Guidelines to Reduce Sea Turtle Mortality in Fishing Operations

Preamble

The FAO Code of Conduct for Responsible Fisheries calls for sustainable use of aquatic ecosystems and requires that fishing be conducted with due regard for the environment. Some sea turtle stocks are seriously impacted by fishing and require urgent attention. Because of the critical status of these stocks a broad suite of measures is recommended that includes reduction of fishery-related mortality in addition to other conservation measures.

Because of the concern regarding the status of sea turtles and the possible negative effects of fishing on these populations, the twenty-fifth Session of the FAO Committee on Fisheries (2003) raised the question of sea turtle conservation and interaction with fishing operations and requested that a Technical Consultation be held on the subject matter to consider, inter alia, the preparation of guidelines to reduce sea turtle mortality in fishing operations. These guidelines respond to the request of the Committee on Fisheries (COFI) and have been developed on the basis of the report of the Expert Consultation, held in Rome in March 2004.

These guidelines are intended to serve as input to the preparation of FAO Technical Guidelines as well as to offer guidance to the preparation of national or multilateral fisheries management activities and other measures allowing for the conservation and management of sea turtles. These guidelines are voluntary in nature and non-binding. They apply to those marine areas and fisheries where interactions between fishing operations and sea turtles occur or are suspected to occur. They are global in scope but in their implementation national, subregional and regional diversity, including cultural and socio-economic differences, should be taken into account.

These guidelines are directed towards members and non-members of FAO, fishing entities, subregional, regional and global organizations, whether governmental or non-governmental concerned with fisheries management and sustainable use of aquatic ecosystems.

All activities associated with these guidelines should be undertaken with the participation and, where possible, cooperation and engagement of fishing industries, fishing communities and other affected stakeholders.

Implementation of the guidelines should be consistent with the Code of Conduct for Responsible Fisheries as well as with the Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem with regard to ecosystem considerations and based on the use of best available science.

1. Fishing operations

A. Appropriate handling and release.
In order to reduce injury and improve chances of survival:

(i) Requirements for appropriate handling, including resuscitation or prompt release of all bycaught or incidentally caught (hooked or entangled) sea turtles.

(ii) Retention and use of necessary equipment for appropriate release of bycaught or incidentally caught sea turtles.

B. Coastal trawl

(i) In coastal shrimp trawl fisheries, promote the use of turtle excluder devices (TEDs) or other measures that are comparable in effectiveness in reducing sea turtle bycatch or incidental catch and mortality.

(ii) In other coastal trawl fisheries, collect data to identify sea turtle interactions and conduct where needed research on possible measures to reduce sea turtle bycatch or incidental catch and mortality.

(iii) Implementation of successful methodologies developed as a result of B(ii).

C. Purse seine

(i) Avoid encirclement of sea turtles to the extent practical.

(ii) If encircled or entangled, take all possible measures to safely release sea turtles.

(iii) For fish aggregating devices (FADs) that may entangle sea turtles, take necessary measures to monitor FADs and release entangled sea turtles, and recover these FADs when not in use.

(iv) Conduct research and development of modified FADs to reduce and eliminate entanglement.

(v) Implementation of successful methodologies developed as a result of C(iv).

D. Longline

(i) Development and implementation of appropriate combinations of hook design, type of bait, depth, gear specifications and fishing practices in order to minimize bycatch or incidental catch and mortality of sea turtles.

Recent research has shown positive results for:
- Use of large circle hooks with no greater than a 10 degree offset, combined with whole fish bait. These measures have shown to be effective in reducing sea turtle interactions and mortality;

- Arrangement of gear configuration and setting so that hooks remain active only at depths beyond the range of sea turtle interaction; and

- Retrieval of longline gear earlier in the day and reducing soak time of hooks.

(ii) Research should include consideration of the impact of various mitigation measures on sea turtles, target species and other bycaught or incidentally caught species, such as sharks and seabirds.

(iii) Retention and use of necessary equipment for appropriate release of bycaught and incidentally caught sea turtles, including de-hooking, line cutting tools and scoop nets.

E. Other fisheries

(i) Assessment and monitoring of sea turtle bycatch or incidental catch and mortality in relevant fishing operations.

(ii) Research and development of necessary measures for reducing bycatch or incidental catch or to control mortality in other fisheries with a priority on reducing bycatch or incidental catch in gillnet fisheries.

(iii) In other setnet fisheries, collect data to identify sea turtle interactions and conduct when needed research on possible measures to reduce sea turtle bycatch or incidental catch and mortality.

(iv) Implementation of successful methodologies developed as a result of E (ii) and (iii).

F. Other measures as appropriate for all fishing practices

(i) Spatial and temporal control of fishing, especially in locations and during periods of high concentration of sea turtles.

(ii) Effort management control especially if this is required for the conservation and management of target species or group of target species.

(iii) Development and implementation, to the extent possible, of net retention and recycling schemes to minimize the disposal of fishing gear and marine debris at sea, and to facilitate its retrieval where possible.

2. Research, monitoring and sharing of information

A. Collection of information and data, and research
(i) Collection of data and information on sea turtle interactions in all fisheries, directly or through relevant RFBs, regional sea turtle arrangements or other mechanisms.

(ii) Development of observer programmes in the fisheries that may have impacts on sea turtles where such programs are economically and practically feasible. In some cases financial and technical support might be required.

(iii) Joint research with other states and/or the FAO and relevant RFBs.

(iv) Research on survival possibilities of released sea turtles and on areas and periods with high incidental catches.

(v) Research on socio-economic impacts of sea turtle conservation and management measures on fishers and fisheries industries and ways to improve communication.

(vi) Use of traditional knowledge of fishing communities about sea turtle conservation and management.

B. Information exchange

(i) Sharing and dissemination of data and research results, directly or through relevant RFBs, regional sea turtle arrangements or other mechanisms.

(ii) Cooperation to standardize data collection and research methodology, such as fishing gear and effort terminology, database development, estimation of sea turtle interaction rates, and time and area classification.

C. Review of the effectiveness of measures

(i) Continuous assessment of the effectiveness of measures taken in accordance with these guidelines.

(ii) Review of the implementation and improvement of measures stipulated above.

3. Ensuring policy consistency

A. Maintaining consistency in management and conservation policy at national level, among relevant government agencies, including through inter-agency consultations, as well as at regional level.

B. Maintaining consistency and seeking harmonization of sea turtle management and conservation-related legislation at national, sub-regional and regional level.

4. Education and training
A. Preparation and distribution of information materials such as brochures, manuals, pamphlets and laminated instruction cards.

B. Organization of seminars for fishers and fisheries industries on:
- Nature of the sea turtle-fishery interaction problem
- Need to take mitigation measures
- Sea turtles species identification
- Appropriate handling and treatment of bycaught or incidentally caught sea turtles
- Equipment to facilitate rapid and safe release
- Impacts of their operations on sea turtles
- Degree to which the measures that are requested or required to adopt will contribute to the conservation, management and recovery of sea turtle population.
- Impacts of mitigation measures on profitability and success of fishing operations
- Appropriate disposal of used fishing gear

C. Promotion of awareness of the general public of sea turtle conservation and management issues, by government as well as other organizations

5. Capacity building

A. Financial and technical support for implementation of these guidelines in developing countries.

B. Cooperation in research activities such as on status of sea turtle incidental catch in coastal and high seas fisheries and research at foraging, mating and nesting areas.

C. Establishment of a voluntary support fund.

D. Facilitation of technology transfer.

6. Socio-economic and cultural considerations

A. Taking into account:

(i) socio-economic aspects in implementing sea turtle conservation and management measures.

(ii) cultural aspects of sea turtles interactions in fisheries as well as integration of cultural norms in sea turtle conservation and management efforts.

(iii) sea turtle conservation and management benefits to fishing and coastal communities, with particular reference to small-scale and artisanal fisheries.

B. Promotion of the active participation and, where possible, cooperation and engagement of fishing industries, fishing communities and other affected stakeholders.
C. Giving sufficient importance to participatory research and building upon indigenous and traditional knowledge of fisherfolk.

7. Reporting

Reporting on the progress of implementation of these guidelines as part of Members’ biennial reporting to FAO on the Code of Conduct for Responsible Fisheries and, as appropriate, and voluntarily, to other relevant bodies such as regional sea turtle conservation and management arrangements.

8. Consideration of other aspects of sea turtle conservation and management

Fishers, research institutions, management authorities and other interested parties dealing with fisheries conservation and management should collaborate with relevant conservation and management bodies, at national, sub-regional and regional level, in the following subject matters:

A. Collection and sharing of information on sea turtles relative to:

(i) Biology and ecology (population dynamics, stock identification, behaviour, diet selection, habitats, breeding, nesting, foraging, migration patterns/areas, nursery grounds, etc).

(ii) Sources of mortality other than fisheries.

(iii) Status of sea turtle populations, including human-related threats.

B. Improvement and development of conservation and management measures applied throughout the sea turtle life cycle (habitat/nesting beach protection, enhancement of sea turtle populations).

C. Promotion, as appropriate, of participation in regional sea turtle conservation and management arrangements with a view to cooperate on sea turtle conservation and management.