Species of Concern

NOAA National Marine Fisheries Service

Porbeagle

Lamna nasus

Photo credit: NOAA.

KEY INFORMATION

Areas of Concern

Newfoundland, Canada to Massachusetts, and seasonally to New Jersey.

Year Identified as "Species of Concern"

2006

Factors for Decline

- Fishing

Conservation Designations

IUCN: Critically Endangered- Northeast Atlantic and Mediterranean, Endangered – Northwest Atlantic, Vulnerable globally

Current Status:

Demographic and Genetic Diversity Concerns:

Since the start of commercial exploitation in 1961, **stock** the Northwest Atlantic population has declined by about 90% (COSEWIC 2004); however, the most recent stock assessment indicates that this stock is increasing in biomass, and although they are **overfished**, **overfishing** is not currently occurring (ICES/ICCAT 2009). This species is slow growing and has a relatively late age at maturity (eight years for males and 13 for females) and thus has low productivity rates. They mature considerably after the age at which they first appear in the fishery, making them more vulnerable to fishing pressure (Campana et al. 2002). Due to the species' life history characteristics, the intrinsic rate of increase (r) of the porbeagle is low; however, a recent Ecological Risk Assessment for Atlantic pelagic sharks found that porbeagle sharks ranked among the less vulnerable species in terms of their biological productivity and susceptibility to pelagic longline fisheries (Cortes et al. 2010). Although biomass is increasing and overfishing is not occurring, stock rebuilding is still projected to take decades (ICES/ICCAT 2009).

Existing Protections and Conservation Actions:

In the U.S., this species is managed in the Highly Migratory Species Fishery Management Plan and its amendments (see http://www.nmfs.noaa.gov/sfa/hms/hmsdocument_files/FMPs.htm). There are restrictions on commercial and/or recreational shark fisheries including landing all sharks with fins

naturally attached, limited access, trip limits, gear restrictions, a weight quota, and a minimum size. Additionally, there are hook and bait restrictions and time/area closures for pelagic longliners. The annual commercial quota in the Atlantic is 1.7 tons (mt) dressed weight (dw)(NMFS/HMS 2009). Porbeagle were added to Appendix II of CITES effective 14 September 2014.

Factors for Decline:

They are primarily caught on pelagic longlines; also pelagic and bottom trawls, handlines and gillnets (COSEWIC 2004). Excessive historical fishing is thought to be the main cause of decline. There is concern that porbeagle could be affected by declining groundfish stocks as they are forage for porbeagle (COSEWIC 2004), however, some studies have shown squid as the primary forage through stomach content analysis, and as they are opportunistic feeders, they will forage mostly on whatever prey is available. Based on the most recent stock assessment, ICES/ICCAT (2009) determined that the NW Atlantic porbeagle stock is **overfished,** but **overfishing** is not occurring, and that biomass appears to be increasing; however, stock rebuilding is projected to take decades.

Status Reviews:

In January, 2010, NMFS received two petitions to list the porbeagle shark under the Endangered Species Act (ESA). After reviewing the information contained in the petitions, and that which was readily available in NMFS's files, we determined that neither petition presented substantial information indicating that the petitioned actions were warranted (Federal Register, volume 75, pg. 39656).

Brief Species Description:

Porbeagle sharks are a large, **pelagic,** cold-temperate, coastal and oceanic species distributed across the North Atlantic, and in a circumglobal band in the southern Atlantic, southern Indian, southern Pacific, and Antarctic Oceans. They are found from the surface to depths of up to 300 meters, and move to deeper water in the winter to avoid low water temperatures. They have a heavy spindle-shaped body. Porbeagles are distinguished from white sharks by their spikelike smooth-edged teeth, and by the position of the second dorsal fin, which is directly over the anal fin. The presence of tooth cusplets and secondary caudal fin keels distinguish them from shortfin mako sharks. Porbeagle sharks in the Gulf of Maine are opportunistic feeders, but feed mostly on mackerel and herring and other small fishes, other shark species, and squids. They reach a maximum size of 11.6 feet (355 cm) TL. Males mature at about 8 years and 5.5 feet (170 cm) TL while females mature at 13 years and 6.4 feet (195 cm) TL. They are ovoviviparous (give birth to live young that are nourished *in utero* with egg yolk) and oophagous (egg eating) with females producing on average four young per year. Gestation is thought to be 8 to 9 months.

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