Status of the Shark Fishery Ban in the Maldives and the Implementation of the National Plan of Action on Sharks - An Update with Notes on Turtles and Seabirds

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Abstract

Up until 1970s, the shark fishery of the Maldives was a traditional one, where large sharks were caught in need of shark liver oil. This traditional shark fishery evolved to more export oriented fisheries in 1970s, when highly targeted fisheries for sharks developed in the Maldives. These were the deepwater gulper shark fishery, reef-associated shark fishery and oceanic shark fishery. Shark fisheries were undertaken by a minor community, and had always been in conflict with important stakeholders such as the pole-and-line tuna industry and the booming dive tourism industry. The declining status of shark fisheries, exacerbated by unresolved conflicts with other stakeholders led to declaration of total shark fishing ban in 2010. Shark fishing ban prohibits any landing of sharks including retaining onboard any sharks caught as bycatch. In the most recent logbook system, launched in 2012, shark interactions are to be recorded as species-complexes. The new logbook system, though not to species level, also accounts for interactions of turtles and seabirds. Assessments on interactions on shark species-complexes; hammerhead sharks, thresher, sharks, oceanic white tip sharks and mako sharks have been undertaken for the years 2014-15. In 2014, 18 vessels operated in the tuna longline fishery, many of which joining after mid of 2013. Compared to 2014 in 2015, a sharp decline in shark interactions was recorded in the tuna longline fishery. CPUE for sharks had declined from 0.013 to 0.003 per 1000 hooks from 2014-15. In 2015, the majority of sharks, 63% were released with no damage, while 8% were dead sharks at the time of release. 53 interactions with turtles were recorded in 2015, of which none were recorded as dead at the time of release. No interactions with seabirds were reported in 2014-15. Hence, it can be deduced that longline fisheries of the Maldives has minimal impact on sharks, marine turtles and seabird populations. Maldives have now endorsed, its first National Plan of Action for the Conservation and Management of Sharks in April of 2015. In January of 2016, upon the termination of the 2nd ten-year moratorium on turtle harvesting, a new regulation on marine turtles were put in place and became effective in April 2016, where all marine turtle harvests including a nationwide ban on turtle egg harvesting was declared for an indefinite period of time. Two citizen-science programs which study the abundances of reef-associated sharks and turtles are currently being implemented.

Introduction

For more than a thousand years, fisheries have been the main source of food and income for the Maldives (Anderson and Hafiz, 1996). Tuna has always dominated the catch and for centuries the Maldives has been a tuna fishing nation. It was in the 1970s with the inception of tourism and major developments in trade, small-scale fisheries on reef fishes and sharks developed. Shark fisheries were one of the most lucrative fisheries, among the small-scale fisheries. Higher prices were paid for the exports of shark fins and liver oil of deepwater sharks (Anderson and Ahmed, 1993).

Shark fisheries' contribution to the economy was minuscule compared to the tuna fisheries which dominated the fisheries sector (MRC, 2009). Over the years, the rise in global exploitations on sharks rose concerns over the sustainability of sharks. This led to the rise in awareness on the vulnerability of sharks to over-fishing and called for locally new management measures for sharks in the Maldives.

The objective of this paper is to provide an overview of the past shark fisheries of the Maldives, factors that led to the complete fishery ban and provide an update on the recent developments in shark resources management with an analysis of Endangered, Threatened and Protected (ETP) species interactions in tuna longline fishery with some notes on sea turtles and seabirds.

History of Shark Fisheries of the Maldives

Sharks were first exploited in need of their crude liver oil. In olden days, there was a significant demand for the shark liver oil. The fishing boats of the Maldives were made of wood and to prevent the wood from decaying, crude liver oil of sharks were applied to the boats. The high demand for shark liver oil led to the development of a traditional shark fishery, *maa keyolhukan* (literally big line fishing in *Divehi*, local language). Large sharks such as the tiger shark (*Galeocerdo cuvier*) and sometimes the bluntnose sixgill shark (*Hexanchus griseus*) and the whale shark (*Rhinocodon typus*) were targeted. This subsistence shark fishery gradually evolved to a commercial fishery. In the 1960s, Japanese longliners came into the central Indian Ocean and this introduced Maldivian fishermen to new fishing techniques (Anderson and Ahmed, 1993). Further, in the 1970s widespread motorization of the fishing fleet took place and with major developments in trade, new markets were opened for the fishermen. These developments and new fishing techniques led to the development of commercial shark fisheries. By the early 1980s, there were three types of shark fisheries in the Maldives; the deepwater gulper shark fishery, the reef shark fishery and oceanic shark fishery.

Status of the Shark Fisheries

Deepwater gulper shark fishery

In the early 1980s, Japanese buyers came in looking for shark liver oil rich in squalene. Squalene was a substance used for the pharmaceutical products and cosmetics. Livers of gulper sharks (*Centrophorus* spp.) were found to have high levels of squalene. Japansese market for squalene-rich liver oil led to the development of gulper shark fishery. The high price of squalene-rich liver oil attracted many fishermen to the fishery. The fishery boosted in the early couple of years and reached its peak from 1982 to 1984 (Figure 1). After the peak, there was a precipitous decline in catches. The declining trend continued till the economic collapse of the fishery. The sudden drop in catches was attributed to two main factors. Gulper sharks lived in

cold deep nutrient deficient waters. Hence they would have much slower growth rates compared to shallow water sharks. Gulper sharks inhabit depths of 250-800m and in the Maldives, as atoll slopes are very steep, this depth is very limited around the atolls. Since the gulper sharks' habitat is very confined throughout the country, it was believed these deepwater sharks were of a very small stock and the high fishing pressure exhausted the small stock of the

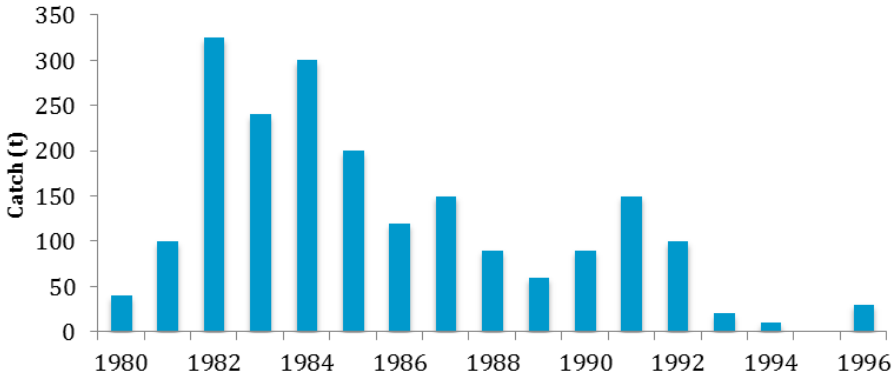

Figure 1 shows the gulper shark catch

gulper sharks (Anderson and Ahmed, 1993).

Reef shark fishery and oceanic shark fishery

Having introduced to new fishing techniques, the fishermen started exploiting the reef associated sharks. Gillnets and longlines were used to target the reef associated sharks. Some of the reef sharks that were caught were white tip reef shark (*Triaenodon obesus*), black tip reef shark (*Carcharhinus melanopterus*), silver tip shark (*Carcharhinus albimarginatus*) and grey reef sharks (*Carcharhinus amblyrhynchos*).

For the oceanic shark fishery, longlining was carried out. The catch included silky sharks (*Carcharhinus falciformis*), oceanic white tips (*Carcharhinus longimanus*), silver tips (*C.albimarginatus),* thresher sharks (*Alopias* spp.) and mako sharks (*Isurus* spp.)

Since shark fisheries were a minor fishery, little importance was given in collecting catch and effort information on shark fisheries. The shark fisheries was a solely an export-oriented one, the local consumption of sharks would be negligible it was assumed the whole shark catch would be exported. As a result, assessments on shark fishery status were carried out by estimating catch from the export data of shark fins. The exported fins were not distinguished by the type of fishery; hence the estimated catch was the combined catch from reef shark and oceanic shark fisheries.

Prior to 1970s, shark catches were estimated to be roughly 500mt (Figure 2). From the late 1970s, a steep rise in shark catches was seen. This was the time when commercial shark fisheries developed. For most of the years, the average annual catch was 1400mt with 1000-2000mt of inter-annual variations in the catch. The differences in shark catch in between the years could be due to the demand of fins in the export market (MRC, 2009). In 2004, shark fisheries attained its peak of 2,700mt. After the peak, the fishery showed significant declines in catches and by 2008 had equaled to the level of shark fishing prior to late 1970s (Figure 2).

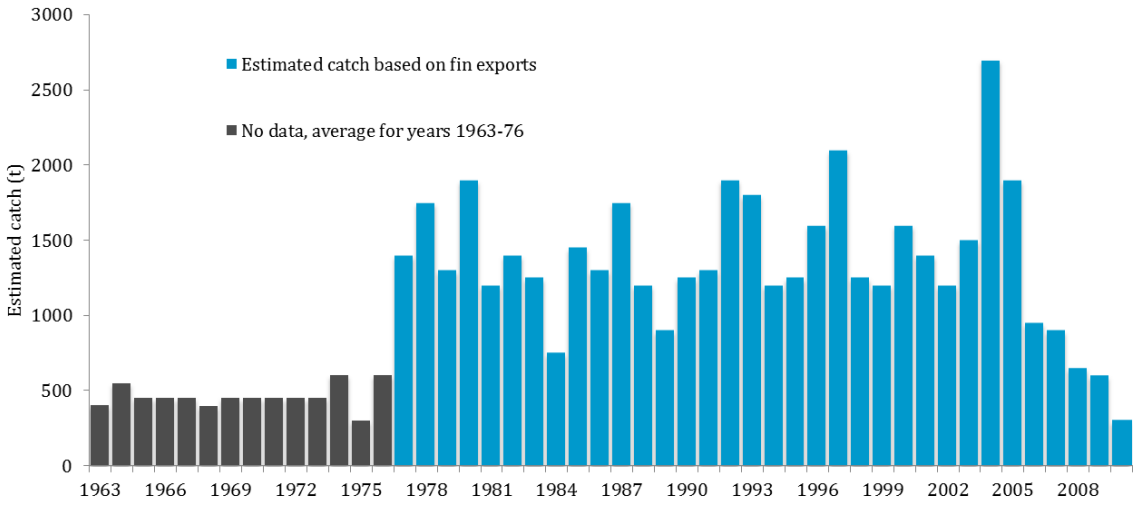

Figure 2 shows estimated shark catch for reef shark fishery and oceanic shark fishery

The significant drop in shark catch after 2004 was believed to be caused by over-exploitation of shark stocks (MacAllister and Partners, 2002) or the decrease in fishing effort (Sinan et al., 2011). For many of the prominent shark fishing islands, the number of fishing vessels engaged in shark fishing has decreased over the years. The most prominent shark fishing island, *Kulhudhuffushi*, in 1992 had 80 boats which was reduced to 10 in 2008 (Sinan et al., 2011). Many socio-economic factors had driven the fishermen away. In a study done by Anderson et al., (2011), it was found that the number of youth entering the shark fishery in *Kulhudhuffushi* was becoming less and the fishing group of the island had aged. However, this particular issue was not only affecting the shark fishery, the entire fisheries sector was being affected.

Conflicts between shark fishermen and other stakeholders

Since its inception, the shark fisheries had major conflicts with other stakeholders. The dive tourism industry had issues with reef shark fishermen and pole-and-line tuna fishermen had issues with shark fishermen. Divers complained that due to reef shark fishing, reef sharks sightings were becoming few. A study in 1993 revealed that a single grey reef shark allowed to live in its habitat would generate about 3,300USD per year than when fished in need of its fins which would generate only 32USD (Anderson and Ahmed, 1993).

Pole-and-line tuna fishermen complained of low tuna catch due to fishing of oceanic sharks. The fishermen believed that having sharks particularly silky sharks (*C. falciformis*) around the tuna schools helped to keep the school together and thus increased the availability of tuna catch.

Shark management measures

Most of the management measures on shark fisheries were taken to reduce these conflicts. The first management measure on shark fisheries was to prohibit shark fishing in tuna fishing grounds during daytime. To reduce the conflict with dive tourism industry, nine prominent shark watching points were included in the first 15 marine protected areas of the Maldives. Furthermore to reduce this conflict, a ten year moratorium on shark fishing was announced in 1998 in seven atolls important for tourism. However, in 2008, even after 10 years of a moratorium on reef shark fishing in the major tourism zones, dive tourism industry complained

of diminishing reef shark sightings. The tourism industry is the main foreign income generating sector, and shark watching is considered as an important part of diving. In addition to growing importance of conserving sharks for the dive tourism industry, the decreased status of shark fisheries pressed for immediate management actions. As a result, with the purpose of conserving the reef associated sharks, a fishery ban on reef sharks was imposed in 2009. A year later in 2010, as oceanic shark fishing could pose negative impacts on the pole-and-line tuna fishery, a complete ban on shark fishing within the entire Exclusive Economic Zone (EEZ) was declared.

Measures to minimize the impact of shark fishing ban on fishermen

After the declaration of the complete shark fishing ban in 2010, a gear-buy-back scheme was implemented for the shark fishermen. Two hundred six fishermen participated in the scheme and shark fishing gear, longlines and nets were bought at depreciated values. Majority of the fishermen has received compensations. In addition to the gear-buy-back scheme, the former shark fishermen were given priority in a soft-loan scheme implemented by the government. Few months after the complete ban was declared, Ministry of Fisheries and Agriculture (MoFA) initiated a Shark Trust Fund. The main purpose of the trust fund was to provide assistance to shark fishermen in finding alternative livelihoods. Since the dive tourism industry would largely benefit from the reef shark fishing ban, the tourism sector was asked to contribute to the Shark Trust Fund. However, having over 98 tourist resorts, only two resorts contributed to the trust fund.

Socio-economic impact of shark ban on former shark fishermen

A study led by the Marine Research Centre of MoFA, in collaboration with the Bay of Bengal Large Marine Ecosystem (BoBLME) Project assessed the socio-economic impact of complete shark ban on former shark fisherfolk. Seven islands notable for shark fishery were chosen for the study and about 125 fishermen took part in the survey.

Issues in the full implementation of Shark Ban

After complete ban on shark fishing was declared, the major issue faced in the implementation of shark ban was the ongoing sale of shark souvenirs. Shark jaws were being sold at a majority of souvenir shops. MoFA was hugely criticized, for not being able to stop the trade of shark souvenirs. The fishery ban imposed by MoFA only prohibited the exploitations on sharks but it did not ban the trade of shark products. The regulation of trade, import and export of any commodity including marine products in the Maldives is in the mandate of the Ministry of Economic Development. Since the beginning of complete shark ban, MoFA has been negotiating with Ministry of Economic Development to impose a ban on local and international trade of shark souvenirs within the Maldives.

Interactions with sharks, sea turtles and seabirds in tuna longline fishery in 2014 and 2015

In year 2014, 18 vessels operated in tuna longline fishery whereas 34 vessels were active in 2015. Longlining for tuna was allowed from 100nm up to the limit of the Maldives' EEZ until mid-2014 and extended into highs seas from then. In 2012, new logbooks on tuna longlining were rolled out. The new logbooks ensure the bycatch of sharks to be recorded at species-complex levels. The condition (and its fate) of shark bycatch are also to be recorded. The

logbook also required incidental catch to be recorded as 'released with no damage', 'released with minimal damage', 'released with major damage' or was 'dead at the time of release'. In January of 2013, training on identification on oceanic sharks was provided to the crew of two longline vessels. The training was provided with assistance from BoBLME[1] Project by the Marine Research Centre in collaboration with Fisheries Management Division of MoFA. The training materials for the workshop were obtained from the Indian Ocean Tuna Commission's (IOTC) identification guides on Shark and Ray Identification in Indian Ocean Pelagic Fisheries.

Interactions of ETP species in the Maldivian waters occur mainly from the longline fishery. The Maldivian shark fishing ban prohibits any landing of sharks including retention of sharks caught as bycatch; hence all live sharks are released and dead sharks are discarded back to the sea. Shark interactions from pole-and-line are virtually nil (Miller et al., in press). All by-caught turtles are released back to the sea.

This paper mainly focuses on ETP interactions from longline fishery from years 2014-15. In longline fishery total of 7,730,281 hooks were deployed in 2014 and 1,406,211 in 2015. Compared to 2014, 2015 showed lower catches for both retained species and sharks (Table 1). As for marine turtles, 24 interactions with turtles were reported in 2014, and 53 interactions in 2015 (Table 1). No interactions with seabirds were reported in 2014 and 2015.

Table 1 Catch composition for retained catch and ETP interactions (sharks in MT and turtles and seabirds in numbers)

Year	# hooks deployed	Retained catch (MT)[2]	Shark bycatch (MT)[3]	#Turtle interactions	#Seabird interactions
2014	7,730,281	2,123.24	99.98	24	0
2015	1,406,211	471.58	12.30	53	0

Incidental catch rates (MT per 1000 hooks) for shark and sea turtles (Nos per 1000 hooks) in 2014 and 2015 were insignificant; 0.013, 0.003 and 0.009, 0.038 respectively (Table 2). Shark catch rate per 1000 MT of retained catch for 2014 and 2015 were 47.09 MT and 26.08 MT. Catch compositions for years 2014 and 2015 showed that sharks comprised 4% and 3% of total catch respectively. (Figure 3 and Figure 4).

Table 2 CPUE for targeted catch and discarded catch rates for sharks, turtles and seabirds

Year	# hooks deployed	Shark catch rate/ MT per 1000 hooks	Shark catch rate per1000 MT of retained catch	Turtle catch rate/1000 hooks
2014	7,730,281	0.013	47.09	0.003
2015	1,406,211	0.009	26.08	0.038

[1] Bay of Bengal Large Marine Ecosystem Project (BOBLME, www.boblme.org, accessed Aug 2016)

[2] Retained catch includes big-eye tuna, yellow fin tuna, albacore, skipjack, billfish, oil fish, small fish, mahi mahi and opah and other catch excluding sharks, marine turtles and seabirds

[3] Shark number to weight conversion factor of 1 shark = 20kg (MRC, 2009)

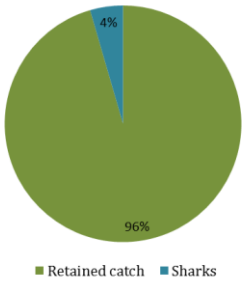

Figure 3 Composition of total catch in tuna longline fishery in 2014.
Note: Turtles and seabirds are not included as interactions were negligible

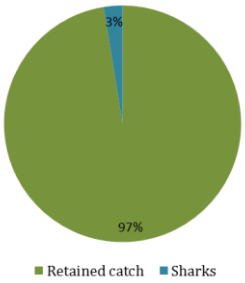

Figure 4 Composition of total catch in tuna longline fishery in 2015.
Note: Turtles and seabirds are not included as interactions were negligible

Figure 5 shows the shark interactions from a total of 18 longline vessels in 2014 and 34 vessels in 2015. Except for hammerheads, all species of sharks showed decreased catch rates in 2015. This could be mainly due to the reduced fishing effort observed in 2015 compared to 2014 (Table 1). In 2014 and 2015, the most frequently by-caught species-complex of sharks was oceanic white tip (*C. longimanus*). The least by-caught species-complex for both years was hammerhead shark group (Figure 5).

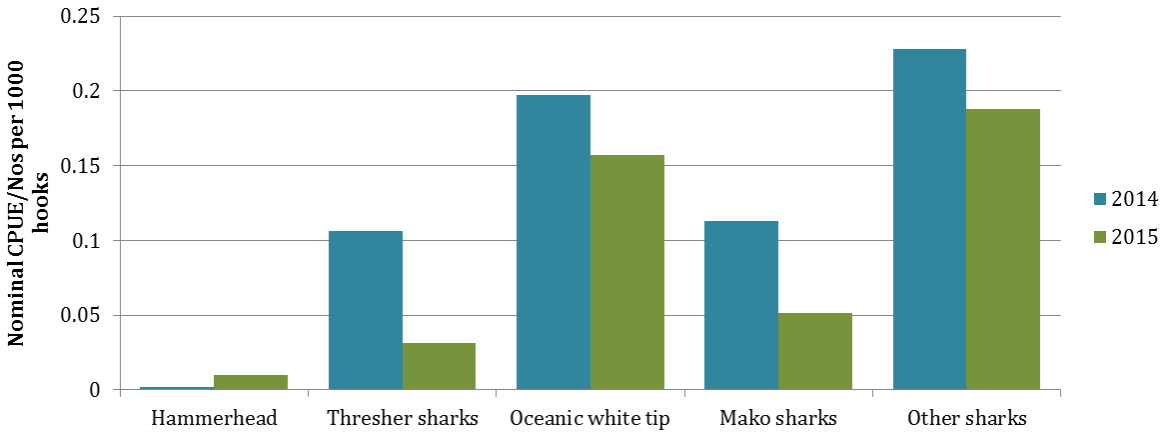

Figure 5 Nominal CPUE (Nos/1000 hooks) of sharks caught per species-complexes in years 2014 and 2015

In 2014, handling information on shark bycatch shows majority of by-caught sharks, 62% were released with no damage, while 31% were dead sharks (Figure 6). Similarly in 2015, majority, 63%, of by-caught sharks were released with no damage (Figure 7). In 2015, only 8% of sharks caught were reported to be dead upon release (Figure 7). Fisheries Law of the Maldives (5/87) prohibits the retention of any sharks on-board all vessels operating in the Maldivian waters, hence all shark bycatch including dead sharks were released back to the sea. More than 50% of all by-caught turtles, 52% in 2014 and 83% in 2015, were released with no damage (Figure 8 and Figure 9).

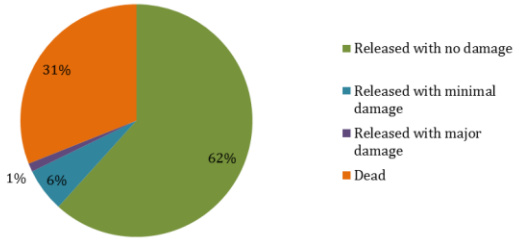

Figure 6 Fate of by-caught of sharks in 2014

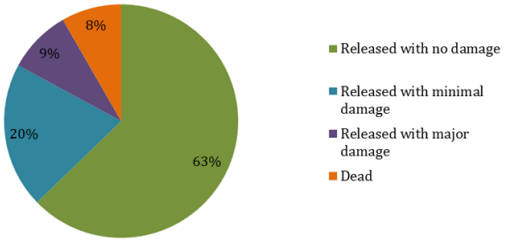

Figure 7 Fate of by-caught sharks in 2015

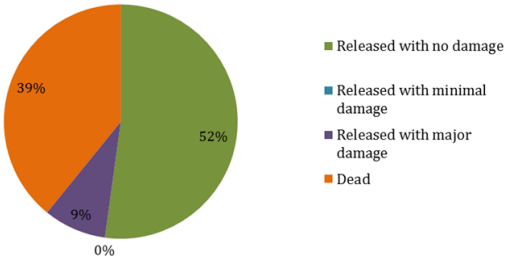

Figure 8 Fate of by-caught turtles in 2014

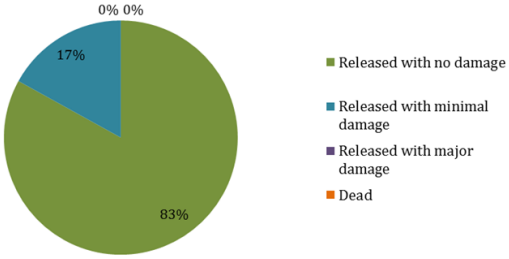

Figure 9 Fate of by-caught turtles in 2015

Figure 10, shows breakdown of shark catch rate by species-complexes by month for year 2014. Majority of sharks were caught in the months January to March and August and October. During the mid of the year, from May to June, a declining trend in catch rates of sharks were observed. This seems to be due to the reduced fishing effort at this time of the year. From July to October, shark interactions were on the rise again, but a drop in shark bycatch was observed for November and December. Except for hammerhead sharks, all other shark species-complexes were observed in all the months (Figure 10).

For most part of the year, oceanic white tip sharks dominated the catch (Figure 10). Oceanic white tip shark catch rate showed an increasing trend from January reaching a peak nominal CPUE of 0.30 sharks in March before showing a drop in April. Another increasing trend in catch rates for oceanic white tips was again observed from May and catch rates were observed to be fairly same the rest of the year. Considerable catch rates for thresher sharks (*Alopias* spp.) were seen in April, July, August and October where a peak was seen in August. Although mako sharks (*Isurus* spp.) were observed throughout the year, high numbers were only observed in April, May, August and October. Hammerhead sharks (*Sphyrna* spp.) were the least observed sharks and appeared in the catch only in May to July and in October with extremely low catch rates (Figure 10).

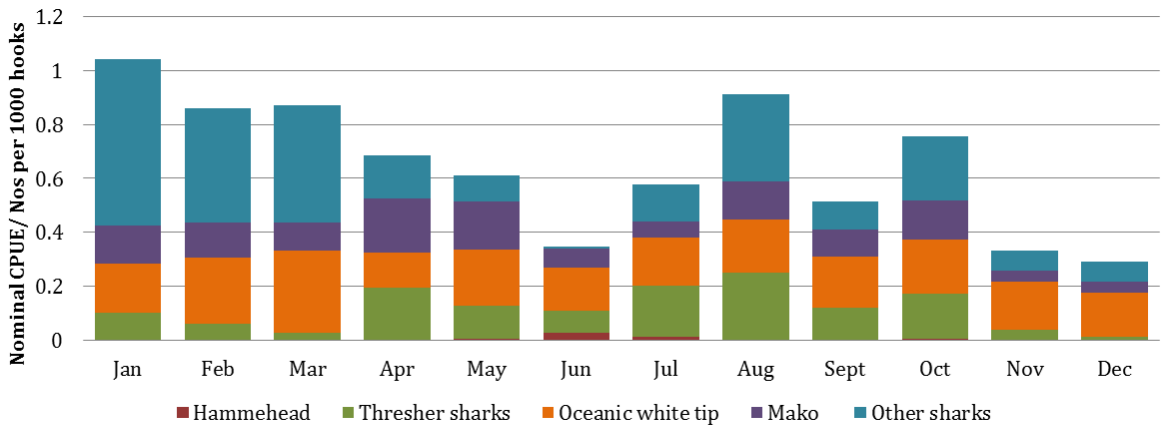

Figure10 Breakdown of types of sharks caught by month for year 2014

Compared to 2014, 2015 showed lower records of shark interactions (Figure 11). Unlike the previous year, a gap in reporting was noticed from months March to July. This gap where no shark interactions were seen could be a case of under-reporting of incidental catches as fishing effort was seen in these months. The gap could be due to more number of vessels being active in 2015 and the vessels that kept regularly reporting ETP interactions may not have done fishing in this period. Reporting of shark interactions gradually increased from August to December and this could be due to vessels that regularly report ETP interactions were active in these months (Figure 11).

Oceanic white-tips dominated the catches from January to February and November to December (Figure 11). No oceanic-white tips were observed in September to October. This could be due to spatial change in fishing operations among the months. Hammerhead interactions were observed in months August to October. Except for February, thresher sharks appeared in catches in all reported months but mostly with low catch rates except in September where it dominated the catches. Mako sharks were observed from January to February and November to December and peak in nominal CPUE of 0.11 was observed in December (Figure 11).

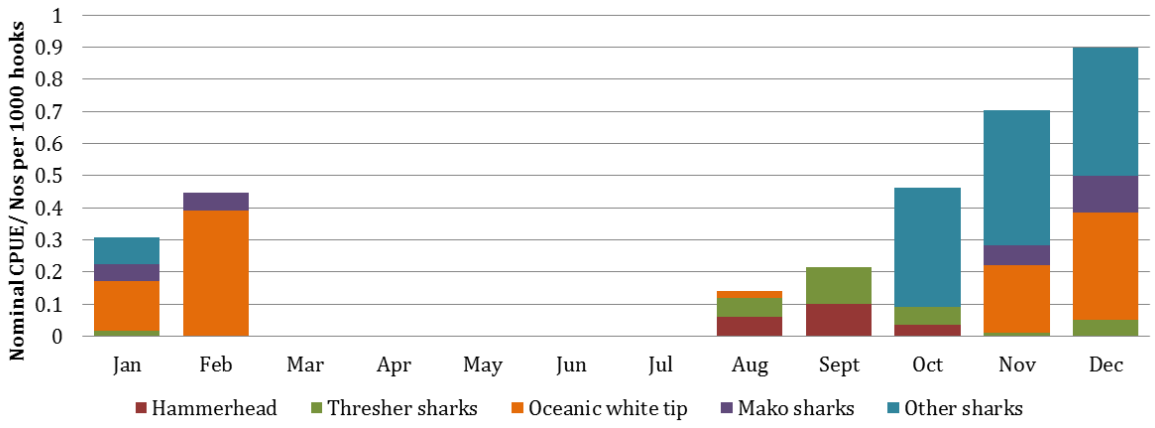

Figure 11 Breakdown of types of sharks caught by month for year 2015

Maldives Sharkwatch Program

After the fishery ban on reef associated sharks was declared in 2009, Sharkwatch Program was initiated under the Darwin Reef Fish Project, collaboration between the Marine Research Centre and Marine Conservation Society (UK). The purpose of the program was to assess the effectiveness of the reef shark ban as well as gain an understanding of the abundance of reef associated sharks at the time of the reef shark ban. Sharkwatch is a citizen-science program and tourism sector is largely targeted for data collection. The country having over 100 tourist resorts, and majority having a dive centre on it, on a single day numerous dives would be undertaken by the dive tourism industry; hence the dive centres were encouraged to take part in data collection.

Sharkwatch uses the roving diver technique, where the surveyor swims for approximately 45-50 minutes and counts the number of sharks encountered on that particular dive. From 2009-13, an increasing effort in surveying and an increase in shark encounters were noticed. The increase in shark sightings could be due to the increased effort in surveying. Results of the four years showed the most encountered shark has been white tip shark (*T. obesus*), followed by grey reef shark (*C. amblyrhynchos*), and the black tip reef shark (*C. melanopterus*). The program has also assisted in identifying hotspots for sharks (Sattar et al., 2014).

Current management

NPOA-Sharks

In collaboration with BoBLME project, the Maldives has developed the National Plan of Action on the Conservation and Management of Sharks (NPOA-Sharks). A stakeholder consultation to present the NPOA-Sharks took place on 10th of April 2014. Stakeholders including former shark fishermen, relevant government authorities, and representatives of tuna longline fishery, attended the one day workshop. The overarching goal of the Maldives NPOA-Sharks is to ensure the implementation and observation of the total shark fishing ban. Some of the actions of the NPOA-Sharks include strengthening of the existing Shark Trust Fund, developing a local shark identification guide and conducting taxonomy trainings targeting longline fishermen. NPOA-Sharks has been formally endorsed by Ministry of Fisheries and Agriculture on 12th of April 2015.

Silky shark proposal

Silky sharks have held a long historical significance in the Maldivian fisheries. During shark fishing era, silky sharks were among the top-most caught sharks and was the only shark species that caused conflicts with the tuna fisheries. Silky sharks' importance to the traditional pole-and-line tuna fishery prompted various management measures to restrict shark fishing in the past decades. In October of 2015, the Maldivian government announced its decision to submit a proposal to regulate the international trade of silky sharks to Convention on International Trade of Endangered Fauna and Flora (CITES). The proposition to include silky sharks in Appendix II of CITES would be asked for vote in the CITES' Convention of Parties meeting in Johannesburg, South Africa in September 2016.

Marine turtles

During the past decades marine turtles were protected under two consecutive moratoria on harvesting under the Fisheries Law. In January of 2015, a marine turtle monitoring program

was launched and systematic recording of both foraging and nesting occurrences of turtles were carried out by volunteer tourist resorts and hired local surveyors. Based on the findings of these surveys a review on the status of marine turtles in the Maldives with policy recommendations was produced. Upon the termination of the most recent moratorium in January of 2016, the review was presented to the relevant ministries. The status review identified important nesting and foraging habitats of marine turtles within the archipelago and called for the need for continuing the monitoring of such sites to identify the best 'turtle habitats' within the archipelago which would facilitate the inclusion of best turtle habitats in Indian Ocean South East Asian Memorandum of Understanding on Marine Turtles (IOSEA-MoU)'s site network for significant turtle habitats.

Marine turtles most commonly occurring in the Maldives are listed as endangered and since protection and management of endangered species falls within the mandate of Maldives Environment Protection and Preservation Act (04/93), a decision was made to transfer the mandate of management and protection of turtles and their habitats to Ministry of Environment and Energy. A new regulation on marine turtles became effective on April 04, 2016 where all marine turtles were declared as protected species with a nation-wide ban on harvesting of turtle eggs for an indefinite period of time. At the time of writing a local guide, on marine turtle species identification, best practices for handling turtles onboard and ensuring their safe release, is in development.

Compliance issues

Maldives enforcing a complete shark fishing ban in the entire EEZ, prohibits the retaining of any incidental catches of sharks. The Regulation on Fishing and Export of Bigeye and Yellowfin Tuna, has provisions to release all live shark bycatches and in any circumstance where dead shark bycatches were landed, the regulation requires it to be declared to a fisheries inspector or fisheries enforcement officers for confiscation. As the Maldives currently do not have fisheries enforcement officers or inspectors in place, dead shark bycatch is not landed and is discarded to the sea. Since the management measure prevents retaining of shark bycatch, the Maldives is unable to fully comply with the IOTC Res. 15/02 and Res.05/05 which entails size- frequency data be taken for shark species as well. Proposal requesting exemption for reporting size-frequency information for sharks from the Maldives was submitted to IOTC in 2016 but was withdrawn on requests from the CPCs suggesting that it may create precedents in proposing exemptions.

Conclusion

Maldives is now enforcing a full ban on all shark species throughout the EEZ. For further management of shark resources, a NPOA-Sharks has been developed and is being implemented. Future efforts would be focused towards effective monitoring of shark ban and improving the reporting mechanism of ETP interactions. From log book information, shark interactions from the tuna longline fishery are observed to be minimal for years 2014-15 whereas interactions of marine turtles and sea birds are considered to be negligible.

Enforcement of the full fishery ban on sharks also prohibits retention of any sharks species caught as bycatch including dead ones. Given these and considering the context of Res.15/02 and Res. 05/05, the Maldives has proposed to IOTC for exemptions for reporting size-frequency information as no sharks are retained in any fisheries in the Maldives, hence allowing for the full

observation and implementation of the complete shark fishing ban. However the proposal was later withdrawn on requests from the CPCs suggesting that it may create precedents in proposing exemptions.

At the time of this writing Ministry of Environment and Energy has started discussion among the line ministries for the decision to sign the Memorandum of Understanding on the Conservation of Migratory Sharks (Sharks MoU) which aims to achieve and maintain a favorable conservation status for migratory sharks throughout their range. If this happens it will further strengthen the Maldives' position on shark conservation and management.

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