ISSF INTERNATIONAL SEAFOOD SUSTAINABILITY FOUNDATION

ISSF Technical Report 2017-08

MANAGEMENT OF TUNA STOCKS AND FISHERIES. NOV. 2017

ISSF / **November 2017, Version 7.0**

Suggested citation:
ISSF. 2017 Management of tuna stocks and fisheries. Nov. 2017 (Version 7). ISSF Technical Report 2017-08. International Seafood Sustainability Foundation, Washington, D.C., USA

Topic Categories: RFMOs, Tropical Tuna

Abstract

This document summarizes the management frameworks that are in place for tuna stocks and fisheries, with emphasis on intergovernmental arrangements known as Regional Fishery Management Organizations (RFMOs). The document also summarizes the main measures adopted by RFMOs in terms of Monitoring, Control and Surveillance. (Summaries of measures adopted by RFMOs for tuna stock conservation and bycatch mitigation are located in the ISSF Tuna Stock Status Update corresponding to each of the stocks (ISSF, 2017)).

November 2017

The research reported in the present Technical Report was funded by the International Seafood Sustainability Foundation (ISSF) and conducted independently by the author(s). The report and its results, professional opinions, and conclusions are solely the work of the author(s). There are no contractual obligations between ISSF and the author(s) that might be used to influence the report's results, professional opinions, and conclusions.

ISSF is a global coalition of scientists, the tuna industry and World Wildlife Fund (WWF) — the world's leading conservation organization — promoting science-based initiatives for the long-term conservation and sustainable use of tuna stocks, reducing bycatch and promoting ecosystem health. ISSF receives financial support from charitable foundations and industry sources.

Table of Contents

Executive Summary

Effective management of the tunas and billfishes is complicated by the fact that they are great wanderers, and during the course of their travels pass through waters under the jurisdiction of many different nations as well as on the high seas; therefore, no nation can unilaterally manage tuna in an effective manner. International law calls on states to cooperate, directly or through appropriate international organizations, to ensure the conservation of highly-migratory species.

Currently, there are five regional fisheries management organizations (RFMOs) responsible for tuna fisheries. These bodies have as an objective the maintenance of the populations at or above levels of abundance that can support the maximum sustainable yield (MSY) on a sustained basis.

Some of the most common challenges that RFMOs face when managing tuna stocks are: regulating fishing capacity, the allocation of fishing rights or fishing possibilities, the decision-making process when adopting conservation measures or allocating fishing rights, implementing efficient compliance mechanisms, obtaining financial resources, managing bycatch and obtaining operational data (Section 4).

The appendices in this document provide additional information. **Appendix 1** lists the members of each RFMO and whether or not they are also parties to The United Nations Fish Stocks Agreement (UNFSA) and the Port States Measures Agreement (PSMA). **Appendix 2** summarizes the main Monitoring, Control and Surveillance (MCS) measures adopted by the various RFMOs.

Key Points:

1. **Tuna are highly migratory species that are managed by intergovernmental arrangements known as Regional Fishery Management Organizations (RFMOs).**
2. **RFMOs face various challenges associated to the management of tuna stocks**
3. **Summary of tuna RFMO members and which are members to the UNFSA**
4. **Summary of main MCS measures adopted by tuna RMFOs**

1. Introduction

Tunas are like any other renewable resource: the rate at which they are harvested affects their abundance and their ability to sustain various levels of exploitation. As fishing pressure on tuna increases, it is essential that mechanisms be implemented to maintain the degree of exploitation at levels that will ensure that the populations of tunas and other large predators are maintained at desired levels of abundance. However, effective management of the tunas and billfishes is complicated by the fact that they are great wanderers, and during the course of their travels pass through waters under the jurisdiction of many different nations as well as on the high seas; therefore, no nation can unilaterally manage tuna in an effective manner. International law calls on states to cooperate, directly or through appropriate international organizations, to ensure the conservation of highly-migratory species[1].

Currently, there are five regional fisheries management organizations (RFMOs) responsible for tuna fisheries: the Inter-American Tropical Tuna Commission (IATTC), the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Indian Ocean Tuna Commission (IOTC), the Western and Central Pacific Fisheries Commission (WCPFC), and the Commission for the Conservation of Southern Bluefin Tuna (CCSBT). These bodies have as an objective the maintenance of the populations at or above levels of abundance that can support the maximum sustainable yield (MSY) on a sustained basis. Section 2 of this document provides more information about these tuna RFMOs.

The UN Fish Stocks Agreement[2] (UNFSA) provides further arrangements for countries to cooperate in the management of highly migratory stocks for the effective implementation of the relevant provisions of the Law of the Sea. But, not all RFMO members are parties to this Agreement, so all its principles have not been implemented through all RFMOs. Nevertheless, UNFSA has prompted improvements in all tuna RFMOs through the adoption of some of the arrangements that it outlines.

The main purpose of the Port States Measures Agreement (PSMA)[3] is to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing through the implementation of robust port State measures. The Agreement envisages that parties, in their capacities as port States, will apply the Agreement in an effective manner to foreign vessels when seeking entry to ports or while they are in port. The application of the measures set out in the Agreement will, inter alia, contribute to harmonized port State measures, enhanced regional and international cooperation and block the flow of IUU-caught fish into national and international markets.

[1] Article 64 of the United Nations Convention on the Law of the Sea.

[2] Agreement for the Implementation of the Provisions of the United Nations Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

[3] http://www.fao.org/fishery/psm/agreement/en

The global catch of albacore, bigeye, bluefin, skipjack and yellowfin in 2015 was 4.8 million tonnes, a 4% decrease from 2014. Catches increased steadily until the early 2000s and although they appeared to have stabilized since then, annual catches have kept increasing in recent years (**Figure 1**). Ranked by species (using the 2011-2015 average = 4,702,911 tonnes), the majority of the catch is skipjack (57%), followed by yellowfin (28%), bigeye (9%), albacore (5%) and bluefin (1%). In terms of fishing gear, 64% of the catch is made by purse seining, followed by longline (12%), pole-and-line (9%), gillnets (4%) and miscellaneous gears (11%).

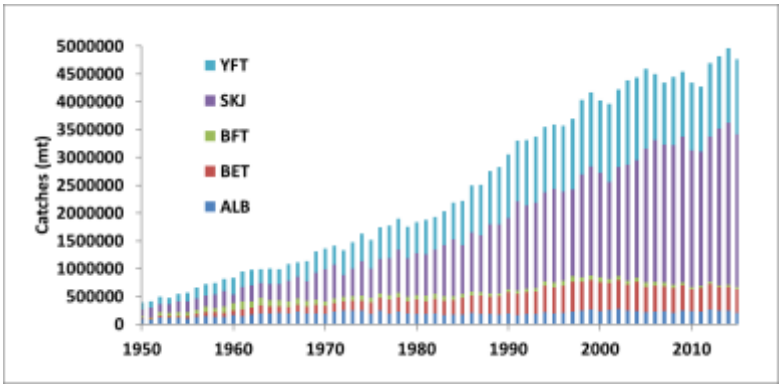

Figure 1. Global catches of the principal tuna species, 1950-2015.

2. RFMOs

Brief descriptions are provided below for each of the five tuna RFMOs. More detailed information can be obtained from the websites provided.

Each of the RFMOs may adopt conservation and management measures to ensure that the tuna stocks are maintained at levels consistent with each Convention, or to restore the stocks to those levels. In addition, the RFMOs may adopt measures to address ecosystem considerations, for example through bycatch mitigation. These measures are not summarized in this document, as they are part of the ISSF Stock Status Report (ISSF, 2017) corresponding to each of the stocks.

The following appendices provide additional information:

Appendix 1 lists the members of each RFMO and whether or not they are also parties to UNFSA and PSMA.

Appendix 2 summarizes the main Monitoring, Control and Surveillance (MCS) measures adopted by the various RFMOs.

2.1. Inter-American Tropical Tuna Commission

Established:

1950.
Note: The "Antigua Convention" (for the Strengthening of the Inter-American Tropical Tuna Commission Established by the 1949 Convention) entered into force in 2010.

Headquarters:

La Jolla, California, USA.

Area of competence:

Pacific Ocean waters East of 150° (EPO).

Convention Objective:

Art. II: "... ensure the long-term conservation and sustainable use of the fish stocks covered by this Convention, in accordance with the relevant rules of international law."

Article VII: "... adopt measures ... to maintain or restore the populations of harvested species at levels of abundance which can produce the maximum sustainable yield."

NOTE: The IATTC also provides the Secretariat for the International Dolphin Conservation Program (AIDCP), which aims to reduce dolphin mortality in fisheries that target tuna schools associated with dolphins (primarily yellowfin); to seek ecologically sound means of capturing large yellowfin tunas not in association with dolphins; and to ensure the long-term sustainability of the tuna stocks in the Agreement Area, as well as that of the marine resources related to this fishery.

Ecosystems / Precautionary Approach:

The Commission may adopt conservation and management measures for species belonging to the same ecosystem and that are affected by fishing for the target stocks, with the objective that their reproduction does not become seriously threatened. In addition, the Commission is required to apply the Precautionary Approach (as described by UNFSA) in adopting conservation and management measures. See also AIDCP objectives referred to above.

Tuna stocks managed (reported 2016 catches):

EPO Yellowfin (252,000 t)

EPO Bigeye (94,100 t)

EPO Skipjack (338,200 t)

North Pacific Albacore (2015 catches. Also managed by WCPFC) (19,200 t)

South Pacific Albacore (2015 catches. Managed by WCPFC) (25,500 t)

Pacific Bluefin (also managed by WCPFC) (3,500)

Principal fishing gears:

Purse Seining (86%)

Long lining (11%)

Other species subject to conservation management measures:

Dolphins, sharks, rays, sea turtles, sea birds.

Number of Members:

21

Number of Cooperating non-Parties:

5

New Members:

Under the Antigua Convention, coastal states can become members; other states would have to be invited to accede by the existing Parties.

Web Site:

http://www.iattc.org

Scientific Advice:

IATTC has a relatively large number of staff in charge of collecting fisheries data, conducting biological studies and conducting stock assessments. It is the Director's responsibility to make recommendations for management actions based on these assessments. The stock assessment results and draft recommendations are supposed to be reviewed by a Scientific Advisory Committee (SAC) composed of representatives from each Commission member. The SAC may suggest changes before the scientific advice is finalized by the Director for presentation to the Commission members. Some of the data collected or compiled by the staff are very detailed, particularly for purse seine fisheries. Data for other fisheries, such as longline, tend to be reported by Commission members in an aggregated form.

Decision-making:

The IATTC Convention requires that decisions be adopted by consensus (consensus means without a vote and without stated objections). In some cases (such as allocation of catches, effort or capacity), consensus has to be by all members ("unanimity"); in other cases, consensus is required of the members present at a meeting (two-thirds of the members are needed in order for a meeting to have quorum). Decisions that are binding to members are called "Resolutions".

2.2. Western and Central Pacific Fisheries Commission (WCPFC)

Established:

2004.

Headquarters:

Kolonia, Pohnpei State, Federated States of Micronesia.

Area of competence:

Approximately, Pacific Ocean waters West of 150°W to the North of 4°S and waters West of 130°W to the South of 4°S (WPO).

Convention Objective:

Article 2: "... the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 Convention and the Agreement [The Law of the Sea and UNFSA]."

Article 5: "... ensure that such measures are based on the best scientific evidence available and are designed to maintain or restore stocks at levels capable of producing maximum sustainable yield, as qualified by relevant environmental and economic factors, including the special requirements of developing States in the Convention Area, particularly small island developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global."

Ecosystems / Precautionary Approach:

The Commission is required to assess the impacts of fishing, other human activities and environmental factors on non-target species, and species belonging to the same ecosystem or dependent upon or associated with the target stocks. In addition, there is an explicit requirement to apply the Precautionary Approach (as described by UNFSA) in adopting conservation and management measures.

Tuna stocks managed (reported 2016 catches):

WPO Yellowfin (633,800 t)

WPO Bigeye (145,900 t)

WPO Skipjack (1,740,300 t)

North Pacific Albacore (also managed by IATTC) (51,200 t)

South Pacific Albacore (68,600 t)

Pacific Bluefin (2015 catches. Also managed by IATTC) (7,500 t)

Principal fishing gears:

Purse Seining (74%)

Pole and line (7%)

Long lining (6%)

Other species subject to conservation management measures:

Cetaceans, Swordfish, striped marlin, sharks, seabirds, sea turtles.

Number of Members and Participating Territories:

33

Number of Cooperating Parties:

7

New Members:

New members would have to be countries located in the Convention Area (coastal States) or invited to accede by a consensus of the Commission.

Web Site:

http://www.wcpfc.int

Scientific Advice:

The Secretariat of the Pacific Community's (SPC's) Oceanic Fisheries Programme (http://www.spc.int/oceanfish/) serves as the Commission's Science Services Provider and Data Manager. As the SPC started collecting fisheries data and conducting biological studies and stock assessments before WCPFC was established, this relationship minimizes duplication of effort between the two organizations. The WCPFC has a Scientific Committee (SC) composed of representatives from each Commission member. The SC reviews the assessment results and related information prepared by SPC and by other SC experts and makes recommendations for management actions based on these assessments.

The International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC, http://isc.ac.affrc.go.jp/) provides scientific advice for species that inhabit the Pacific Ocean in waters generally North of 20°N, inside and outside the Convention Area (e.g., North Pacific albacore and Pacific bluefin).

Decision-making:

Decisions taken by WCPFC are generally done by consensus. In cases where decisions have to be taken by vote, usually on substantive matters, a "two-chamber system" applies. The Pacific Islands Forum Fisheries Agency (FFA) members of the Commission comprise one chamber, while the non-FFA members form the other chamber. Decisions are taken by a three-fourths majority of those present and voting in each chamber and no proposal can be defeated by two or fewer votes in either chamber. Decisions that are binding to Commission members are called "Conservation and Management Measures (CMMs)". In respect of stocks occurring primarily north of 20°N (the so-call "northern stocks"), management decisions by the Commission are based on recommendations of the Northern Committee. Currently, North Pacific albacore, Pacific bluefin and North Pacific swordfish are recognized as "northern stocks".

Other notes:

- The FFA (http://www.ffa.int) was created in 1979, recognizing that the 200-mile extension of EEZ jurisdiction would result in most of the tuna resources of the WCPO falling within the EEZs of Pacific island states. The FFA deals with registration and licensing arrangements and implements monitoring and enforcement capabilities. The FFA maintains a regional register of foreign fishing vessels that are eligible to apply for access licenses for fishing in the EEZs of the FFA members.
- The Nauru Agreement Concerning Cooperation in the Management of Fisheries of Common Interest, which entered into force in 1982, has the objective of coordinating and harmonizing the management of fisheries with regard to common stocks within the EEZs of the eight Contracting Parties (which account for roughly 25% of the world's tuna catch). The Parties to the Nauru Agreement (PNA, http://www.pnatuna.com/) grant priority to fishing vessels of the Parties and establish uniform terms and conditions under which the Parties may license foreign fishing vessels, and have adopted a set of conservation measures that apply to all vessels licensed and operating under the PNA Vessel Day Scheme (e.g., 100% observer coverage, crewing requirements, VMS, etc.). In 2010 the PNA established its own offices in Majuro, Marshall Islands.

2.3 International Commission for the Conservation of Atlantic Tunas (ICCAT)

Established:

1969.

Headquarters:

Madrid, Spain.

Area of competence:

Atlantic Ocean, including adjacent seas (e.g., Mediterranean, Caribbean).

Convention Objective:

Preamble: "[members]... to co-operate in maintaining the populations of these fishes at levels which will permit the maximum sustainable catch for food and other purposes."

Article VIII: "The Commission may, on the basis of scientific evidence, make recommendations designed to maintain the populations of tuna and tuna-like fishes that may be taken in the Convention area at levels which will permit the maximum sustainable catch."

Ecosystems / Precautionary Approach:

The ICCAT Convention pre-dates UNCLOS and UNFSA; there is no explicit mention in the Convention about the Precautionary Approach or ecosystem considerations. However, the Convention requires that the Commission study other species of fish exploited in Atlantic tuna fisheries as long as they are not under investigation by another international fishery organization.

Tuna stocks managed (reported 2016 catches):

Atlantic Yellowfin (127,800 t)

Atlantic Bigeye (72,400 t)

Eastern Atlantic Skipjack (217,400 t)

Western Atlantic Skipjack (28,600 t)

Northern Atlantic Albacore (30,100 t)

Southern Atlantic Albacore (13,700 t)

Mediterranean Albacore (3,500 t)

Western Atlantic Bluefin (1,900 t)

Eastern Atlantic and Mediterranean Bluefin (20,100 t)

Principal fishing gears:

Purse Seining (61%)

Pole and line (18%)

Long lining (15%)

Other species subject to conservation management measures:

Swordfish, marlins, sharks, sea turtles, sea birds.

Number of Members:

52

Number of Cooperating Parties:

5

New Members:

Open to accession by any member of the United Nations.

Web Site:

http://www.iccat.int

Scientific Advice:

The Standing Committee on Research and Statistics (SCRS), composed of representatives from each Commission member, is responsible for all scientific work and providing scientific advice on management measures. The Secretariat plays primarily a facilitating role in organizing meetings, maintaining databases and making publications. The stock assessments are carried out by species-specific working groups of the SCRS.

Decision-making:

Decisions taken by ICCAT are generally done by consensus. Conservation and management measures for tuna stocks are first elaborated by Panels (bigeye, yellowfin and skipjack are in Panel 1; bluefin tuna, northern albacore and Mediterranean albacore are in Panel 2; southern albacore are in Panel 3). If a vote is required in a Panel, a simple majority of the Panel members needs to be in favor in order for the proposal to move to the Commission. Once the Commission considers a Panel-approved proposal, and a vote is needed, a two-thirds majority of Commission members is required for the proposal to be adopted (Note: other decisions that are not originated in Panels require a majority of Commission members). Decisions that are binding to Commission members are called "Recommendations". There is a well-defined system for members to object to any management Recommendation approved, and any member that meets a particular schedule for lodging objections is not bound by the measure to which it has objected, i.e. there is an “opt out” clause for nations that do not want to be bound by the management measure.

2.4 Indian Ocean Tuna Commission (IOTC)

Established:

1996.

IOTC was established under Article XIV of the FAO Constitution (it is the only Tuna RFMO established in this way).

Headquarters:

Victoria, Seychelles.

Area of competence:

The Indian Ocean (IO, defined for the purpose of the Agreement as being FAO Statistical Areas 51 and 57), and adjacent seas, north of the Antarctic Convergence. In 1999, the Commission extended the western boundary of the IOTC statistical area from 30ºE to 20ºE, thus eliminating the gap in between the areas covered by the IOTC and ICCAT.

Convention Objective:

Article V: "...ensuring, through appropriate management, the conservation and optimum utilization of stocks..."

Ecosystems / Precautionary Approach:

The IOTC Convention makes no explicit mention about the Precautionary Approach or ecosystem considerations. The Precautionary Approach was formally adopted in 2012 through a Resolution. The Commission requires data for non-target species that are caught in Indian Ocean tuna fisheries.

Tuna stocks managed (reported 2016 catches):

IO Yellowfin (421,900 t)

IO Bigeye (87,300 t)

IO Skipjack (446,900 t)

IO Albacore (35,900 t)

Principal fishing gears:

Purse Seining (35%)

Long lining (19%)

Gillnet (18%)

Pole and line (11%)

Other species subject to conservation management measures:

Cetaceans, Swordfish, marlins, sharks, sea turtles, sea birds.

Number of Members:

31

Number of Cooperating Parties:

3

New Members:

Open to FAO members that are either coastal States to the IOTC Convention Area or that engage in fishing for tunas in that area.

Web Site:

http://www.iotc.org

Scientific Advice:

The Scientific Committee (SC), composed of representatives from each Commission member, is responsible for all scientific work and providing scientific advice on management measures. The Secretariat plays primarily a facilitating role by assisting members on scientific and compliance matters, organizing meetings, maintaining databases and conducting preparatory analyses in support of the subsidiary Committees. The stock assessments are carried out by species-specific Working Parties of the SC.

Decision-making:

Decisions taken by IOTC are generally done by consensus, although voting procedures are established in which conservation and management measures are agreed to by two-thirds majority vote of members present and voting,

and are binding on all Commission members. However, there is an 'opt-out' clause: any member can file an objection to the measure, and by doing so is not bound by it. Binding decisions are called "Resolutions".

2.5 Commission for the Conservation of Southern Bluefin Tuna (CCSBT)

Established:

1994.

Headquarters:

Canberra, Australia.

Area of competence:

The area of competence is the entire geographical range of southern bluefin tuna (southern waters of the Atlantic, Indian and Pacific Oceans).

Convention Objective:

Article 3: "...to ensure, through appropriate management, the conservation and optimum utilisation of southern bluefin tuna."

Ecosystems / Precautionary Approach:

The CCSBT Convention makes no explicit mention about the Precautionary Approach or ecosystem considerations. However, the Commission requires data for non-target species. The CCSBT also has a working group on Ecologically Related Species that has begun to meet every two years and provides recommendations to the Commission (https://www.ccsbt.org/en/content/ecologically-related-species).

Tuna stocks managed (reported 2016 catches):

Southern Bluefin (14,400 t)

NOTE: IOTC, ICCAT and WCPFC also have responsibility for southern bluefin in their respective Convention Areas. However, since CCSBT is responsible for the species throughout its range, members of these other organizations defer to CCSBT for assessment and management of the species.

Principal fishing gears:

Long lining (61%)

Purse Seining (39%)

Other species subject to conservation management measures:

Sharks, sea birds, sea turtles. Note: Members are expected to comply with binding and recommendatory measures on these species and other ecologically related species adopted by IOTC or WCPFC when fishing for southern bluefin tuna in those Convention Areas. Members are required to use Tori poles in all longline SBT fisheries below 30° south.

Number of Members:

8

Number of Cooperating Parties:

None

New Members:

Open to States whose vessels fish for southern bluefin and to States having EEZs through which the species migrates.

Web Site:

http://www.ccsbt.org

Scientific Advice:

The Scientific Committee (SC), composed of representatives from each Commission member and an independent scientific advisory panel, is responsible for all scientific work and providing scientific advice on management measures. The Secretariat plays primarily a facilitating role in organizing meetings, maintaining databases and making publications. The stock assessments are carried out by the SC. From October 2010, the Scientific Committee is required to incorporate advice consistent with the precautionary approach in its advice to the Commission.

Decision-making:

Conservation and management measures are agreed to by consensus or unanimous vote of members present (two-thirds of members in a meeting constitutes a quorum). Binding decisions are called "Resolutions".

3. National Governments

While the Tuna RFMOs are the frameworks under which governments collaborate with each other in order to effectively manage these highly migratory species, in the end it is up to these governments to individually implement and enforce any agreed measures at a national level. This is typically done by adopting and enforcing national laws or regulations to implement these measures. A summary of such decisions is beyond the scope of this document. However, such decisions can usually be obtained from the National Reports submitted by these countries to the different RFMOs.

As members or cooperating non-members of RFMOs, governments enjoy a number of privileges, such as fishing quota or effort or capacity allocations, but also have a number of duties and responsibilities in addition to the mandate to implement the RFMO decisions at the national level. These include:

- Financing the operations of the RFMO through the payment of annual dues (members only);
- Compiling and reporting relevant fishery and, where required bycatch, statistics;
- Reporting other scientific information such as biological studies;
- Enforcing the RFMO decisions with respect to vessels flying their flag, ports over which they have jurisdiction, etc.;
- Monitoring and reporting on compliance with RFMO measures.

4. Challenges

4.1. Fishing capacity

The term "capacity" generally refers to the potential to catch a given amount of fish. Many tuna fleets have "overcapacity", in the sense that if the existing number of vessels operated at full efficiency, they would catch more fish than what the stock's productivity could sustain.

The open access nature of many fisheries leads to overcapacity. Under open access, fishing increases until profits disappear; catches are taken with higher costs than needed; and eventually catches diminish. As profits are eroded, pressure on management mounts to weaken restraints in an effort by industry to avoid immediate financial losses. Overcapacity, once developed, takes a long time to disappear, as boat owners continue fishing as long as variable costs are covered. Endemic overcapacity in tuna fisheries leads to overexploitation and wastes resources.

Dealing with overcapacity is especially problematic in fleets that catch more than one tuna species. For example, tropical purse seine fleets catch skipjack, yellowfin and bigeye tunas. If some stocks are overfished while others are not, the same fleet can have overcapacity for some stocks and not for the others. In addition, large-scale tuna fishing vessels, like the tuna they catch, are highly mobile. Success in limiting fishing mortality and overcapacity in one area could easily redirect capacity to another area. This does not mean that capacity management should not be undertaken, but that global success requires coordination among RFMOs.

The establishment of exclusive rights to fish is essential for RFMOs to prevent overfishing, achieve sustainability and to realize maximum economic benefits of the fisheries. Open access creates perverse incentives for the “race to fish” whereas exclusive rights provide a positive incentive to preserve and conserve the fish stock which enhances the future value of the right. A right can be an exclusive use or a property right and allocated rights may be based on measures of catch, effort, or licenses. Similar systems could also be used for fulfilling obligations such as bycatch limits.

4.2. Allocation

Allocation of fishing rights or fishing possibilities is one of the most contentious matters in fisheries management. Allocation generally refers to what part of the Total Allowable Catch (TAC) will be assigned to different countries. In some cases, other metrics can be allocated (e.g., fishing days).

None of the tuna RFMOs follow a formulaic approach to allocate fishing opportunities. Allocation is almost always done by intense and very politicized negotiations that take into account various aspects about the different countries involved (usually member countries of the RFMO). Two that are typically considered are (a) the historical fishing levels of a country for the stock in question, and (b) the aspirations of developing coastal states who want to participate in the fishery.

In today's tuna RFMO decision-making climate, which is basically consensus-driven, allocation negotiations often result in overall catch levels that are higher than the level recommended by scientists. This is especially the case when science indicates that the amount of fishing needs to be reduced considerably: Those with a strong historical presence in the fishery do not want to give it up, and those without one want a chance; in an effort to reach consensus, sacrifices tend to be insufficient, and the sum of the individual catch allocations is larger than the overall TAC level recommended by scientists. Such allocations in excess of optimal levels will reduce the overall efficiency of the allocation and reduce the benefit of the allocation in the future.

4.3. Modern decision-making

As with allocation decisions, the adoption of conservation and management measures in tuna RFMOs often involves difficult negotiations where, in an effort to reach consensus, the final decisions tend to be weaker than needed to achieve management objectives. The concept of Harvest Strategies (HS) is an important model of modern fisheries management. HS are a way of regulating fishing in a pre-defined way so that management objectives are achieved on average, and risks are avoided with high probability. Harvest strategies are made up of several elements that work together: Monitoring data, analysis method (which may be an assessment) and harvest control rules that are used to calculate the value for a TAC or effort control measure. HS are derived by simulation and chosen for their performance in meeting the specified management objectives and robustness to the presence of uncertainties. Management Strategy Evaluation is commonly used to evaluate and select amongst competing Management Procedures (MPs).

Over the last few years, tuna RFMOs have been moving progressively forward towards the adoption of integrated harvest strategies for the management of their stocks (Anonymous, 2015). However, to-date, only CCSBT has formally adopted a management strategy.

4.4. Compliance

The management measures adopted by tuna RFMOs will only work if they are effectively complied with by the RFMO members. Each of the five tuna RFMOs has an annual mechanism to monitor and assess the compliance of members, and in some cases cooperating non-members, with their obligations under the RFMO convention and its conservation and management measures.

The five tuna RFMO compliance monitoring processes vary in how they review and assess member and non-member implementation of and compliance with their obligations, what information is used by the compliance committees or working groups, what information is publicly available and at what level of detail, whether or not the RFMO has tools to address non-compliance and whether or not it uses those tools (such as capacity building or application of sanctions), and the degree to which the RFMO follows-up on the previously identified non-compliance (Koehler, 2016). There is considerable variability in individual States' compliance with their obligations, which can impact effective RFMO functioning and achieving sustainable tuna fisheries.

Further modification of existing tuna RFMO compliance mechanisms to incorporate and apply desirable best practices outlined in ISSF Technical Report 2016-06 (Koehler, 2016) would strengthen the ability of an RFMO to assess the degree to which its measures are being implemented and complied with, reward those that are abiding by the rules, provide assistance to those nations that need it and penalize those that are undermining the effectiveness of RFMO conventions and conservation and management measures. Greater transparency in terms of the level of compliance of each member and cooperating non-member, and the steps they are taking to rectify implementation deficiencies or breaches of conservation measures, will promote system legitimacy, reduce perceptions of unfairness and contribute to public and market confidence in the sustainable international management of global tuna fisheries through RFMOs.

4.5. Financial resources

All tuna RFMOs rely on science in support of decision-making. This science involves the collection and analysis of fishery statistics, as well as important (and expensive) field research to improve estimates of vital parameters for tunas, such as the rates of natural mortality, fishing mortality, migration, growth and reproduction. The demands on science far exceed the budgets of any RFMO (RFMO science budgets are a minute fraction of fishing revenues). In addition, in some RFMOs, some member states do not have the resources needed to actively fulfil their most basic obligations of collecting and reporting data for their fisheries, or for adequately participating in the scientific process.

The effectiveness of any conservation measure depends on strict compliance by all fishing vessels. Monitoring, Control and Surveillance (MCS) measures vary considerably between the tuna RFMOs, and are weak in many cases. Furthermore, the level with which RFMO measures are complied with is better known for some RFMOs than others (Koehler, 2016). As is the case with science, tuna RFMOs generally devote insufficient resources to institute comprehensive and effective MCS measures.

4.6. Bycatches

Bycatch is the unintended catch in a fishing operation of species other than the target species, or individuals of the target species that are of undesirable size. Bycatch can either be discarded or landed. Bycatch occurs in virtually all fisheries.

Bycatch is of concern to governments and stakeholders alike. An example of the complexity of the problem is the fishery on fish aggregating devices (FADs), which targets primarily skipjack, and in which the bycatch of other species is greatest among types of purse seine sets: more than half the world skipjack catch is taken on FADs so, if FAD fishing were prohibited in order to protect bycatch species, the catch of skipjack would drop precipitously. Any measures to deal with bycatch must be based on sound science if they are to be effective in reducing bycatch and maintaining sustainable fisheries.

Obtaining the data needed to quantify the impact of bycatch on the ecosystem would entail increasing observer coverage rates on longline fleets, and in some oceans, purse seine fleets, and require scientific studies of the ecosystem to which the bycatch species and tunas belong and research into the development of fishing gear and technology that will allow the target species to be caught without harming the bycatch species. All of this will require considerable resources, both human and financial.

4.7. Operational data

Modern stock assessment tools require detailed information on fishing operations in order to inform management decisions. Operational-level data are typically set-by-set data with information on exact time and position, the fishing effort used, and the resulting catches. Unfortunately, these types of data are not always made available to the scientific groups of the RFMOs for analyses.

On one hand, there are RFMOs like ICCAT and IOTC where members are only obliged to submit aggregated data to the Secretariats. Therefore, only aggregated data are available to the working groups that carry out the assessments. Operational-level data are in most cases made available only to scientists from the countries' official institutions who may prepare analyses based on these data. However, this process is unsatisfactory because there is no opportunity to analyze all of the detailed data sets from the different countries together, within a single model.

On the other hand, there are RFMOs like IATTC and WCPFC where members are obliged to submit operational-level data, but compliance with this is heterogeneous. Also, historical data is generally not available. This situation is unsatisfactory as it affects continuity, quality control, and may ultimately affect management advice.

Bibliography

Anonymous (2015). Report of the 2015 ISSF Stock Assessment Workshop: Characterizing uncertainty in stock assessment and management advice. ISSF Technical Report 2015-06. International Seafood Sustainability Foundation, Washington, D.C., USA.

ISSF (2017). Status of the world fisheries for tuna. Nov 2017. ISSF Technical Report 2017-02A. International Seafood Sustainability Foundation, Washington, D.C., USA.

Koehler, H. (2016). Promoting Compliance in Tuna RFMOS: Promoting Compliance In Tuna RFMOS: A Comprehensive Baseline Survey Of Current Mechanics Of Reviewing, Assessing & Addressing Compliance With RFMO Obligations & Measures. ISSF Technical Report 2016-06. International Seafood Sustainability Foundation, McLean, Virginia, USA.

Appendix 1. Participation in Tuna RFMOs, UNFSA and PSMA (updated 11/2017)

Key: M=Member; C=Cooperating non-Member; P=Participating Territory

N=Caught some amount of tunas between 2012 and 2016 but does not participate in RFMO

	IATTC	ICCAT	IOTC	WCPFC	CCSBT	UNFSA	PSMA
Albania		M					
Algeria		M					
American Samoa				P			
Angola		M					
Australia			M	M	M	Y	Y
Bangladesh			C			Y	
Barbados		M				Y	
Belize	M	M	N	N		Y	
Bolivia	C	C					
Brazil		M				Y	
Canada	M	M		M		Y	
Cape Verde		M					
Chile	C					Y	Y
China, People's Republic of	M	M	M	M			
Chinese Taipei	M	C	*	M	M		
Colombia	M						
Comoros			M				
Cook Islands				M		Y	
Costa Rica	M	C				Y	
Côte d'Ivoire		M					
Curacao		M					
Dominica		N					
East Timor			N				
Ecuador	M			C		Y	
Egypt		M					
El Salvador	M	M		C			
Equatorial Guinea		M					
Eritrea			M				
European Union	M	M	M	M	M	Y	
Fiji				M		Y	
France	M		M	M		Y	
French Polynesia				P			
Gabon		M					
Ghana		M				Y	Y
Grenada		M					
Guam				P			
Guatemala	M	M					
Guinea Rep.		M	M			Y	
Guinea-Bissau, Rep. of		M					
Guyana, Cooperative Republic of		C					
Honduras	C	M					
Iceland		M				Y	Y
India			M			Y	
Indonesia	C		M	M	M	Y	Y
Iran, Islamic Republic			M			Y	
Japan	M	M	M	M	M	Y	
Jordan			N				
Kenya			M			Y	Y
Kiribati	M			M		Y	
Korea, Republic of	M	M	M	M	M	Y	

	IATTC	ICCAT	IOTC	WCPFC	CCSBT	UNFSA	PSMA
Liberia	C	M	C	C		Y	
Libya		M					
Madagascar			M				
Malaysia			M				
Maldives			M			Y	
Marshall Islands, Republic of				M		Y	
Mauritius			M			Y	
Mauritania		M					
Mexico	M	M		C			
Micronesia, Federated States of				M		Y	
Morocco		M				Y	
Mozambique			M			Y	Y
Namibia		M				Y	
Nauru				M		Y	
New Caledonia				P			
New Zealand				M	M	Y	Y
Nicaragua	M	M					
Nigeria		M				Y	
Niue				M		Y	
Northern Mariana Islands, Commonwealth of the				P			
Norway		M				Y	Y
Oman			M			Y	
Pakistan			M				
Palau				M		Y	
Panama	M	M		C		Y	
Papua New Guinea				M		Y	
Peru	M						Y
Philippines		M	M	M	N	Y	
Russia		M				Y	
St. Pierre and Miquelon (France)		M					
Samoa				M		Y	
São Tomé and Príncipe		M					
Senegal		M	C			Y	
Seychelles			M			Y	
Sierra Leone		M	M				
Solomon Islands				M		Y	
Somalia			M				
South Africa		M	M		M	Y	
Sri Lanka			M			Y	
St. Kitts and Nevis		N					
St. Lucia		N				Y	
St. Vincent and The Grenadines		M				Y	
Sudan			M				
Suriname		C					
Syria		M					
Tanzania			M				
Thailand			M	C		Y	
Tokelau				P			
Tonga				M		Y	
Trinidad and Tobago		M				Y	
Tunisia		M					
Turkey		M					
Tuvalu				M		Y	
United Kingdom (Overseas Territories)		M	M			Y	
United States of America	M	M		M		Y	Y
Uruguay		M				Y	Y
Vanuatu	M	M	N	M			
Venezuela	M	M					
Vietnam				C			
Wallis and Futuna				P			
Yemen			M				

	IATTC	ICCAT	IOTC	WCPFC	CCSBT	UNFSA	PSMA
Total (M+C+P):	**26**	**57**	**34***	**40**	**8**	**57**	**12**

* Under the UN system, the IOTC Agreement currently inhibits the full involvement of Chinese Taipei in the Commission. However, individuals from Chinese Taipei participate in IOTC meetings as Invited Experts.

Appendix 2. Summary of Monitoring, Control and Surveillance (MCS) Measures Adopted by RFMOs (Updated 11/2017)

This summary of the MCS measures adopted by the five Tuna RFMOs is intended to provide an overview of some of the most important measures. For each RFMO, a reference number for most recent relevant measure is provided. More details can be obtained by downloading the appropriate reference from the RFMO's website. ISSF also publishes technical papers outlining best practice recommendations for each of these MCS measures. These can be accessed here: https://iss-foundation.org/knowledge-tools/technical-and-meeting-reports/

1. Maintain an active Compliance / Monitoring Committee	
CCSBT	A Compliance Committee reviews and assesses compliance with all management measures, including data submissions. CCSBT has a Compliance Plan that also includes a Three-Year Action Plan to address priority compliance risks, which is reviewed and updated triennially. CCSBT also has minimum performance requirements to meet CCSBT obligations; a corrective actions policy; and MCS information collection and sharing guidelines. The CCSBT also has an independent Quality Assurance Review (QAR) program where existing CPC systems and processes are audited against selected sections of the minimum performance requirements guidelines.
IATTC	The Antigua Convention establishes the Committee for the Review of Implementation of Measures Adopted by the Commission. C-11-07 established a detailed process for the Committee to review compliance with all IATTC Resolutions by members and non-members. The AIDCP established the International Review Panel, which has the power to review observer reports, if necessary send possible infractions to governments to investigate within a prescribed time frame, and in some cases to apply sanctions on vessels and captains.
ICCAT	The Permanent WG for the Improvement of ICCAT Statistics and Conservation Measures [Rec. 11-23] addresses compliance by non-members; the Conservation and Management Measures Compliance Committee [Rec. 11-24] for members. Rec. [11-11] sets up a detail process for reviewing compliance and Res. [16-22] formalizes the practice of its compliance assessment process. Recs. [05-09, 11-15 and 15-09] establish penalties for non-reporting; Rec. [06-13] provides for trade measures; and Res. [16-17] establishes a schedule of actions to improve compliance and cooperation with ICCAT measures.
IOTC	A Compliance Committee monitors non-compliance and advises the Commission on actions which might be taken in response to non-compliance. The Committee terms of reference also provide that sanctioning mechanisms for non-compliance and provisions for following-up on infringements should be developed. [Res. 10-09]
WCPFC	The WCPFC Convention establishes a Technical and Compliance Committee to review implementation for members and non-members. The WCPFC adopted a Compliance Monitoring Scheme (CMS) in 2010 (CMM 2010-03). The current WCPFC CMS reviews a sub-set of the suite of obligations in the Convention and binding conservation and management measures adopted by the Commission. The CMS Working Group meets during the TCC. The Commission extended the CMS for 2016 and 2017 only. The effectiveness of CMS is being reviewed by an independent panel in 2017.

2. Operate catch documentation schemes that permit full traceability from sea to processing

CCSBT	CCSBT has a Bluefin Catch Documentation Scheme [modified 2014] that is a very complete traceability model.
IATTC	IATTC does not have a catch documentation scheme, but has a Statistical Document Program for frozen bigeye tuna only [C-03-01]. Bigeye caught by pole-and-line/bait-boats or purse seine vessels that are destined for canning are exempt. AIDCP provides system for monitoring purse seine catches from time of capture to processing.
ICCAT	ICCAT has a Bigeye Statistical Document Scheme [Recs. 01-21 and 03-19]. Bigeye caught by pole-and-line or purse seine vessels that are destined for canning are exempt. ICCAT also has a Bluefin Catch Documentation Scheme [Recs. 11-20, 13-16, and 15-10]. While a very complete traceability model, it is not functioning effectively. ICCAT is now moving toward the implementation of an electronic CDS; the elements of which became mandatory from 1 May 2016 and the use of the paper-based system would no longer be acceptable[4].
IOTC	IOTC has only a Bigeye Statistical document Program [Res.01-06 and 03-03]. Like the IATTC program, it only applies to frozen bigeye tuna and provides exemptions for bigeye tuna caught by purse seiners or bait-boats/pole-and-line boats where the catch is principally destined for canneries in the agreement area.
WCPFC	The WCPFC has not yet implemented a CDS for any species under its mandate, despite work commencing as early as 2005 to develop a CDS for bigeye tuna. The WCPFC has a CDS Intersessional Working Group (CDS IWG) which has met in 2014, 2015 and 2016. The CDS IWG did not meet in 2017 and the work is being progressed electronically by the FFA Secretariat.

3. Operate near real-time vessel and catch monitoring schemes	
CCSBT	Members are to use VMS systems from CCAMLR, ICCAT, IOTC or WCPFC, depending on where vessels operate. Monthly catch reporting by members (since 2008).
IATTC	VMS systems in place in member countries to monitor vessels over 24 m (C-04-06). IATTC field office staff conducts real-time monitoring of the purse seine fleet. In 2014, IATTC adopted C-14-02 that strengthened its VMS program, by increasing transmission rates from on-board VMS transceivers – from 6 hours to 4 hours for longliners and 2 hours for other vessels. C-14-02 also now includes procedures in the case of a technical failure or breakdown of the ALC device.
ICCAT	VMS systems in place in member countries to monitor vessels over 24 m (Rec. 2003-14); VMS for eastern Atlantic and Mediterranean bluefin transmitted to the Secretariat (Rec. 10-04). No real-time catch monitoring, except for eastern Atlantic and Mediterranean bluefin with monthly catch reports (Rec. 10-04). In 2014, ICCAT adopted Rec. 14-09 to reform its VMS by reducing the transmission rate from 6 to 4 hours.
IOTC	VMS required for all CPC vessels 24m or greater LOA or vessels less than 24m operating on the high seas fishing for species covered by the IOTC Agreement (Res. 15-03). Res. 15-03 also includes provisions to accelerate implementation of the IOTC VMS by prescribing that those CPCs that do not have a VMS for any vessel now meeting the criteria for inclusion in the VMS, as per the amended in Resolution 15-03, must submit an implementation plan to the Compliance Committee in April 2016. Electronic logbooks are an option (Res. 13-03) but only aggregated data sent to Secretariat annually.
WCPFC	Commission VMS system for vessels fishing on the high seas; the data are simultaneously transmitted to the flag State and Secretariat (CMM 2014-02); VMS systems also in place for member countries; Commission VMS may also be applied to waters under the jurisdiction of Members and to complement and support Members' national VMS.

4. Implement at-sea observer programs to assist surveillance of conservation measures or for scientific purposes	
CCSBT	Scientific observer program (10% coverage) since 2001, operated by members.

[4] This is contingent upon the system being complete and ready for use.

IATTC	100% observer coverage for purse-seiners with a carrying capacity greater than 363 metric tons provided by AIDCP. C-11-08 requires 5% scientific observer coverage for longliners greater than 20 m.
ICCAT	Rec. [10-10]: scientific programs with at least 5% coverage on vessels ≥ 15 m (purse seine, pelagic longline and pole-and-line fleets, only). Rec. [10-04]: Compliance Regional observer program for purse seine vessels fishing eastern Atlantic and Mediterranean bluefin (100% coverage for vessels > 24 m in 2011, >20 m in 2012, and all sizes thereafter). 100% coverage on all transfers to cages. National programs to cover those purse seine vessels not monitored by the Regional program, as well as 20% coverage on pole-and-line, longline and trawlers. Rec. [06-11]: Observers on all carriers receiving at-sea transshipments. Other Recs. require some level of National observer program coverage for certain fleets catching bigeye, marlins, and for chartered vessels. Rec. [16-01]: establishes a Regional Observer Program to ensure 100% observer coverage for all vessels 20m length overall or greater, including support vessels, fishing for bigeye and/or yellowfin tunas during a two-month FAD closure period in a defined area off western Africa. Rec. [11-10]: Collect and report data on catch of non-target species and discards.
IOTC	Regional program to collect verified catch data and other scientific information (Res. 11-04); target 5% coverage for all vessels over 24m, and under 24m if fishing on the high seas. Res. 16-04 creates a pilot project to strengthen the implementation of Res. 11-04 and to increase the level of compliance with Resolutions 15/01 and 15/02 (recording of catch and effort data by fishing vessels and mandatory statistical reporting requirements).
WCPFC	CMM 2007-01 requires 5% coverage of the effort in each fishery under the jurisdiction of the Commission (except for vessels used exclusively to fish for fresh fish in area north of 20ºN and troll and pole and line vessels). CMM-2016-01 requires 100% observer coverage on purse seiners during FAD closure and for all purse seiners fishing on the high seas in the area between 20N and20S. WCPFC also requires 5% coverage for vessels fishing for fresh fish in the high seas north of 20ºN.

5. Maintain IUU vessel lists and encourage reporting of vessels fishing in contravention of conservation and management measures	
CCSBT	Yes; Resolution on Establishing a List of Vessels Presumed to have Carried Out Illegal, Unreported and Unregulated Fishing Activities for Southern Bluefin Tuna.
IATTC	Yes; Res. C-15-01 establishes the process for listing and de-listing
ICCAT	Yes; Rec. 09-10 and 11-18 and Res. 14-11 establish the process for listing and de-listing. Potentially covers vessels of members and non-members, limited to > 20 m.
IOTC	Yes; Res. 17-03 establishes the process for listing and de-listing.
WCPFC	Yes CMM-2010-06 establishes the process for listing and de-listing.

6. Establish Port State measures compatible with the FAO Agreement	
CCSBT	Yes. Resolution for a CCSBT Scheme for Minimum Standards for Inspection in Port (2015)
IATTC	No.
ICCAT	Yes. Rec. 12-07 provides minimum standards for inspections in port.
IOTC	Yes. Res. 16-11 provides for a more detailed PSM scheme in line with the FAO Port State Measures Agreement.
WCPFC	No.

7. Maintain a register of authorized fishing vessels	
CCSBT	List of fishing vessels and a list of carrier vessels that are authorized to fish for or carry southern bluefin.
IATTC	A Regional Vessel Register established by C-11-06, covering all fishing methods (the register is closed for purse seine vessels). C-11-05 establishes a list of longliners greater than 24 m.
ICCAT	For fishing vessels ≥ 20 m [Rec. 11-12]. Rec. [12-03] for all vessels participating in eastern Atlantic and Mediterranean bluefin fishery.
IOTC	Res. 15/04 for all vessels > 24m and smaller vessels operating in the high seas. Res. 13/07 establishes a record of foreign licensed vessels.
WCPFC	CMM-2013-10; members maintain their own records, except for a regional record to list vessels authorized to fish outside a member's national jurisdiction (e.g. on the high seas or in another nation's EEZ).

8. Regulate and monitor transshipments	
CCSBT	Yes; for large-scale longliners CCSBT establishes a monitoring program for at-sea transshipments (with a 100% observer coverage on the receiving vessel) and a program to monitor transshipments in port; the program is coordinated with ICCAT and IOTC.
IATTC	C-12-07 prohibits transshipments at sea for most vessels fishing on the high seas (except for troll vessels, pole-and-line vessels, and vessels engaged in transshipment of fresh fish). Transshipments at sea for high seas longliners that are 24m or greater LOA are monitored by observers on carrier vessels. Coverage for other longliners engaged in the transshipment of fresh tuna is not required.
ICCAT	Rec. 12-06 prohibits transshipments at sea for most vessels. Transshipments at sea for longliners > 24 m are monitored by observers on carrier vessels. All at-sea transshipment operations are prohibited other than those involving longline vessels of 24m or larger.
IOTC	Res. 12-05 prohibits transshipments at sea for most vessels. Transshipments at sea for longliners are monitored by observers on carrier vessels.
WCPFC	CMM-2009-06 establishes monitoring of transshipments with observer program; transshipments by purse seiners are prohibited, with exemptions for archipelagic and territorial waters and for the EEZs of some members.

9. Require full retention of target tuna species	
CCSBT	No.
IATTC	Yes; C-12-01 requires retention of skipjack, yellowfin and bigeye, unless unfit for human consumption.
ICCAT	No.
IOTC	Yes; Res. 17-04 requires retention of skipjack, yellowfin and bigeye, unless unfit for human consumption.
WCPFC	Yes; CMM 2016-01 requires retention of skipjack, yellowfin and bigeye, unless unfit for human consumption.

10. Implement high-seas boarding and inspection schemes	
CCSBT	No
IATTC	No
ICCAT	Rec. 12-03 applies a scheme of joint international inspection only for vessels fishing for eastern Atlantic and Mediterranean bluefin.
IOTC	No
WCPFC	Yes; CMM 2006-08 outlines the procedures for high seas boarding and inspection in the Convention Area.

11. Require IMO/ other UVI numbers	
CCSBT	Yes. Effective from 1 January 2017, Members and Cooperating Non-members shall ensure that all fishing vessels (except wooden and fibreglass vessels) flying their flag that are authorised to catch SBT, and that are

	at least 100GT/GRT in size, have IMO numbers issued to them. (Resolution on a CCSBT Record of Vessels Authorised to Fish for Southern Bluefin Tuna, amended in 2015).
IATTC	Yes. Res. C-14-01. Effective 1 January 2016, flag CPC's shall ensure that all their fishing vessels authorized to fish in the Convention Area that are at least 100 gross tons (GT) or 100 gross registered tons (GRT) in size have an IMO or LR number issued
ICCAT	Yes. Rec. 13-13. Effective January 1, 2016, flag CPCs shall authorize their commercial LSFVs to operate in the Convention area only if the vessel has an IMO number or a number in the seven-digit numbering sequence allocated by IHS-Fairplay (LR number), as applicable.
IOTC	Yes. Res. 15/04. Effective 1 January 2016, CPCs shall ensure that all their fishing vessels that are registered on the IOTC Record of fishing vessels have IMO numbers issued to them. (Only vessels eligible to receive IMO numbers).
WCPFC	Yes. CMM 2013-04. Effective 1 January 2016, flag CCMs shall ensure that all their fishing vessels that are authorized to be used for fishing in the Convention Area beyond the flag CCM's area of national jurisdiction and that are at least 100 GT or 100 GRT in size have IMO or LR numbers issued to them

ISSF INTERNATIONAL SEAFOOD SUSTAINABILITY FOUNDATION

www.iss-foundation.org

1440 G Street NW
Washington D.C. 20005
United States

Phone: + 1 703 226 8101
E-mail: info@iss-foundation.org