OBSERVING THE OCEAN TO SAVE THE EARTH

EMSO ERIC Data Services

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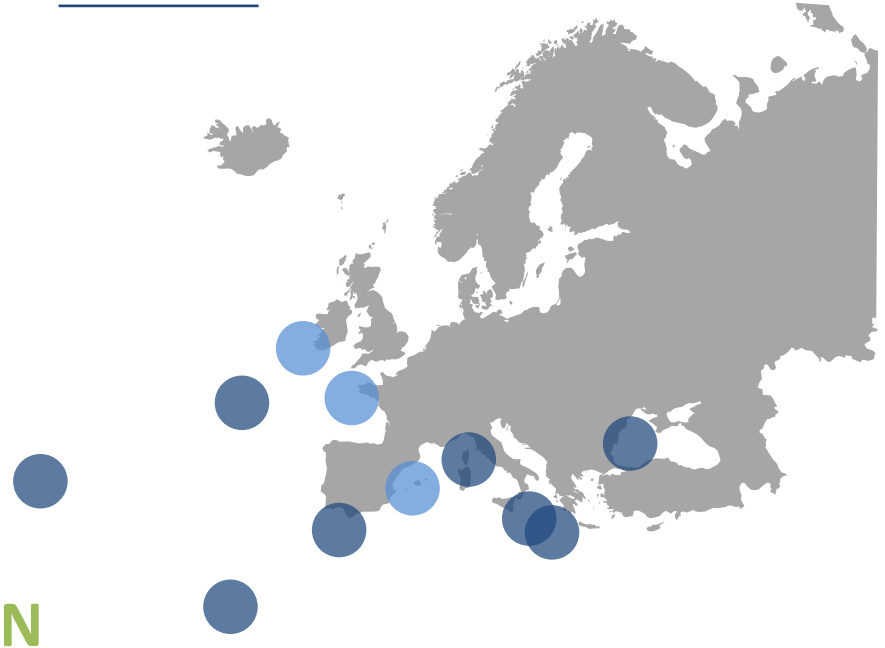
The EMSO-Link project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreements N° 731036.

EMSO ERIC

EMSO ERIC was constituted on September 29, 2016 (EU Official Journal L268/59 October 1st, 2016)

DISTRIBUTED RESEARCH INFRASTRUCTURE



1 **CENTRAL HUB** AND **11** INTERLINKED **FIXED POINT MUTI-SENSORS PLATFORMS**

EXCELLENCES

Delivering standardised: services, data process, scientific results.

High level of **INTEGRATION** among 11 multi-sensor platforms and 17 European institutions

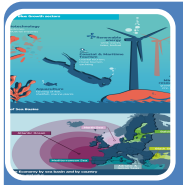
Common access policy and a single point of access for all users

User programme designed to absorb capacity of the RI

ADDED VALUE compared to the value of a single research cooperation network

JOINT INVESTMENT STRATEGY to strengthening EMSO ERIC through its regional facilities/test sites and common and shared services

MISSION



To establish a comprehensive and smart sensor system in water column, seafloor, and sub-seafloor environments as part of the integrated and sustainable organization EMSO ERIC

emso ERIC
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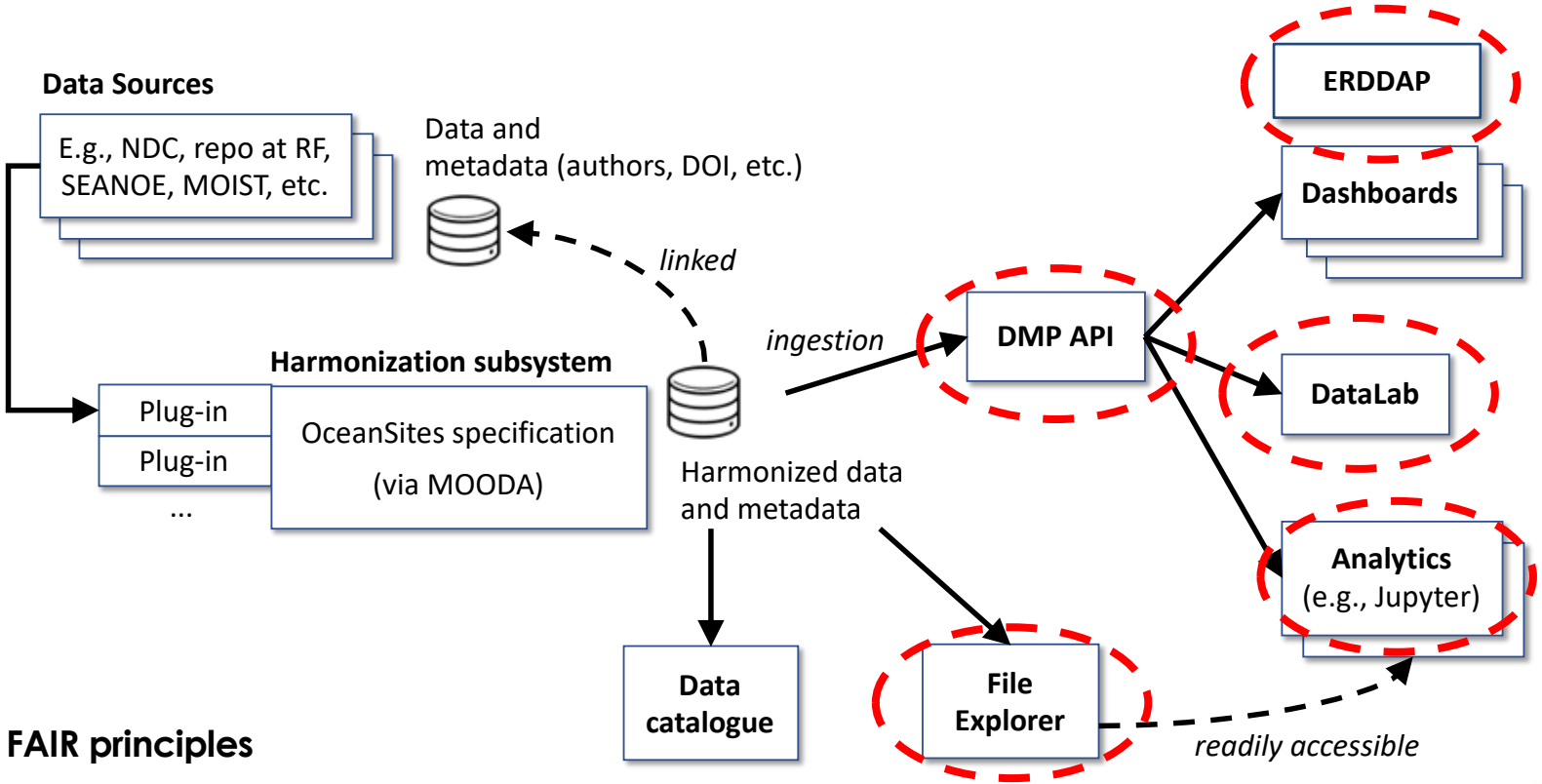
Baseline Implementation of EMSO ERIC Data Services



- **FAIR principles**
- **EOSC guidelines (EOSC-Hub EAP)**

Harmonization and Cyberinfrastructure Deployment

MOODA (Module of Ocean Observatory Data Analysis)

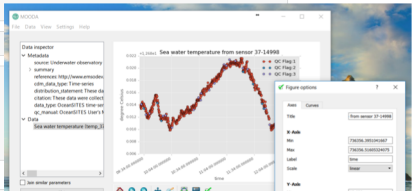
- Data harmonization (OceanSites standard), data management and transport

```
In [1]: from mooda.access import EGIM

In [2]: egim = EGIM("login", "password")

In [3]: code, observatories = egim.observatories()
        if code == 200:
            for i, observatory in enumerate(observatories):
                print(i, observatory)
        else:
            print("Error code:", code)

        0 EMSODEV-EGIM-node00001
```



MOODA as a library or with the Graphical User Interface (GUI)

EOSC-Hub Early Adopter Programme

- EGI Cloud Compute service (Openstack services at CESGA and RECAS-BARI)
- EGI Online Storage
- Technical plan (targeting registration in the EOSC Portal Marketplace)

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Work Plan Status

Quarter (2020)	Work Planned	Status and notes
Q1	• Identify the adequate capacity for implementing the project. • Engage with the EOSC providers interested to support the project activities. • Scale-up the compute and storage resources to move the DMP to preproduction. The platform will be replicated in two cloud providers for redundancy.	• Defined resource requirements and basic services. • Obtained resources from RECAS-BARI and CESGA • Deployed core data services at RECAS-BARI • Migration of services from OpenNebula to OpenStack • Short training-oriented session on data services delivered using EGI resources at EMSO Conference (Athens, Feb 12)
Q2	• Enable/integrate federated identity management in the EMSO-ERIC Data Management Platform using one of the available AAI solutions provided by EOSC-hub. • Perform initial scalability tests of the EMSO-ERIC DMP in EOSC.	• Prioritized data services: ERDDAP deployment • Prioritized data services: DataLab • Prioritized capabilities: Engagement with DOI provider • Ongoing deployment of mirrored/distributed services in CESGA
Q3	• Enabling the EOSC-hub monitoring in the DMP. • Enabling the EOSC-hub accounting in the DMP. • Increase the scale of the tests of the platform in EOSC.	• Working on AAI integration (EGI Check-in service) • Enhancements in the DMP monitoring system to enable scalability/stress tests • Potential OLAs through INFRAEOSC-07 proposal
Q4	• Agreed OLAs with the EOSC providers. • Registration of the EMSO-ERIC Data Management Platform in the EOSC Portal.	

EMSO ERIC Data Services @EGI (RECAS-BARI)

Production (Internal/External Access)	Testing/Staging (Internal/External Access)	Development (Internal/External Access)
DMP Back-end (E)	DMP Back-end Test (I)	DMP Back-end Dev (I)
Data Portal Front-End (E)	Data Portal Front-End Test (I)	Data Poral Front-End Dev (I)
EMSO ERIC API (E)	EMSO ERIC API Test (I)	
DataLab (E)	DataLab Test (E)	DataLab Dev (I)
Virtual Research Environment – VRE (E)	*Training VRE (E) – on demand only*	
	EMSO ERIC ERDDAP Test (E)	
ERDDAP-OBSEA (E)		
GitLab (E)		

Publicly accessible services (since Q1 2020):

- ~100% uptime
- 2 incidents (networking issues)

Current/Next Steps

- Integrating AAI solution provided by EOSC-hub (EGI Check-in service)
  - Setting up development/testing VO
  - Registration form
  - AAI integration for services (followed by IDp)

- Integrating DOI support in the DMP (DataCite).
- Preparing scalability/stress tests (focus on the API – core component).

Thank you for your attention

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