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Agenda Item 19

EXECUTIVE SUMMARY: ASSESSMENT OF BYCATCH IN GILL NET FISHERIES

*(Introductory note prepared by the Secretariat
and Summary by Sextant Technology Ltd. for CMS)*

1. Reproduced below is the Executive Summary of the Assessment of Bycatch in Gill Net Fisheries excerpted from the Report (UNEP/CMS/Inf.10.30) prepared by Sextant Technology Ltd. for CMS.
2. The review was commissioned from Sextant Technology Ltd., after a tender process, in response to recommendations by the Scientific Council, which at its 16th Meeting proposed focusing the review, originally foreseen to cover all fisheries, on gill nets only. The desk study was funded by means of voluntary contributions from Australia and the United Kingdom.
3. With this review, the consultants attempted to carry out a comprehensive analysis of all global commercial and artisanal gill net fisheries to assess the available information on the bycatch of seabirds, marine turtles, sharks and marine mammals, taking into account available data on recent fishing effort and bycatch information to evaluate the level of impact on CMS listed species.
4. They were also to review mitigation methods aimed at reducing mortalities of seabirds, marine turtles, sharks and marine mammals due to interactions with gill net fishing gear, and prepare a comprehensive report assessing their effectiveness, recommending mitigation methods for fisheries and identifying areas for further research.
5. As far as the available data allowed such analysis, the report identifies the importance of bycatch in gill net fisheries as a threat to migratory species and provides an overview of priority fisheries, regions and species for international action through the CMS.

Action requested:

The Conference of the Parties is requested to:

- a. Note the outcomes of the review contained in UNEP/CMS/Inf.10.30;
- b. Adopt the recommendations on gill net bycatch proposed in the draft Resolution on Bycatch of CMS-listed Species in Gill Net Fisheries, contained in UNEP/CMS/Res.10.14; and
- c. Make suggestions for other actions which could be added to the draft Resolution or to relevant programmes of work.

ASSESSMENT OF BYCATCH IN GILL NET FISHERIES

Executive Summary

A study was conducted to assess the impacts of gillnet fishing on species listed by the Convention of Migratory Species (CMS species). Concerns about the impact of incidental mortality in gillnet fishing has been expressed for marine mammals, turtles, seabirds and sharks. Such long-lived and/or top-predator populations have life-history traits that make them inherently vulnerable to additive adult mortality, with population decreases possible with additional fisheries mortality.

The review of fishery information concluded that gill net fisheries are too poorly documented to enable analyses of fishery activity or characterization of the fishing fleets using gill net methods into discrete fishery units. Rather the research used summary gill net data at a universal level. This approach may lead biases in the analysis of impacts of gill net fishing on non-target CMS species, sharks, turtles, marine mammals and seabirds.

Using information about species and gill net fishing distribution, the analysis examined the relative exposure of species to gillnet activity. The information was then weighted by a factor to take into account the vulnerability of populations to extinction (IUCN weighted exposure). Species most exposed to gill net fishing came from all species groups listed under the CMS.

Areas of high diversity (CMS species) were west coast of South America, west coast of Africa from the Cape of Good Hope to Algeria, The Red Sea / Persian Gulf to Arabian Gulf, New Zealand / Tasman Sea, and the Aegean Sea.

The twenty Exclusive Economic Zones of 237 areas, in which the greatest exposure to fishing risk occurs for CMS listed species (weighted by IUCN rank) were: Myanmar, Vietnam, Peru, India, Russia (Pacific), Chile, South Africa, China, Namibia, Greece, Galapagos, Bangladesh, Japan (Main Islands), Western Indonesia, Eastern Indonesia, Norway, Mauritania, United Kingdom, Algeria and Morocco.

The forty species most exposed to risk from gillnet fishing, when weighted by IUCN rank, by taxon group were:

- Seabirds – African Penguin, Peruvian Diving-petrel, Japanese Murrelet, Darkrumped Petrel, Waved Albatross, Socotra Cormorant, Humboldt Penguin, Balearic Shearwater, Pink-footed Shearwater, Audouin's Gull, Short-tailed Albatross.
- Cetaceans & Sirenians – Finless Porpoise, Irrawaddy Dolphin, Dugong, North Pacific Right Whale, Atlantic Hump-backed Dolphin, Northern Right Whale, Bottlenose Dolphin, Heaviside's Dolphin, Fin Whale, Sei Whale, Indo-Pacific Hump-backed Dolphin, Blue Whale, Burmeister Porpoise, Baird's Beaked Whale, Omura Whale.
- Seals and Sea Otters – Mediterranean Monk Seal, Marine Otter, Southern River Otter.
- Sea Turtles – Hawksbill Turtle, Kemp's Ridley Turtle, Leatherback Turtle, Loggerhead Turtle, Green Turtle, Olive Ridley Turtle.
- Sharks – Basking Shark, Longfin Mako Shark, Porbeagle Shark, Whale Shark, Great White Shark.

The main recommendation of the research in relation to mitigation was that fishery- and species-specific solutions need to be examined and prioritized. The study provides some guidance as to which areas and which species interactions are most likely to benefit from further monitoring and management. No single mitigation method was found to be effective at reducing bycatch of CMS species across taxon groups. Area and seasonal closures may come near to resolving all species issues, but are unlikely to be a feasible option to implement, given the high reliance of communities on fish from gill net fishing as a food source. Research to define specific points of interaction between CMS species and particular fisheries is urgently needed.

There is a strong need for improved observer data, better records of bycaught species with a particular focus in the areas of high overlap of at-risk species and a high density of fishing effort. The next step is for further, finer-scaled research to address bycatch issues in those areas, and for data to assess population and behavioural factors for the species identified as highest risk in this analysis.