



Managing Fishing Capacity in International Fisheries: Approaches and Practices in Tuna Regional Fisheries Management Organizations (RFMOs)

Final Report

prepared for the International Seafood Sustainability Foundation (ISSF) by

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August 10, 2011

Suggested Citation:

Engler-Palma, M.C. 2011. Managing Fishing Capacity in International Fisheries: Approaches and Practices in Tuna Regional Fisheries Management Organizations (RFMOs). ISSF Technical Report 2011-06. International Seafood Sustainability Foundation, McLean, Virginia, USA.

ACCRONYMS AND ABBREVIATIONS

AIDCP	Agreement on the International Dolphin Conservation Program
ALB	Albacore
AU	Australia
BET	Bigeye tuna
BFT	Bluefin tuna
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CA	Convention Area
CMM	Conservation and Management Measure
CPC	Contracting Party and cooperating non-contracting party
EEZ	Exclusive Economic Zone
EPO	Eastern Pacific Ocean
FAO	Food and Agricultural Organization
GRT	Gross Registered Tonnage
GT	Gross Tonnage
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tuna
IOTC	Indian Ocean Tuna Commission
IPOA	International Plan of Action
NZ	New Zealand
OPRT	Organization for the Promotion of Responsible Tuna Fisheries
P(p).	Page(s)
Para.	Paragraph
PNA	Parties to the Nauru Agreement
Rec.	Recommendation
Res.	Resolution
RFMO	Regional Fisheries Management Organization
RVR	Regional Vessel Register
SIDS	Small Island Developing States
SKJ	Skipjack tuna
SWO	Swordfish
TAC	Total Allowable Catch
USA	United States of America
WCPFC	Western and Central Pacific Fisheries Commission
WTPO	World Tuna Purse Seine Organization
YFT	Yellowfin tuna

INTRODUCTION

This paper reviews and summarizes the approaches and practices of five tuna regional fisheries management organizations (RFMOs) in managing fishing capacity. The RFMOs included in the analysis are the Inter-American Tropical Tuna Commission (IATTC), the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Indian Ocean Tuna Commission (IOTC), the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), and the Western and Central Pacific Fisheries Commission (WCPFC).

The subject matter is addressed in six parts. The first part addresses some general concepts of fishing capacity that are relevant for the substantive analysis that follows. It summarizes States' obligations regarding management of fishing capacity in international and regional legal frameworks, and the commitments of the five tuna RFMOs adopted during the joint meetings held in Kobe, Japan (2007), Santander, Spain (2009), and La Jolla, USA (2011), and during the International Workshop on Fishing Capacity in Brisbane, Australia (2010). It also addresses the meaning of fishing capacity, the extent to which the selected tuna RFMOs have developed their own definitions of capacity, and the measures to manage fishing capacity that have been included in this paper.

The second part summarizes the general approaches adopted by each tuna RFMO to address fishing capacity problems, as well as ongoing initiatives and efforts aimed at improving their performance in controlling and managing fishing capacity.

Part 3 addresses one particular tool to manage fishing capacity: records of vessels authorized to fish, or actively fishing, for tuna in the respective Convention Area (positive lists). In most cases this measure alone does not manage fishing capacity because it does not limit entry to the fishery. However, they are pertinent to this analysis because they are used as baseline information to assess and measure capacity; they are often used as a baseline for management reduction schemes; and they could evolve into limited entry regimes. The particular case of the IATTC Regional Vessel Register is also analyzed in this section.

Part 4 addresses the main measures adopted by each RFMO to address, directly or indirectly, fishing capacity. In particular, the part analyzes: vessel and gear restrictions; catch restrictions, TAC and allocations; and area closures. These measures are analyzed mostly in form of comparative tables, which highlight the similarities and differences in the approach taken by the different tuna RFMOs.

Part 5 addresses in particular the mechanisms used by the different RFMOs to accommodate the development of fishing capacity of developing States. Finally, part 6 describes measures adopted to prevent transfer of fishing capacity to other fisheries as a consequence of fishing capacity restrictions.

There are a number of issues that, although relevant for management of fishing capacity, are beyond the scope of this paper. They include: monitoring and compliance measures; measures regulating transshipment activities; measures to regulate joint-operations; fish farming regulations; national implementation of the measures adopted at the regional level; and efforts of RFMOs to obtain the cooperation of non-cooperating non-contracting parties in addressing fishing capacity problems for one or more species. The paper does not address assessment of fishing capacity or establishment of fishing capacity targets by RFMOs, either. Finally, the IATTC International Dolphin Conservation Program is not included in this paper.

The paper is based on the results of a desk-top study. The decisions of the RFMOs (resolutions, recommendation, and conservation and management measures) analyzed in this study are identified in Annex 1. It should be noted that the conservation and management measures considered for this study are mostly the last measures adopted by each RFMO, without considering their actual entry into force according to the respective provisions of the different Convention texts.

The conservation and management measures adopted by the RFMOs apply in all cases to member States and participating territories, members of extended commissions (in the case of CCSBT), and cooperating non-contracting parties. They are referred as CPCs throughout the text. As mentioned above, measures with respect to non-cooperating non-contracting parties are not included in this study (although a brief reference to new entrants is made in relation to allocation criteria).

PART 1. FISHING CAPACITY IN INTERNATIONAL AND REGIONAL FRAMEWORKS

With few exceptions, the commercial stocks of tuna fisheries are either fully or overexploited (Joseph et al. 2010 , p. 12-13). A recent United Nations report assessing the status of the tuna and tuna-like stocks for which the state of exploitation is known concludes that 30 per cent of these stocks are overexploited or depleted, 53 per cent are fully exploited, and 18 per cent are moderately exploited (UN, 2010).

Recent studies have also provided quantitative or empirical evidence of overcapacity in the tuna purse seine fisheries and large-scale longline fisheries (Joseph et al. 2010, p. 17, citing Reid et al. 2005 and Miyake 2005). The results of these studies are shared by government, regional fisheries bodies, conservation organizations and industry (Joseph et al. 2010, pp. 17 and 32; Joint Tuna RFMOs 2010; WTPO and OPRT 2007; OPRT 2010).

Excess fishing capacity is one of the main causes of overfishing. It is also responsible for dissipation of food production potential and for significant economic waste (FAO, 2008, p. 2). Assessing, measuring and managing fishing capacity has become, therefore, a matter of priority for States individually and cooperatively through the RFMOs with jurisdiction to establish conservation and management measures for tuna and tuna-like stocks. The need and obligation to address excess capacity in the tuna fisheries has been recognized in international instruments, some regional agreements establishing tuna RFMOs, and in the recent Joint Tuna RFMOs Meetings, or “Kobe process”.

A number of binding and non-binding international instruments highlight the need for States and RFMOs to address fishing capacity, the most important being the United Nations Fish Stock Agreement, the FAO Code of Conduct for Responsible Fisheries, and the FAO International Plan of Action for the Management of Fishing Capacity (FAO-IPOA). The United Nations Fish Stock Agreement calls upon coastal States and States fishing for straddling or highly migratory fish stocks on the high seas to take measures to prevent or eliminate overfishing and excess fishing capacity and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of fishery resources (article 5(h)).

The FAO Code of Conduct for Responsible Fisheries, in turn, require States to take measures to prevent or eliminate excess fishing capacity and to ensure that levels of fishing effort are commensurate with the sustainable use of fishery resources as a means of ensuring the effectiveness of conservation and management measures (para. 7.1.8). It further requests that where excess fishing capacity exists, mechanisms should be established to reduce capacity to levels commensurate with the sustainable use of fisheries resources so as to ensure that fishers operate under economic conditions that promote responsible fisheries (para. 7.6.3).

In 1999, FAO Committee on Fisheries adopted the IPOA for the Management of Fishing Capacity, which was later endorsed by the FAO Council in November 2000. The IPOA aims at facilitating the adequate and timely implementation of fishing capacity management measures at the national and international level, and its immediate objective is for “States and regional fishery organizations, in the framework of their respective competencies and consistent with international law, to achieve worldwide, preferably by 2003 but no later than 2005, an efficient, equitable and transparent management of fishing capacity” (FAO-IPOA, para. 7).

Highlighting the urgency of assessing and managing fishing capacity, the 2010 Resolution adopted by the United Nations General Assembly on sustainable fisheries (UNGA 65/38) also calls upon States to:

- commit themselves to urgently reducing the capacity of the world’s fishing fleets to levels commensurate with the sustainability of fish stocks;
- establish target levels and plans or other appropriate mechanisms for ongoing capacity assessment;
- avoid the transfer of fishing capacity to other fisheries or areas in a manner that undermines the sustainable management of fish stocks, including those areas where fish stocks are overexploited or in a depleted condition; and
- recognize the legitimate rights of developing States to develop their fisheries for straddling fish stocks and highly migratory fish stocks consistent with article 25 of the Agreement, article 5 of the Code, and paragraph 10 of the International Plan of Action for the Management of Fishing Capacity.

At the regional level, only the WCPFC Convention and the recently adopted IATTC Antigua Convention make a reference to the management of fishing capacity. Article 5(g) of the WCPFC Convention considers a function of the Commission to take measures to prevent or eliminate over-fishing and excess fishing capacity and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of fishery resources. In fulfilling this obligation, Article 10(2) subparagraphs b) and c) of the Convention text enable the Commission to take measures relating to, *inter alia*, the level of fishing effort and measures to prevent or eliminate over-fishing and excess fishing capacity and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of fishery resources.

Similarly, the IATTC Antigua Convention, article VII(1) includes among the functions of the Commission to:

- adopt measures that are based on the best scientific evidence available to ensure the long-term conservation and sustainable use of the fish stocks covered by this Convention and to maintain or restore the populations of harvested species at levels of abundance which can produce the maximum sustainable yield, *inter alia*, through the

setting of the total allowable catch of such fish stocks as the Commission may decide and/or the total allowable level of fishing capacity and/or level of fishing effort for the Convention Area as a whole;

- determine whether, according to the best scientific information available, a specific fish stock covered by this Convention is fully fished or overfished and, on this basis, whether an increase in fishing capacity and/or the level of fishing effort would threaten the conservation of that stock;
- adopt appropriate measures to prevent or eliminate over-fishing and excess fishing capacity and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of the fish stocks covered by this Convention;
- where necessary, develop criteria for, and make decisions relating to, the allocation of total allowable catch, or total allowable fishing capacity, including carrying capacity, or the level of fishing effort, taking into account all relevant factors.

CCBST, IOTC and ICCAT Convention do not make an explicit reference to fishing capacity, fishing over-capacity or excess fishing capacity. In the case of ICCAT and IOTC, the explanation thereof must be found in the date the agreements were adopted. Nevertheless, the lack of explicit references to fishing capacity does not preclude the respective Commission from adopting measures for its management, based on the RFMOs' ample mandate to adopt conservation and management measures for the sustainable use of fishery resources under their jurisdiction.

The need to address excess fishing capacity has also been a key concern in the Joint Tuna RFMOs meetings or "Kobe Process", a recent initiative aimed at improving coordination, harmonization and cooperation among RFMOs with jurisdiction over tuna resources. Fishing capacity and excess fishing capacity have been discussed during the three joint meetings of the tuna RFMOs (January 2007, July 2009 and July 2011), and during an International Workshop held in Brisbane, Australia, on 20 June-1 July 2010.

The participants to the second Kobe Meeting adopted a Course of Action 2009-2011 (Joint Tuna RFMOs 2009), which calls on RFMOs to take the following actions directly related to fishing capacity:

- It is imperative that members of RFMOs collaborate at a global level, and that each flag State or fishing entity ensure that its fishing capacity is commensurate with its fishing opportunities as determined by each tuna RFMO, including through a fair, transparent, and equitable process for the allocation of fishing opportunities among its members. The participants agreed that this problem should be addressed in a way that does not constrain the access to, development of, and benefit from sustainable tuna fisheries, including on the high seas, by developing coastal States, in particular small island developing States, territories, and States with small and vulnerable economies;

- Tuna fishing capacity should not be transferred between RFMO areas and, as appropriate within RFMO areas, unless in accordance with the measures of the RFMOs concerned; and
- The establishment of a global register of active vessels, with contributions by the five RFMOs. This list will not be understood as providing individual or collective fishing rights. It will be without prejudice to any system of rights provided for in the existing RFMOs. The preparation of this list will be coordinated by the Secretariats of the tuna RFMOs.

The participants to the second Kobe meeting also agreed to organize an International Workshop on RFMO management of tuna fisheries, with an emphasis on reducing overcapacity. The workshop took place in Brisbane, Australia, on 20 June-1 July 2010. Its Report (Joint Tuna RFMOs 2010) recommended that RFMOs should, as a matter of urgency:

- Develop publicly available authorised and active vessel lists for all gears. These lists will include small-scale fishing vessels that are capable of catching significant amounts of fish under the competency of tuna RFMOs;
- Encourage secretariats to continue their work on the global list of tuna vessels, including the assignment of a unique vessel identifier;
- As appropriate, RFMOs include only vessels on their active vessel register in any scheme for reducing capacity by eliminating vessels;
- Review existing capacity against the best available scientific advice on sustainable levels of catch and implement measures to address any overcapacity identified;
- Each tuna RFMO consider implementing where appropriate a freeze on fishing capacity on a fishery by fishery basis. Such a freeze should not constrain the access to, development of, and benefit from sustainable tuna fisheries by developing coastal States; and
- Ensure that the effectiveness of all conservation and management measures is not undermined by exemption or exclusion clauses.

In the medium term, RFMOs should:

- Develop measures of capacity and, in the absence of an agreed capacity definition, adopt the FAO definition “The amount of fish (or fishing effort) that can be produced over a period of time (e.g. a year or a fishing season) by a vessel or a fleet if fully utilised and for a given resource condition”;
- Ensure that all stocks maintained at sustainable and optimal levels through science-based measures;
- Review and develop management regimes, based *inter alia* on the concept of fishing rights for fisheries under the RFMOs’ competence; and

- Consider using right-based management approaches and other approaches as part of a 'tool box' to address the aspirations of developing states, overfishing, overcapacity and allocation.

The recent Kobe III Meeting held in La Jolla, California, USA in July 2011 reinforced the previous agreements by recommending that:

- Each tuna RFMO Secretariat annually measure existing capacity in tuna fisheries under its jurisdiction and monitor where that capacity is used and by whom, and refer the results of this work to the respective Commission for its consideration;
- By 2013, each tuna RFMO establish a record of vessels, by gear type, actively fishing for stocks under its jurisdiction;
- All tuna RFMO Secretariats coordinate the establishment of a common vessel database linked, to the extent possible, to the existing consolidated list of active vessels, taking into account the requirements of each tuna RFMO for vessel registration;
- Developed fishing members freeze large-scale purse seine capacity under their flag; and
- Based on the status of the stocks, each tuna RFMO should consider a scheme for the reduction of over capacity in a way that does not constrain the access to, development of, and benefit from sustainable tuna fisheries, including on the high seas, by developing coastal States, in particular small island developing States, territories, and States with small and vulnerable economies; and the transfer of capacity from developed fishing members to developing coastal fishing members within its area of competence where appropriate (Joint Tuna RFMOs 2011a).

Meaning of Fishing Capacity

Although it is generally recognized that the first step for managing fishing capacity is to achieve a common understanding of the meaning of capacity and overcapacity, reaching that common understanding has proven to be difficult. Fishing capacity is a term that can be and is understood and used with different meanings, often interchangeably. FAO (FAO 2008) noted:

Fisheries scientists often think of capacity in terms of fishing effort, and the resultant rate of fishing mortality (the proportion of the fish stock killed through fishing). Effort is itself a fairly abstract concept as, in theory, it encapsulates all inputs employed in the harvesting process. In practice, it is generally not possible to measure all inputs, so proxy measures are used such as the total days fished, the number of pots or kilometres of nets deployed. (...) Fisheries managers generally have a similar view of capacity, but they often link the concepts of capacity and overcapacity more directly to the number of fishing boats in a fishery. (...) In contrast, economists tend to consider capacity as some level of potential output that could be produced if the boat was operating at maximum profits (...).

The meaning of fishing capacity was discussed in two meetings organized by FAO as part of the preparatory work for the adoption of the FAO-IPOA: a technical working group (La Jolla 1998) and an expert consultation on management of fishing capacity (Mexico city, 1999). During this second consultation, the participants agreed on a definition of fishing capacity that was “more a reflection of economic theory than fisheries population dynamics” (Joseph et al 2010, p. 16):

the maximum amount of fish than can be produced by a fully utilized fleet or vessel during a time period, given the size of the stock being fished and the level of fishing technology employed (FAO 2000).

Building on this agreement and on the two perspectives of fishing capacity mentioned above, a later FAO document on Guidelines on Responsible Fishing included a definition of fishing capacity that is both input (e.g. effort, boat numbers, etc.) and output (catch) based:

Fishing capacity is the amount of fish (or fishing effort) that can be produced over a period of time (e.g. a year or a fishing season) by a vessel or a fleet if fully utilized and for a given resource condition (FAO, 2008).

The Brisbane Workshop recommended RFMOs to adopt this FAO definition, in the absence of an agreed capacity definition. The RFMOs’ response to this recommendation has varied.

In the case of WCPFC, the Scientific Committee agreed that in the absence of a WCPFC definition of capacity, the FAO definition should be used in the interim (WCPFC 2010a). The Scientific Committee further recommended to the Commission the adoption of the management measures agreed upon during the Brisbane Workshop, including the recommendation to adopt in the interim the FAO definition of fishing capacity. This recommendation was approved by the WCPFC Commission during its 2010 Meeting (WCPFC, 2010b).

The Kobe process has also been reported to the CCSBT (CCSBT 2010), but the Commission has not yet discussed fishing capacity issues. Thus, CCSBT has not adopted a definition of the term fishing capacity.

Similarly, the recommendations of the Brisbane Conference were presented to the IOTC Commission (IOTC 2011a, p. 7), but no decision followed that discussion. However, the IOTC working party on fishing capacity has recognized the different interpretations of the term and agreed that input-based measures of fishing capacity would be more useful for management purposes (IOTC 2009, p. 3).

In the case of IATTC, the organization has not yet acted upon the Brisbane recommendations. However, IATTC has adopted an operational definition of fishing capacity for its purse seine fleet, which it has defined as the total well volume measured in metric tons (IATTC Res. 02-03; IATTC 2005, para. 14).

The ICCAT working group on stock assessment methods, during its 2007 and 2008 meeting, also addressed the issue and recommended that the Commission adopted the terminology included in table 1.1. (ICCAT 2008a, p. 2). The working group established by ICCAT to address fishing capacity endorsed the standardized terminology for future use (ICCAT 2008b, p. 121). However, these definitions have not been officially endorsed by the ICCAT Commission.

Table 1.1. ICCAT definition of fishing capacity and related terms (ICCAT 2008a).

Term	Definition	Comment
Capacity	Refers to the potential to catch fish.	Capacity is sometimes indexed by an indicator of vessel size (e.g. carrying capacity), and sometimes by a measure of potential output (harvesting capacity).
Harvesting capacity (Capacity output) (Fishing capacity)	The potential output (catch, F) that could be realized from a stock at a given time if all of the available fishing effort were used efficiently.	Harvesting capacity is usually greater than actual catch (or actual F).
Capacity utilization	The ratio of actual catch (or F) to harvesting capacity.	Capacity utilization would be equal to 1.0 if all of the available fishing effort were used, given the state of technology, environmental conditions, and stock size.
Carrying capacity	Usually the tonnage of fish that can be stored on the vessel when it is fully loaded, or the storage area, measured in m ³ .	Sometimes used as an indicator of the fishing capacity of a vessel under normal operating conditions.
Excess capacity	The difference between harvesting capacity and actual harvest (or F).	Excess Capacity and Capacity Utilization are closely related.
Fishing power	Refers to relative efficiency at catching or generating a relative F between gear and vessel types and over time.	Usually defined by reference to a "standard vessel".
Overcapacity	The generic term for excessive levels of capacity. It is measured by the difference between harvesting capacity and a sustainable management target.	The management target will generally change depending on stock status. For healthy stocks, it may be catch levels equal to MSY. For overfished stocks, the target will be lower catch levels that will allow for rebuilding to Bmsy.

An analysis of the recommendations adopted by RFMOs demonstrates that in general the Commissions use the term fishing capacity in connection with input-based measures to manage fishing capacity. That is for example the case of the ICCAT Recommendation on Eastern Atlantic and Mediterranean Bluefin tuna (currently Rec. 10-04), which addresses total allowable catch and national allocations and fishing capacity in different sections, considering under the latter restrictions on the number of vessels (joined by an indicator of the vessel size) that can be used in the fishery. It is also the case of conservation measures adopted by IOTC. The Commission considers among measures to manage the fishing capacity those restricting or reducing the number of vessels (usually joined by an indicator of the size of the vessel) that can be used in the respective fisheries.

Measures to Manage Fishing Capacity Covered in this Paper

The management of fishing capacity can be defined as the implementation of a range of policies and technical measures aimed at ensuring a balance between fishing inputs and production from capture fisheries (FAO 2004, p. 45). The various policies and technical measures for managing fishing capacity have been subject to different classification schemes. FAO (2008) identifies different management measures that have an impact, at least in the short term, on fishing capacity and classifies them into two groups: incentive blocking measures and incentive adjusting measures. Other authors address the measures to control fishing capacity by distinguishing between command-and-control measures and rights-based management measures (Joseph et al. 2010).

This latter approach recognizes that excess capacity is a consequence of poorly defined property rights in the fisheries (FAO 2004; Joseph et al. 2010). Therefore, establishing and strengthening a rights-based management regime will provide the right-holder with the incentives to increase economic efficiency by adjusting the fishing capacity to levels commensurate with the sustainable use of resources. These rights may take different forms, “ranging from simple participatory rights that limit the number of fishermen or vessels that may participate in a fishery to the allocation and 'ownership' of individual quotas (IQs) that can be traded among participants” (Joseph et al. 2010, p. 18). The stronger the rights, the stronger the incentives toward long-term conservation of the fish resources.

This paper follows generally this latter perspective on measures to manage fishing capacity, analyzing in Part III and IV command-and-control regulations, measures addressing participatory rights in the fisheries, and measures addressing rights to the resource. It is relevant to note that some of these measures may not always be established with the direct objective of controlling fishing capacity, but they indirectly affect capacity by creating the incentives for the right-holder to maintain or restore the balance between fishing inputs and production from capture fisheries.

Command and control regulations impose restrictions on the inputs or components of inputs (Walden et al. 2010) but do not vest the participants with rights to either access to the fishery or a share of the fish resources. Examples thereof are gear restrictions, area closures, and some vessel restrictions.

Measures addressing participatory rights include limited entry mechanisms such as closed records of vessels, and tacit or explicit allocation of total allowable fishing capacity (i.e. capacity restrictions and total effort allocations). The possibility of trading total effort allocations strengthens this rights-based management approach by providing a further characteristic of classical property rights, and allows for increased economic efficiency (Joseph et al. 2010, p.18).

Better-defined forms of rights are those that vest the participant not only with a right to participate in the fishery but also with a share of the resource (Joseph et al. 2010, p.18). Measures analyzed in this broad category are national catch restrictions, and total

allowable catch (TAC) and national allocations (including trading regulations of allocated quotas).

It should be noted that the measures mentioned above are not the only available policies or technical measures to control fishing capacity. Other tools include: licence restrictions; buyback programmes; territorial user rights (TURFs); community-based rights management; community fishing quotas and other group rights in fisheries; and taxes and resource rental charges. They have not been included in the analysis of this paper because they have not been adopted by the tuna RFMOs. Nevertheless, a brief mention of licences is included in Part III because some RFMOs have started to require CPCs to issue licences under particular conditions. Although this is not a measure to control fishing capacity in itself, it was considered relevant to include these developments in the analysis of this paper because they may lead to some stronger licence restriction schemes.

PART 2. RFMOs EFFORTS TO CONTROL FISHING CAPACITY: A BRIEF DESCRIPTION OF APPROACHES AND CURRENT DEVELOPMENTS

IATTC

IATTC has a long history in adopting conservation and management measures for the tuna stocks in the Eastern Pacific Ocean (EPO). In the late 1960s and early 1970s, it was one of the first regional fisheries management organizations establishing total allowable catches and national allocations. However, after coastal States extended their Economic Exclusive Zone, agreement on allocations became difficult and stalled the negotiation and implementation of conservation measures. This period was also marked by a decline in the fleet size that allowed for catches to be less than the recommended TACs.

Conservation measures became necessary again in 1998, and has since then relied on three main measures:

- a) Limited carrying capacity of the purse-seine fleet through a closed record of purse-seine vessels;
- b) Closed seasons and areas for purse-seine fishery targeting Yellowfin, Bigeye and Skipjack tunas; and
- c) Catch quotas for longline vessels targeting Bigeye tuna.

The pillar of the conservation approach of IATTC has been the limitation on carrying capacity of the purse-seine fleet, a process that has been supported by an IATTC Permanent Working Group on Fleet Capacity that has met 11 times between 1998 and 2011.

On October 1998, IATTC adopted a Resolution assigning individual limits on the carrying capacity of the purse-seine fleet operated by each of the 13 nations participating in the fishery (FAO 2005), with a total carrying capacity adding up to 158,837 metric tons. The measure was not extended beyond 1999. Agreement on a renewed limitation on fishing capacity was hindered by the claims by several states to increase their carrying capacity allocation considering their status as coastal States (e.g. Costa Rica, Colombia, Nicaragua, El Salvador, Guatemala, Panama, and Peru). During the June 2000 IATTC Meeting, however, States agreed to abide by the 1999 Resolution while the issue was further discussed in a new meeting of the Working Group on Capacity.

During the 2000 Meeting, IATTC also agreed to establish and maintain a Regional Vessel Record (RVR) with the vessels authorized to fish in the Eastern Pacific Ocean (Res. C-00-06). The Record was originally open to vessels of both CPCs and non-members, but Resolution C-11-06 restricted the register to vessels of CPCs only. Additionally, a list of longline fishing vessels over 24 meters (LSTLFVs) was established by Resolution C-03-07, superseded by Resolutions C-11-05.

The IATTC-RVR became a fundamental part of the architecture for the new agreement on limiting fishing capacity reached on June 2002 and adopted by Resolution C-02-03 on the Capacity of the Tuna Fleet Operating in the eastern Pacific Ocean. Resolution C-02-03

remains the main management measure for fishing capacity adopted by IATTC (details of the measure are discussed in Part III).

The Resolution on Capacity of the Tuna Fleet establishes the RVR as the definitive list of purse-seine vessels authorized to fish for tunas in the eastern Pacific Ocean, effectively establishing the participatory rights of the purse-seine vessels included in the record and excluding new purse-seine fleet. The concept involved in the RVR is that the capacity quotas apply to vessels, rather than to governments (FAO, 2005). It was originally intended that the program allowed the transfer of vessels on the list to other flags, creating a market for trading carrying capacity (FAO, 2005). However, different interpretations of the resolution in this respect have led to a difficult implementation of transfer arrangements and unresolved conflicts within IATTC.

In parallel to the Resolution limiting fishing capacity, IATTC drafted a Plan for Regional Management of Fishing Capacity (the EPO Plan) (IATTC 2005), adopted by the Commission during its 73rd meeting in June 2005. The EPO Plan was elaborated within the framework of the FAO International Plan of Action (IPOA) for the Management of Fishing Capacity and the FAO Code of Conduct for Responsible Fisheries, as required in article 2(d) of the FAO-IPOA. It was the first capacity management plan adopted by a regional fisheries body (the only other one being the plan adopted by the Lake Victoria Fisheries Organization in 2007) and the only Plan adopted by a tuna RFMO. While the objective and phased-approach to managing fishing capacity follow closely the FAO-IPOA, the plan also sets the capacity target for purse-seine fishery in 158,000 m³ of total well volume (subject to period revision).

Despite the efforts of Resolution C-02-03 and the regional plan of action, fishing capacity has continued to grow in the EPO. Current estimates consider the total well volume of vessels classified as active on the IATTC Regional Vessel Register in 213,421 m³, well above the capacity target (IATTC 2011a). In addition to that, there is further potential carrying capacity that could be added to the fishery:

- a) the capacity of inactive or sunk vessels is 12,136 m³ (IATTC 2011a);
- b) the capacity available as a result of movements of vessels on the Regional Register is 61,229 m³ (IATTC 2011a); and
- c) unused increases of carrying capacity authorized by para. 10 of Resolution C-02-03 is 9,708 m³ (IATTC 2011a).

These numbers do not consider capacity increases claimed by several States (IATTC 2011b).

The existence of excess capacity has been cited as one of the reasons of increasing difficulties in reaching agreement on more stringent conservation and management measures for the different IATTC stocks. Indeed, the program for conservation of tunas adopted by Resolutions C-03-12, Resolution C-04-09 and Resolution C-06-02 could not be renewed, and for several years negotiations on equivalent conservation measures were stalled. In June 2009, a multiannual program for the conservation of tuna in the EPO was adopted for 2009-2011. In October 2010, the multiannual program was renewed for 2011-2013. Although the multiannual program was first renewed as a non-binding

recommendation (Rec. C-10-01), it was recently adopted by the binding Resolution C-11-01.

Considering that Resolution C-02-03 has not been as effective as required in controlling increases in fishing capacity and that the agreement on and implement of effective conservation and management measures has become increasingly difficult, during the 2010 IATTC Meeting one CPC submitted a request to the scientific staff to consider a TAC system for the purse-seine and longline fishery in the eastern Pacific Ocean (IATTC 2010, Appendix 5(d)). The evaluation of the IATTC staff was presented at the 82nd IATTC Meeting that took place in La Jolla, California, 4-8 July 2011. Minutes of the meeting are not yet available.

ICCAT

ICCAT has been one of the precursors in adopting management measures for international fisheries, with the first binding management measures adopted in 1982 for Western and Central Bluefin tuna (TAC and national allocations); 1988 for Eastern Atlantic and Mediterranean Bluefin tuna (TAC and national allocations); 1993 for Yellowfin tuna (vessel restriction); 1994 for Southern Albacore (catch restriction); 1994 for North Atlantic Swordfish (TAC and national allocations) and Southern Swordfish (catch restriction); 1995 for Bigeye tuna (catch restriction); and 1998 for Northern Albacore (vessel restriction).

With the exception of the ICCAT Record of Vessels over 20 m. in length overall authorized to fish in the ICCAT area, the Commission does not have specific recommendations that deal with capacity. The issue is dealt with in a number of the species-specific recommendations (ICCAT 2009a). Several fisheries are managed by fishing capacity measures restricting or limiting the number of vessels participating in the fishery. As noted by Murua, Bruyn and Arrizabalaga (Murua et al. 2008), these measures have been adopted in a relatively ad hoc manner, seeking to cap or reduce fishing capacity to a predetermined historic level rather than scientifically determined fish capacity targets. Recently, ICCAT has undertaken several efforts to assess fishing capacity for their different fisheries, mostly by the ICCAT Working Group on Assessment Methods. The work of this group has been hindered, however, by the lack of consistent information submitted by CPCs on fishing vessels actively fishing in the Convention area and the fact that the Record of Fishing Vessels excludes smaller vessels.

Further support has been provided by the ICCAT Working Group on Fishing Capacity, which has held two meetings (July 2007 and July 2008). A third meeting has not been scheduled.

Several fisheries are managed through TAC and allocated national quotas. ICCAT has explicitly address criteria to assist in the allocation of fishing opportunities in the non-binding Resolution 01-25. The criteria are, however, ambiguous in formulation, which has resulted in a difficult implementation and source of many conflicts in the Commission (ICCAT 2009a, p. 17-18). Allocation decisions are, in theory, not permanent and can be

reviewed periodically according to changes in number and circumstances of the participants. In practice, they tend to be relatively stable.

Despite ICCAT efforts and progress, overcapacity still exists in several fisheries, particularly in the Eastern Atlantic and Mediterranean Bluefin tuna. The ICCAT Independent Performance Review Panel recommended the following measures:

- Binding recommendation on all CPCs fishing and farming in the Mediterranean to reduce both fishing and farming capacity to match the TAC of the fishery (including through the implementation of some form of tradable right or by payment of adjustment funding by members);
- Ensure that any vessels that are reduced through adjustment programs in this fishery are not relocated to other oceans to cause problems elsewhere;
- Investigate the controls that CPCs place on the activities of their nationals in terms of investment under foreign flag arrangements and whether this leads to de facto increases in capacity; and
- Revise existing process of monitoring fishing capacity, which currently relies on activities of CPCs, and development of greater monitoring and compliance capability within ICCAT.

Some steps in line with these recommendations have already been taken. Noteworthy, the current Multi-annual Recovery Plan for Eastern Atlantic and Mediterranean Bluefin tuna has adopted a novel approach aimed at reducing capacity to the fishing capacity commensurate to the allocated quotas, as recommended by the Performance Review Panel (see Part IV).

IOTC

The approach of IOTC to manage fishing capacity has been mostly to use input-based controls to the management of fishing capacity. It has established a record of vessels authorized to fish for tuna and tuna-like species in the Indian Ocean, which is limited to vessels over 24 m. in length overall, or smaller vessels fishing outside the EEZ of the Flag State (Res. 07/02). A further IOTC Record, established in 1998, is the record of active vessels fishing for tuna and tuna-like species in the Indian Ocean, which also is limited to vessels over 24 m. in length overall, or smaller vessels fishing outside the EEZ of the Flag State (currently Resolution 10/08).

A first fishing capacity restriction was adopted in 2003. By Resolution 03-01, IOTC members with more than 50 vessels on the IOTC Record agreed to freeze the number and GRT or GT of their authorized vessels larger than 24 meters length overall. In 2006 and 2007, respectively, IOTC members further agreed to restrict the number and GT of vessels of 24 meters of length overall and over, and under 24 meters if they fished outside the flag State's EEZ, to the vessels which have actively fished in the IOTC Area in 2006 (for tropical tunas) and in 2007 (for Swordfish and Albacore) (Resolutions 06/05 and 07/05, both superseded by Resolution 09/02). CPCs with small fleets are allowed to submit fleet development plans. Additionally, catch restrictions have been adopted for Bigeye tuna (Res.

05/01), and seasonal area closures have been adopted for longline and purse seine vessels (Res. 10/01).

TAC and national allocation have not been established by IOTC. However, the organization has agreed to work towards the adoption of a TAC and allocation-based scheme for managing Bigeye and Yellowfin tuna in 2012 (Res. 10-01).

The measures adopted so far have been deemed not sufficient to limit the capacity at a level commensurate with long term sustainability of fisheries. The IOTC Performance Review Panel (IOTC 2009a) recommended that IOTC established a stronger policy to eliminate excess fishing capacity. Particularly, it was recommended that:

- loopholes in the current systems of fishing capacity limitation, such as the establishment of fleet development plans and exemptions for vessels less than 24 metres, should be closed;
- IOTC explores other approaches to fisheries management, such as total allowable catch (TAC) or total allowable effort (TAE).

In relation to these recommendations, IOTC has adopted the following actions (IOTC 2011a:95):

- a) Following a recommendation of the Scientific Committee and supported by the recommendations of the Performance Review Panel, IOTC established in 2009 a working party on fishing capacity, which held two meetings (22 October 2009 and 26 October 2010). No new documents were presented to the 2010 meeting. Therefore, the Commission decided to amalgamate this working group with the Working Party on Tropical Tunas, establishing a specific theme session on fishing capacity.
- b) A technical meeting on allocation criteria held its first meeting on 16-18 February 2011. This technical meeting was considered in Resolution 2010-01 as a preparatory step for the adoption of an allocation quota system for Yellowfin and Bigeye tunas at the plenary session in 2012.

The working party found some agreement in that quota allocation system should be based on a baseline allocation structured around guiding principles, the allocation criteria and indicators that quantify each of the allocation criteria (IOTC 2011b). This baseline allocation would then be adjusted considering some correction factors. Agreement could not be reached on what the guiding principles, allocation criteria, indicators and corrective factors should be. A second technical meeting is scheduled for January 2012.

CCSBT

CCSBT approach to control fishing mortality has relied on the use of TACs and national allocations as fundamental management tool. Allocation criteria are included in the CCSBT Convention, and supplemented by the Memorandum of Understanding of the three original Members adopted in 1994. CCSBT has not developed a formal procedure to determine the

size of the allocations. In practice, allocations to new members have been determined through case-by-case negotiations. The current allocation scheme is based on a system of nominal and current allocations, mostly reflecting a temporary reduction of the Japanese allocation for 2006-2011 due to its overharvest in previous years. The pay-back ends in 2011, and therefore national quotas will have to be re-negotiated to maintain catches at sustainable levels.

The Contracting Parties have not considered controls in fishing capacity, concluding that “management measures associated with capacity reduction are best left to members’ domestic arrangements” (CCSBT 2008a). The only measure in place, which was adopted for control and compliance purposes, is the establishment of a Record of Vessels over 24 meters authorized to fish for Southern Bluefin tuna (2003), which was later modified to include all authorized vessels (2004).

The external expert who undertook the second phase of the CCSBT Performance Review disagreed with the Commissions approach of leaving fishing capacity reductions to each CPC. He recommended that CCSBT “should at very least implement the recommendations set forth in the FAO International Plan of Action on the management of fishing capacity” (CCSBT 2008b). The Commission’s response to the Performance Review was to convene a special working group to elaborate a Strategic Plan for the CCSBT (CCSBT 2008c: 6). The draft Strategic Plan presented at the 2009 Extended Commission Meeting included, *inter alia*, the goal of achieving fishing capacity commensurate with fishing opportunities (CCSBT 2009: Attachment 16). The goal was assigned a medium to low priority, and its associated actions were scheduled mostly for the second last year of the proposed 5-year action plan.

The Strategic Plan has not been adopted yet (CCSBT 2010: 6). Nevertheless the Commission agreed to discuss some of the Strategies during the 2010 Meeting, adopting several recommendations including:

- a) the recommendation that the Secretariat should develop an active vessel list based on information from the Contracting Parties and publish the list on its website; and
- b) the recommendation that the templates developed for the Compliance Committee should include questions to Flag States relating to issues of overcapacity.

WCPFC

Fishing capacity in the Western and Central Pacific Ocean was already addressed during the negotiation process leading to the adoption of the WCPFC Convention. During the fourth session of the Multilateral High Level Conference (MHLC 19 February 1999) and the third session of the Preparatory Conference for the Establishment of the Commission (PrepCon 22 November 2002), the participants urged all States and other entities concerned to exercise reasonable restraint in respect of any regional expansion of fishing effort and capacity. Compliance with these resolutions was poor, and during the fifth session of the PrepCon (3 October 2003), the participants strongly urged states, territories,

fishing entities and other entities who have continued to breach these resolutions to reduce any overcapacity they have created.

Recalling those resolutions, the second session of the WCPFC Commission adopted Resolution 2005-02, which requires developed CPCs to work together to ensure that, by 31 December 2007, beneficial owners of purse seine vessels that entered the WCPFC Convention Area after the MHLG and PrepCon resolutions reduce the overcapacity created between 1999 and 2005.

Further stock-specific management measures adopted by the WCPFC have also relied on vessels limitations and restrictions to limit fishing capacity. Catch restrictions have been adopted for three fisheries. The Commission has not adopted TAC or allocation schemes. Attempts to establish TAC or total allowable effort and national allocations have been problematic. An earlier effort (2006) was suspended; future work is scheduled but not yet undertaken.

WCPFC has adopted a comprehensive management measure for two of the main target stocks, Bigeye tuna and Yellowfin tuna. The main components of this comprehensive conservation measure, CMM 2008-01, are: purse seine effort restrictions; a FAD closure; high seas pockets (area) closure; longline catches; and capacity restrictions for other fisheries.

In the case of purse seine fishery, the measure recognizes fishing effort restrictions (fishing day restrictions) adopted by the parties of the Nauru Agreement and applicable in the EEZ, and establishes a compatible measure for the high seas by limiting the purse seine effort, expressed in days fished, to 2004 levels or the average of 2001-2004. While the two measures are meant to be complementary, it is worth noting that the vessel day scheme established in the Nauru Agreement is not only a limitation of fishing effort (expressed in days fished), but the establishment of transferable fishing effort allocations to the participating parties. Considering this different approach, the CMM 2008-01 tasks the commission with the “development of a high seas vessel day scheme (HS VDS) to be compatible with the PNA VDS to provide a common currency for managing purse seine effort” (CMM 2008-01 para. 21).

The measure also considers a fishing aggregate device (FAD) closure of 3 months in the EEZs and high seas in the area bounded by 20° N and 20° S (with the FAD closure in the high seas open to an alternative measure involving reductions on bigeye catch and several monitoring and compliance measures). Additionally, two high seas areas surrounded by EEZ (the western high seas pockets) were closed to purse-seine vessels effective on 1 January 2010.

The longline fishery is subject to catch restrictions and reductions. Other commercial fisheries are subject to a capacity restriction to the average level of the 2001-2004 period or 2004.

Despite the adoption and implementation of such measures, the expansion of purse-seine fishing in the Western and Central Pacific has not been limited. This issue was discussed at length during the 2010 Meeting, but CPCs could not agree on more stringent measures for Bigeye tuna or tropical tunas. Participants only agreed to discuss during their next meeting in December 2011 an enhanced measure to conserve and manage tropical tunas on the basis of the advice provided by the Scientific Committee and the Compliance Committee, which shall be designed to deliver a substantial improvement in the status of the WCPO Bigeye stock, and promote the conservation and management of Skipjack and Yellowfin (WCPFC 2010b).

It should be mentioned that the parties to the Nauru Agreement have agreed on establishing a vessel day scheme applicable to longline fleet, in addition to the existing scheme for the purse seine fishery. During 2011, the parties have undertaken a monitoring and reporting trail, and full implementation of the longline vessel day scheme is expected to come into force on 2011 or 2012 (PNA 2011). These new arrangement will probably influence further developments in the WCPFC management approach.

WCPFC has not established a special working group or other subsidiary body to specifically address management of fishing capacity. However, this issue has been included in the Strategic Plan 2011-2013 adopted during the 7th Session of the Commission in December 2010 (WCPFC 2010b, p. 183). The Strategic Plan was adopted “as a living document that will incorporate the ongoing work of the Commission’s subsidiary bodies and Annual Sessions.” The content of the Strategy with respect to fishing capacity is, however, rather broad. It reiterates, now as an operational activity of the Commission, the obligations already included in the WCPFC Convention: prevent or eliminate overfishing and excess fishing capacity, and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of fishery resources. Another related operational activity included in the Strategy requires the adoption and implementation of a capacity development strategy for nationals from developing States, particularly SIDS and territories. The Plan also has scheduled work on allocation schemes and mechanisms for 2012 and 2013.

PART 3. RECORDS OF VESSELS AND FISHING LICENCES

I. RECORDS OF VESSELS

IATTC, ICCAT, IOTC, WCPFC and CCSBT have different records of vessels that, for analysis purposes, will be categorized as: records of authorized vessels, records of active vessels, and records of vessels.¹

Type	IATTC	ICCAT	IOTC	CCSBT	WCPFC
Record of Authorized vessels	Regional Vessel Register	Record of vessels over 20 m	Record of Vessels	Record of vessels authorized to fish for South. BFT	Record of Fishing Vessels
	Positive List of Large-scale Longline Fishing vessels				
Stock-specific Vessels Records		Record of BFT Catching Vessels			
		Record of BFT Other Vessels			
		Record of Mediterranean SWO Vessels			
Record of Active Vessels			Record of licensed foreign vessels fishing for tuna and SWO in the IOTC area		
			IOTC Record of Active Vessels fishing for tuna and SWO in the IOTC Area		

A) Record of Authorized Vessels

All RFMOs have a Record of Authorized Vessels (positive lists). These records have been established as a tool to prevent and eliminate IUU fishing: they are used by Members to identify whether vessels are operating legally in the fishery and/or whether fish being landed or imported has been taken by a vessel that is authorised to fish. Vessels not included in the Records are generally *deemed* not to be authorized to fish for, retain on board, tranship or land tuna and tuna-like species in the respective RFMO area.

With the important exception of the IATTC Regional Vessel Register with respect to its purse seine fleet (analyzed in detail below), the records of authorized vessels do not

¹ Some RFMOs also have records of carrying vessels, authorized ports, Bluefin tuna farming facilities, and Bluefin tuna traps. These are not included in this analysis. The IOTC Record of licensed foreign vessels fishing for tuna and Swordfish in the IOTC area is also not analyzed.

represent a capacity management measure. They are open records and the CPCs can add or modify the vessels on the record at any moment. However, they may play a role with respect to fishing capacity because:

- they may allow assessment of overcapacity;
- they may serve as an initial basis for reduction of capacity; and
- they may provide a basis to assess compliance with conservation and management measures establishing a reduction on fishing capacity (effort).

All these Registers include vessels *authorized* to fish for tuna and tuna-like species in the respective RFMOs Convention Area, as opposed to vessels *actively fishing* for those species. Some of these records allow the registration of vessels under construction or acquisition process and for which fishing authorizations are under administrative procedure (IOTC). In other cases, these are not subject to registration, although some CPCs have presented them to the respective RFMO (WCPFC).

The Records vary in the type of vessels that must be registered. While initially most RFMOs restricted the registration to vessels 24 meters in length overall or greater, gradually they have either reduced the length of the vessels in need of registration (ICCAT, Rec. 09/04 reduces the length to 20 m), or eliminate this limitation altogether (CCSBT, Decision adopted in 2004). IATTC considers all vessels in its Regional Vessel Record, but only longline fishing vessels over 24 m in length overall are included in the separate positive list of large-scale tuna longline fishing vessels.

Most RFMOs require the registration of the vessels authorized in the Convention Area (which includes high seas and areas under national jurisdiction) without consideration to the area of operation of the respective vessel. Exceptions thereof are IOTC and WCPFC. IOTC has different registration conditions for vessels fishing exclusively inside the EEZ of the Flag State, requiring in this case the registration of large vessels only. WCPFC does not require registration of vessels operating in the EEZ of the Flag State.

The information requested to register vessels in the RFMOs Record of Vessels is, with few and minor exceptions, equivalent (see table 3.2). Noteworthy, the WCPFC and IATTC records of vessels contain a much more detailed description of the vessel and its characteristics, including information on: technical characteristics of the vessel (beam, moulded depth, power of main engine(s); carrying capacity, including freezer type, capacity and number, fish hold capacity and capacity of freeze chambers. The WCPFC Record also includes information on vessel communication types and numbers (Inmarsat A, B and C numbers and satellite telephone number), and information on the master and normal crew complement.

Table 3.1. RFMOs Records of Authorized Vessels: Summary of main characteristics

RFMO	IATTC	IATTC	ICCAT	IOTC	CCSBT	WCFCPC
Conservation measure	Resolution C-11-06 (superseding Res. C-00-06)	Resolution C-11-05 (superseding Res. C-03-07)	Rec. 2009-08 (superseding Rec. 2002-22 and Rec. 2000-17)	Res. 07/02 (superseding Res. 05/02, Res. 02/05, and para. 1 Res. 01/02)	Res. (2008) on amendment of the Res. on IUU and establishment of a CCSBT Record of Vessels over 24 m. authorized to fish for Southern BFT (2003)	CMM 2009-01 (CMM 2004-01)
Scope of record	All vessels	Longline fishing vessels larger than 24 meters overall length (LSTLFVs)	Vessels 20 m. in length overall or greater (LSFVs)	Vessels larger than 24 m. in length overall or Vessels less than 24 m. in length overall operating outside the EEZ of the Flag State	All vessels	All vessels
Title for registration	Authorized to fish in the Antigua CA for species covered by the Convention	All LSTLFV on the IATTC Regional Vessel Register	Authorized to fish for tuna and tuna-like species in the CA	Authorized to fish for tuna and tuna-like species in the IOTC Area Includes authorizations currently foreseen under administrative process	Authorized to fish for South. BFT	Authorized to fish in the CA beyond the national jurisdiction of the member of the Commission whose flag the vessel is flying
Consequence of the registration		LSTLFVs not include in the LSTLFV Record are deemed not to be authorized to fish for, retain on board, tranship or land tuna and tuna-like species in the EPO	Large scale fishing vessels (20 meters in length or greater) not entered into the record are deemed not to be authorized to fish for, retain on board, tranship or land tuna and tuna-like species	Vessels not included into the Record are deemed not to be authorised to fish for, retain on board, tranship or land tuna and tuna-like species	Fishing vessels not entered into the Record are deemed not to be authorized to fish for, retain on board, tranship or land Southern BFT	Any vessel not included in the WCPFC Record shall be deemed not to be authorized to fish for, retain on board, tranship or land highly migratory fish stocks in the CA beyond the national jurisdiction of its Flag State
Amendments to record	CPCs shall promptly notify the Director of: - any modifications to the information provided - additions to the record - deletion from the record	CPCs shall notify the Director of any changes affecting the LSTLFV List at any time they occur		CPCs shall promptly notify any addition to, or deletion from, and/or modification of the IOTC Record at any time such changes occur		Additions, changes of information or deletions have to be notified within 15 days or in any case 72 hours before commencement of fishing activities in the CA

Publicity of record		Director shall ensure publicity of the LSTLFV List, including placing it on the IATTC website, in a manner consistent with confidentiality requirements of the pertinent CPCs	ICCAT Secretariat shall take any measure to ensure publicity of the Record and through electronic means, including placing it on the ICCAT website, in a manner consistent with confidentiality requirements noted by CPCs	IOTC Secretariat shall take any measure to ensure publicity of the Record and through electronic means, including placing it on the IOTC website, in a manner consistent with confidentiality requirements noted by CPCs	CCSBT Secretariat shall take any measure to ensure publicity of the Record and through electronic means, including placing it on the CCSBT website, in a manner consistent with confidentiality requirements noted by the Members and cooperating non-members	Executive Director shall ensure that due publicity is given to the Record and the Register including making its content available through an appropriate website
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Table 3.2. RFMOs Records of Authorized Vessels: Summary of information included in the register

IATTC (RVR and LSTLFVs Record)	ICCAT	IOTC	CCSBT	WCFC
Name	Name	Name	Name	Name
Registration number	Register number	Register number	Register number	Registration number
				WCPFC Identification number (WIN)
	(*)	IMO number if available		
Previous names (if known)	Previous name (if any)	Previous name (if any)	Previous name (if any)	Previous name (if known)
Previous flag (if known and if any)	Previous flag (if any)	Previous flag (if any)	Previous flag (if any)	Previous flag (if any)
	Previous details of deletion from other registries (if any)	Previous details of deletion from other registries (if any)	Previous details of deletion from other registries (if any)	
International radio call sign (if any)	International radio call sign (if any)	International radio call sign (if any)	International radio call sign (if any)	International radio call sign
Port of registry		Operating port		Port of registry
	Type of vessel	Type of vessel	Type of vessel	Type of vessel
Name and address of owner or owners Name and address of operator(s) and/or manager(s) (if any)	Name and address of owner and operator	Name and address of owner and operator	Name and address of owner and operator	Name and address of owner or owners
Type of vessel (only for RVR)				
Type of fishing method or methods	Gear(s) used	Gear(s) used	Gear(s) used	Type of fishing method or methods
Length	Length	Length	Length	Length (specify type and metric)
GT	GRT and, where possible, GT	GT	GRT	GRT or GT
Moulded depth				Moulded depth (specify metric)
Beam				Beam (specify metric)
Power of main engine or engines				Power of main engine or engines (specify metric)
Freezer type, freezer capacity, and number and capacity of fish holds, in cubic meters				Carrying capacity, including freezer type, capacity and number, fish hold capacity and capacity of freeze chambers (specify metrics)
The nature of the authorization to fish granted by the flag CPC (such as main target species)	Time period(s) authorised for fishing and/or transshipping	Time period(s) authorised for fishing and/or transshipping	Time period(s) authorised for fishing and/or transshipping	The form and number of the authorization granted by the flag States concluding any specific areas, species and time periods for which it is valid
				Name and nationality of the master
				Vessel communication types and

				numbers (Inmarsat A, B and C numbers and satellite telephone number)
Photograph of the vessel showing its registration number				Colour photograph of the vessel
Where and when built				Where and when the vessel was built
				Normal crew complement

(*) ICCAT Circular 202/07 requests Contracting parties to provide IMO numbers and explain how this issue is dealt with at the domestic level. This has been a response to the Kobe process and the initiative to establish a global record of authorized tuna vessels (positive list). The requirement is not mandatory.

IATTC Regional Vessel Register and Purse-Seine Capacity Restrictions

While most records of vessels or positive lists serve monitoring and compliance purposes, the IATTC Regional Vessel Register (RVR) has evolved into a fishing capacity restriction – and indeed a limited entry regime – for its purse-seine fleet. By Resolution C-02-03 03 on the Capacity of the Tuna Fleet Operating in the Eastern Pacific Ocean, the CPCs agree to use the RVR as the definitive list of purse-seine vessels authorized by the participants to fish for tunas in the EPO, provided that the vessels had fished before 28 June 2002.

The Resolution prohibits the entry of new vessels (i.e. vessels not included in the Register) to the EPO purse-seine fleet. Vessel replacements are allowed provided that the total capacity of any replacement vessel or vessels does not exceed that of the vessel or vessels replaced. The same rule applies to increases in capacity of existing purse-seine vessels.

Although the Resolution on Capacity effectively freezes the well capacity of the purse-seine fishing fleet authorized to operate in the Eastern Pacific Ocean to the levels of 28 June 2002, it has some exceptions that allow for an increase in the well capacity for a number of states. These include:

- a) a limited well capacity increase for five States (Costa Rica, Nicaragua, El Salvador, Peru and Guatemala) for a total of 30,420 m³;
- b) a special exception for 32 USA vessels authorized and licensed to fish in other areas of the Pacific Ocean under an alternative international fisheries management regime, and that may occasionally fish to the east of 150° West (subject to several conditions and monitoring measures).

Some CPCs maintain claims for increased capacity allocation, most of which are still pending resolution by the Commission (Res. C-02-03 footnote and IATTC 2011b). The Commission recently granted Peru's request to utilize 5,000 m³ of the 14,046 m³ in the footnote to Resolution C-02-03 by vessels flying the Peruvian Flag and operating within marine areas under the jurisdiction of Peru (IATTC 2011b and Res. C-11-12).

The IATTC limited entry regime for the Eastern Pacific purse-seine fleet is unique in that it is implemented by, and directly linked to, the closed record of vessels administered by the IATTC Secretariat as instructed by the Commission. This allows that the capacity quotas apply to vessels, rather than to governments (FAO, 2005). Other vessel limitation schemes leave to each CPC the implementation of the agreed limitation or reduction of fishing capacity (as will be seen in Part IV).

It was originally intended that the program allowed the transfer of vessels on the list to other participants (i.e. CPCs), thereby allowing the nation to which the vessels transfers to increase its capacity by the amount of the transferred vessel, but requiring the nation from which the vessel was transferred to reduce its capacity by that amount (Joseph et al. 2007, p. 166). In other words, the scheme not only limited fishing capacity but also created a market for trading capacity (Joseph et al. 2007). In practice, and particularly during the first years of implementation of the measure, the implementation of the transfer of vessels and capacity has been difficult due to differing interpretations (Joseph et al. 2007, p. 166)

and lack of clearly defined procedures (IATTC 2011a). Unresolved claims are still pending resolution by the Commission (IATTC 2011b).

In addition to transfer of vessels and capacity to another CPC, the Commission has also had some cases of CPC transferring available capacity to another CPC (IATTC 2011a, p. 4). The possibility of lending available capacity has been informally discussed but not implemented (IATTC 2011a, p. 4), although two CPCs seem to have finalized such arrangements (IATTC 2011c, p. 15). Some CPCs have expressed concern about arrangements for 'lending' capacity and have requested further discussion of the issue (IATTC 2011c, p. 15).

B) ICCAT stock-specific record of vessels

ICCAT has established two independent stock-specific records of fishing vessels authorized to fish for Mediterranean Swordfish and for Eastern Atlantic and Mediterranean Bluefin tuna. The Mediterranean Swordfish record of vessels in turn was established as part of the Framework for the Sustainable Exploitation of this stock (Rec. 09-04, p. 4-6). The Bluefin tuna records of vessels support the comprehensive Multi-Annual Recovery Plan (Rec. 08-05, para. 54-56).

ICCAT Record of Vessels authorized to fish for Mediterranean Swordfish

The Mediterranean Swordfish Record of vessels is a list of all the vessels authorized to catch Swordfish in the Mediterranean Sea, without restrictions on size. It is, therefore, more comprehensive than the ICCAT Record of Authorized vessels (which is restricted to vessels over 20 m. length overall). CPCs have to submit the list before 31 August each year. Vessels not included in the list are deemed not to be authorized to catch, retain on board, tranship, transport, process or land Swordfish. The list is open and CPCs can modify it or add vessels. It is not clear from the Recommendation if those additions or changes can be made any time throughout the year.

ICCAT Record of Vessels authorized to fish for Eastern Atlantic and Mediterranean Bluefin tuna

The Bluefin tuna Record of Vessels consists actually of two lists:

- a) Record of BFT Catching Vessels: the Commission shall establish and maintain an ICCAT record of all catching vessels authorized to fish actively for Bluefin tuna in the eastern Atlantic and Mediterranean Sea (catching vessel being defined as the vessel used for the purposes of the commercial capture of Bluefin tuna resources);
- b) Record of BFT Other Vessels: the Commission shall establish and maintain an ICCAT record of all other fishing vessels (i.e. catching vessels excluded) authorized to operate for Bluefin tuna in the eastern Atlantic and Mediterranean Sea.

The registration in the record is not limited by the size of the vessel and therefore is more comprehensive than the ICCAT Record of Authorized Vessels.

Vessels not included on these lists are deemed not to be authorized to fish for, retain on board, tranship, transport, process or land Bluefin tuna in the eastern Atlantic and

Mediterranean Sea. Additionally, a vessel cannot be included in both lists during the same calendar year.

The lists of vessels shall be communicated to the ICCAT Executive Secretary before the beginning of the fishing season or before March of every year (as appropriate). Retroactive submissions are not accepted, nor are changes to the submitted list within the year for which it was presented. The only exception thereof is the case of fishing vessels included on the lists and that are prevented from participation due to legitimate operational reasons or *force majeure*, and provided that the CPCs submit to the Executive Secretariat:

- a) full details of the intended replacement fishing vessel(s) referred to in paragraph 54; and
- b) a comprehensive account of the reasons justifying the replacement and any relevant supporting evidence or references.

Thus, the Record limits the entry of new vessels to the fishery for one fishing season.

C) Records of active vessels

The Kobe Process has highlighted the importance of collecting information on vessels actively fishing for tuna-stocks, in addition to the records of authorized vessels. The second and third Kobe Meetings (2009 and 2011, respectively) and the International Workshop held in Brisbane (2010) recommended that tuna RFMOs:

- a) Establish a record of vessels, by gear type, actively fishing for stocks under its jurisdiction by 2013;
- b) Develop a global register of active vessels with contributions of the five RFMOs;
- c) Include only vessels of their active vessel register in any scheme for reducing capacity (as appropriate).

Four tuna RFMOs have adopted mechanisms to gather information on the active vessels fishing in their respective Convention Area:

- WCPFC requires a specific indication of the status of the vessel (active/non active) for the vessels registered in the WCPFC Record of Vessels;
- IOTC has established a separate Record of Active Vessels;
- ICCAT requests information on active vessels for two tuna stocks: Northern Albacore and Mediterranean Swordfish; and
- IATTC considers “non-active” purse seine vessels in the Regional Vessels Record.

Additionally, as mentioned in Part I, CCSBT has recommended that the Secretariat develop an active vessel list based on the information from the CPCs, and publish the list on the CCSBT website.

WCPFC active vessel information

WCPFC requires each CPC to submit, before 1 July of every year, a list of all vessels included in the WCPFC Record at any time during the preceding calendar year (including its WCPFC Identification Number) and the indication of whether each vessel fished for highly

migratory fish stocks in the Convention Area beyond its area of national jurisdiction (expressed as (a) fished or (b) did not fish).

IOTC Record of Active vessels

The record was first established through Resolution 98/04, modified by Resolution 05/04, superseded by Resolution 07/04 and currently considered in Resolution 10/08 Concerning Record of Active Vessels Fishing for Tunas and Swordfish in the IOTC Area.

IOTC requests all IOTC members and cooperating non-contracting parties to notify to the Commission no later than 15 of February of each year, a list of the vessels larger than 24 m. in length, and vessels less than 24 m. operating in waters outside the EEZ of the Flag State, that were active in the IOTC Area during the previous year.

The information to be provided is similar to the information required for the IOTC Record of Authorized vessels, but includes, additionally, the main target species and the period of the respective fishing authorization.

As in the case of the Record of Authorised Vessels, the IOTC Secretary shall maintain the IOTC Record of Active Vessels and take any measure to ensure its publicity through electronic means, including placing it on the IOTC website, in a manner consistent with confidentiality requirements noted by CPCs.

ICCAT Mediterranean Swordfish: information on active vessels

Recommendation 09-04, in addition to establishing a special record of authorized vessels for Mediterranean Swordfish, requests CPCs to communicate to ICCAT Secretariat, no later than 30 June each year, the list of fishing vessels that were authorized to carry out pelagic longline

fishery for highly migratory pelagic species in the Mediterranean during the preceding year. Although the requirement considers authorized, rather than active vessels, the information that needs to be provided for each vessel includes information on their fishing activity, including:

- a) Period(s) fished and total annual number of fishing days by fishery (i.e. by target species and area);
- b) Geographical areas, by ICCAT statistical rectangles, where fishing by fishery was carried out;
- c) Number of hooks used by fishery;
- d) Number of longline units used by fishery; and
- e) Overall length of all longline units by fishery.

ICCAT Northern Albacore

In order to ensure compliance with a limitation of fishing vessels adopted by Recommendation 98-8, this Recommendation requires CPCs to submit by 1 June 1999, the list of vessels, exclusive of recreational vessels, participating in a directed fishery for Northern Albacore in the years of 1993-1995. Additionally, it requires CPCs to submit, by 1 June every year thereafter, the list of vessels which will participate in a directed fishery for this stock.

IATTC Active and Non-Active Purse-seine vessels

Resolution C-02-03 allows CPCs to notify the IATTC Director of any purse-seine vessel operating under its jurisdiction and listed on the Register that will not fish in the EPO in that year. Any vessel identified pursuant to this paragraph shall remain on the Register as “inactive” and shall not fish in the EPO in that year.

The purpose of these “inactive” designation, in the context of a closed Regional Vessel Records that effectively limits the participation of new vessels, is to allow the CPC to substitute it with another purse-seine vessel or vessels on the Register to make use of the “inactive” capacity, provided that the total “active” capacity of purse-seine vessels flying the flag of that participant in any year does not exceed the capacity listed for such vessels on the Register as of 28 June 2002.

Effects of the Active Vessels Record or Indication of Active Vessels

In most cases, the records of active vessels request information on fishing activity for the previous year. Thus, they are not in themselves limitations to fishing capacity. However, they allow to monitor compliance with vessel restrictions, and to obtain more accurate data on the real, rather than latent, level of fishing capacity in the area.

IOTC Resolution 10/08 explicitly states that the IOTC Secretary shall compile a report on the information submitted by the CPCs, which objective is to provide an objective evaluation of level of compliance to the Record resolution and other resolutions by IOTC. The IOTC Compliance Committee shall evaluate the report of the Secretary and make appropriate recommendations to the Commissions on actions to be pursued against non-complying CPCs.

Similarly, the ICCAT Recommendation 98-08 states that the requirements to submit information on active vessels participating in a directed fishery for Northern Albacore in 1993-1995, and on a yearly basis afterwards, are for purpose of controlling compliance with the fishing capacity restriction.

Exceptions thereof are: the ICCAT Northern Albacore list of active vessels, which requires the identification of the active vessels for the following fishing season; and the IATTC designation of non-active vessels, which has been included to allow some flexibility in the use of the well capacity of the purse seine fleet authorized in the Regional Vessel Register.

D) Implementation Issues for RFMOs Records of Vessels

The establishment and maintenance of records of authorized or active vessels has faced some difficulties and challenges that are summarized below. Although some of them may be particular to one of the registers described above, they mostly have the potential to arise in the development of any register of vessels.

d.1. Submission of information

A common problem for all RFMOs is the CPCs failure to submit timely and complete information. For example, ICCAT noted that the Commission has not adopted any standard format or coding system for the collection of this information, and hence the information is not standardized, rendering it very difficult to maintain a coherent database (ICCAT 2008c, p. 295-6).

IOTC has consistently noted low level of compliance with submission of required information (IOTC 2009c; IOTC 2010a; IOTC 2011c). The Committee on Compliance further expressed its concern that some members have not provided all the data required by Resolution 07/04 on the IOTC List of Active Vessels for the years 2006 through 2008, and noted that this non-compliance affects the ability of the Commission to meet the objectives of Resolution 09/02 concerning the limitation of fishing capacity for vessels targeting tropical tunas, and Swordfish and Albacore (IOTC 2010a, p. 38).

IOTC also noted that CPCs do not submit information on: time period that the vessels are authorized for fishing or transshipping; GT of vessels (volume is informed as Gross Tonnage (GT) instead); information concerning the length overall of some of their authorized vessels. The majority of reporting CPCs also fail to disclose the target species for their active vessels (IOTC 2011c).

The WCPFC Secretariat, in turn, noted that submissions to the WCPFC Record of Vessels (CMM 2004-01 and CMM 2009-01) are often incomplete. Although the submissions have been improving with respect of the completeness of the reports, there are still some CPCs submitting only 50% of the required information (WCPFC, 2010c). Information on the status of the fishing vessel (active/non active) is an aspect particularly missing from the CPCs' reports. Indeed, as of 7th Sept. 2010, only twelve (12) CPCs had submitted their report on their authorized vessels which fished and did not fish in the WCPFC Convention Area during calendar year 2009 (WCPFC 2010c, p. 6).

d.2 Interpretation of the conservation and management measures

Some difficulties have also arisen from the interpretation of specific aspects of the Resolutions and Conservation and Management Measures adopting the records of active vessels.

In the case of ICCAT, an aspect of the Bluefin tuna record of catching vessels that came to the attention of ICCAT is that CPCs had different interpretation on which vessels should be included. Some included only vessels for which Bluefin tuna is a target species, while others including both vessels fishing for Bluefin tuna and those catching Bluefin tuna as by-catch (ICCAT 2007b, p. 217). The different interpretations led to difficulties on adopting the Record as a basis for freezing capacity (ICCAT 2008b, p. 122).

In the case of WCPFC, a specific issue noted in the implementation of its Record of Vessels is the wish of some CPCs to register “rights based authorities without vessel names” (WCPFC 2011c, p. 5). It should be noted that IOTC explicitly accepts registration of authorizations corresponding to vessels under construction.

In the IOTC, some CPCs have expressed concerns over the absence of a definition for the term “Operating Port”. They have, therefore, opted to provide information on the port of registration for their vessels as an alternative (IOTC 2011c).

d.3 Definition of “active” vessel

The 2010 Brisbane Conference recommended that RFMOs develop publicly available authorised and active vessel lists for all gears (Joint Tuna RFMOs 2010). However, it was left to each RFMO to determine what should be considered active vessels. The concept of “active” vessel has not been explicitly discussed during the negotiations establishing the respective record of active vessels.

The IOTC Secretariat has noted that some cases, CPCs do not fully appreciate the difference in the list of active vessels and the record of authorized vessels. Some CPCs continue to submit their authorised vessels list as their active vessels list (IOTC 2011c). As noted above, few WCPFC CPCs include information on the status (active/non active) of their vessels (WCPFC 2010c, p. 6). The IATTC Secretariat has also reported some technical problems with the language on inactive vessels in the Resolution, and that the drafting could be improved (IATTC 2011a, p. 4).

d.4. Authorities of the Executive Secretariat

An aspect of the record that has raised further difficulties is the lack of clarity on the authority of the Executive Secretary of each RFMO to accept and reject CPCs information for registration in the Record of Vessels, or to control that the vessels included in the Registry comply with the general requirements agreed by the Commission (including potential restrictions on number or size of vessels that can be registered).

WCPC (WCPFC 2010c, p. 2) has noted that there are no directions or clear authority for the Secretariat on:

- minimum data requirements prior to posting a vessel on the RFV (incomplete data submission); and
- allowed actions by the Executive Director when a vessel on the RFV is found on another RFMO IUU list.

IOTC has faced similar problems. The Commission, by recommendation of the Compliance Committee, has authorized the Secretariat to directly contact the CPCs that are missing mandatory data for their vessels (IOTC 2007, p. 9). However, only a few CPCs responded to the Secretariat requirement (IOTC 2011c).

Similarly, IATTC has recently included a provision in the Resolution (Amended) on Regional Vessel Record (Res. C-11-06) allowing the Director to request each CPC to provide complete data for its vessels, if the CPC does not provide all the information required in the amended Resolution.

II. LICENCES OR AUTHORIZATIONS

None of the RFMOs issue licences or authorizations to the vessels operating for the fishery and in the Area of the respective Conventions. Licensing and authorizing fishing vessels to engage in fishing activities is considered a matter under the sovereignty or sovereign rights of the coastal and Flag states. RFMOs require, however, that CPCs submit information on the form and nature of the authorization to fish granted to the vessel or, at least, the time period(s) the vessels has been authorised to fish and/or tranship (see Record of Vessels, and particularly table 3.2).

Furthermore, the RFMO decisions establishing records of fishing vessels and some conservation and management measures include some obligations for CPCs with respect to authorizations or licenses issued to vessels engaging in fishing activities in the respective Convention Area. Those decisions are:

- a) IOTC Resolution 2007-02 concerning the establishment of an IOTC Record of Vessels Authorised to Operate in the IOTC Area;
- b) CCSBT 2008 Resolution on amendment of the Resolution on “Illegal, Unregulated and Unreported Fishing (IUU) and Establishment of a CCSBT Record of Vessels over 24 meters Authorized to Fish for Southern Bluefin Tuna”
- c) WCPFC CMM 2009-01 on Record of Fishing vessels and Authorization to Fish;
- d) ICCAT Recommendation 09-08 concerning the establishment of an ICCAT Record of Vessels 20 meters in length overall in the Convention Area;
- e) ICCAT Recommendation 09-04 for a Management Framework for the Sustainable Exploitation of Mediterranean Swordfish and Replacing ICCAT Recommendation 08-03; and
- f) IATTC Resolution C-11-05 (Amended) on the establishment of a List of Longline Fishing Vessels over 24 meters authorized to operate in the EPO.

Only one of these decisions explicitly requires the issuance of a special licence or authorization to fish: ICCAT Recommendation 09-04 for a Management Framework for the Sustainable Exploitation of Mediterranean Swordfish requires CPCs to grant special fishing permits to vessels authorized to participate in pelagic longline fisheries for highly-migratory pelagic stocks in the Mediterranean for each fishery (i.e. by target species and area).

Other decisions include requirements on fishing authorizations that restate general obligations of Flag State obligations under current international law. They include the need to:

- a) authorise the fishing vessels to operate in the Convention Area (for the species regulated) only if they are able to fulfil in respect of these vessels the requirements and responsibilities under the Convention or Agreement and its conservation and management measures;
- b) take necessary measures to ensure that their fishing vessels comply with all the relevant conservation and management measures;
- c) take necessary measures to ensure that their fishing vessels on the RFMOs' Record keep on board valid certificates of vessel registration and valid authorisation to fish and/or tranship;
- d) ensure that the fishing vessels have no history of IUU fishing activities or that, if those vessels have such history, the new owners have provided sufficient evidence demonstrating that the previous owners and operators have no legal, beneficial or financial interest in, or control over those vessels;
- e) ensure, to the extent possible under domestic law, that the owners and operators of their fishing vessels on the RFMOs' Record are not engaged in or associated with tuna fishing activities conducted by fishing vessels not entered in the Record in the Convention Area (for the species regulated); and
- f) take necessary measures to ensure, to the extent possible under domestic law, that the owners of the fishing vessels on the RFMOs' Record are citizens or legal entities within the flag CPCs so that any control or punitive actions can be effectively taken against them.

Further details on the content of the authorization are given included in WCPFC CMM 2009-01 on the Record of Fishing Vessels and Authorizations to Fish. According to the provisions of this CCM, the authorizations shall set forth *inter alia* the specific areas, species and time periods for which the authorization is valid and the permitted activities by the vessel. A specific obligation on fishing capacity management is also included in this CMM: CPCs have the obligation to “*undertake to manage the number of authorizations to fish and the level of fishing effort commensurate with the fishing opportunities available to that member in the Convention Area.*”

The reports of the WCPFC Compliance Committee, however, do not address how the CPCs have complied with these obligations, and in particular with the obligation to manage the number of their authorizations to fish and the level of fishing effort commensurate with available fishing opportunities.

PART 4. CONSERVATION AND MANAGEMENT MEASURES DIRECTLY OR INDIRECTLY ADDRESSING FISHING CAPACITY

I. SUMMARY OF MEASURES IN PLACE

Table 4.1 presents a summary of the management measures adopted by the tuna RFMOs. As noted in the Introduction, the measures range from command-and-control measures to measures establishing elements of, or strengthening, right-based management regimes (including participatory rights and rights to a share of the resource).

The measures adopted include stock-specific, gear-specific, and multi-stock management measures. They range from single measures to comprehensive rebuilding or management plans that consider an array of different measures to manage fishing mortality. A particular section addresses fisheries that are managed through both vessel and catch restrictions.

Table 4.1 Summary of measures in place

RFMO	Stock	Vessel restriction	Gear Restriction	Catch restriction /TAC	Area closure
IAATC	Purse-seine fleet (YFT, BET, SKJ)				
	Long-line fleet BET				
IOTC	Tropical tunas				
	BET				
	ALB and SWO				
CCSBT	Southern BFT				
WCPFC	Pacific BFT				
	North Pacific ALB				
	South Pacific ALB				
	Southwest Striped Marlin				
	North Pacific Striped Marlin				
	BET and YFT– purse seine				
	BET and YFT– long line				
	BET and YFT – other commercial fishery				
	South Pacific SWO				
ICCAT	Northern ALB				
	Southern ALB				
	Eastern and Mediterranean BFT				
	Western and Central BFT				
	BET				
	YFT				
	North Atlantic SWO				
	Mediterranean SWO				
	South Atlantic SWO				

II. VESSEL AND GEAR RESTRICTIONS

The most common form of fishing capacity management consists in the freezing of the number of vessels (usually joined by an indicator of the vessel size) to the existing level at a certain reference period. In some cases, CPCs agree to reduce the fishing capacity (expressed in terms of number of vessels) by a certain percentage from the existing level at the reference period.

The reference period is usually determined, but flexible in that the States can choose their best result from two or more periods (for example: the average of a short-term history (last 5 years), the most recent year, or the best year within a short-term period). However, in some cases references were made to undefined concepts such as “recent” levels of fishing effort.

Restrictions are usually expressed in terms of number of vessels, often joined by an indicator of the size of the vessel. The most common indicator is Gross Tonnage or Gross Registered Tonnage. Fishing days has also been used. In some cases, the conservation measures require CPCs to limit fishing capacity or fishing effort without providing a specific parameter, which is therefore left to the discretion of each CPC implementing the measure. One of those cases is IATTC resolution C-05-02 limiting fishing effort on Northern Albacore. Noting the difficulties associated with the term used in the resolution, the IATTC staff has repeatedly requested the Commission to work on an operational definition of “current levels of fishing effort”. The Commission has yet to tackle this recommendation.

While the specific fishing capacity limit is sometimes determined with the information already submitted to the Commission, and even explicitly stated as part of the decisions, in many cases the information has not (yet) been submitted. Retroactive submissions are usually not prohibited. This has sometimes become a problem. For example, during the 2011 IOTC Commission meeting it was noted that some CPCs had still not reported the reference capacity of their active fleets targeting tropical tunas in 2006 and Swordfish and Albacore during 2007 (IOTC 2011a).

All conservation measures establishing vessel restrictions (except the ICCAT Yellowfin tuna Recommendation 93-4) consider exceptions to those restrictions. In the case of WCPFC, a general provision included in all resolutions states that the limitations shall not “prejudice the legitimate rights and obligations of those small island developing State Members and participating territories in the Convention Area seeking to develop their own domestic fisheries.” In other cases, exceptions apply to: CPCs with a limited number of fishing vessels in the fishery; CPCs with small catches in the fishery; CPCs applying alternative measures and particularly Individual Transferable Quotas to manage the fishery; or artisanal fisheries.

Table 4.2 contains a comparison of the vessel restrictions adopted for different fishery resources by the selected tuna RFMOs, highlighting the three main features of such a measure: the indicator of fishing capacity, the reference period, and exceptions (if any).

Some RFMOs have adopted restrictions to the fishing gears. In most cases, these measures prohibit the use of driftnets in the high seas, consistent with the United Nations General Assembly Resolutions. In other cases, they prohibit the use of Fishing Aggregating Devices (FADs) during a certain period of the fishing season. Table 4.3 summarizes the fishing gear regulations adopted by tuna RFMOs.

Table 4.2. Comparison of vessel restrictions adopted by tuna RFMOs

Measure	Fishing Capacity indicator	Reference period	Exceptions
IATTC- purse seine vessels Res. C-02-03	Well volume of purse-seine vessels. Regional Vessel Register (RVR) is the definite list of purse seine-vessels authorized (see part III for details on the purse seine RVR)	Vessels that have fished in the EPO before 28 June 2002	- Following participants may add purse-seine vessels to the Register after 28 June 2002, within the following limits: Costa Rica 9,364 m³ El Salvador 861 m³ Nicaragua 5,300 m³ Peru 3,195 m³ - Guatemala may increase its purse-seine fleet by 1,700 m³ within 2 years - A limit of 32 US vessels authorized and licensed to fish in other areas of the Pacific Ocean under an alternative international fisheries management regime and that may occasionally fish to the east of 150W shall be authorized to fish in the EPO provided that: a) the fishing activity of any such vessels in the EPO is limited to a single trip not to exceed 90 days in one calendar year; b) the vessels do not possess a dolphin Mortality Limit pursuant the International Dolphin Conservation program; and c) the vessel carry an approved observer. Similar exception shall be considered for vessels of other participants with similar record of participation in the EPO purse-seine fisher and that meet the criteria listed - Nothing in this Resolution shall be interpreted to limit the rights and obligations of any participant to manage and develop the fisheries under its jurisdiction or in which it maintains a longstanding and significant interest
IATTC – Northern Albacore tuna Res. C-05-02	Total level of fishing effort	Not to be increased beyond current levels	The provision shall not prejudice the rights and obligations under international law of those coastal CPCs in the EPO whose current fishing activity for northern Pacific Albacore tuna is limited, but that have a real interest in, and history of, fishing for the species, that may wish to develop their own fisheries for northern Pacific Albacore tuna in the future
IOTC – tropical tuna (Res. 09-02)	Number of vessels, by gear type, over 24 meters overall length, and under 24 meters if they fished outside their EEZs, and corresponding overall capacity in GT, actively fishing	Limit to number and GT actively fishing in 2006	- Provision does not apply to those vessels included in the lists, but considered under administrative process of construction in 2006 and 2007 - Freezing of fishing effort does not apply to CPCs that directly limit catches using ITQs under a comprehensive national management plan which has been provided to the Commission - CPCs which had the objective of developing their fleets following the provisions of IOTC Res. 03-01 through the introduction to the IOTC of a fleet development plan, shall confirm by 31 December 2009, <i>inter alia</i>, the type, size, gear and origin of the vessels included in the Plan and the programme (precise calendar for forthcoming 10 years) of their introduction to the fishery - According to Res. 03-01, the possibility of submitting a fleet development plan is open to CPCs which have <u>50 or less vessels</u> on the 2003 IOTC Record - In relation to the foregoing, the Commission took note of the interests of the developing coastal States, in particular small island developing States and territories within the IOTC Convention Area whose economies depend largely on fisheries

Measure	Fishing Capacity indicator	Reference period	Exceptions
IOTC- ALB and SWO (Res. 09-02)	Number of vessels, by gear type, over 24 meters overall length, and under 24 meters if they fished outside their EEZs, and corresponding overall capacity in GT, actively fishing	Limit to number and GT actively fishing in 2007	- Provision does not apply to those vessels included in the lists, but considered under administrative process of construction in 2006 and 2007 - Freezing of fishing effort does not apply to CPCs that directly limit catches using ITQs under a comprehensive national management plan which has been provided to the Commission - CPCs which had the objective of developing their fleets following the provisions of IOTC Res. 03-01 through the introduction to the IOTC of a fleet development plan, shall confirm by 31 December 2009, <i>inter alia</i>, the type, size, gear and origin of the vessels included in the Plan and the programme (precise calendar for forthcoming 10 years) of their introduction to the fishery - According to Res. 03-01, the possibility of submitting a fleet development plan is open to CPCs which have 50 or less vessels on the 2003 IOTC Record - In relation to the foregoing, the Commission took note of the interests of the developing coastal States, in particular small island developing States and territories within the IOTC Convention Area whose economies depend largely on fisheries
WCPFC - North ALB (CCM 2005-03)	Level of fishing effort (fishing effort shall be reported by gear type in terms of the most relevant measures for a given gear type, including at a minimum for all gear types the number of <u>vessel-days fished</u>)	No increase beyond current levels (report of fishing effort to be submitted by April 30, 2006, shall cover calendar year 2004)	Provision (...) shall not prejudice the legitimate rights and obligations under international law of those small island developing State Members and participating territories in the CA whose current fishing activity for North Pacific ALB is limited, but that have a real interest in, and history of, fishing for the species, that may wish to develop their own fisheries for North Pacific ALB in the future The [latter] provisions (...) shall not provide a basis for an increase in fishing effort by fishing vessels owned or operated by interests outside such small island developing State Members or participating territories, unless such fishing is conducted in support of efforts by such Members and territories to develop their own domestic fisheries
WCPFC - South Pacific ALB (CMM 2010-05)	Number of fishing vessels actively fishing	No increase above current level (2005) or recent historical levels (2000-2004)	Provision (...) shall not prejudice the legitimate rights and obligations under international law of those small island developing State Members and participating territories in the CA for whom South Pacific ALB is an important component of the domestic tuna fishery in waters under their national jurisdiction, and who may wish to pursue a responsible level of development of their fisheries for South Pacific ALB
WCPFC - Southwest Striped Marlin (CMM 2006-04)	Number of fishing vessels	Limit to number of vessels in any one year between the period 2000-2004 CPCs shall provide, by 1 July 2007, information on number of fishing vessels fishing for striped marlin in CA south of 15S during 2000-2004, and nominate the maximum number of vessels that shall continue to be permitted to fish	- The provision (...) shall not prejudice the legitimate rights and obligations under international law of small island developing State and Territory CCMs, in the CA who may wish to pursue a responsible level of development of their own fisheries for striped marlin in the CA south of 15S from 2000 - 2004 levels, and the legitimate rights and obligations of coastal states who may wish to pursue a responsible level of development within their fisheries waters - Paragraphs 1-4 (effort limitation and reporting obligations) do not apply to those coastal states CCMs south of 15 degrees south in the CA who have already taken, and continue to take, significant steps to address concerns over the status of striped marlin in the South-western Pacific region, through the establishment of a commercial moratorium on the landing of striped marlin caught within waters under their national jurisdiction

Measure	Fishing Capacity indicator	Reference period	Exceptions
WCPFC – (North) Pacific BFT (CMM 2010-04)	Total fishing effort	Stay below the 2002-2004 levels for 2011 and 2012 (including measure to reduce catches of juvenile below 2003-2004 levels) CPCs shall report by 31 July 2011 and 2012 the measures they used to implement this provision	- Artisanal fisheries - Provision (...) shall not prejudice the legitimate rights and obligations under international law of those SIDS Members and participating territories in the CA whose current fishing activity for Pacific BFT is limited, but that have a real interest in fishing for the species, that may wish to develop their own fisheries for North Pacific BFT in the future. This provision shall not provide a basis for an increase in fishing effort by fishing vessels owned or operated by interests outside such developing coastal State, particularly SIDS or participating territories, unless such fishing is conducted in support of efforts by such members and territories to develop their own domestic fisheries
WCPFC – BET and YFT - purse seine fishery (CMM 2008-01) Area: 20 N and 20 S	High Seas: level of purse seine fishing effort in days fished <u>EEZ- PNA</u> : vessel day scheme <u>EEZ – non-PNA</u> : compatible measures to reduce purse seine fishing mortality on BET in their EEZ	Not exceed 2004 levels or average of 2001-2004	(...) these paragraph shall not apply to small developing state members and participating territories
WCPFC – South Pac. SWO (CMM 2009-03)	Number of their fishing vessels	Limit to the number in any one year between 2000-2005 (listed in Annex of CMM)	The provision (...) shall not prejudice the legitimate rights and obligations under international law of SIDS and participating Territory CCMs, in the CA who may wish to pursue a responsible level of development of their own fisheries in the CA
ICCAT – North. ALB (Rec. 98-08)	Number of vessels (exclusive of recreational vessels)	Limit to average number in the period 1993-1995	Measure does not apply to CPCs whose average catches are less than 200 MT. These CPCs shall limit their annual catches to 200 MT Japan shall endeavor to limit its total catches of North. ALB to no more than 4% by weight of its total longline BET catch in the Atlantic Ocean
ICCAT – BET (Rec. 98-03, 04-01, 06-01, 08-01, 09-01, 10-01)	Number of fishing vessels larger than 24 meters length overall (exclusive of recreational vessels), and GRT	Limit to average number of fishing vessels having fished BET in the CA in 1991-1992. CPCs with TAC allocation: number of its vessels fishing for BET, by gear type, notified to ICCAT for 2005	- Vessel restriction does not apply to CPCs that catch annually less than 2,000 MT of BET on an average of the recent five years (98-03). When the annual catch of any of those Parties / entities or fishing entities exceeds 2000 MT before 2001, the Commission should consider and recommend, if appropriate, new conservation measures for Bigeye tuna, applicable to them - Specific limits are identified for the following CPCs: China: 45 longline vessels Philippines: 8 longline vessels; and 2 additional longlines only in 2010; and 10 vessels in 2011 Chinese Taipei : 60 longline vessels 20008 and thereafter; and 7 additional longlines only in 2010; and 75 in 2011 Panama : 3 purse seine vessels Korea: 16 vessels in 2011
ICCAT- YFT (Rec. 93-04)	Level of effective fishing effort	Shall not be increase over 1992 levels	

Table 4.3. Comparison of gear restrictions adopted by tuna RFMOs

RFMO and fishery	Gear restriction	Area of application	Timeframe	Special rules and exceptions
WCPFC BET and YFT CMM 2008-01	Purse seine fish closed to fishing on FADs	20° N and 20° S	Between 1 August and 30 September 2009 1 July to 30 September 2010-2011	Alternative of member specific catch limit (by weight) equivalent to at least 10% reduction (2009) and 20% reduction (in 2010-2011) relative to 2001-2004 average levels. Alternative only available to those members that have demonstrated a functioning capacity to implement such measures in effective and transparent manner
WCPFC CMM 2008-04	Prohibition on use of large-scale driftnets	High seas within the CA	Permanent	“Large-scale driftnets” are defined as gillnets or other nets or a combination of nets that are more than 2.5 kilometres in length whose purpose is to enmesh, entrap, or entangle fish by drifting on the surface of, or in, the water column
ICCAT Med. SWO Rec. 03-04	Prohibition to use driftnet for large pelagics	Mediterranean	Permanent	
IOTC Res. 09/05	Prohibition to use large-scale driftnets	High seas within the CA	Permanent	

III. CATCH RESTRICTIONS

Restrictions on catches can be drafted in different ways. The RFMO can agree to:

- a) cap (freeze) catches to the level of a certain current or past period;
- b) reduce catches with respect to the level of a certain current or past period;
- c) establish a total quota without national allocation;
- d) establish a total quota with national allocations to all participating CPCs; or
- e) a combination of the above methods, applicable to different subsets of CPCs.

1) Cap and Reduction of Catches

As in the case of fishing effort, common catch restrictions consist in freezing each CPCs catch to the level of a certain reference period. In some cases, this is joined by a reduction of catch from the level this reference period.

The reference period is usually determined, but flexible in that the States can choose their best result from two periods or more (for example: the average of a short-term history (last 5 years), the most recent year, or the best year within a short-term period). However, in some cases the restriction of catches was not joined by a defined timeframe (e.g.: restrict catches to recent levels, as reported to the Scientific Committee).

These catch restrictions result in an implicit allocation of a quota. In many cases, it is the first step towards the adoption of TAC with national allocations. In the case of IOTC Bigeye tuna, for example, the restriction was explicitly considered as an interim measure until the Commission adopted a 3-year interim catch levels for CPCs catching more than 1000 t, and afterwards an allocation scheme for Bigeye tuna. The envisioned process failed, and the measure that freezes the catch levels is still in place.

Exceptions are common in these types of catch restrictions. For example, WCPFC conservation and management measures establishing catch restrictions usually consider a broad exception worded (with some variations) as “nothing in this measure shall prejudice the legitimate rights and obligations under international law of small islands developing State Members and participating territories seeking to pursue a responsible level of development of their own fisheries in the Convention Area.” Other exceptions favoured Small Island Developing States and CPCs with low level of catches.

Table 4.4 contains a comparison of the catch restriction measures adopted by the tuna RFMOs, highlighting the main features of this measure: the terms of the catch cap or reduction, and special rules and exceptions (if any).

Table 4.4. Comparison of catch restrictions adopted by tuna RFMOs

RFMO and stock	IATTC - Longline fleet BET (Res. C-11-01)	IOTC - BET (Res. 05-01)	WCPFC - North Pacific Striped Marlin (CMM 2010-01)								
Catch restriction or reduction	Four CPCs undertake to ensure that the total annual catches of BET by their longline vessels over 24 meters length overall in the EPO during 2011-2013 do not exceed the following levels: <table><tr><td>China</td><td>2,507</td></tr><tr><td>Japan</td><td>32,372</td></tr><tr><td>Korea</td><td>11,947</td></tr><tr><td>Chinese Taipei</td><td>7,555</td></tr></table> All other CPCs undertake to ensure that the total annual catches of BET by their longline vessels over 24 meters length overall in the EPO during 2011-2013 do not exceed the greater of 500 mt or their catches of BET in 2001.	China	2,507	Japan	32,372	Korea	11,947	Chinese Taipei	7,555	CPCs shall <u>limit their catch</u> of BET to their recent levels of catch reported by the SC	<u>Total catch</u> of North Pacific Striped Marlin will be subject to a phased reduction such that by 1 January 2013 the catch is 80% of the levels caught in 2000 to 2003. Each flag/chartering CPC with vessels fishing in the CA north of the equator shall be subject to the following <u>catch limits</u> for North Pacific Striped Marlin for the years 2011 and beyond (reductions with respect to highest catch between 2000 and 2003): 2011 [10%] 2012 [15%] 2013 and beyond: [20%] By 30 April 2011, each flag or chartering CPCs shall report to the Commission verifiable information regarding its catch of North Pacific Striped Marlin by its vessels north of the equator. Each flag/chartering CPC shall decide on the management measures required to ensure that its flagged/chartered vessel operate under the catch limits specified (previous examples include effort reductions, gear modifications and spatial management).
China	2,507										
Japan	32,372										
Korea	11,947										
Chinese Taipei	7,555										
Special rules		Commission shall request Taiwan Province of China (non party) to limit their annual BET catch in the IOTC area to 35,000 tonnes									
Exceptions		Commission took note of the developing coastal states, in particular SIDS and territories within the IOTC CA whose economies depend largely on fisheries.	Nothing in this measure shall prejudice the legitimate rights and obligations of SIDS Members and participating territories in the CA seeking to develop their own domestic fisheries								

Table 4.4. (cont.)

RFMO and stock	WCPFC – BET and YFT longline (CMM 2008-01)	WCPFC –South Pacific SWO (CMM 2009-03)
Catch restriction or reduction	The <u>total catch</u> of BET by longline fishing gear will be subject to a phased reduction such that by 1 January 2012 the longline catch of BET is 70% of the average annual catch in 2001-2004 or 2004 (as specific in Attachment). Reduction are: 2009: 10% 2010: 20% 2011: 30% If reduction would result in a catch limit less than 2,000 tonnes for a Member, then a catch limit of 2,000t shall apply to that CPC. The catch of Yellowfin tuna is not to be increased from 2001-2004 levels (for China, US, and Indonesia, 2004 applies)	CPCs shall limit the amount of SWO to the amount caught in any one year during 2000-2006 (catch shall be verified)
Special rules	Catch reduction for BET does not apply to members and participating territories that caught less than 2,000 tonnes in 2004. Each member that caught less than 2,000 tonnes of BET in 2004 shall ensure that their catch does not exceed 2,000 tonnes in each of the next 3 years (2009, 2010 and 2011). The catch limit for China for 2009 and 2010 will remain at 2004 levels pending agreement being reached to develop an arrangement for the attribution of Chinese catch taken as part of domestic fisheries in the EEZs of Pacific Island Countries.	No later than 30 April 2001, CPCs shall nominate the maximum total catch of SWO that it shall continue to be permitted to fish. As an interim measure, if it is determined that the catch of vessels flying the flag of a CPCs exceeds the total catch specified for them, that CPCs will be subject to a reduction in their catch limit equal to the exceeded amount. The reduction will apply in the year immediately after it has been determined that the catch limit has been exceeded.
Exceptions	The catch limits for BET shall not apply to SIDS members and participating territories in the CA undertaking responsible development of their domestic fisheries. Catch reductions for 2010 and 2011 shall not apply to fleets of members with a total longline Bigeye tuna catch limit as stipulated in Attachment F of less than 5,000 tonnes and landing exclusively fresh fish, provided that the details of such fleets and their operational characteristics are registered with the Commission by 31 December 2008 and that the number of licenses authorized in such fisheries does not increase from current levels. In such cases, catch limits specified in Attachment F shall continue to be applied.	Nothing in this measure shall prejudice the legitimate rights and obligations under international law of SIDS and participating territories CPCs in the CA seeking who may wish to pursue a responsible level of development of their own fisheries in the CA.

2) TAC and Allocation

Currently, only ICCAT and CCSBT have adopted TAC and national allocations as a conservation and management measure for stocks under their jurisdiction. However, as has been noted in Part II, IOTC is currently undertaking preparatory work for its adoption in the near future. WCPFC and IATTC, in turn, also include the consideration of allocation schemes in the agenda of the next meetings.

TACs can be established for one year or for a multi-annual period, but the trend is to adopt multi-annual TACs. The TAC is generally allocated to participating States. Only in one case, ICCAT has maintained a global (common) quota in the absence of agreement on an allocation scheme. While originally RFMOs had reserved a small portion of the TAC for non-members, this practice has disappeared. Currently, none of the stocks managed through TAC and national allocations consider a quota for non-cooperating non-members.

Both CCSBT and ICCAT have adopted criteria for the allocation (CCSBT Convention and ICCAT non-binding Resolution 01-25), but its implementation is a matter of persistent conflict among members and tough negotiation processes. Although allocations can be revised periodically (in particular at the time a new TAC is adopted set for the next year or multi-annual period) in practice they tend to be relatively stable.

The CCSBT allocates the TAC among all CPCs. ICCAT, in turn, allocates the TAC only to a subset of CPCs. In one case, only a portion of the TAC was allocated to a subset of CPCs, leaving a common quota available for other members and cooperating non-members. In the case of North Atlantic Swordfish, ICCAT has allocated national quotas that exceed the allowable TAC. Therefore, it is possible that the TAC is exceeded even though every CPC complies with its allocations. Is this to happen, ICCAT has a pre-agreed rule: the amount of the excess will be deducted from the 2013 national quotas *pro rata* of the 2011 allocations.

CMM establishing national allocations usually allow adjustments for over-catches and under-catches during the following year (add to the quota the uncaught quota of the previous year, and subtract from the quota any over-catches during the previous year). ICCAT has established a general rule allowing for the underages or overages to be added or subtracted to the limit of the following or next to following year (ICCAT Res. 01-25), but stock-specific agreements take precedence over this general rule.

Over-catches are sometimes sanctioned in that the quota of the following year(s) is reduced by more than 100% of the over-catch (e.g.: ICCAT Western and Central Atlantic Bluefin tuna fishery, in cases of two consecutive periods of overharvest). In some cases, adjustment of under-catches has been prohibited (e.g.: ICCAT East Atlantic and Mediterranean Bluefin tuna fishery).

The system of penalties and rewards for over- and underages of catch allocations has been criticized, with simulations based on management strategy evaluations providing evidence of a potential negative impact on the achievement of management targets and recovery

period, especially if monitoring is biased (catches misreported) or imprecise (Powers and Brooks 2008).

The possibility of transferring quota has been put to the attention of some RFMOs (ICCAT, WCPFC, CCSBT) but, with the exception of ICCAT, the Commissions' debate have not proceeded very far (Serdy 2010). ICCAT has adopted a general non-binding rule in Resolution 01-25 that prohibits transfers of quota. However, the general agreement in ICCAT is that transfers may be authorized by the Commission on a case-by-case basis. Some particular transfers (between identified CPCs) are sometimes authorized in the recommendation establishing the TAC and national allocations. Two ICCAT recommendations include a general authorization to transfer quota, subject to a number of restrictions and notification requirements.

Table 4.5 contains a comparison of the TAC and national allocation adopted by ICCAT and CCSBT for particular fisheries, highlighting the main features of such a measure as discussed above.

Table 4.5. Comparison of TAC and allocation measures adopted by tuna RFMOs

RFMO, stock & CMM	ICCAT – Southern ALB (Rec. 07-03)	ICCAT- West. & Central Atl. BFT (Rec. 10-03)	ICCAT- North Atl. SWO (Rec. 10-02 and Rec. 96-14)								
TAC	Multi-annual TAC (2008 to 2011)	Two-year TAC (2011-2012) (inclusive of dead discard)	One year TAC (2011) (previously multi-annual TAC)								
Allocation	No national allocation made If catches exceed 28,800t any given year until 2011, the conservation measures should be reviewed to aim to develop proposals for a sharing agreement based on ICCAT Criteria for the Allocation of Fishing Possibilities (Res. 01-25)	Total TAC allocated to: <u>Two CPC</u> : by-catch allocation <u>Six CPC (2 previous and 4 other CPCs)</u> : pre-agreed allocation scheme which varies according to the level of TAC. The scheme is applied to the 2011-2012 TAC	- Allocated to 21 CPCs. Total allocated exceeds TAC - If the total catch exceeds the TAC of 13,700t in 2011, the exceeded amount (except for the possible overage of each CPC over its adjusted quota) shall be deducted from the quotas in 2013 on a <i>prorata</i> basis of the 2011 quotas								
Special rules	- CPCs not actively fishing for South. ALB and having caught, on average, less than 100t per year during 1998-2002 shall be subject to a catch limit of 100t - CPCs not actively fishing for South. ALB and having caught, on average, more than 100t during 1992-1996, excluding Japan, shall be subject to an annual catch limit or 110% of their respective average 1992-1996 catches - Japan shall endeavour to limit its total catch of South. ALB to 4% by weight of its total longline BET catch in the Atl. Ocean South of 5°N - All aspects of South. ALB catch limit and sharing agreement will be reviewed and revised in 2011	Canada has a two year combined total catch (excluding by-catch allowance).	- Japan shall be allowed to count up to 400t of its SWO catch taken from the part of the North Atl. management area that is east of 35°W and south of 15°N, against its uncaught South Atl. SWO quota - The EC shall be allowed to count up to 200t of its SWO catch taken from the South Atl. management area against its uncaught North Atl. SWO quota. (See Part 6 below) - The US may harvest up to 200t of its annual catch limit within the area between 5°N and 5°S - The Commission shall establish at its 2011 meeting a multi-year conservation and management plan								
Under and overharvest	Should the total reported ALB catches in 2008, as reported to the 2009 ICCAT meeting, exceed 29,900t, the TAC for 2009 shall be reduced by the full amount of the 2008 catch in excess of 29,900t No provision shall be made for carry-over of underharvests made under this sharing arrangement, with exception of Belize and CPCs subject to a limit of 110% of their catches in 1992-1996, which can carry over a maximum of 150t of underage in 2007 and 2008, and underages in any given year of the conservation measures with carry-overs being non-accumulative	Underharvest carry-over authorized, with a limit of 10% of CPC quota if the allocated quota exceeds 100t 100% overharvest shall be reduced from following year. If overharvest occurs in 2 consecutive periods, ICCAT can take further measures including CPC's quota reduction equal to a minimum of 125% of the overharvest and, if necessary, trade restrictive measures	Any unused portion/ excess of the annual adjusted quota may be added to/shall be deducted from, the respective quota/catch limit during or before the adjustment year, in the following way: <table><tr><td><i>Catch year</i></td><td><i>Adjustment year</i></td></tr><tr><td>2009</td><td>2011</td></tr><tr><td>2010</td><td>2012</td></tr><tr><td>2011</td><td>2013</td></tr></table> The maximum underage that a CPC may carryover in any given year shall not exceed 50% of the original quota. If any CPC exceeds its catch limit during any two consecutive management periods, the Commission will recommend appropriate measures, which may include, but are not limited to, reduction in the catch limit equal to a minimum of 125% of the excess harvest, and, if necessary, trade restrictive measures Special rules apply to Japan	<i>Catch year</i>	<i>Adjustment year</i>	2009	2011	2010	2012	2011	2013
<i>Catch year</i>	<i>Adjustment year</i>										
2009	2011										
2010	2012										
2011	2013										
Transfer		One time transfer up to 15% of the quota to another CPC, with notification to the Secretariat. 15% does not apply to CPC with allocations of 4t. Any such transfer may not be used to cover overharvests. A CPC that receives a one-time quota transfer may not retransfer that quota Specific transfers: explicitly authorized in the Rec. between identified CPCs and for specified quota amounts	General transfer authorization: Rec. authorizes one-time transfer within a fishing year of up to 15% of TAC allocation to other CPCs with TAC allocations. Any such transfer may not be used to cover overharvests A CPC that receives a one-time quota transfer may not retransfer that quota. Specific transfer: explicitly authorized in the Rec. between identified CPCs and for specified quota amounts								
Fishing opportunities to non-members	Not applicable	No allocations made	No allocations made								

Table 4.5. (cont.)

RFMO, stock & CMM	ICCAT- South Atl. SWO (Rec. 09-03)	ICCAT- BET (Rec. 98-03, 04-01, 06-01, 08-01, 09-01, 10-01)	ICCAT – North. ALB (Rec. 09-05)	CCSBT – South. BFT (CCSBT 16)
TAC	Three-year TAC (2010-2012) Total catch for three-year management period shall not exceed 45,000 t. If yearly total catch of any of the three years exceeds 15,000 tm the TAC(s) for the following year(s) shall be adjusted to ensure that the three-year total will not exceed 45,000 t. If total catch in 2012 exceeds 15,000t and the three-year total exceeds 45,000 t, the exceeded mount for three years shall be adjusted in the next management period. In general, these adjustments shall be carried out through prorate reduction of the quota for each CPC.	One year TAC (2011) (previously multi-annual TAC)	Two-year TAC (2010-2011)	Average global TAC for each of the years 2010 and 2011 and research mortality allowance (11t)
Allocation	Total TAC allocated to 18 CPCs None of the arrangements in this Rec. shall be deemed to prejudice a future arrangement relating South Atl. SWO.	Portion of the TAC allocated to 8 CPCs (79,427 from a TAC of 85,000t) If the catches of a developing coastal CPCs not subject to a national quota exceed 3,500t in 2011, an appropriate catch limit will be established for the following years	Portion of TAC allocated to 4 CPCs (25,600 from a 28,000 TAC). Other CPCs (exc. Japan) are subject to a 200 t limit. If, in any year, the combined landings of CPCs exceed the TAC of 28,000 t, the Commission will re-evaluate the North. ALB recommendation.	Total TAC allocated to all CPCs (AU and NZ to make additional voluntary reductions of their quota) Each CPC to provide formal advice to the Secretariat regarding how it will split its allocation between the 2010 and 2011 fishing seasons
Special rules	Japan shall be allowed to count up to 400t of its Swordfish catch taken from the part of the North Atl. management area that is east of 35°W and south of 15°N, against its uncaught South Atl. SWO quota The EC shall be allowed to count up to 200t of its SWO catch taken from the North Atl. management area against its uncaught South Atl. SWO quota (see Part 6 below) Brazil may harvest up to 200t of its annual catch limit within the area between 5°N and 5°S		Japan shall endeavour to limit its total North. ALB catches to a max. of 4% in weight of its total BET longline catch in the Atl. Ocean.	

Cont.	ICCAT- South Atl. SWO	ICCAT- BET	ICCAT – North. ALB	CCSBT – South. BFT														
Under and overharvest	Any unused portion/excess of the annual quota/catch limit may be added to/shall be deducted from, the respective quota/catch limit during or before the adjustment year, in the following way: <table><tr><td><i>Catch Year</i></td><td><i>Adjustment Year</i></td></tr><tr><td>2010</td><td>2012</td></tr><tr><td>2011</td><td>2013</td></tr><tr><td>2012</td><td>2014</td></tr></table> The maximum underage that a party may carry over in any given year shall not exceed 50% of the quota of previous year Japan`s, USA`s and Chinese Taipei`s underage in 2009 may be carried over to 2010 up to 800, 100 and 400t, in addition to their quotas specified in the table. Those CPCs may also carry over unused portions during 2010-2012, but such carried over amounts each year shall not exceed the amounts specified here	<i>Catch Year</i>	<i>Adjustment Year</i>	2010	2012	2011	2013	2012	2014	Underages or overages of the annual catch limit of BET in 2011 may be added to or shall be deducted from the annual catch limit in 2012 and/or 2013	Any unused portion/excess of a CPC's annual quota/catch limit may be added to/shall be deducted from, the respective quota/catch limit during or before the adjustment year, in the following way: <table><tr><td><i>Year of Catch</i></td><td><i>Adjustment Year</i></td></tr><tr><td>2010</td><td>2012 and/or 2013</td></tr><tr><td>2011</td><td>2013 and/or 2014</td></tr></table> Max. underage that a Party may carry-over in any given year shall not exceed 25% of its initial catch quota	<i>Year of Catch</i>	<i>Adjustment Year</i>	2010	2012 and/or 2013	2011	2013 and/or 2014	CPCs can distribute the two-year quota between 2010 and 2011 (thus over and under harvest are allowed). No carryover of unused quota from 2010/11 to 2012
	<i>Catch Year</i>	<i>Adjustment Year</i>																
2010	2012																	
2011	2013																	
2012	2014																	
<i>Year of Catch</i>	<i>Adjustment Year</i>																	
2010	2012 and/or 2013																	
2011	2013 and/or 2014																	
Transfer	Specific transfers of quota between identified CPCs and for defined amounts of quota are authorized in the Rec.	Specific transfers of quota between identified CPCs and for defined amounts of quota are authorized in the Rec.		No provision made														
Fishing opportunities to non-members	No allocations made	No allocation made		No allocations made														

IV. LIMITATION OF CATCHES AND EFFORT

RFMOs usually limit fishing mortality using either vessel restrictions or catch restrictions (including TACs and national allocations), but not both. Only a few conservation and management measures have adopted a more comprehensive approach including both vessels and catch restrictions. These are the conservation and management measures adopted for: WCPFC (South) Pacific Swordfish; ICCAT Northern Albacore; ICCAT Bigeye tuna; and ICCAT Eastern Atlantic and Mediterranean Bluefin tuna.

With the exception of the Eastern Atlantic and Mediterranean Bluefin tuna, the management of these stocks started with vessel restrictions and were complemented with catch limits.

WCPC SWO	2006 – vessel restrictions	2008 – catch restrictions	
ICCAT Northern ALB	1998 – vessel restrictions	2000 – catch restrictions	
ICCAT BET	1998 – vessel restrictions	2001 – TAC	2004 – Multi-annual Management Plan
ICCAT East. Atl. & Med. BFT	1998 – TAC	2008 – vessel restrictions	

In most cases, the vessel and catch restrictions are adopted following the methods and features described in the two previous sections but without linking the two measures explicitly. The respective measures can be found on tables 4.2, 4.4 and 4.5 above.

The approach taken by ICCAT in the recovery plan for Eastern Atlantic and Mediterranean Bluefin tuna is novel in that it establishes explicit correlations between fishing capacity and catch restrictions. For this reason, the detailed analysis of these management measures is addressed separately in this section.

ICCAT Eastern Atlantic and Mediterranean Bluefin tuna

ICCAT adopted management measures for Eastern and Atlantic Bluefin tuna as early as 1993, and progressively adopted a series of measures that included vessel and catch restrictions, area closures and TAC and allocations. These catch restrictions and other regulations, however, were largely ineffective in preventing increases in landings (ICCAT 2010a). The precarious situation of Bluefin tuna warranted some States and organizations unsuccessfully requesting a suspension of fishing activities (e.g.: ICCAT 2009a, p.3) and its listing as endangered species under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (CITES 2010).

The conservation status of Bluefin tuna and the international pressure for effective management prompted the Commission to adopt a Multi-annual Recovery Plan in 2006

(Rec. 06-05),² a revised 27 pages Plan adopted in 2008 (Rec. 08-05), amendments adopted in 2009 (Rec. 09-06), and a further revised 31 pages Plan adopted in 2010 (Rec. 10-04). Further, a particular information process to assess implementation of the 2006 Plan was agreed upon by Rec. 07-05.

The different documents progressively develop several elements of the Rebuilding Plan, strengthening the obligations of the CPCs and establishing more stringent conditions for fishing activities for Eastern Atlantic and Mediterranean Bluefin tuna. The 2006 Plan included five main management measures: a multi-annual TAC and its allocation to 14 CPCs;³ the obligation to CPCs to “adjust its fishing effort commensurate with available fishing opportunities fixed in accordance with this Plan”; the limitation of the number of baitboats, trolling boats, and pelagic trawler vessels authorized to catch Bluefin tuna as a by-catch;⁴ the establishment of the record of vessels authorized to catch Bluefin tuna in the Eastern Atlantic and Mediterranean;⁵ and closed fishing seasons for the different gear types participating in the fishery. Additionally, the 2006 Plan explicitly recognized the need to assess and address overcapacity in fleets participating in many ICCAT fisheries to develop effective ways to address this problem in a comprehensive manner, in particular for this fishery, but did not include fishing capacity measures awaiting the results of the first meeting of the Capacity Working Group.

The 2008 Plan maintains the same measures adopted in the 2006 Plan, with some amendments.⁶ It also added several provisions, including a special section on capacity management with further obligations for CPCs. Noteworthy, this Plan required CPCs to reduce fishing capacity so as to ensure that at least 25% of the discrepancy between fishing capacity and fishing capacity commensurate with allocated quota in 2010 is achieved; and to submit a capacity management plan over 2010-2013.

The 2010 Plan, established by Rec. 10-04, reiterates and strengthens the main elements included in the 2008 Plan. According to the current provisions of the Multi-annual Rebuilding Plan, fishing capacity of Eastern Atlantic and Mediterranean Bluefin tuna is managed through TAC and national allocations, capacity measures, closed fisheries seasons. Compliance with the Plan is supported by reporting obligations and vessel records.

² A previous multi-year conservation and management plan was adopted by Recommendation 02-08 by ICCAT, which included some of the elements of the 2006 Recovery Plan, including TAC and allocations, closed fishing seasons, and minimum size measures.

³ The allocation scheme was discussed in a special meeting held in January 2007, approved by mail vote, and included as Annex I of Recommendation 06-05 as an integral part of the Plan.

⁴ Appendix I of Rec. 06-05.

⁵ See Part 3 above.

⁶ It increased the number of CPCs with quota allocation (to 15 in 2009 and 16 in 2010). It also increased the days of fisheries closures.

a) TAC and national allocations

The TAC has been set at 12,900t for a multi-annual period (from 2011 and until the Standing Committee on Research and Statistics - SCRS advises otherwise). The TAC is allocated to 16 CPCs. There is no remaining quota for other CPCs not included in the allocation list or for non-members.

If the SCRS stock assessment detects a serious threat of fishery collapse, the Commission shall suspend all the fisheries for eastern Atlantic and Mediterranean Bluefin tuna in the following year.

a.1. Underages and overages:

Generally, carry-over of any under-harvest is not allowed. Under-harvest arising from 2005 and 2006 may be carried over with a limit of 50%. Specific carry-overs for Libya, Morocco and Tunisia are explicitly allowed.

Overage of a CPC shall be deducted from the next year's quota of that CPCs. EU overage of 2007 is, however, authorized to be paid back between 2009 and 2012.

a.2 Transfer of quota:

The plan requires authorization by the CPCs concerned and the Commission for private trade arrangements and transfers of quotas and catch limits between CPCs.

a.3 Allocation obligations:

CPCs are required to establish individual quotas for the catching vessels over 24 meters in length overall, in an effort to ensure that the fishing effort of its catching vessels is commensurate with the fishing opportunities on Bluefin tuna available to that CPCs.

CPCs are also required to allocate a specific quota for the purpose of recreational and sport fisheries.

a.4. By-catch:

Catching vessels not fishing for Bluefin tuna have a limit of Bluefin tuna allowed on board of 5% of total catch on board by weight or/and number of pieces. By-catch is deducted from the CPCs quota.

b) Capacity measures

The Plan requires the following sequential actions by CPCs:

b.1. Freezing fishing capacity:

CPCs have to limit the number and GRT of their fishing vessels to the number and tonnage of their vessels that fished for, retained on board, transhipped, transported, or landed BFT during the period 1 January 2007 to 1 July 2008. This limit applies by gear type for catching vessels and by vessel type for other fishing vessels.

Freezing fishing effort may not apply to CPCs, in particular developing States, demonstrating that they need to develop their fishing capacity so as to fully use their quota.

b.2. Fishing capacity assessment:

CPCs are required to assess the level of fishing capacity commensurate with their quota in accordance with the methodology approved and adopted by Panel 2 during its 2009 annual meeting. This methodology, which relies on an output fishing capacity, assesses each CPC overcapacity by comparing its allocated quota with the best catch rate and potential catch rate of its fleet. The vessels' best catch rates and potential catch rates were estimated for the different segments of the fleet by the ICCAT Standing Committee on Research and Statistics. Best catch rate for each type of vessels were estimated on the basis of list of authorized catching vessels, the weekly catch reports, the VMS data, summaries of trade information, caging declarations, and expert knowledge; while potential catch rates were estimated considering the same sources of information but without taking expert knowledge into account (ICCAT 2009b, p. 128).

b.3. Fishing capacity reduction:

CPCs must reduce their fishing capacity so as to ensure that the discrepancy between its fishing capacity and its fishing capacity commensurate with its allocated quota is reduced by:

- at least 25% in 2010;
- at least 75% in 2011;
- at least 95% in 2012;
- 100% in 2013.

Reduction fishing effort may not apply to CPCs that demonstrate that their fishing capacity is commensurate with their allocated quotas (using the ICCAT approved methodology).

b.4. Fleet management plans

CPCs have the obligation to submit a Fleet Management Plan for 2010-2013, which in turn shall comply with the freezing and reduction provisions explained above.

c) Fishing season closures

- *Large-scale pelagic longline catching vessels over 24 m:* from 1 June to 31 December with the exception of the area delimited by West of 10°W and North of 42°N, where such fishing shall be prohibited from 1 February to 31 July.
- *Purse seine fishing:* from 15 June to 15 May.
- *Baitboats and trolling boats:* from 15 October to 15 June.
- *Pelagic trawlers:* 15 October to 15 June.
- *Recreational and sport fishing:* 15 October to 15 June.

d) Reports for compliance purposes

CPCs are required to submit two reports, in addition to the fleet development plans:

- *Annual fishing plans and implementation reports:* CPCs shall submit, no later than March 1, an Annual fishing Plan, and no later than 15 October, a reports on the implementation of their annual fishing plans.
- *A fishing, inspection and capacity reduction plans:* CPCs are expected to submit a fishing, inspection and capacity reduction plan to the intersessional meeting of the ICCAT

Compliance Committee before the beginning of the 2011 fishing season, and before the 2012 and 2013 regular meetings of the Compliance Committee.

The Compliance Committee is explicitly authorized to not endorse plans with serious faults, in which case the Commission shall decide on the suspension of the Bluefin tuna fishing by the CPC by mail vote.

e) Record of catching and supporting vessels in the Eastern Atlantic and Mediterranean Bluefin Tuna Fishery

ICCAT must establish and maintain a Record of catching vessels authorized to fish actively for Bluefin tuna, and Record of all other fishing vessels authorized to operate for Bluefin tuna, in the Eastern Atlantic and Mediterranean Sea (see Part III above).

Implementation of the Multi-annual Recovery Plan for Eastern Atlantic and Mediterranean Bluefin tuna

In 2009, capacity management plans considering a 25% reduction of discrepancies between the fishing capacity and fishing capacity commensurate with the allocated quota (Rec. 08-05 and 2010 TAC of 19,950t) were submitted to ICCAT Panel 2 by the following CPCs: China, the European Community, Croatia, Iceland, Japan, Korea, Lybia, Morocco, Syria, Tunisia, Turkey, and Chinese Taipei. Algeria was unable to submit its plan, but it was agreed that it would do so before the end of November 2009. Albania and Egypt did not present capacity reduction plans. The Plans were adopted by the Panel and Commission.

In 2010, fishing management plans were revised by the Inter-sessional meeting of the Compliance Committee, considering that the TAC for 2010 was reduced to 13,500t. The plans were again approved but it was noted that, although the capacity management plans met the 25% reduction target, overcapacity remained a significant problem in the fishery (ICCAT 2010b: p.115). During the Commission Meeting in 2010, a lower TAC for 2011 was agreed (12,900t) and further reductions of fishing capacity discrepancies were required (Rec. 10-04). Both amendments to the Multi-annual Recovery Plan will require further revisions of the capacity management plans.

Other aspects of the Plan (e.g. individual quota allocations for catching vessels 24 meters of length overall or greater, and allocation for recreational and sports fisheries) have not been discussed in detail in the Compliance Committee or in the National Annual Reports.

V. AREA AND SEASON CLOSURES

Area and season closures can be used with different management purposes: e.g. limiting harvest of specific life stages; protecting depleted stocks and their habitat during the rebuilding phase; protecting genetic reservoirs; protecting critical or vulnerable habitat; limit bycatch; resolve conflicts over multi-use of areas or resources; and to restrain excess fleet capacity (FAO 2002, p. 51-55). In the case of tuna RFMOs, the measure has been used mostly to restraint fishing capacity, and in some cases to prevent fishing on particular stages of the life-cycle.

Area and season closures are generally included within a broader package of measures that include other forms of fishing effort or catch restrictions. ICCAT Mediterranean Swordfish, is currently managed only with area closure and gear restriction. This is considered an interim situation “until a long-term management plan is decided by ICCAT agreement on fishing effort or catch restrictions can be reached”. In the case of IOTC, the area closure for tropical tunas was adopted also due to the inability of the Commission to reach TAC and allocations during the 2010 Meeting.

Area closures usually can consider a well defined marine area or the entire Convention Area. In one case, the closed area is referred to by its function in the life cycle of the species (spawning grounds) and its particular location has been left unidentified in the Resolution. In the case of WCPFC, the closed areas consist of two pockets of high seas surrounded by areas under national jurisdiction located between 20° North and 20° South (CMM 2008-01 para. 22 and Attachment D). Further high seas pocket closures were discussed during the 2009 WCPFC Meeting, but agreement could not be reached (WCPFC 2009). One of these areas was put into a special monitoring and compliance regime through CMM 2010-02 on Eastern High-Seas Pocket Special Management Area to address the challenge of increased IUU fishing activities.

The period of area closures varies between one month and permanent closures, with other periods covering two, six, eight, and eleven months. Closures are usually adopted as a permanent measure, but in some cases it is set for only two years to be reassessed by the Scientific Committee.

Table 4.6 summarizes the main features of the area closures adopted by the different RFMOs.

Table 4.6. Comparison of area and season closures adopted by tuna RFMOs

RFMO	Stock	Scope of closure	Area of closure	Period of closure
IATTC	BET, YFT, SKJ Purse seine fishery (Res. C-11-01)	Purse-seine vessels of more than 182 mt carrying capacity Purse-seine vessels between 182 and 272 mt carrying capacity are able to make one single fishing trip of up to 30 days duration during the closure period (with an observer of the on-board observer program of the AIDCP)	East. Pacific Ocean (EPO)	2011 to 2013: 62 days closure 29 July – 28 Sept or 18 Nov – 18 Jan following year
	BET, YFT, SYT (Res. C-11-01)	Purse-seine vessels of more than 182 mt carrying capacity	96° and 110°W and 4°N and 3°S	29 Sept - 29 Oct
IOTC	All targeted stocks of tropical tuna (particularly directed to BET and YFT) (Res. 10/01)	Longline and purse seine vessels 24 meters overall length and over, and under 24 meters if they fish outside their EEZ, fishing within the IOTC area of competence	0° - 10°N 40° and 60°E	Longline vessels: 1 Feb. - 1 March 2011 and 2012 Purse seine vessels: 1 Nov. - 1 December 2011 and 2012
ICCAT	East. Atl. & Med. BFT (Rec. 10-04)	Large-scale pelagic longline catching vessels over 24 m	East. Atl. and Med. (excluding area below)	1 June - 31 Dec.
			West of 10°W and North of 42°N	1 Feb. - 31 July.
		Purse seine fishing	East. Atl. and Med.	15 June - 15 May
		Baitboats & trolling boats	East. Atl. and Med.	15 Oct. - 15 June
		Pelagic trawlers	East. Atl. and Med.	15 Oct. - 15 June
		Recreational and sport fishing	East. Atl. and Med.	15 Oct. - 15 June
	West. & Central Atl. BFT (Rec. 10-03)	Directed fishery on the BFT spawning stocks	Spawning areas such as the Gulf of Mexico	All year
	BET (Rec. 04-01)	Purse seiners Baitboats	South. limit: 0° South lat. North. limit: 5° North lat. West. limit: 20° West long. East. limit: 10° West long.	1 Nov. - 30 Nov.
WCPFC	Med. SWO (Rec. 09-04)	Targeted fishery By-catch	Mediterranean Sea	1 Oct. – 30 Nov.
	BET and YFT (CMM 2008-01)	Purse seine fishery	(Two) High Seas Pockets as identified in attachment	From 1 January 2010

PART 5. ACCOUNTING FOR THE RIGHTS, INTEREST AND ASPIRATIONS OF DEVELOPING COASTAL STATES

Both the United Nations General Assembly and the Kobe process have explicitly acknowledged that the problem of overcapacity has to be addressed in a way that does not constrain the access to, development of, and benefit from sustainable tuna fisheries, including on the high seas, by developing coastal States, in particular small island developing States, territories, and States with small and vulnerable economies.

This section addresses the mechanisms through which the different RFMOs have taken into consideration the rights, interests and aspirations of developing coastal States in the conservation and management measures limiting fishing capacity and in the measures establishing catch restrictions or TAC and allocations.

The analysis of the measures allowed concluding that the special requirements of developing States have been taken into consideration mainly through two mechanisms: differential treatment (including exceptions for the application of a conservation measure); and their recognition in allocation criteria. In cases where exceptions have applied, fleet development plans have been required for future increases in fishing capacity. Fleet Development Plans are addressed in this section as well.

a) Differential treatment

A common approach taken in measures restricting fishing capacity (vessels) or catches is to include special measures for a particular state, state category or fleet segment. These special measures or provisions can consist on exempting them from the implementation of a particular capacity or catch restriction, or establishing a different (less stringent) restriction.

The exceptions and special rules have been included on tables 4.2, 4.3, 4.4 and 4.5. Their analysis allows concluding differentiated treatment is not always used with explicit reference to the special interest and aspirations of developing States. In fact, only WCPFC and IOTC have included exceptions and special rules that refer explicitly to developing States. In other measures, exceptions and special rules are directed to a particular segment of the fleet: e.g. coastal states, small-scale fisheries, subsistence fisheries, by-catch fisheries. The design of these exceptions and special rules may have included the consideration of the special interests and aspirations of developing States, but this is not explicitly stated.

The explicit references to developing States include the following measures:

WCPFC: WCPFC usually includes in their conservation measures a general clause, with slightly different wording, stating that the provisions limiting effort or catches shall not prejudice the legitimate rights and obligations of small island developing state member and participating territories in the Convention Area seeking to develop their own domestic fisheries, or which may wish to pursue a responsible level of development of their own fisheries in the Convention Area.

In the case of WCPFC CMM 2008-01 establishing catch limits and reductions for Bigeye tuna, the WCPFC exempt from the catch limits the small island developing State members and participating territories in the Convention Area undertaking responsible development of their domestic fisheries.

There are several open-ended elements in these exceptions. While it may be clear which are the small island developing state members and participating territories that are situated in the Convention Area, concept as “own domestic fisheries” and “responsible level of development” are left undefined. Further, WCPFC has not established specific and formal mechanisms to control the implementation of these exceptions.

IOTC: The IOTC Resolution 05-01, establishing a catch limitation for bigeye tuna, “took note of the developing coastal states, in particular small island developing States and territories within the IOTC Convention area whose economies depend largely on fisheries.” The interpretation and implications of this provision are not clear from the text of the resolution or the implementation of the measure.

b) Fleet Development Plans

IOTC exempts some CPCs from the implementation of the management measures restricting fishing capacity, but subjects any increases in fishing capacity by those CPCs to the submission of fleet development plans. These plans are an important measure to control capacity growth resulting from the exceptions, and therefore warrant special consideration in this report. It is worth noting that the presentation of a fleet development plan is an option granted to CPCs with a small fleet in the IOTC Convention area, independently from the development stage of those CPCs. However, the IOTC resolutions give special consideration to developing coastal States, and particularly SIDS in the implementation of the respective provisions.

The first capacity restriction adopted by IOTC (Res. 03-01 adopted in 2003) was applicable only to members with more than 50 vessels registered in the Record of Vessels in 2003. Other CPCs which had the objective of further developing their fleets agreed to submit a fleet development plan to the Commission for information and record, indicating the type, size and origin of the new vessels and the programming of their introduction into the fisheries. The provision further added that “in relation to the foregoing, the Commission took note of the interests of the developing coastal States, in particular small island developing States and territories within the IOTC Convention Area whose economies depend largely on fisheries” (Res. 03-01 para. 4).

Subsequent IOTC Resolutions adopting limitations on fishing capacity for tropical tunas (Res. 06-05) and Swordfish and Albacore (Res. 07-05) recognize and reiterate the right to submit fleet development plans with an explicit reference to developing States. The Resolution takes note “of the interests of the Coastal States, in particular small island Developing States and Territories within the IOTC Area whose economies depend largely

on fisheries, and recognises their rights and obligations in accordance with paragraph 3 and 4 of IOTC Resolution 03-01 On the limitation of Fishing Capacity of Contracting Parties and Cooperating Non-Contracting Parties” (Res. 06-05 and Res. 07-05, both at para. 4).

These two resolutions were superseded by Resolution 09-02 on limiting fishing capacity for tropical tunas and Swordfish and Albacore. This Resolution again reiterates the right to submit fleet development plans by those CPCs which had the objective of developing their fleets following the provisions of IOTC Resolution 03-01, but includes precise timelines for its submission and content of the plan and provides stronger oversight powers to the Commission. It also reiterates that in relation to the foregoing, “the Commission will give due consideration to the interests of the developing coastal States, in particular small islands developing States and territories within the IOTC Convention Area” (Res. 09-02, para. 9).

CPCs which have the intention of develop their fleet shall confirm by 31 December of 2009, *inter alia*:

- type and size of vessel;
- gear;
- origin of the vessels; and
- programme for their introduction into the fisheries, including a precise calendar for the forthcoming 10 years.

Resolution 09-02, following a recommendation from the IOTC Performance Review Panel, introduces the obligation for CPC to implement their plans according to a pre-agreed scheduled. The IOTC Compliance Committee and the IOTC Commission are mandated to give annual consideration to non-compliance with this obligation.

Compliance with Resolution 09-02 has been low. By March 2010, the Secretariat has received only two development plans (France, on behalf of its outer sea territories, and European Community) (IOTC 2010b). During the 2010 Meeting, nine CPCs announced its intention to submit a fleet development plan in the near future, even though the deadline established in Resolution 09/02 was already expired (IOTC 2010c). Following the Recommendation of the IOTC Compliance Committee, the Commission set the 31st December 2010 as a new deadline for the submission of all revised or new fleet development plans, with the purpose of establishing firm capacity targets (IOTC 2010c). Some CPCs have cited the global financial crisis as the reason for their inability to implement their fleet development plan and have signalled to the Commission that their plan will be revised (IOTC 2011a, p. 100).

It should be noted that the IOTC Performance Review Panel released in January 2009 has recommended that the loopholes in the currently systems of fishing capacity limitations, including the establishment of fleet development plans, be closed.

c) Developing States and allocation criteria

In the case of TAC and allocations, RFMOs take into account the special requirements and aspirations of developing states mostly by including them among the allocation criteria. ICCAT Resolution 2005-01, and the WCPFC Convention consider them explicitly as factors that need to be taken into account in deciding allocations for CPCs, while CCSBT Convention has two provisions that allow their recognition. The IATTC Antigua Convention and the IOTC Convention do not include allocation criteria. The IOTC Commission has initiated work to adopt allocation criteria for future allocation schemes.

ICCAT Resolution 01-25 includes several criteria that recognize the special requirements and aspirations of developing States, although some do not exclusively address developing States. They include:

- The interests of artisanal, subsistence and small-scale coastal fishers;
- The needs of the coastal fishing communities which are dependent mainly on fishing for the stocks;
- The needs of the coastal States of the region whose economies are overwhelmingly dependent on the exploitation of living marine resources, including those regulated by ICCAT;
- The socio-economic contribution of the fisheries for stocks regulated by ICCAT to the developing States, especially small island developing States and developing territories from the region;

In turn, Article 10(3) of the WCPFC Convention includes five factors that allow for the consideration of the developing States, and particularly small island developing States, in the Convention area. These factors are:

- The needs of small island developing States, and territories and possessions, in the Convention Area whose economies, food supplies and livelihoods are overwhelmingly dependent on the exploitation of marine living resources;
- The needs of coastal communities which are dependent mainly on fishing for the stocks;
- The special circumstances of a State which is surrounded by the exclusive economic zones of other States and has a limited exclusive economic zone of its own;
- The geographical situation of a small island developing State which is made up of non-contiguous groups of islands having a distinct economic and cultural identity of their own but which are separated by areas of high seas; and
- The fishing interests and aspirations of coastal States, particularly small island developing States, and territories and possessions, in whose areas of national jurisdiction the stocks also occur.

CCSBT Convention, Article 8(4), does not consider the interests and aspirations of developing States explicitly, but includes two criteria that may lead to their recognition. Those factors are:

- the interests of Parties through whose exclusive economic or fishery zones southern Bluefin tuna migrates; and
- any other factors which the Commission deems appropriate.

The weight of this factor and the extent to which they are actually taken into account in the allocation process is, however, an unsettled issue in most RFMOs.

PART 6. TRANSFER OF FISHING CAPACITY

One aspect of fisheries capacity management that requires special attention from a management perspective is the need to avoid transferring capacity to other stocks or geographical areas as a consequence of restrictions on fishing capacity. Transferring capacity does not eliminate the overcapacity problem, but just displaces the problem to other fisheries. For this reason, the Course of Action adopted during the Second Kobe Meeting (2009) recommended that tuna fishing capacity should not be transferred between RFMO areas and, as appropriate within RFMO areas, unless in accordance with the measures of the RFMOs concerned.

The problem addressed in this section is not the tradability of fishing effort allocations or quota allocations in a right-based management system. This aspect has been analyzed on Part III (IATTC Regional Vessel Record for purse seine fleet) and Part IV (TAC and allocations). The subject under review on this section is the measures that have been adopted to avoid that a displaced fleet (due to fishing capacity restrictions) does not increase fishing capacity in other fisheries.

RFMOs have made some references to transfer of capacity and adopted some measures to try to avoid this effect. The measures considered by the tuna RFMOs can be divided into two broad categories:

- A. Measures adopted to avoid that capacity is transferred to another stock or area within the same jurisdictional area of the Commission;
- B. Measures adopted to avoid that capacity is transferred to the area of another RFMO.

A. Measures adopted to avoid transfer of capacity within the RFMOs Convention area

Recommendations and Conservation and Management Measures that include provisions to avoid transfer of capacity to other areas within the RFMO include:

- WCPFC CMM 2009-03 for Swordfish
- WCPFC CMM 2008-01 for Bigeye tuna and Yellowfin tuna
- ICCAT Rec. 10-03 on Western and Central Atlantic Bluefin tuna
- ICCAT Rec. 10-02 on North Atlantic Swordfish
- ICCAT Rec. 09-02 South Atlantic Swordfish

In all these cases, the conservation and management measures (including fishing capacity restrictions and TAC and national allocations) have been established for a specific area within the respective Convention Area.

The approach adopted by these conservation and management measures is to either include a general prohibition to the transfer of fishing effort or capacity between two geographical areas, or to regulate specific authorized transfers or capacity.

a.1 WCPFC and one measure adopted by ICCAT prohibit transfer of fishing effort or fishing capacity between two geographical areas:

- *WCPFC – CMM 2008-01 on BET and YFT*: The conservation and management measure of fishing effort limitation for Bigeye tuna and Yellowfin tuna purse seine fishery is restricted to the area between the 20°N and 20°S. The measure requires CPCs to ensure that the effectiveness of these measures for the purse seine fishery are not undermined by a transfer of effort (in terms of days fished) into areas within the Convention Area south of 20°S. In order to not undermine the effectiveness of these measures, CCMs shall not transfer fishing effort in days fished in the purse seine fishery to areas within the Convention Area north of 20°N.

Additionally, the CMM encourages CPCs to ensure that the effectiveness of the measure for Bigeye tuna and Yellowfin tuna is not undermined by a transfer of effort into archipelagic waters and territorial seas.

- *WCPFC CMM 2009-03 for Swordfish*: The conservation and management measure, which establishes fishing capacity restriction, applies to Swordfish fishing activities south from 20°S. Thus, it prohibits CPCs to shift their fishing effort for SWO to the area north of 20°S as a result of the fishing capacity restriction established.
- *ICCAT – Rec. 2010-03 on West. & Central Atl. BFT*: Since 1982, ICCAT manages North Atlantic Bluefin tuna in two distinct stocks: Western and Central Atlantic, and Eastern Atlantic and Mediterranean. However, the relationship and exchanges between these two distinct stocks are not fully understood. For this reason and with the purpose of avoiding increasing fishing mortality in either stocks beyond the levels considered in the respective conservation measures, the Recommendation for Western and Central Atlantic Bluefin tuna requires CPCs to "continue to take measures" to prohibit any transfer of fishing effort from the western Atlantic to the eastern Atlantic and Mediterranean and from the eastern Atlantic and Mediterranean to the western Atlantic. In this case, it is noteworthy that the stocks have been, until recently, managed only through TAC and allocation without fishing capacity restrictions.
- *IOTC Resolution 09-02 on the Implementation of a Limitation of Fishing Capacity of Contracting Parties and Cooperating Non-Contracting Parties*: the Resolution requires CPCs to ensure that where there is a proposed transfer of capacity to their fleet, the vessels to be transferred are on the IOTC Record of Vessels or on the record of vessels of other tuna RFMOs. It also prohibits the transfer of vessels in the IUU list of any RFMOs.

The implementation mechanisms of these measures are left to the individual CPCs. RFMOs have not put specific procedures in place to monitor and verify compliance with, and effectiveness of, the national measures adopted pursuant these provisions.

a.2. In the case of ICCAT Swordfish, also managed through two distinct stocks (north and south Atlantic Swordfish) both subject to TAC and allocations, the approach of ICCAT has been to authorize explicitly specific transfer of quotas from the south to the north section of the fishery on a case by case basis, and without increasing the overall TAC of the respective CPC.

- *ICCAT Rec. 10-02 on North Atlantic Swordfish:* The Recommendation authorizes the USA to harvest up to 200t of its annual catch limit within the area between 5 degrees N latitude and 5 degrees S latitude; the EU to count up to 20 t of its Swordfish catch taken from the South Atlantic management area against its uncaught North Atlantic Swordfish quota; and Japan to count up to 400t of its Swordfish catch taken from a specific area of the North Atlantic management area (East of 35W and south of 15 N) against its uncaught South Atlantic Swordfish quota.
- *ICCAT Rec. 09-02 South Atlantic Swordfish:* Consistent with the Recommendation on North Atlantic Swordfish, this Recommendation authorizes Japan to count up to 400t of its Swordfish catch taken from the specific area of the North Atlantic management area against its uncaught South Atlantic Swordfish quota. It also allows the EU to count up to 200t of its Swordfish catch taken from the North Atlantic management area against its uncaught South Atlantic Swordfish quota.

B. Measures adopted to avoid transfer of capacity to other RFMOs

The tuna RFMOs resolutions and recommendations adopting record of authorized vessels contain a provision that foresees further action to avoid that their implementation has adverse effects upon tuna resources in other oceans. The relevant measures are:

- IATTC Resolution C-11-05 (Amended) on the establishment of a list of longline fishing vessels over 24 meters (LSTLFVs) authorized to operate in the Eastern Pacific Ocean (para. 9);
- ICCAT Recommendation 09-08 concerning the establishment of an ICCAT Record of Vessels 20 meters in length overall or greater authorized to operate in the Convention Area (para.10);
- IOTC Resolution 2007-02 concerning the establishment of an IOTC Record of Vessels Authorised to Operate in the IOTC Area (para. 10);
- CCSBT Resolution on amendment of the Resolution on “Illegal, Unregulated and Unreported Fishing (IUU) and Establishment of a CCSBT Record of Vessels over 24 meters Authorized to Fish for Southern Bluefin Tuna” adopted at the CCSBT15 in 2008 (para. 11); and
- WCPFC CMM 2009-01 on Record of Fishing Vessels and Authorization to fish (para. 22).

In all cases, and with only minor formal variations, the provisions read:

The Commission and the CPCs concerned shall communicate with each other, and make best effort with FAO and other relevant regional fishery management bodies to develop and implement appropriate measures, where feasible, including

establishment of records of similar nature in a timely manner, so as to avoid adverse effects upon tuna resources in other oceans. Such adverse effects include the excessive fishing pressure resulting from a shift of the illegal, unreported and unregulated authorized fishing vessels from the Convention Area to other oceans (fisheries).

These provisions are consistent with the ongoing efforts of the Joint Tuna RFMO Meetings. The global list of vessels authorized to fish for highly migratory stocks (“positive list”) and the regional IUU lists have, *inter alia*, the objective of facilitating exchange of information that allow RFMOs to identify problems of transfer of capacity.

In February 2011, a Workshop on exchange of information and maintenance of the consolidated list of authorized vessels of Tuna Regional Fisheries Management Organizations was held, with the support of FAO and the International Seafood Sustainability Foundation (ISSF). The Workshop, which was attended by database and compliance managers from the tuna RFMO Secretariats and participants from FAO, agreed on the procedures and time frames to be used in the consolidation of vessel records (Joint Tuna RFMOs 2011b).

As a result of these efforts, the Joint-Tuna RFMOs website has posted a “Global List of authorized tuna fishing vessels” (<http://tuna-org.org/GlobalTVR.htm>), an informal process that consolidates the Record of Authorized Vessels of the five tuna RFMOs and updates it periodically.

ANNEX 1. Conservation and management measures adopted by ICCAT, IOTC, CCSBT and WCFPC included in the analysis for this report.

RFMO	Conservation and Management Measure
IATTC	Resolution C-11-12 on the Carrying Capacity of Peru
	Resolution C-11-06 (Amended) on a Regional Vessel Register
	Resolution C-11-05 (Amended) on the Establishment of a List of Longline Fishing Vessels over 24 Meters (LSTLFVs) Authorized to Operate in the Eastern Pacific Ocean
	Resolution C-11-01 on a Multiannual Program for the Conservation of tuna in the Eastern Pacific Ocean in 2011-2013
	Recommendation C-10-01 on a Multiannual Program for the Conservation of Tuna in the Eastern Pacific Ocean in 2011-2013.
	Resolution C-09-01 on a Multiannual Program for the Conservation of Tuna in the Eastern Pacific Ocean in 2009-2011.
	Resolution C-05-02 on Northern Albacore Tuna
	Resolution C-03-07 on the Establishment of a List of Longline Fishing Vessels over 24 meters (LSTLFVs) Authorized to Operate in the Eastern Pacific Ocean
	Resolution C-02-03 on the Capacity of the Tuna Fleet Operating in the Eastern Pacific Ocean (Revised)
	Resolution C-00-06 on a Regional Vessel Register
IOTC	Resolution 10/08 Concerning a Record of Active Vessels Fishing for Tunas and Swordfish in the IOTC Area
	Resolution 10/01 for the Conservation and Management of Tropical Tunas Stocks in the IOTC Area of Competence
	Resolution 09/02 on the Implementation of a Limitation of Fishing Capacity of Contracting Parties and Cooperating Non-Contracting Parties
	Resolution 07/05 on Limitation of Fishing Capacity of IOTC Contracting Parties and Cooperating Non-Contracting Parties in terms of number of longline vessels targeting Swordfish and Albacore (superseded by Resolution 09/02)
	Resolution 07/02 Concerning the Establishment of an IOTC Record of Vessels Authorised to Operate in the IOTC Area
	Resolution 06/05 on Limitation of Fishing Capacity, in terms of number of vessels, of IOTC Contracting Parties and Cooperating Non-Contracting Parties (superseded by Res. 09/02)
	Resolution 05/02 Concerning the Establishment of an IOTC Record of Vessels Authorised to operate in the IOTC Area (superseded by Resolution 07/02)
	Resolution 05/01 on Conservation And Management Measures For Bigeye Tuna
	Resolution 03-01 on the Limitation of Fishing Capacity of Contracting Parties and Cooperating Non-Contracting Parties
	Recommendation 02/06 on the Implementation of the Resolution Concerning the IOTC Record of Vessels
	Resolution 02/05 Concerning the Establishment of an IOTC Record of Vessels over 24 metres Authorised to operate in the IOTC Area (superseded by Resolution 05/02)
	Resolution 05/02 Concerning the Establishment of an IOTC Record of Vessels Authorised to operate in the IOTC Area (superseded by Resolution 05/02 and Resolution 07/02)
	Resolution 01/02 Relating to Control of Fishing Activities (partially superseded by Resolution 02/05, Resolution 05/02 and Resolution 07/02)

CCSBT	Resolution on the Total Allowable Catch and Future Management of Southern Bluefin Tuna adopted at the CCSBT16 in 2009
	Resolution on amendment of the Resolution on “Illegal, Unregulated and Unreported Fishing (IUU) and Establishment of a CCSBT Record of Vessels over 24 meters Authorized to Fish for Southern Bluefin Tuna” adopted at the CCSBT15 in 2008
WCPFC	Resolution 2009-01 WCPFC Record of Fishing Vessels and Authorization to Fish
	CMM 2010-05 CMM for South Pacific Albacore
	CMM 2010-04 CMM for Pacific Bluefin tuna
	CMM 2010-02 CMM for the Eastern High Seas Pocket Special Management Area
	CMM 2010-01 CMM for North Pacific Striped Marlin
	CMM 2009-03 on Conservation and Management of Swordfish
	CMM 2009-02 Conservation And Management Measure On The Application Of High Seas Fad Closures And Catch Retention
	CMM 2008-04 to Prohibit the Use of Large Scale Driftnets on the High Seas in the Convention Area
	CMM 2008-01 CMM for Bigeye and Yellowfin tuna in the WCPO
	CMM 2006-04 CMM for Striped Marlin in the Southwest Pacific
	CMM 2006-01 CMM for Bigeye and Yellowfin tuna in the WCPO (Replaced by CMM 2008-01)
	CMM 2005-03 CMM for North Pacific Albacore
	Resolution 2005-02 on Reduction on Overcapacity adopted at the Second Meeting of the WCPFC
	CMM 2005-01 CMM for Bigeye and Yellowfin tuna in the WCPO (Replaced by CMM 2008-01)
	Resolution 2004-01 on Record of Fishing Vessels and Authorization to Fish (Replaced by CMM 2009-01)
	Resolution adopted at the fourth session of the Multilateral High Level Conference on 19 February 1999
	Resolution adopted at the fifth session of the preparatory conference (Prep.Con) of WCPFC
ICCAT	Rec. 10-04 amending the Recommendation by ICCAT to Establish a Multi-Annual Recovery Plan for Bluefin Tuna in the Eastern Atlantic and Mediterranean
	Rec. 10-03 concerning the Western Atlantic Bluefin Tuna Rebuilding Program
	Rec. 10-02 for the Conservation of North Atlantic Swordfish
	Rec. 10-01 to amend the Rec. by ICCAT on a Multi-year Conservation and Management Program for Bigeye Tuna
	Rec. 09-08 concerning the Establishment of an ICCAT Record of vessels 20 meters in length overall or greater authorized to operate in the Convention Area
	Rec. 09-06 amending Recommendation 08-05 to Establish a Multi-Annual Recovery Plan for Bluefin Tuna in the Eastern Atlantic and Mediterranean
	Rec. 09-05 to establish a Rebuilding Program for North Atlantic Albacore
	Rec. 09-04 for a Management Framework for the Sustainable Exploitation of Mediterranean Swordfish and Replacing recommendation 08-03
	Rec. 09-03 on South Atlantic Swordfish Catch Limits
	Rec. 09-01 to amend the Rec. by ICCAT on a Multi-year Conservation and Management Program for Bigeye Tuna
ICCAT (cont.)	Rec. 08-05 amending Recommendation by ICCAT to Establish a Multi-Annual Recovery Plan for Bluefin Tuna in the Eastern Atlantic and Mediterranean

	Rec. 08-01 to amend the Rec. by ICCAT on a Multi-year Conservation and Management Program for Bigeye Tuna
	Rec. 07-05 for Rebuilding of the Eastern Atlantic Bluefin Tuna Stock
	Rec. 07-04 in Regard to Compliance with the Multi-Annual Recovery Plan for Bluefin Tuna in the Eastern Atlantic and Mediterranean
	Rec. 07-03 on the southern Albacore Catch Limits for 2008, 2009, 2010 and 2011
	Rec. 06-05 to Establish a Multi-Annual Recovery Plan for Bluefin Tuna in the Eastern Atlantic and Mediterranean
	Rec. 06-01 regarding Chinese Taipei
	Rec. 04-01 on a Multi-year Conservation and Management Program for Bigeye Tuna
	Rec. 03-04 Relating to Mediterranean Swordfish
	Resolution 01-25 ICCAT Criteria for the Allocation of Fishing Opportunities
	Rec. 98-08 concerning the Limitation of Fishing Capacity on Northern Albacore
	Rec. 98-03 on the Bigeye Tuna Conservation Measures for Fishing Vessels Larger than 24 m length overall
	Rec. 96-14 Regarding Compliance in the Bluefin Tuna and North Atlantic Swordfish Fisheries
	Rec. 93-04 on Supplemental Regulatory Measures for the management of Atlantic Yellowfin Tuna

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