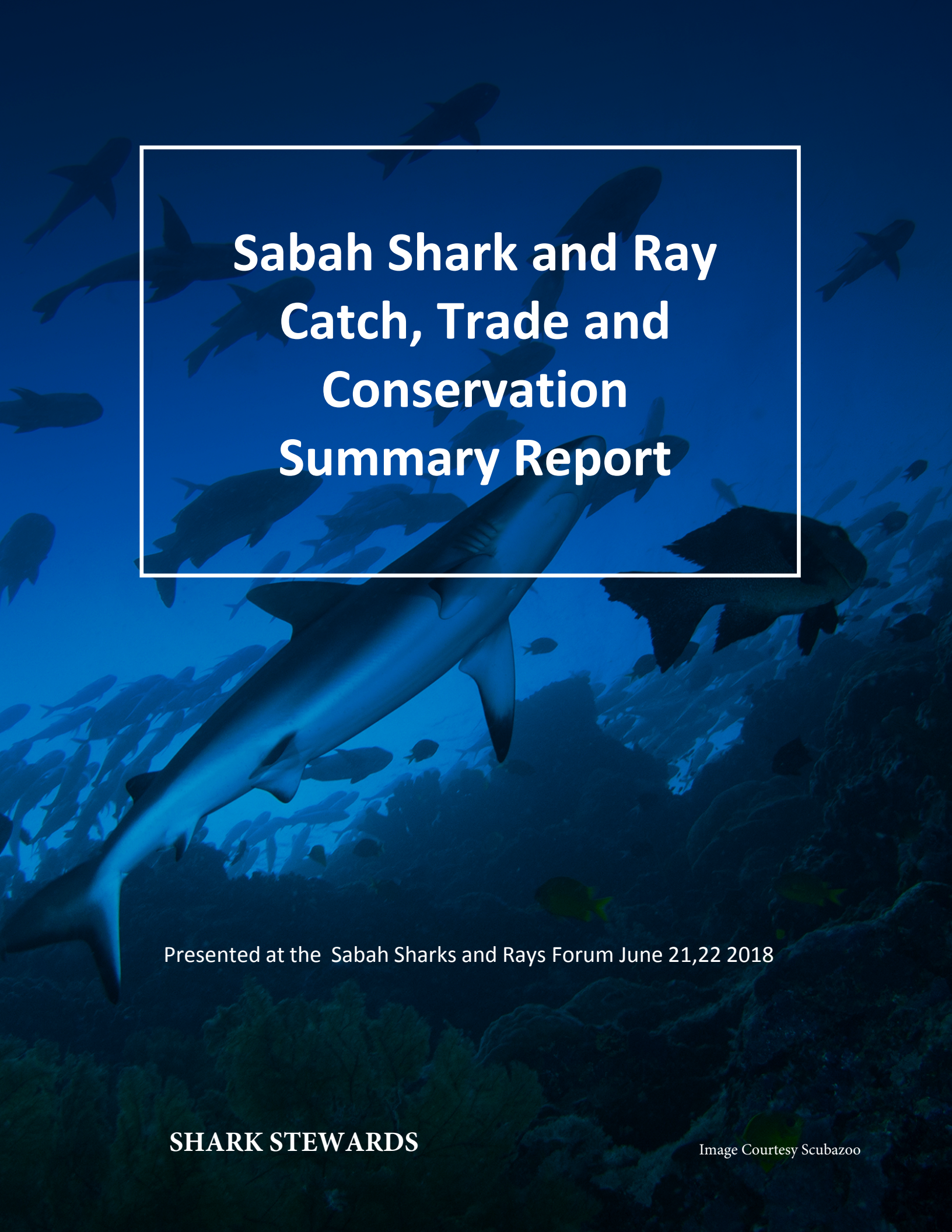
Sabah Shark and Ray Catch, Trade and Conservation Summary Report



Presented at the Sabah Sharks and Rays Forum June 21,22 2018

SHARK STEWARDS

Image Courtesy Scubazoo

Introduction

On behalf of a collaborative group of non-profits, businesses, and registered organizations in Malaysia and in Sabah, Shark Stewards has undertaken a report to consolidate existing and unpublished data to better define the quantity and breadth of the catch of elasmobranches (sharks, skates and rays) in Malaysia, the trade of their meat and products, and to make recommendations with the goal of increasing management, protection and conservation of these important fish, especially in Sabah waters. This document serves as a summary presented at the Sabah Sharks and Rays Forum June 21, 22 2018 in Kota Kinabalu, Sabah.

Malaysia is rich in shark and ray diversity, with many endemic species and endangered species living in the rivers and coastlines of Borneo. These sharks and rays are valuable to the natural heritage and ecology, with increasing value to the Malaysian economy extending beyond fishing to dive tourism. As the population increases and more people rely on the oceans for food, managing marine food resource sustainably is increasingly urgent. In this report, we present market data on shark catch based on market surveys and reporting and shark fin trade and consumption in Malaysia, Sabah in particular. We conclude with recommendations for increased management of catch of shark, skates, and rays, and the development of a comprehensive conservation strategy for elasmobranchs in Sabah. A hopeful trend is the increasing government awareness and public attention to marine conservation. Increasing marine protection and dive ecotourism in Sabah can benefit sharks and rays while providing long-term economic benefits, as well as an enduring impact on ecosystem health.

This summary of a full report outlines recommendations for shark, ray and ecosystem conservation based on a survey of market and trade data and recent fish market surveys collected for the government and by independent research.

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This report could not have been compiled without the support of Sabahans and residents, including Aderick Chong (Chairman of the SSPA), Cynthia Ong (LEAP Spiral and Forever Sabah), Harry Jonas (Forever Sabah and Future Law), the Shark Stewards team, and the volunteers and the passionate people who love sharks and the seas of Sabah. Any errors or omissions remain those of the author.

We would like to dedicate this report in memory of Dr. Steven Oakley, founder of TRACC and longtime Sabah shark and ocean champion.

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Executive Summary

Centered in the heart of the Coral Triangle, Borneo is well known as a region of high biological diversity and endemism. A diverse population of sharks and rays are among many species unique to Malaysian Borneo. However, population growth, increased fishing and a growing market demand for fins, and more recently gill rakers from rays, has placed severe pressure upon many of Malaysia's elasmobranch populations. Evidence shows a decline in large species of sharks and rays such as hammerhead sharks, whale sharks, and manta rays, in addition to an almost complete absence in observations of some species.

Sharks and rays are in peril globally, and Malaysia is no exception. The first systematic analysis of threats for a globally distributed lineage of 1,041 chondrichthyan fishes, sharks, rays, and chimaeras was published in a report by the IUCN Shark Specialist Group (SSG) in 2014, entitled: the *Global Conservation Status of Sharks and Rays*. It estimated that one-quarter are threatened according to IUCN Red List criteria due to overfishing (targeted and incidental). The SSG identified Malaysia, located within the Indo-Pacific Biodiversity Triangle, as among three main global hotspots where the biodiversity of sharks and rays is seriously threatened. The authors emphasize the need for national and international action to protect sharks and rays from overfishing. Large-bodied, shallow-water species are at greatest risk and five out of the seven most threatened families are rays and sawfish. Many of species in these families are present and even endemic to Malaysia, including 4 species of sawfish, and are at grave risk.

The state of sharks in Malaysia parallels the state of sharks globally, where a lack of accurate, species-specific harvest data often hampers quantitative stock assessment and sustainable stock management. Moreover, confusion in designation of shark fin in trade data makes shark fin exports and imports more difficult to define and underestimates the quantity of shark fin in the Malaysian market. An evaluation of the literature, fisheries reports and 172 market visits in this report, indicates a large decline in reef sharks, hammerhead sharks, zebra sharks and large rays. This report identifies an active shark and ray fishery within Malaysia, including Sabah and that large sharks are targeted and not merely bycatch. As a result, many species are on the decline and are traded despite international protections for trade under CITES. A sharp increase in shark fin imports for domestic consumption and sale has ranked Malaysia within the top three countries responsible for the global decline of sharks, associated primarily with shark finning and overfishing on the high seas and in other national waters.

Although total declared value of world trade in shark products approaches USD$1 billion traded per year, current knowledge of this increasing globalized market remains limited. According to the Food and Agriculture Organization of the United Nations, Malaysia is currently ranked as the world's 9th largest producer of shark products and 3rd largest importer in terms of volume (FAO, State of the Global Market for Shark Products 2015). Due to improvement in income and changing lifestyle, Malaysia is a net importer of sharks and product and the deficit is growing as demand for shark meat and fin is rising. Malaysia is the largest importer of shark fin in the ASEAN region. Malaysia accounted for about 71.5% of the ASEAN market and 20% of the world import during the period of the Fish Supply-Demand study. Between 2003 and 2005 the peak catch of sharks and then rays was realized in Malaysia associated with fishing pressure and has since declined.

Although Malaysian shark fin exports have declined dramatically since 2007, imports of shark fin have risen steadily since that time. Import/export codes make tracking of trade difficult, or even absent in the case of gill rakers, and are likely largely underreported. A SEAFDEC study on status and trends of sharks fisheries in study indicates that Malaysia importation of sharks and rays has increased seventeent fold between 2004 to 2013.

Malaysia's first comprehensive Fish Supply Demand Study (2017) reports that Malaysians are increasingly buying imported and more expensive hight value fishery products. Although there is a need for more data, shark fin consumption seems to parallel this increase as evidenced by increasing shark fin imports and the large numbers of restaurants selling shark fin soup. Shark finning does appear to be rare in Malaysia, however the large importation and consumption of shark fin makes Malaysia a responsible party in the global decline of sharks and as such tacitly condones shark finning.

Shark and ray meat consumption in Malaysia is an important source of protein and livelihood, particularly for subsistence and artisanal fishers. However, these landings are not included in official fisheries statistics leading to management challenges for a sustainable fishery. Market and trade surveys of shark catch and shark fin conducted in Sabah indicate that a more significant shark and ray fishery exists than is considered by fisheries statistics. Sharks landed with fins detached are common making species ID difficult and facilitates unregulated or unreported trade. Much of this catch is underestimated or unaccounted for in official records.

A study focusing on the smallt scale and artisanal fishing sector in Sabah using a previously reconstructed time series of smallt scale catches as the basis for estimating the economic value of these fisheries. These findings suggest that since the early 1990s, smallt scale fish catches in Sabah may have been undervalued by up to 225%. Presently, smallt scale fisheries may be supporting up to an additional 3.5% of Sabah's population.

Illegal, Unreported and Unregulated fishing is a serious concern globally and in Malaysia. In June 2017, the Fisheries Department said the country lost 980,000 tones of seafood worth up to RM6 billion (S$1.9 billion) each year because of illegal fishing and it was estimated that only about half of all seafood caught in local waters reaches Malaysian consumers. A particularly egregious form of illegal fishing, known as fish bombing is common and creating long-term destruction to marine ecosystems and habitat in Malaysia, in addition to compromising food and national security. Enforcement is critical particularly in Marine Parks, and could be applied at point of sale of fish bombed, and applying new technologies. However, a long term solution providing education and alternative livelihoods e.g. through seaweed farming or tourist services is needed to limit poaching or destructive fishing.

Dive tourism is a growing industry globally and of larger economic importance than previously assessed for Sabah in particular. Increasing public attention has been brought to bear on shark and ray harvest near dive tourism resorts in Semporna. Bloody images in the news press and social media have created protest to a legal act (although questionably sustainable) and drawn international censure upon the region. The response by fisheries managers has been that shark finning does not exist, and that all sharks and rays are bycatch, that shark finning laws are unnecessary, and shark catch is inconsequential at around 2.5t 3%

of the total volume caught. The argument does not address that overall Malaysian fisheries are being overfished, and that sharks make up a disproportionately smaller volume of overall biomass. Also, reconstructed data that adjusts for unaccounted data by small fishers suggests that the proportion of shark catch may in fact be much 0.5- 3 X that reported. Moreover, we present evidence that large sharks and rays are targeted and not simply bycatch.

Shark ecotourism will benefit all stakeholders and help protect biodiversity hot spots and their abundance of threatened species. This economic sector can develop and support alternative livelihoods to local, indigenous subsistence and artisanal fishers. To avoid the negative impacts on tourism and to increase accuracy of data landing by species and frequency, we recommend that the Department of Fisheries:

- Require landings of all large sharks and rays that are listed, protected or species of concern to be made at public landing centers and not private docks;
- Increase licensing, inspection of small scale fisheries landing large rays and sharks;
- Transition the Semporna longline industry targeting sharks to a hook and line fishery with distinct prohibitions on listed, protected or Species of Merit.
- Prohibit the trade of fins and gill rakers from listed, protected or species of interest;

On a positive note, the economic benefits of an expanding dive tourism market targeted at seeing sharks and rays, particularly in Sabah, is providing hope for the economy and a growing population dependent on the ocean for their livelihoods. Economic analysis indicate that dive tourism services benefit local businesses in Sabah an estimated USD16.6 million per year, 796 jobs that yielded USD2.8 million per year in salaries for employees. Divers will pay more to dive with sharks and this industry has promising growth and provides hope for shark conservation. The argument is increasingly strong that sharks are far more valuable alive than dead. Additionally, Malaysia, lead by Sabah has committed to SDG 14 to increase marine protection by 10%. Newly gazetted marine protected areas like the Tun Mustapha Marine Park offer hope for healthy ecosystems and communities, providing alternative livelihoods for native people when properly managed and well enforced. No take reserves are the highest in efficacy, but only 0.1% of current MPAs exist in the current system as full no take.

We endorse recommendations made in the Malaysian National Plan of Action for Sharks, by the Sabah government and by external reviewers, and add additional recommendations on how the people and government of Sabah can sustainably manage fisheries protect, habitat and species and reduce future threats to sharks and rays in Sabah and Malaysia. Because sharks play such an important role in assuring a well-balanced and healthy ecosystem, prohibiting harvest and exports of listed species will ease pressure on threatened reef ecosystems. Supporting and developing the existing dive tourism network building a citizen science program will increase public and scientific knowledge and provide support to fisheries managers. Increasing community engagement enforcement to existing marine protected areas will ensure that sharks, the marine ecosystem and the Sabah economy will flourish. We hope these and other recommendations made at this conference will lead to increase Sabah shark and ecosystem health and for the world oceans.

Recommendations

Supported by this investigation, we offer these overarching recommendations in addition to others in the full report[2]:

1. Amend the Fisheries Act to require all sharks to be landed with fins attached and require all landings of large or sharks of protected or species of merit to occur at public centers where landings can be recorded.
2. Amend the Fisheries Act to prohibit the sale of Mobulid ray gill rakers.
3. Develop consistent trade coding for shark fin and ray gill rakers for imports, exports and re-exports.
4. Prohibit personal exports of marine products (fins, gills, fish maw, live fish, seahorses etc.) by tourists.
5. Reevaluate the category classification of 'bycatch' to recognize that some species of sharks and rays and their products are in fact targeted catch and reconciliation for consistency of language between Federal and State fisheries laws.
6. Increase protection of endangered species and enforcement for prohibiting landings of listed species.
7. Reduce shark fin imports and consumption through a national and state campaign to education campaign to stop serving shark fin soup.
8. Adopt clear policy toward the selling and trade of shark fins from any protected, threatened or listed species, and develop a new protective category for protection "Species of Merit" to support shark tourism.
9. Increase training and species ID for more effective management of fisheries and regulation of the trade of CITES-listed and IUCN endangered species of sharks and rays.
10. Support an increased training and enforcement program for staff within established Marine Parks, utilizing a community-based conservation model to train and provide skilled jobs for locals who may have previously depended on shark fishing for income.
11. Institute a shark tourism fee across all snorkel and SCUBA resorts that will go directly to enforcement infrastructure such as patrol boats and enforcement officers.
12. Use the non-profit and academic network to support additional research studying shark movements that will be applied to fishery boundaries for the establishment of no take zones within marine parks.
13. Support the development of a statewide education approach targeted towards reducing shark fin imports and reduce internal shark fin consumption.
14. Prohibit exports of any undocumented or uncoded seafood product for personal use (e.g. commercial or tourist exports of fins, seahorses, fish maw, live fish, ray gills etc.).
15. Develop a statewide standardized citizen science program for data collection, and endorsing well managed and well-intentioned shark and ray diving ecotourism at a state and national level.
16. Develop a formal working group that will support shark conservation tourism with direct revenues to local communities with clear deadlines and deliverables.
17. Support increased scientific research on shark movements, migrations and overlap with fisheries and identify hotspots for marine protection, and species of merit for protection.[2]

[2] For Full Report go to www.sharkstewards.org/Sabah-Shark-Report