A wide-angle photograph of an Arctic seascape. The foreground is a dark, choppy sea with small icebergs. The middle ground features a long, low ice shelf or a series of icebergs stretching across the horizon. The sky is filled with dramatic, layered clouds, transitioning from a deep blue at the top to a bright orange and yellow near the horizon, suggesting a sunset or sunrise. The overall mood is serene and majestic.

ARTIC SEAFLOOR MAPPING – NORWEGIAN MAPPING AUTHORITY HYDROGRAPHIC SERVICE

Øyvind Tappel

Arctic-Antarctic Seafloor Mapping Meeting in
Stockholm May 3-5 2011

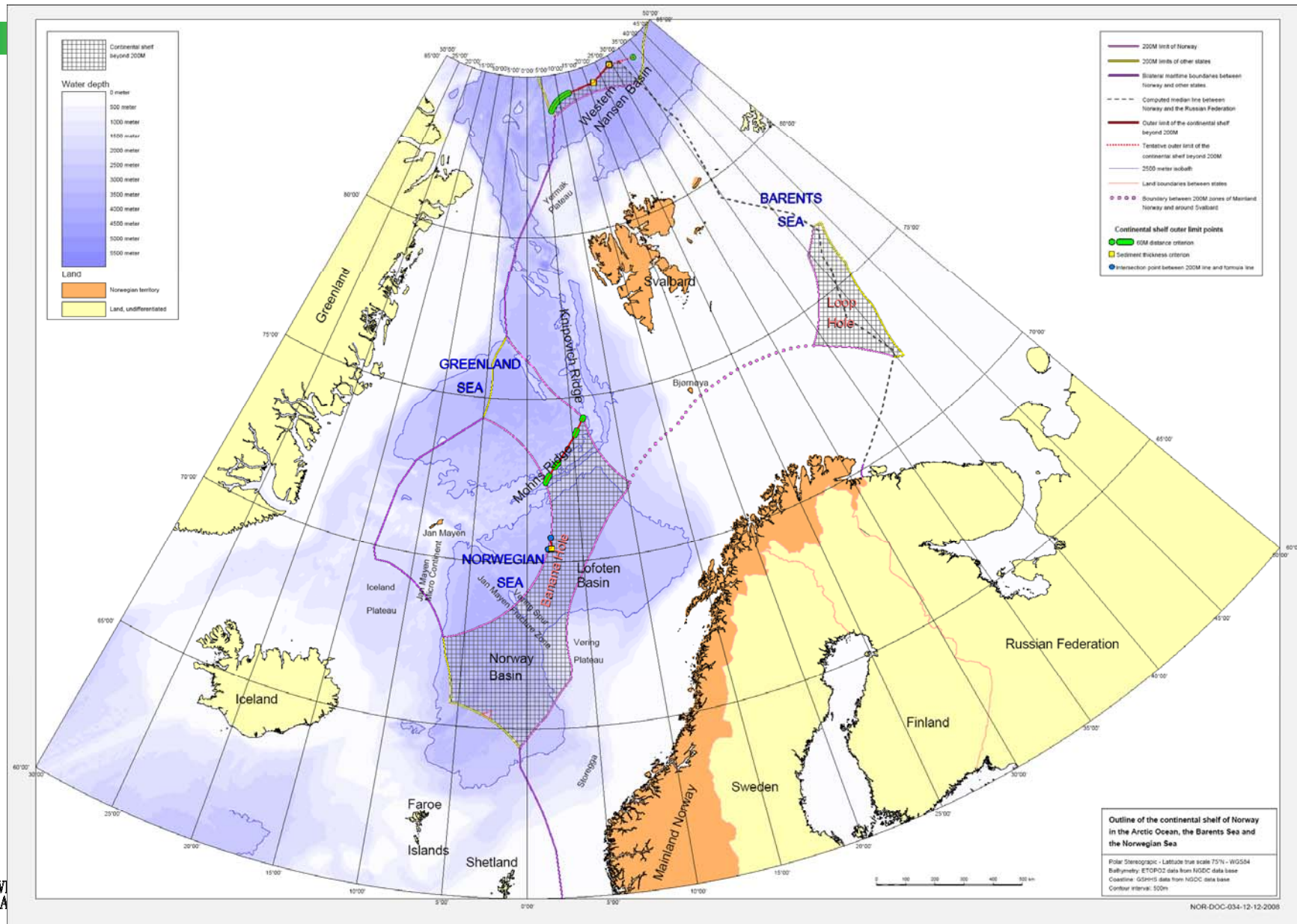


OUTLINE

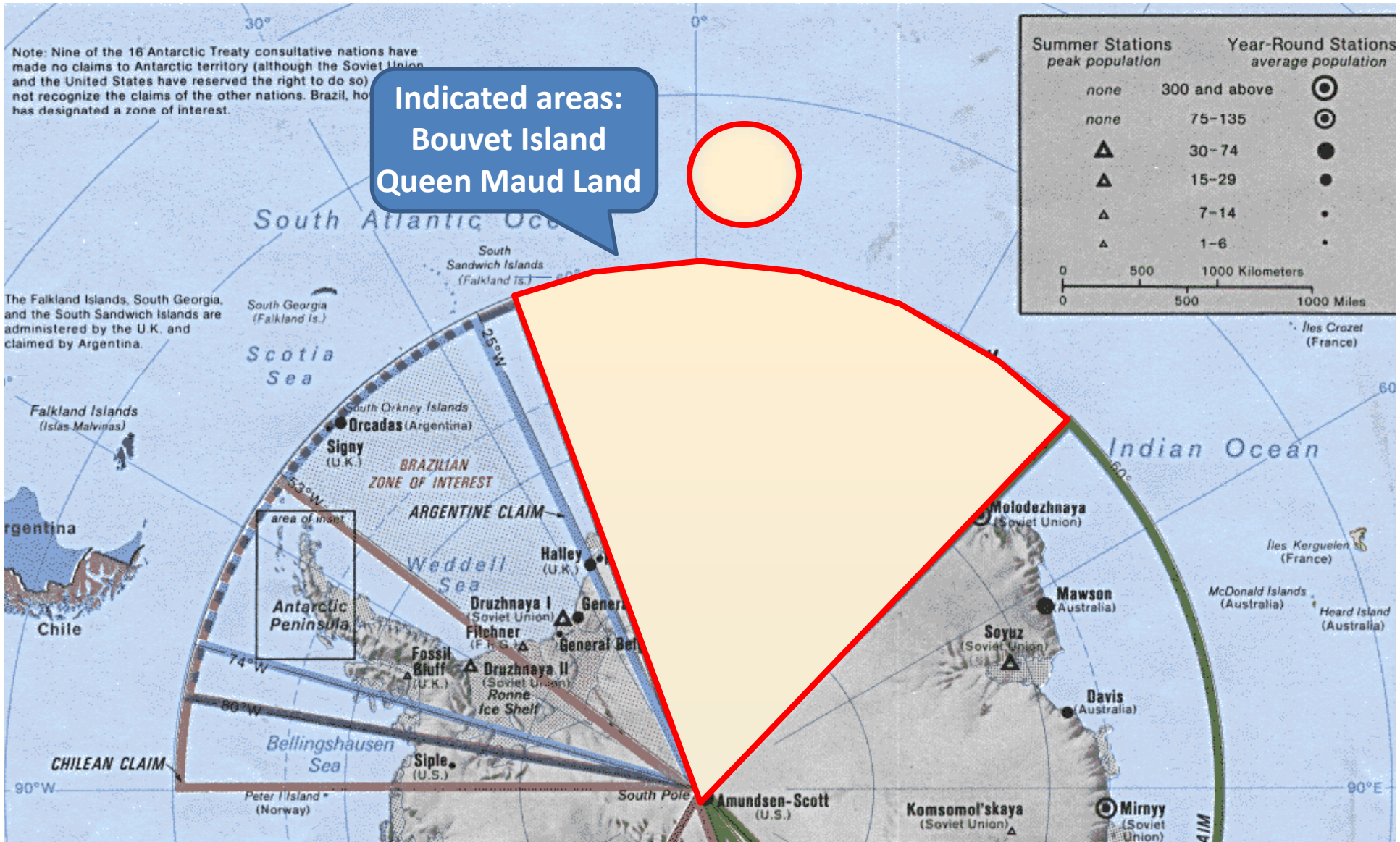
- Area of responsibility
- Survey fleet
- Equipment
- Surveying status
- Norwegian coast
- Jan Mayen
- Svalbard



AREA OF RESPONSIBILITY – NORTH ATLANTIC AND ARCTIC REGION



AREA OF RESPONSIBILITY – SOUTH ATLANTIC AND ANTARCTIC REGION



SURVEY VESSELS

Length 10 m
Speed 13 knots
Built 1998
EM3002D

Sjøtroll



R/V Hydrograf

Length 43.6 m
Speed 10 knots
Built 1985
13 cabins
EM710



Sjøfalk



Length 11.5 m 3 cabins
Speed 15 knots EM3002D
Built 2003

MULTIBEAM ECHOSOUNDERS

EM3002D on one of the
Survey launches



From the installation of
EM710 on R/V Hydrograf

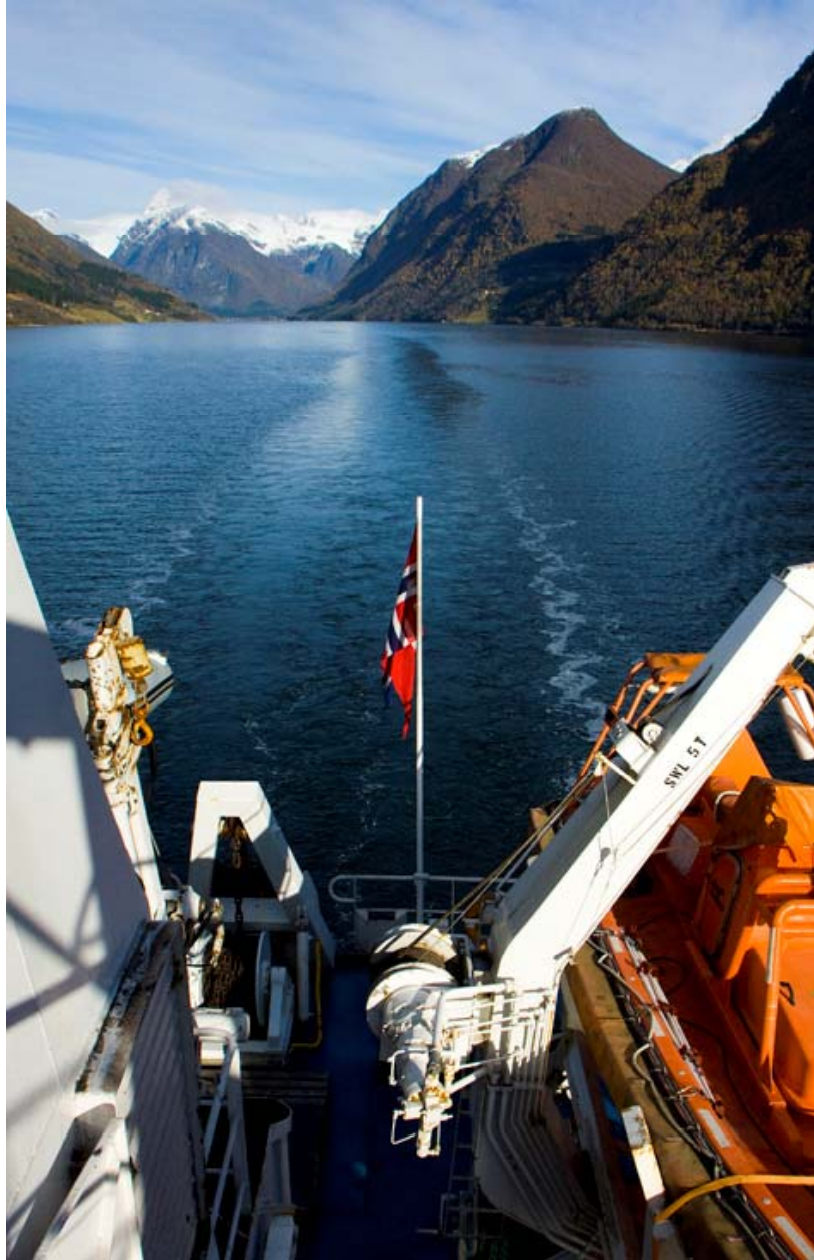
MAJOR FOCUS AREAS FOR SURVEYING

- Norwegian coastal areas
- Svalbard coastal areas
- Selected offshore areas (Mareano)

- Coastal areas:
 - Principal purpose - navigation safety
 - Other use of data - coastal zone planning, industry, science, ...

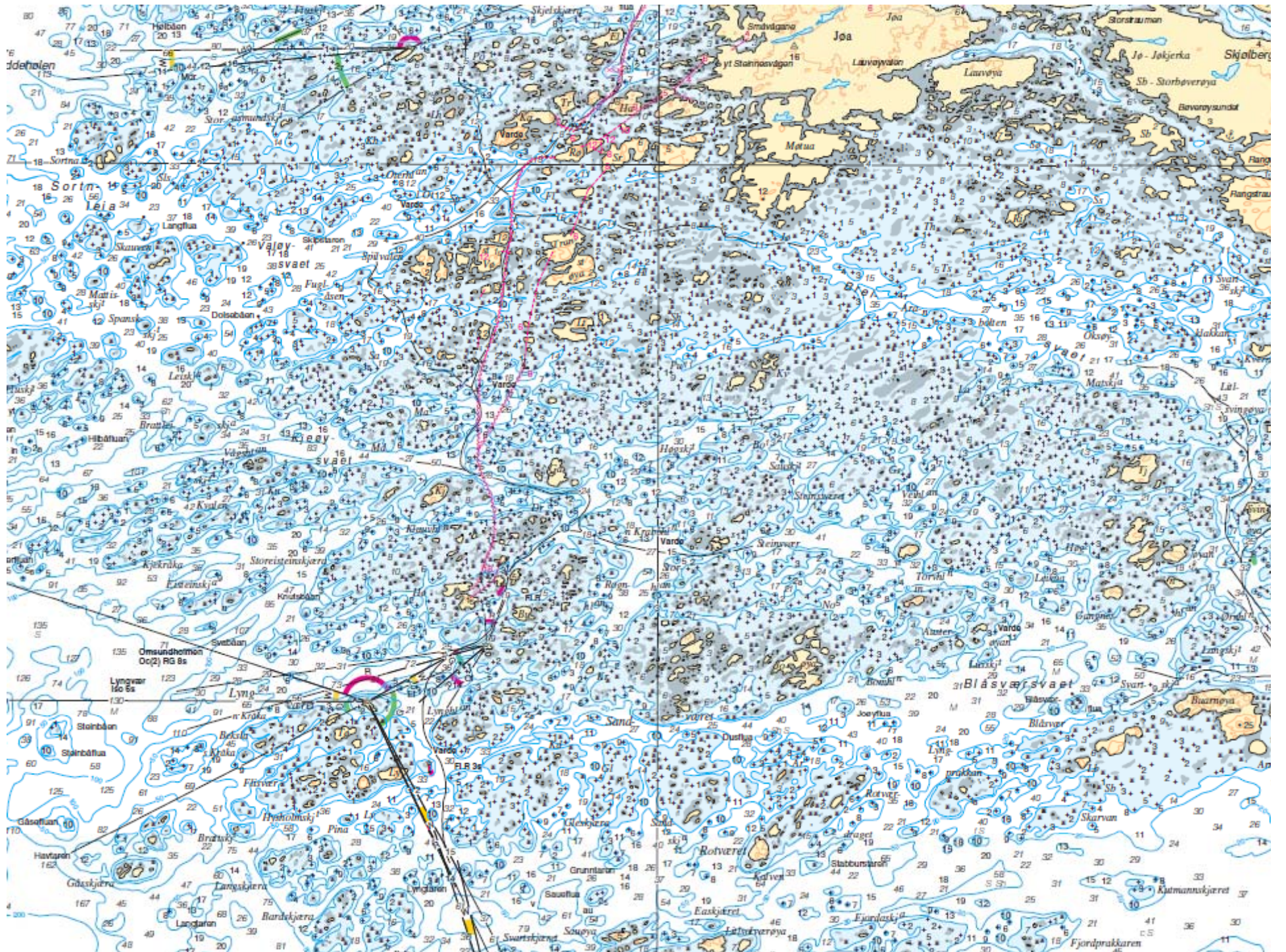


The Norwegian Coast



ACTIVITY 1

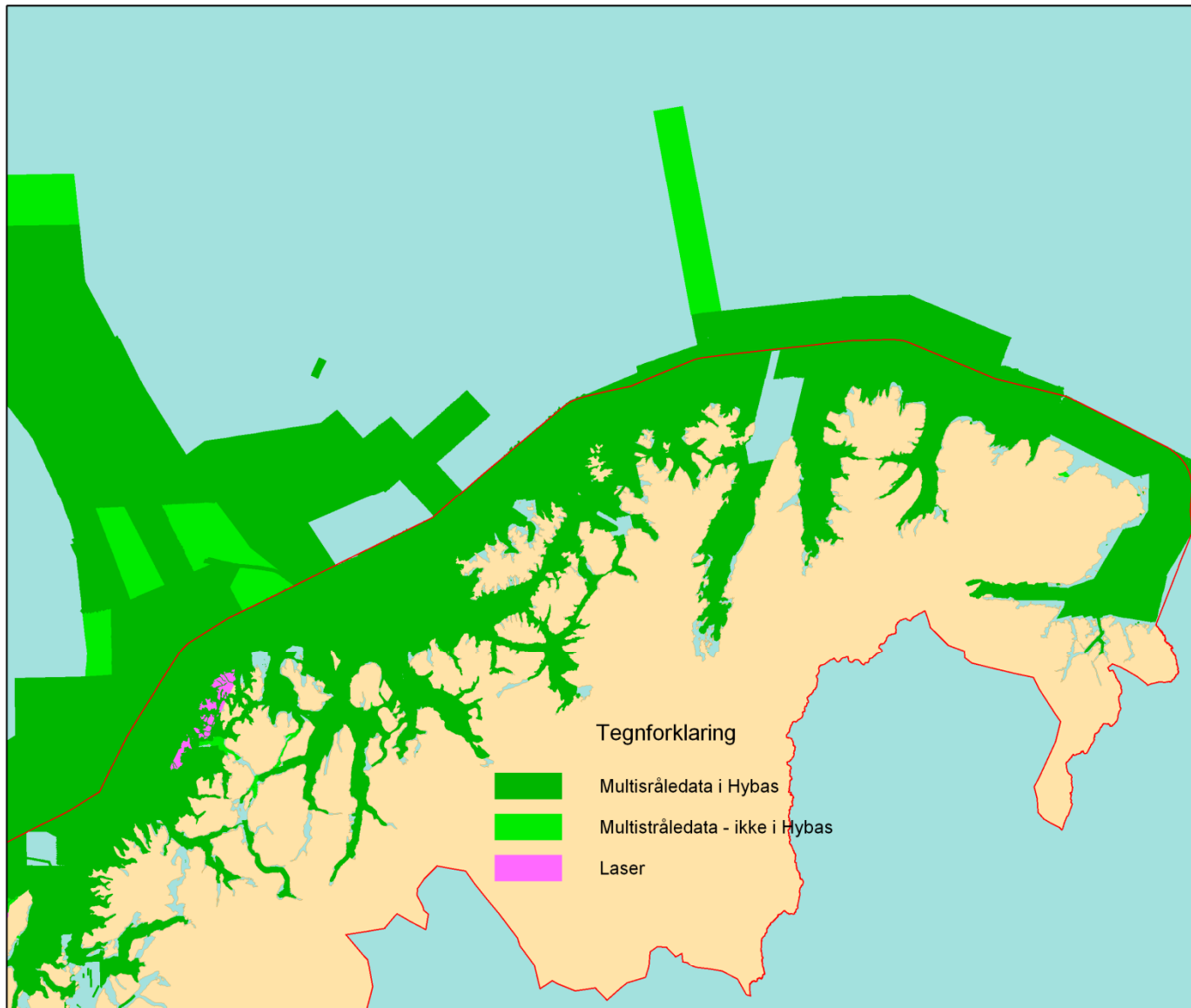
HYDROGRAPHIC DATA – FOR BENEFIT OF THE SOCIETY



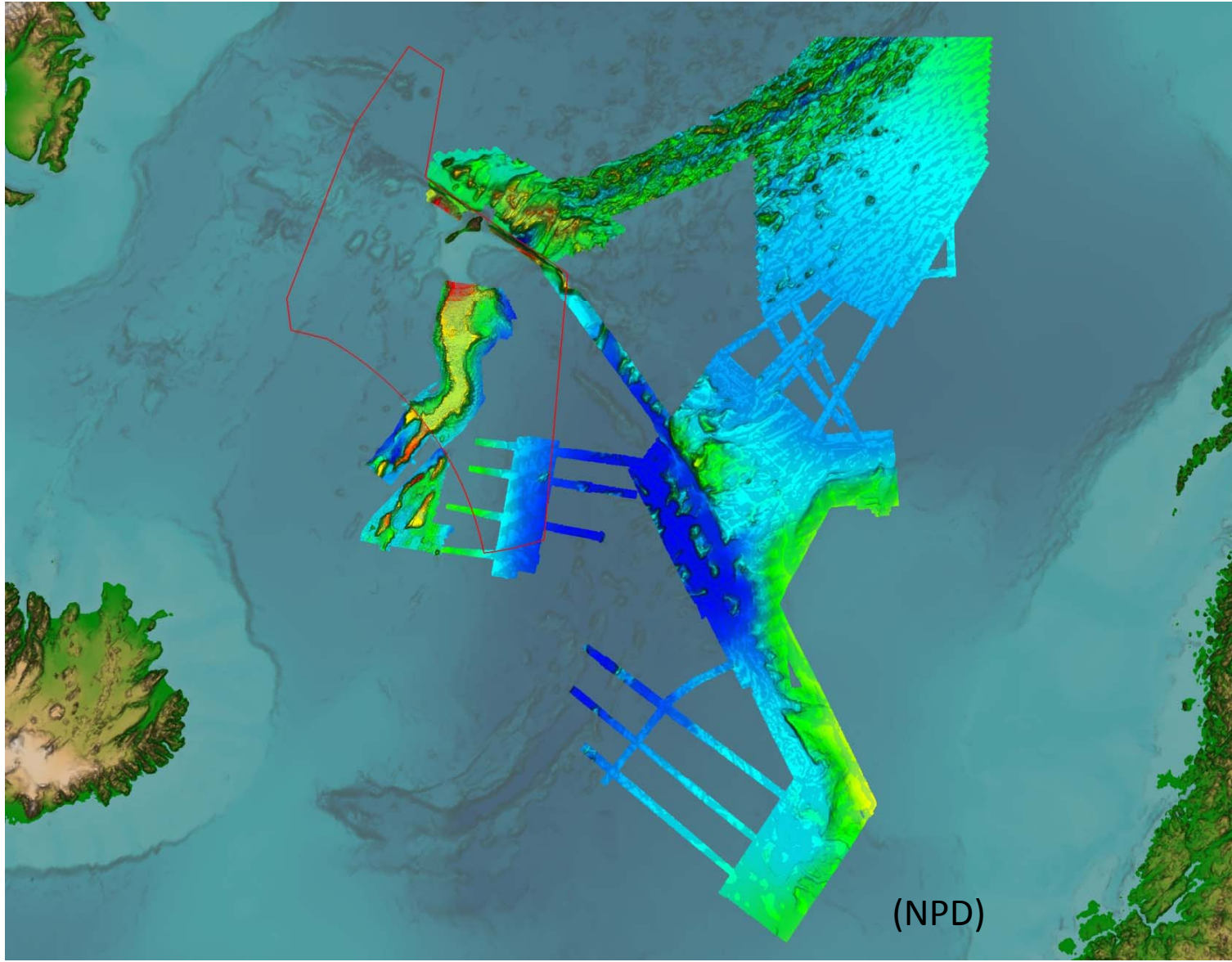
SURVEYING THE FORESHORE



STATUS SURVEYING NORTHERN NORWAY

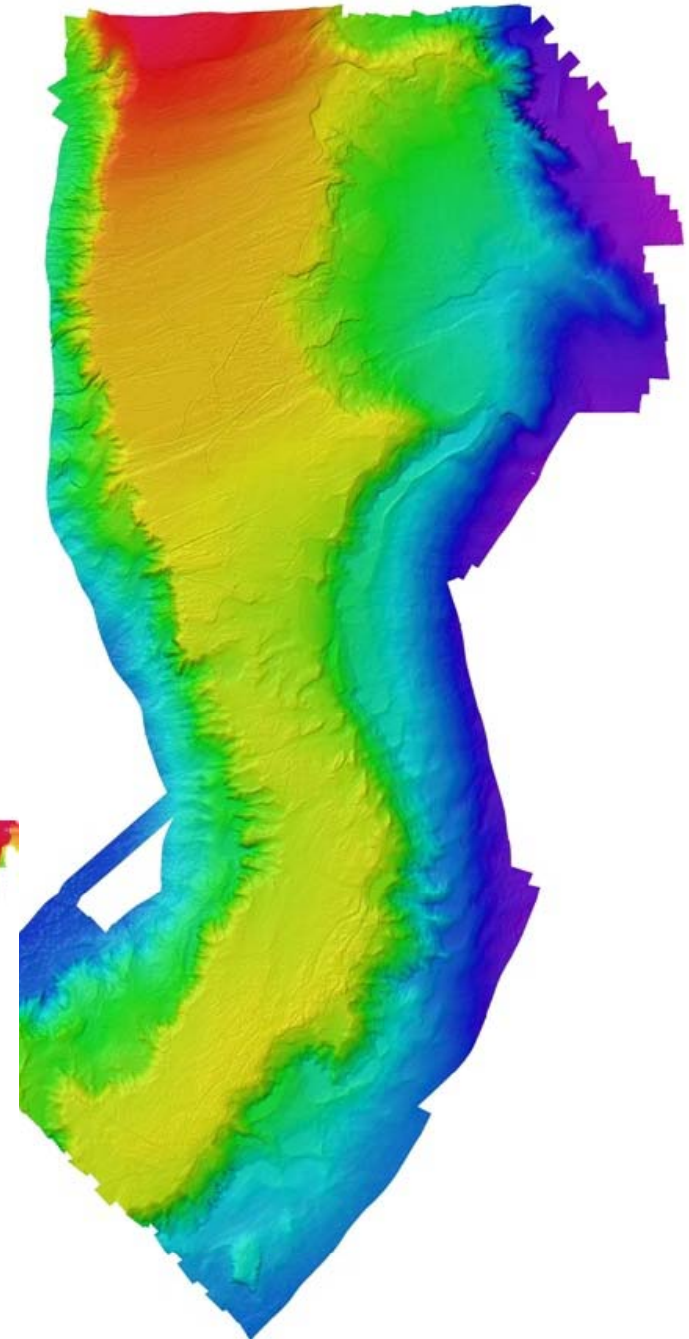
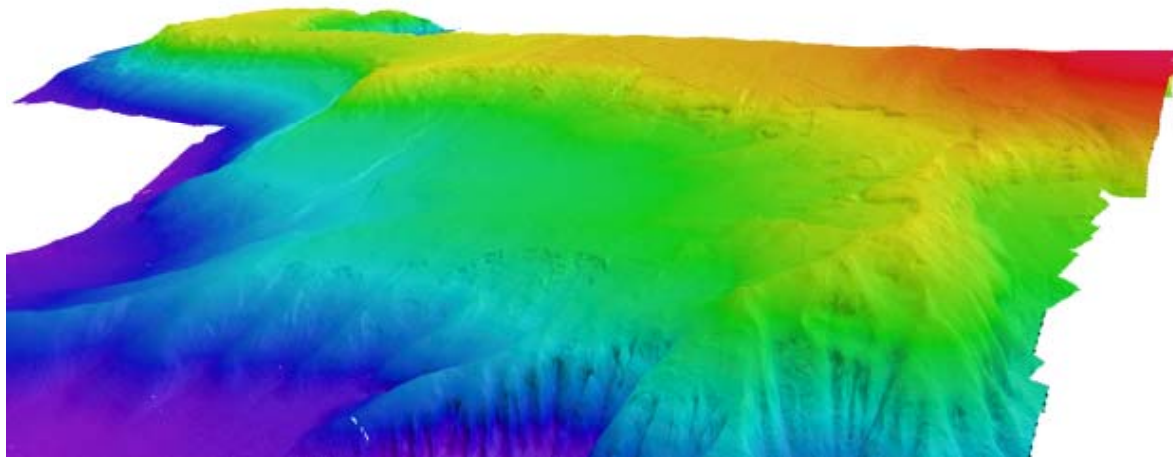


JAN MAYEN : DATA FROM THE NORWEGIAN PETROLEUM DIRECTORATE



JAN MAYEN RIDGE

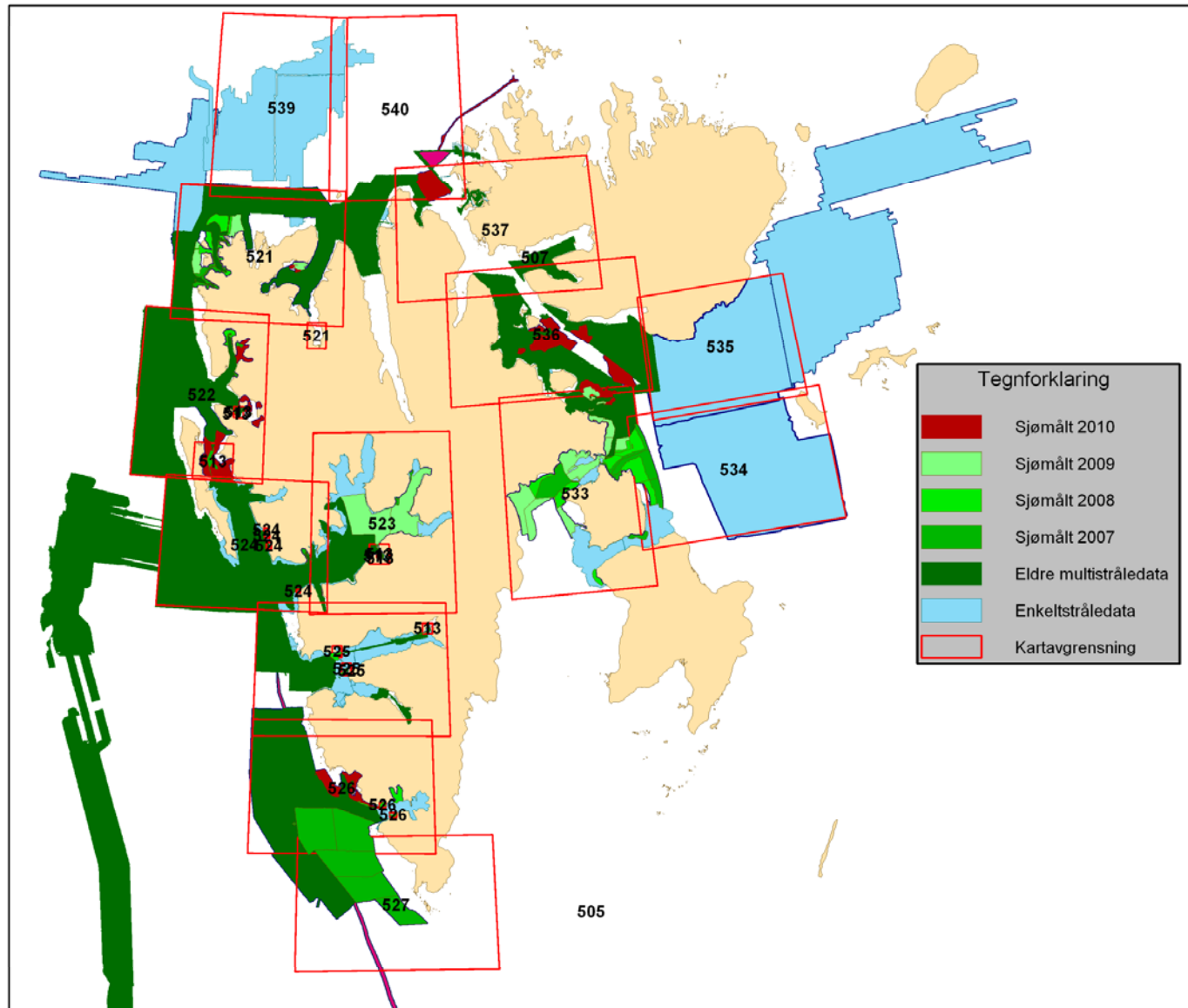
- Last survey: EM 300 data at the Jan Mayen ridge.
- Surveyed in 2010 by the Norwegian Petroleum Directorate and Iceland Marine Research Institute



SURVEYING AT SVALBARD



STATUS SURVEYING SVALBARD



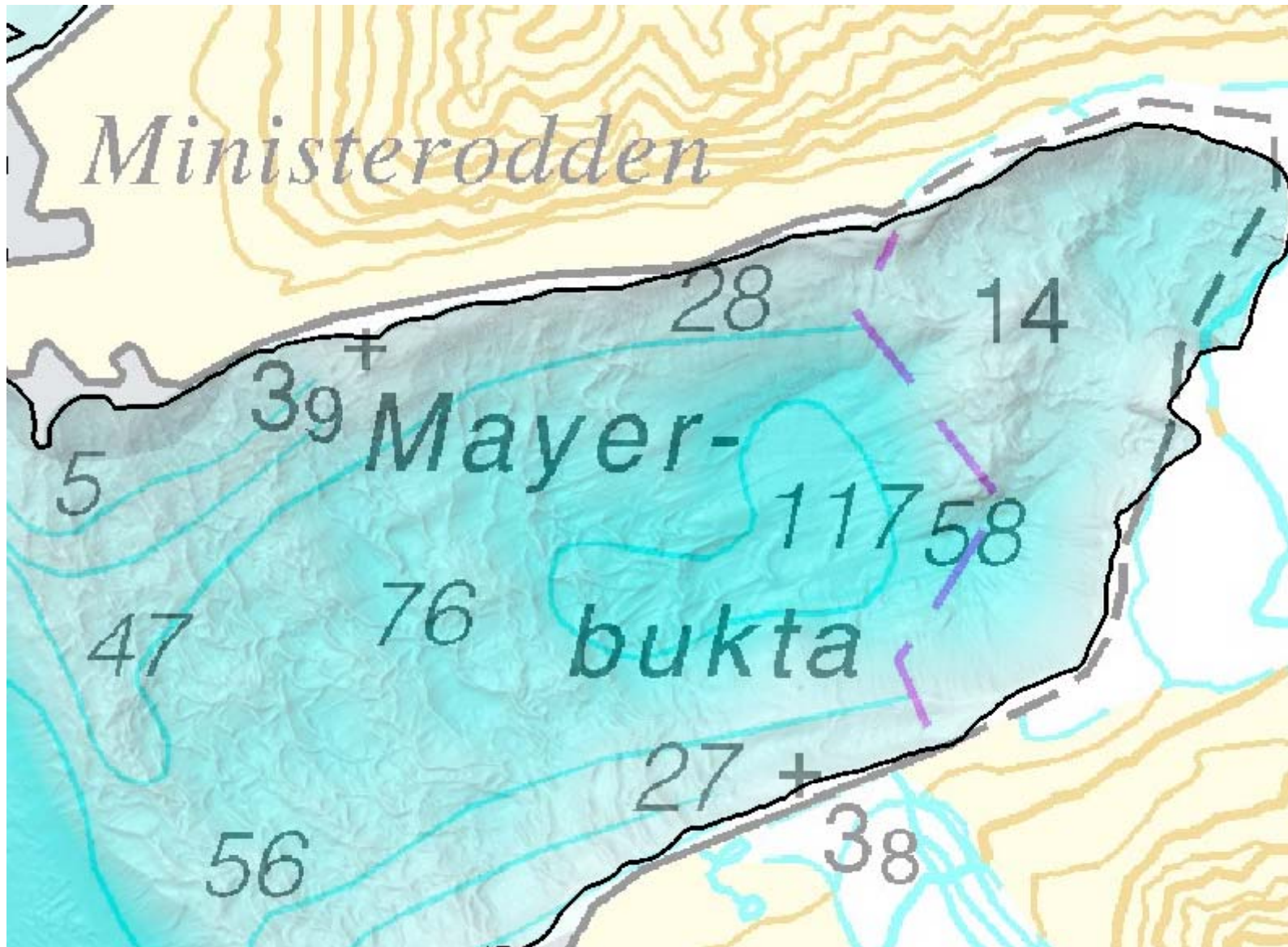
SURVEYING CONDITIONS AT SVALBARD






- Extensive shallow areas
- Drifting ice
- Murky water

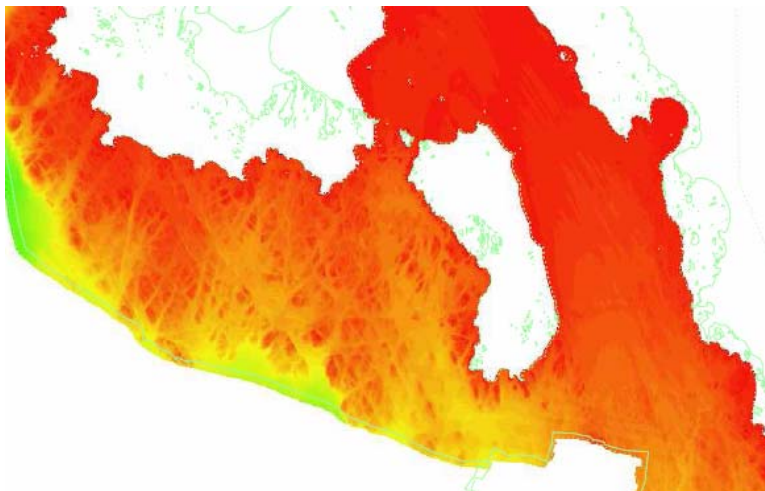


FJORD AT SVALBARD , EM3002 GRID DATA FROM 2010



FUTURE FAIRWAYS AT SVALBARD

- Planning fairways with 3nm buffer 
- Aim to cover with multibeam
-  multibeam data
-  singlebeam data
- 2010 data from Svalbard



A topographic map with a purple-to-brown color gradient. The map features numerous contour lines representing elevation, with numerical values such as 10, 20, 30, 40, 50, 60, and 70. The terrain is depicted with shading to show depth and elevation changes. A grid of latitude and longitude lines is overlaid on the map.

THANK YOU FOR YOUR ATTENTION!