, catch, take, kill or harvest fish;  
(3) engaging in any other activity that results in the searching, catching, taking, killing or harvesting of fish;  
(4) placing or searching or retaking of any fish aggregating device or equipment including “radio beacons”;  
(5) undertaking any operation at sea or on an island in preparation for any activity mentioned in subsections (1), (2), (3) or (4). |
<p>| (e) Fishing vessels | 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. |
| (f) Logbook | 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. |
| (g) Management plans | The plan with regard to fisheries planning, management and development in relation to Chapter Three of the Act no.: 14/2019 (Fisheries Act of the Maldives). |</p>
<table>
<thead>
<tr>
<th>(h) Master / Captain</th>
<th>Person holding the most responsible position at any given time on-board a fishing vessel.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Minister</td>
<td>The minister responsible for fisheries, including aquaculture.</td>
</tr>
<tr>
<td>(j) Ministry</td>
<td>The ministry responsible for fisheries, including aquaculture.</td>
</tr>
<tr>
<td>(k) Offence</td>
<td>Administrative offences prescribed in this Plan.</td>
</tr>
<tr>
<td>(l) 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>(m) 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>(n) Processing facilities</td>
<td>Lands, buildings, or such other places on or in which:</td>
</tr>
<tr>
<td></td>
<td>(1) fish or aquaculture products are cleaned, packaged, dried, salted, chilled, frozen or otherwise processed for sale in and outside the Maldives; or</td>
</tr>
<tr>
<td></td>
<td>(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.</td>
</tr>
<tr>
<td>(o) Territory</td>
<td>The territory of the Maldives as defined in Article 3 of the Constitution of the Republic of Maldives.</td>
</tr>
<tr>
<td>(p) Vessel Owner</td>
<td>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.</td>
</tr>
</tbody>
</table>