



Mako Shark © Joe Romeiro

Top priorities for conservation and management of sharks in Atlantic Canada

Results from the Atlantic Shark Forum held in
Halifax, Nova Scotia on March 31st and April 1st, 2011

Prepared by WWF



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ATLANTIC SHARK FORUM

WWF-Canada's Atlantic Shark Forum was the first step in a collaborative process that brought together fishermen, scientists, managers and practitioners that either interact with shark species directly or are involved in the conservation and management of sharks in Atlantic Canadian waters. The goal of the forum was to identify top priorities that, if addressed, would significantly advance conservation and management of sharks and inspire collaboration between different interest groups. Representatives from several regions/departments of Fisheries and Oceans Canada, relevant gear sectors (pelagic longline, bottom longline, trawl/dragger, groundfish gillnet, recreational shark fishing and shark derbies), non-governmental organizations, tourism, and academia attended the forum¹.

TOP PRIORITIES FOR SHARK CONSERVATION IN ATLANTIC CANADA

To accomplish the above stated goal, participants were asked to develop, review and agree upon a broad range of priorities during two working group sessions over a period of a day and a half. During the first session, participants were organized, where possible, according to their expertise (on-the-water practice, science and policy/management) to discuss the top priorities that they felt to be most pressing. During the second session, working groups were rearranged at random, to achieve mixed-representation, and discussed which of the top priorities agreed upon in the previous category-specific session were cross-cutting or top priorities for all stakeholders.

The cross-cutting priorities that were identified by forum participants are provided in Box 1, while the top priorities identified in the on-the-water practice, science and policy/management specific groups are provided in Box 2. These priorities represent the key issues and/or actions that participants felt to be most pressing. Note that priorities are not listed in any particular order of importance.

Box 1: Top cross-cutting priorities for conservation, protection and understanding of Atlantic Canadian shark species

- ❖ **Better understanding of shark avoidance and release practices used by industry in Atlantic Canadian waters by species and fleet through:**
 - Development of protocols and tools for safe release by fleets
 - Information sharing of what has been done and/or could be done for avoiding shark bycatch
 - Training and educational workshops to disseminate shark avoidance and release practices between fleets
- ❖ **Advance research on and implementation of appropriate mitigation measures through:**
 - Better use of existing bodies of knowledge and data (e.g. log books)
 - Identify, where possible, when and where risks exist for shark species
 - Investigation, by sector, of potential mitigation measures (e.g. gear modifications, area closures)
 - Conduct pilot projects to test possible options to address specific problems for shark species (e.g. test shark repellent hooks, setting practices)

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¹ For a complete list of all 42 participants, please refer to the Appendix I.



- ❖ **Require more and/or better information on, or changes in, stock status through:**
 - Stock assessments for key shark bycatch species with limited information (e.g. greenland, blue and basking sharks)
 - Assessment of total bycatch and post-release mortality for individual shark species
 - Establishment of reference points and bycatch limits for individual shark species
 - Integration of fishers knowledge into conservation and management recommendations
- ❖ **Training and education about shark conservation issues through:**
 - Keeping good and open communication among all stakeholders
 - Sharing of information and knowledge through formal (e.g. workshops) and informal (e.g. conversations) means of communication
 - Developing or making use of existing educational tools (e.g. identification cards)
 - Inform the public on issues and initiatives related to participants efforts with regards to sharks through a collaborative website

Box 2: Top priorities for the conservation, protection and understanding of Atlantic Canadian shark species as identified by the on-the-water practice, science and policy/management working groups.

TOP PRIORITIES FOR ON-THE-WATER PRACTICE

- ❖ More accurate scientific information is needed for some shark species (e.g. basking, blue, spiny dogfish and greenland sharks) to reduce uncertainties that exist for sharks
- ❖ As the marine environment is in flux, new and/or more species of shark may inhabit our waters in the future. It is critical that fishermen and their knowledge are recognized as a vital source of information that needs to be trusted and accepted by science
- ❖ Determine appropriate levels of observer coverage to provide consistent and relevant data on shark species across fleets and regions
- ❖ Some fisheries have their own strategy or avoidance plan that is adapted and changed on-the-water. These strategies need to be collected, shared and tested in areas of higher bycatch across fleets and regions
- ❖ Fishery specific best practices for safe handling and release of sharks is of high importance for fleets. Workshops and forums are needed to disseminate this information and experience across fleets and regions
- ❖ Identification of species is a problem in some fisheries. Education, and the development of educational tools (e.g. I.D. keys), is required for fishermen, as well as fisheries observers
- ❖ Shark derbies represent an opportunity to educate participants and spectators alike, while at the same time gathering scientific information; however, these derbies should move towards catch and release of sharks potentially using U.S. tournaments as an example (e.g. prize for the largest catch and release)

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TOP PRIORITIES FOR SCIENCE

- ❖ Analyze existing data in order to:
 - Determine the spatial and temporal distribution of sharks and shark bycatch
 - Develop robust stock assessment for all species
 - Quantify bycatch of sharks across all fisheries
- ❖ Evaluate current options for bycatch mitigation of sharks, including reducing harm, mortality and catch rates, across all fisheries. This includes:
 - Collaborating with industry to determine possible methods of gear modifications and safe handling
 - Establishing post-release mortality rates for all shark species
 - Integrating scientific and fishers' knowledge for a more comprehensive understanding of shark bycatch
- ❖ Additional data required for shark species through:
 - Fisheries-independent surveys for shark population assessments (excluding spiny dogfish and porbeagle shark)
 - More accurate observer data and additional observer coverage in fisheries with high incidences of shark bycatch
 - More biological data for non-commercial species (e.g. basking, greenland shark and other deep water species)

TOP PRIORITIES FOR POLICY/ MANAGEMENT

- ❖ Develop best practices for safe handle and release of sharks to increase survival
- ❖ Expand regulations requiring that shark discard mortality is accounted in all fisheries known to have bycatch
- ❖ Establish precautionary catch limits for discard mortality of non-commercial priority species based on available data and peer-reviewed assessments
- ❖ Using the shark forum as a basis for recommendations to revise the Canadian National Plan of Action for Sharks with clear actions, priorities, timeframes and responsible agencies
- ❖ Expand fisheries monitoring and enforce regulations established for conservation and management of shark species
- ❖ Fisheries Act renewal to redefine a “shark” and break up their current categorization to include all species in order to safeguard specific species that require additional protection (e.g. species specific area closures)
- ❖ Develop a regional plan of action for conservation and management of sharks in Atlantic Canada
- ❖ Consider shifting current ‘finning’ regulation to fin-attached policy



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NEXT STEPS

Based on participant feedback, the Atlantic Shark Forum proved to be a successful collaborative first step in identifying conservation priorities for sharks in Atlantic Canada. The shark forum acted as an effective tool in connecting people working on shark related projects. It also presented a tremendous opportunity to educate one another on the various perspectives that exist on sharks in Atlantic Canada and the initiatives that are currently being undertaken by various groups. Sharing information and knowledge from all walks of life allowed relationships, and potential partnerships, to be cultivated, opening the door for future collaborative projects which will identify solutions to conservation issues discussed throughout the forum; something that has never previously been done for sharks in Atlantic Canada. Participation by 42 individuals from throughout Atlantic Canada showed that there was a lot of interest in the protection and conservation of sharks by all stakeholders, but as the results above show, there is still a great deal of work to be done in order to secure the future for sharks.

WWF-Canada is committed to working with partners to address some of the priorities identified during the forum. In particular we will be working with industry to gather their knowledge regarding shark distribution in our waters, levels of unintentional capture and current measures used by fleets to reduce interactions. We will facilitate the exchange of information between sectors, continue our support of research to identify shark bycatch hotspots and work with industry and academia to conduct pilot projects investigating mitigation measures to address conservation issues for specific shark species. WWF-Canada, in collaboration with the Worm Lab and Fisheries and Oceans Canada, is developing an interactive website to facilitate information exchange and promote shark conservation in Atlantic Canada. As well, a complimentary shark forum will be taking place on the west coast to address the main concerns for shark populations in Canada's Pacific waters.

The top cross-cutting priorities were criticized for being 'motherhood statements' that failed to account for firm actions being taken or needed to be taken by all stakeholder groups to secure the future of sharks. Next steps in the collaborative process for sharks in Atlantic Canada should be to develop a work plan identifying actions to be taken or are underway to address the above stated top priorities. Actions should include project timelines, as well as associated responsibilities (e.g. who is doing what or responsible for what). The development of a work plan is central to ensure that initiatives are not being duplicated and that we are in fact addressing the top priorities identified for sharks in Atlantic Canada. In addition, participants emphasized the need for future collaborations and/or workshops to be inclusive of additional stakeholders, including other industry sectors (e.g. fleets, regions, etc.) across Atlantic Canada. As such, key stakeholders that were invited but unable to participate in the forum or those that were identified during the forum will be added to the distribution list and will be sent this report.

The Atlantic Shark Forum was an early step in an ongoing collaborative process for improving shark conservation and management in Atlantic Canada. Identified top priorities and other forum results will help to inform and direct future shark endeavors (e.g. revision of Canada's National Plan of Action for the Conservation and Management of Sharks). As we continue to work together, striving to address the top priorities identified, we will significantly advance the conservation and management of sharks in Atlantic Canada.*

* We would like to acknowledge the Government of Canada Habitat Stewardship Program for Species at Risk and the Canadian Wildlife Federation for supporting WWF-Canada's work on the conservation of shark species in Atlantic Canada.



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Appendix I: Atlantic Shark Forum Participant List

PARTICIPANT LIST

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Top priorities for future conservation and management for sharks in Atlantic Canada

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