

Northwest Atlantic Fisheries Organization (NAFO)

Elasmobranch Conservation Progress & Priorities

Sharks, skates, and rays (elasmobranchs) deserve special conservation focus because low reproductive capacity leaves most species exceptionally vulnerable to overexploitation.

The Shark League has been working towards the following for elasmobranchs under NAFO:

- Measures to improve catch reporting and minimize incidental mortality
- Fishing limits based on science and the precautionary approach, and
- Protections for especially vulnerable species.

Progress since 2016

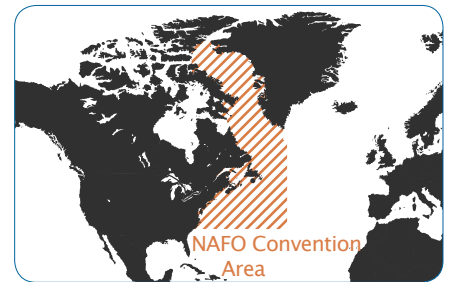
The following steps taken over the last two years can improve the outlook for elasmobranchs:

- NAFO adopted a ban on at-sea removal of shark fins, the gold

standard for shark finning ban enforcement (2016)

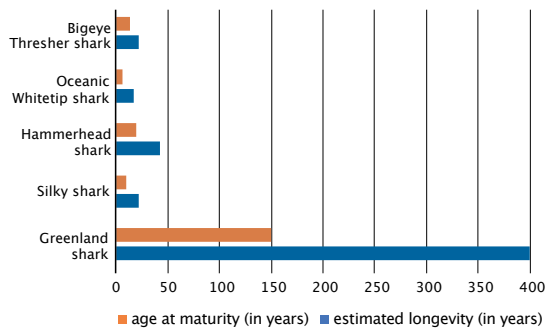
- Amendments that modernize the NAFO Convention entered into force (2017), underscoring Parties' commitments to:
 - o Preventing overfishing and ensuring long-term sustainability
 - o Heeding the best scientific advice available
 - o Applying the precautionary approach
 - o Minimizing incidental catch and harmful impacts on marine ecosystems
 - o Preserving biological diversity, and
 - o Collecting and sharing sound fishing data in a timely manner.
- NAFO scientists completed a groundbreaking review of the status and conservation needs of Greenland Sharks (2018).

Despite this progress, several Northwest Atlantic elasmobranch populations under NAFO purview are in a precarious state and in need of domestic and international safeguards. NAFO's total allowable catch (TAC) limit for skates has consistently been set higher than levels advised by scientists. Excessive catch limits leave room for serious overfishing, particularly for Thorny Skates. There is also need to examine the sustainability of exceptionally vulnerable deep sea shark species that are taken incidentally in NAFO fisheries, particularly the Greenland Shark.



Spotlight on Greenland Sharks (*Somniosus microcephalus*)

The Greenland Shark, the second largest carnivorous shark, is considered the world's longest living vertebrate. In 2016, scientists estimated that Greenland Sharks don't reach sexual maturity until ~150 years of age and can live more than 400 years. This finding and inferences about the species' vulnerability to overfishing led to widespread concern and review by NAFO's Scientific Council.



Greenland Sharks are associated with the high latitudes of the North Atlantic and Arctic waters at depths up to 3,000 metres. Growing to more than 6m (21 feet), they were heavily fished in the first half of the 20th century for liver oil. Today, Greenland Sharks are taken primarily as incidental catch in a variety of fisheries, and also targeted for meat by vessels from Greenland and Iceland.

NAFO scientists have highlighted the extreme longevity and low fecundity of Greenland Sharks, and noted other Regional Fishery Management Organization decisions to prohibit retention of inherently vulnerable shark species. The Scientific Council's final Greenland Shark advice will be ready in time for consideration at the 2018 NAFO annual meeting in September.



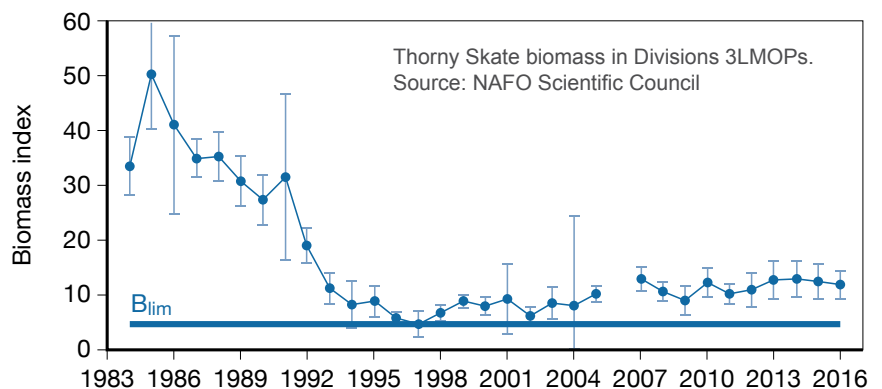
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Spotlight on Thorny Skates (*Amblyraja radiata*)

Thorny Skates are widely distributed across a variety of substrates down to 1,400m on both sides of the Atlantic. Females mature at around age 11 and produce only about 15 viable hatchlings each year after incubation that can last three years. Thorny Skates have been severely depleted in the southern part of their distribution, declining by as much as 95% since the 1970s in some US waters.

The NAFO Scientific Council has demonstrated that:

- Skates have low resilience to fishing pressure due to low population growth rates
- The Division 3LNO Thorny Skate population is low, and
- NAFO management has resulted in little stock rebuilding.



Adherence to scientific advice is a key element of the amended NAFO Convention and to the national policies of many NAFO Parties. Yet, the NAFO Skate TAC has been significantly higher than the level advised by the Scientific Council since the limit was first agreed in 2004. The current TAC exceeds scientific advice by more than 2,000t. More detailed catch data are needed for scientists to develop a robust Thorny Skate assessment and predict the rebuilding progress expected at various TAC levels.

The Scientific Council is now finalizing its advice on NAFO skate catch limits for consideration by NAFO Parties at the annual meeting in September. Efforts by major skate fishing Parties (EU, Canada, Russia) to agree the allocation of skate quota cuts ahead of the annual meeting are needed to avoid a stalemate and facilitate long overdue alignment with scientific advice.

Call To Action

The Shark League urges NAFO Parties to take the following priority actions for elasmobranchs

- Prohibit retention and reduce incidental mortality of Greenland Sharks
- Agree a NAFO Skate TAC that does not exceed the Scientific Council advice
- Significantly increase observer

coverage and the level of detail reported on catches (length, location, etc.), particularly for Thorny Skates

- Direct the NAFO Scientific Council to expand on the next steps for:
 - o minimizing mortality of deep sea sharks, and
 - o establishing reference points for a Thorny Skate rebuilding plan.

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