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**FIRST MEETING  
OF THE  
TECHNICAL AND COMPLIANCE COMMITTEE  
OF THE COMMISSION FOR THE CONSERVATION AND MANAGEMENT OF  
HIGHLY MIGRATORY FISH STOCKS IN THE WESTERN AND CENTRAL  
PACIFIC OCEAN, POHNPEI, FEDERATED STATES OF MICRONESIA,  
5-9 DECEMBER 2005**

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**Shark conservation and management: actions by the Commission, relevant regional  
fisheries management organizations and other international initiatives**

Prepared by the Secretariat

**Introduction**

1. Annex II of the Summary Record of the First Session of the Commission held in Pohnpei, Federated States of Micronesia in December 2004 requested advice, for consideration at the Second Session, on *inter alia*:

1. (d) Estimates of the mortality of non-target species with an initial focus on seabirds, turtles and sharks.

Further, Annex II proposes that the Commission will adopt, in accordance with Article 5 of the Convention, conservation and management measures necessary to address sustainability concerns. Measures may include, *inter alia*:

4. (e) Mitigation measures to address the mortality of non-target species e.g. seabirds, turtles and sharks.

2. In accordance with Article 6 of the Convention, Annex II stipulates that the precautionary approach will be applied (sic. to address sustainability concerns) and that the absence of scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.

3. This paper has been prepared to support discussion during the First Regular Session of the Technical and Compliance Committee on shark conservation and management in the Convention Area. It is also to support the development of advice to the Second Session of the Commission in relation to mitigation measures that may be adopted as part of efforts to reduce the mortality of shark species.

**Background**

4. This background paper was prepared by the Secretariat in order to assist Members in considering shark conservation and management, calling for, *inter alia*, data collection that is consistent with actions taken by other regional fisheries management organizations

and the International Plan of Action for the Conservation and Management of Sharks adopted by the Food and Agriculture Organization of the United Nations (FAO) and a ban on the practice of shark finning.

5. Sharks, skates, and rays are within the Class Chondrichthyes, the cartilaginous fishes, and the subclass Elasmobranchii. Sharks are an ancient and diverse group of fishes presenting an array of issues and challenges for fisheries management and conservation due to their biological and ecological characteristics. Most sharks are predators at the top of the food chain and many shark species are characterized by relatively late maturity, slow growth, and low reproductive rates. Abundance of these top predators is often low relative to organisms at lower trophic levels which can make them particularly vulnerable to overexploitation.

6. Sharks have not been a major priority for fisheries management agencies because the volume and value of shark landings were considerably less than commonly exploited commercial fishes. On a global level, however, shark catches are commonly underreported and in some coastal waters there is no requirement to report shark catches; therefore actual landings may be much greater than previously surmised. Within the last decade there has been increasing concern about the status of shark stocks and the sustainability of their exploitation in world fisheries. As demand for some shark species and shark products has grown, there has been increased international fishing effort directed at sharks, and there is increasing evidence of overfishing. In turn, several international initiatives have been undertaken to promote greater understanding of sharks in the ecosystem and greater efforts to conserve the many species taken in world fisheries.

### **The Convention and sharks**

7. The Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (the Convention) incorporates by reference to Annex I of the United Nations Convention on the Law of the Sea, in its definition of “highly migratory fish stocks”, a category of oceanic sharks. The Convention’s definition also includes “such other species of fish as the Commission may determine.”

8. In Part II, Article 5 of the Convention, reference is made to “species belonging to the same ecosystem...or associated with target stocks” (5(d)), and the Convention calls for measures to “...minimize waste, discards...of both fish and non-fish species...in particular endangered species” (5(e)).

9. Thus, it is clear that the Convention provides authority, *inter alia*, for the Commission to conserve and manage sharks both in fisheries targeting sharks and in fisheries in which sharks are taken as by-catch.

10. More broadly, Article 5 also calls for the need to “protect biodiversity” (5(f)), and the need to “take into account the interests of artisanal and subsistence fishers” (5(g)).

Sharks contribute to biodiversity and hold cultural and economic value to some artisanal and subsistence fishers of the region. Additionally, the Convention text makes clear reference to the "...impact of fishing on non-target associated or dependent species" (c.f 6(1)(b) and (c) and 6(4)).

8. Working Group II of the Precon established several specialist working groups to support the activities of the Scientific Committee (See Final Report of the First Meeting of the Scientific Committee, Noumea, New Caledonia, August 2005). During that Meeting the Ecosystem and Bycatch Specialist Working Group developed draft terms of reference to, *inter alia*:

"...review the impact of fishing on components of the ecosystem not targeted by fisheries, especially sharks, seabirds and turtles; the interactions between climate and environmental factors and the target bycatch species, and the development of ecosystem-based models to assist the Commission with the development of management decisions."

Under the draft terms of reference the specialist working group is also to:

- Review annual estimates of non-target species catches
- Assess the impacts of fishing, other human activities and environmental factors on the ecosystem and biodiversity, including non-target, associated and dependent species, and habitats of special concern.
- Evaluate measures to minimize impacts of fishing on non target, associated and dependent species and habitats of special concern.

9. Notably, at the first annual meeting of the Commission, Members agreed to a Resolution<sup>1</sup> directing the Scientific and Technical and Compliance Committees to provide recommendations to the Commission (at the second annual meeting) on, *inter alia*:

1. (d) *Estimates of the mortality of non-target species with an initial focus on seabirds, turtles and sharks.*

And that the Commission shall adopt in accordance with article 5 of the Convention conservation and management measures necessary to address sustainability concerns related to bigeye and yellowfin tuna. Such measures may include, *inter alia*,

(e) *Mitigation measures to address the mortality of non-target species e.g. seabirds, turtles and sharks.*

### **First Meeting of the Scientific Committee, Noumea, New Caledonia, 8-19 August 2005**

10. The Ecosystem and Bycatch Specialist Working Group (EB-SWG1) of the Scientific Committee conducted preliminary reviews and presented estimates of mortality on non-target species, including sharks. The EB-SWG1 noted several constraints in

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<sup>1</sup> WCPFC/Comm.1/8 10 December 2004 Annex II - Resolution on Conservation and Management Measures.

presenting other than preliminary data, with problems related to low observer coverage rates and coverage rates not accurately representing the distribution of total effort within each fishery. The EB-SWG1 provided the following preliminary shark mortality estimates:

- Total annual catches of sharks were much higher than for the other taxa (sea turtles and seabirds) examined due to the existence of dedicated shark longline fisheries and opportunistic catches of sharks and finning. As a result, it was assumed that most catches of sharks resulted in mortalities.
- Most shark catches were estimated for the TSL fishery, with increasing catches in recent years.
- Most sharks observed were identified to species and catches were dominated by blue sharks, silky sharks, oceanic white-tip sharks and pelagic sting rays. More than 40 shark taxa were recorded by observers.

11. EB-SWG1 further noted that analyses of shark data were complicated by the large number of shark species and the lack of information to identify target and non-target species of sharks for each of the four fisheries.

12. IATTC made a proposal for collaboration between IATTC and WCPFC on a preliminary investigation of the status of Pacific shark stocks, and development of a research plan for a comprehensive assessment. A useful starting point would be a review of stock assessments for sharks elsewhere in the Pacific, including blue sharks in the North Pacific. A parallel review of shark by-catch also needs to be conducted to identify the priority species for formal stock assessments.

13. The Scientific Committee recognized that biological studies and assessing the status of sharks stocks within the Western and Central Pacific Ocean are important issues for the Commission, particularly as it has been shown that some shark species may be particularly vulnerable to over-exploitation. The Scientific Committee noted that the different spatial distributions of some shark species within the Pacific and regional differences in the priorities among member States makes it difficult to determine a single set of priorities for assessing sharks species at this time. Nevertheless, the Scientific Committee encouraged member States to cooperate on carrying out research into sharks including stock assessments.

14. If agreement can be made on a small set of shark species of higher priorities, and the budget of the WCPFC allows, the Commission should also consider undertaking assessments of high priority shark species. Given the pan-Pacific distribution of some of these species, strong collaboration between the IATTC and the WCPFC and its respective contracting Parties should be mutually beneficial.

### **Actions by the Food and Agricultural Organization of the United Nations (FAO)**

15. In February 1999, the FAO Committee on Fisheries (COFI) endorsed the International Plan of Action for the Conservation and Management of Sharks, which recorded the commitment of all FAO Members to strive to adopt a corresponding

national plan of action for conservation and management of sharks by the COFI session in 2001. In late 2004, a paper circulated for a CITES meeting reported that four FAO Members had completed a National Plan of Action (NPOA). The International Plan also identifies actions that can only be taken through international cooperation, including within regional fisheries management organizations.

### **Recent actions by Regional Fisheries Management Organizations and other international initiatives**

#### *North Atlantic Fisheries Organization (NAFO)*

16. At its 26<sup>th</sup> Annual Meeting in September 2004, the NAFO Fisheries Commission became the first regional fisheries management organization in the world to establish a catch limit for a directed elasmobranch fishery. For each of the year's 2005-2007, the total allowable catch (TAC) for skates in Division 3LNO (the Anose@ and Atail@ of the Grand Bank) will be 13,500 metric tons. Also, at its 27<sup>th</sup> Annual Meeting in September 2005, the NAFO Fisheries Commission adopted a resolution banning shark finning in all NAFO-managed fisheries that is closely modeled after the measures taken by IATTC and ICCAT discussed below.

#### *Inter-American Tropical Tunas Commission (IATTC)*

17. At its 73rd meeting in June 2005, the IATTC adopted a "Resolution on the Conservation of Sharks Caught in Association with Fisheries in the Eastern Pacific Ocean." This Resolution, co-sponsored by the United States, European Union, Japan and Nicaragua, bans shark finning and mandates the collection of information and advice on stock status of shark species as well as proposals for a comprehensive assessment of shark stocks in the Pacific Ocean. It also requires that all Members establish and implement a National Plan of Action for conservation and management of shark stocks in accordance with the *FAO International Plan of Action for the Conservation and Management of Sharks*; take measures to require that their fishers fully utilize any retained catches of sharks, defined as retention of all parts of the shark excepting head, guts, and skins, to the point of first landing. By May 1 of each year, Members must report data for catches, effort by gear type, landing and trade of sharks by species, where possible, and a progress report on implementation of this Resolution during the previous year.

#### *International Commission for the Conservation of Atlantic Tunas (ICCAT)*

18. In 2004, ICCAT adopted a binding measure requiring full utilization of shark catches and prohibiting vessels in ICCAT fisheries from retaining on board, transshipping, or landing any shark fins that are harvested in contravention of the recommendation. The measure also (1) establishes requirements for data collection on catches of sharks, (2) calls for research on shark nursery areas, and (3) encourages the release of live sharks, especially juveniles.

*Asia Pacific Economic Cooperation Forum (APEC) and the Convention on Migratory Species*

19. The APEC Fisheries Working Group (FWG) sponsored a workshop on shark conservation and management in Mexico on December 3-6, 2002. This workshop produced recommendations on steps to reduce waste of sharks, improve data collection, improve national and regional management, and better implement the FAO IPOA on Sharks. In an effort to assist APEC FWG Economies in implementing these recommendations, the FWG (with NGO and academic assistance) has produced a Technical Manual on Elasmobranch Fisheries Management Techniques. In addition, work on shark conservation and management continues through planned workshops focusing on policy makers and fisheries managers in economies in Latin America. These workshops will seek to assist countries in implementing effective management of their elasmobranch fisheries and facilitate implementation of the FAO International Plan of Action for the Conservation and Management of Sharks.

*Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*

20. At the 11<sup>th</sup> meeting of the Conference of the Parties (CoP11), a proposal to include the great white shark, *Carcharodon carcharias*, in Appendix I was submitted by Australia and the United States of America. This proposal was amended at CoP11 to include the species in Appendix II, but was rejected. Australia subsequently listed this species in Appendix III in October, 2001. At CoP13, Australia and Madagascar proposed to include the great white shark, *Carcharodon carcharias*, in Appendix II, including an annotation stating a zero annual export quota be established. In 2002, CITES listed two shark species in Appendix II-whale shark, *Rhincodon typus*, and basking sharks, *Cetorhinus maximus*. In 2004, CITES adopted a proposal to list the great white shark on Appendix II.

*United Nations General Assembly (UNGA)*

21. On November 24, 2003, the UNGA adopted, by consensus, a Resolution on Oceans and the Law of the Sea: Sustainable Fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments. The Resolution includes important provisions to encourage shark conservation and discourage finning. It calls for: the implementation of the FAO International Plan of Action for Sharks, including through the implementation of NPOAs; ensuring the conservation and management of sharks and their long-term sustainable use, including banning directed shark fisheries conducted solely for the purpose of harvesting shark fins and taking measures for other fisheries to minimize waste and discards from shark catches and encouraging full use of dead sharks; providing assistance to developing States so they can address shark conservation needs; and inviting the FAO to prepare a study of the impact on shark populations of shark catches from directed and non-directed

fisheries, on ecologically related species, and to update its 1999 FAO Technical Paper 389 on shark utilization, marketing and trade.

*International Union for Conservation of Nature and Natural Resources (IUCN)*

22. At its 2004 World Congress in Bangkok, Thailand, IUCN – the World Conservation Union, comprising more than 1000 governmental and non-governmental organizations from over 140 countries, adopted a recommendation urging all States to ban shark finning and require shark fins to be landed attached to their bodies. The United Nations estimates over 100 million sharks are killed each year and studies show shark populations have declined by 90 percent around the world in the last 50 years. The IUCN’s shark specialist group hopes the recommendation will encourage governments and organizations around the world to consider this, and related policies of CITES, when adopting national and regional programs for the conservation and sustainable management of sharks.

**Possible WCPFC Action**

23. Members are invited to consider the development and adoption of a Resolution, in accordance with Article 5, that describes measures to mitigate the mortality of sharks in the Convention Area. Resolutions or Recommendations adopted by NAFO, IATTC, and ICCAT are appended to provide Members with a basis for further consideration of the action to be taken by the Commission.

## Appendix A

### **Resolutions relating to sharks adopted by NAFO, IATTC, and ICCAT.**

Refer to:

For IATTC: <http://www.iattc.org/PDFFiles2/C-05-03-Sharks.pdf>

For NAFO: [www.nafo.org](http://www.nafo.org)

For ICCAT: [<http://www.iccat.int/Documents%5CRecs%5Ccompendiopdf-e%5C2004-10-e.pdf>]