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**PROPOSALS FOR THE SAFE RELEASE OF BYCATCHES OF SEA
TURTLES AND MANTA RAYS**

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The survival of some bycatch species in tuna fisheries can be improved by the development and use of proper release techniques. This has been amply demonstrated by the tuna purse-seine fishermen in the eastern Pacific Ocean (EPO), who dramatically reduced the mortality of dolphins by means of net modifications and the backdown maneuver, which facilitate the release of dolphins from the nets. The methods proposed below reflect the current state of knowledge regarding means of reducing the mortality and injury of sea turtles caught in longline fisheries and mobulid rays (*i.e.*, manta and devil rays) encircled in purse seines.

1. SEA TURTLES IN LONGLINE SETS

IATTC [Resolution C-07-03](#), adopted in 2007, recommends that IATTC Members require longline fishers to “carry and, when sea turtle interactions occur, employ the necessary equipment (*e.g.* de-hookers, line cutters, and scoop nets) for the prompt release of incidentally caught sea turtles”.

Subsequently, FAO and other regional fisheries management organizations (RFMOs) have adopted and refined more detailed measures for safely handling and releasing sea turtles (FAO [Guidelines to reduce sea turtle mortality in fishing operations](#); ICCAT Recommendations [10-09](#) and [13-11](#); IOTC [Resolution 12-04](#); WCPFC [CMM 2008-03](#) and [SC8-2012/EB-IP-12](#)).

The IATTC staff presents the additional guidelines for tuna longline fisheries outlined below for consideration by the Commission. They will enhance the guidance provided to fishermen for the safe release of sea turtles and will harmonize IATTC guidelines with those of the other tuna RFMOs.

1. Every longline vessel operating in an area where sea turtles may be hooked or entangled should carry a dipnet to safely lift sea turtles aboard the vessel, a line cutter that is long enough to reach the turtle without lifting it from the water, dehookers (both inverted-V- and pigtail-shaped designs), a bolt cutter capable of cutting the hooks, and equipment capable of safely keeping the sea turtle’s mouth open.
2. Sea turtles should not be hauled from the water by a fishing line, regardless of whether the animal is hooked or entangled in the line. If circumstances dictate that a turtle must be removed from the water, an appropriate basket lift or dipnet should be used. If a hooked sea turtle cannot be safely removed from the water and must be released with the hook in place, the associated line should be cut as close as possible to the hook without inflicting additional unnecessary harm on the turtle.
3. If sea turtles are brought aboard the vessel, fishermen should know how to assess the condition of the turtles to determine if they are injured, comatose or otherwise compromised. Injured or unresponsive turtles should be kept on board, to the extent practicable, in a manner consistent with maximizing their survival prior to release. Recommendations for specific situations are described in detail in the FAO [Guidelines](#), and educational materials are available on the IATTC [website](#).

4. If a sea turtle has swallowed a fishing hook, the hook should be left in place and the line cut as close to the hook as possible without inflicting additional unnecessary harm on the turtle. Attempting to remove a swallowed hook typically results in severe injury and decreases the turtle's chances of survival.

Adequate education and training of fishermen regarding safe handling is an important factor in increasing the survival of turtles interacting with longline gear. Videos and other educational materials to aid fishermen in their decisions on when and how to dehook or disentangle a turtle are available on the IATTC [website](#), and it is highly recommended that they be incorporated into the training programs for captains and crews of longliners. Fishermen should be familiar with the methods illustrated in these materials, and should also be able to identify leatherback, loggerhead, and hawksbill turtles, and be aware of the risk of extinction facing these species.

2. LARGE RAYS IN PURSE-SEINE SETS

Five species of mobulid rays are caught in tuna purse-seine sets in the EPO: the giant manta ray (*Manta birostris*), and the Chilean (*Mobula tarapacana*), Munk's (*M. munkiana*), spinetail (*M. japonica*), and smoothtail (*M. thurstoni*) devil rays. These species have slow population growth rates, and the IUCN Red Book categorizes them as either Near Threatened, Vulnerable, or Data Deficient. All can grow very large; giant manta rays can reach 9 m in width and up to 1,350 kg in weight. Because of their conservation status and their large size, they must be handled carefully to avoid harm to both the vessel crew and the animal.

The IATTC currently does not provide any guidance to fishermen for safely releasing large rays caught in purse-seine sets, which can be very difficult due to their large size and vulnerability to injury,. However, there are three practices that should always be avoided, as they typically result in the death or severe injury of the animal: “[gaffing](#)” (using hooked poles to move the animals), lifting rays by their gill slits, and punching holes through their bodies in order to pass hoisting cables through.

While small rays may be released by hand if handled carefully and safely, large rays should be brailed out of the net, as recommended by the [WCPFC](#) (Poison *et al.* 2012, [Good Practices to Reduce the Mortality of Sharks and Rays Caught Incidentally by the Tropical Tuna Purse Seiners](#)). Rays that are brought up on deck should be returned to the water as soon as possible, preferably using a ramp from the deck to an opening on the side of the vessel, or lowered with a large, mesh net.