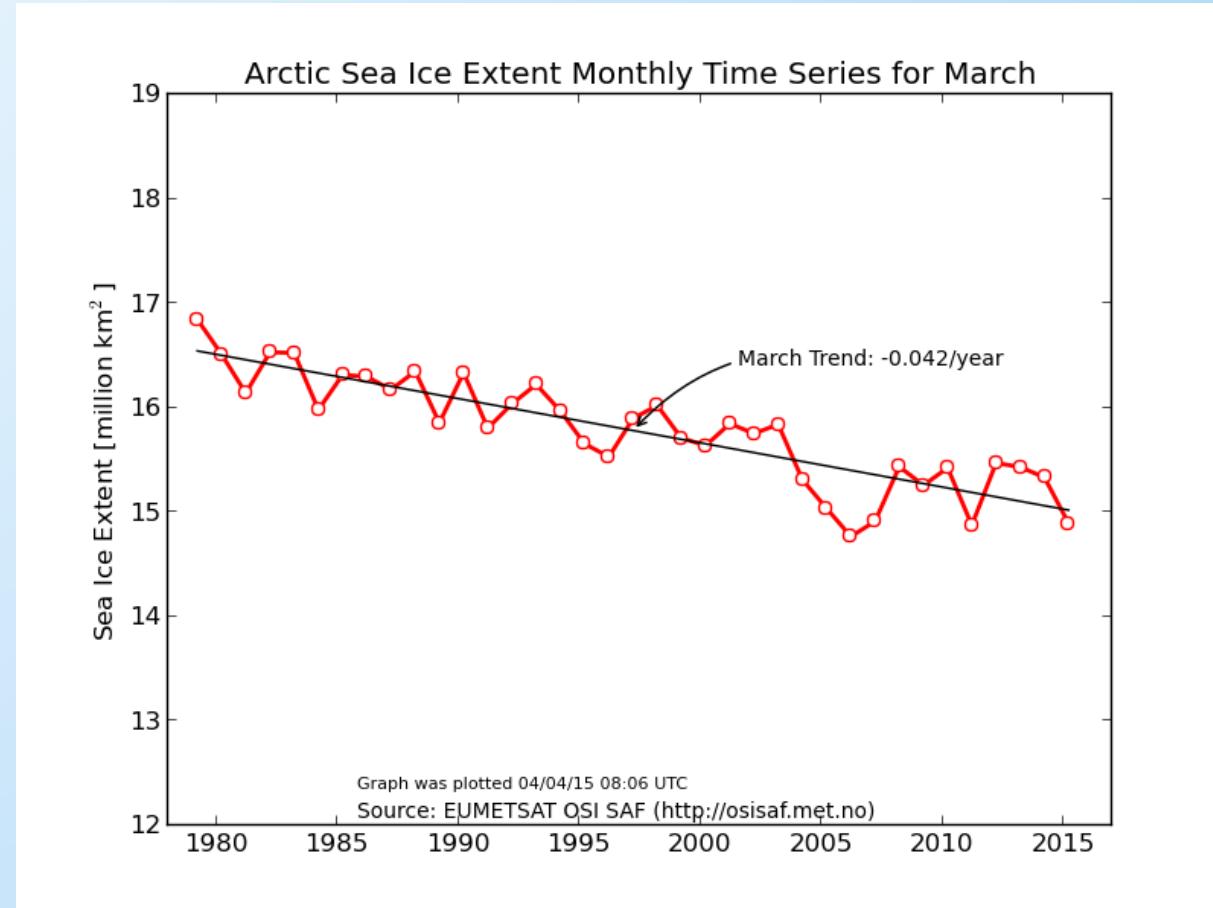


ARCTIC OPERATIONAL OCEANOGRAPHY

Erik Buch
EuroGOOS chair

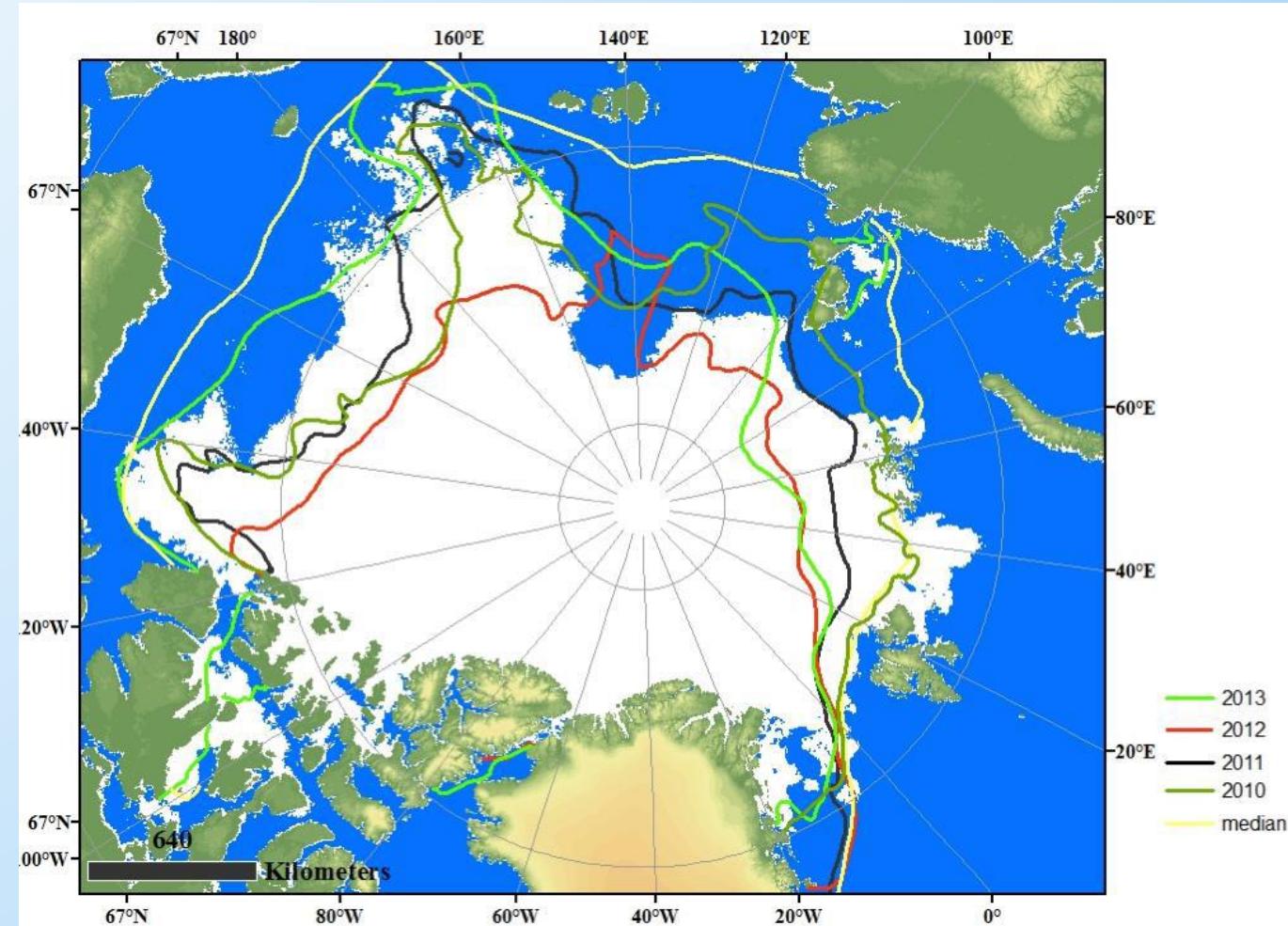


Arctic Sea Ice Extent





Arctic Sea Ice horizontal distribution





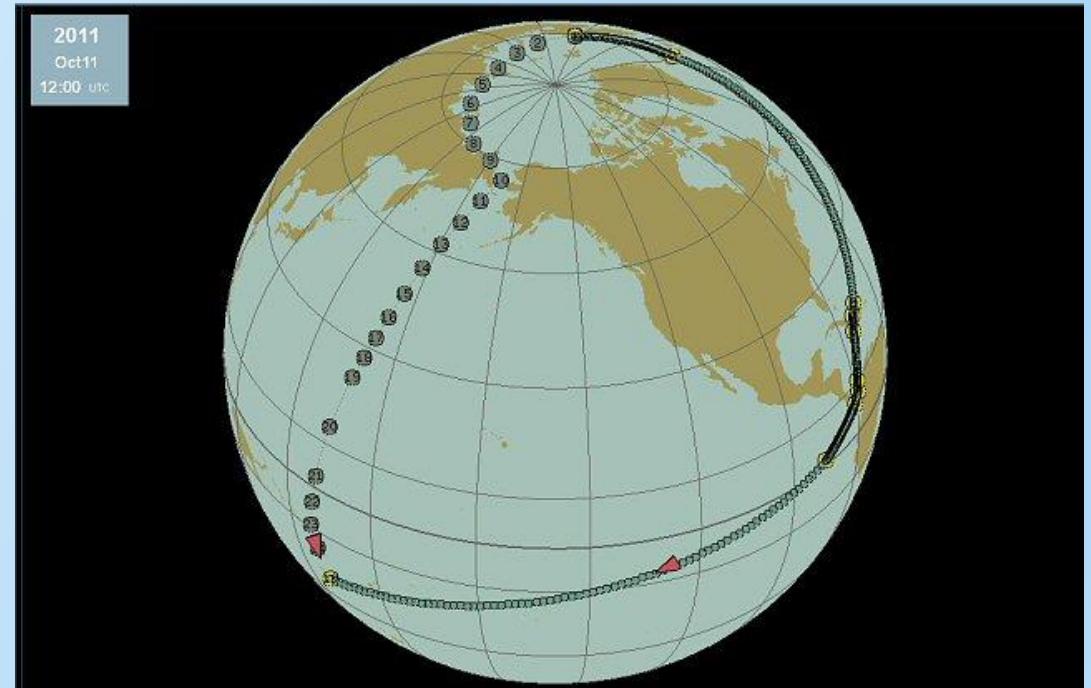
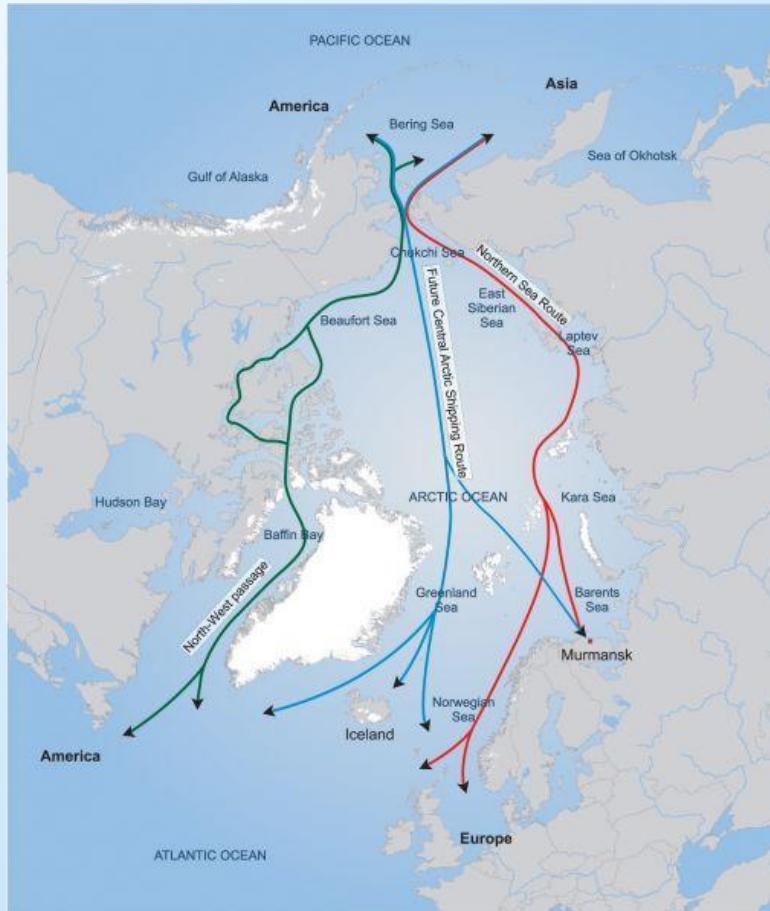
EuroGOOS
European Global Ocean
Observing System

Maritime activities



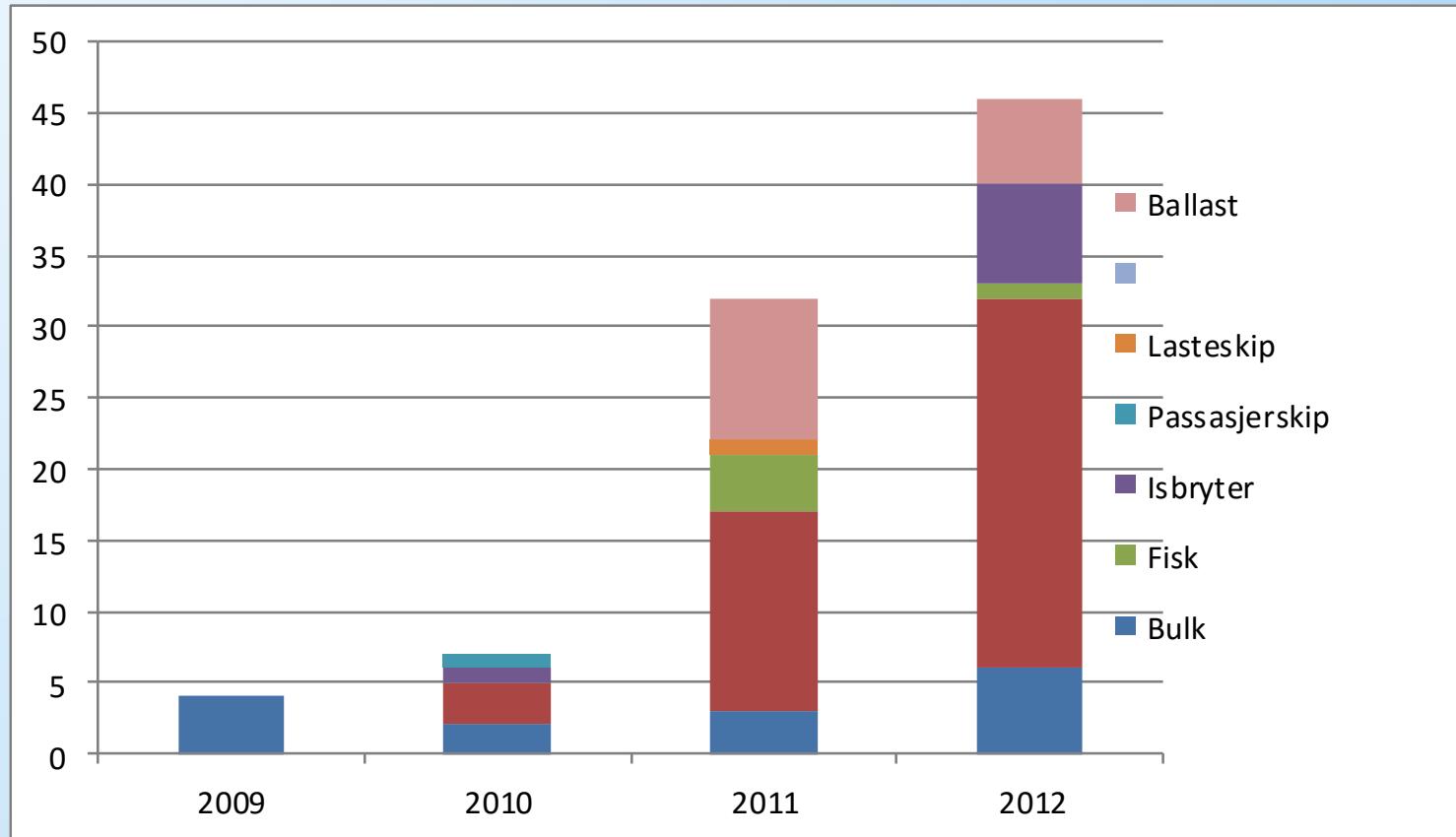


Northern Sea Routes



'Polarcus Alima' saved 2600 nm = 9 days

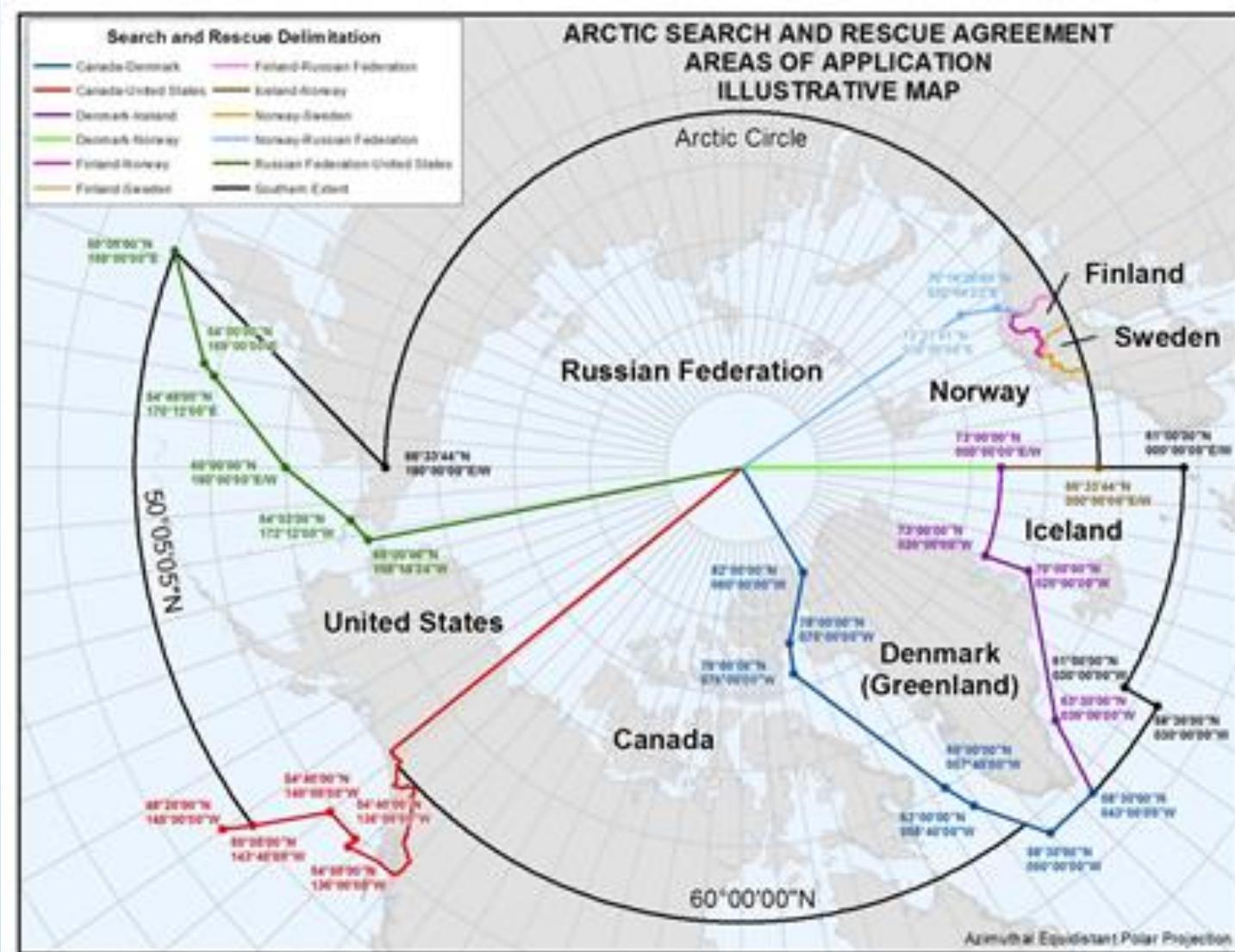
Number of ships in the Northern Sea Route



Sailings through NSR 2009-2012 (numbers and ship type/cargo)
source: www.arctis.com / 2012, Rosatomflot



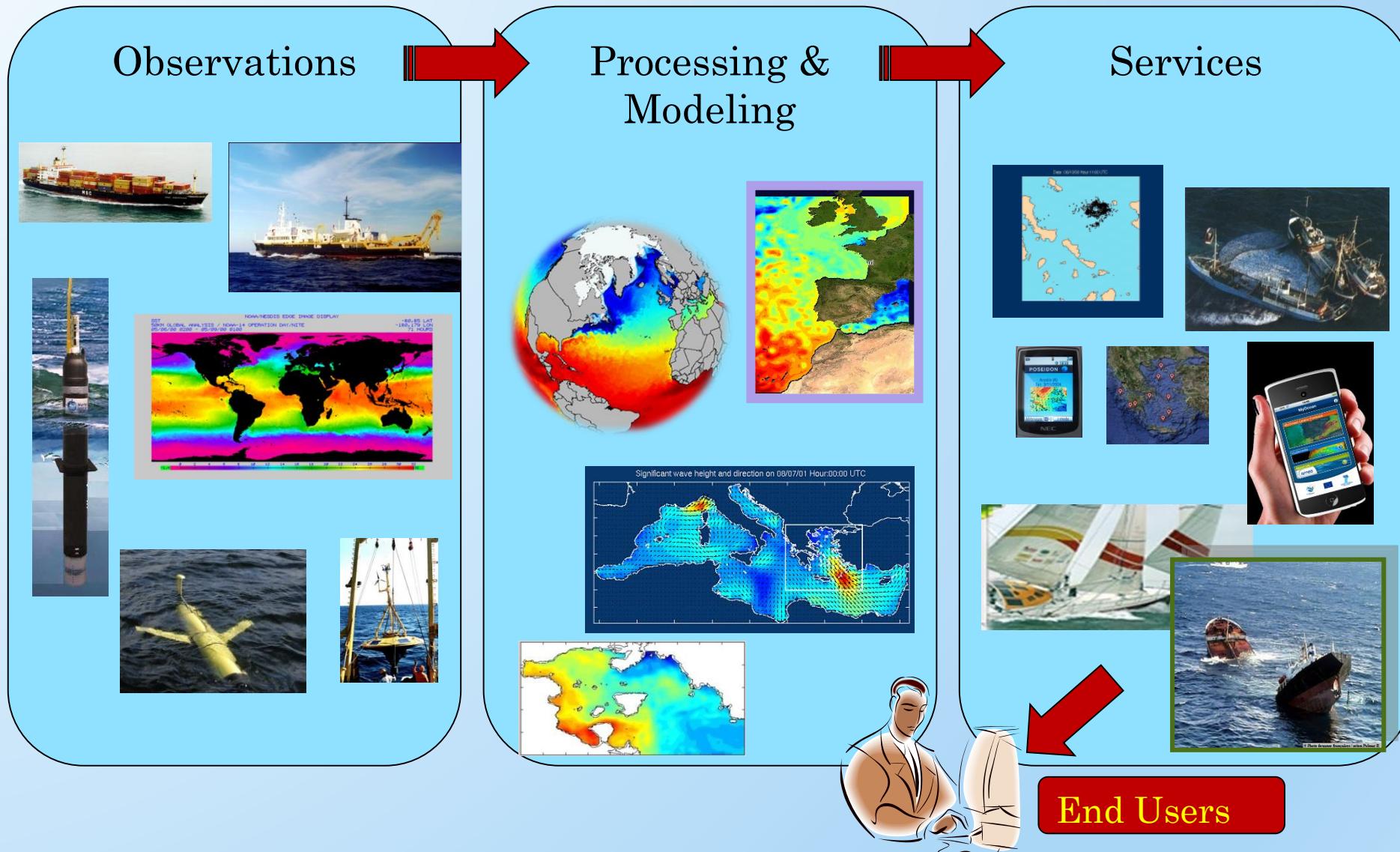
National areas of responsibilities for search and rescue in the Arctic.





EuroGOOS
European Global Ocean
Observing System

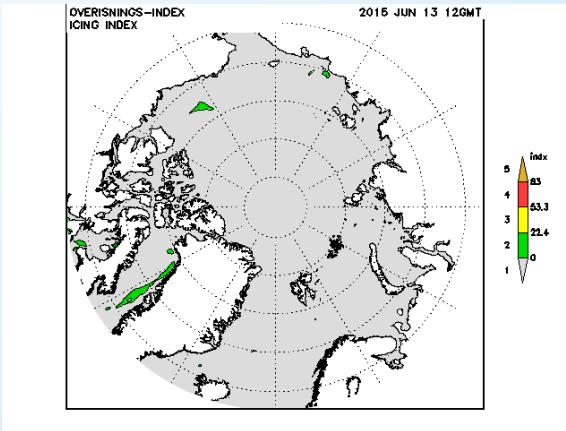
Operational Oceanography





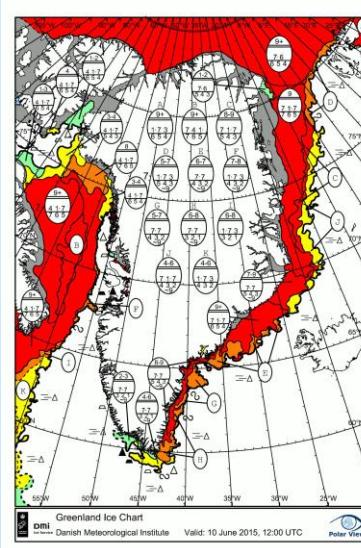
EuroGOOS
European Global Ocean
Observing System

Icing Index

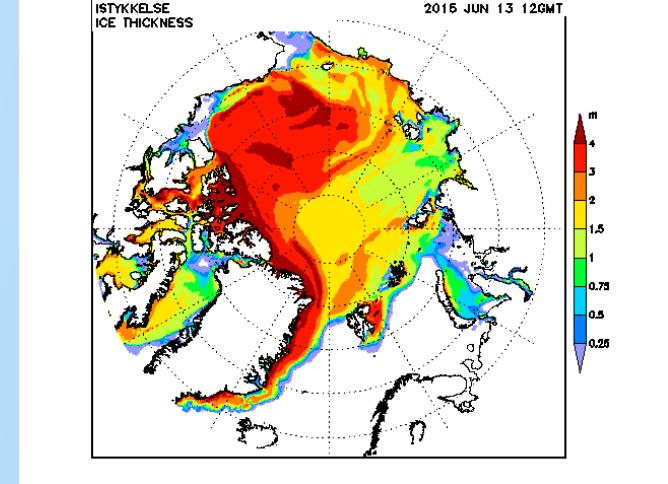


Operational end-user Services

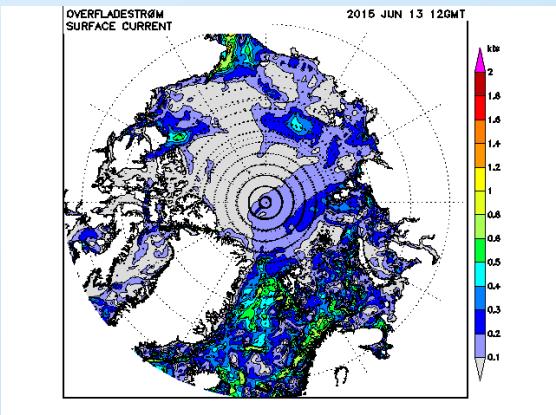
Sea-Ice service



Ice thickness



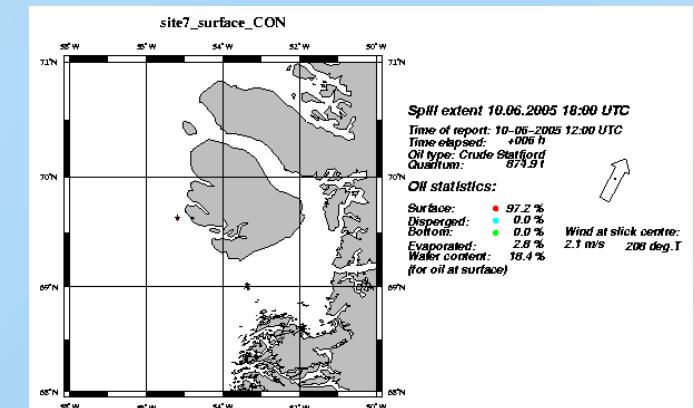
Surface currents



Search and Rescue



Oil spill Service

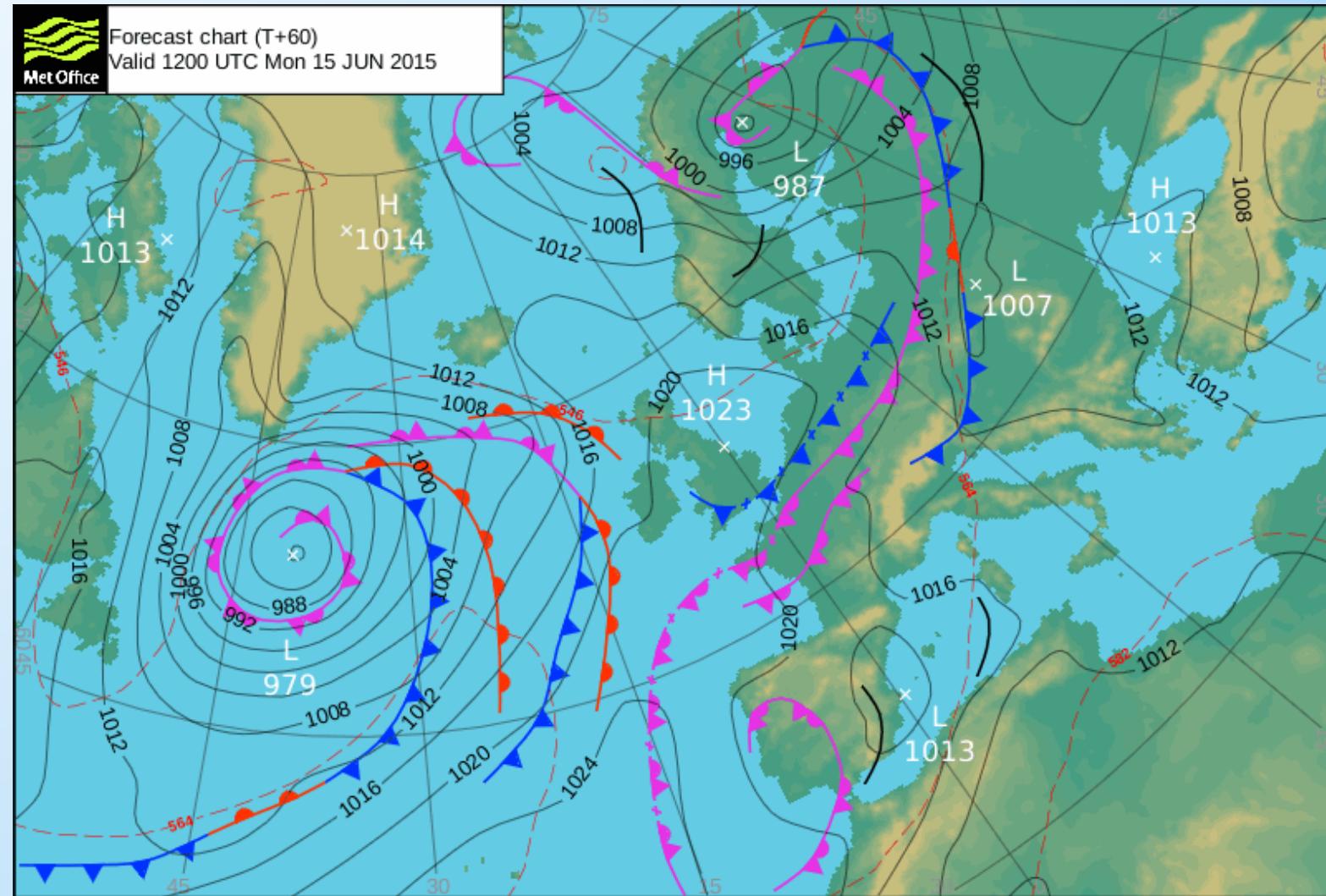




EuroGOOS

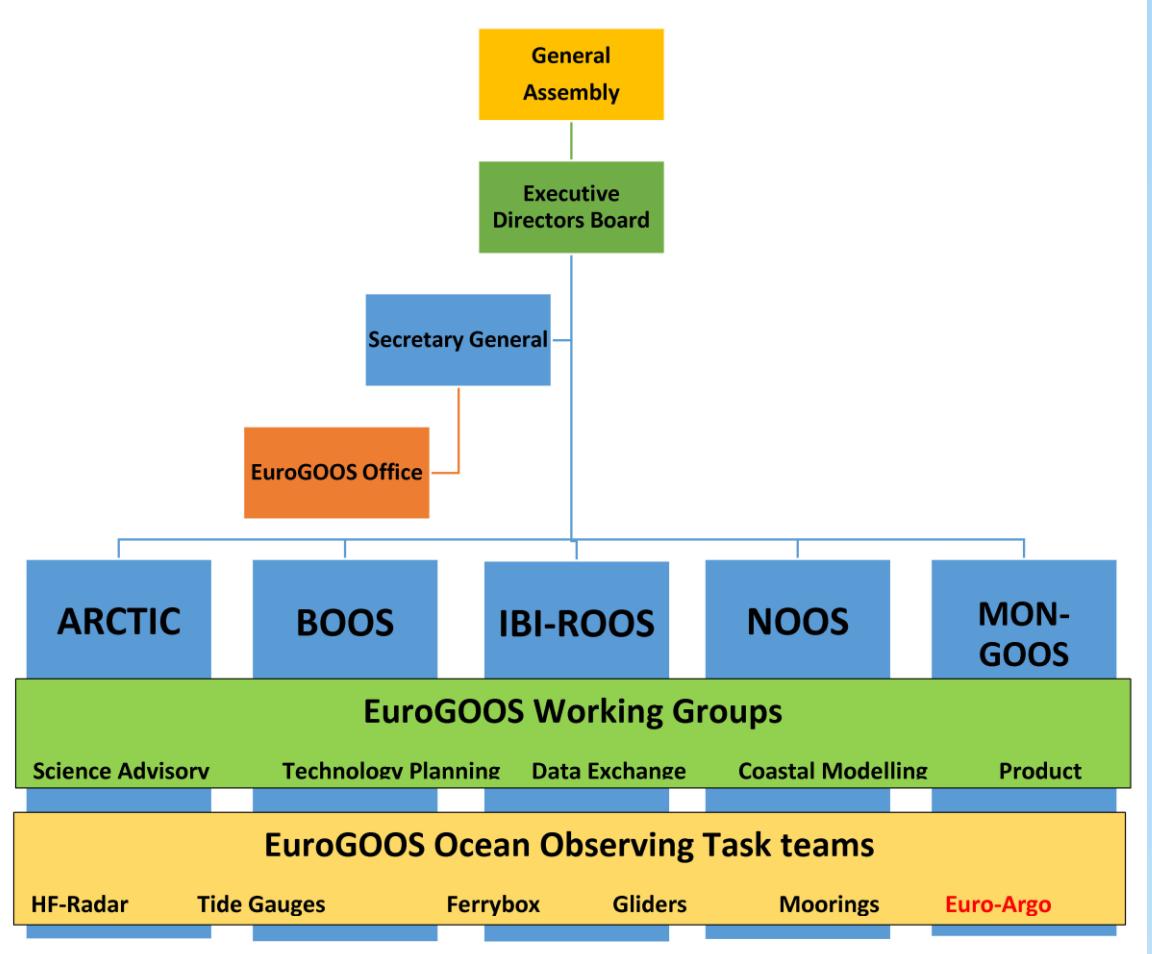
European Global Ocean
Observing System

International cooperation essential



European activities

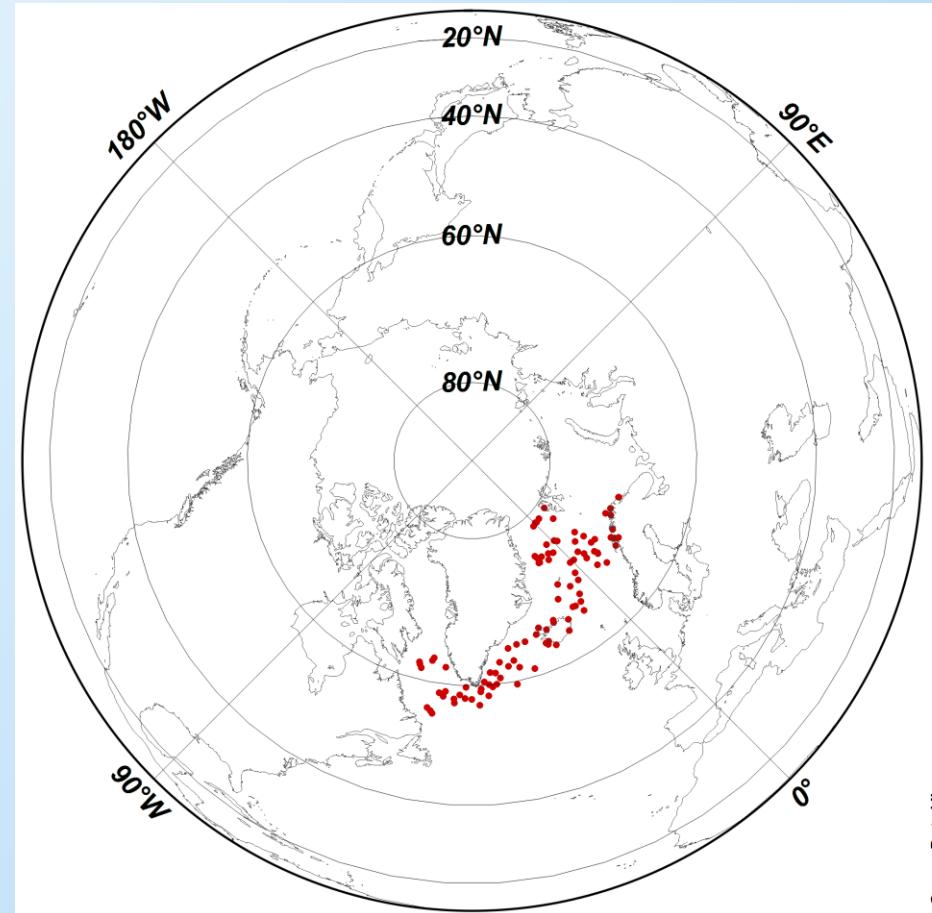
- EuroGOOS
- Copernicus Marine Service
- EMODnet – European Marine observations and Data Network





EuroGOOS
European Global Ocean
Observing System

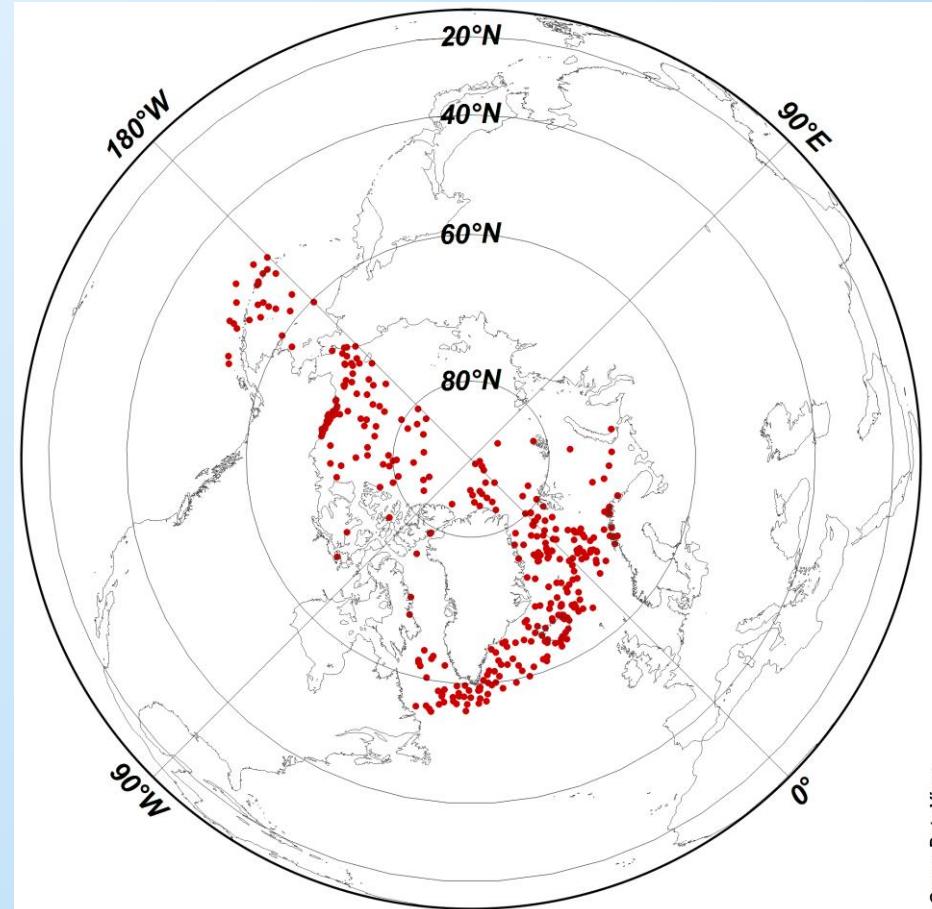
EMODNET European Data





EuroGOOS
European Global Ocean
Observing System

EMODNET – European and IOOS (US) data





Vision for the future

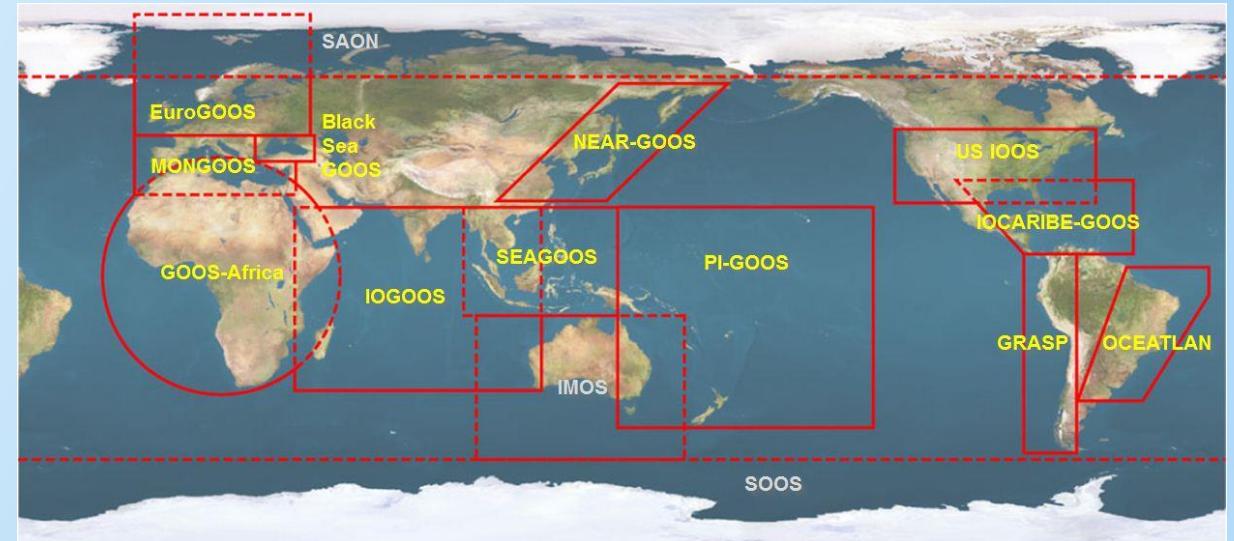
- Partnership = sharing responsibilities and costs
- Based on a common vision for an Arctic Ocean Observation system
- Synergy in working together





IOC to establish an Arctic GOOS

Proposal





EuroGOOS

European Global Ocean
Observing System

