

## RFMO bycatch mitigation and monitoring

The following is a summary of the major mitigation and monitoring measures adopted by the various tuna RFMOs.

### CCSBT

**Sea birds, sharks and turtles.** With only one exception, all CCSBT Members and Cooperating Non-Members are also Parties or Cooperating Parties to IOTC, WCPFC and/or ICCAT. As a consequence, any binding bycatch mitigation measure of these RFMOs is in practice binding on the CCSBT Member/Cooperating Non-Member when fishing within that Convention Area. Additionally, the non-binding Recommendation to Mitigate the Impact on Ecologically Related Species - ERS - of Fishing for Southern Bluefin Tuna (updated 2011) strongly encourages CCSBT members to comply with mitigation measures on sea birds, sharks and sea turtles adopted by ICCAT, IOTC and WCPFC. The Resolution to align CCSBT's ERS measures with those of other tuna RFMOs (adopted in 2018 and revised in 2019) lists all ERS Measures in place.

**Sea birds.** Mandatory use of Tori poles is required by all members in all southern bluefin longline fisheries South of 30°S.

**Monitoring and mitigation research.** CCSBT members are required to exchange information concerning new or refined techniques to reduce incidental catch of seabirds and cooperate in developing and assessing the effectiveness of such techniques. Most CCSBT Members and Cooperating Non-Members have achieved 10% scientific observer coverage (in catch and effort) for their fisheries; the 10% level is a non-binding target.

### IATTC

**General.** Resolution 04-05 requires the release of non-target species caught in purse seine fisheries.

**Sea Turtles.** Resolution C-19-04 requires fishermen to release sea turtles sighted in purse seine nets or accidentally caught in longlines following the handling and release guidelines detailed in the resolution. CPC are also required to report annually information on sea turtle interactions. Resolution C-19-01 requires the use of non-entangling FADs in purse seine fisheries.

**Sharks.** Resolution C-16-04 discourages shark retention and establishes a limit in the amount of shark fins that can be landed, relative to the total weight of shark bodies that must be retained. This ratio of fin-to-body-weight acts as a disincentive to target sharks because the shark carcasses occupy hold space on the vessel and have little market value. The Resolution also mandates reporting of shark catches to IATTC. Resolution C-11-10 prohibits the retention of oceanic whitetip sharks and requires the release of specimens that are alive when caught. Resolution C-19-01 requires the use of non-entangling FADs in purse seine fisheries. Resolution C-19-06 prohibits deliberate setting on whale sharks. C-16-05 calls for a workplan for completing full stock assessments of silky and hammerhead sharks, and requires catch data collection for those species. C-19-05 defines other shark conservation measures with an emphasis on silky shark.

**Rays.** Resolution C-15-04 requires CPCs to prohibit retaining onboard, transshipping, landing, storing, selling, or offering for sale any part or whole carcass of Mobulid rays and to release all Mobulid rays alive wherever

possible.

**Sea birds.** The IATTC Resolution C-11-02 requires longline vessels operating in high latitudes (North of 23°N, South of 30°S and around the Galapagos Islands) to employ at least two sea bird mitigation techniques such as night setting or weighted branch lines.

**Dolphins.** The AIDCP establishes total per-stock and per-year limits on incidental dolphin mortality (DMLs), with a structured protocol for allocating and keeping track of DMLs (using observers). A vessel must stop setting on dolphin associations for the rest of the year once its DML has been reached.

**Monitoring and mitigation research.** Through the Agreement on the International Dolphin Conservation Program (AIDCP), there is 100% observer coverage on all large purse seiners (> 363 tons in carrying capacity) and lower coverage on smaller vessels. This level of observer coverage, coupled with the information from fishing logbooks, allows the IATTC to maintain a very complete accounting of the bycatch taken in purse seine fisheries in the EPO. Several IATTC Recommendations and Resolutions encourage research that could make FAD-based purse seining and longlining more species-selective. These are non-binding, however, and depend on the IATTC member nations making the necessary resources available. ISSF has a research program for bycatch mitigation in purse seine fisheries, and IATTC scientists are taking part in this program (IATTC, 2010). Resolution C-11-08 now requires 5% scientific observer coverage for large longliners.

NOTE: Major fleets such as Japan that use longlining in the EPO reported catches of non-target species to IATTC (particularly sharks and billfishes; Matsumoto and Bayliff, 2008), and in this sense they were relatively better than longline fleets elsewhere. However, it is apparent that this level of monitoring and reporting has not been maintained.

### ICCAT

**General.** Recommendation 19-02 requires that all FADs deployed are non-entangling and, as of January 2021, constructed from biodegradable materials with the exception of FAD tracking buoys.

**Sharks.** Recommendation 04-10 established a limit on the ratio of fin weight to total shark weight that can be retained onboard a fishing vessel, and encouraged the release of live sharks in fisheries that do not target sharks. Recommendation 07-06 limits mortality on porbeagle and North Atlantic shortfin mako (SMA). Recommendation 14-06 aims to improve data collection and reporting for SMA. Recommendation 16-12 (amended by Rec. 19-07) and Rec. 19-08 establish limits on catches, aims to improve data collection and encourages scientific research on North Atlantic and South Atlantic blue sharks, respectively. Recommendation 15-06 prompts CPCs to promptly release unharmed and to ensure the collection of Task I and Task II data for porbeagle sharks.

Recommendations 09-07, 10-07, 10-08 and 11-08 prohibit the retention on board of bigeye thresher, oceanic white tip, several species of hammerhead sharks, and silky sharks. All of these measures have a reporting requirement associated with them (Recommendation 12-05 requires all parties in 2013 to report on their compliance with Recs. 04-10, 07-06, 09-07, 10-08, 10-07, 11-08, and 11-15). Recommendation 10-06 prohibits the retention of shortfin mako onboard vessels flagged to countries that do not report catches for this species. Recs. 17-08 and 19-06 require the release of SMA sharks, but lists a series of exemptions. Recommendation 18-06 prompts CPCs to submit a check sheet with details of their implementation of and compliance with shark conservation and management measures.

**Sea Turtles.** Recommendations 10-09 and 13-11 set up reporting requirements for sea turtle interactions and mandates its scientific committee to assess, by 2014, the impact of tuna fisheries on sea turtle populations. The measure has specific requirements for longline operators to be trained on appropriate handling and release of live turtles so as to maximize their survival.

**Sea birds.** Recommendation 07-07 required longliners operating south of 20°S to use at least two of several mitigation measures such as weighted branch lines or tori (bird-scaring) lines. The measure also required ICCAT members to collect and report data on interactions between fisheries and sea birds. Recommendation 11-09 strengthened the mitigation measures in 07-07, especially for longliners fishing south of 25°S, and in the Mediterranean.

**Other finfish.** Longliners and other fisheries also take Atlantic blue and white marlin as bycatch, both of which are thought to be overfished. ICCAT adopted Recommendation 06-09 (now Rec. 19-05), which includes a rebuilding plan with catch limits by country for blue and white Marlins and minimum standards for safe handling and live release procedures. Rec. 18-05 requires that all CPCs submit a check sheet with details of their implementation of and compliance with billfish conservation and management measures.

**Monitoring and mitigation research.** ICCAT has specific requirements for reporting data on sharks, sea turtles and sea birds. For the most part these are not complied with fully, but the situation is improving over time. Recommendation 10-10 requires members to have at least 5% observer coverage (for vessels over 15 m) in their national observer programs for longline, purse seine and pole-and-line fisheries. Recommendation 11-10 requires CPCs to collect and report data on bycatch and discards either through observer programs and logbooks (for vessels to which Rec. 10-10 applies) or via alternative means (for artisanal and semi-industrial fisheries). Recommendation 11-15 establishes penalties for CPCs that do not report annual catch data (including zero catches) by prohibiting them from retaining such species in the following year.

## IOTC

**Sharks.** The IOTC has adopted measures that address shark conservation concerns. Resolution 17/05 established that CPCs shall take the necessary measures to require that their fishermen fully utilize their entire catches of sharks, with the exception of species prohibited by the IOTC. Resolution 18/02 asks CPCs to

ensure that effective management measures are in place to support the sustainable exploitation of blue shark by improving data reporting and scientific research.

Resolution 12/09 prohibits the retention on board of all species of thresher sharks, a group that is thought to be particularly vulnerable due to its low productivity. In addition, Resolution 12/09 requires data reporting to IOTC, especially for fisheries targeting sharks.

Resolution 13/05 prohibits intentional purse seine setting on tunas associated with whale sharks. Resolution 13/06 prohibits the retention of oceanic whitetip sharks. Resolution 19/02 calls for the use of non-entangling FADs in purse seine fisheries and a transition to biodegradable FADs by 2022.

**Rays.** Resolution 19/03 prohibits intentional setting on mobulid rays as well as retaining onboard, transshipping, landing or storing any part or whole carcass. Live release handling procedures are detailed in the resolution.

**Sea Turtles.** Resolution 12/04 (which supersedes various prior measures) requires IOTC members to mitigate sea turtle mortality and to provide data on turtle bycatch to the SC. The measure has specific requirements for longline and purse seine operators to facilitate the appropriate handling and release of live turtles. Resolution 19/02 calls for the use of non-entangling FADs in purse seine fisheries and a transition to biodegradable FADs by 2022.

**Sea birds.** Resolution 12/06 (which supersedes various prior measures) requires longliners operating south of 25°S to use at least two of several mitigation measures such as weighted branch lines or tori (bird-scaring) lines. The measure also requires IOTC members to provide data on interactions between fisheries and sea birds to the SC.

**Cetaceans.** Resolution 13/02 prohibits deliberate purse seine sets around cetaceans and requires reporting of interactions.

**Other finfish.** Resolution 18/05 requires IOTC members to ensure that the level of catches of striped marlin, black marlin, blue marlin and indo-pacific sailfish do not exceed their MSY level (or proxy). It also requires the release of specimens of those species if brought alive on board.

**Monitoring and mitigation research.** Resolution 10/04 established a regional observer program that requires at least 5% coverage for vessels over 24 m, and for smaller vessels operating in the high seas. Resolution 08/04 requires longliners greater than 24 m overall, as well as smaller longliners operating in the high seas, to have electronic logbooks and record and report data on target and non-target species to the SC. Monitoring of bycatches in the gillnet fisheries is extremely poor.

## WCPFC

**Sea Turtles.** CMM 2018-04 instructs WCPFC members to implement the FAO guidelines for reducing sea turtle mortality and ensure the safe handling of all captured sea turtles. It requires longline operators to use line cutters and de-hookers to handle and promptly release sea turtles caught or entangled. The measure also requires purse seine operators to avoid setting on turtles if possible and to disentangle/release them when caught alive.

**Sharks.** CMM 2019-04 on conservation and management measures for sharks replaces all previous shark related CMMs (2010-07, 2011-04, 2012-04, 2013-

08 and 2014-05) and becomes effective in November 2020. This CMM covers measures such as full utilization of sharks and prohibition of finning, data reporting of shark retentions and releases by gear type and species, minimizing bycatch and practicing safe release (following the adopted Best Handling Practices for the Safe Release of Sharks), prohibition of deliberate purse seine sets around whale sharks, requirement to report interactions and safe release following the WCPFC Guidelines for the Safe Release of Encircled Whale Sharks. CMM 2019-05 (effective in January 2021) prohibits targeted fishing or intentional setting on mobulid rays, or the retention, transshipping or landing of any part of whole carcass. It includes best handling practices for the safe release of mantas and mobulids.

**Sea birds.** CMM 2018-03 sets specific requirements for longliners operating north of 23°N, between 25-30°S or south of 30°S on the use of seabird bycatch mitigation measures such as weighted branch lines, tori (bird-scaring) lines or hook-shielding devices. The measure also encourages mitigation research to be conducted by WCPFC members.

**Cetaceans.** CMM-2011-03 prohibits deliberate purse seine sets around cetaceans and requires reporting of interactions.

**Other finfish.** Striped marlin are also caught as bycatch in longline fisheries; this species is of more concern because it has been declining in abundance. The WCPFC adopted CMM 2010-01 which sets a cap on the catch of striped marlin for each member relative to historical levels.

**Monitoring and mitigation research.** With the exception of sharks under CMM 2009-04, reporting of bycatch species is not mandatory at WCPFC, so much of the information available comes from observer programs. The WCPFC has a Regional Observer Program that, since 2010, is intended to have 100% coverage on purse seine vessels that fish on the high seas or between two or more EEZs. As these data become available and are