



Brief on: Important summer areas for narwhal (*Monodon monoceros*) concerning operations related to mineral exploration or exploitation activities [minerals@natur.gl](mailto:minerals@natur.gl)  
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## **Important summer areas for narwhals**

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### **Background**

The document *Rules for field work and reporting regarding mineral resources* ('Field Rules') (Anon., 2000) provides special provisions for field work related to mineral activities. The provisions are applied to activities within areas and periods of particular significance to wildlife.

The areas and provisions in the Field Rules are defined based on the existing biological knowledge of the time. Government of Greenland has requested a revision of Field Rules' chapter 2 and 3 including report and digital map to be available in NatureMap at [www.eamra.gl](http://www.eamra.gl) ([naturemap.eamra.gl](http://naturemap.eamra.gl)). NatureMap is an online mapping portal for environment and nature of Greenland. Information from NatureMap can be viewed in NunaGIS and GovMin (Licence-Map) as direct data link service.

This brief is an update and supplement to the text of chapter 2 section 2.03.08 *Areas with narwhals* with regards to summer areas.

**Ad. 1: General description and sensitivity**

The North-West Greenland population of narwhal (*Monodon monoceros*) on the national Red List is assessed as ‘Near Threatened’ (NT). The East Greenland population on the national Red List is assessed as ‘Endangered’ (EN) (Boertmann & Bay 2018).

The narwhal stocks in Greenland are:

- Qimusseriarsuaq (Melville Bugt),
- Ikersuaq (Inglefield Bredning) and
- East Greenland defined as from Kangertittivaq (Scoresby Sund) to Isortoq settlement

They are all considered to have status as ‘highest concern’ by a recent global review on the conservation status of monodontid stocks (Hobbs et al. 2020).

Narwhals are sensitive to anthropogenic disturbance of underwater noise from active acoustic sources and vessel traffic.

Narwhals travel in general at a speed of 3-4 knots. It is advised not to allow vessels to travel at a speed higher than 5 knots in the important areas within the territorial sea baseline border during the sensitive periods.

Experimental studies in 2017 and 2018 show that narwhals are sensitive to seismic exploration. They react by physiological response, change of foraging behavior, vocal activity, reduced activity, and diving behavior. They may also react by increase of swim speed in upper part of the water column and approaching the coast.

Considering the sensitivity to anthropogenic disturbances and the Red List status of narwhals, it is advised to expand the important summer areas in the Field Rules, see ad. 2 and ad. 3.

**Ad. 2: Periods of importance**

In the Field Rules (November 2000) the following periods are listed:

1. In East Greenland: During the period June 1 – October 31.
  - b. in North-West Greenland: During the period August 1 – October 15

It is advised to change the periods to:

1. All regions: During the period June 1 – October 31.

This is supported by studies proving presence of narwhal in many of the summer areas in the period July 1 – October 15. The recommended period is longer to accommodate variances in migration of narwhal due to changes in sea ice cover.

In consideration of recent years’ aerial surveys, it is advised to require a separate advisory document for important areas to narwhal during winter and spring seasons. The surveys suggest that the habitats along the sea ice edge are important feeding areas for narwhals dependent on

changes in sea ice cover and glacier front developments, and regulations of activities could be relevant.

### **Ad. 3: Areas of importance**

Revised areas are presented in Figure 1. Previous areas are presented in Figure 2 for reference.

Extensive field surveys the recent years demonstrate that narwhals are active in many coastal waters and fjords in East and North-West Greenland during the sensitive summer period.

For North-West Greenland, the areas of Qimusseriarsuaq (Melville Bugt), Ikersuaq (Inglefield Bredning), and Petermann Fjord must be considered very important to the narwhals during the summer season.

Several of the fjord systems in East Greenland must be considered very important during summer. These include the North-East Water, Jøkel Bugt, Dove Bugt, Young Sund area, the Kangerittivaq (Scoresby Sund) fjord complex and mouth, fjords along the Blossville Kyst, Kangerlussuaq, and Tasiilaq / Sermilik.

Due to seasonal and annual changes in sea ice cover, the fronts of sea ice and glaciers, the areas important to narwhals can change accordingly. It is advised to assess the prevailing and current ice situation during activities of e.g., field work or transport.

It is advised to change the regulations of the section in the field rules to the following:

*2.03.10 Narwhal summer areas. During the period June 1 – October 31, the following regulations apply, unless approved by the Environmental Agency for Mineral Resources and Activities:*

- a. It is not allowed to cause disturbance, including firing guns or traveling by boat at speeds above 5 knots.*
- b. It is not allowed to fly by of fixed-wing plane or helicopter within a vertical distance of 500 meters.*
- c. It is not allowed to fly drones within a vertical or horizontal distance of 100 meters.*
- d. Traffic and going on ice floes are not allowed where narwhal is observed.*

**Updated map of important summer areas for narwhals**

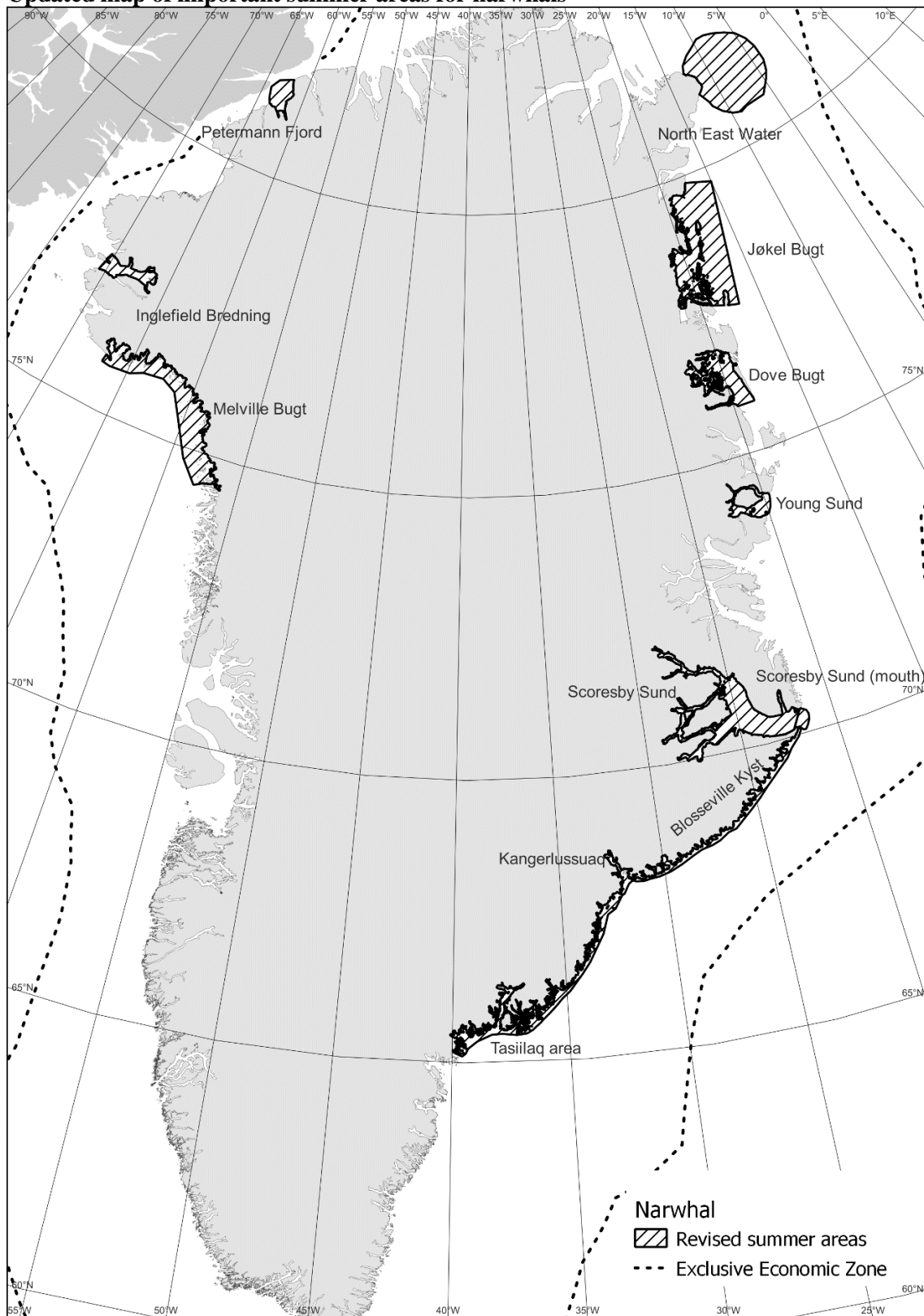
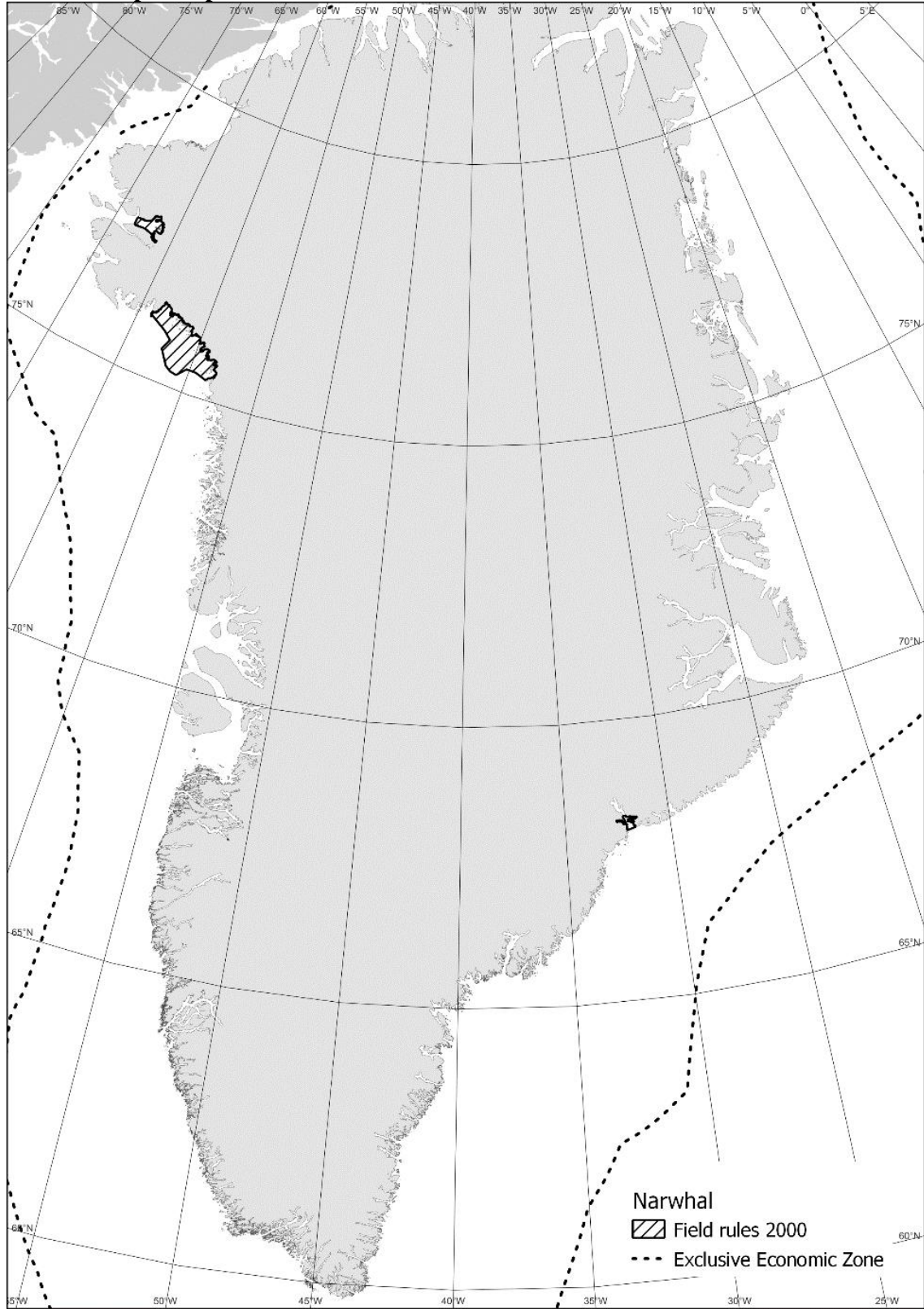


Figure 1: Important summer areas for narwhals. Updated regions. November 2022

**Previous map of important areas for narwhals**



*Figure 2: Previous delineation of Important summer areas for narwhals. Previous regions of Field Rules, November 2000.*

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