

DR1: Extent of bathymetry data and sub-bottom data used in this study

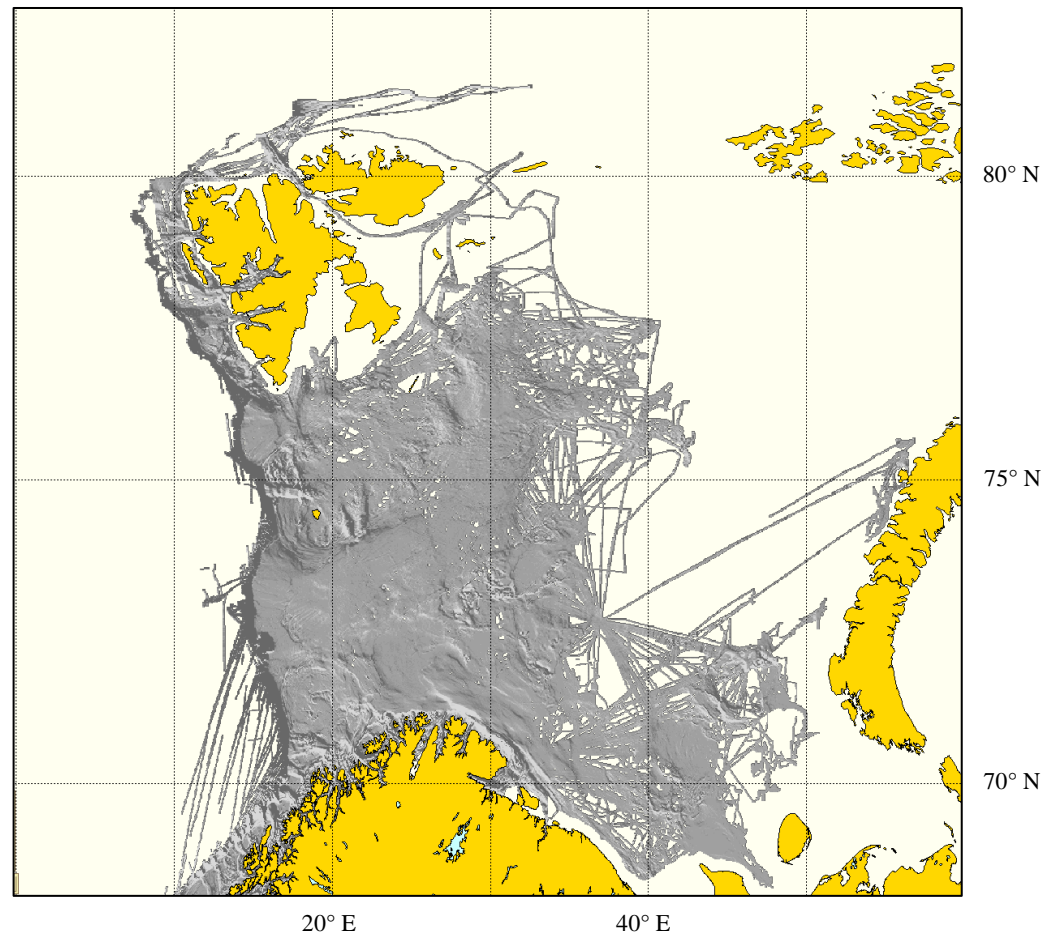
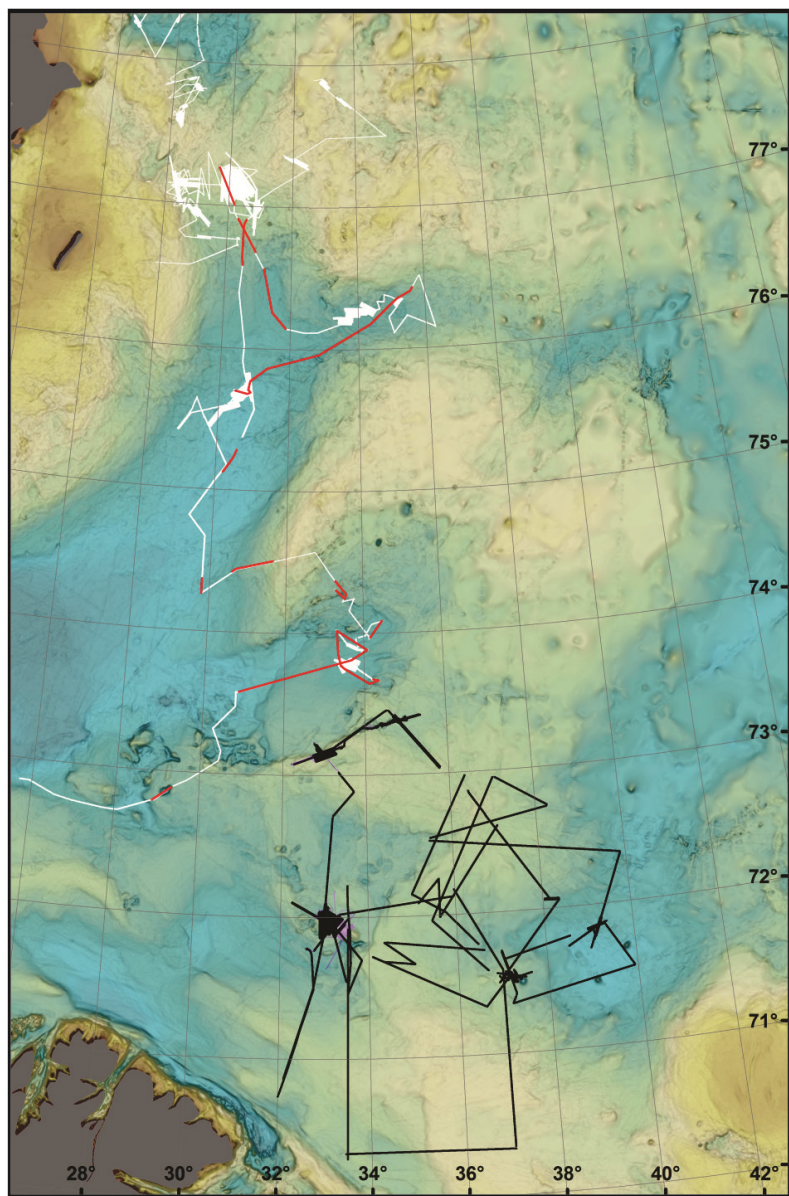


Figure DR1-A) Screenshot from the Olex fisheries database showing the extent of Olex bathymetry data used in this study (for technical details see nr. 1 in Table DR2).



DR1-B) White area: Extent of multibeam swath bathymetry and chirp sub-bottom profiler data acquired on R/V Helmer Hanssen (for technical details see nr. 2, 4, 5 in Table DR2); Red lines: Extent of single-channel seismic acquired on R/V Helmer Hanssen (for technical details see nr. 5 in Table DR2); Black lines: Extent of multibeam swath bathymetry and sub-bottom profiler data acquired on R/V Akademik Strakhov (for details see nr. 3, 6 in Table DR2)

DR2: Description of bathymetry data and sub-bottom data used in this study (*For the extent of the respective datasets see DR1*):

Nr.	Data type		Description	Horizontal resolution	Further information
1	Echosounder data	Olex database	Olex fisheries database: Compilation of primarily single-channel echosounder data	The Olex seafloor image has a cell size of 5x5 m, a positional accuracy of <10m, vertical resolution of ~0.1-1 m, and a horizontal resolution of 5 m up to a few tens of metres.	www.olex.no Bradwell, T., Stoker, M. S., Golledge, N. R., Wilson, C. K., Merritt, J. W., Long, D., Everest, J. D., Hestvik, O. B., Stevenson, A. G., Hubbard, A. L., Finlayson, A. G., and Mathers, H. E., 2008: The northern sector of the last British Ice Sheet: Maximum extent and demise: Earth-Sciences Reviews, v. 88, no. 3-4, p. 207-226.
2	Echosounder data	Multi-beam echosounder	Simrad EM-300, 135 beams, 63° by 63° beam configuration and automatic continuous pinging. Calibrated by CTD profiles (Seabird 911).	Frequency: 30 kHz Gridded to: 10 x 10 m.	Acquired on R/V Helmer Hanssen by the University of Tromsø in 2012. Used for groundtruthing of mapped features.
3	Echosounder data	Multi-beam echosounder	Reson SeaBat 8111/7150 101 beams, 150° swath	Frequency: 100 kHz Gridded to: 10 x 10 m.	Acquired Akademik Strakhov in 2011 (TTR18 cruise). Used for groundtruthing of mapped features.
4	Sub-bottom data	Chirp sub-bottom profiler	Edgetech HM-3300, 16 element transducer, signal length: 40 m	Frequency: sweeping 1.5-9 kHz. Max. observed penetration: <40 ms.	Acquired on R/V Helmer Hanssen by the University of Tromsø in 2012. Used for groundtruthing of mapped features.
5	Sub-bottom data	High resolution seismic	Single-channel seismic system: 15/15 GI-airgun (shot rate 3 s), 6 m long 20-element streamer, BOGE Compair Reavell compressor (160 Bar).	Frequency: 0-800 Hz rec. Max observed penetration: 850 ms	Acquired on R/V Helmer Hanssen by the University of Tromsø in 2012. Used for groundtruthing of mapped features.
6	Sub-bottom data	Chirp sub-bottom profiler	Edgetech HM-3300, 5 x 5 transducer.	Frequency range: 2-16 kHz Beam width: 20°.	Acquired on R/V Akademik Strakhov in 2011 (TTR18 cruise). Used for groundtruthing of mapped features.

DR3: Shapefile containing geographical information and attribute descriptions for the mapped tunnel valleys

The file: *DR3_TVsBARSEA.shp* is a shapefile for use with geographic information systems (GIS). The following six files collectively make up the shapefile: *DR3_TVsBARSEA.shp*, *DR3_TVsBARSEA.shx*, *DR3_TVsBARSEA.dbf*, *DR3_TVsBARSEA.prj*, *DR3_TVsBARSEA.sbn* and *DR3_TVsBARSEA.sbx*.

The file contains information about the mapped tunnel valleys (TVs) as well as selected attributes of these features. The file is compatible with a number of commercial programs (e.g. Esri's ArcMap), and freeware (e.g. Qgis). Shapefile projection: WGS84UTM36N.

The table shown below contains the names of the given feature attributes (top line, bold font) which are included in the shapefile *DR3PTVsBARSEA.shp*, as well as a brief description of the what the values describe and how they were measured.

FID	Shape	type	length2D	depth	depth_max	width_min	width_max	innerwidth	innerdepth
Feature ID Ex.: 1	Shapefile type Ex: Polyline ZM	Type 0: Features mapped based on extensive Olex data, often verified by multibeam bathymetry data and/or seismic data. Mapping of features of type 0 is considered to be robust. Type 1: Unverified channel segments. Features mapped based on less extensive Olex data. Mapped extent of features considered more uncertain than for Type 0.	Feature length (<i>as the crow flies</i>). Distance (in m) from the starting point of polyline to the end point of polyline.	Depth of the main part of the channel/valley feature (in m). Depth was measured from shoulder height to channel/valley bottom.	Depth of the deepest part of the depression feature (in m). Depth was measured from shoulder height to depression bottom.	Depression widths were measured from shoulder to shoulder. Width of the narrowest section of the channel/valley feature (in m).	Depression widths were measured from shoulder to shoulder. Width of the widest section of the channel/valley feature (in m).	Given for features that have cross profiles with wide shoulders sitting atop a narrower channel. A value (in m) showing the width of the narrower depression.	Given for features that contain a narrower, deeper channel within the main channel/valley feature. A value (in m) showing the depth of the narrower channel/valley.