



<b>CHAPTER 1: OVERVIEW</b>	<b>AUTHOR: SECRETARIAT</b>	<b>LAST UPDATE: Jan. 25, 2006</b>
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## 1. Overview

### 1.1 What is ICCAT?

#### *Introduction*

Tunas and other large highly-migratory species are typically assessed and managed through international arrangements. Since the distribution of such stocks is not limited to the waters of any single sovereign nation, such arrangements are necessary in order to share the available research and fishery information.

The International Commission for the Conservation of Atlantic Tunas is responsible for the conservation of tunas and tuna-like species in the Atlantic Ocean and adjacent seas. The organization was established at a Conference of Plenipotentiaries, which prepared and adopted the International **Convention** for the Conservation of Atlantic Tunas signed in Rio de Janeiro, Brazil, in 1966. After a ratification process, the Convention entered formally into force in 1969. The official languages of ICCAT are English, French and Spanish.

The Commission's work requires the collection and analysis of statistical information relative to current conditions and trends of the fishery resources in the Convention. About 30 species are covered by the Convention: Atlantic bluefin (*Thunnus thynnus thynnus*), yellowfin (*Thunnus albacares*), albacore (*Thunnus alalunga*), bigeye tuna (*Thunnus obesus*) and skipjack (*Katsuwonus pelamis*); swordfish (*Xiphias gladius*); billfishes such as white marlin (*Tetrapturus albidus*), blue marlin (*Makaira nigricans*), sailfish (*Istiophorus albicans*) and spearfish (*Tetrapturus pfluegeri* & *T. belone*); mackerels such as spotted Spanish mackerel (*Scomberomorus maculatus*) and king mackerel (*Scomberomorus cavalla*); and, small tunas like black skipjack (*Euthynnus alletteratus*), frigate tuna (*Auxis thazard*), and Atlantic bonito (*Sarda sarda*).

Southern bluefin tuna (*Thunnus maccoyii*) is also part of the Convention, although currently the primary responsibility for assessing and managing this species rests with the Commission for the Conservation of Southern Bluefin Tuna (CCSBT).

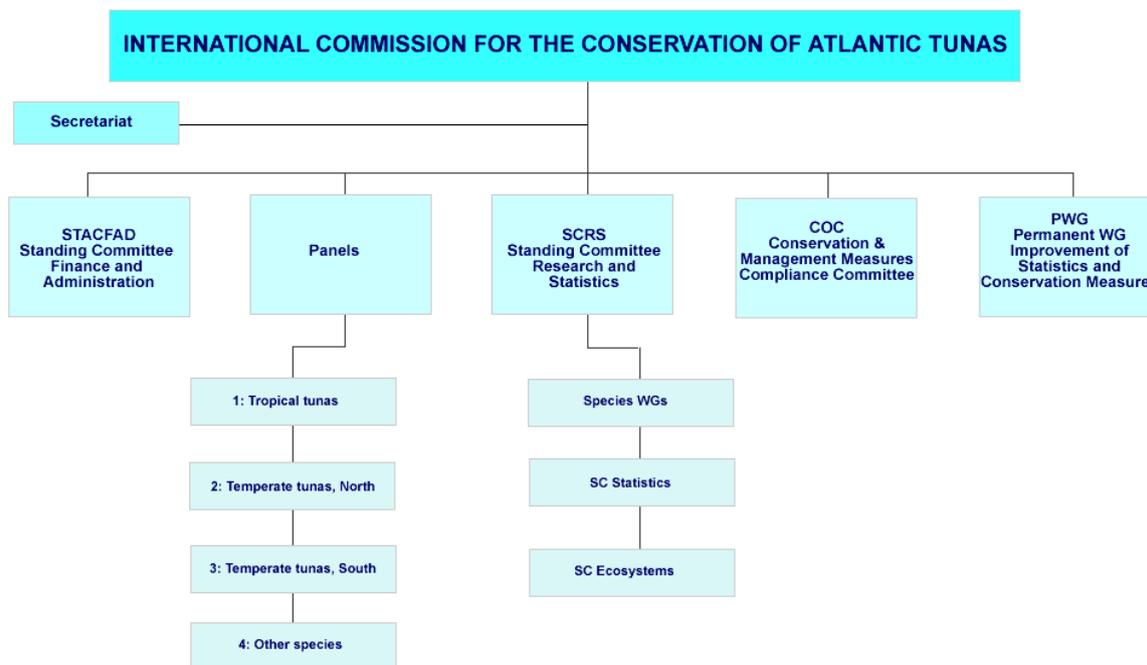
Other species, although not explicitly mentioned in the Convention, are also of interest to ICCAT. This is the case of some species that are caught incidentally by tuna fleets and that are not managed directly through other international arrangements. These currently include pelagic oceanic sharks such as shortfin mako (*Isurus oxyrinchus*) and blue shark (*Prionace glauca*).

#### *Structure*

##### *Contracting Parties*

The Commission is composed of Contracting Parties. The Commission may be joined by any government that is a member of the United Nations (UN), any specialized UN agency, or any inter-governmental economic integration organization constituted by States that have transferred to it competence over the matters governed by the ICCAT Convention.

The Commission has also created a special status known as *Cooperating Non-Contracting Party, Entity or Fishing Entity*. Parties, entities or fishing entities that are granted this status have many of the same obligations, and are entitled to many of the same privileges, as are Contracting Parties.



### *Subsidiary Bodies*

The Commission has set up a number of subsidiary bodies that analyze different types of information and refer their conclusions and recommendations back to the Commission for final decision-making.

The Secretariat Coordinates and facilitates the work of the Commission. This includes managing the Commission's budget, coordinating research programs, maintaining databases, preparing publications and organizing the meetings of the Commission and subsidiary bodies.

The Standing Committee on Finance and Administration reviews all financial and administrative matters and prepares a budget.

The Standing Committee on Research and Statistics (SCRS) recommends to the Commission all policy and procedures for the collection, compilation, analysis and dissemination of fishery statistics. It is the SCRS' task to assure that the Commission has available at all times the most complete and current statistics concerning fishing activities in the Convention area as well as biological information on the stocks that are fished. The Committee also coordinates various national research activities, develops plans for special international cooperative research programs, carries out stock assessments, and advises the Commission on the need for specific conservation and management measures. The SCRS is composed of other subsidiary bodies that examine different species or different topics: These are the Species Groups (working groups that assess the status of the various stocks), and two Sub-Committees: Statistics and Ecosystems.

Four Panels are responsible for keeping under review the species, group of species, or geographic area under its purview: Panel 1: Tropical Tunas (yellowfin, skipjack and bigeye); Panel 2: Northern Temperate Tunas (albacore and bluefin); Panel 3: Southern Temperate Tunas (albacore and southern bluefin); and, Panel 4: Other species (swordfish, billfishes, sharks). The Panels review scientific and other information and make recommendations for joint action by the Contracting Parties aimed at maintaining the stocks at levels that will permit maximum sustainable catches. The Panels may also recommend to the Commission studies and investigations necessary for obtaining information relating to its species, group of species, or geographic area, as well as the co-ordination of research programs by the Contracting Parties.

Compliance matters are reviewed by two different bodies: The Conservation and Management Measures Compliance Committee (reviews matters related to Contracting Parties), and the Permanent Working Group on ICCAT Statistics and Conservation Measures (reviews matters related to Non-contracting Parties).

## *The Secretariat*

The Secretariat is managed by the Executive Secretary who is appointed by the Commission. The Secretariat performs the functions that are necessary for the implementation of the Commission's work. This includes the day-to-day administrative and financial tasks, as well as coordinating various research programs, preparing the collection and analysis of data necessary for stock assessment, and preparing for approval by the Commission scientific, administrative and other reports.

Practically all of the Commission's scientific work and data collection efforts are accomplished by the Contracting Parties themselves. The Secretariat's role is more of being a focal point for data collation/assimilation and coordinating access by scientists to the common databases.

### **1.2 The Main Types of Data**

The main types of data used by ICCAT could be classified according to two criteria: The source of the data, and the intended usage for the data.

#### **Data sources**

##### *Fishery-independent*

Fishery independent data such as research vessel surveys are used in many stock assessments world-wide because such data are less prone to biases than fishery-dependent data are. For example, while a research vessel survey can be designed to operate the same way year after year, it is unlikely to encounter constant technology and methods of operation with commercial vessels.

But, the migratory behavior and wide spatial (and vertical) distribution of most large tunas make it practically impossible to carry out fishery-independent surveys at reasonable costs. Most fishery-independent studies on tunas are conducted with tagging programs. There are, however, a few examples of surveys conducted (e.g., larval surveys).

##### *Fishery-dependent*

These represent the vast majority of data used by ICCAT. The main sources are: Logbooks, observer programs, port sampling, factory/market sampling, and international trade (import/export) statistics. In some cases, remote systems such as telephone and mail surveys, are used.

In many cases, data collected from various sources are used to improve estimates. For example, the estimates of catch made at sea may be adjusted with more precise quantification of catches made at the time of landing in port.

Certain types of fishery-dependent data are mandatory according to the ICCAT Convention and to various international agreements. The most basic data type that must be collected and reported to ICCAT is total annual catch by species, flag, stock area and gear. Other types of data such as catch/effort samples and size samples also need to be collected and reported to ICCAT.

#### **Data Usage**

##### *Compliance*

Each year, the Commission adopts a number of Recommendations for the management of stocks. Certain types of data are used to ensure that these Recommendations are being implemented adequately. For example, if a Recommendation establishes catch quotas and minimum sizes for a given stock, the compliance information needed will be in the form of total catches and in the size composition of those catches.

##### *Biological knowledge*

Stock assessment models are constructed based on a scientific understanding about the main biological characteristics of a species. These include, *inter alia*: stock structure, migration, growth, reproduction, and natural mortality.

Under the Convention, Contracting Parties undertake to carry out such studies on the biology of the stocks. Each year, scientists from the Contracting Parties present the latest results of their studies to the pertinent Species Groups and to the SCRS. From time to time, the advances made by individual investigators are "adopted" as the most up-to-date information and become part of the knowledge base used in stock assessments. The scientific studies are published annually in the *ICCAT Collective Volume of Scientific Papers*.

### *Statistics*

Statistical data used by ICCAT are usually those associated with the fisheries, with a particular level of detail: What species? Where? When? How? How much?

Some of the data collected by Contracting Parties can be quite detailed, while those data reported to the ICCAT Secretariat and shared with other Contracting Parties tends to be more aggregated. Detailed data can be the catch composition made in every single set by a fishing boat. Aggregated data could be the total catch by species made by all the boats in a given year.

Not all data reported to ICCAT are samples. Samples often require some degree of extrapolation in order to come up with estimates of total amounts.

### **1.3 Reporting of Statistical Data to the ICCAT Secretariat**

The number of species, flags, gears and areas for Atlantic tuna fisheries make it necessary to have a set of standards for codes and for submission formats. In order to facilitate the submission of such information, each year the Secretariat sends circulars requesting the information required, copies of which can be downloaded from the ICCAT Web site.

**Appendix 1** in this Manual contains all of the reporting forms that should be used, and **Appendix 2** shows the codes used in the ICCAT databases.

The statistical information requested strictly for scientific purposes covers tuna, tuna-like species and shark catches caught in the ICCAT Convention area. These are:

- *Fleet characterization*: Number of fishing vessels in each fishing fleet (defined explicitly by each flag country, entity or fishing entity taking into account various attributes such as: Nationality, commercial category, fishing gear group, major base port/area, targeted species, etc.) categorized by size (LOA) and tonnage (GRT) classes and major targeted species.
- *Task I Nominal Catches*: Nominal catch estimates (targeted and by-catch species) and dead discards, classified by fishing fleet, species, year, gear, region, fishing waters (EEZ or High Seas). Task I should include all catches, including recreational fisheries and those of research and training vessels of all tuna and tuna-like species and sharks, whether taken as target species or by-catch. Where fish are fattened in fish farms, Task I statistics should include the weight of the fish at the time of their capture. Where fish farm products are exported, the weight of fattened fish exported should be reported separately.
- *Task II Catch & Effort*: Catch (species catch composition) and effort statistics, classified by fishing fleet, gear, time strata and area strata, in accordance with the ICCAT coding system currently under development. These data may be estimates (always raised to the total catches) and/or observed data obtained through various data sources (log-books, auction sales, port sampling, landing ports, transshipments, etc).
- *Task II size samples*: Size frequencies of the samples measured for each species classified by fishing fleet, species, gear, sample units, time strata, area strata.
- *Task II catch-at-size*: Reported catch-at-size estimates (raised to Task I) classified by fishing fleet, gear, time strata, and area strata for the major species (bluefin, albacore, yellowfin, bigeye, skipjack and swordfish) and by sex in the case of swordfish.

#### ***1.4 How this Manual is organized***

Following this introductory text, Chapter 2 follows with a description of the main biological and fishery aspects for each species. Chapter 3 describes the main types of fishing gears/operations used to catch tuna and tuna-like species in the Atlantic Ocean. Chapter 4 introduces the main aspects involved in the collection of biological and statistical data for ICCAT species. Chapter 5 is devoted to types of data that are not usually collected for scientific purposes (although they can sometimes be used to complement scientific estimates). Chapter 6 introduces the main publications produced by ICCAT. Finally, the Appendices provide a number of details on codes, standards, and guidelines for data submission, as well as summaries of basic biological parameters for the main ICCAT species.

This Manual is intended to be maintained primarily in electronic form on the Internet. Various parts are expected to be updated with a high frequency. These pertain mostly to items that could change on an annual basis, such as gear codes. Other parts, such as sampling methods or species descriptions, are not expected to change as frequently. In any case, the reader should consult the ICCAT Web site for the most up-to-date version.