



SPECIES AT RISK ACT

Legal listing consultation workbook



Shortnose Sturgeon ***(Acipenser brevirostrum)***

Aussi disponible en français



Addition of species to the Species at Risk Act

Introductory Information

Species at Risk and You

Scientists estimate that the world's species are becoming extinct at a rate that is as much as 10,000 times higher than it should naturally be. It's a staggering statistic and a source of concern for all humans. Although many Canadians understand that species have intrinsic worth, sometimes we forget why the disappearance of a species matters. At the most basic level, species diversity, often referred to as "biodiversity," is crucial to ensure that life continues on earth. From a human standpoint, biodiversity also supports people's livelihoods, enables sustainable development and encourages cooperation among nations.

In 2003, the Government of Canada took a major step toward protecting species at risk and their habitats in Canada when it proclaimed the Species at Risk Act (SARA). SARA was designed as a key tool for the conservation and protection of biodiversity in Canada. It provides a framework for action across the country to ensure the survival and recovery of wildlife species at risk and the protection of our natural heritage. The law protects those plants and animals that are included on the "List of Wildlife Species at Risk," sometimes referred to as "Schedule 1" or the "SARA List." (For more information on SARA, visit the SARA Registry at www.sararegistry.gc.ca)

In order to determine which species should be "listed," or added to the SARA list of protected species, the Government of Canada consults the

general public, with special emphasis on those groups either directly involved with or particularly interested in the species under review. The government makes its decision only after carefully considering the outcome of consultations as well as the potential social and economic implications of listing the species. This consultation workbook is part of the government's effort to obtain feedback on whether or not the **shortnose sturgeon** should be added to the List of Wildlife Species at Risk.

Your thoughts on this issue are important and play a crucial role in the listing process. They will be carefully reviewed and considered. Please answer all of the questions in this book to the best of your ability. If you have additional comments, space has been provided for them as well. To ensure that your responses are considered, please return your completed workbook or any other comments you may have to the address below by **April 1, 2006**. Thank you for your help.

Mail

Species at Risk Coordination Office
Bedford Institute of Oceanography
Box 1006
1 Challenger Drive
Dartmouth, N.S. B2Y 4A2

Email

xmarsara@mar.dfo-mpo.gc.ca

For More Information on Species at Risk in Canada

www.aquaticspeciesatrisk.gc.ca
www.cosewic.gc.ca
www.sararegistry.gc.ca
www.speciesatrisk.gc.ca



Terms You Should Know

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assigns a “status” to each species it considers. The status indicates the degree to which a species is at risk. Considered here are:

- Extirpated:** A species that no longer exists in the wild in Canada, but exists elsewhere in the world
- Endangered:** A species facing imminent extinction or extirpation
- Threatened:** A species that is likely to become endangered if certain factors affecting it are not addressed
- Special Concern:** A species with biological characteristics that make it particularly vulnerable to human activity or certain natural phenomena

Other Information You Should Know

How is a Species Listed?

1. The species is assessed and assigned a status by the COSEWIC. This committee is comprised of specialists working in a variety of relevant fields, such as biology, ecology, and traditional ecological knowledge. They come from government, universities, aboriginal organizations, and non-governmental organizations, and they are appointed according to their expertise. However they do not represent the agency, group or region from which they are drawn, but must provide impartial scientific recommendations about the species they are considering.

2. The COSEWIC provides the status report to the Minister of the Environment and the Canadian Endangered Species Conservation Council, which is comprised of provincial and territorial ministers responsible for the conservation and management of wildlife, in addition to the federal ministers responsible for the administration of SARA (the Minister of the Environment, and the Minister of Fisheries and Oceans). A copy is also posted on the SARA Public Registry.
3. The Minister of the Environment indicates how he or she will respond to a COSEWIC assessment in a “Response Statement”. This Response Statement indicates the nature and timing of consultations and is posted on the SARA Public Registry within 90 days of receiving the COSEWIC Assessment.
4. Consultations are undertaken by the lead federal departments, Environment Canada and the Department of Fisheries and Oceans, and the information brought forward is analyzed.
5. Based on advice from the Minister of Fisheries and Oceans, the Minister of the Environment must provide the Governor in Council (the Governor General of Canada acting on the advice of Cabinet) with a recommendation to add or not add the species to the List of Wildlife Species at Risk. In order to make his or her decision, the Minister will take into consideration the COSEWIC’s scientific assessment of the species, the information provided by Canadians obtained through initiatives like this consultation workbook, and the anticipated socio-economic impacts of adding the



species to the SARA List. The Minister can offer three possible responses to the COSEWIC assessment.

- a. Accept the COSEWIC assessment and, as it advises, either add the species, reclassify it, or remove it from the SARA List
- b. Determine that the species should not be added to the SARA List
- c. Determine that there is insufficient information to make a decision, and refer the species back to COSEWIC for further consideration

How Does SARA Protect a Species?

Immediately upon a species being added to the SARA List as extirpated, endangered, or threatened, it receives protection under SARA. It is then an offence to:

- kill, harm, harass, capture or take an individual of these listed species
- possess, collect, buy, sell or trade an individual, part or derivative of these listed species
- damage or destroy the residence of one or more individuals of these listed species

The only exceptions to these rules occur when the government issues specific authorizations for: scientific research about the conservation of the species done by a qualified person; an activity that benefits the species or enhances its chances of survival in the wild; or an activity whose effect on the listed species is incidental. In all cases, the activity must not jeopardize survival or recovery.

For species listed as special concern, prohibitions do not apply.

What Happens Next?

After a species is listed, the recovery process begins in an effort to reduce the causes of a species' decline and to improve the status of the species. There are two parts to the process for extirpated, endangered or threatened species: a recovery strategy, which identifies threats to the species and describes recovery objectives, and an action plan, which details the activities that must be carried out to promote the species' recovery. The process for species of special concern requires a management plan, which lists appropriate conservation measures for a species and its habitat. All of these documents are developed through extensive consultation with scientists, community members, aboriginal groups and community stakeholders. Then, the strategies and plans are published in the SARA Public Registry, and the public has 60 days to comment on them. Five years after the plans come into effect, the responsible government minister must report on their implementation and the progress that has been made in meeting the objectives they outlined.

Species Specific Information

Shortnose Sturgeon

The shortnose sturgeon, *Acipenser brevirostrum* is an ancient and long lived species that occurs in only 1 river system in Canada – the Saint John River in New Brunswick. Its long cylindrical shape is said to be “armoured” with 5 rows of boney plates or “scutes”. It has a thick leathery skin that is olive green to brown above and white below. A darker



mottled chain pattern runs along the top of the head area. Shortnose sturgeon are very similar in appearance to the Atlantic sturgeon and since they inhabit the same areas, are often misidentified.

The Saint John River shortnose sturgeon is the most northerly population of the species and evidence suggests that they may also be the most genetically distinct. They are a social fish exhibiting schooling behaviour particularly in areas where there are strong currents. Feeding off the bottom, their preferred diet is small crustaceans and insects in particular, soft shelled clams. Shortnose sturgeon have been recorded at lengths of over a meter and at ages in excess of 60 years. They generally over winter in the lower reaches of the Saint John River and migrate upstream in the spring to spawn just below the Mactaquac Dam.

Shortnose sturgeon males reach maturity at roughly 11 years of age and spawn every second year. Females mature later at approximately 13 years of age and spawn every 3 to 5 years, laying up to 200,000 eggs in the fast flowing current below the dam. The eggs sink and attach themselves to the rocks and gravel on the bottom of the river. After hatching, the larvae drift downstream. Juvenile sturgeon usually migrate upstream in the summer and as the temperature in the river drops in the fall, move back downstream.

Very little is known about the early juvenile stages of shortnose sturgeon but it is thought that survival at this stage is critical to population abundance. Evidence suggests that there may be pressure for food and habitat from the

stronger competitor, the Atlantic sturgeon.

COSEWIC assessment

COSEWIC provides the following rationale for designating the shortnose sturgeon as *special concern*:

This is an anadromous species restricted to a single river system in Canada where spawning fish require unhindered access to freshwater spawning sites; but the population may have been divided since 1967 by the Mactaquac Dam. These large, slow growing, late maturing fish are conservation dependent. There is some risk to the species through mortality from hydroelectric facilities, by-catch in alewife and shad fisheries, and poaching. However, there is no immediate threat that would lead to elimination of the population in a very short period of time.

Threats to Shortnose Sturgeon

Shortnose sturgeon are only permitted to be landed in a recreational sturgeon fishery and as bycatch in the Atlantic sturgeon fishery. Both fisheries have minimum size and gear restrictions which reduce the likelihood of this species being captured. However, shortnose sturgeon are also caught as bycatch in other fisheries on the Saint John River such as gaspereau, bass and shad. Although they are required to be released unharmed in these fisheries, the COSEWIC status report notes that shortnose sturgeon are particularly vulnerable during their spawning run. Since a gaspereau fishery happens at the same time as the sturgeon are running, any catch and release from this fishery may interrupt or curtail shortnose sturgeon spawning altogether.



The Mactaquac Dam on the Saint John River prevents sturgeon from migrating upstream. Spawning activity has been forced to take place just below this site leaving shortnose sturgeon vulnerable to dam operations that alter river conditions. Changes in flow rates and temperature may reduce habitat important for spawning and egg incubation.

Pollution from pulp mills, as well as farming and forestry activities along the Saint John River could also have negative consequences for this population. Although there has been no research conducted on the effect of contaminants on shortnose sturgeon in the Saint John River, their longevity and benthic feeding habits provide potential for bioaccumulation of toxic substances.

Protecting Shortnose Sturgeon

Shortnose sturgeon currently receive protection through section 32 of the federal Fisheries Act which prohibits the killing of fish by any means other than fishing and sections 34 to 42 which provide protection against fish habitat alteration, disruption or destruction and pollution. The commercial fishery is managed through *The Maritime Provinces Fishery Regulations* (SOR /2001-452 s.28) made pursuant to the *Fisheries Act*. These regulations provide for gear and minimum fish size restrictions as well as seasonal closures. The recreational fishery is regulated under section 82-103 of the *New Brunswick Fish and Wildlife Act*. There is a minimum size limit of 120 cm fork length for all sturgeon in either of these fisheries.

Potential Impacts on Stakeholders

Once added to the List of Wildlife Species at Risk, activities that affect the shortnose sturgeon or its habitat may receive more scrutiny. A Management Plan will be developed and there is a range of management measures that may be implemented to conserve the shortnose sturgeon.

These measures may lead to a variety of impacts on stakeholders, including additional costs. The following list is not exhaustive; please use this consultation as an opportunity to list omissions.

Aboriginal

Aboriginal peoples will be invited to participate in the development of a Management Plan for shortnose sturgeon. Management strategies that could affect aboriginal people fishing for commercial species in areas inhabited by shortnose sturgeon may be considered.

Fishers (Recreational/Commercial)

If a particular fishing activity is identified to be a concern for the survival of a listed species, management measures may be taken to address the concern. These measures could include area and time closures, further gear and size restrictions, or other measures developed in collaboration with industry that will help prevent and minimize interactions.

Industrial Users/ Land Owners

Development restrictions and other planning and management measures may be imposed on activities that could impair water quality or destroy habitat in spawning and rearing areas.



Recreational Users

Restrictions and management measures may be imposed to limit recreational activities that may affect water quality of shortnose sturgeon habitat.

Research Activity

Those wishing to carry out research on shortnose sturgeon or in areas of their habitat may be required to comply with stricter guidelines. This may limit the types and/or durations of research permitted on shortnose sturgeon and may lengthen the preparation time required for planning research projects.

References

COSEWIC 2005. COSEWIC assessment and update status report on the shortnose sturgeon *Acipenser brevirostrum* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 27 pp.



Consultation Workbook Survey – Shortnose sturgeon

The government's decision on whether or not to list a species under the Species at Risk Act (SARA) will be based on a full description and understanding of the costs and benefits of the impacts of protection and recovery on individuals, organizations, Aboriginal groups, industries, and Canadian society in general.

This survey form can be used to provide your opinions about listing shortnose sturgeon under SARA. Comments are welcome from individuals of all backgrounds, whether you are engaged in activities that may be affected by shortnose sturgeon conservation efforts or are a citizen with an interest in shortnose sturgeon.

You should read the consultation workbook before completing these questions.

About the Consultation Workbook Survey

The consultation workbook survey asks you to answer a series of questions that require reflection about your views relating to the conservation and recovery of shortnose sturgeon. There are a variety of question formats in this survey. There are also numerous opportunities for personal responses to further explain your views. If you would like to keep the introductory sections of this workbook, please feel free to detach this section and return only the survey.

Please return your workbook by **April 1, 2006** to:

Species at Risk Coordination Office
Bedford Institute of Oceanography
P.O. Box 1006
1 Challenger Drive
Dartmouth, NS B2Y 4A2

Alternatively, you may email comments to XMARSARA@mar.dfo-mpo.gc.ca

The information that you provide is important! We very much appreciate the time and effort you take to complete this survey!



Your Opinions about Threats to Shortnose Sturgeon

Please indicate your **level of concern** regarding the following factors that may affect the shortnose sturgeon population in Canadian waters.

	Very Low	Somewhat Low	Moderate	Somewhat High	Very High	I Have No Opinion On This Factor
Bycatch from commercial fisheries targeting other anadromous species i.e. shad, gaspereau	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waterway alterations affecting temperature and flow rates necessary for spawning, incubation and rearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pollution from agriculture, pulp mills, and other forestry activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bycatch by recreational fishers directing for Atlantic sturgeon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduction in adult spawners through illegal fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you have any comments or concerns about other factors that may affect the shortnose sturgeon population? If so, please use the space below.



Your Opinions about Possible Interventions to Help Shortnose Sturgeon Conservation and Recovery

For each factor, please indicate what **level of impact** you think this measure will have on shortnose sturgeon conservation.

	Very Low	Somewhat Low	Moderate	Somewhat High	Very High	I Have No Opinion On This Factor
Conduct scientific research to better understand shortnose sturgeon behaviour and distribution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restrict recreational licenses for sturgeon to Atlantic sturgeon only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modify fishing gear so less shortnose sturgeon are caught	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase awareness among recreational fishers about shortnose sturgeon conservation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Close identified shortnose sturgeon spawning and rearing areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitor water management practices to limit the potential for destruction of spawning habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you have any other comments about how other measures might help to conserve shortnose sturgeon? If so, please use the space below.



Your Opinion about the Potential Direct or Indirect Costs of Shortnose Sturgeon Conservation

Please choose an option that reflects your rating of the likely **economic impacts** (direct and indirect) of shortnose sturgeon conservation to this industry or group.

	Negligible	Somewhat Low	Moderate	Somewhat High	Very High	I Have No Opinion On This Factor
Costs to fishers directing for other anadromous species.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to recreational fishers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to scientific researchers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to forestry/agriculture industries.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to hydroelectric companies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to my personal household.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you have any other comments about how conservation measures might lead to costs to other people or industry sectors, or about what your suggestions are to minimize costs? Costs might be direct (e.g., increasing the cost of doing business) or they might be indirect (e.g., lost opportunities for commercial activities). If so, please use the space below.



Your Opinion about the Potential Benefits of Shortnose Sturgeon Conservation to Canadian Society

Please choose an option that reflects your rating of the likely **benefits** (economic or social) of shortnose sturgeon conservation to this industry or segment of society.

	Negligible	Somewhat Low	Moderate	Somewhat High	Very High	I Have No Opinion On This Impact
Benefits to Communities along the Saint John River	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benefits to Canadian Society as a Whole	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benefits to Aboriginal Groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benefits to the Scientific Community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Your Opinion about Other Potential Benefits of Shortnose Sturgeon Conservation

Please choose an option that reflects your **level of agreement or disagreement** with the following statements.

	Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree	I Have No Opinion On This Impact
I think that shortnose sturgeon are valuable because they play an important role in maintaining healthy marine ecosystems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think that shortnose sturgeon will be valuable to future generations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think that many people in Canada value shortnose sturgeon even though they may never personally see one.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you have any other comments about who might benefit from shortnose sturgeon conservation and how important this benefit might be? If so, please use the space below.



Comments about the Proposed Listing Status of Shortnose Sturgeon

Have you read the COSEWIC status report for shortnose sturgeon?

Yes

No

Please choose an option that reflects your level of support for the Government of Canada listing shortnose sturgeon as a species of special concern under the *Species at Risk Act*.

I **Strongly Disagree** with listing shortnose sturgeon as a species of special concern

I **Somewhat Disagree** with listing shortnose sturgeon as a species of special concern

I **Neither Agree nor Disagree** with listing shortnose sturgeon as a species of special concern

I **Somewhat Agree** with listing shortnose sturgeon as a species of special concern

I **Strongly Agree** with listing shortnose sturgeon as a species of special concern

Please tell us why **you agree or disagree** with listing shortnose sturgeon as a species of special concern.



General Questions

1. If a legal listing will affect your activities, do you see these effects as a cost or benefit to you? In what way? Please consider the social costs/benefits as well as economic costs/benefits.

2. In the event that the species is listed, how can you as an individual, or your industry or organization as a group, participate in the recovery of the species? Give examples of particular activities, if you can.



Background Information about You

What is Your Age Category?	
< 20 Years	
20-29 Years	
30-39 Years	
40-49 Years	
50-59 Years	
60-69 Years	
> 70 Years	

What is Your Gender?	
Female	
Male	

In which sector are you employed?	
Retired	
Full-Time Homemaker	
Student	
Commercial Fishing/Processing	
Farming	
Forestry	
Oil and Gas	
Professional Services	
Private Sector – Other	
Academic	
Federal Government	
Provincial Government	
Municipal Government	
Non-Governmental Organization	
I am Between Jobs	
I am Employed in another Field	

Where do you live?	
Nova Scotia	
New Brunswick	
Prince Edward Island	
Newfoundland and Labrador	
Quebec	
Ontario	
Western Canada or Territories	
Outside Canada but I am a Canadian Citizen or Permanent Resident	
Outside Canada - I am not a Canadian Citizen or Permanent Resident	



If you are completing this workbook as a representative of an organization, please indicate your name, the name of your organization and a contact address.

You've now finished the survey – thank you very much for your help
