

SUBMISSION TO THE NUNAVUT WILDLIFE MANAGEMENT BOARD

FOR

Information:

Decision: X

Issue: Committee on the Status of Endangered Wildlife in Canada (COSEWIC) status updates and *Species at Risk Act* (SARA) listing process for the Roundnose Grenadier, Roughhead Grenadier, Atlantic Redfish and Deepwater Redfish.

Background:

As per 3.3 of the Harmonized Listing Process, DFO has previously informed NWMB of COSEWIC assessment results for these four species. DFO originally did not intend to proceed with the listing process for species that occur in Nunavut and Nunavik waters until an MOU had been developed and approved to harmonize the SARA listing process with the Nunavik Inuit Land Claims Agreement. However, DFO has subsequently decided that deepwater fish species not normally captured in Inuit subsistence fisheries could be moved forward. DFO is therefore seeking NWMB decision, as per 2.2 of the Harmonized Listing Process, to begin an abridged listing process for these four deepwater fish species. As these species are not taken by the subsistence fishery, DFO suggests that only consultations with the fishing industry will be necessary. However, DFO is prepared to send letters to HTOs in areas adjacent to these species advising them of the process and to see if there are concerns about the possible listing of any of these species.

Roundnose Grenadier

The Roundnose Grenadier was designated by COSEWIC as Endangered in 2008.

Survey data shows that the number of adults have shown declines of 98% from 1978 to 1994 with a further decline from 1995 to 2003. Although much of the population lives at depth greater than those surveyed, adding uncertainty to the assessment, this constitutes the best available information to assess species status. The species is long-lived (160 years) and matures late (around 10 years) which makes it susceptible to human-caused mortality. Roundnose Grenadier have been reported at depths of between 200 and 2600 m (650 – 8500'). Commercial harvests have declined, however the species is a component of the by-catch of deepwater fisheries. This species is not known to be captured in any subsistence fishery.

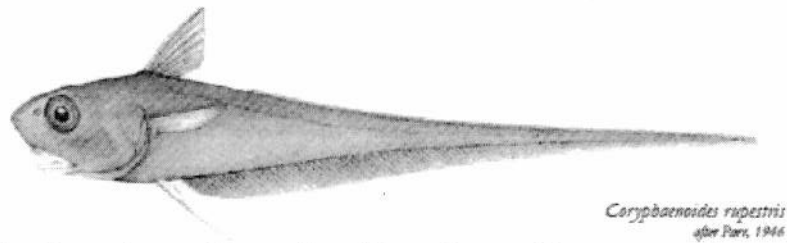


Figure 1: The Roundnose Grenadier (*Coryphaenoides rupestris*).

Should this species be listed under SARA, automatic prohibitions apply and a recovery strategy and action plan must be developed.

The complete COSEWIC status report for the Roundnose Grenadier can be obtained from the SARA Registry at:
http://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr%5Froundnose%5Fgrenadier%5F0809%5Fen%2Epdf

Roughhead Grenadier

The Roughhead Grenadier was designated by COSEWIC as Special Concern in 2007.

Roughhead Grenadiers typically occur on or near the continental slope at depths between about 400 and 1200 m (1300 – 4000'). In Nunavut, they are caught in small numbers in Davis Strait and very small numbers in Baffin Bay, primarily as by-catch (incidentally) in the Greenland halibut (turbot) fishery. It is unlikely this species is fished for subsistence in Nunavut. Roughhead grenadiers have a low fecundity, slow growth rate, late maturation, and low population turnover rate. Females mature at approximately 13 to 15 years and reach a maximum age of 25 years. Roughhead grenadiers are non-specialist predators. This species is not known to be captured in any subsistence fishery.

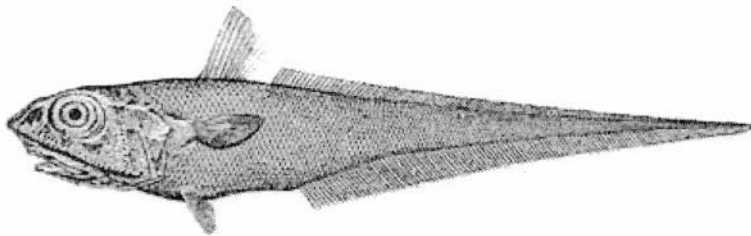


Figure 2: The Roughhead Grenadier (*Macrourus berglax*).

Should this species be listed under SARA, automatic prohibitions do not apply although a management plan must be developed.

The complete COSEWIC status report for the Roughhead Grenadier can be obtained from the SARA Registry at:

http://wwwhttp://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr_macrourus_berglax_e.pdf

Acadian Redfish and Deepwater Redfish – General

Because the two species cannot be easily distinguished (Fig. 3), DFO Fisheries Management treats the two species as a single management unit. For this reason, the two species have been assessed together by COSEWIC in the 2010 report and both have been designated as Threatened.

Redfish inhabit cold waters along slopes of banks and channels at a depth of 100 to 700 m (325 to 2300'). Deepwater Redfish are typically found in waters of 350 to 700 m depth while Acadian Redfish prefer slightly shallower waters of from 150 to 300 m. While Deepwater Redfish occur on both sides of the Atlantic, the Acadian Redfish is found only in the western Atlantic, mainly along the coast of Canada (Figure 4).

Redfish have a long life span (up to at least 75 years) and late maturation and slow growth give this species low resilience and are considered limiting factors. Deepwater and Acadian Redfish have both been major commercial species in the past. Given their large historical abundance, they must have played an important role in the marine ecosystem.

Incidental capture in the northern shrimp fishery may be the largest current threat to northern populations of these species. These species are not known to be captured in any subsistence fishery.

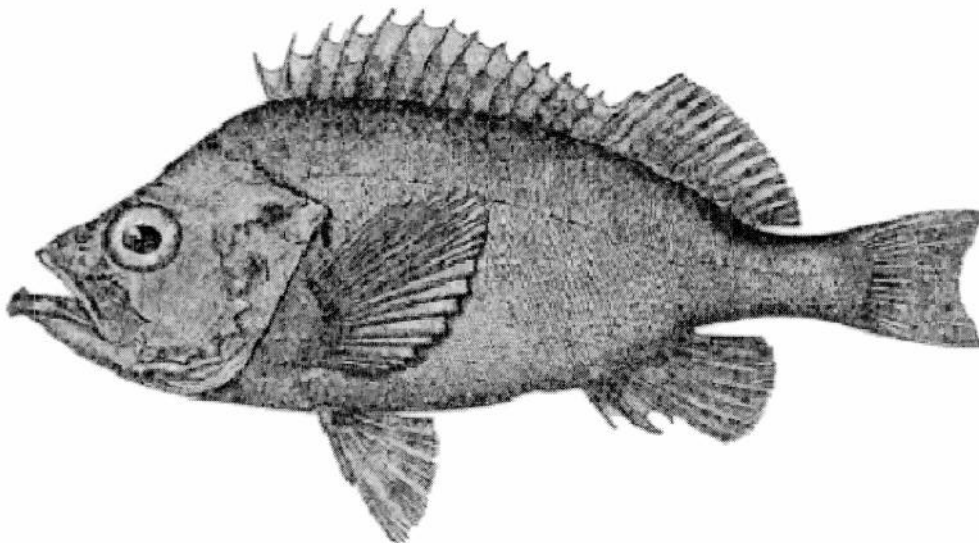


Figure 3: Drawing of the Acadian Redfish (*Sebastes fasciatus*). It is impossible to distinguish the Acadian Redfish from the Deepwater Redfish (*Sebastes mentella*).

Acadian Redfish - Atlantic Population

This species is long lived, late maturing and very vulnerable to mortality from human activities. It has experienced a 99% decline in the abundance of individuals over a period of two generations. Since the 1990's there has been some stability. Directed fishing and incidental harvest in fisheries for other species (bycatch) are the main known threats. In some areas where this species occurs the fishery is closed. This species occurs in both Nunavut and Nunavik waters (Fig. 4).

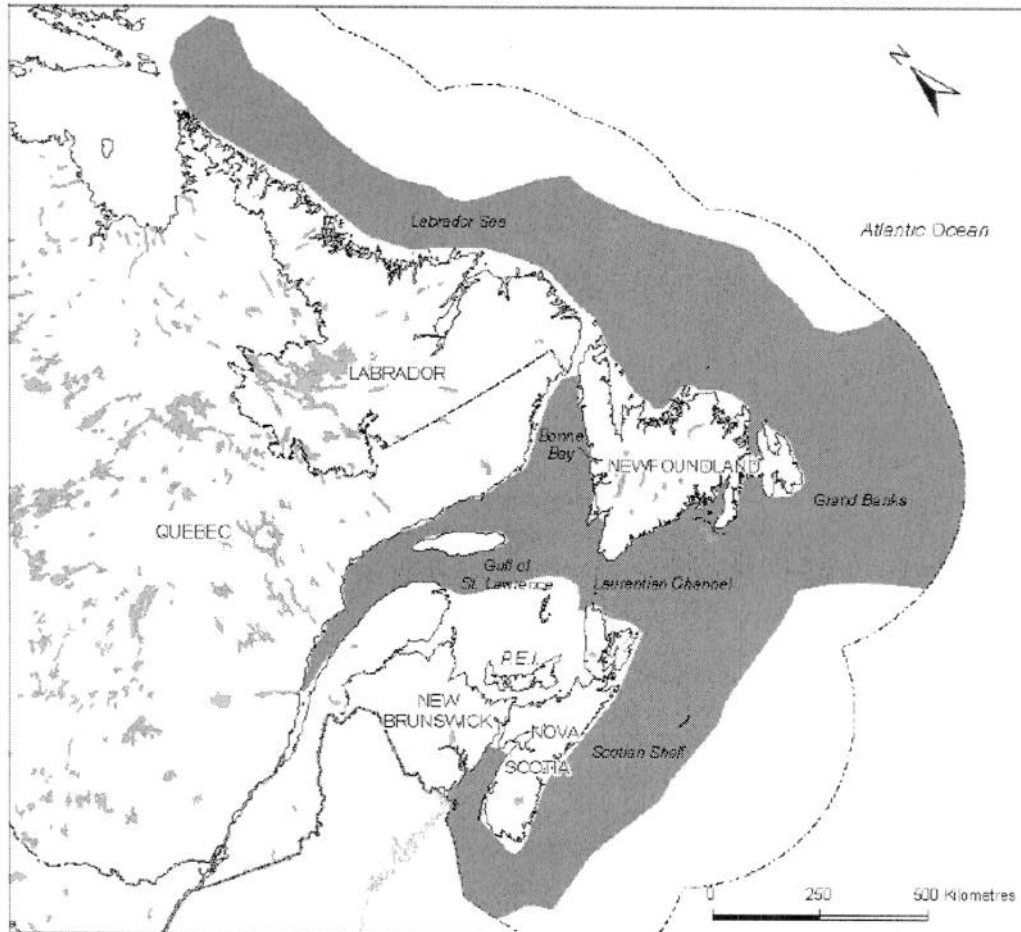


Figure 4: The distribution of the Acadian Redfish in Canadian waters.

Deepwater Redfish - Northern population

This species is long lived, late maturing and very vulnerable to mortality from human activities. Abundance of mature individuals has declined by 98% since 1978. Directed fishing and incidental harvest in fisheries of other species (bycatch) are the main known threats. This species met the criteria for being assessed as endangered, however COSEWIC felt that because it is located over

a large area, has several million mature individuals and there is evidence that the population may be stable or increasing the designation of Threatened was more appropriate. The Canadian distribution of the Deepwater Redfish is shown in Figure 5. This species is not known to be captured in any subsistence fishery.

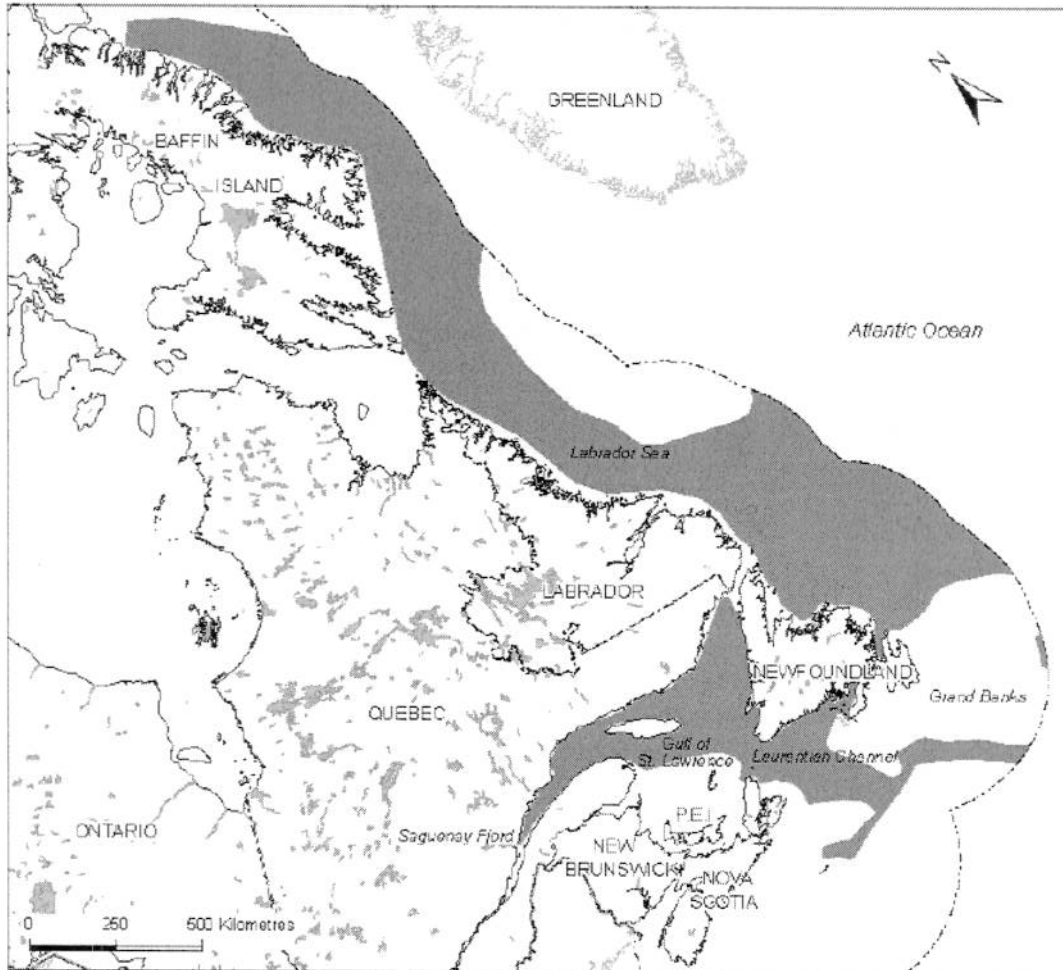


Figure 5: The distribution of the Deepwater Redfish in Canadian waters.

Should either of these species eventually be listed under SARA, automatic prohibitions apply and a recovery strategy and action plan must be developed.

The complete COSEWIC status report for the Acadian and Atlantic Redfish can be obtained from the SARA Registry at:

http://www.sararegistry.gc.ca/9C047373-F075-48B5-856A-1B1DF4FCDF81/sr_Deepwater-and-Acadian-Redfish_0810_e.pdf

Consultations:

As these species are not captured in any subsistence fisheries, adding them to the List of Wildlife Species at Risk under the SARA would appear to have little impact on Nunavut residents. For this reason, no community consultations are planned.

Recommendations:

That the NWMB consider the information presented by Central and Arctic Region DFO and provide the Board's position on the proposed abridged listing process for Roundnose Grenadier, Roughhead Grenadier, Acadian Redfish and Deepwater Redfish by December 20, 2011. The decision required is as follows: agree with abridged listing process or not.

Prepared by:

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Date: September 21, 2011

Assessment Summary – November 2008

Common name

Roundnose Grenadier

Scientific name

Coryphaenoides rupestris

Status

Endangered

Reason for designation

Survey data indices of adult numbers show declines of 98% from 1978 to 1994 with a further decline from 1995 to 2003. Although much of the population lives at depths greater than those surveyed, adding uncertainty to the assessment, this constitutes the best available information to assess species status. The species is long-lived (60 yr) and matures late (around 10 yr) which makes it susceptible to human-caused mortality. Commercial catches were high in the 1960s and 1970s but have since declined, although harvest still occurs.

Occurrence

Arctic Ocean, Atlantic Ocean

Status history

Designated Endangered in November 2008. Assessment based on a new status report.

Assessment Summary – April 2007

Common name

Roughhead grenadier

Scientific name

Macrourus berglax

Status

Special Concern

Reason for designation

This species is widespread on the upper continental slope and deep continental shelf throughout the North Atlantic. Females mature at 13-15 years with a generation time of approximately 20 years. The species is distributed from Davis Strait in the north to Georges Bank in the south, occurring both inside and outside 200 n. miles, primarily in depths between 400 and 1500 m. Research vessel surveys have not consistently covered deep portions of the range and catch a low proportion (ca. 2%) of mature adults. Canadian survey index decline rates over 15 years (< one generation) of > 90% occurred in the 1980s and early 1990s, but the surveys only covered depths to 1000 m. This decline is probably due to a combination of distributional change and abundance decline: there is evidence for movement of fish into deeper water as a result of the cooling of the shelf in the 1980s, and reduction in population size due to fishing pressure is also a possible factor. The species is caught primarily as bycatch in the Greenland halibut fishery, which has experienced reduced Total Allowable Catch and greater restrictions on areas of operation since 2000. However, there are no catch limits or management plans for the species in Canadian waters, and catch reporting of foreign vessels is often unreliable. Survey indices (Canadian and European Union) for adults have been stable over the past decade. The species is of concern because of late maturation, lack of evidence of return of adults to shallower depths with return to environmental conditions prevailing prior to the 1980s, a probable decline in abundance in the 1980s and 1990s, and the lack of a management plan for directed and incidental harvest.

Occurrence

Atlantic Ocean

Status history

Designated Special Concern in April 2007. Assessment based on a new status report.

Assessment Summary – April 2010**Common name**

Deepwater Redfish - Northern population

Scientific name

Sebastes mentella

Status

Threatened

Reason for designation

As with other members of the family Sebastidae, this species is long-lived (maximum age about 75 yr), late-maturing (generation time 23 yr), and highly vulnerable to mortality from human activities. Recruitment is episodic, with strong year-classes only occurring every 5-12 years. Abundance of mature individuals has declined 98% since 1978, somewhat over one generation. However, declines have stopped since the mid-1990s and increases have been observed in some areas. Directed fishing and incidental harvest in fisheries for other species (bycatch) are the main known threats. Fisheries in parts of this designatable unit are currently closed, but remain open in other areas. Bycatch in shrimp fisheries has been substantially reduced since the 1990s by use of separator grates in trawls, but could still affect population recovery.

Occurrence

Arctic Ocean, Atlantic Ocean

Status history

Designated Threatened in April 2010.

Assessment Summary – April 2010**Common name**

Acadian Redfish - Atlantic population

Scientific name

Sebastes fasciatus

Status

Threatened

Reason for designation

As with other members of the family Sebastidae, this species is long-lived (maximum age about 75 yr), late-maturing (generation time 16-18 yr), and highly vulnerable to mortality from human activities. Recruitment is episodic, with strong year-classes only occurring every 5-12 years. Abundance of mature individuals has declined 99% in areas of highest historical abundance over about two generations. However, since the 1990s, there has been no long-term trend in one area, and trends have been stable or increasing in other areas where large declines have been previously observed. Directed fishing and incidental harvest in fisheries for other species (bycatch) are the main known threats. Fisheries in parts of the range of this designatable unit (DU) are currently closed, but remain open in other areas. Bycatch in shrimp fisheries has been substantially reduced since the 1990s by use of separator grates in trawls, but could still be frequent enough to affect population recovery.

Occurrence

Atlantic Ocean

Status history

Designated Threatened in April 2010.