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ICCAT: Background and Issues Germane to Sharks (Elasmobranchs) Listed on CITES Appendices

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Outline

- A cursory description of ICCAT
 - Scope
 - mandate
- Assessments and quota setting process
- Process and measures in place for CITES-listed sharks
- Provenance of major shark catches
- Questions



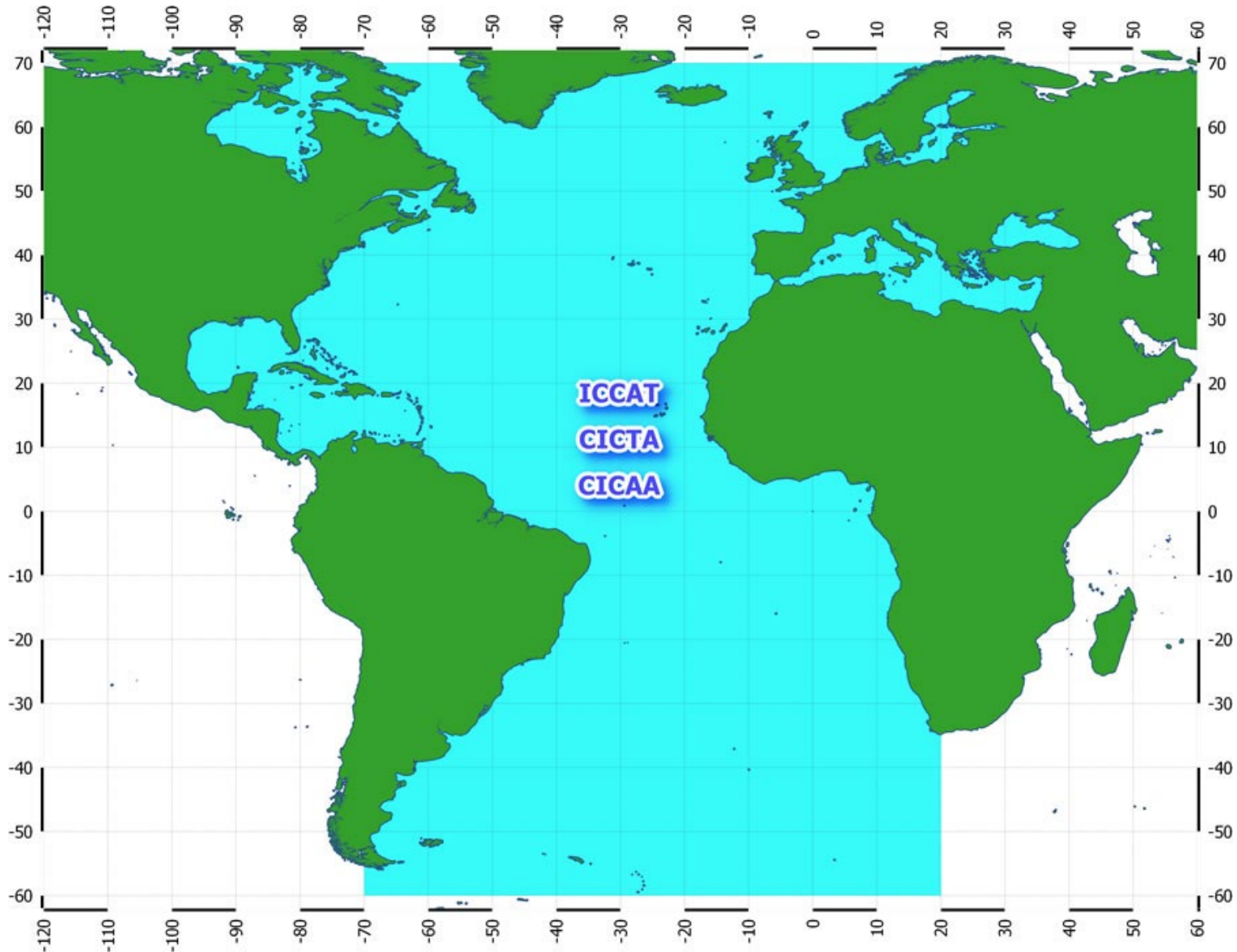
General overview of ICCAT

Convention signed in Rio de Janeiro (Brazil), 1966.

Amendment adopted in 2019 (not yet in force).

52 Contracting Parties + 5 with cooperating status.

The objective of the Convention is to maintain the populations of tuna and tuna-like species at levels which will permit the maximum sustainable catch for food and other purposes.



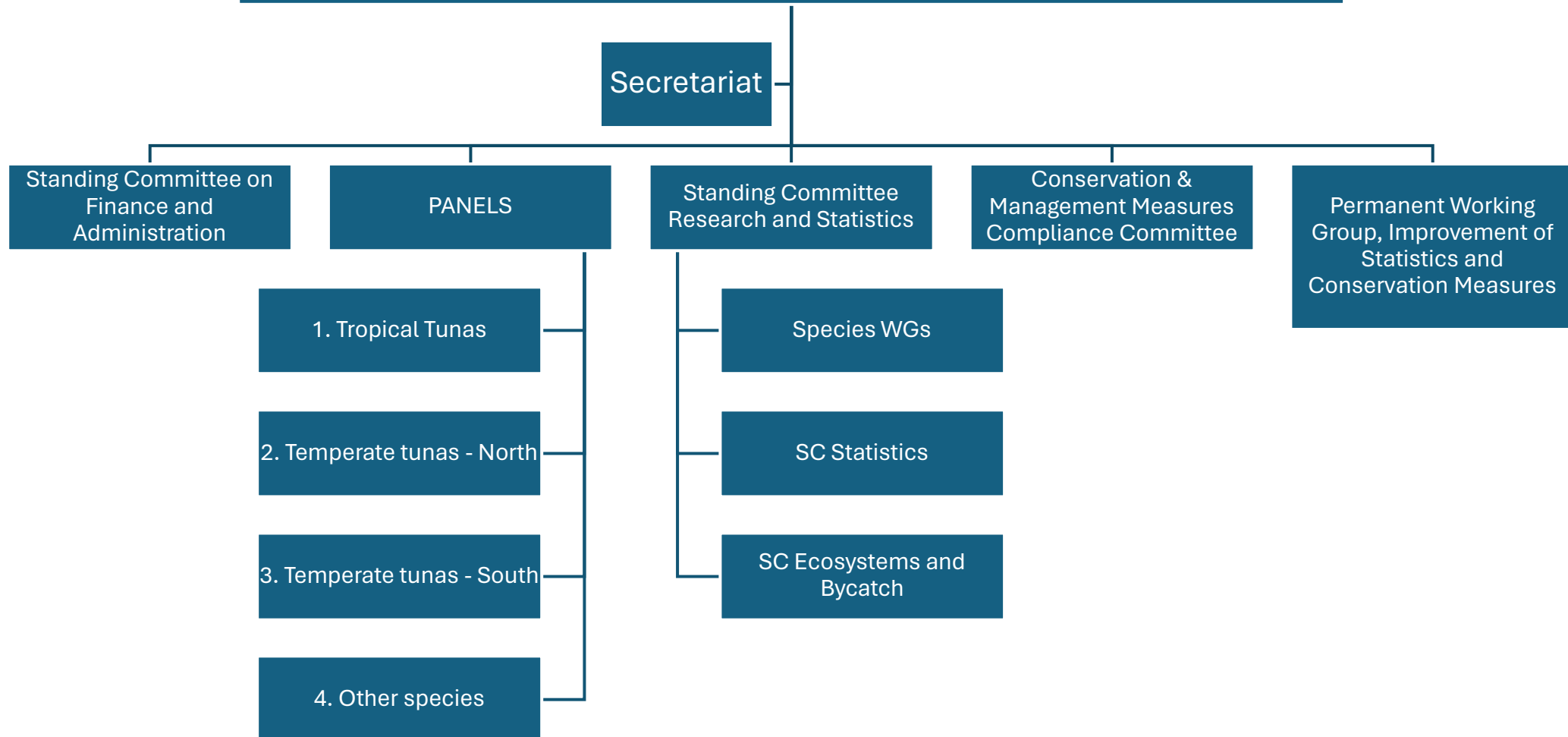
Over **30** species of tuna and tuna-like fishes, also manages **three major** shark species and **43** species of minor commercial importance. Management measures on other bycatch species such as seabirds and sea turtles have also been taken.

Currently 12,000 vessels on the ICCAT Record(s) – can increase significantly during certain fishing seasons.

Between management and scientific, almost 150 reporting requirements.

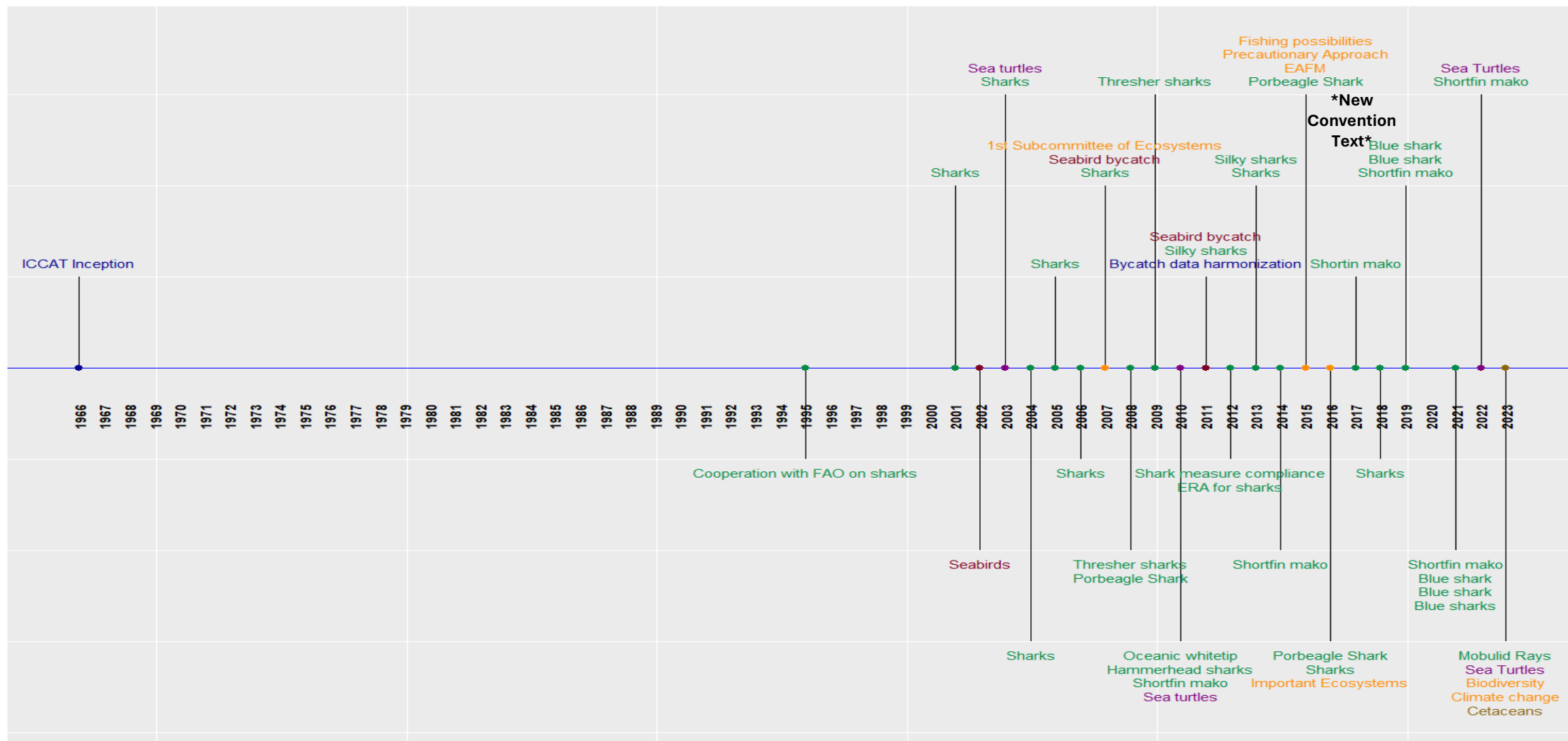


International Commission for the Conservation of Atlantic Tunas





Not just tunas: the evolution of ICCAT ´s experience: recommendations/resolutions related to non-target species





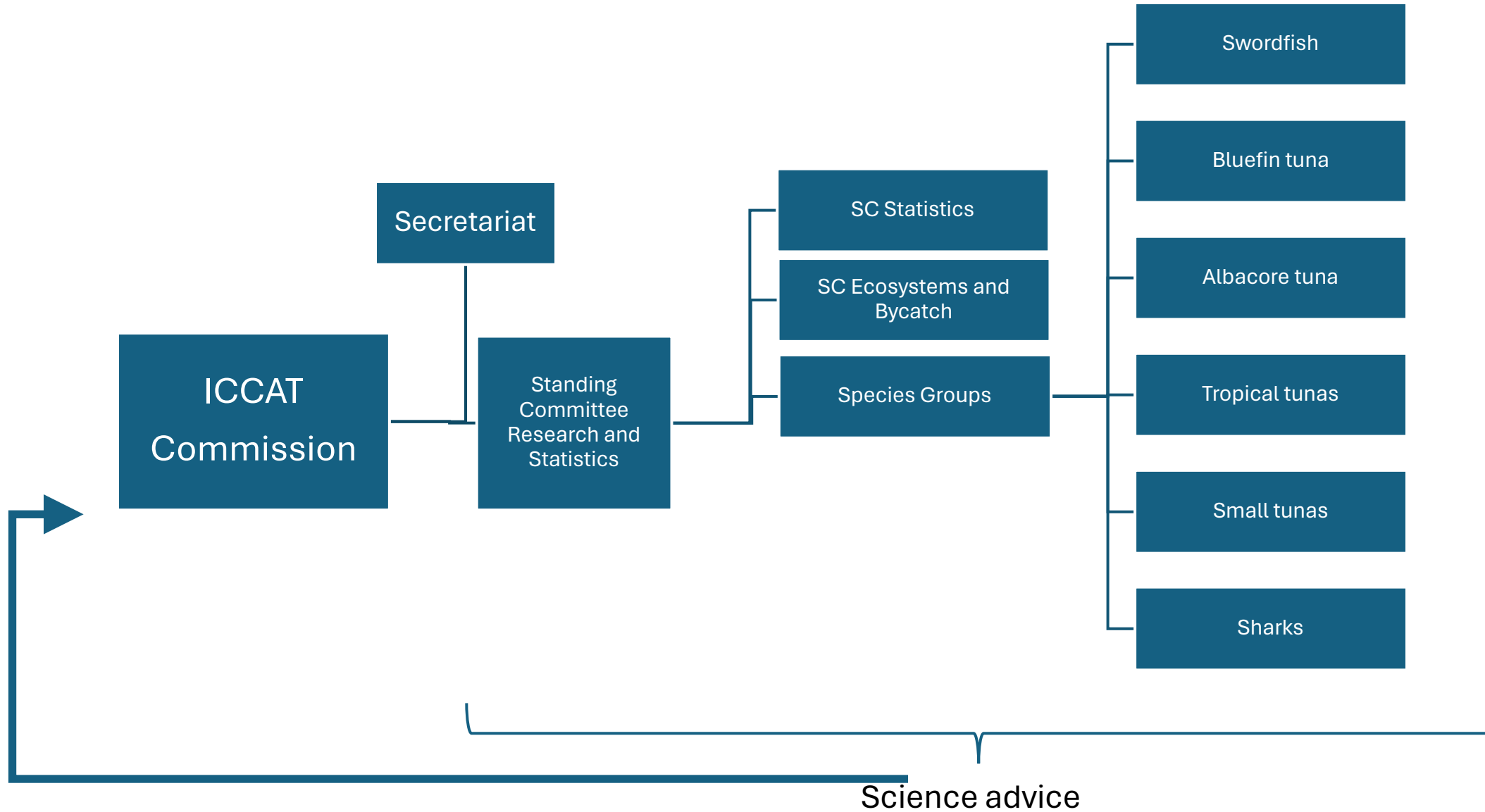
ICCAT's Amended Convention Text (currently being ratified)



Article IV

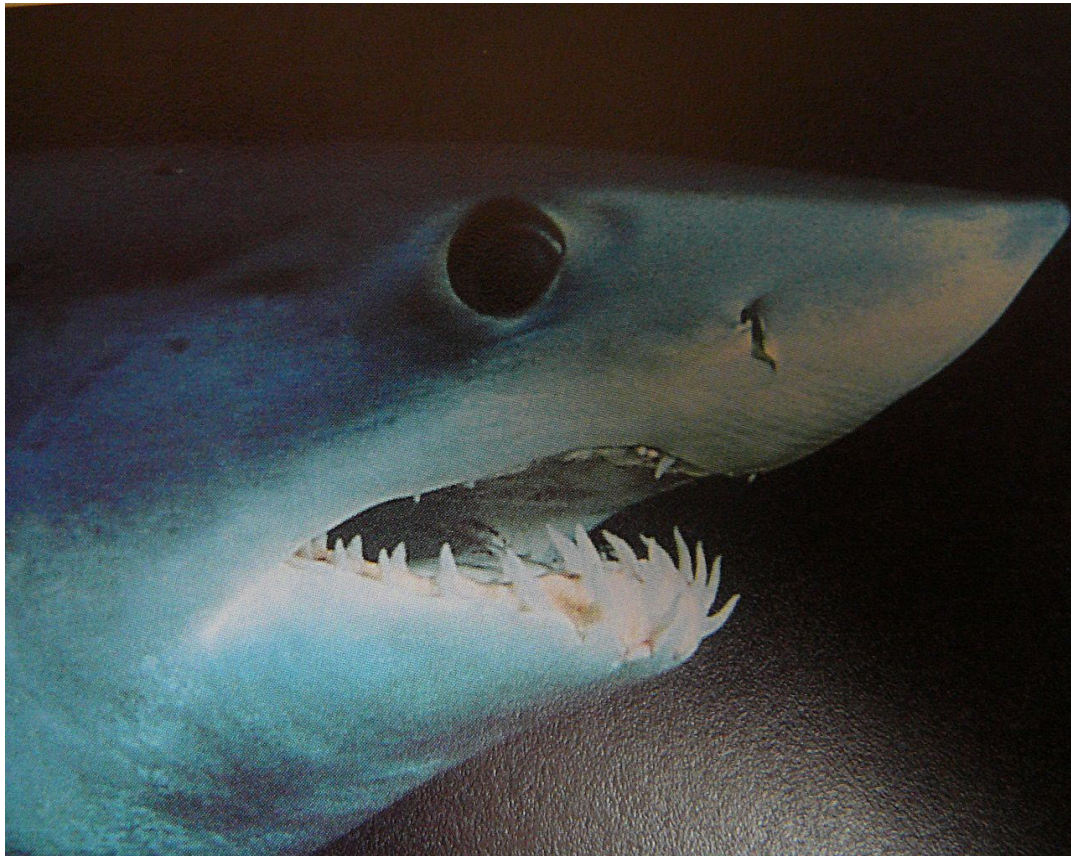
The Commission and its Members, in conducting work under this Convention, shall act to:

- (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.





Major sharks



- In the late 1990s there were very few shark data, and little attention paid to sharks.
- In 2012 Ecological Risk Assessment of Pelagic Sharks Caught In Atlantic Pelagic Longline Fisheries for 20 shark stocks.
- ICCAT now actively assesses and manages three major shark species: porbeagle shark, shortfin mako and blue shark.
- These three shark species cover 8 stocks (northern and southern blue shark, northern and southern shortfin mako, northeast and northwest porbeagle, southeast and southwest porbeagle).
- Appropriate management of these species includes recommendations limiting the total catches of blue shark ([Rec. 23-10](#), [Rec. 23-11](#)) shortfin mako shark ([Rec. 21-09](#)) and porbeagle sharks ([Rec. 15-06](#)).
- Other species managed include thresher sharks (Rec. 09-07) oceanic whitetip (Rec. 10-07), hammerhead sharks (Rec. 10-08), silky sharks (Rec. 11-08), whale shark (Rec. 23-12), mobulid rays (Rec. 23-14).
- plus many more <https://iccat.int/en/RecRes.asp>



Sharks of minor commercial importance

- Chilean devil ray*
- Rough longnose dogfish
- Arrowhead dogfish
- Great hammerhead*
- Scalloped hammerhead*
- Smooth hammerhead*
- Great white shark *
- Thresher*
- Basking shark*
- Bigeye thresher*
- Galapagos shark*
- Roughskin dogfish
- Lined lanternshark
- Pygmy shark
- Taillight shark
- Silky shark*
- Bigeye sixgill shark
- Largetooth cookiecutter shark
- Longfin mako*
- Goblin shark
- Megamouth shark
- Oceanic whitetip shark*
- Pelagic stingray
- Crocodile shark
- Spined pygmy shark
- Whale shark*
- Inshore manta ray*
- Giant manta*
- Lesser devil ray*
- Spinetail mobula*
- Devil fish*
- Lesser Guinean devil ray*
- Smoothtail mobula*
- Cookie cutter shark



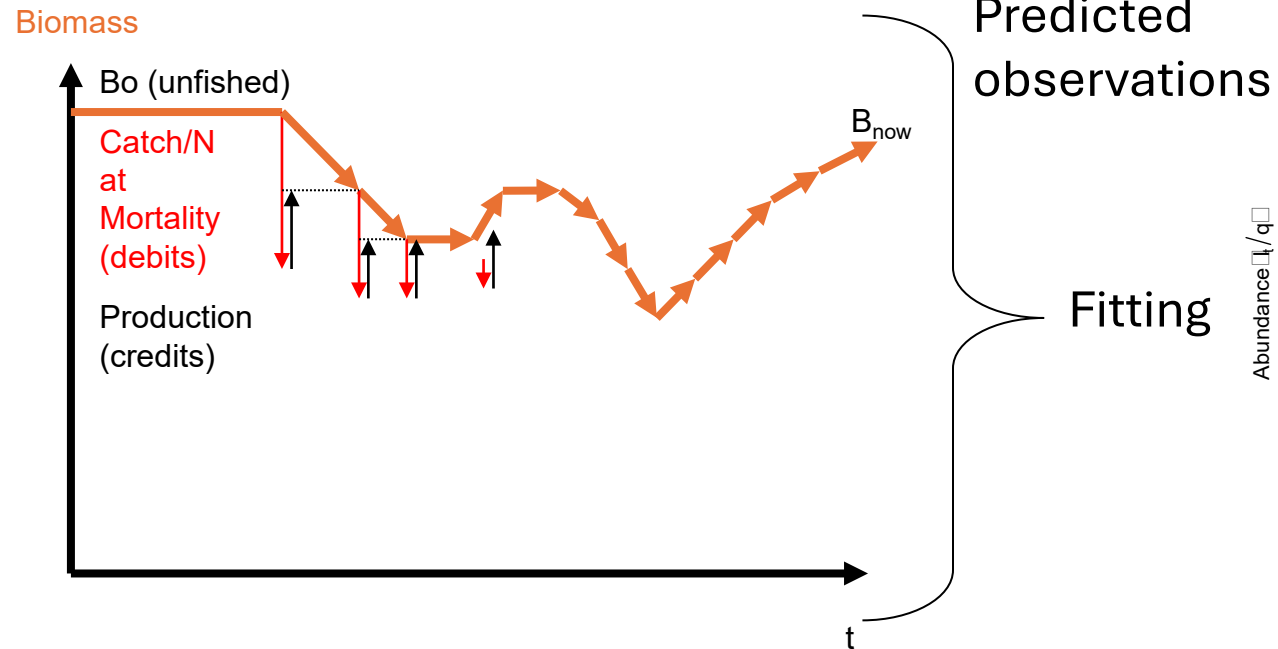


Shark assessments

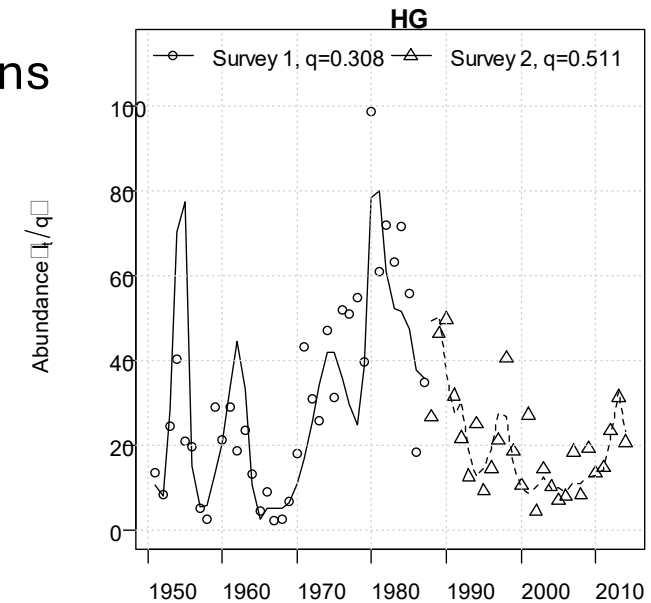
- In 2012 Ecological Risk Assessment of Pelagic Sharks Caught In Atlantic Pelagic Longline Fisheries for 20 shark stocks.
- ICCAT now actively assesses and manages **three major sharks**: porbeagle shark, shortfin mako and blue shark.
- These three sharks (8 “stocks”) have typically been assessed using assessment methodologies much more elaborate than an Ecological Risk Assessment.
- ICCAT exclusively conducts the assessment for northern shortfin mako, southern shortfin mako, northern blue shark, southern blue shark, and northwestern porbeagle shark.
- ICCAT does a “joint” assessment of northeastern porbeagle shark with ICES.



Shark assessments



Observations
(data)

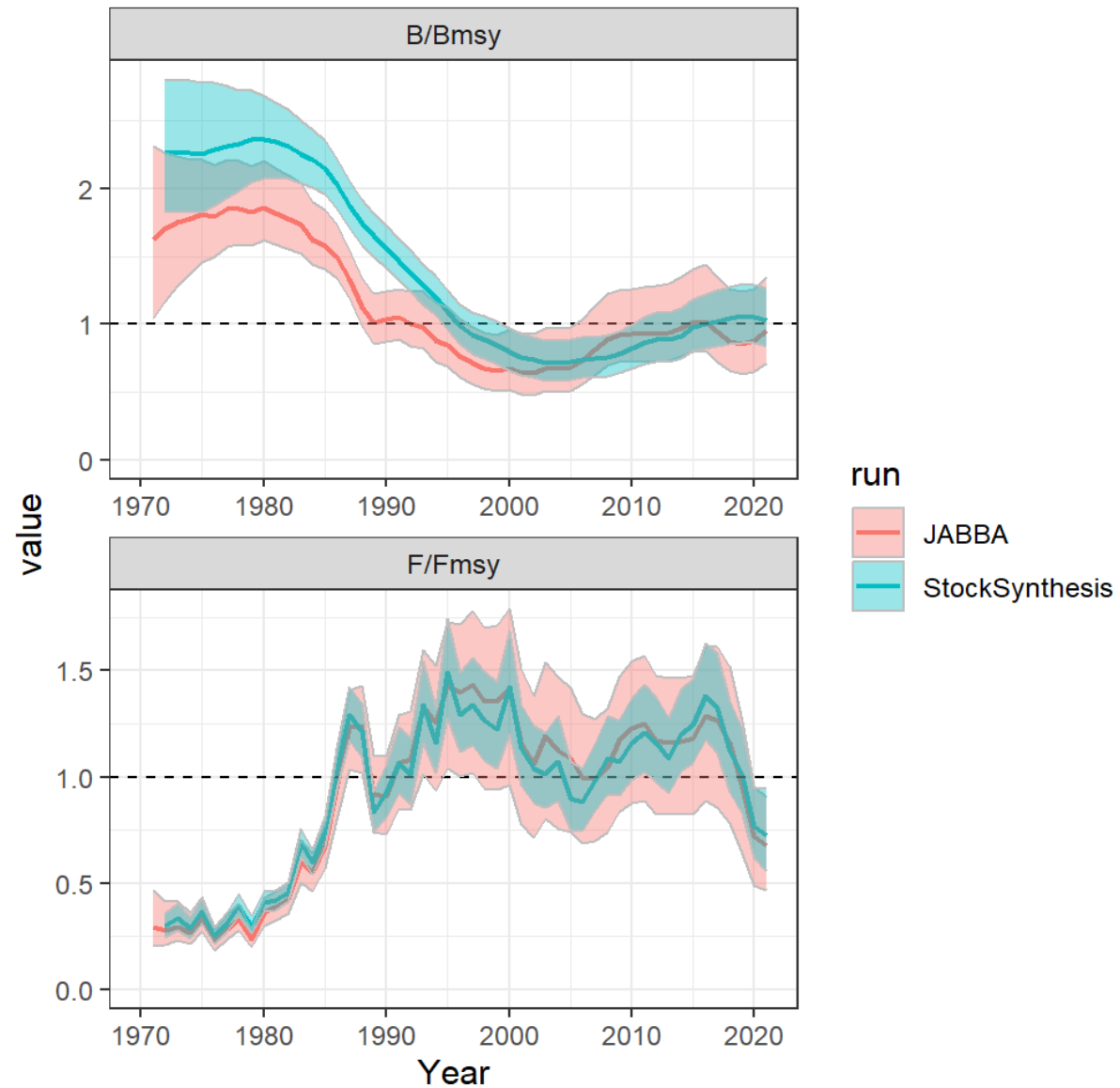




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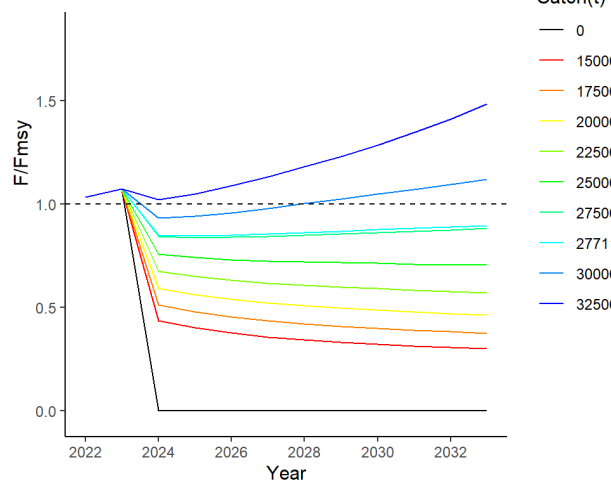
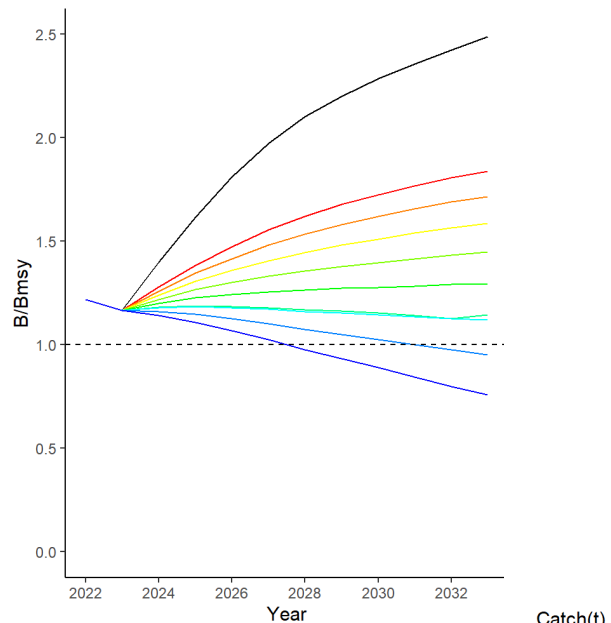


From the
assessment
you get
current and
historical
stock status





Projections (N. Blue shark example)



Probability that $B_t > B_{MSY}$ AND $F_t < F_{MSY}$

| Catch (t) | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|-----------|------|------|------|------|------|------|------|------|------|------|
| 0 | 93% | 99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 15000 | 83% | 89% | 93% | 95% | 97% | 98% | 99% | 99% | 99% | 99% |
| 17500 | 81% | 86% | 90% | 92% | 94% | 95% | 96% | 97% | 97% | 98% |
| 20000 | 79% | 83% | 86% | 88% | 89% | 90% | 91% | 92% | 93% | 94% |
| 22500 | 77% | 79% | 81% | 82% | 82% | 83% | 84% | 84% | 85% | 86% |
| 25000 | 74% | 75% | 75% | 75% | 74% | 74% | 73% | 73% | 73% | 72% |
| 27500 | 68% | 68% | 67% | 65% | 63% | 61% | 59% | 59% | 54% | 53% |
| 27711 | 67% | 67% | 66% | 63% | 61% | 60% | 58% | 56% | 55% | 54% |
| 30000 | 58% | 57% | 54% | 51% | 49% | 47% | 44% | 43% | 41% | 40% |
| 32500 | 47% | 45% | 42% | 39% | 37% | 34% | 32% | 31% | 29% | 28% |



Some important qualifications

- The type of assessment described above is applied to virtually all commercially important fisheries but for sharks there are a couple variants.
- First of these is when (in part due to the CITES listing) the quality of the data to support stock assessment has declined (porbeagle east and porbeagle west have no indices of abundance), then other methods are used to try to generate this kind of advice e.g. western porbeagle had to resort to alternative methods for this reason.
- The second variant involves applying a set of simulation that justifies and defines the harvest control rule (the mathematical conversion of the assessment model/data to TAC advice) as applied to Atlantic bluefin tuna, northern albacore, and under development for swordfish.



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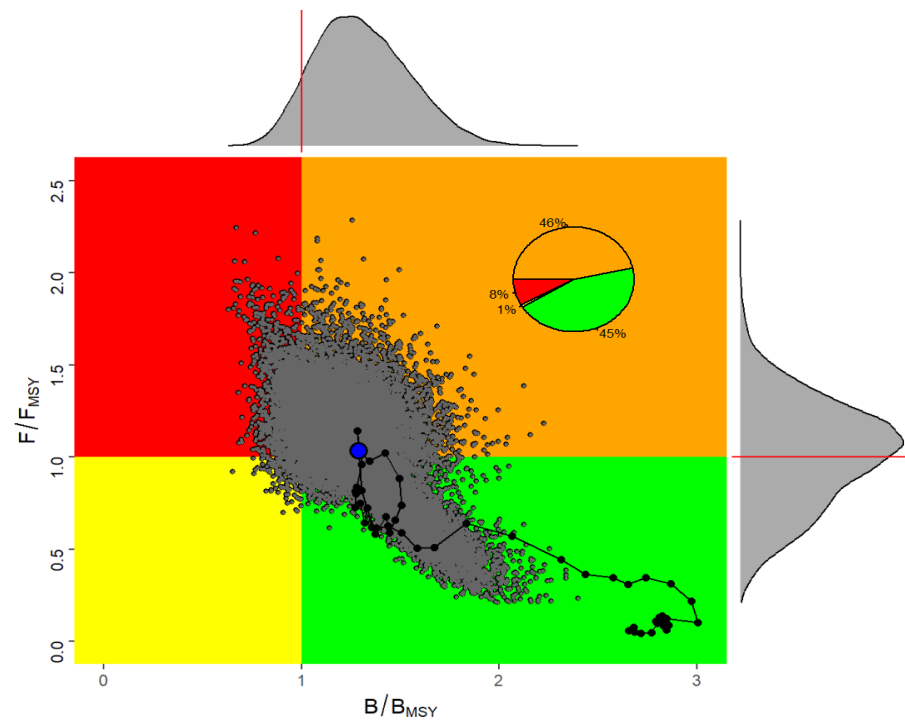


What are the estimates of “current” stock status for ICCAT’s Appendix 2 listed sharks?

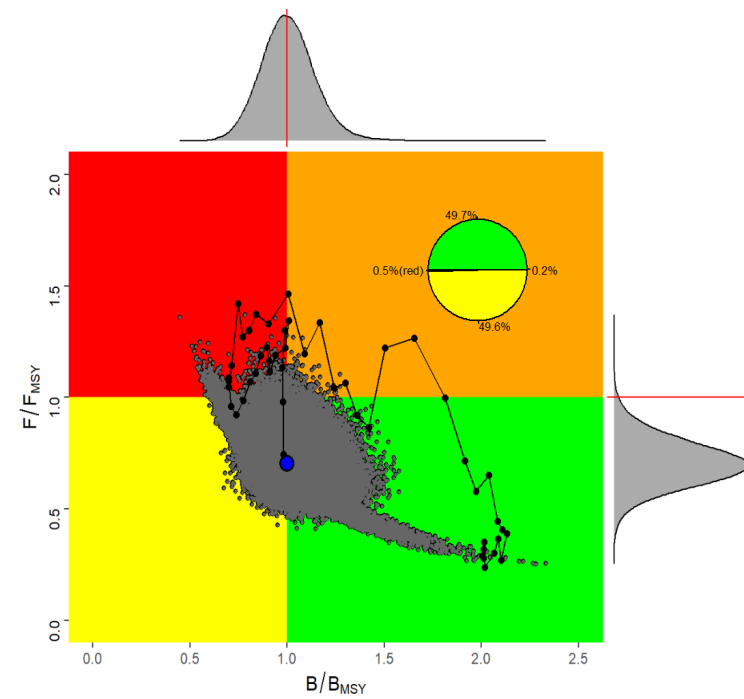


Blue shark

Blue sharks, 2021 (S)



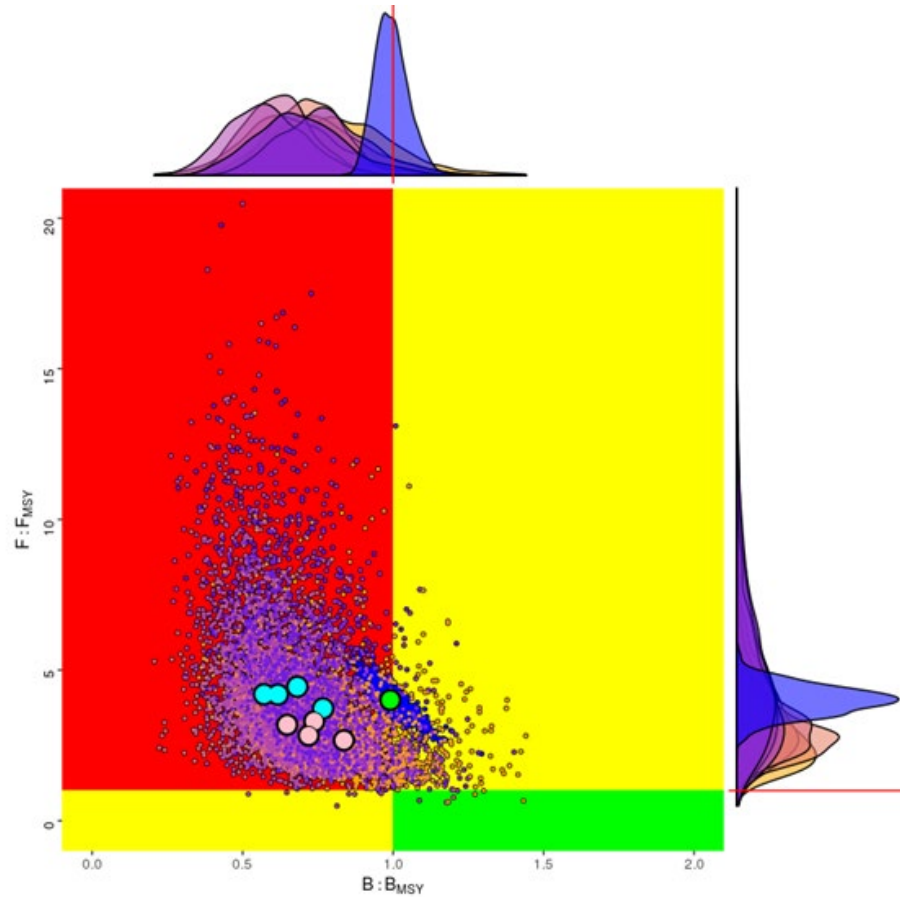
Blue sharks, 2021 (N)



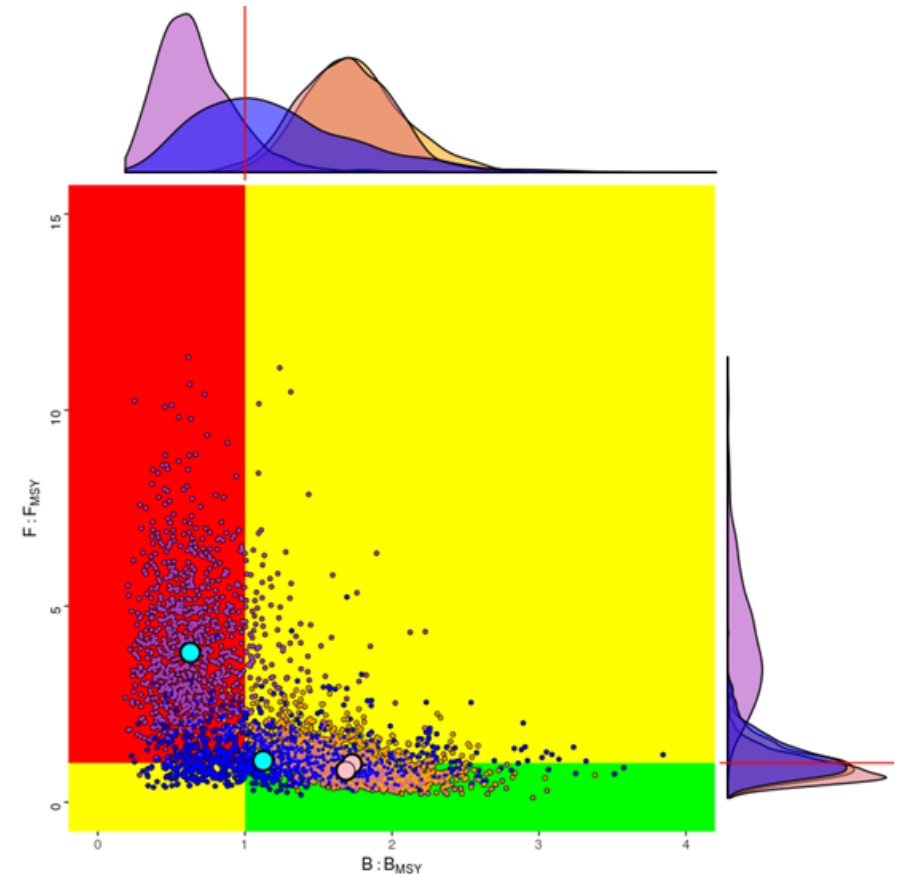


Shortfin mako

North (2018)



South (2015)



[illegible]



Regulations in effect

- Porbeagle: Rec. 15-06, 1. Contracting Parties, and Cooperating non-Contracting Parties, Entities or Fishing Entities shall require their vessels to promptly release unharmed, to the extent practicable, porbeagle sharks caught in association with ICCAT fisheries when brought alive alongside for taking on board the vessel.
- Blue shark:
 - North TAC 30,000 t, [Rec. 23-10](#)
 - South TAC 27,711 t, [Rec. 23-11](#)
- Shortfin mako:
 - It's complicated.



Regulations in effect blue shark - S

More on blue shark **Rec. 23-11:**

3. The following CPCs shall be subject to the following catch limits:

CPC Catch limit

EU 17,405 t

Brazil 3,481 t

Namibia 3,238 t

Japan 1,520 t

Chinese Taipei 867 t

- a) All other CPCs shall endeavour to maintain or reduce their catches.
- b) If the catches of a CPC that is a coastal developing State and not included in the allocation table exceed 1,000 t in any given year, that CPC shall be automatically included in the allocation table. The catch limit of that CPC shall be set at the level of that year.
- c) If the catches of a CPC that is not a developing coastal State and not included in the allocation table exceed 750 t in any given year, that CPC shall be automatically included in the allocation table with a catch limit of 750 t.
- d) If the total annual catches or the total of the catch limits included in the allocation table exceed the TAC established in paragraph 2 above, the Commission shall review the catch limits to bring harvesting levels in line with the TAC.



Regulations in effect blue shark - N

More on blue shark **Rec. 23-10**

2. An annual TAC of 30,000 t for North Atlantic blue shark is established.

3. The following CPCs shall be subject to the following annual catch limits:

| CPC | Catch limit |
|----------------|-------------|
| EU | 24,449 t* |
| Japan | 3,012 t** |
| Morocco | 1,644 t*** |
| United Kingdom | 25 t |

*This takes into account an annual transfer of 348 t to Morocco until the next stock assessment of North Atlantic blue shark by the SCRS and is without prejudice to future allocation discussions.

4. All other CPCs shall endeavour to maintain their catches below the level of their highest annual catches over the last ten years.



Regulations in effect for northern shortfin mako

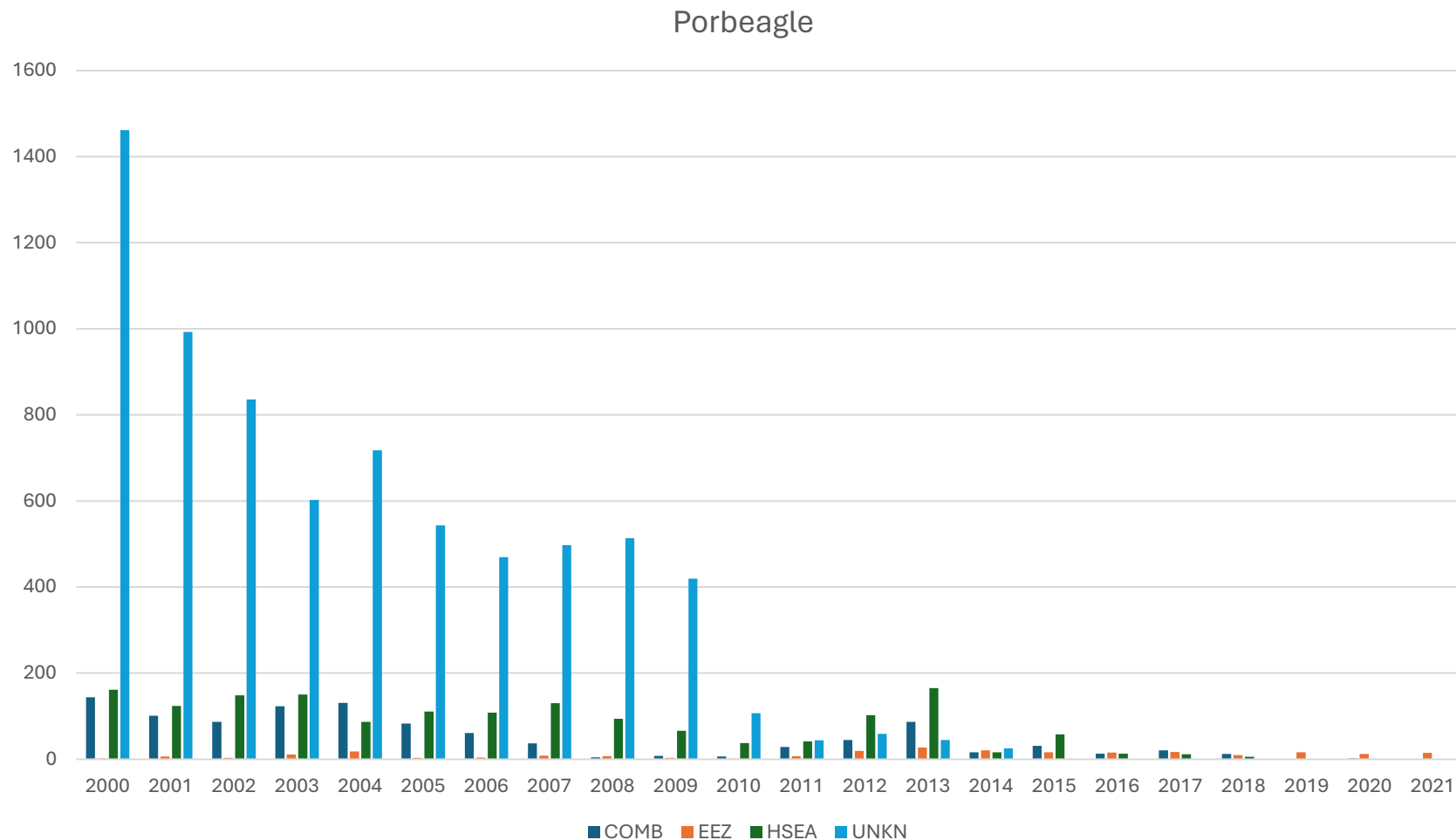
- The management of shortfin mako is complicated by the fact that it's captured as bycatch in surface longline fisheries.
- The important recommendation here is [Rec. 21-09](#)
 - 1..."end overfishing immediately and gradually achieve biomass levels sufficient to support maximum sustainable yield (MSY) by 2070 with a probability of a range of between 60 and 70% at least".
 - 3. "prohibition on retaining on board, transshipping and landing, whole or in part, North Atlantic shortfin mako caught in association with ICCAT fisheries **in 2022 and 2023**".
 - 4a. "the total fishing mortality for North Atlantic shortfin mako shall be no more than 250 tonnes until new SCRS advice is provided to the Commission (this is landed catch plus dead discards)".
- For years after 2023, there is an algorithm that determines if there is any allowable catch:
 - If the sum of all landed catch and dead discards is less than 250 tonnes, then some retention may be permitted.
 - The sum of landed catch and dead discards significantly exceeds 250 tonnes so no retention is permitted.



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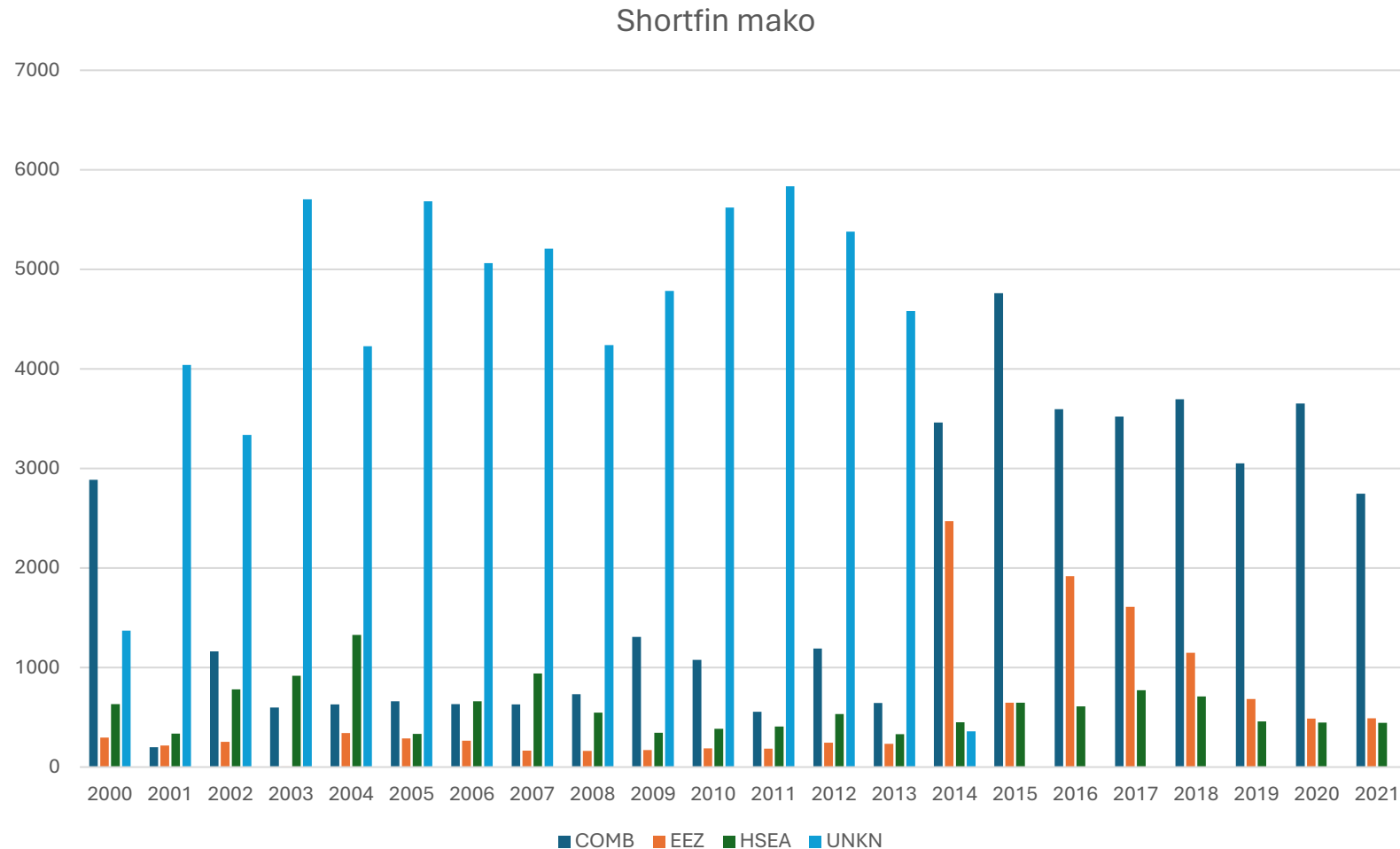


Where does the catch come from?



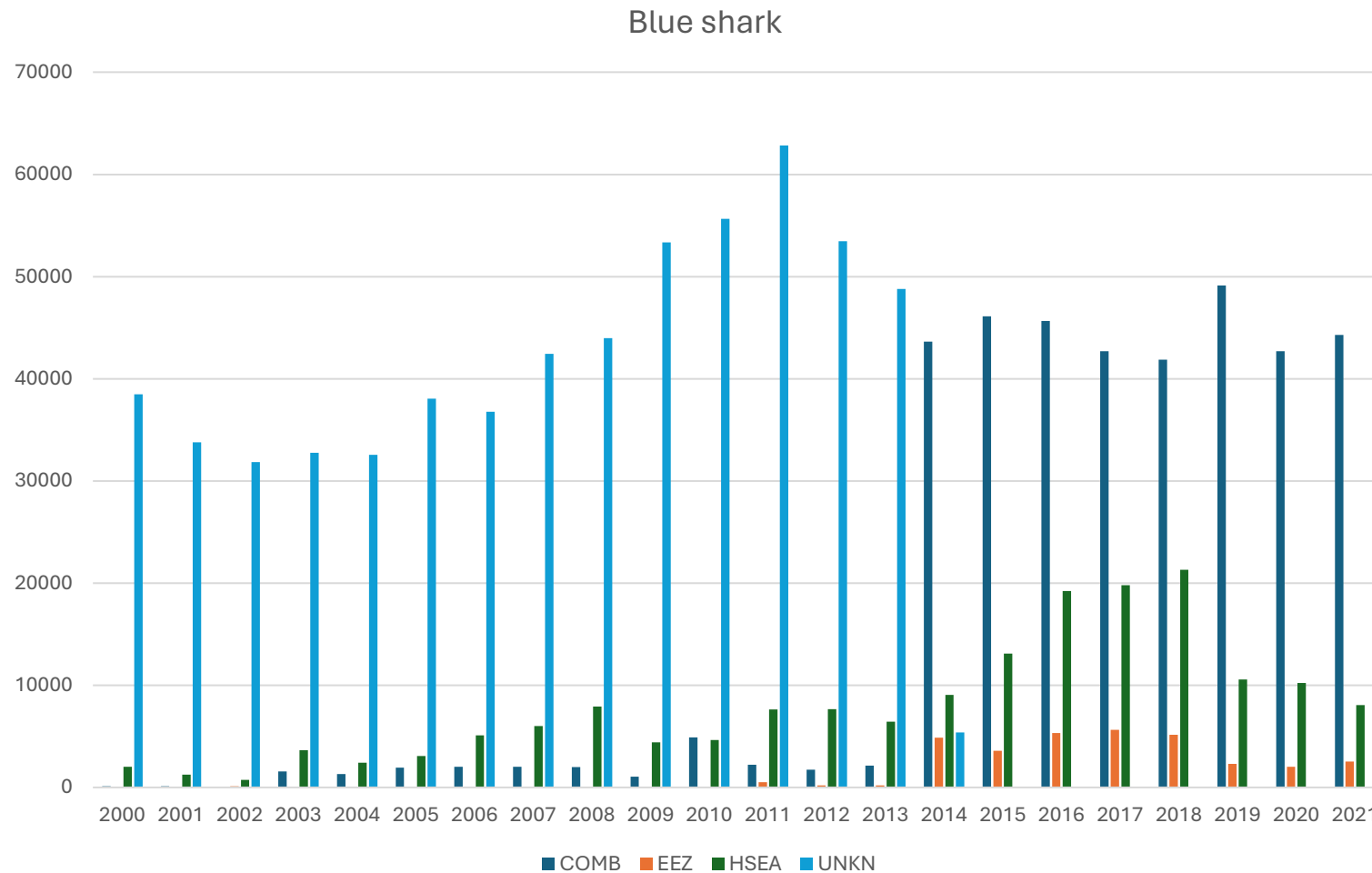


Where does the catch come from?





Where does the catch come from?



Questions?