



AQUATIC SPECIES AT RISK

HIGHLIGHTING 5 AQUATIC SPECIES AT RISK IN
NEWFOUNDLAND AND LABRADOR WATERS AND HOW WE
CAN HELP



Cover photo credits:
Atlantic Wolffish - Ocean Quest Adventures
Leatherback Sea Turtle - Nature Canada
North Atlantic Right Whale - Shutterstock

Newfoundland and Labrador (NL) has some of the most productive waters in the world and is home to many marine animals.

Unfortunately, we are seeing declines in our species, some to the extent of being Endangered due to threats like boating activity and marine pollution.

This guidebook was developed by the Canadian Parks and Wilderness Society - Newfoundland and Labrador Chapter (CPAWS-NL) to provide information on five Aquatic Species at Risk in NL and how we can help recover their populations:

Wolffish (Atlantic, Spotted and Northern),
Leatherback Sea Turtle and the North
Atlantic Right Whale.

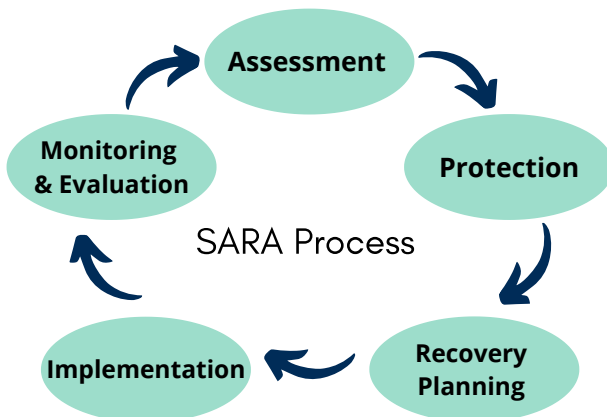


SPECIES AT RISK

In 2003, the **Species at Risk Act (SARA)** was passed in Canada with the goal to protect wildlife species at risk and their critical habitats.

Prohibitions under the Act make it illegal to kill, harass, capture or in any way harm a species that has been listed under SARA.

The ultimate success of SARA in protecting species depends on the cooperation between the public, government and industry.



Once species are assessed, they can be classified under one of four SARA categories:

Special Concern

A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats

Threatened

A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction

Endangered

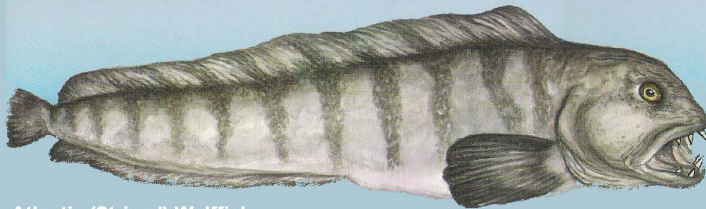
A wildlife species that is facing imminent extirpation or extinction

Extirpated

A wildlife species that no longer exists in the wild in Canada, but exists elsewhere

WOLFFISH

There are three different species of Wolffish in Newfoundland and Labrador, each with their own unique characteristics and occupy slightly different habitats. The Atlantic (Striped) is listed as Special Concern while the Spotted and Northern Wolffish are both listed as Threatened. As they are so similar, recovery strategies include all three.



Atlantic (Striped) Wolffish
(*Anarhichas lupus*)

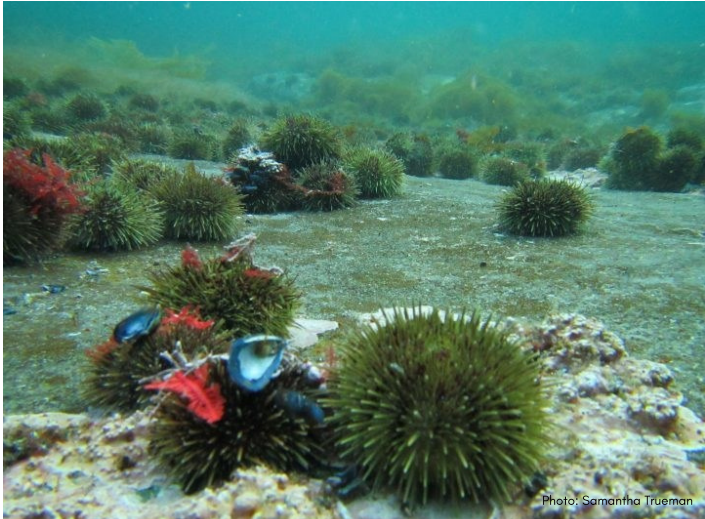


Spotted Wolffish
(*Anarhichas minor*)



Northern (Broadhead) Wolffish
(*Anarhichas denticulatus*)

Photo: DFO



An urchin barren in Newfoundland

Wolffish are an important species to our ocean ecosystem and protect valuable habitat such as kelp beds, where juvenile fishes and crustaceans live. Sea Urchins are Wolffish's favourite diet, as they are able to break through the hard shell with their powerful jaw and many teeth.

A decline in Wolffish populations causes an increase in Sea Urchins. Sea Urchins feed on kelp beds and other vegetative areas, with too many feeding on these areas it can create "Urchin Barrens", resulting in areas with no kelp whatsoever to be used as habitat.

Species Profile



Photo: DFO

Atlantic or Striped Wolffish (*Anarhichas lupus*)

Local Name: Catfish

SARA Status: *Special Concern*

Size: Adults range from about 40 -100 cm

Diet: Opportunistic but mostly eats crabs, clams, snails, sea urchins and some fish

Where it is found: Mainly from Labrador Shelf to Grand Banks and to Gulf of St. Lawrence, Scotian Shelf and Bay of Fundy and into American waters. Near shore to 500 m

Most vulnerable to: Bycatch in fisheries targeting other species

Species Profile



Photo: DFO

Spotted Wolffish (*Anarhichas minor*)

Local Name: Catfish

SARA Status: *Threatened*

Size: Adults range from about 40 -100 cm

Diet: Opportunistic but mostly eats crabs, clams, snails, sea urchins and some fish

Where it is found: Mainly from the Labrador Shelf to the Grand Banks at a depth of about 100 m - 800 m

Most vulnerable to: Bycatch in fisheries targeting other species

Species Profile



Photo: DFO

Northern Wolffish (*Anarhichas denticulatus*)

Local Name: Catfish, Jelly cat

SARA Status: *Threatened*

Size: Adults range from about 60 -120 cm

Diet: Opportunistic but mostly eats jellyfish and some fish, crabs, clams, snails and sea urchins

Where it is found: Mainly from the Labrador Shelf to the Grand Banks at a depth of 200 m - 900 m

Most vulnerable to: Bycatch in fisheries targeting other species

KEY THREATS

Wolffish species

The leading cause of Wolffish decline is suggested to be incidental **bycatch** during fishery activities (food, small and large scale, and inshore and offshore fisheries).

Since 2004, all Wolffish accidentally caught during any fisheries must be released, quickly, without harm to the Wolffish, and at the site of capture.

Make sure to record and report sightings and bycatch of Wolffish to DFO and follow safe handling practices when fishing.

For more information on reporting Wolffish, please contact your nearest DFO office or visit:

www.dfo-mpo.gc.ca

HANDLING AND RELEASING WOLFFISH

Hook and Line Fishing

Consider using hooks that are larger and easier to remove



Wolffish should be removed from hook and line before going through hauler



Long handled needle nosed pliers can be used to remove hooks from wolffish



Release wolffish as quickly as possible

Avoid dropping wolffish on to hard surfaces. Consider using hook straightening devices. Handle wolffish gently and avoid touching gills. Avoid using sharp instruments such as gaffs and knives when handling wolffish.

If you do not want to handle a wolffish or it is a large wolffish use a dip net to release the fish.

HANDLING AND RELEASING WOLFFISH

Gillnetting

Wolffish should be removed from nets before going through hauler



Use a sorting table



It may be necessary to cut the mesh in order to release a tangled wolffish safely

Handle wolffish gently and avoid touching the gills

Avoid using sharp instruments such as gaffs and knives when handling wolffish.

Avoid dropping wolffish on to hard surfaces. Soaking times should be kept to a minimum.

If you do not want to handle a wolffish or it is a large wolffish use a dip net to release the fish.

Use no more nets than can be hauled in a reasonable amount of time. Release wolffish as quickly as possible.

HANDLING AND RELEASING WOLFFISH

Otter Trawl Fishing

Water in the ramp should be turned on to improve the survival rate of wolffish



A long handled dip net can be used to remove wolffish from the ramp and return to water



A crew member should be assigned to observe, remove, and release wolffish as the fish drop down the ramp



Consider using recovery tanks before releasing wolffish

Handle wolffish gently and avoid touching the gills. Avoid dropping wolffish on to hard surfaces.

Avoid using sharp instruments such as gaffs and knives when handling wolffish. Release wolffish as quickly as possible.

If you do not want to handle a wolffish or it is a large wolffish use a dip net to release the fish.

HANDLING AND RELEASING WOLFFISH

Shrimp Fishing

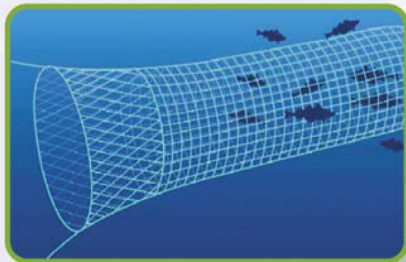
In areas of wolffish bycatch shorter tow times are recommended



The mandatory exclusion device is another tool to reduce wolffish bycatch



Even with excluder devices there is some bycatch of Juvenile Wolffish



Use square mesh Codend to reduce juvenile fish bycatch including wolffish

Avoid dropping wolffish on to hard surfaces. Release wolffish as quickly as possible.

HANDLING AND RELEASING WOLFFISH

Crab Fishing

When possible, release wolffish directly into the water



Use a sorting table to remove wolffish from catch



Handle wolffish gently and avoid touching the gills



Release wolffish as quickly as possible

Avoid using sharp instruments such as gaffs and knives when handling wolffish.

If you do not want to handle a wolffish or it is a large wolffish use a dip net to release the fish.

Avoid dropping wolffish on to hard surfaces.

LEATHERBACK SEA TURTLES



Photo: Giovanni Gava/Getty Images

Leatherback Sea Turtles are an Endangered species in Newfoundland and Labrador and are most vulnerable to entanglements in fishing gear in Canada.

Leatherbacks are the largest turtle worldwide and unlike other sea turtles, they have a leathery skin on their back rather than a hard shell. They also have a pink spot on the dorsal surface of their head that is thought to help them sense seasonal changes.

Every year leatherbacks are commonly seen in NL during the summer months in nearshore waters feeding on jellyfish. While they are often seen floating or feeding near the surface, these turtles can swim up to 25km/hr and dive to 1,300 m.

Species Profile



Leatherback Sea Turtle (*Dermochelys coriacea*)

Local Name: Sea turtle, Leatherback

SARA Status: *Endangered*

Size: Adults are up to 1.8 m long and weigh 725 - 900 kg

Diet: Primarily jellyfish

When and where it is found: Mostly in summer throughout the region but are more common in Southern Newfoundland

Most vulnerable to: Entanglements in fishing gear

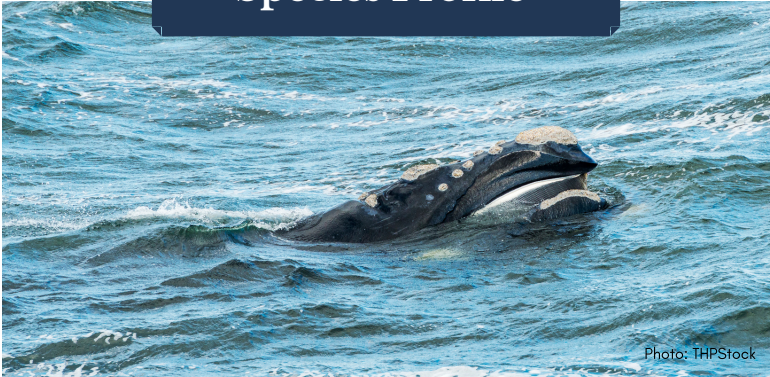
NORTH ATLANTIC RIGHT WHALES



North Atlantic Right Whales are the most endangered whale, with less than 400 individuals left, worldwide. Its name comes from being the "right" whale to hunt, causing a steep decline in population. Though whaling of this species has stopped, the population is still struggling.

North Atlantic right whales are slow swimmers which make them susceptible to vessel strikes and are also highly vulnerable to entanglements in fishing gear.

Species Profile



North Atlantic Right Whale (*Eubalaena glacialis*)

Local Name: Northern Right Whale, Right Whale, Black Whale

SARA Status: *Endangered*

Size: Adults average 11 - 18 m in length and weigh 30 - 90 tonnes

Diet: Zooplankton (e.g., copepods and other krill-like crustaceans)

When and where it is found: Sightings are rare in NL but can be seen in late summer in the Lower Bay of Fundy and less often on the south coast of Newfoundland

Most vulnerable to: Vessel strikes and entanglements in fishing gear

Within recent years, right whales have been migrating further North and it is extremely important to report if spotted in Newfoundland and Labrador.

How to identify a North Atlantic Right Whale:



BLOW:
V-Shaped blow



FLUKES:
Black tail, often
seen when diving



FLIPPERS:
No Dorsal Fin,
Uniquely shaped
and short flippers

KEY THREATS

Leatherback Sea Turtles and North Atlantic Right Whales

Leatherback Sea Turtles and North Atlantic Right Whales have a lot in common when it comes to threats. Both are migratory species that feed near the surface, leaving them extremely vulnerable to **entanglements** in fishing gear and **vessel strikes**.

These threats can cause lethal or sub-lethal injuries and entanglements can also compromise the ability to swim, resulting in drowning.



Photo: Tangly Whales

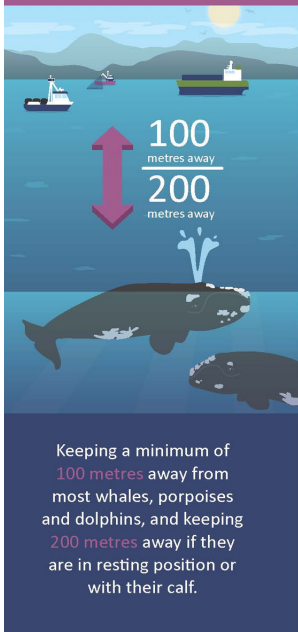


Photo: NOAA/NEFSC/Peter Duley

MARINE MAMMAL REGULATIONS

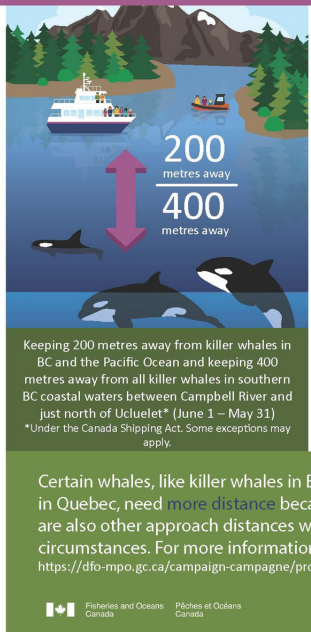
North Atlantic Right Whales are protected further against vessel strikes and human interactions under the *Marine Mammal Regulations* which includes minimal distance requirements.

If you see tail, fin or spray – Stay far enough away



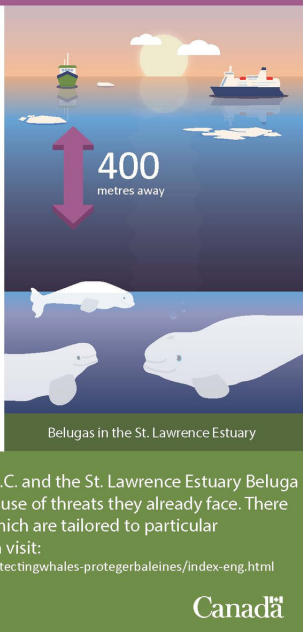
100 metres away
200 metres away

Keeping a minimum of 100 metres away from most whales, porpoises and dolphins, and keeping 200 metres away if they are in resting position or with their calf.



200 metres away
400 metres away

Keeping 200 metres away from killer whales in BC and the Pacific Ocean and keeping 400 metres away from all killer whales in southern BC coastal waters between Campbell River and just north of Ucluelet* (June 1 – May 31)
*Under the Canada Shipping Act. Some exceptions may apply.



400 metres away

Belugas in the St. Lawrence Estuary

Certain whales, like killer whales in B.C. and the St. Lawrence Estuary Beluga in Quebec, need **more distance** because of threats they already face. There are also other approach distances which are tailored to particular circumstances. For more information visit:
<https://dfo-mpo.gc.ca/campaign-campagne/protectingwhales-protegerbaleines/index-eng.html>

OTHER THREATS

Leatherback Sea Turtles and North Atlantic Right Whales

Underwater noise also poses threats to marine animals, especially whales as they are highly vocal by nature and depend on sound to function normally.

Noise disturbances can cause behavioural changes and can result in displacement, avoidance, shifts in migration path, stress, hearing damage and strandings.

While boat engine noise is an ongoing concern, much more harmful noise is generated from seismic activity in search of oil and gas.



Photo: New England Aquarium

OTHER THREATS

Leatherback Sea Turtles



Plastic ingestion is another threat worth mentioning. Debris like plastic bags resemble jellyfish causing turtles to consume them accidentally. Plastics do not digest and stay in the stomach, creating the sensation of being "full".

This is often why species are found with a stomach of plastics, as they are not able to pass nor ingest new sources of nutrients.

The survival of species at risk depends on all of us working together to ensure that species will be around for future generations to come.

The following section provides information on how to report sightings and animals in distress and other ways we can help protect species at risk.



HOW TO REPORT

Report an injured, stranded, entangled or dead marine mammal or sea turtle:

- *Whale Release and Standings NL*: 1-888-895-3003

Report someone abusing or harassing a marine mammal or sea turtle:

- *Crime Stoppers*: 1-800-222-TIPS (8477)
- Marine VHF radio channel 16

For further information or to report a sighting of a live marine mammal or sea turtle:

- *DFO Marine Mammal or Sea Turtle Sightings in NL*: whalesighting@dfo-mpo.gc.ca

LOST AND RETRIEVED FISHING GEAR REPORTING



Ghost gear refers to any fishing gear that has been lost, discarded, or abandoned, which continues to catch target and non-target species, including species at risk.

Make sure to report lost or abandoned fishing gear to DFO:

<https://www.dfo-mpo.gc.ca/fisheries-peches/commercial-commercial/declaration-declaration-eng.html>

OTHER WAYS TO HELP

There are many ways we can all help protect species at risk including:

- 1) **Return all waste generated at sea** back to shore, ensuring to recycle and reuse whenever possible.
- 2) **Reduce plastic use!** Plastic can cause entanglements and cause injuries and/or death to animals who ingest it.
- 3) **Volunteer** with a local conservation group. This is a great way to get involved with the community.
- 4) Take part or organize a **cleanup at your local beach or shoreline.**
- 5) **Share your knowledge** so that others can help!

CLEANUP TIPS AND TRICKS

How to organize your own cleanup:

- 1) Identify a cleanup site and get permission from town council
- 2) Choose a site coordinator
- 3) Visit the site in advance
- 4) Gather supplies
- 5) Plan how to handle and dispose of garbage and recyclables
- 6) Line up event partners
- 7) Invite volunteers to help
- 8) Stay safe and have fun!

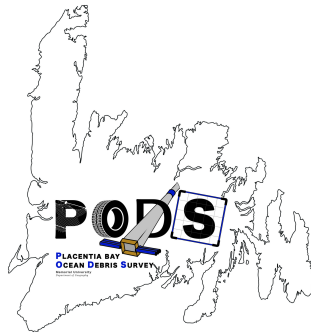
You can also join a cleanup through:

The Great Canadian Shoreline Cleanup:
www.shorelinecleanup.ca

Or other local non-profit organizations like CPAWS-NL!

CLEANUP TIPS AND TRICKS

As shorelines are the connection of land and sea, we often find debris from both ocean and land activities. Keeping track of what is found during cleanups helps to better understand the point source of litter in your community, and the province.



Download the Marine Debris Tracker App and use the Placentia Bay Ocean Debris Survey category.

CLEANUP TIPS AND TRICKS

Underwater cleanups are a great way to remove unwanted marine debris once they enter the water but please leave it to the professionals!

Marine debris is tricky to remove if it's been in the environment for a long time and actually becomes a habitat for many species.

Through our partnership with **Ocean Quest Adventures**, we have done our own underwater cleanups at harbours in Newfoundland while looking for Wolffish.

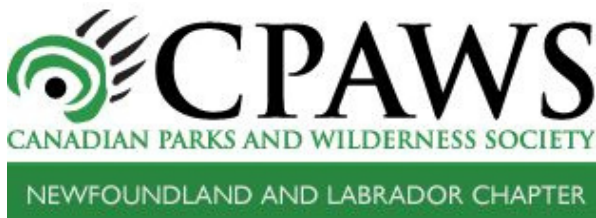


VOLUNTEER WITH CPAWS-NL

CPAWS-NL is a non-profit conservation organization that works with community members to help protect Canada's land, oceans and the animals who call it home.

For more information about volunteer opportunities, requirements and training, please visit our website:

www.cpawsnl.org/volunteer



OTHER CPAWS-NL INITIATIVES

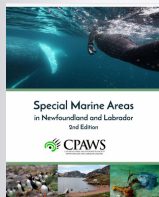
CPAWS-NL is involved in many other community-driven conservation initiatives including:



Through working with fish harvesters, marine vessel operators and harbour management, this program aims to reduce marine debris and encourage all ocean users to bring all of their waste back to shore and dispose of it properly.



Every year from August - November, the **Puffin & Petrel Patrol** rescue puffin & petrel chicks that have become disoriented by artificial lighting present in communities in close proximity to Seabird Ecological Reserves.



With the help of scientists, governments, ENGOs, and community groups, we have highlighted 140 special marine areas that include coastal sites, coral beds, bird colonies, fish spawning grounds, and migratory routes in our "Special Marine Areas in Newfoundland and Labrador Guide, 2nd Edition"

check out our website for more info @ cpawsnl.org



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