



The role of the Italian Navy Hydrographic Institute in the Arctic activities

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Director of the Italian Hydrographic Institute

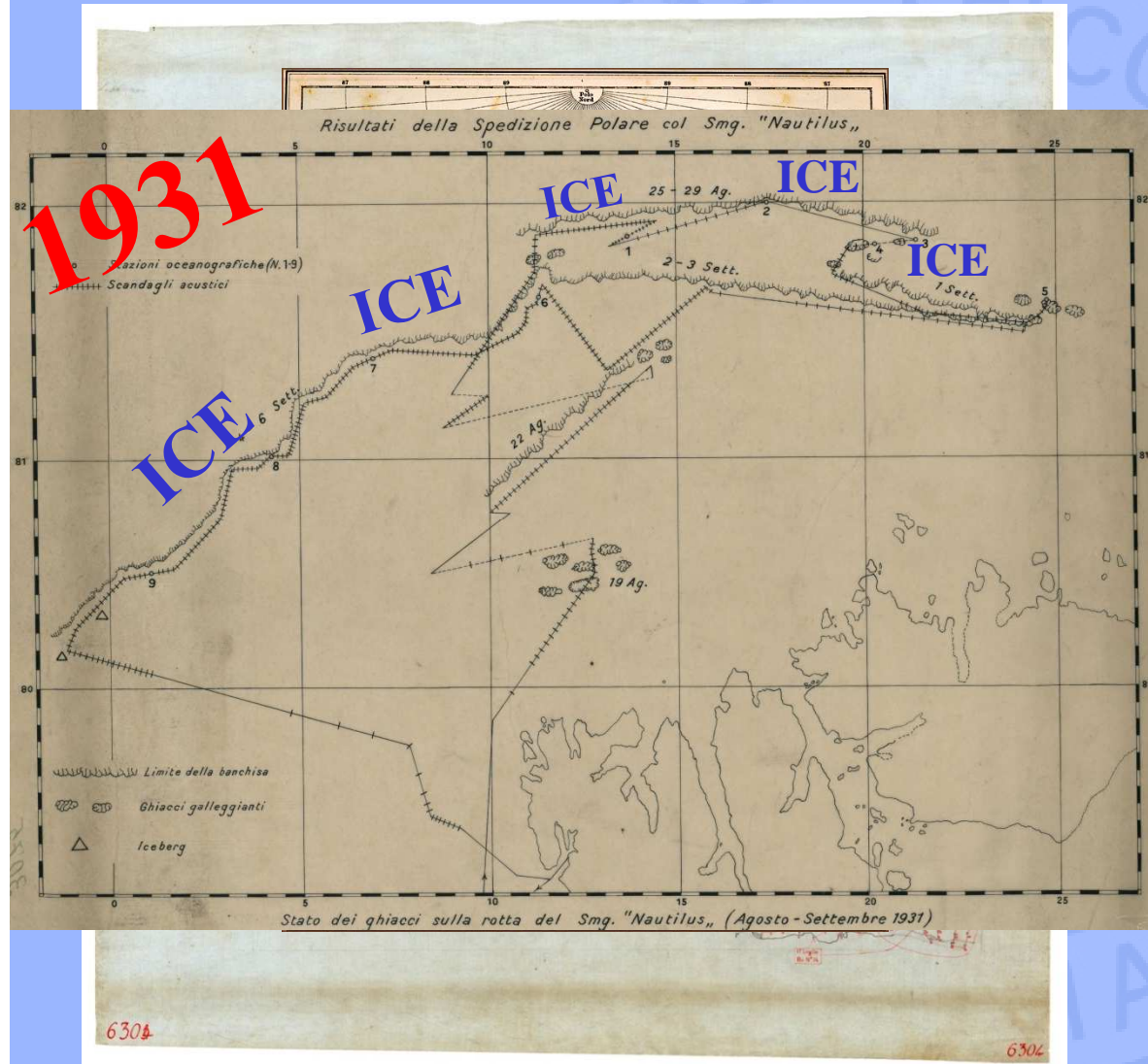


Final Conference, 11 October 2016 - Rome





Early Arctic hydrographic surveys



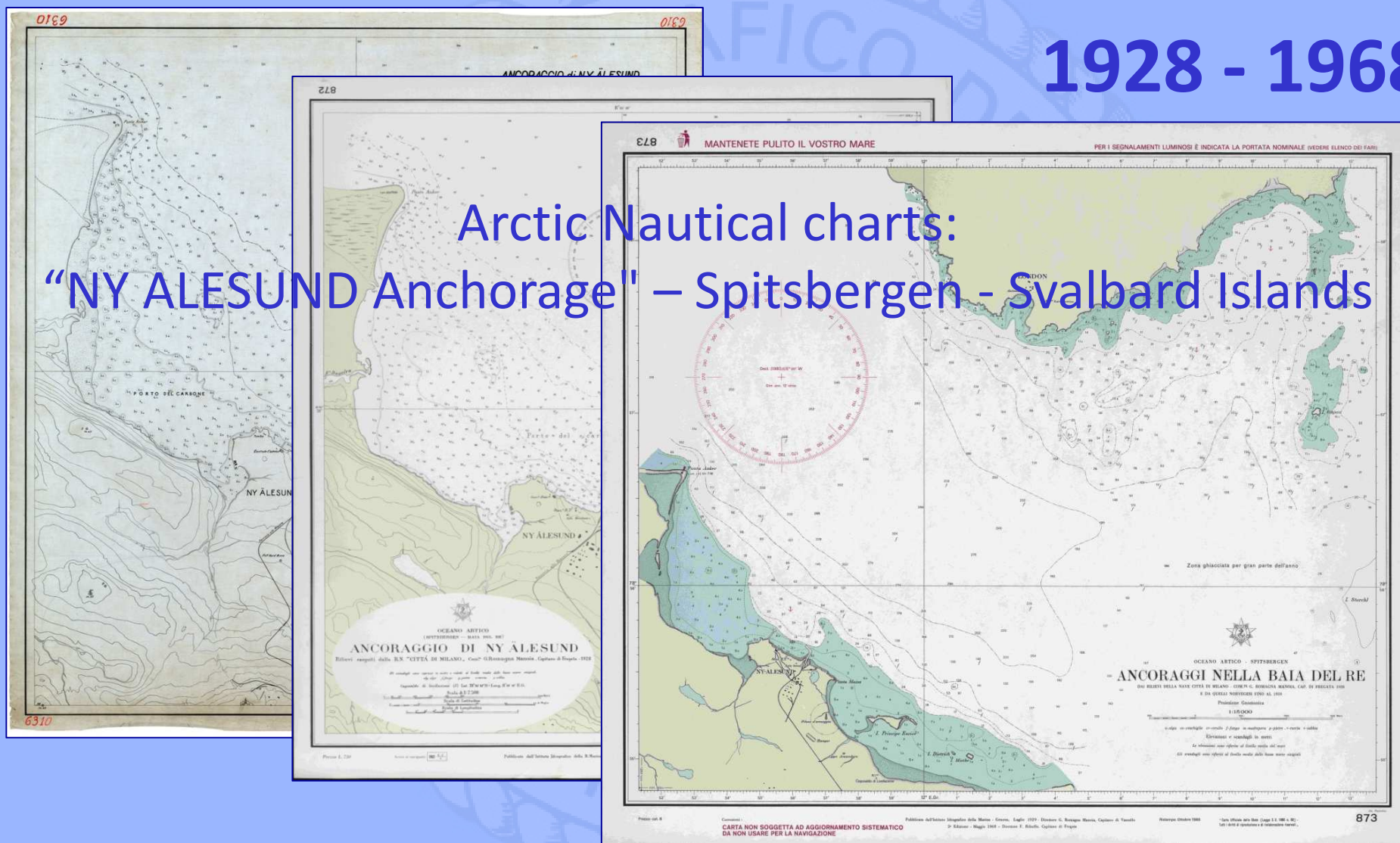


Arctic hydrographic monitoring



1928 - 1968

Arctic Nautical charts:
"NY ALESUND Anchorage" – Spitsbergen - Svalbard Islands



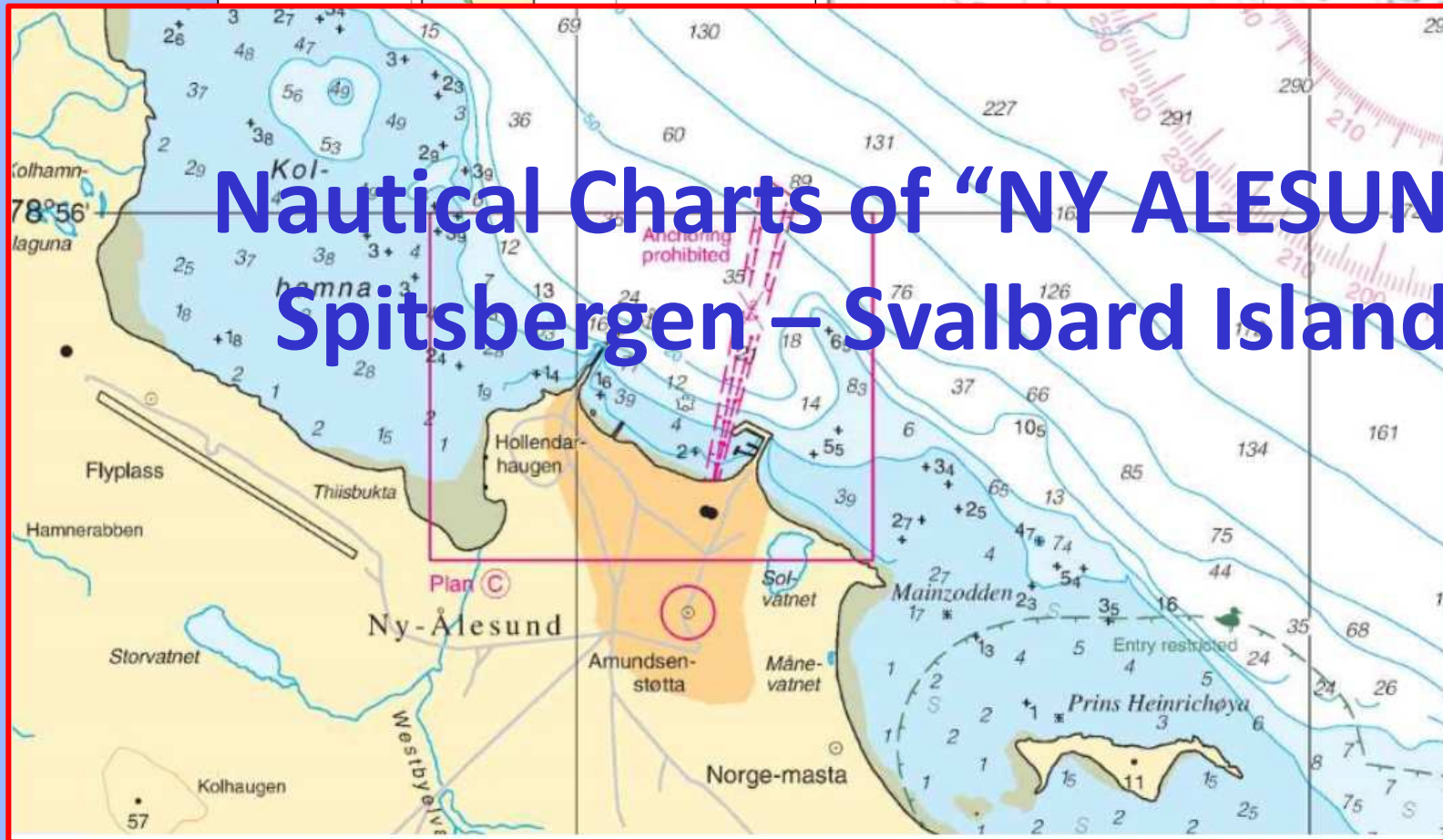


Arctic nautical charts



2016

Nautical Charts of “NY ALESUND” Spitsbergen – Svalbard Islands





Hydrography - IHO



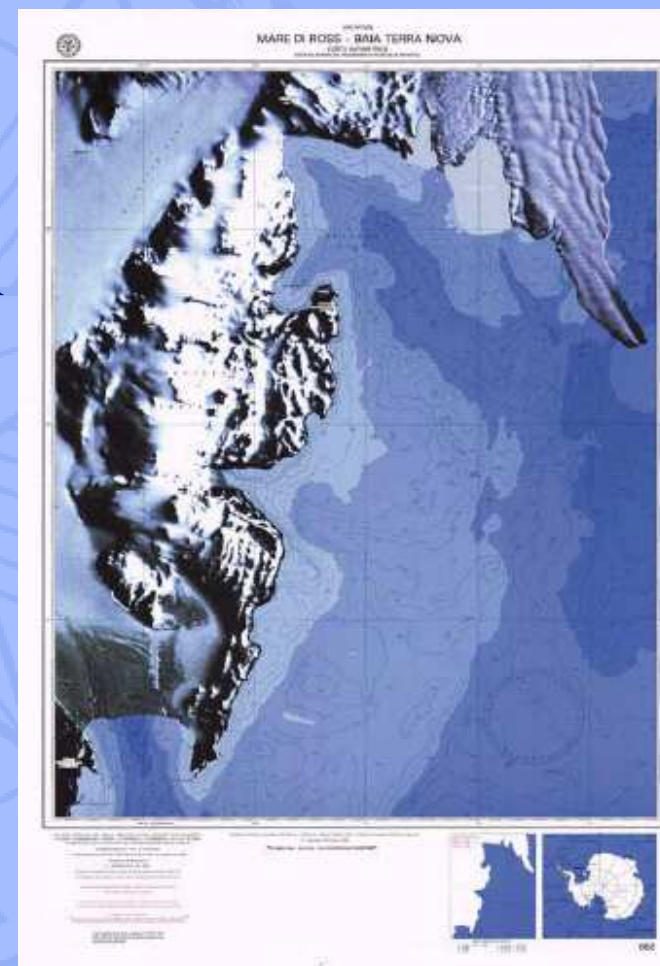
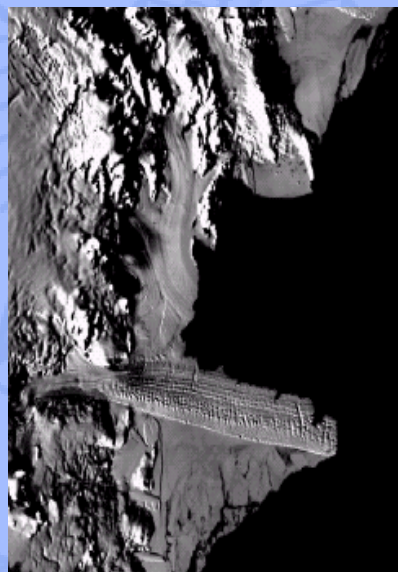
IHO - International Hydrographic Organization

Hydrography is the branch of applied sciences which deals with the measurement and description of the physical features of oceans, seas, coastal areas, lakes and rivers, as well as with the prediction of their change over time, for the primary purpose of *safety of navigation* and in support of all other marine activities, including **economic development, security and defence, scientific research, and environmental protection.**



IIM Polar skills

- **Polar operation** trained and specialized personnel
- The IIM has been involved in National Antarctic Program since 1986 and has been working in the Arctic environment since the 1920s

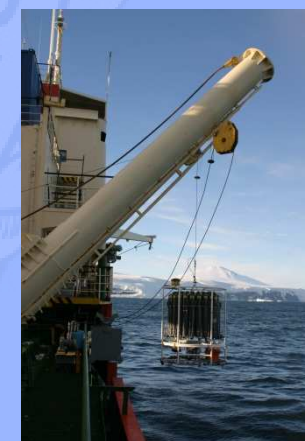
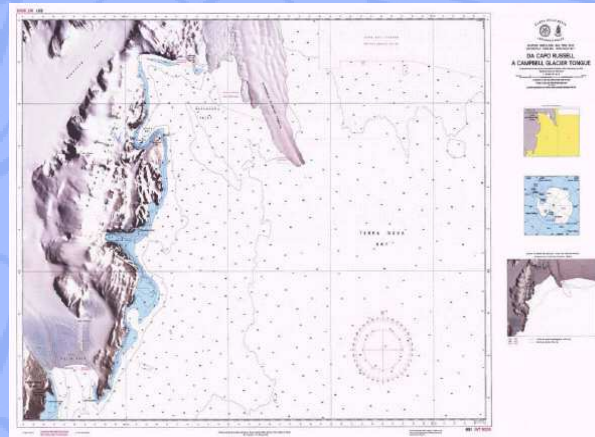




IIM Polar skills

The IIM can provide scientific and technical support to marine operations in:

- Hydrography
- Oceanography
- Cartography
- Aids to navigation and positioning systems
- IMO Polar Code application
- Environmental standards development, etc.

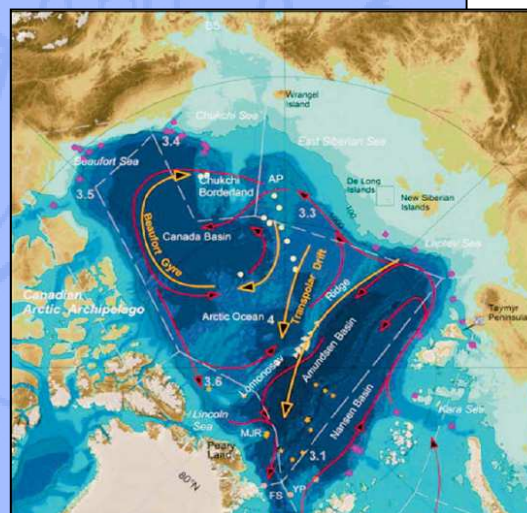
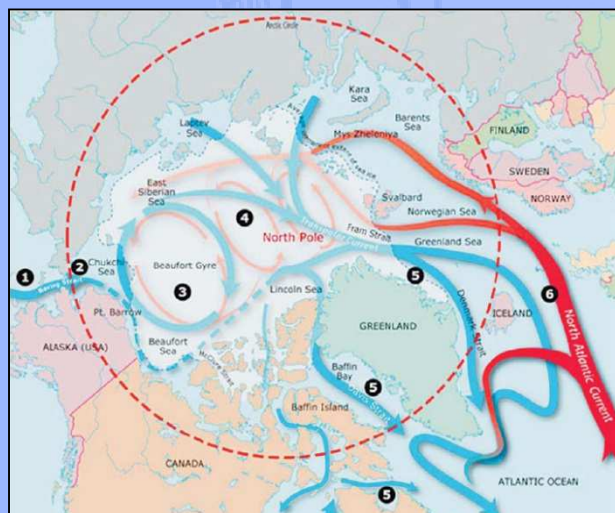




IIM Polar skills

The IIM studies the Arctic environment and the new Arctic routes:

«Dinamiche della copertura glaciale artica e rotte di navigazione»





IIM Participation in EPPR Working Group

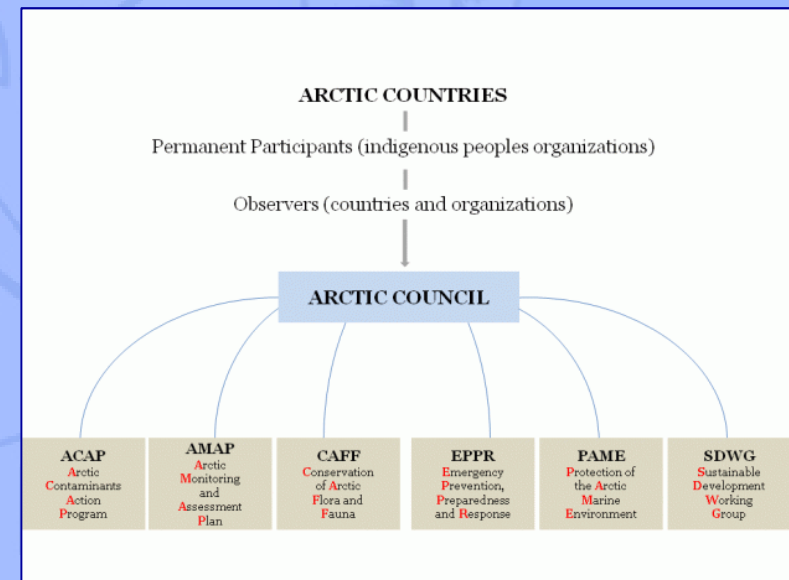
EPPR WG - Emergency, Prevention, Preparedness and Response Working Group

It is one of the institutional technical tables of the Arctic Council:

- EPPR WG concerns prevention of hydrocarbon marine pollution, emergency management, navigational aids and Search And Rescue (SAR) in the Arctic
- In 2016 the Italian Minister of Foreign Affairs and International Cooperation delegated the IIM to represent Italy in the EPPR WG



ARCTIC COUNCIL





Last EPPR WG Meeting Outputs Montreal, 14 – 15 June 2016

- Need for a joint test of the alarm procedures for emergency management in the Arctic
- Need for an *Arctic SAR Joint Manual* including SOLAS, Chicago Convention and IAMSAR (*International Aeronautical and Maritime Search And Rescue*) prescriptions
- Need to establish an Arctic Coast Guard forum
- Work in progress for a Database of Arctic response assets
- Workshop on standards on oil-spill prevention



ARCTIC COUNCIL





IIM Participation in EPPR Working Group

Main results

- TTX - Table Top Exercise and MOSPA - Marine Oil Pollution Preparedness and Response in the Arctic (3° phase)
- IOGP - International Association of Oil and Gas Producers EPPR Workshop:
“Standard development for hydrocarbons marine pollution prevention”
- Report to the Ministry of Foreign Affairs on possible national stakeholders involvement in EPPR matters



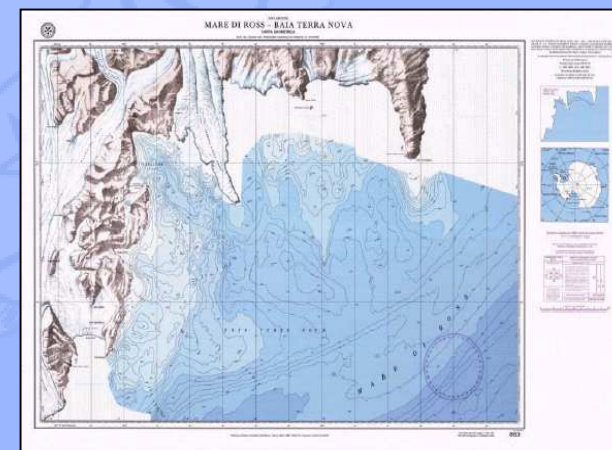
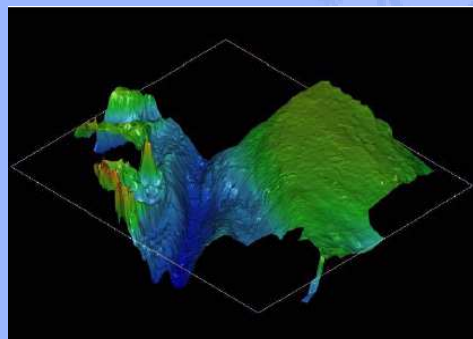
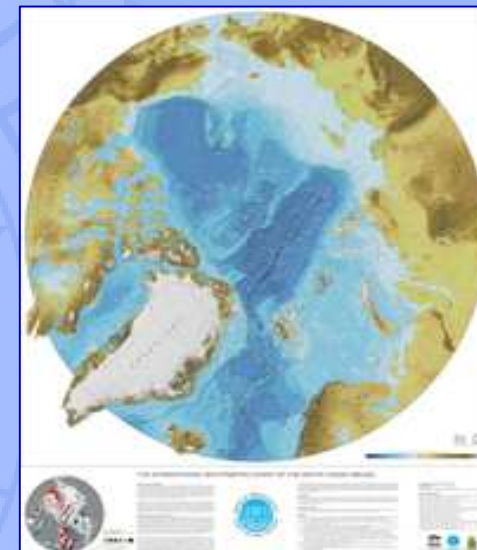
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IIM participation in specialized Arctic contexts

- GEBCO IBCAO – International Bathymetric Chart of the Arctic Ocean
- GEBCO SCUFN – Sub-Committee on Undersea Feature Names
- IHO-ARHC – Arctic Regional Hydrographic Commission
- Cooperation in Arctic scientific projects with major oceanographic research institutes

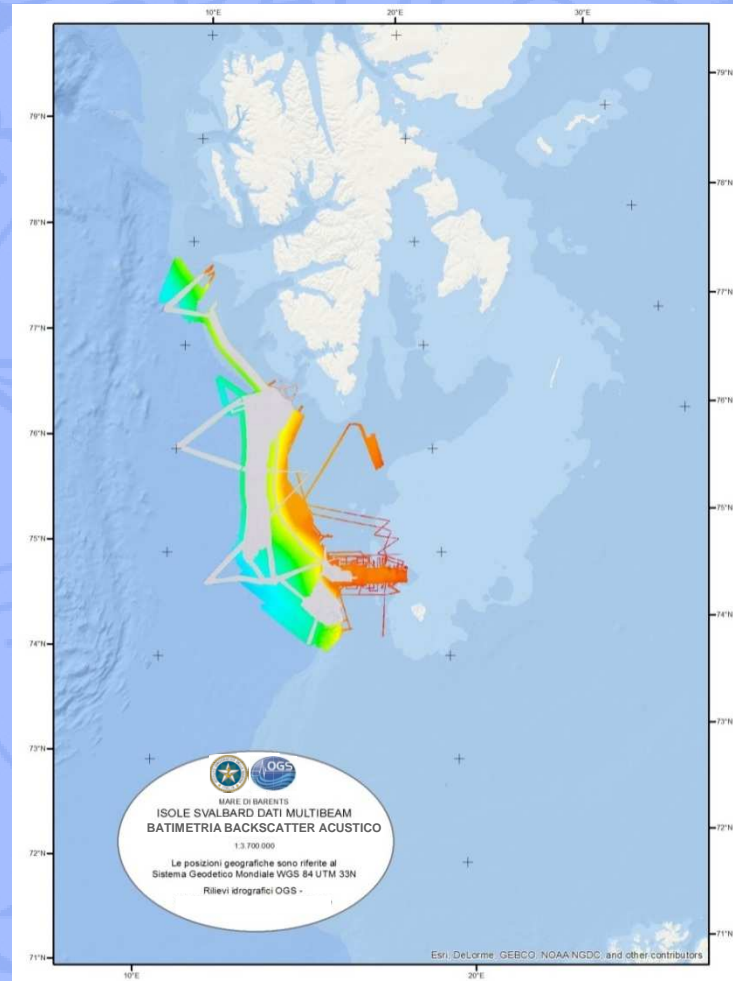




Arctic Mapping – IIM-OGS



Bathymetry and Acoustic backscatter

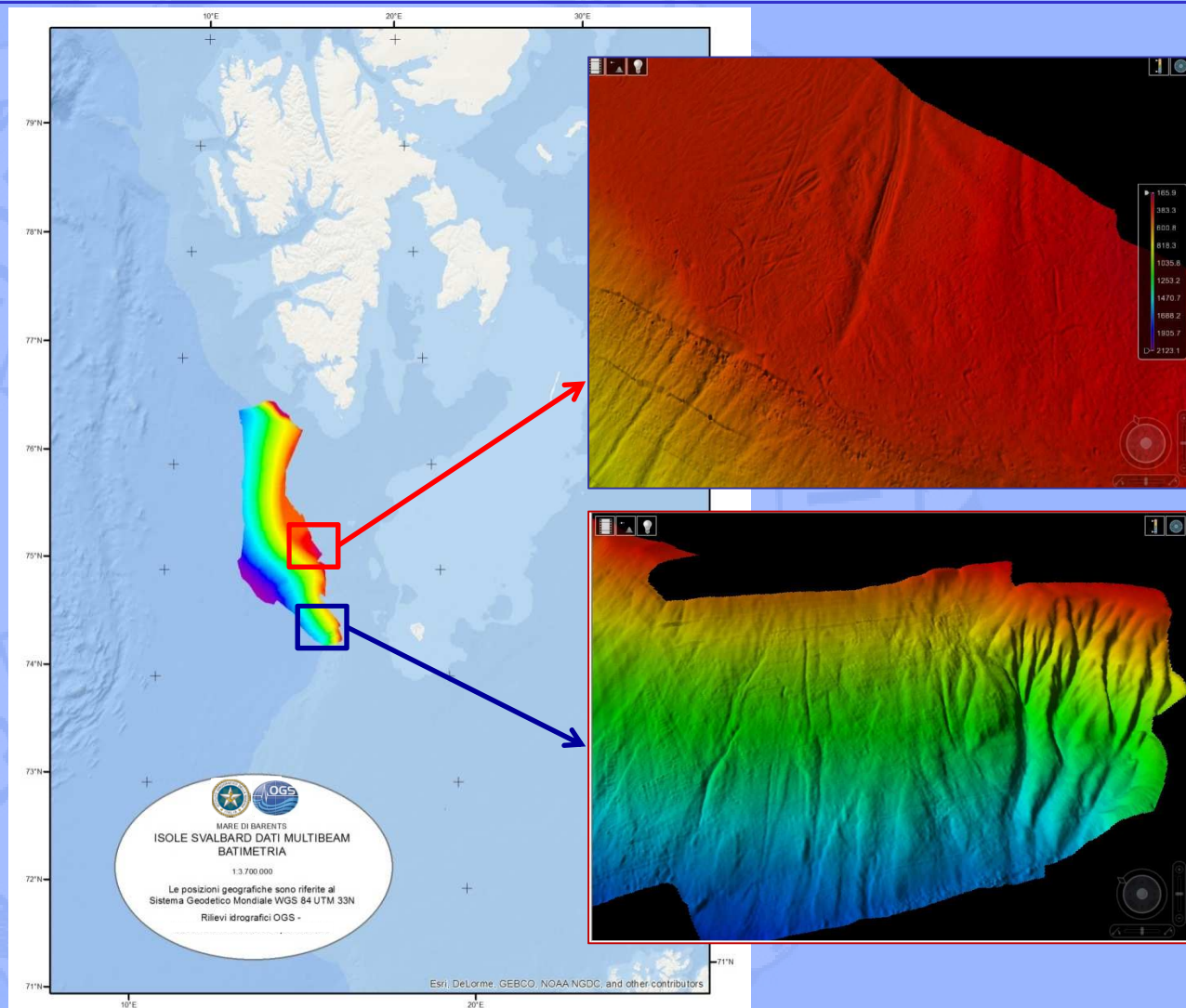


The IIM established a joint research project with OGS, in particular for polar areas. The Institutes share data and will produce new thematic maps over the areas.



Arctic Mapping

Bathymetry

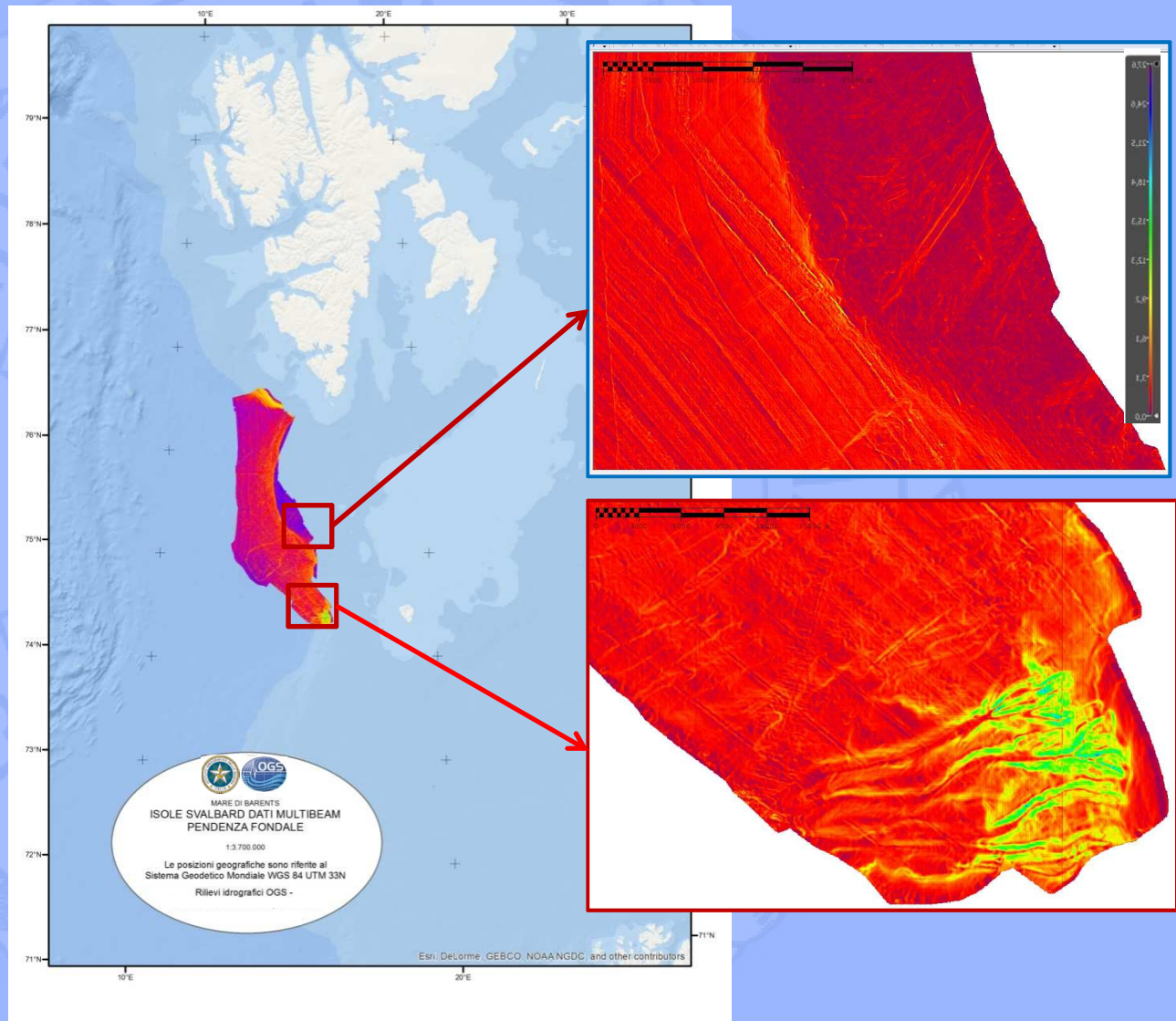




Arctic Mapping



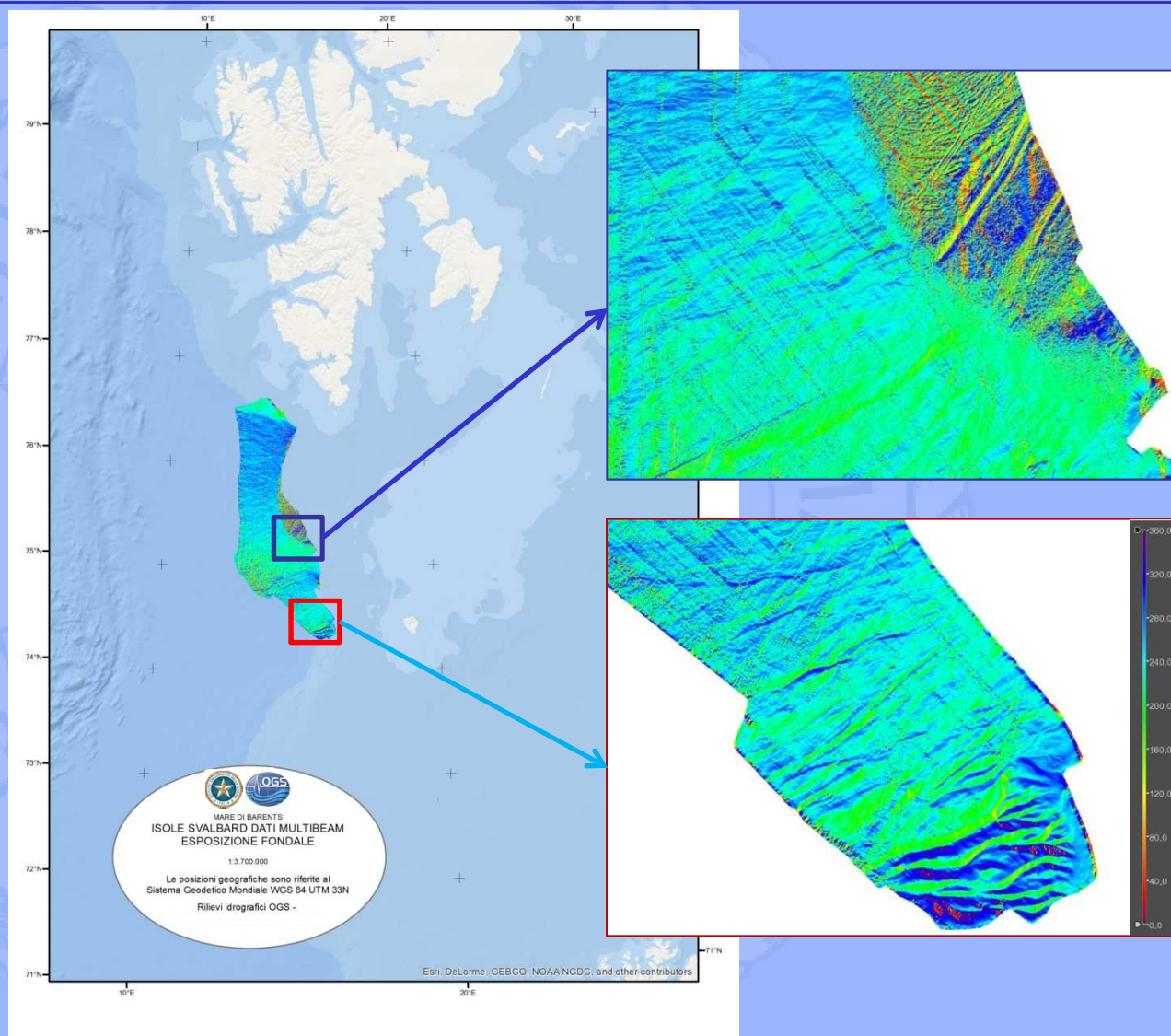
Slope





Arctic Mapping

Aspect





Conclusions

1. Operating in the Arctic since the 1920s
2. Supporting the Italian S.A.O.: EPPR, new arctic routes and safety of navigation
3. Expertise in polar navigation
4. Sharing of skills in the Hydro-Oceanographic and Geo-Marine fields
5. Marine surveying





Italian Navy - Hydrographic Institute



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