27-29 May 2024

International conference on Marine Data and Information Systems

SeaDataNet AISBL · Havforskningsinstituttet · Ifremer · MARIS · MEDIN · National Oceanography Centre · INGV · iMagine · ICDE · eosc Blue-Cloud2026

H2020 Eurofleets+ Data Management: an integrated data stewardship approach across multidisciplinary Transnational Access cruises

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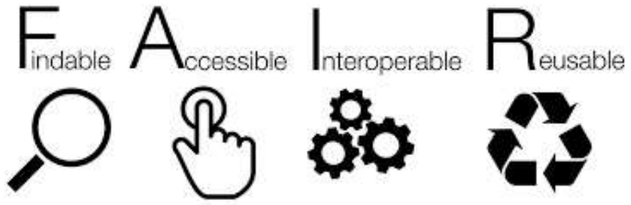
THE EUROFLEETS+ PROJECT

- Eurofleets+ is an INFRAIA H2020 project started in 2019 and ended in Oct 2023 (57 months)
- It facilitated open free of charge access to a unique fleet of state-of-the-art Research Vessels from European and international partners which has been arranged by competitive Transnational Access (TA) calls.
- The EF+ project funded 28 cruises which took place between 2021 and 2023

THE EF+ DATA MANAGEMENT STRATEGY

- A Data Policy has been defined and applies the FAIR and Open research data principles of the H2020 framework.
- A dedicated Work Package Task has been set up with the objective of optimizing the management of scientific data generated during the funded cruises
- EF+ deployed an integrated and uniform DM approach over the 28 funded research projects.
- It has been implemented in synergy with SeaDataNet, a leading pan-European infrastructure for marine data management, involving 3 NODCs as core partners.
- The cruises DM has been centralized and coordinated by the Responsible Data Centers in close collaboration with the PIs.



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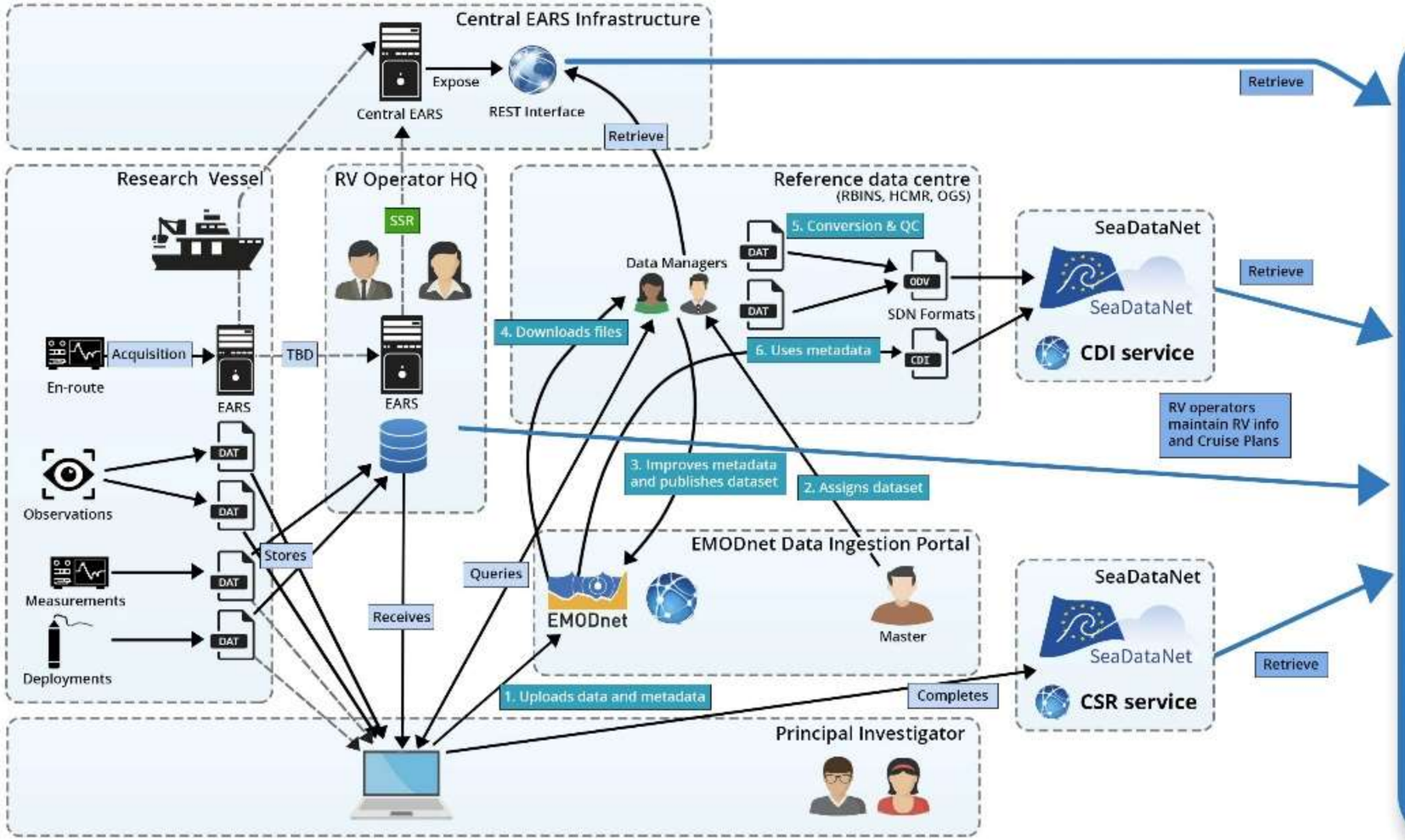
DATA HANDLING CHAIN OF THE EUROFLEETS+ PROJECT



EF+ EVIOR portal with Interfaces for:

- EF+ data sets catalogue with research data
- RV-tracks db with en-route data
- RV db
- Cruise Plan db
- CSR db

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THE EF+ DATA MANAGEMENT PROCESS

28 Cruises

3 NODCs

2 weeks before cruise

cruise

2 weeks after cruise

2 months after cruise

DMP

Cruise

CSR

Data

Repositories

DMP Roadmap

PI

DMP submission → Data collection → CSR submission → Data deposit to NODC or ‘as is’ data submission

NODC

DMP review → Support/checks CSR submission → Data validation, standardization, publication

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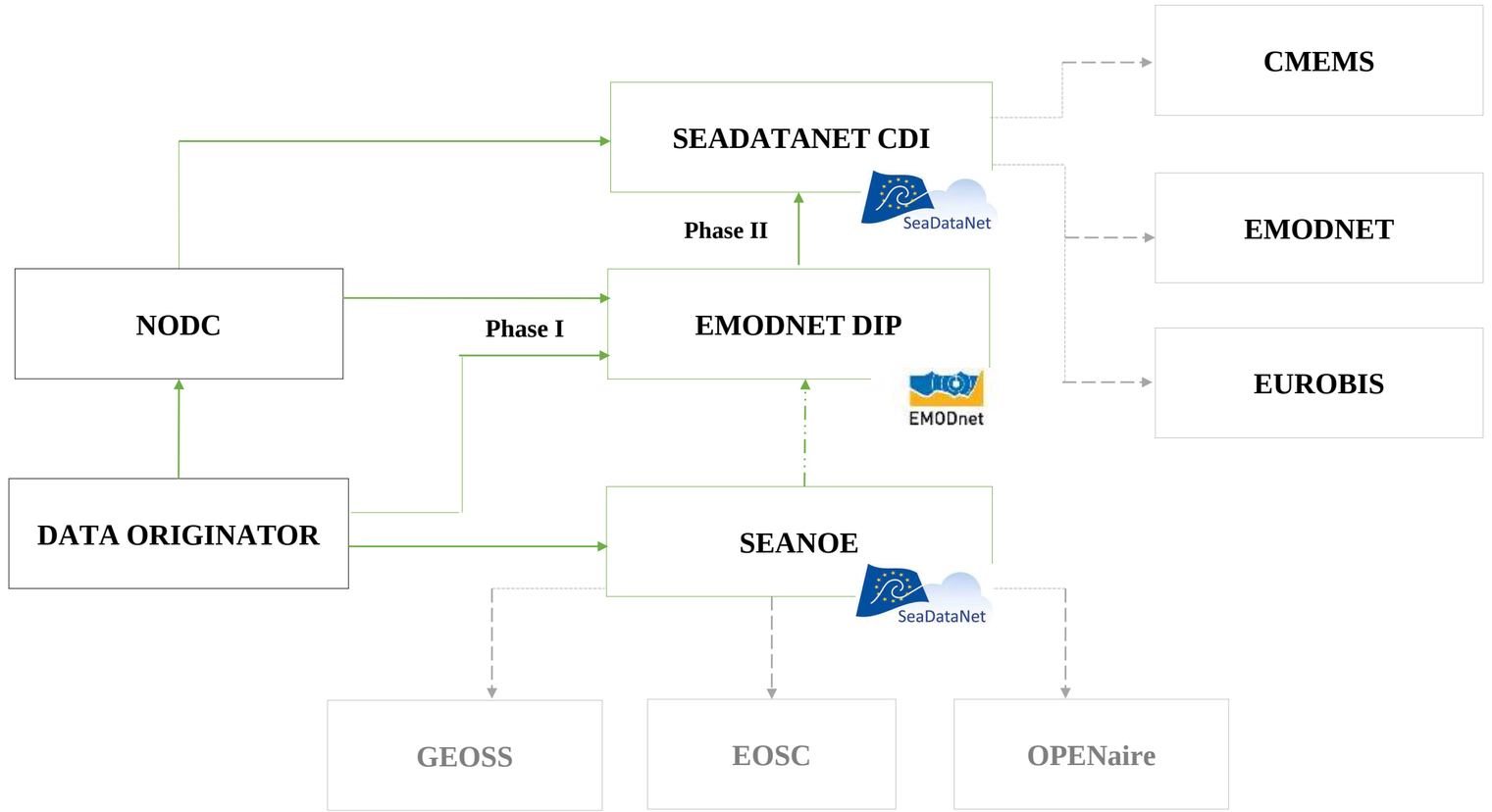
DATA MANAGEMENT WORKFLOWS

WORKFLOW FOR “COMMON” DATA WITHOUT EMBARGO



FAIRNESS INDICATORS

EMODNET DIP **SEANOE**	Findable Accessible
SEADATANET CDI	Findable Accessible Interoperable Reusable

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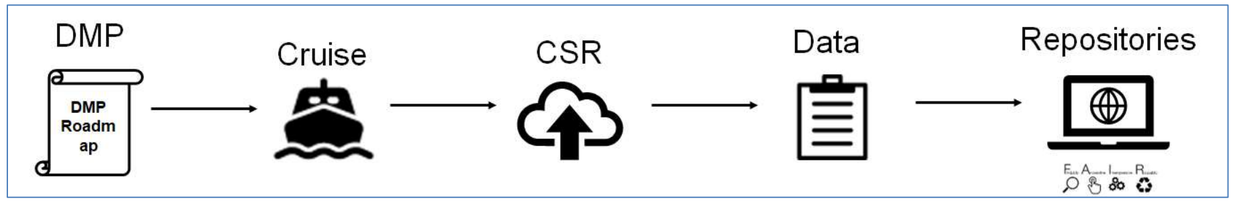
EF+ TA CRUISE DATA MANAGEMENT OUTCOMES

2019 → 2023

Follow-up of 28 cruises



Responsible NODCs:
HCMR : 8 cruises
OGS: 10 cruises
RBINS: 10 cruises

DMPs

All DMPs completed except one

CSRs

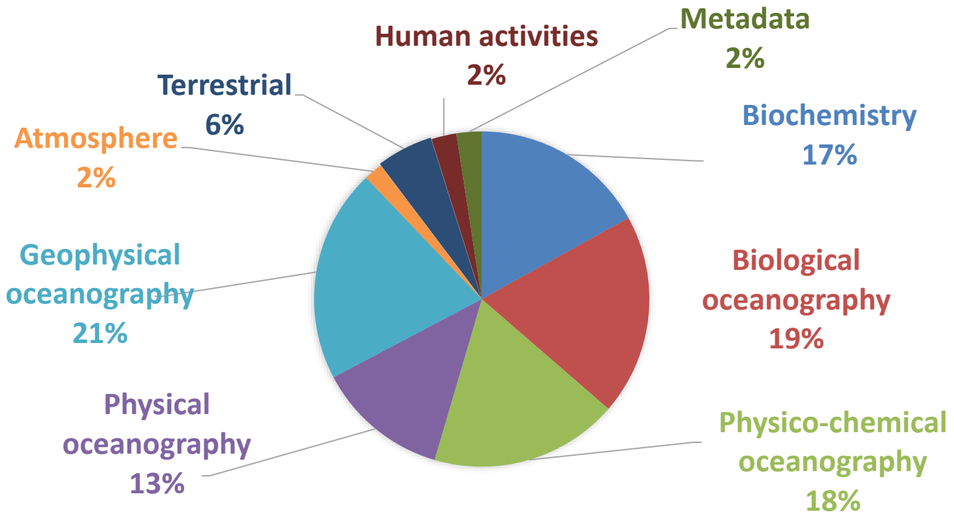
All CSRs published on CSR catalogue and Eurofleets+ EVIOR portal

Data

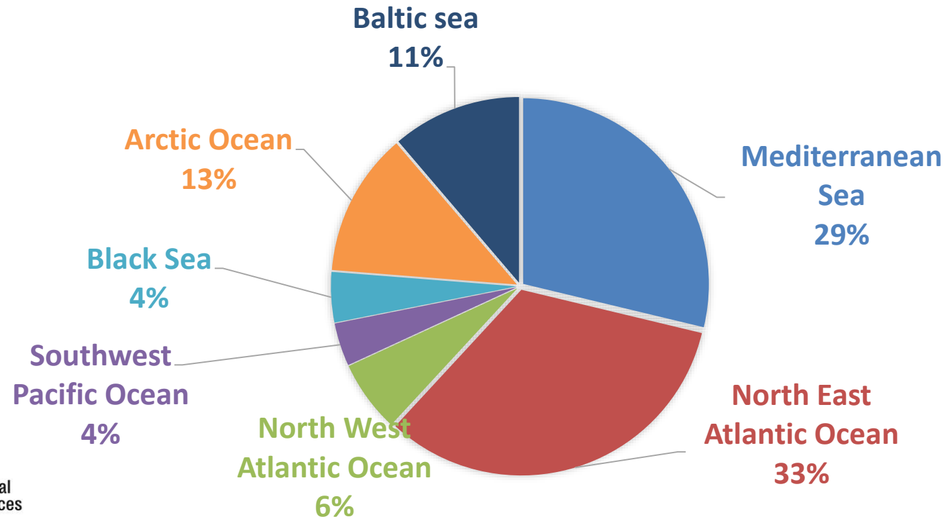
164 datasets generated,
66% datasets deposited,
Published datasets available on:
EMODnet DIP (21%)
SeaDataNet SEANOE (14%)
SeaDataNet CDI service (30%)
and via Eurofleets+ EVIOR portal

SYNTHESIS OF THE TA CRUISES DATA MANAGEMENT

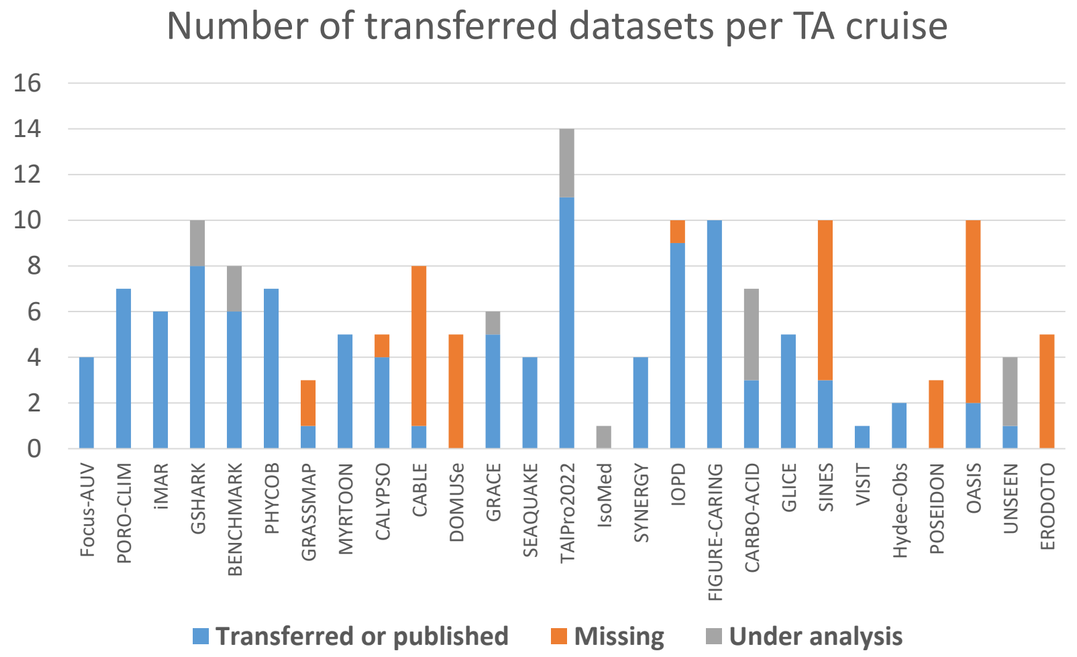
% DATASETS PER DISCIPLINE PURPOSE



% DATASETS PER SEA REGIONS



EF+ TA funded cruises generated 164 datasets



66% datasets deposited

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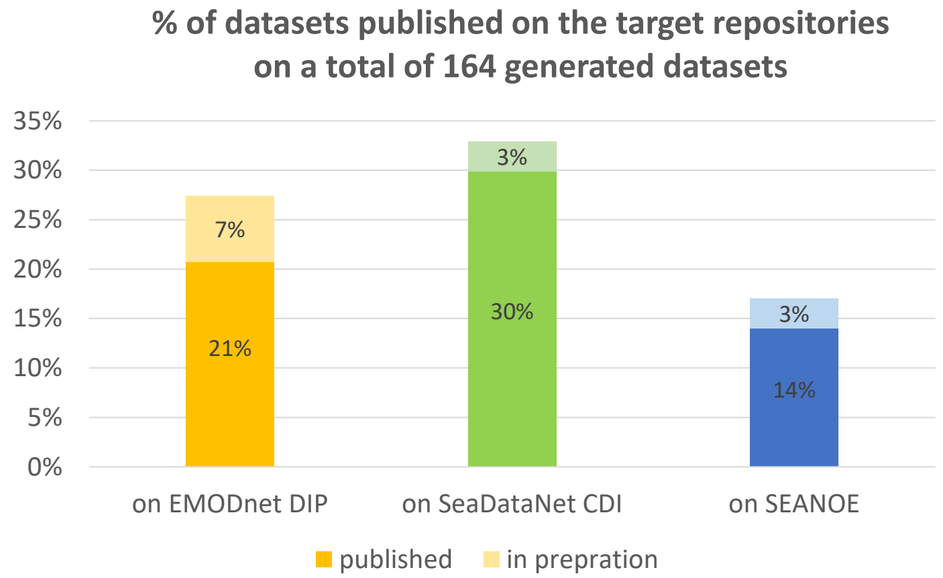
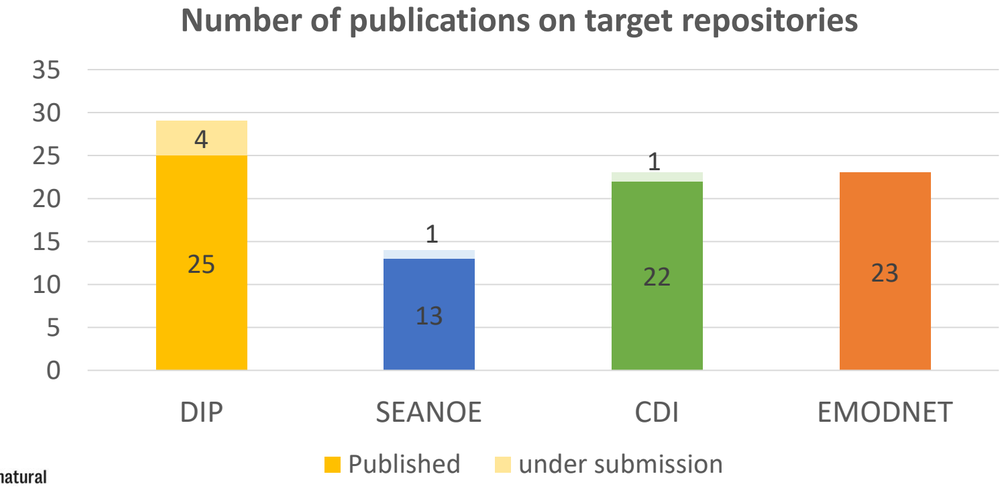
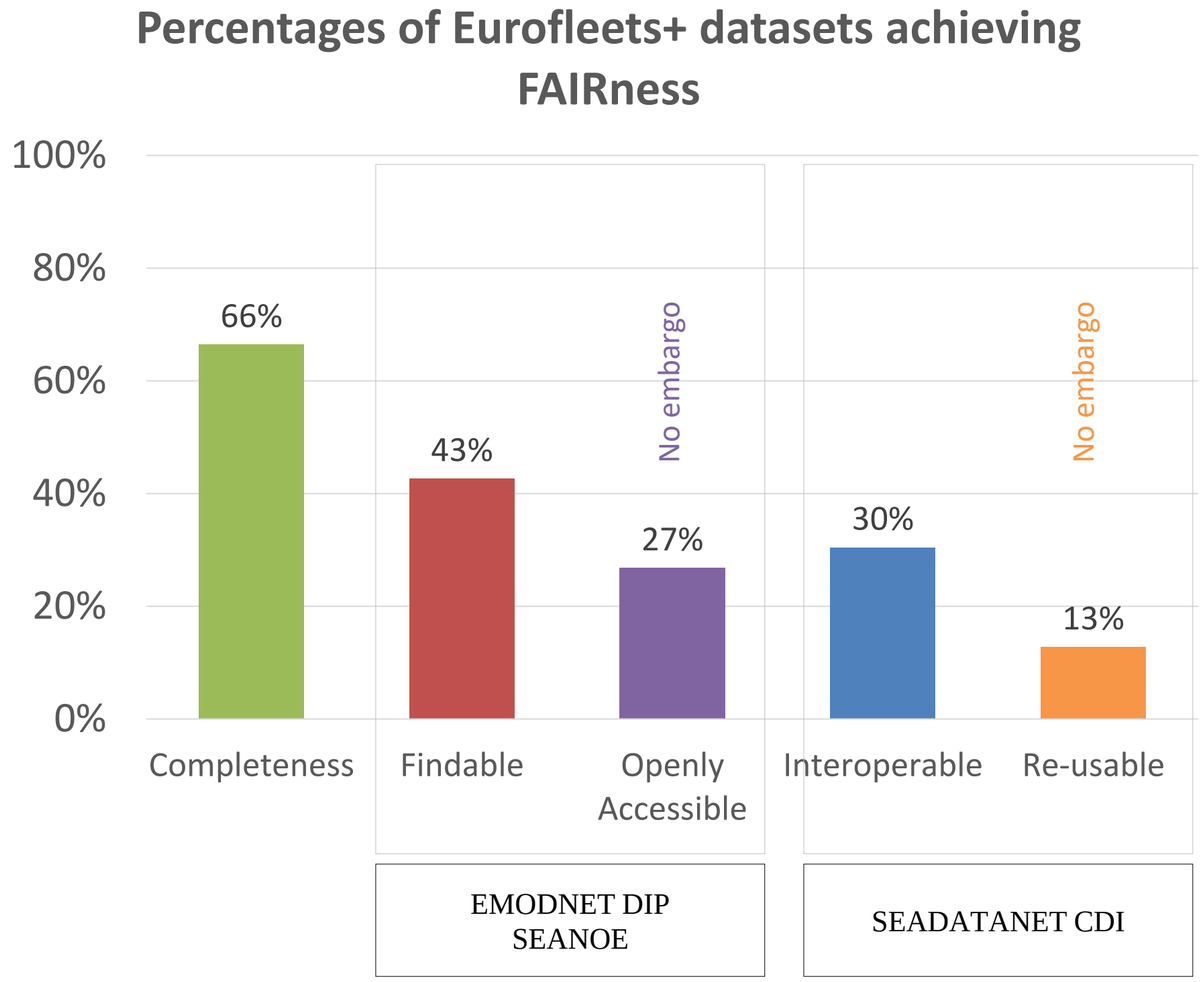
SYNTHESIS OF THE TA CRUISES DATA MANAGEMENT







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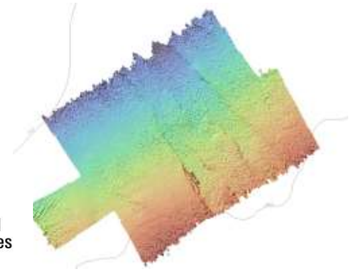
CONCLUSIONS

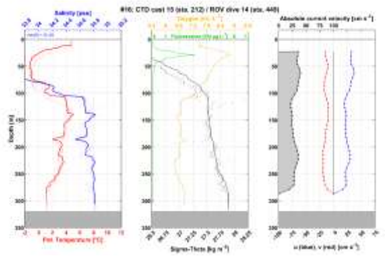
- 164 datasets generated
  - ✓ 66% deposited for preservation
  - ✓ 30% eventually F.A.I.R at the end of their moratorium.

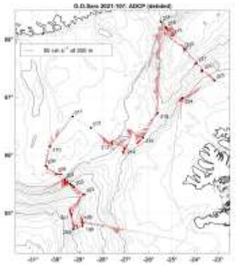
Given the scale of the project, the amount of generated data and the time scale involved achieving present scores is considered as a very satisfactory rate.

To achieve these results, the main data management activities were:

- describing **guidelines** and giving **training** to scientists on the cruises data management requirements
- a continuous **communication** between PIs and NODCs to provide the necessary datasets (meta)data information
- the **data curation** process performed by the NODCs to publish interoperable and re-usable datasets







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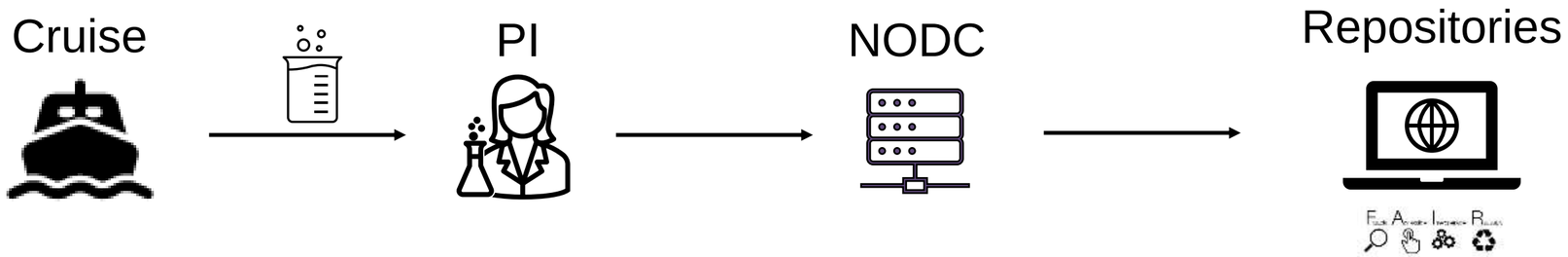
MAIN LESSONS LEARNED

1. The complete cruise **data handling chain** has been a **lengthy process**, inevitably extending beyond the EF+ project timeframe. FAIRness indicators reached was what could be expected to be achievable given the scale of the project.



2. Successful DM is the result of **a close cooperation** between scientists and data managers as they are complementary. Achieving data FAIRness means bringing awareness to scientists on DM good practices and fostering collaboration and communication between data managers and data-originators.

Eurofleets+
www.eurofleets.eu

AQUARIUS

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