



## Still Fishing for Endangered Sharks? Reevaluating Canada's Porbeagle Fisheries

### Stock Status of the Porbeagle Shark in the ICCAT Area

Porbeagle sharks are classified by the IUCN as Critically Endangered in the Northeast Atlantic and Mediterranean, Endangered in the Northwest Atlantic and Vulnerable globally<sup>1</sup>. The 2009 joint ICCAT-ICES assessment of porbeagle sharks shows rebuilding the population to MSY would take decades, even if all fisheries and bycatch of porbeagle are banned and fishing mortality is reduced to zero. Both stocks are overfished and at very low population levels. In 2008, ICES advice on Northeast Atlantic porbeagle stated, "*Given the state of the stock, no targeted fishing for porbeagle should be permitted and bycatch should be limited and landings of porbeagle should not be allowed.*"<sup>2</sup> Although the 2009 assessment stated that continued catches of 200t in the NE Atlantic would allow recovery over 20-50 years, the EU has decided to act precautiously in an effort to speed recovery of porbeagle and has instituted a zero TAC beginning in 2010. Results for the NW Atlantic porbeagle stock similarly shows decades to recover with current fishing. Despite this Canada, the main porbeagle fishing nation in the NW Atlantic, has yet to act proactively to also end porbeagle fishing and aid the international efforts to speed recovery of this endangered shark.

### Shortcomings in Canada's Porbeagle Management Strategy

Canada has consistently refused to close the domestic directed porbeagle fishery and blocked the adoption of international bans on the retention of porbeagle, asserting that it has a well-managed porbeagle fishery based on sound science. The Ecology Action Centre argues that, while Canada's research has contributed immensely to the ICCAT's understanding of the porbeagle shark population, Canada's management of porbeagle is high risk, rather than precautionary, given the lack of any target timeline for recovery, and insufficient monitoring and enforcement to prevent further population decline. We have identified specific shortcomings in Canada's strategy which include:

- The 185t 'limit' does not account for discard mortality and dead discards.
- The limit does not account for international fishing mortality. The amount of international mortality remains unknown, and needs to be taken into account to better reflect total removals.
- The model does not allow for environmental stochasticity (variability in environment affecting fecundity and population trends). A 2008 assessment<sup>3</sup> conducted for the Northwest Atlantic Fisheries Organization does run models with stochasticity and, as expected, recovery time is extended considerably from decades to a century.
- All data on population status and growth are fisheries dependent and heavily weighted towards Canadian fisheries, which are at the center of the population's distribution. Reduction in shark and ray populations are often characterized by range contraction,

<sup>1</sup> *Lamna nasus* (Porbeagle) - IUCN Red List of Threatened Species

[www.iucnredlist.org/apps/redlist/details/11200/0](http://www.iucnredlist.org/apps/redlist/details/11200/0) (accessed November 2011)

<sup>2</sup> ICES. 2009. Report of the Joint Meeting between ICES Working Group on Elasmobranch Fishes (WGEF) and ICCAT Shark Subgroup, 22–29 June 2009, Copenhagen, Denmark. ICES CM 2009/ACOM:16. 424 pp.

<sup>3</sup> Campana, S and J. Gibson. 2008 Catch and Stock Status of *Porbeagle* Shark (*Lamna nasus*) in the Northwest Atlantic to 2007. NAFO SCR 08-036.

hence estimates based on the centre of a population distribution may not reflect actual population trajectories. The Canadian CPUE time series may be overly optimistic about stock status resulting in a bias in overall estimates relative to MSY. The population and productivity levels could actually be less than that estimated in stock assessments, which would further extend recovery time, given current fishing pressure.

### **A century or more to recover: An acceptable risk for an endangered species?**

Canadian porbeagle reported landings represent about 2% fishing mortality resulting in recovery time from between 20-50 years in a no-fishing scenario of between 30 -100 years. Canada's government has decided that 4% fishing mortality is an acceptable level of risk. ***If the allowed 4% mortality were actually being fished the recovery time is pushed above 100 years.*** This approach is neither a precautionary nor responsible approach to managing an endangered species.

Following a declining population trend for the last 50 years, indications that porbeagle numbers have stabilized in the last few years should be celebrated, but not used as a justification to continue fishing. These 'signs of recovery' only mean that the shark is holding steady at 20% of its 1960s population, which was likely lower than virgin biomass. Porbeagle is still considered to be in the 'critical zone' according to Canada's own Precautionary Approach Policy.

### **The truth behind Canada's 'well-managed' shark fishery**

The agreed 185t TAC that Canada has for porbeagle is not actually an enforced limit. The directed porbeagle fishery constitutes only a fraction of the total catch. The majority of landings are bycatch in other fisheries, including the surface longline fleet for swordfish, an ICCAT managed fishery. Canada's fishery management officials have confirmed that they will not stop other fleets from catching porbeagle once the 'quota' has been reached.

The success of the Canadian recovery program is contingent on proper accounting of all catches, including those taken by high-seas fleets. With the current management model so risky already, any unaccounted for mortality may slow the projected recovery time considerably. There is mounting concern regarding ***unaccounted discards*** of porbeagle sharks as bycatch in several fishing fleets in Atlantic Canada, particularly juvenile discards in an area identified as a porbeagle nursery ground. Increased observer coverage is needed to fully assess total mortality on this vulnerable species and to ensure that signs of further decline are noted in a timely fashion. There is no accounting of fisheries mortality through the Canadian recreational shark fishery despite the anecdotal reports that porbeagle recreational charter catches have increased in recent years; this is particularly concerning given the growing interest in expanding recreational shark fishing in Atlantic Canada. The Canadian Integrated Fisheries Management Plan for sharks does not quantify the number of recreational charter licenses being fished, nor whether they are compliant with catch and release policies.

There are as yet *no limit reference points or timeline targets for recovery* nor any harvest control rules laid out for various porbeagle population scenarios, as is required under Canada's Precautionary Policy for species considered to be in the critical zone ( $< 40\% B_{msy}$ ). Additionally, there are no maximum length restrictions or mandatory spatial closures to protect important life stages for porbeagles, like pupping and mating.

The Canadian Department of Fisheries and Oceans continues to argue that they need the directed fishery for data collection and a continued time-series. Canada has some of the world's leading non-lethal porbeagle tagging research, which has contributed immensely to our understanding of this species. Further fisheries independent research on porbeagle shark should be supported by the government and our international partners, but *data collection should not be an excuse for maintaining a directed fishery for an endangered species.*

Canada has also argued that banning retention of porbeagle would create unacceptable economic costs for fishers. The directed porbeagle fishery is still considered an 'exploratory' fishery under Canadian fisheries management since it is not yet a self-sustaining fishery economically. In fact, there are only a handful of fishermen participating in the fishery and there have been almost no landings by the fleet over the last few years. The reported landings are almost entirely made up of bycatch from longline fisheries who are receiving some of the highest prices for fins seen in some years. The directed fleet makes more money through charter fees to carry out the government population surveys. *Socio-economic excuses in the case of porbeagle fishing have no basis.*

### **Moving Forward on Protection of Porbeagle through ICCAT**

While Canadian landings for porbeagle have declined over the last decade, the catch was over 1000 t during the 1990s. If the market for this shark resumes and Canada continues to allow the exploitation of this species with no hard cap limit, there is a real danger that catches will rise once again. Given that porbeagle sharks are classified as Endangered or Critically Endangered throughout the North Atlantic and Threatened throughout the ICCAT Regulatory Area, recovery timelines are on the order of decades to a century, and the 2008 ICES recommendation for no directed fishing and bycatch limits, retention of porbeagle sharks should be prohibited by ICCAT, as proposed by the EU. Atlantic-wide progress on protection should not be blocked by Canada. Canada's insistence that it has a well managed fishery is clearly an excuse that will not lead to population recovery nor will it ensure that best practices for shark bycatch are implemented in ICCAT managed fisheries in Canadian waters.

*The Ecology Action Centre is Atlantic Canada's oldest and largest environmental organization, celebrating 40 years of action in 2011. The Marine Conservation Program works locally, nationally, and internationally towards conserving and protecting marine ecosystems and maintaining sustainable fisheries and vibrant coastal communities.*

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