

Japan's National Plan of Action for Conservation and Management of Sharks

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(Partly revised in March 2009)

(Partly revised in March 2016)

Fisheries Agency
Government of Japan

1. Introduction (Principle and objective)

(1) Japan, as a responsible fishing nation, confirms the recognition of the international community that "the significant role in providing food security for the world, both through food supplies and through economic and social well-being" (Kyoto Declaration and Plan of Action on Sustainable Contribution of Fisheries to Food Security). In addition, Japan duly respects the international agreement that "the States should commit themselves to the conservation and sustainable use of marine living resources (the United Nations Conference on Environment and Development (UNCED) and Chapter 17 of Agenda 21) and the Code of Conduct for Responsible Fishing of the United Nations Food and Agriculture Organization (FAO) that calls for promotion of contribution of fisheries to food security.

(2) Japan recognizes that sharks are important fishery resources and play an important role in the marine ecosystem as higher-level predators. Japan aims to achieve sustainable and effective utilization of sharks. As sharks are subjected to catch in various types of fisheries in many countries, Japan is aware of the need for appropriate management of shark fishing based on the results of stock assessment on a species by species and stock by stock basis so that negative impact on the resources can be averted. Furthermore, Japan shares the concern that sharks are made subject to illegal, unregulated and unreported (IUU) fishing activities.

(3) Under such circumstances, Japan adopted in 2001 an effective and practicable National Plan of Action (NPOA-Sharks) that would objectively and scientifically analyze the impact of Japanese fisheries on shark resources, taking into account the internationally agreed code of conduct in order to carry out appropriate conservation and management of sharks based on "the FAO's International Plan of Action for Conservation and Management of Sharks (IPOA-Sharks)" adopted in 1999.

(4) Since then, Japan has ensured collection of scientific knowledge and information regarding shark resources and ensured rational conservation and sustainable utilization of shark resources based on accurate knowledge and information through implementation of the plan. Further Japan has coped with the IUU fishing that would impair sustainable utilization of the resources and other activities that would hamper effective use of the resources through such means as international cooperation and provision of accurate information.

2. Fisheries and species subjected to NPOA-Sharks

(1) NPOA-Sharks covers fisheries targeting sharks or those with substantial by-catch of sharks and shark species caught by these fisheries. Regarding the

fisheries and species subjected to NPOA-Sharks, regular meetings of an expert group consisting of Japanese scientists, administrators and fishing industries are held to carry out analysis of shark fisheries and stock status based on updated information. Then, on the basis of the results of the analyses, the group discusses the need for management measures, and where necessary, makes recommendations to Regional Fisheries Management Organizations (RFMOs) and other bodies, and revises NPOA-Sharks. In considering the above, due attention is given to the following items:

- (i) biological characteristics of the species covered in NPOA-Sharks,
- (ii) characteristics of fisheries covered in NPOA-Sharks,
- (iii) safety of fishers and reasonability of burden to fishers, and
- (iv) socio-economic impacts of conservation and management measures

The state of the fisheries and species subjected to NPOA-Sharks is described in detail in the implementation reports of NPOA-Sharks, and is reported to the Committee on Fisheries (COFI) of the FAO, which is held every two years.

(2) In particular, the following data collection and research will be carried out in order to obtain necessary information to analyze the status of the species subjected to NPOA-Sharks.

- (a) Catch and effort data reported from commercial fishing vessels,
- (b) Scientific data from research vessels belonging to the national and prefectural governments and other organizations,
- (c) Scientific data collected by on board observers,
- (d) Data on shark landings at major fishing ports in Japan,
- (e) Catch statistics compiled by the national and prefectural governments, and
- (f) Data possessed independently by non-governmental organizations (universities, aquariums, etc.)

3. Management measures

(1) Many types of fisheries in Japan are placed under the jurisdiction of the national or prefectural governments pursuant to the Fisheries Law and Fisheries Resource Conservation Law. Entry into these fisheries is limited under the license system. Most of the fisheries targeting sharks or those in which substantial by-catches of sharks occur, are licensed by the Minister of Agriculture, Forestry and Fisheries or prefectural governors. Furthermore, it is not likely that fishing pressures on shark resources will increase in the future because Japan has no intention to expand the scale of these fisheries.

(2) Japan is member to all the RFMOs for the areas where sharks are assumed to be targeted or caught incidentally by longline fishing. Japan is obliging its fishers to comply with all the management measures adopted by these RFMOs as conditions for granting the fishing license. The government of Japan will have fishers comply with any new measures when they are introduced in the future.

(3) Considering that waste of shark resources is perceived as an international issue because carcass of sharks are discarded and only the fins are landed at port, and in order to secure effective use of shark resources, the Ministerial Order was

amended in 2008 for distant-water tuna longline fisheries, offshore tuna longline fisheries, and coastal tuna longline fishing so as to oblige, in case the harvested sharks are possessed, possession of all parts of the shark excepting head, guts and skins, to the point of first landing, with the exception of cases where part of the shark was landed outside Japan. Also following the 2008 amendment of the Ministerial Order, reports of information on incidental catch were required even in case where the by-catch fish was not possessed on board in order to reinforce monitoring of shark resources.

(4) Seasonal operation mainly targeting sharks by offshore tuna longline fleets based in Kesenuma is the only shark targeting in Japan. The Management plan for longline fisheries targeting sharks (See Attachment 2) has been implemented since January 2016, in accordance with the conservation and management measures of the Western and Central Pacific Fisheries Commission (WCPFC)

(5) Regarding NDF (Non Detriment Finding) which is necessary in issuance of export certificate of sharks listed in CITES Appendix II (Attachment 3), NDF Guidelines for Aquatic Species in Japan was instituted in August 2014 (Attachment 4). NDFs are issued in accordance with the NDF Guideline.

4. Promotion of effective utilization of sharks

(1) In several regions in Japan where sharks are landed in a certain amount on a constant basis, shark products have been utilized effectively and properly. Specially, the shark meat is used as a common cooking ingredient, and some parts such as heart are valued as delicacies. Furthermore, skins are used as materials for high-grade leather products and cooking apparatus, and bones are used for pharmaceutical products. Thus, in comparison with other countries, sharks are used with little waste in Japan. As effective utilization of sharks is pursued around the world, Japan continues to encourage such practice.

(2) Efforts are made to grasp the actual state of catch and utilization also in the regions where sharks are not the main target of fisheries and are landed only as by-catch species on an irregular basis. Sustainable and effective use is promoted in such regions.

(3) In recent years, some environmental protection organizations obstruct sustainable and effective use of sharks. The government of Japan counter their arguments while providing accurate information.

(4) In some fisheries such as distant-water tuna longline fishing which operates in remote areas from the domestic market and for a long period of time without calling ports, only fins were often landed because of the limited fish hold capacity. However, since the amendment of the Ministerial Order in 2008, it has been secured that effective utilization of all usable parts of sharks by inspection at ports and other measures.

5. Educational and outreach activities

(1) Promoting social awareness on FAO IPOA-Sharks and Japan's NPOA-Sharks that was developed pursuant to IPOA-Sharks among not only fishers but also the

general public is very important in promoting sustainable utilization and conservation of shark resources in Japan. In particular, it is crucial to promote outreach and educational activities on NPOA-Sharks among fishers in order to enhance their awareness toward management of shark resources and collect accurate data for stock assessment.

(2) To this end, the following actions are taken:

- distribute Shark Species Identification Sheets, and organizing seminars for fishers regarding stock management;
- promote educational activities for the general public regarding how shark resources have been related to the Japanese culture;
- develop pamphlets, video presentation, posters, etc. regarding sustainable use and conservation of shark resources;
- provide information on international debate about shark resources to fishers, fisheries organizations and other targets; and
- promote educational and outreach activities to fisheries successors

6. Promotion of international cooperation

(1) As stated in 2(1) above, the implementation status of NPOA-Sharks is reported to FAO-COFI.

(2) The government of Japan contributes positively to the discussion at the FAO and RFMOs in order to promote conservation and management of sharks based on scientific evidence. Especially, given the fact that Japanese fisheries data are greatly contributing to stock assessment of sharks, Japan continues its effort to provide accurate information.

(3) In addition, Japan promotes cooperation with the countries concerned through the FAO and RFMOs for elimination of IUU fisheries since those activities are significantly undermining the international conservation scheme and the efforts of countries concerned regarding conservation and management of fishery resources including sharks.

(Attachment 1)

Conservation and management measures for sharks implemented by Japanese fishing vessels

1. Measures implemented in the entire fishing ground

With regard to retaining of caught sharks onboard, tuna longline fishers are required to retain all the parts of sharks excepting head, guts and skins on board up to the first point of landing when they retain harvested sharks on board, except the case when parts of the shark was landed in and outside of Japan.

2. Measures implemented in each fishing ground

(1) The area under jurisdiction of the Western and Central Pacific Fisheries Commission (WCPFC) (Central and western Pacific Ocean)

- Retention of Oceanic Whitetip Shark and Silky Shark on board is prohibited.
- Distant-water and offshore tuna longline fishing vessels are prohibited either to possess wire as branch lines and leaders or to use branch lines running directly off the longline floats or drop lines, known as shark line.

(2) The area under jurisdiction of the Inter-American Tropical Tuna Commission (IATTC) (Eastern Pacific Ocean)

Retention of Oceanic Whitetip Shark on board is prohibited.

(3) The area under jurisdiction of the Indian Ocean Tuna Commission (IOTC) (Indian Ocean)

Retention of Pelagic Thresher, Bigeye Thresher, Common Thresher, and Oceanic Whitetip Shark on board is prohibited.

(4) The area under jurisdiction of the International Commission for the Conservation of Atlantic Tunas (ICCAT) (Atlantic Ocean)

Retention of Bigeye Thresher, Oceanic Whitetip Shark, Hammerhead Shark, except Bonnethead Shark and Silky Shark on board is prohibited.

(Attachment 2)

Management plan for longline fisheries targeting sharks

1. Background

Offshore longline fishing fleet based on Kesennuma is one of the major offshore longline fleets in Japan. Their vessel size is in between 119 and 150 tons. They are mainly operating in the Oyashio-Kuroshio transition zone in the subtropical and temperate northwest Pacific where throughout year. Blue Shark is one of the primary target species, and they generally conduct blue shark targeting operation in the season between early summer to early autumn.

2. Management plan

In accordance with paragraph 2 of CMM2014-05 (Conservation and Management Measure for Sharks), following shark management plan is addressed:

(1) Time period of the plan

Five years, starting in January 1st, 2016.

(2) Fleet conducting the plan

Offshore surface longline fishing fleets based at Kesennuma fishing port (List of fishing vessels is omitted)

(3) Operational area

Subtropical and temperate Northwest Pacific

(4) License for the pelagic longline operation

License of the offshore surface longline fleet for the pelagic longline operation is issued by Minister of Agriculture, Forestry and Fisheries of Japan.

(5) Total annual landing limit

Blue Shark: 7,000 tons

Shortfin Mako shark: 600 tons

Total landing limits are set to historical lowest level.)

(6) Measures to conserve stocks of depleted tropical sharks

- Prohibition of the use of shark line.

- Sharks landed to the port are limited to Blue Shark, Shortfin Mako shark, Salmon Shark, and Thresher Sharks. All other sharks will be released in a way to maximize their survival.

(7) Other measures

- Fin of sharks will be attached at the time of landing.

- Shortfin Mako sharks smaller than 1m PCL are released in a way to maximize their survival, except for retaining as scientific sample for biological study.

(8) Report on the management plan

Implementation of the management plan will be reported to the Commission by July 15 of the next year.

(9) Review of the conservation plan

The management plan will be reviewed in the third and fifth year of the plan, and revised if necessary.

(Attachment 3)

Sharks listed in Appendix II of CITES

Species	Date when Appendix II inclusion took effect	Remark
Whale Shark	Feb. 13, 2003	Japan made a reservation
Basking Shark	Feb. 13, 2003	Japan made a reservation
Great White Shark	Jan. 12, 2005	Japan made a reservation
Oceanic Whitetip Shark	Sept. 14, 2014	Japan made a reservation
Scalloped Hammerhead, Great Hammerhead, Smooth Hammerhead	Sept. 14, 2014	Japan made a reservation
Porbeagle	Sept. 14, 2014	Japan made a reservation

NDF Guidelines for Aquatic Species by the Fisheries Agency of Japan

COP16 of CITES adopted a resolution on Non Detriment Finding (NDF) including non-binding guidelines. NDF issued by a scientific authority is a requirement when issuing export permits or introducing specimen from the Sea for a species listed in CITES Appendix I or II. Accordingly, the Fisheries Agency of Japan has established NDF guidelines for aquatic species for which the Agency is a scientific authority. NDF will be made in accordance with these guidelines.

1. NDF should be made as much as possible by each genetically independent stock (hereinafter referred to as a species). Regarding look-alike species, when identification of species is clearly possible, NDF is unnecessary.

2. NDF can be made when the specimen is:
 - i) collected before the listing in Appendix
 - ii) not a nature origin such as:
 - a) Bred from parents collected before listing in Appendix
 - b) Bred from parents which were imported under the CITES procedures
 - c) Bred from parents which met the requirement of NDF
 - d) Others (Bred under a robust technique which was proved to be able to make F2.)
 - iii) collected from a part of an individual by a method without affecting the survival of the individual (such as a specimen of biopsy sampling, an embryo, spermatozoa and so on)
 - iv) collected from a dead individual and it is reasonably considered that the death is not attributable to the specimen collector, e.g., a stranded whale. A by-caught individual is excluded from this category.

3. When a specimen does not meet any criterion of paragraph 2 above, NDF should be basically considered, taking into account the following information:
 - i) Biological characteristic and life history of the species
 - ii) Distribution range of the species (historical and present)
 - iii) Stock structure, status and trend of the species
 - iv) Threats to the species
 - v) Historical and present fishing situation and mortality rate of the species
 - vi) Introduced and proposed management measures for the species
 - vii) Compliance situation of the management measures
 - viii) Monitoring of the species status
 - ix) Conservation of the species
 - x) Continuity of the role of the species in the ecosystem
 - xi) Effects of illegal trade on the survival of the species

4. In collecting the information of paragraph 3 above, the following items should be examined. An applicant may be requested to submit relevant information as necessary.

- i) Relevant scientific papers
- ii) Ecological risk assessment
- iii) Results of surveys at fishing grounds and markets
- iv) Knowledge and expertise of local people involved
- v) Views of experts
- vi) Trade data

5. When NDF is considered based on the information in paragraph 3 above, as a first step, items iii), v) and vi) of paragraph 3 should be considered in accordance with the following criteria in order. If these three items meet requirements in the criteria, the other items in paragraph 3 should be considered to judge whether NDF can be made.

- i) When a TAC of the species is established or calculated on scientific bases, the present total catch of the species including the export is less than the amount of the TAC.
- ii) In case that establishment or calculation of a TAC of the species on scientific bases is difficult, but the stock trend can be estimated for a certain period based on catch or other data, the stock does not show a decreasing trend and the present total catch of the species including the export is less than the average past catch amount of the species. (The length of the period depends on biological characteristic of the species.)
- iii) In case that establishment or calculation of a TAC of the species on scientific bases is difficult and 5. ii) above is not applicable, the stock is considered to be maintained through the management measures which have been introduced or will be introduced in the near future. In making judgment of the effect of the management measures, the following information should be considered:
 - a) Protected areas are effectively established.
 - b) Time closure is effectively established.
 - c) It is estimated that the fishing pressure has been decreased substantially because the number of fishermen to catch the species is regulated and the number has been substantially decreased over a long period.
 - d) Regulation of fishing gear is effectively established.
 - e) Individuals smaller than a certain size are protected.
 - f) Other effective management measures (such as release of females, prohibition of bottom trawl, restriction of power of light and so on) are established.
 - g) Combination of above mentioned measures brings the same conservation effect.
- iv) In case that establishment or calculation of a TAC of the species on scientific bases is difficult and neither 5. ii) nor iii) is applicable, the annual catch amount of the species is considered negligible against the estimated stock size. In estimating the stock size, the minimum stock size should be estimated, taking into account, *inter alia*, the past

catch record, the area of distribution, the stock size and productivity of look-alike species as well as the catch amount and the maximum fishing efficiency. The “negligible level” should in principle follow the table below, depending on the productivity of the species. When any parameter of the species falls under a less productivity category, the species shall be regarded as belonging to the category.

Parameters	Productivity		
	Low	Middle	High
Natural mortality rate (M)	$M < 0.2$	$0.2 \leq M \leq 0.5$	$0.5 < M$
Intrinsic rate of Natural increase (R)	$R < 0.14$	$0.14 \leq R \leq 0.35$	$0.35 < R$
von Bertalanffy growth rate (K)	$K < 0.15$	$0.15 \leq K \leq 0.33$	$0.33 < K$
Age at maturity (t mat)	$8 < T \text{ mat}$	$3.3 \leq t \text{ mat} \leq 8$	$t \text{ mat} < 3.3$
Maximum age (t max)	$25 < T \text{ max}$	$14 \leq t \text{ max} \leq 25$	$t \text{ max} < 14$
Generation interval (G)	$10 < G$	$5 \leq G \leq 10$	$G < 5$
Negligible level ¹ (Recovery Index(Fr)=0.1)	0.7%	1.2.% ²	1.8% ³

- v) The species is considered to be maintained under the present fishing activities because of the stock enhancement activities for the species

When the species does not meet any of the criteria above, NDF should not be made unless there are special reasons.

¹ "negligible level" can be calculated as $R \cdot Fr / 2$ by the method of Wade 1998.

² Median value of R is used as there are ranges.

³ 0.35 (lower limit) is used as R