



14 March 2024

Mr. Miguel de Serpa Soares
Under Secretary General for Legal Affairs
and United Nations Legal Council
United Nations
New York 10017
USA

SUBJECT: ICCAT CONTRIBUTION TO SECRETARY GENERAL REPORT ON SUSTAINABLE FISHERIES MANAGEMENT IN THE FACE OF CLIMATE CHANGE.

YOUR REF: *Letter of 28 February 2024: TCSP-17/Invitation/IGOs*

Dear Mr. de Serpa Soares,

I have the honour to refer to your letter of 28 February 2024 requesting information on activities relating to *Sustainable fisheries management in the face of climate change* and to submit information of relevance from ICCAT.

Please accept the assurances of my highest consideration.

Yours sincerely,

Executive Secretary

Camille Jean Pierre MANEL

Cc: doalos@un.org; Michele Ameri (amerim@un.org)

The International Commission for the Conservation of Atlantic Tunas (ICCAT) Experience in Sustainable Fisheries Management in the Face of Climate Change

ICCAT Secretariat
April 2024

i) Experience in sustainable fisheries management in the face of climate change.

a) *Assessing the impacts of climate change on fisheries*

Climate change effects on stock and recruitment can be implicitly estimated in fisheries stock assessment where departures from the expected mean reproductive output are estimated. Through this process, non-stationary changes in productivity (either higher or lower) caused by climate change or other ecological factors may be detected. But prediction ability for determining the direction and magnitude of factors affecting fish stock productivity and distribution remain challenges to overcome.

b) *Addressing the impacts of climate change on fisheries*

ICCAT is beginning to address the impacts of climate change on fisheries insofar as including scenarios with time-varying productivity in its evaluation of harvest strategies through Management Strategy Evaluation (MSE). For example, bluefin tuna are managed to dynamic (i.e. varying with productivity) Maximum Sustainable Yield (see [here](#)). Northern swordfish explicitly tests harvest strategies against a situation where there are changes in productivity with a so-called robustness test, which uses the patterns found in the historical Atlantic multi-decadal oscillation (AMO) trends to modulate recruitment in the projection period. The AMO patterns were used in order to draw on an example of a case from nature where an underlying trend is imposed on otherwise random variations (see [ICCAT 2023](#)).

c) *Accounting for cumulative impacts*

Stock assessment models and the suite of simulation models used in ICCAT's [MSE processes](#) consider cumulative impacts by virtue of the fact that they are time-series analyses. Here, cumulative effects are propagated from time step to subsequent time steps, e.g. a low biomass at one time step is propagated forward into lower biomass and recruitment at the next time step. In this case, cumulative effects are accounted for forward in both model conditioning and projection.

d) *Application of an ecosystem approach and the precautionary approach in the face of climate change and:*

For the purpose of defining terms, ICCAT use [FAO 2003's](#) Technical Guidelines on the Ecosystem Approach to fisheries definition: "An ecosystem approach to fisheries strives to balance diverse social objectives, by taking into account the knowledge and uncertainties about biotic, abiotic, and human components of ecosystems and their interaction and applying an integrated approach to fisheries within ecological meaningful boundaries."

When ICCAT began in 1966, it had a relatively narrow focus on target species. As it evolved through the 1990s and 2000s, concern about the effects of fishing on non-target species, notably sharks, sea birds, and marine turtles became apparent (shown as vertical lines along the time axis of **Figure 1**). Over the course of the years since, ICCAT introduced many separate regulations to reduce the broader effects of ICCAT fisheries on ecosystems. See **Appendix 1** which summarizes the recommendations that have been implemented at ICCAT for non-target species and ecosystems.

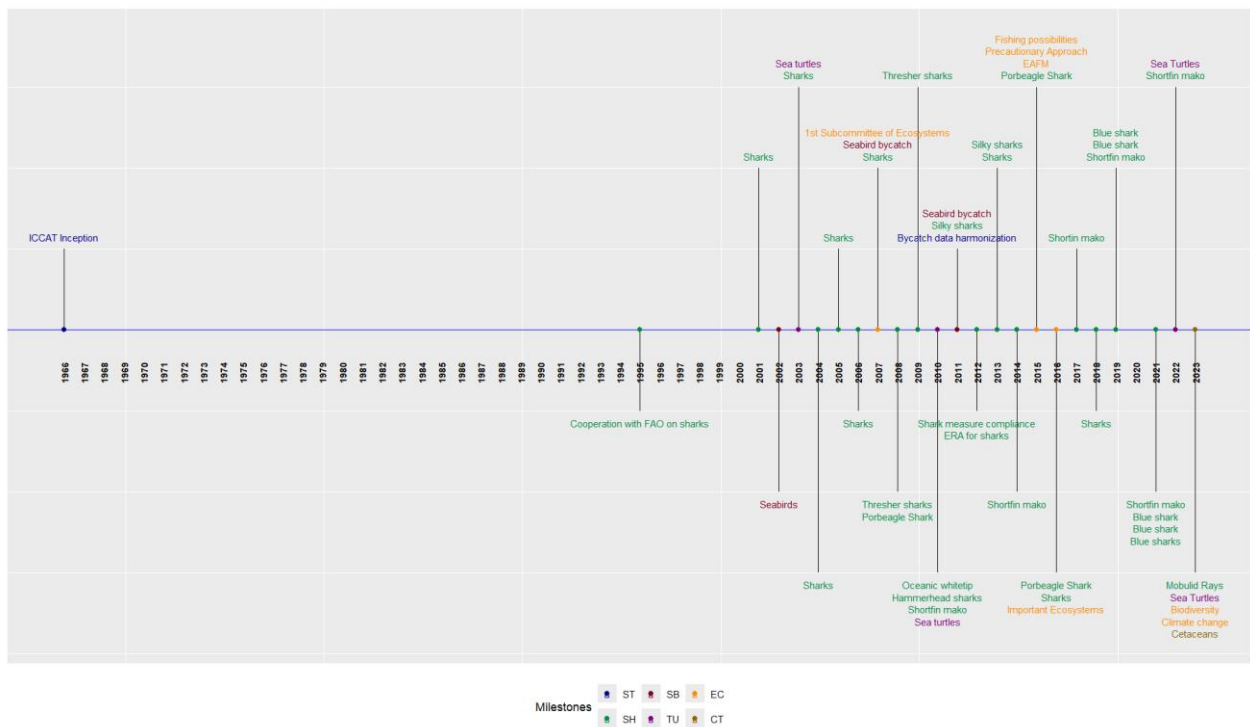


Figure 1. Representation of ICCAT recommendations and resolutions used to manage and target and non-target species including those targeted at improving the management of statistics (ST), sharks (SH), Seabirds (SB), Ecosystems (EC), Turtles (TU), and cetaceans (CT).

To implement the Ecosystem Approach to Fisheries Management in a more coherent way, ICCAT enshrined many of the principles that had justified individual recommendations or resolutions historically by modifying its Convention text. In the [yet-to-be-ratified convention text](#), article IV states the following:

- (a) apply the precautionary approach and an ecosystem approach to fisheries management in accordance with relevant internationally agreed standards and, as appropriate, recommended practices and procedures;
- (b) use the best scientific evidence available;
- (c) protect biodiversity in the marine environment;
- (d) ensure fairness and transparency in decision making processes, including with respect to the allocation of fishing possibilities, and other activities; and
- (e) give full recognition to the special requirements of developing Members of the Commission, including the need for their capacity building in accordance with international law, to implement their obligations under this Convention and to develop their fisheries.

For illustrative purposes, some ICCAT’s mandate under the new convention text can be mapped onto the principles of EAFM defined in [FAO 2005](#) as follows in **Table 1**:

Table 1. EAFMC Principles and ICCAT Convention Text.

EAMFM key principle (FAO 2003 , section 1.2.1)	Some relevant ICCAT Convention text
1. fisheries should be managed to limit their impact on the ecosystem to an acceptable level;	Article I ...co-operate in maintaining the populations of these fishes at levels that will permit their long-term conservation and sustainable use for food and other purposes
2. ecological relationships between species should be maintained;	Article V 1(a)The Commission may also study species belonging to the same ecosystem or dependent on or associated with ICCAT species.
3. management measures should be compatible across the entire distribution of the resource;	Article VII(c) may recommend to the Commission studies and investigations necessary for obtaining information relating to its species, group of species, or geographic area
4. precaution in decision-making and action is needed because the knowledge on ecosystems is incomplete;	Article IV(a) apply the precautionary approach and an ecosystem approach to fisheries management

5. governance should ensure both human and ecosystem well-being and equity	Article IV(e) ensure fairness and transparency in decision making processes, including ... the allocation of fishing possibilities, and other activities; and (e) give full recognition to the special requirements of developing Members of the Commission, including the need for their capacity building
--	---

In addition to the convention text ICCAT implements most of the principles of EAFM in practice. Firstly, it undertakes appropriate management of target species and in so doing limits the impact of fisheries on the ecosystem to an acceptable level (Principle 1). ICCAT actively manages the following stocks through total allowable catches:

Table 2. Target stocks managed by ICCAT. Asterisks indicate which stocks have Harvest Strategies already implemented or in development.

Atlantic bluefin tuna*	Eastern and Western Atlantic sailfish
Yellowfin tuna*	White marlin
Atlantic albacore*	Blue marlin
Bigeye tuna*	Northern swordfish*
Western skipjack tuna*	Mediterranean albacore
Southern Atlantic swordfish	Med swordfish
Northern blue shark	Eastern skipjack tuna*
Southern blue shark	

With respect to maintaining ecological relationships between species (principle 2 above), ICCAT tries to limit mortality on non-target through a large suite of management measures (see Appendix 1). Because stock areas are defined according to the extensive species distribution of many of ICCAT species, [stock areas](#) for the implementation of management measures are explicitly designed to be compatible across the entire distribution of the relevant resources (Principle 3). ICCAT also exercises precaution in decision making (Principle 4). In addition to having an explicit recommendation to implement the Precautionary Approach ([Rec. 15-12](#)), ICCAT also applies asymmetric risk profiles in harvest strategy design(s) i.e. for fisheries managed under Management Procedures, these are developed to have very high probabilities of avoiding biomass levels that could put the stock(s) at risk with comparatively lower probabilities of achieving the biomasses that produce the highest yields. For example, the bluefin tuna management procedure is implemented with a 15% or less probability of either stock falling below the limit reference point and a 60% or higher probability of being above the biomass that produces maximum sustainable yield and below the fishing mortality that produces maximum sustainable yield.

e) Incorporating economic, social and cultural aspects of sustainable fisheries management in the face of climate change.

ICCAT incorporates economic, social, and cultural aspects in a variety of ways. These are captured in how it defines both means (process) and ends objectives (the results) *sensu* Gregory *et al.* 2012¹. The way in which ICCAT strives to ensure fairness and transparency in decision making processes, including the allocation of fishing possibilities is a reflection of the parties' cultural objectives to achieve fairness and transparency. With respect to the ends objectives, socioeconomic, cultural, and traditional aspects enter in two key ways. First, ICCAT determines the Total Allowable Catch of a species stock based on the best scientific information. However, the economic objective defined in its convention, i.e. to achieve maximum sustainable yield is primarily a socio-economic objective. Moreover, at the ICCAT Commission forum, contracting parties at ICCAT explicitly consider the economic consequences of a given total allowable catch in their negotiations, also taking into consideration social, cultural, and traditional aspects of fisheries. A second way that economic, social, and traditional aspects enter ICCAT's decision making process is in defining risk tolerances for achieving objectives in the Management Strategy Evaluation processes. In these instances, parties must agree on their risk tolerances for: avoiding limit reference points, achieving maximum sustainable yield levels, and variability in yield. Defining risk tolerances and what tradeoffs are acceptable between the objectives (e.g. yield vs. conservation) are fundamentally questions of value that are founded in the parties' social, economic, and cultural traditions. Accordingly, in defining the means and ends objectives for the ICCAT Commission, economic, social and cultural aspect are considered.

¹ Robin Gregory, Lee Failing, Michael Harstone, Graham Long, Tim McDaniels and Dan Ohlson. 2012. [Structured Decision Making: A Practical Guide to Environmental Management Choices](#). Wiley-Blackwell 312 pp.

ii) Lessons learned, best practices and challenges in sustainable fisheries management in the face of climate change

ICCAT is still in the initial stages of implementation sustainable fisheries management in the face of climate change. It is too early for reflections on lessons learned, best practices, and challenges.

iii) Actions needed to further strengthen sustainable fisheries management in the face of climate change, including to address particular challenges faced by developing countries through capacity building in accordance with Part VII of the Agreement.

The [Resolution by ICCAT on Next Steps by the Joint Expert Group on Climate Change](#) in 2024 ([Res. 23-19](#)) provides for a meeting which will include, *inter alia* “discussion of how climate-related information can be incorporated into the ICCAT decision-making processes, from both a management and scientific perspective;”

It should be noted that ICCAT has implemented mechanisms to address the special needs of developing States when making decisions and to build their capacity (for example, through meeting participation funds, data and capacity funds).

Summary of ICCAT recommendation and resolutions² for non-Target Species and Ecosystems

MILESTONE	Class	Title EN
Res. 66-01	Statistics	Resolution on the collection of statistics on the Atlantic tuna fisheries
Res. 95-02	Sharks	Resolution by ICCAT on cooperation with the Food & Agriculture Organization of the United Nations (FAO) with regard to study on the status of stocks and by-catches of shark species
Res. 01-11	Sharks	Resolution by ICCAT on Atlantic sharks
Res. 02-14	Seabirds	Resolution by ICCAT on incidental mortality of seabirds
Res. 03-10	Sharks	Resolution by ICCAT on the shark fishery
Res. 03-11	Sea turtles	Resolution by ICCAT on sea turtles
Rec. 04-10	Sharks	Recommendation by ICCAT concerning the conservation of sharks caught in association with fisheries managed by ICCAT
Rec. 05-05	Sharks	Recommendation by ICCAT to Amend Recommendation 04-10 Concerning the Conservation of Sharks Caught in Association with Fisheries Managed by ICCAT
Rec. 06-10	Sharks	Supplementary Recommendation by ICCAT Concerning the Conservation of Sharks Caught in Association with Fisheries Managed by ICCAT
Rec. 07-06	Sharks	Supplemental Recommendation by ICCAT Concerning Sharks
Rec. 07-07	Seabirds	Recommendation by ICCAT on Reducing Incidental Bycatch of Seabirds in Longline Fisheries
Rec. 08-07	Sharks	Recommendation by ICCAT on the Conservation of Bigeye Thresher Sharks (<i>Alopias superciliosus</i>) Caught in Association with Fisheries Managed by ICCAT
Res. 08-08	Sharks	Resolution by ICCAT on Porbeagle Shark (<i>Lamna nasus</i>)
Rec. 09-07	Sharks	Recommendation by ICCAT on the conservation of thresher sharks caught in association with fisheries in the ICCAT convention area
Rec. 10-06	Sharks	Recommendation by ICCAT on Atlantic shortfin mako sharks caught in association with ICCAT fisheries
Rec. 10-07	Sharks	Recommendation by ICCAT on the conservation of oceanic whitetip shark caught in association with fisheries in the ICCAT convention area
Rec. 10-08	Sharks	Recommendation by ICCAT on hammerhead sharks (family <i>Sphyrnidae</i>) caught in association with fisheries managed by ICCAT
Rec. 10-09	Sea turtles	Recommendation by ICCAT on the by-catch of sea turtles in ICCAT fisheries
Rec. 11-08	Sharks	Recommendation by ICCAT on the Conservation of Silky Sharks Caught in Association with ICCAT Fisheries
Rec. 11-09	Seabirds	Supplemental Recommendation by ICCAT on Reducing Incidental By-Catch of Seabirds in ICCAT Longline Fisheries

² The full list of ICCAT recommendations can be found at <https://iccat.int/en/RecRes.asp>

Rec. 11-10	Statistics	Recommendation by ICCAT on Information Collection and Harmonization of Data on By-catch and Discards in ICCAT Fisheries
Rec. 12-05	Sharks	Recommendation by ICCAT on Compliance with Existing Measures on Shark Conservation and Management
SCRS/2007/010	Ecosystems	Establishment of Subcommittee of Ecosystems and Bycatch
SCRS/2008/138	Sharks	Ecological Risk Assessment of sharks
Rec. 13-10	Sharks	Recommendation by ICCAT on Biological Sampling of Prohibited Shark Species by Scientific Observers
Rec. 13-11	Sharks	Recommendation by ICCAT Amending Recommendation 10-09 on the By-Catch of Sea Turtles in ICCAT Fisheries
Rec. 14-06	Sharks	Recommendation by ICCAT on Shortfin Mako Caught in Association with ICCAT Fisheries
Rec. 15-06	Sharks	Recommendation by ICCAT on Porbeagle caught in Association with ICCAT Fisheries
Res. 15-11	Ecosystems	Resolution by ICCAT Concerning the Application of an Ecosystem Approach to Fisheries Management
Res. 15-12	Ecosystems	Resolution by ICCAT Concerning the Use of a Precautionary Approach in Implementing ICCAT Conservation and Management Measures
Res. 15-13	Ecosystems	Resolution by ICCAT on Criteria for the Allocation of Fishing Possibilities
Rec. 16-12	Sharks	Recommendation by ICCAT on Management Measures for the Conservation of Atlantic Blue Shark Caught in Association with ICCAT Fisheries
Rec. 16-13	Sharks	Recommendation by ICCAT on Improvement of Compliance Review of Conservation and Management Measures regarding Sharks Caught in Association with ICCAT Fisheries
Res. 16-23	Ecosystems	Resolution by ICCAT on Ecosystems that are Important and Unique for ICCAT Species
Rec. 17-08	Sharks	Recommendation by ICCAT on the conservation of North Atlantic stock of shortfin mako caught in association with ICCAT fisheries
Rec. 18-06	Sharks	Recommendation by ICCAT to Replace Recommendation 16-13 on Improvement of Compliance Review of Conservation and Management Measures Regarding Sharks Caught in Association with ICCAT Fisheries
Rec. 19-06	Sharks	Recommendation by ICCAT on the conservation of North Atlantic stock of shortfin mako caught in association with ICCAT fisheries
Rec. 19-07	Sharks	Recommendation by ICCAT amending the Recommendation 16-12 on management measures for the conservation of the North Atlantic blue shark caught in association with ICCAT fisheries
Rec. 19-08	Sharks	Recommendation by ICCAT on management measures for the conservation of South Atlantic blue shark caught in association with ICCAT fisheries
Rec. 21-09	Sharks	Recommendation by ICCAT on the conservation of North Atlantic stock of shortfin mako caught in association with ICCAT fisheries
Rec. 21-10	Sharks	Recommendation by ICCAT amending Recommendation 19-07 amending the Recommendation 16-12 on management measures for the conservation of the North Atlantic blue shark caught in association with ICCAT fisheries

Rec. 21-11	Sharks	Recommendation by ICCAT amending Recommendation 19-08 on management measures for the conservation of South Atlantic blue shark caught in association with ICCAT fisheries
Rec. 21-11	Sharks	Recommendation by ICCAT amending recommendation 19-08 on management measures for the conservation of south Atlantic blue shark caught in association with ICCAT fisheries
Rec. 22-11	Sharks	Recommendation by ICCAT on the conservation of the south Atlantic stock of shortfin mako caught in association with ICCAT fisheries
Rec. 22-12	Turtles	Recommendation by ICCAT on the bycatch of sea turtles caught in association with ICCAT fisheries (combine, streamline, and amend recommendations 10-09 and 13-11)
Rec. 23-13	Turtles	Supplemental Recommendation by ICCAT amending Recommendation 22-12 on the bycatch of sea turtles caught in association with ICCAT fisheries
Rec. 23-14	Sharks	Recommendation by ICCAT On Mobulid Rays (Family <i>Mobulidae</i>) Caught in Association with ICCAT Fisheries
Res. 23-15	Cetaceans	Resolution by ICCAT On Cetacean Encirclement
Res. 23-23	Ecosystems	<u>Resolution by ICCAT on the implementation of biodiversity conservation instruments</u>



24 April 2024

Mr. Miguel de Serpa Soares
Under Secretary General for Legal Affairs
and United Nations Legal Council
United Nations
New York 10017
USA

SUBJECT: ICCAT CONTRIBUTION TO SECRETARY GENERAL REPORT ON SUSTAINABLE FISHERIES MANAGEMENT IN THE FACE OF CLIMATE CHANGE.

YOUR REF: *Letter of 28 February 2024: TCSP-17/Invitation/IGOs*

Dear Mr. de Serpa Soares,

Further to my previous letter of 14 March 2024, I have the honour to refer to attach an additional contribution from the Chair of the Working Group on Climate Change and the Chair of the Standing Committee on Research and Statistics February 2024 in relation to ICCAT's contribution to *Sustainable fisheries management in the face of climate*.

We trust this additional information will be of interest. Please accept the assurances of my highest consideration.

Yours sincerely,

Executive Secretary



Camille Jean Pierre MANEL

Cc: doalos@un.org; Michele Ameri (amerim@un.org)

**17th Informal Consultation of States Parties to UNFSA
Sustainable Fisheries Management in the Face of Climate Change**

Contribution on behalf of the International Commission for the Conservation of Atlantic Tunas (ICCAT)

ICCAT welcomes the opportunity to provide a contribution to the seventeenth round of informal consultations of States Parties to the Agreement (ICSP-17) on “sustainable fisheries management in the face of climate change.” ICCAT’s Commission has recently taken several decisions related to climate change and fisheries in response to a growing interest in developing effective management and other strategies to adapt to changing conditions and improve the resilience of ICCAT stocks, fisheries, related ecosystems, and fishing communities. Though the organization is not far enough along in this area of work to provide many “lessons learned,” we have already observed the importance of looking closely at how our resources and our governance structures can best advance both science and management decisions related to the impacts of climate change on our fisheries. We summarize below the Commission’s recent actions related to climate change.

In 2022, ICCAT adopted Resolution 22-13 on Climate Change, which calls on the Commission to account for the potential impacts of climate change on ICCAT-managed species as well as related ecosystems and fisheries. The resolution also initiated a process to identify available information, data gaps, and research needs that will better inform the Commission’s future management of ICCAT species.

Following the adoption of Resolution 22-13, in July 2023 ICCAT convened its first Joint Experts’ Meeting on Climate Change, which brought together managers, scientists from ICCAT’s Standing Committee on Research and Statistics (SCRS), and other external experts to discuss ICCAT’s future in climate-adaptive fisheries management. At the virtual meeting, various experts presented on the expected impacts of climate change on the ocean, in particular on ICCAT-managed resources, and various tools available to scientists and managers to respond to these impacts.

ICCAT continues to explore and advance this area of work, with plans to hold a Second Joint Experts’ Meeting on Climate Change in July 2024. The Commission endorsed the continuation of this work, including by setting out a potential agenda for the next Joint Experts’ Meeting, when it adopted ICCAT Resolution 23-19 at its 2023 Annual Meeting. Resolution 23-19 also calls for the undertaking of a “stock-take” analysis that will identify relevant ongoing ICCAT work which relates to, or is impacted by, climate change, thereby providing a tool for the Commission and SCRS to prioritize its next steps. Initial consideration of ICCAT’s activities related to climate change based on the discussion at the 2023 Joint Experts’ Meeting revealed little direct consideration of climate change in ICCAT’s current ongoing work. The formal “stock-take” may, therefore, identify numerous areas for future consideration. The results of the “stock-take” analysis will be discussed at ICCAT’s July 2024 Joint Experts’ Meeting with a view to refine the draft Plan of Action to guide the Commission’s continued work in the climate change arena.

Attachments:

[ICCAT Resolution 22-13](#)

[Meeting Record of ICCAT’s First Joint Experts’ Meeting on Climate Change](#)

[ICCAT Resolution 23-19](#)