

WP 5: Infrastructure and Integrated Coastal Zone Management (ICZM)



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WP 5 - Objectives

- Increase Arctic maritime safety by integrated coastal zone management.
- Response to *Harbour and fairway act* into effect from 1.5.2008 (restriction no.342 of 11.4.2008).
- More information available: hydrographic surveys, satellite-AIS.

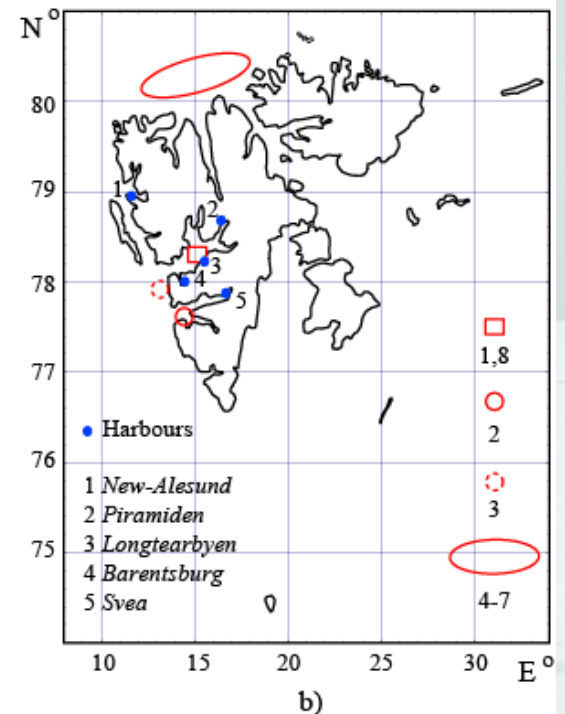
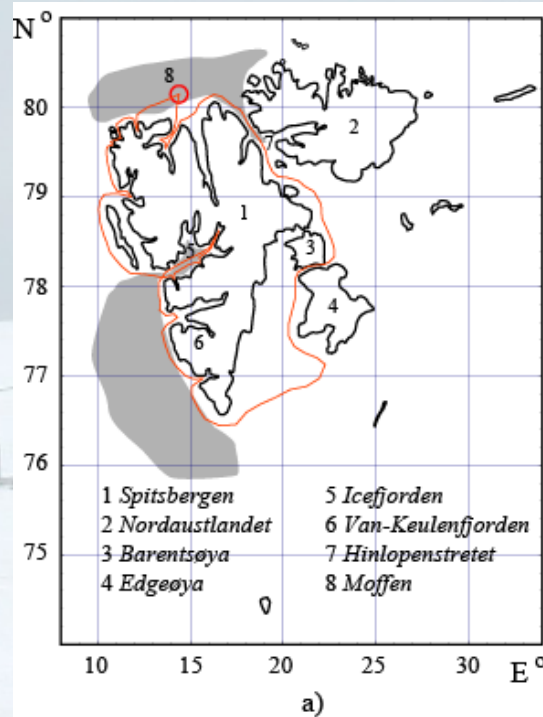
Locations of ship captured in ice around Svalbard

LEFT:

Traditional areas for the fishing (grey areas).

RIGHT:

Locations of ship captured in ice around Svalbard (red areas, 1-8 from table). Main harbours (blue points).



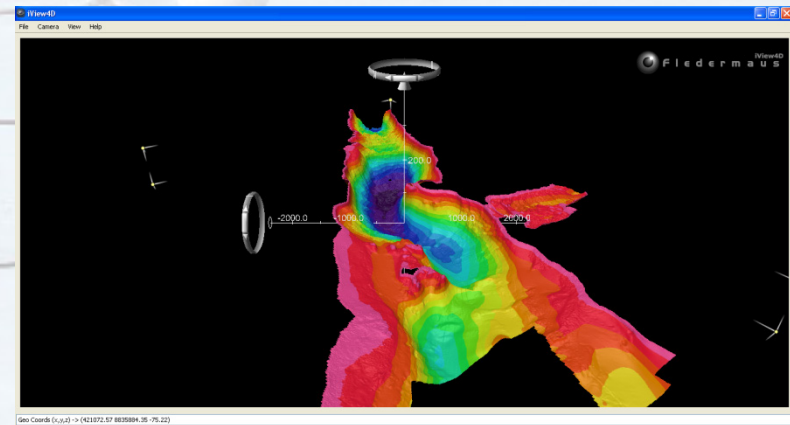
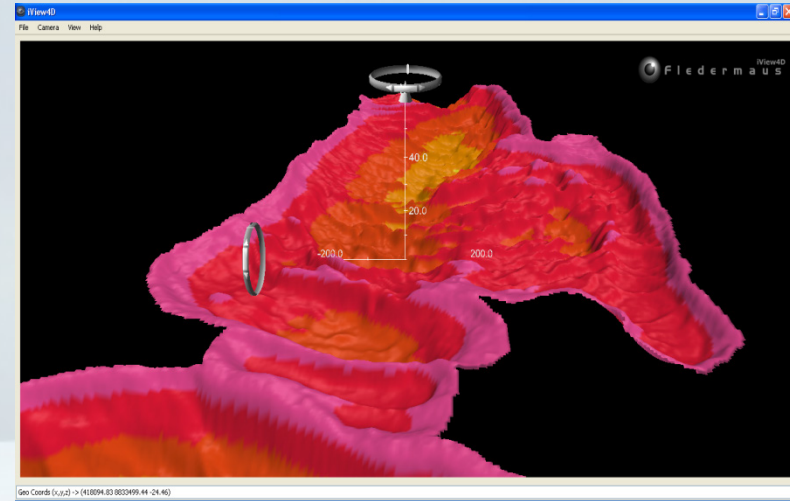
WP 5 - Work Structure

WP 5 focused on three topics:

- 5.1 Electronic Navigational charts and other electronic maps including metocean-data
- 5.2 Aids to ship in degraded conditions, especially concerning environmental impact of accidents, and
- 5.3 Places of refuge and stranding zones, as a response of an accident to reduce the environmental impact.

Results of the project WP 5.1

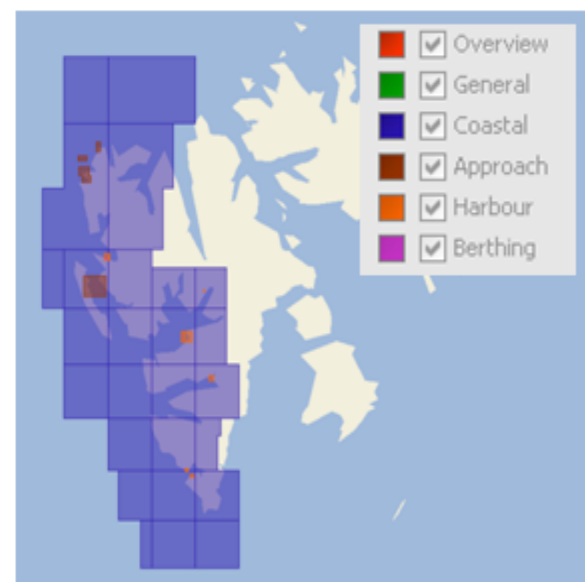
- Need of detailed bathymetric data.
- Ice-data, metocean data
- Basis for NOR-VTS at Vardø, Emergency Response on acute pollution, and NAVAREA XIX info.



Status on coverage of ENC at Svalbard

ENC, Zones of Confidence (ZOC)

ZOC	Position Accuracy	Depth Accuracy	Seafloor Coverage	Typical Characteristics
A1	+/- 5m	10m (+/- 0.6) 30m (+/- 0.8)	Full seafloor <u>ensonification</u> or sweep. All significant seafloor features detected and depths measured.	Controlled, systematic high accuracy survey on WGS 84 datum; using DGPS or a minimum three lines of position (LOP) with a multi beam, channel or mechanical sweep system.
A2	+/- 20m	10m (+/- 1.2) 30m (+/- 1.6)	Full seafloor <u>ensonification</u> or sweep. All significant seafloor features detected and depths measured.	<u>Controlled</u> , systematic survey to standard accuracy; using modern survey echo sounder with sonar or mechanical sweep.
B	+/- 50m	10m (+/- 1.2) 30m (+/- 1.6)	Full seafloor coverage not achieved; uncharted features, hazardous to surface navigation are not expected but may exist.	Controlled, systematic survey to standard accuracy.
C	+/- 500m	10m (+/- 2.5) 30m (+/- 3.5)	Full seafloor coverage not achieved, depth anomalies may be expected.	Low accuracy survey or data collected on an <u>opportunitiy</u> basis such as soundings on passage.
D	Worse than C	Worse than C	Full seafloor coverage not achieved, large depth anomalies may be expected.	Poor quality data or data that cannot be quality assessed due to lack of information.



Results of the project WP 5.2

- Aids to ship in degraded conditions: NAVAREA XIX, NOR-VTS.
- Information distribution. Guidance to navigation.
- Emergency Response on acute pollution.
- On Scene Commander

Findings WP5.3:

- Adjustment to procedure of choosing possible places of refuge:

1. Nautical review
2. Conflict potential
3. On-site inspections
4. Consequence analysis
5. Hearing
6. Decision/Implementation

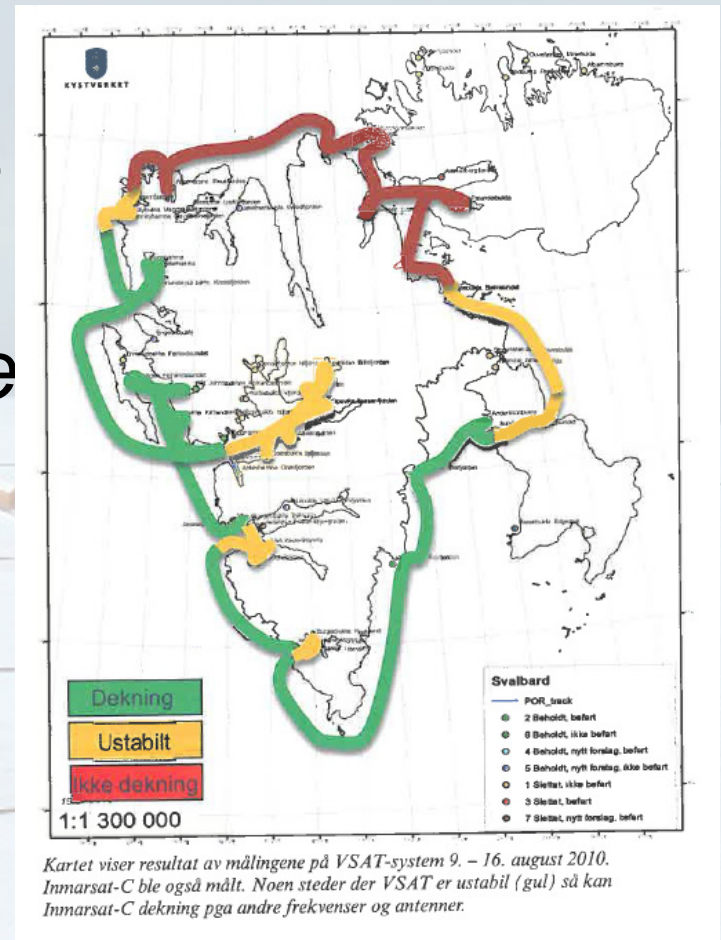
Results of the project WP 5.3

- Common understanding of use of places of refuge to reduce risk of acute pollution.
- Information available through internet (kystinfo) and *Den norske los bd 7* (NHS)



Results of the project WP 5.3

- Communication tests during survey of possible places of refuge (presented in *Den norske los bd. 7*).



Findings:

Visions and Future Needs

- A common fact basis for Coastal Zone Management and assistance to ship in distress increase Maritime Safety.
 - Common understanding on use of place of refuge
 - Common information and information systems as decision support system (<http://kart.kystverket.no>). Barents Watch, ...

Further suggestions

Evaluation of the places of refuge, did also result in other suggested tasks to increase maritime safety at Svalbard. We therefore strongly recommend NCA, Department for Maritime Safety to act on the following subjects in the survey report:

- ENC-charts and bathymetric measuring.
- Detailed bathymetric data for decision support and navigation.
- Maritime communication test results.
- AIS-coverage and mandatory AIS for leisure vessels at Svalbard.

(ref letter from the project to NCA 25.2.2011)

Thanks to KV Svalbard!

