Data systems in the Arctic
–
Results from INTAROS and plans for further development

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Outline

1. Main achievements
2. Expected impact
3. Plans for future development

Main achievements

- **Data value chain**

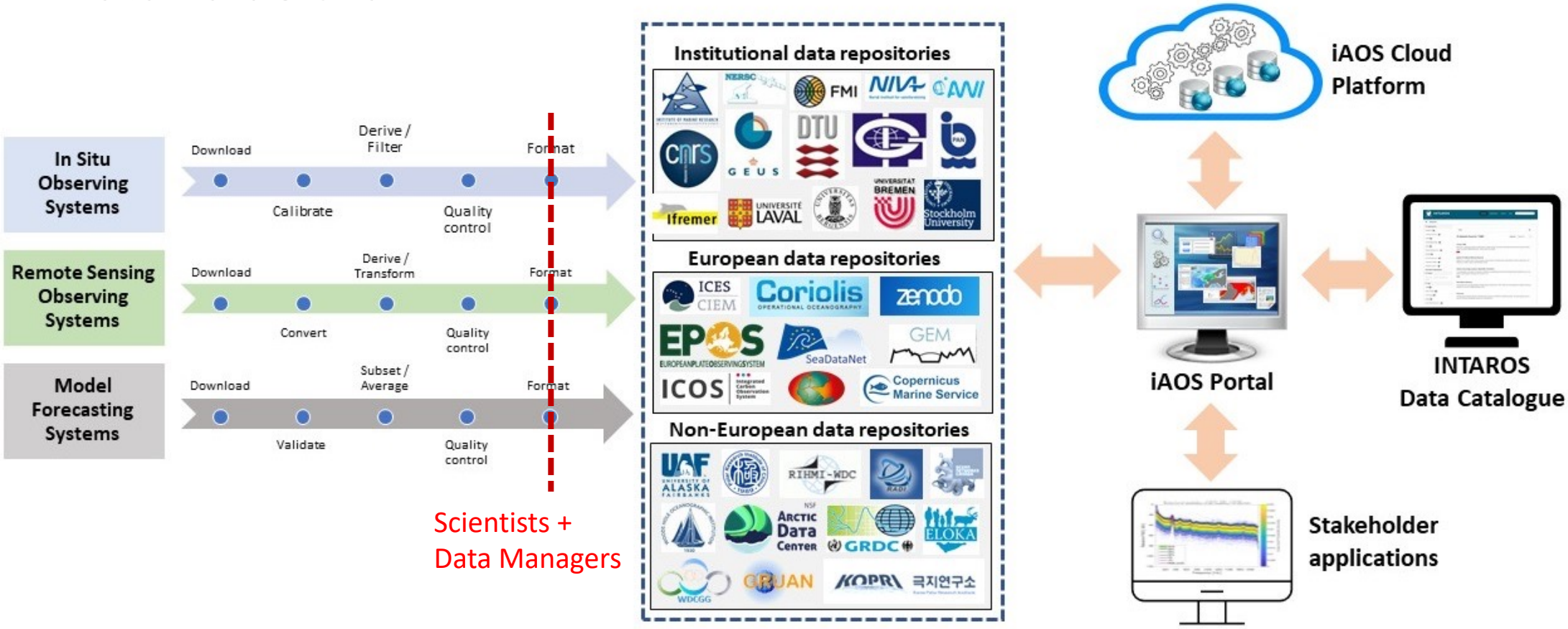
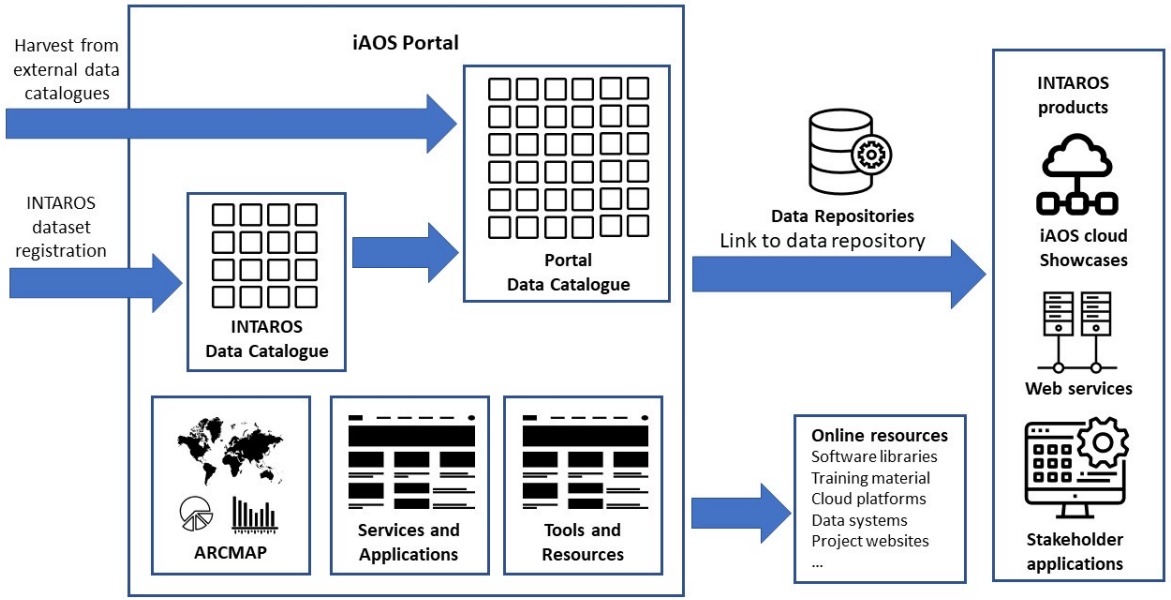


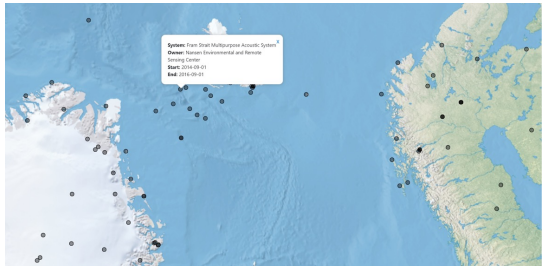
Figure 1. Data value chains for integrating INTAROS data into the various iAOS subsystems, overlaid the competences of SDMG in different parts of the data value chain (source: INTAROS Deliverable D5.12).

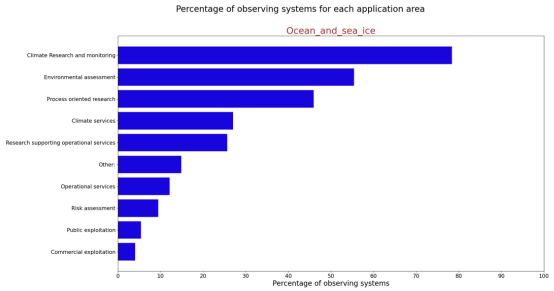
Main achievements

- **Data catalog and portal platform**



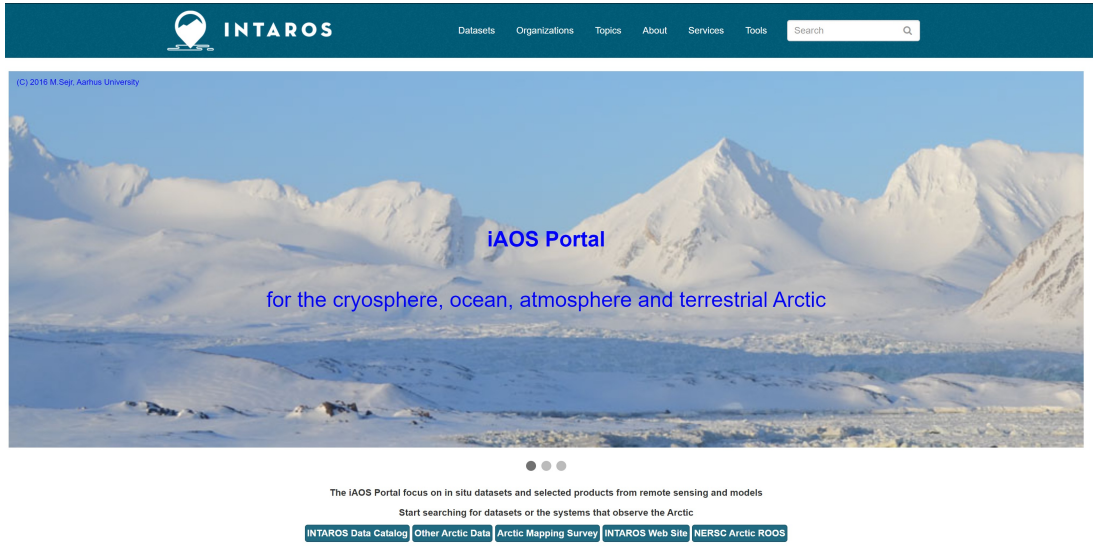
Major components of the iAOS Portal and their interconnections.

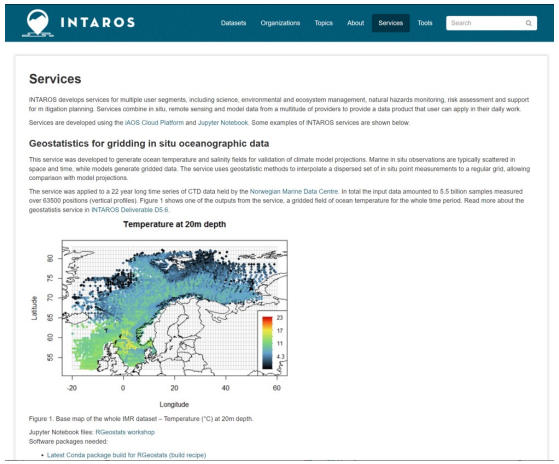


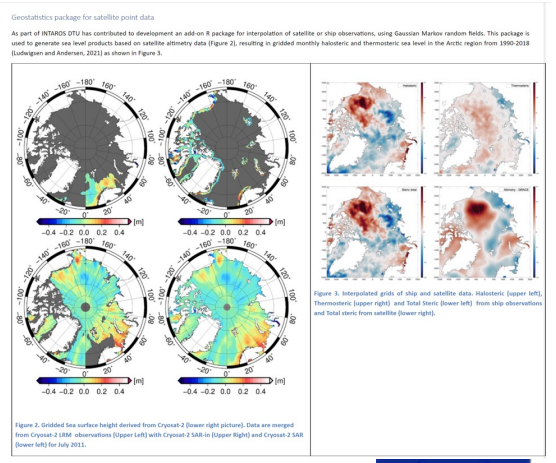


ARCMAP

https://intaros-portal.nersc.no/





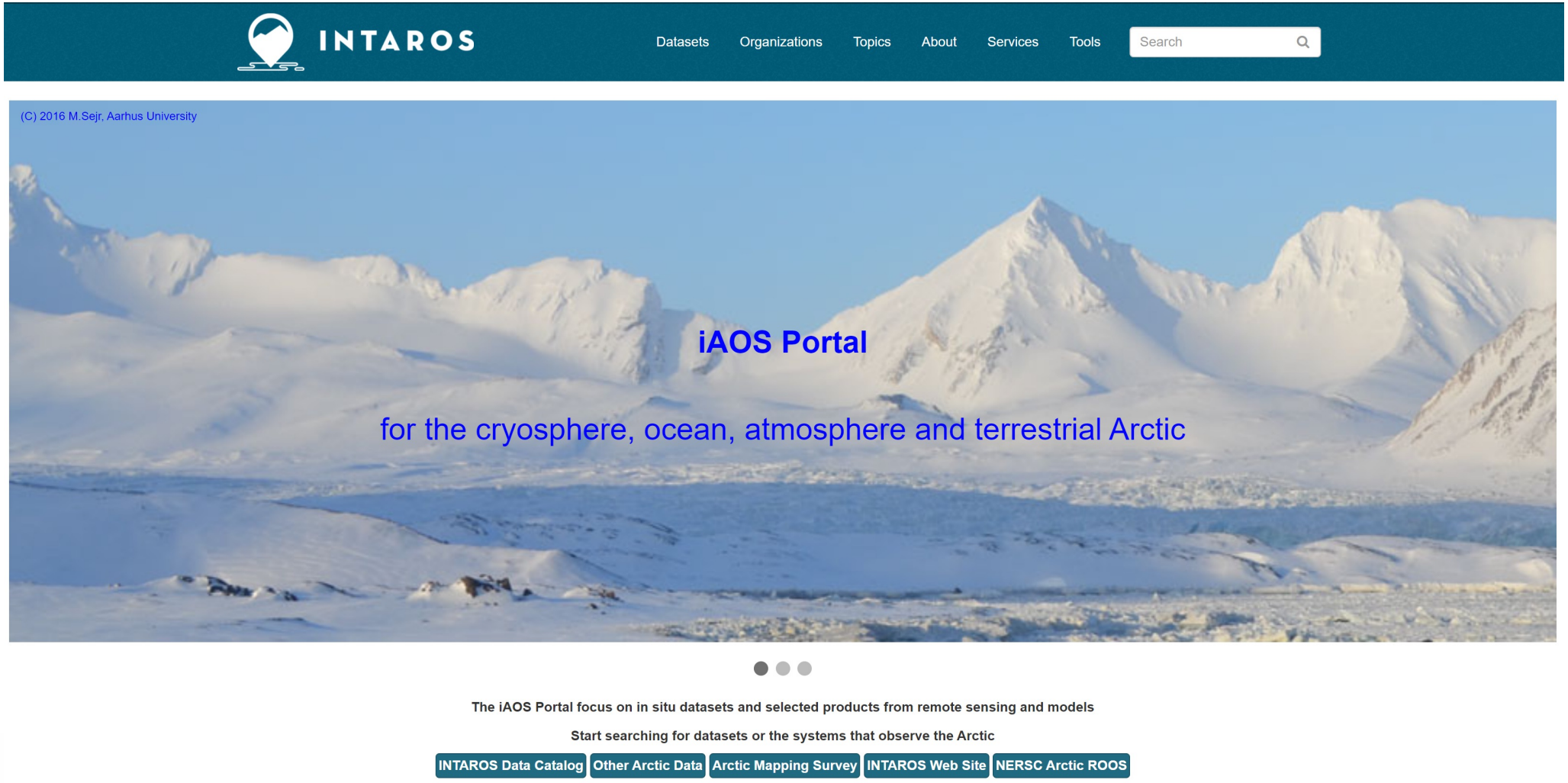


Promotion of services and tools

Main achievements

- **Data catalog and portal platform**

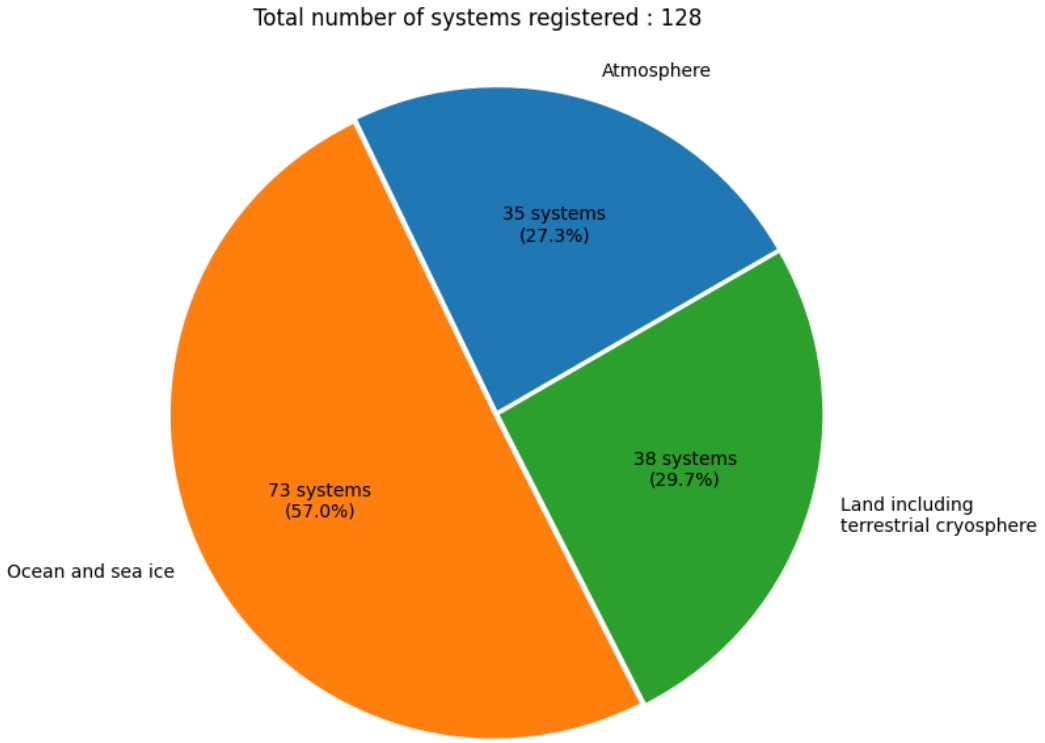
https://intaros-portal.nersc.no/



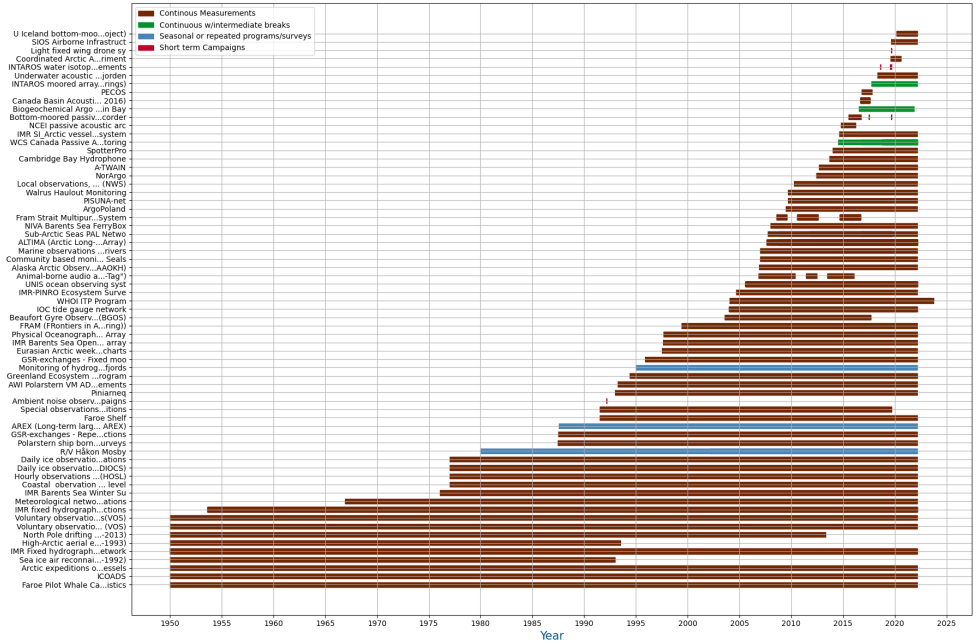
INTAROS

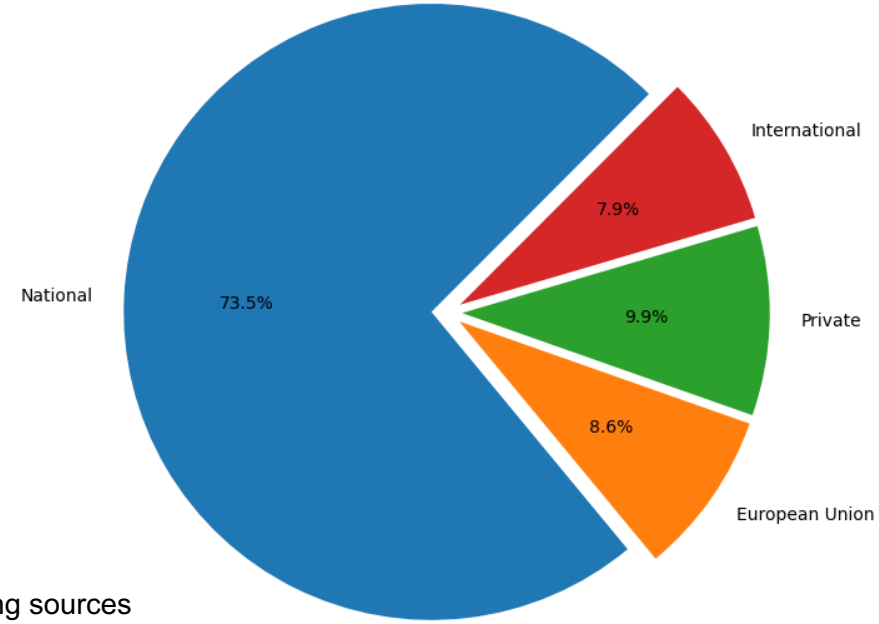
Main achievements

- Number of observing systems is steadily increasing
  - 2018: 49
  - 2020: 105
  - 2022: 128
- Thanks to all respondents!
- And to the ARCMAP support team!
- Daily plots at https://ci.nersc.no/client/plots.html
- Maintained by NERSC



Observing regularity

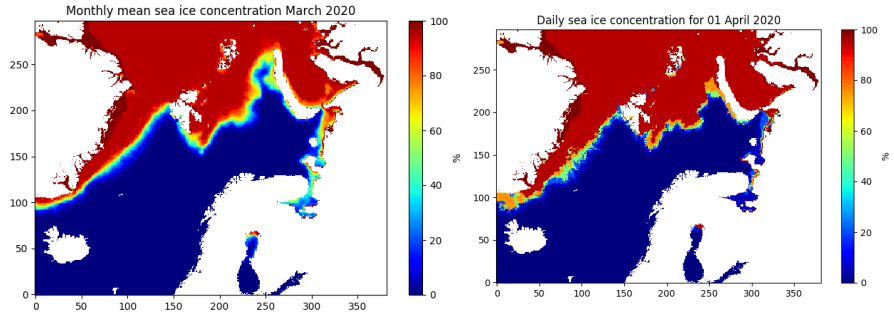


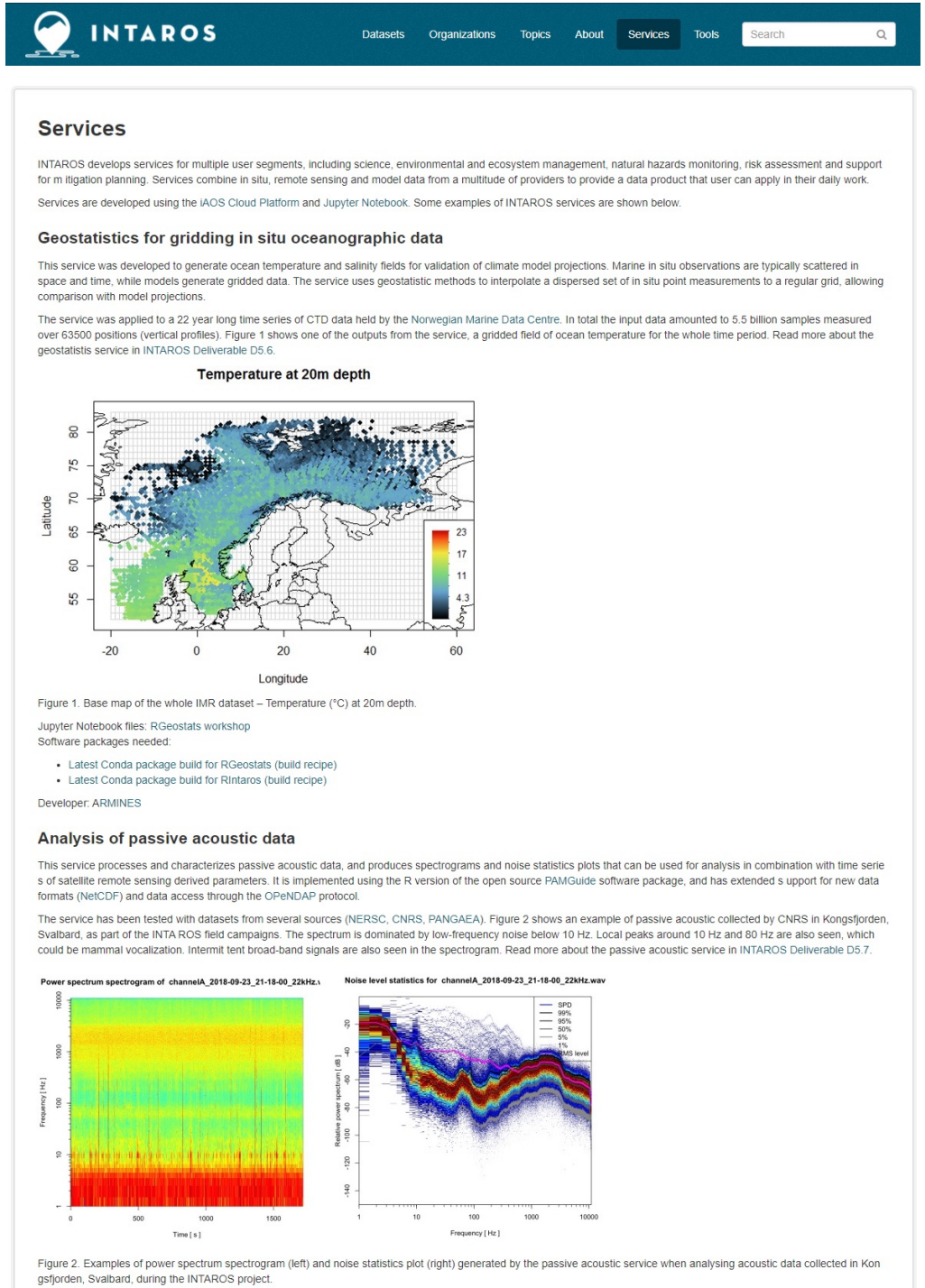


Funding sources

Main achievements

- **Data catalog and portal platform**
  - Promotion spaces for
    - Showcases/Applications
    - Cloud services
    - WPS services
    - Geostatistics libraries
  - Open for new entries
  - Marketplace for future iAOS developments
  - Maintained by NERSC

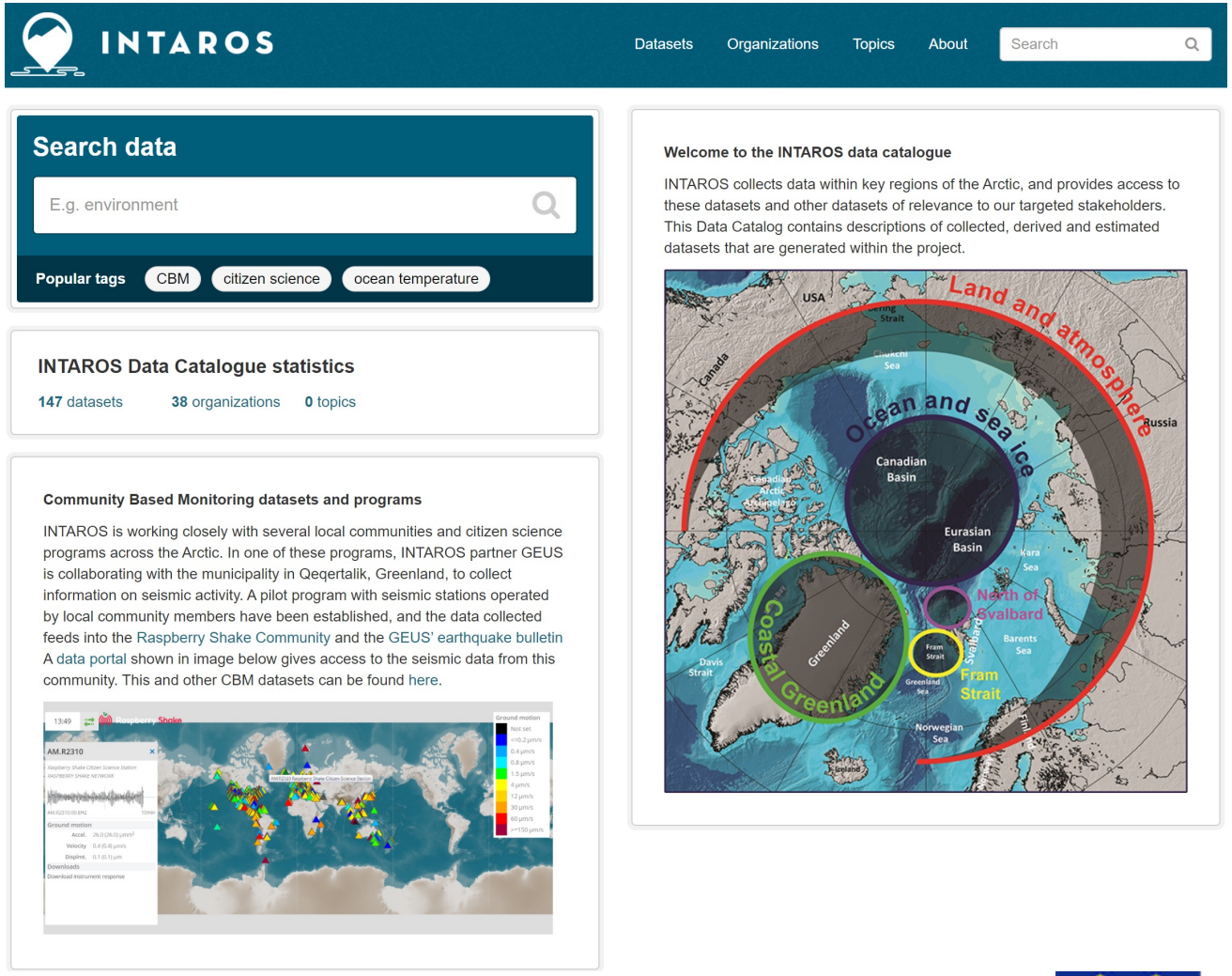




Main achievements

- **Data catalog and portal platform**
  - Window to INTAROS datasets
  - Currently: 147 datasets
    - WP2: 60
    - WP3: 27
    - WP4: 15
    - WP5: 12
    - WP6: 10
    - Russian partners: 23

    From 38 organisations
  - Same platform as iAOS portal
  - Share metadata schema
  - Multi-faceted search
  - Maintained by NERSC



https://catalog-intaros.nersc.no/

Expected impact

- iAOS portal and INTAROS data catalogue offers a way to promote datasets, services, applications and other resources
  - Open, accessible through a common web browser
  - Standard API for metadata harvesting

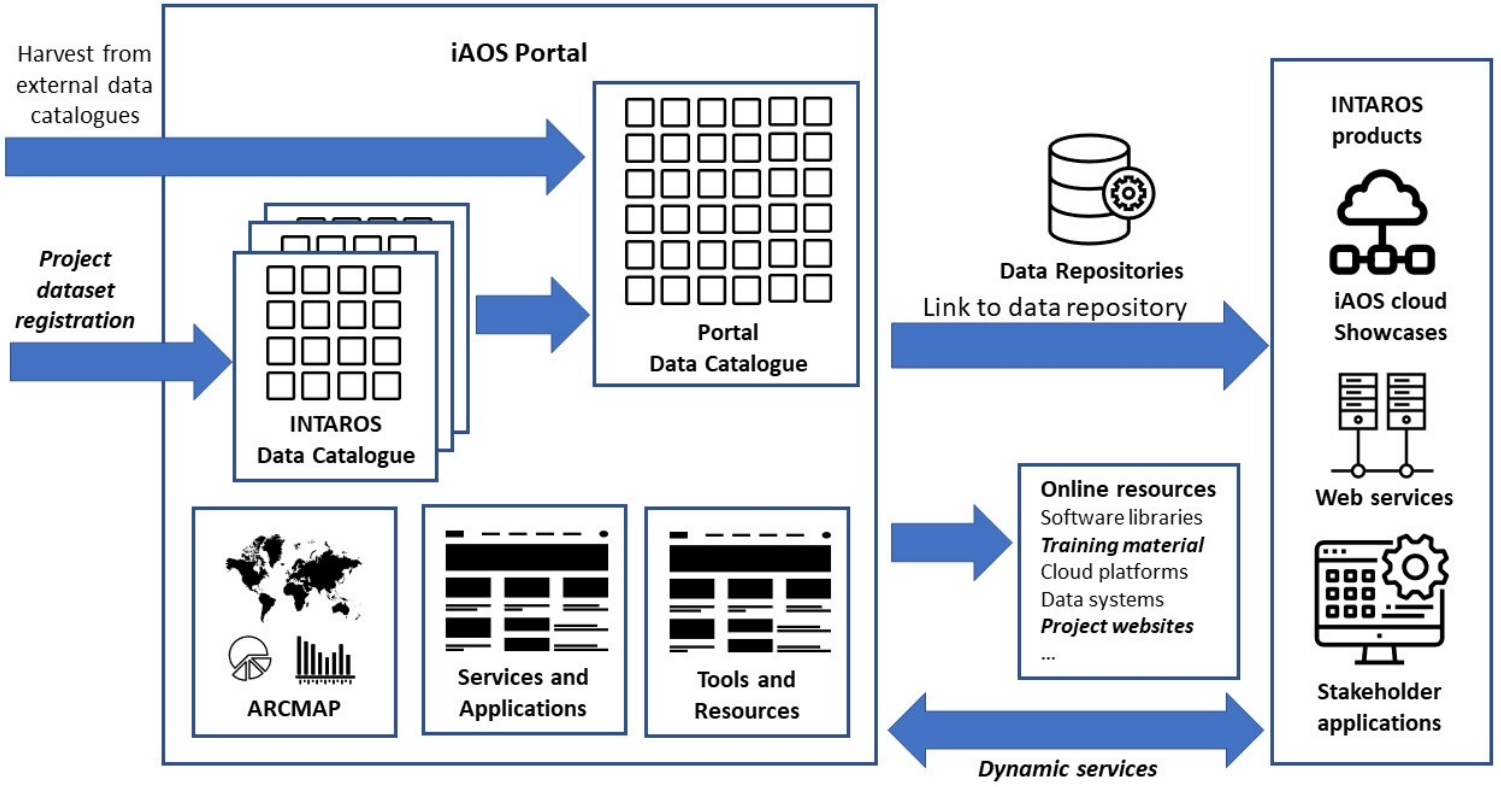
- Portal and data catalog platform will sustain the iAOS portal and INTAROS Data Catalog
  - Open-source framework with large user community
  - Modular architecture allows for extension
  - Many plugins ready for use (e.g. metadata harvesting)
  - New plugins can draw upon well documented APIs and support from user community

- ARCMAP provides a unique system for assessing Arctic in situ observing capacity
  - Supports open APIs for data sharing (according to FAIR, licensed)
  - Adaptable for other areas

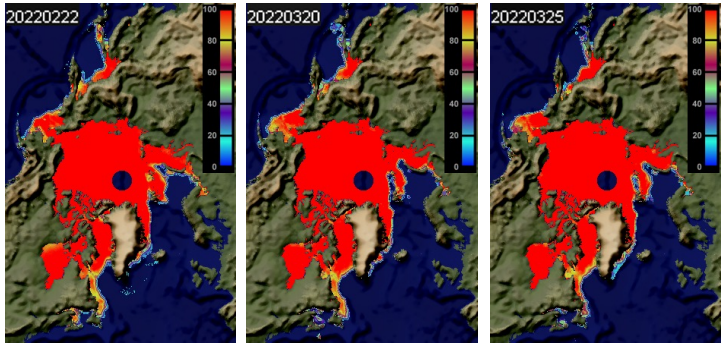
INTAROS

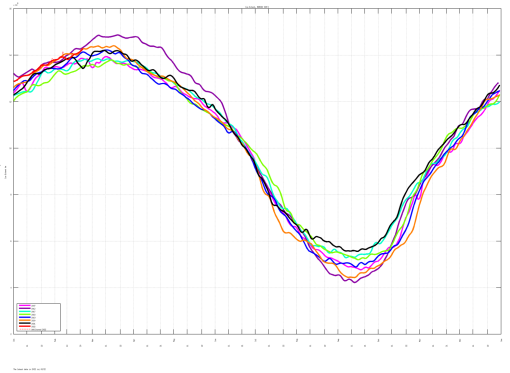
Plans for future development

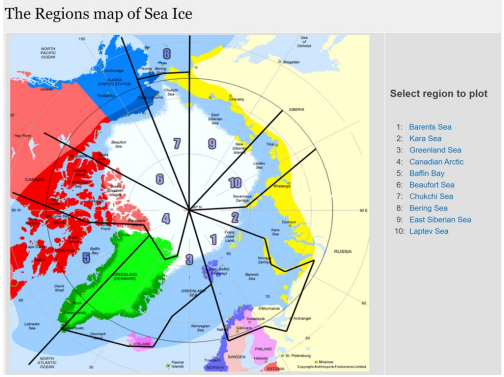
- Extending the iAOS portal
  - Open up for new projects and initiatives
  - Make more datasets visible
  - Support capacity building
  - Promote new services, applications, tools and other resources
  - Offer dynamic services



NERSC Arctic Sea Ice Observing System – contribution to Arctic ROOS







INTAROS

Plans for future development

- Extending the iAOS portal
  - Promote new services, applications tools and other resources

The iAOS Portal focus on in situ datasets and selected products from remote sensing and models

Start searching for datasets or the systems that observe the Arctic

INTAROS Data Catalog | iAOS Portal Catalog | ARCMAP Survey | NMDC

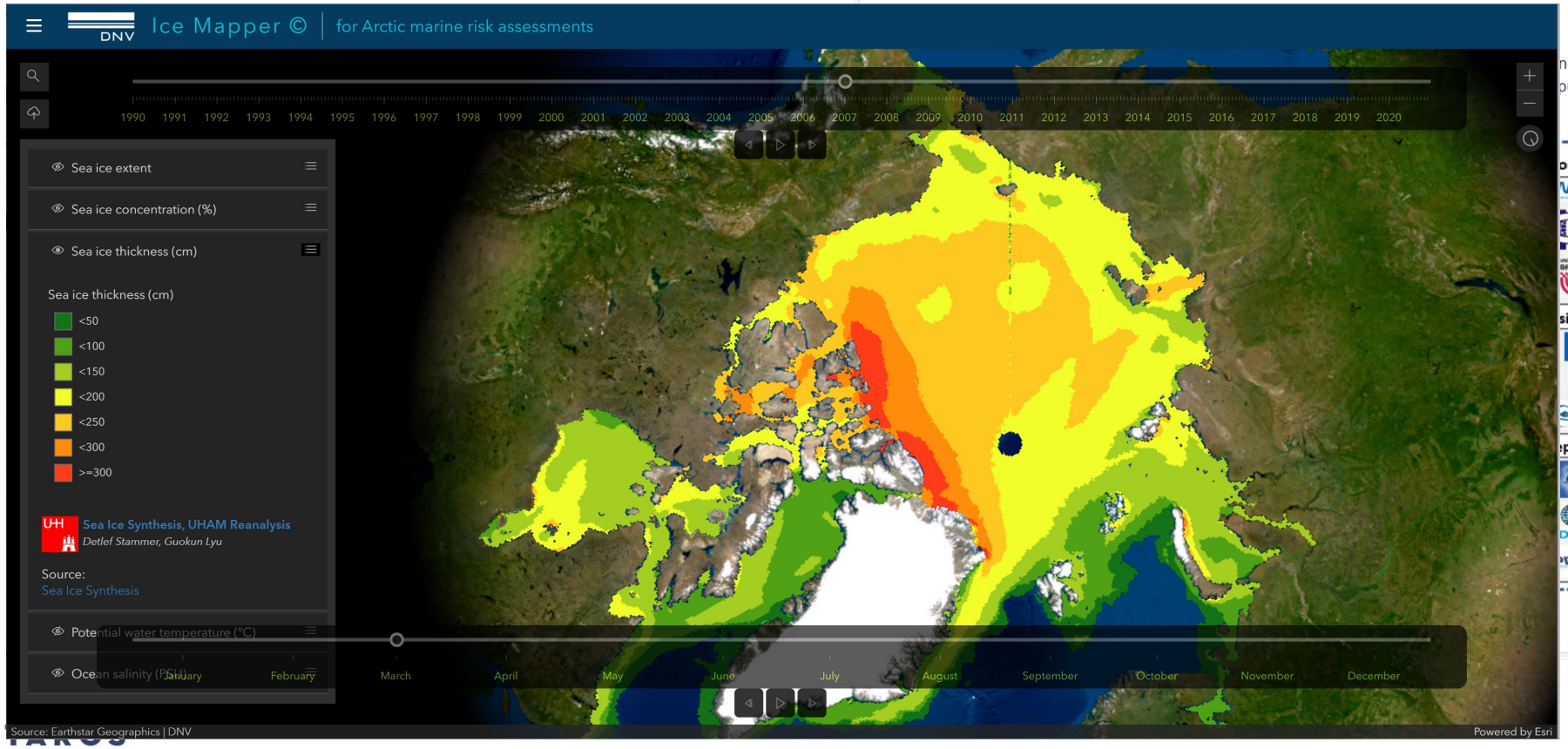
Test selected services and applications

NERSC WPS | DNV IceMapper | NERSC IceObs

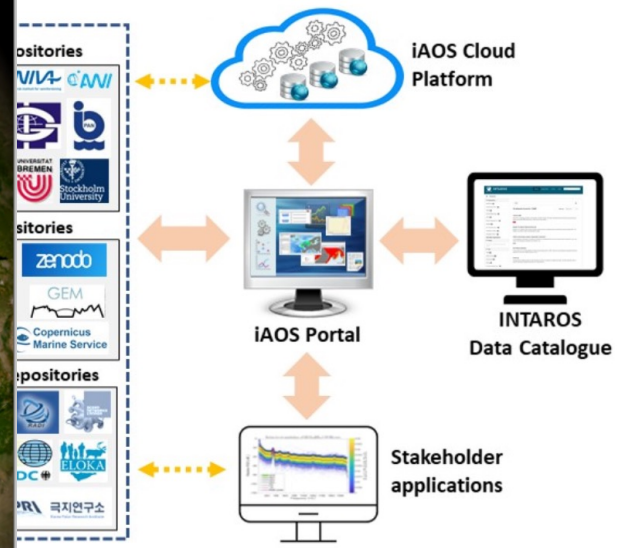
Projects and initiatives linked to iAOS

INTAROS | CAATEX | CAPARDUS | DAS | FloatYourBoat | UAK

DNV IceMapper



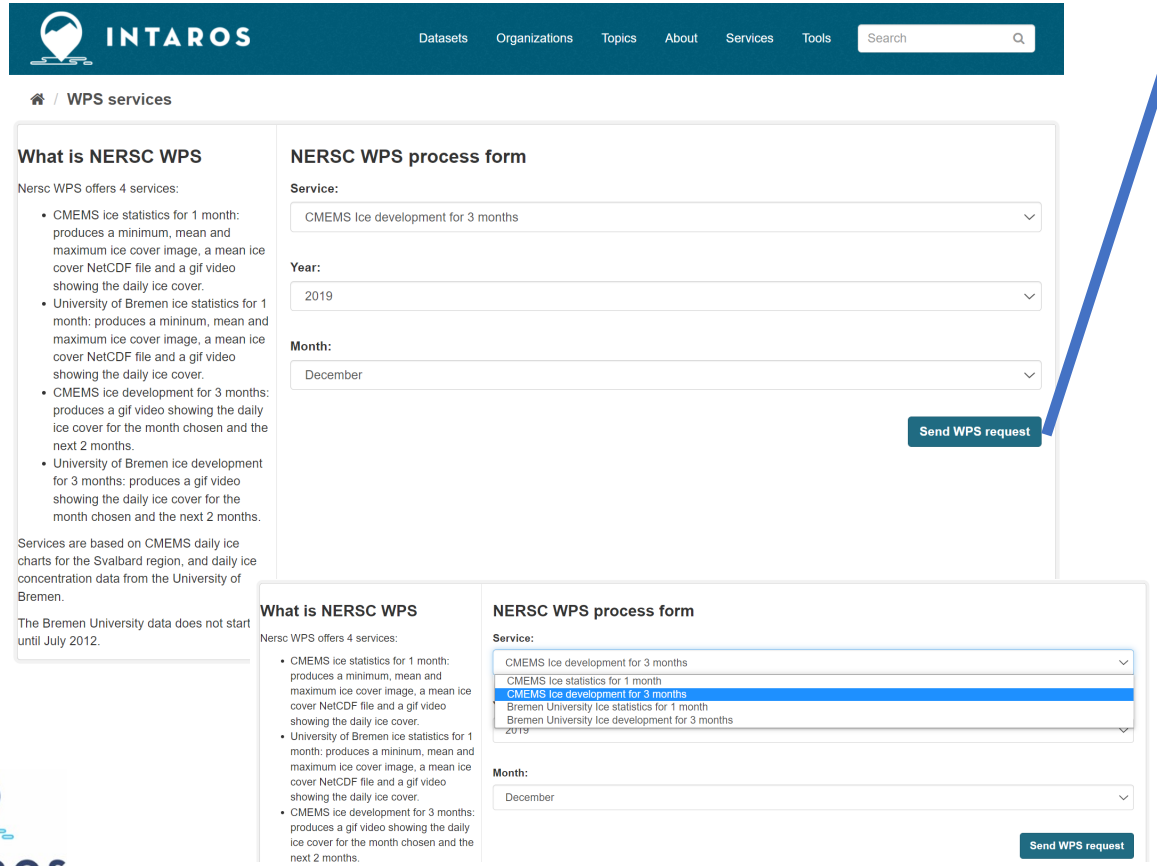
nd other datasets of relevance to our targeted stakeholders. We build services
ublic and private sector.

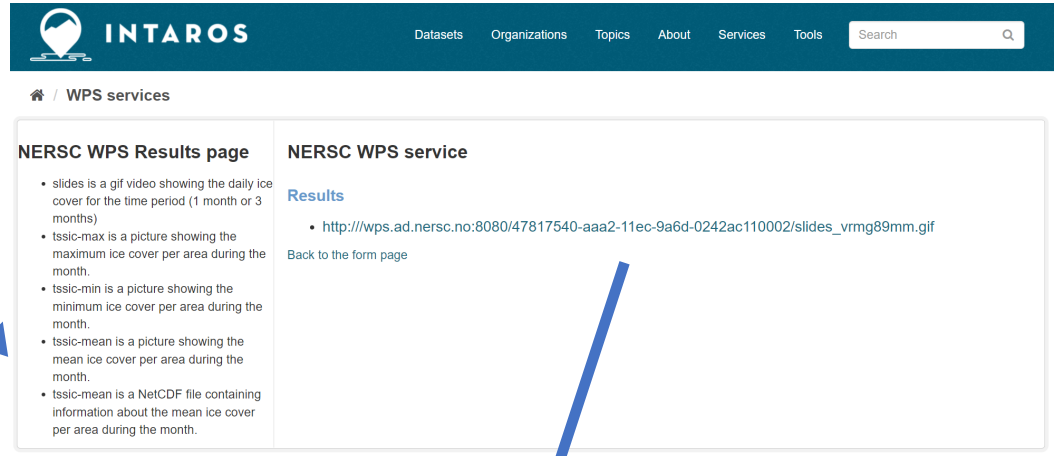


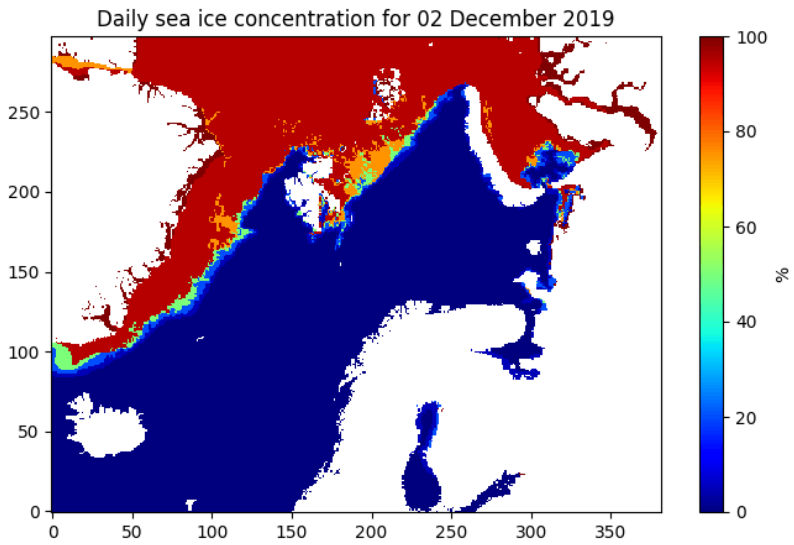
Plans for future development

- Extending the iAOS portal
  - Offer dynamic services

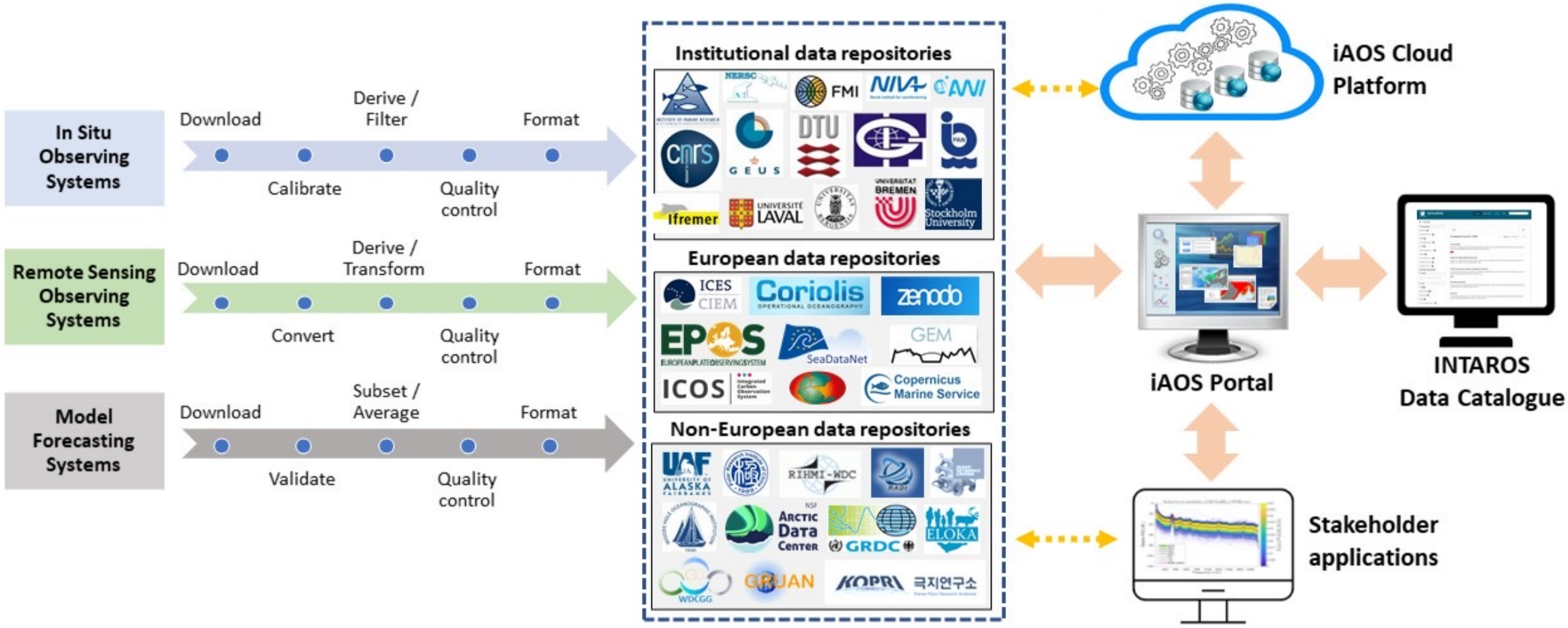
NERSC WPS







Thank you!



INTAROS