



Dashboard for the State of the Environment

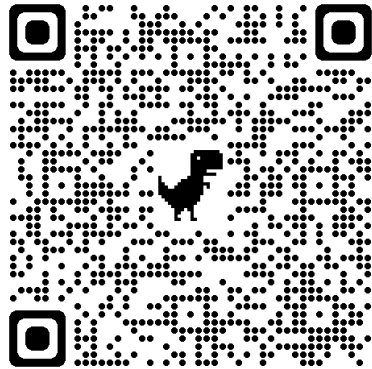
Designed, developed and supported by the ENVRI
for the EOSC Future Project

Angeliki K. Adamaki, ICOS Carbon Portal

#EOSCSymposium2023, Madrid, Spain

On behalf of ICOS, SeaDataNet, EMSO, ACTRIS, eLTER, IAGOS

An extensible collection of Environmental Indicators resulting from ENVRI (FAIR) data and services

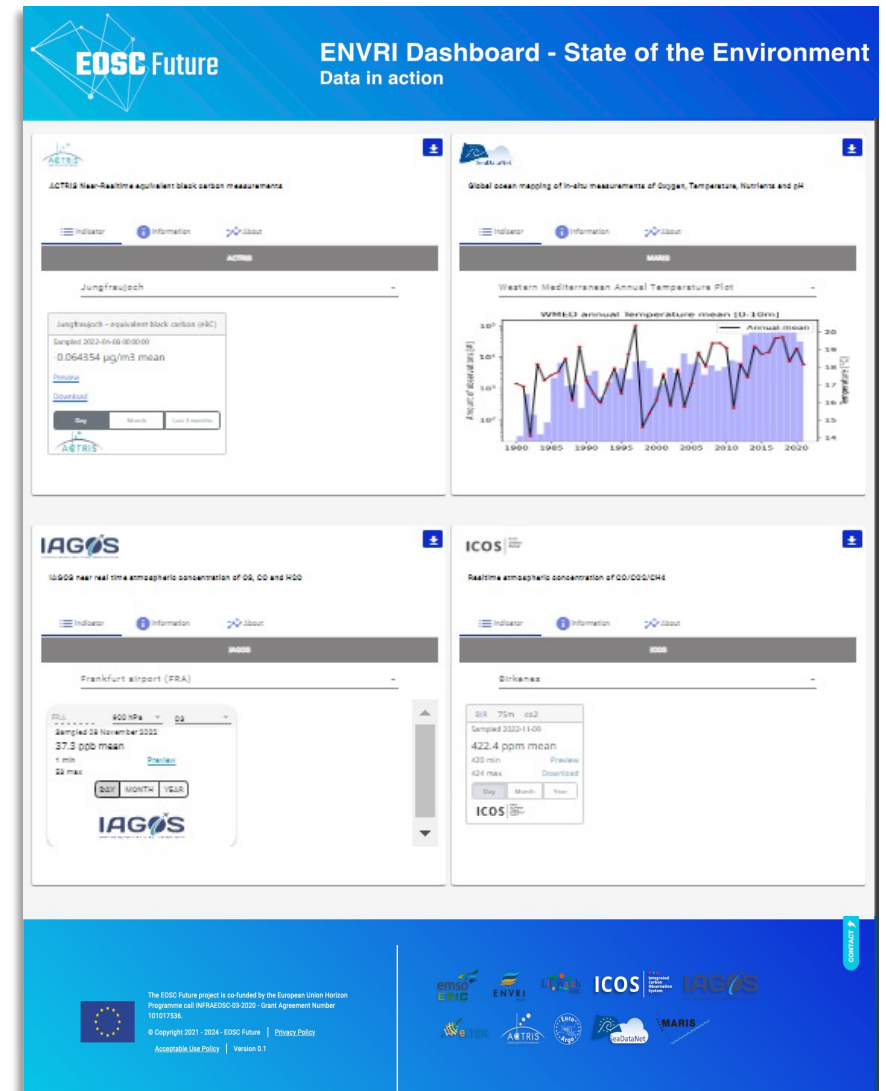


<https://env-dashboard.eoscfuture.eu/>

The screenshot shows the 'ENVRI Dashboard - State of the Environment Data in action' interface. The dashboard is titled 'EOSC Future' and features four main data panels. The top-left panel, 'ACTIS', displays 'Near-Realtime equivalent black carbon measurements' for 'Jungfraujoch', showing a mean value of 0.064354 µg/m³. The top-right panel, 'Marine', shows 'Global ocean mapping of in-situ measurements of Oxygen, Temperature, Nutrients and pH' with a 'Western Mediterranean Annual Temperature Plot' from 1990 to 2020. The bottom-left panel, 'IAGOS', shows 'near real time atmospheric concentration of O3, CO and H2O' for 'Frankfurt airport (FRA)', with a mean O3 concentration of 37.3 ppb. The bottom-right panel, 'ICOS', shows 'Realtime atmospheric concentration of CO2/CO2e/CH4' for 'Oriskany', with a mean CO2 concentration of 422.4 ppm. The footer contains logos for EOSC Future, EMIS, ENVI, ACTIS, ICOS, IAGOS, and MARIS, along with copyright and privacy information.

An extensible collection of Environmental Indicators resulting from ENVRI (FAIR) data and services

- An **EOSC Service**
- Supported by approved **EOSC providers**
- Backed by the quality assurance of the **ENVRI**s
- The Dashboard is universal and **flexible**
- Users can configure their own Dashboard, **customise** the view and choose the indicators of their interest by logging in with their **EOSC credentials!**



An extensible collection of Environmental Indicators resulting from ENVRI (FAIR) data and services

- Environmental indicators provided (so far) by **SeaDataNet, ICOS, ACTRIS, IAGOS, eLTER**
- Development of the central service supported by **EMSO**
- Marine Data Viewer developed by **MARIS**

EOSC as enabler – Service Integration

Several **EOSC services** are used to develop the Dashboard on the **EOSC Platform** and support the RI providers.

- ✔ EOSC Marketplace
- ✔ EOSC AAI Federation
- ✔ EGI Cloud Compute
- ✔ EOSC Service Monitoring
- 🔄 EOSC Helpdesk

✔ Achieved
🔄 In Progress

Air Quality

Goals for Scientists and Policy Makers

- Develop policies for sustainable transportation
- Enhance air quality monitoring systems
- Support evidence-based urban planning strategies
- Evaluation of emission reduction programs – emission standards
- Public awareness campaigns



Air Quality

EOSC Future ENVRI Dashboard - State of the Environment LOGIN
Data in action

ICOS Carbon Portal

Realtime atmospheric concentration of CO/CO2/CH4

[Indicator](#) [Information](#) [About](#)

ICOS

Zeppelin

ZEP	15m	co2
Sampled 2023-09-13		
411.4 ppm mean		
411 min	Preview	
412 max	Download	
Day	Month	Year

ICOS European
Carbon
Infrastructure
System

ACTRIS Measuring the Atmosphere

ACTRIS Near-Realtime equivalent black carbon measurements

[Indicator](#) [Information](#) [About](#)

ACTRIS

Zeppelin mountain (Ny-Ålesund)

Zeppelin - equivalent black carbon (eBC)		
Sampled 2022-05-24 00:00:00		
0.001079 µg/m3 mean		
Preview		
Download		
Day	Month	Last 3 months

ACTRIS Measuring the Atmosphere

ACTRIS Measuring the Atmosphere

ACTRIS Near-Realtime Ultra Fine Particles measurements

[Indicator](#) [Information](#) [About](#)

ACTRIS

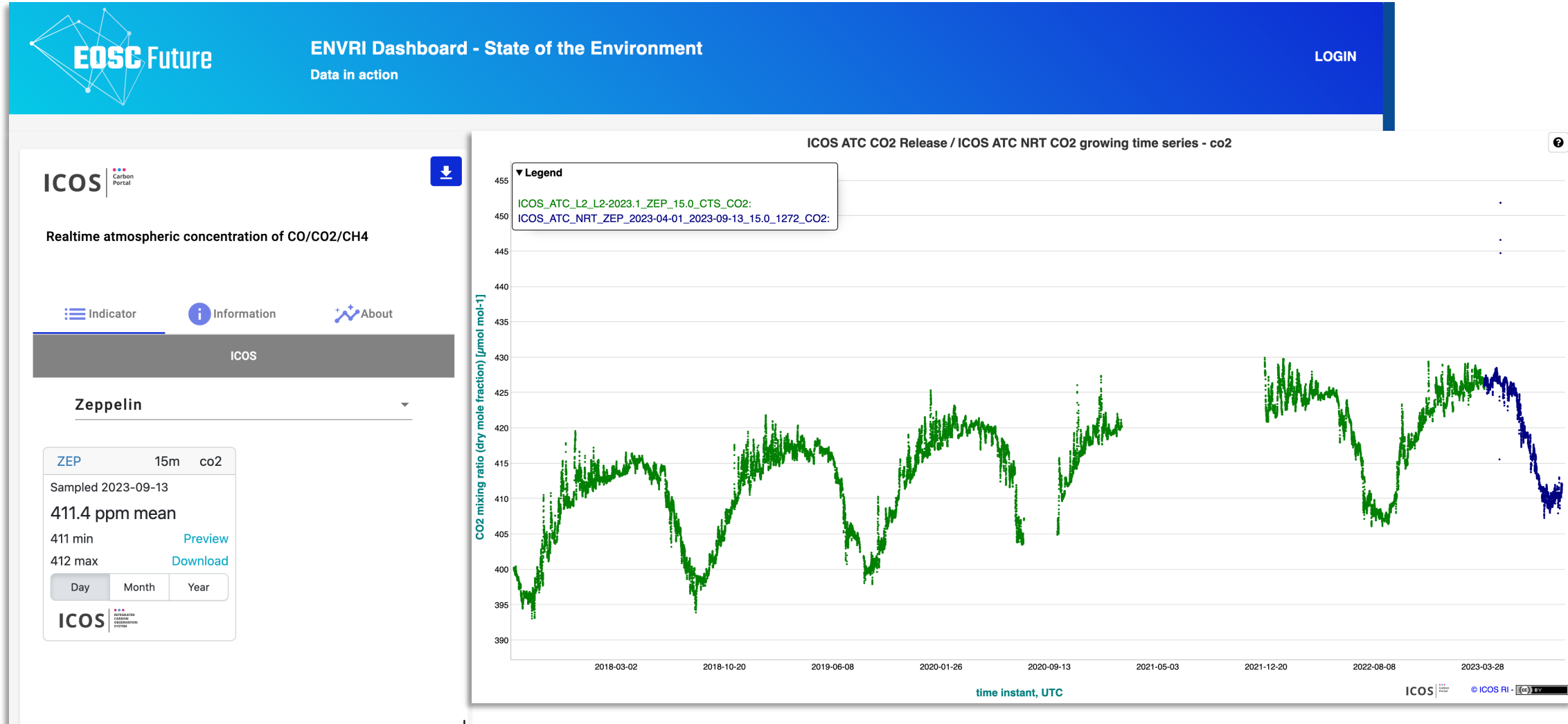
Zeppelin mountain (Ny-Ålesund)

Zeppelin		
Sampled 2022-09-30 00:00:00		
64.62 1/cm3 mean		
Preview		
Download		
Day	Month	Last 3 months

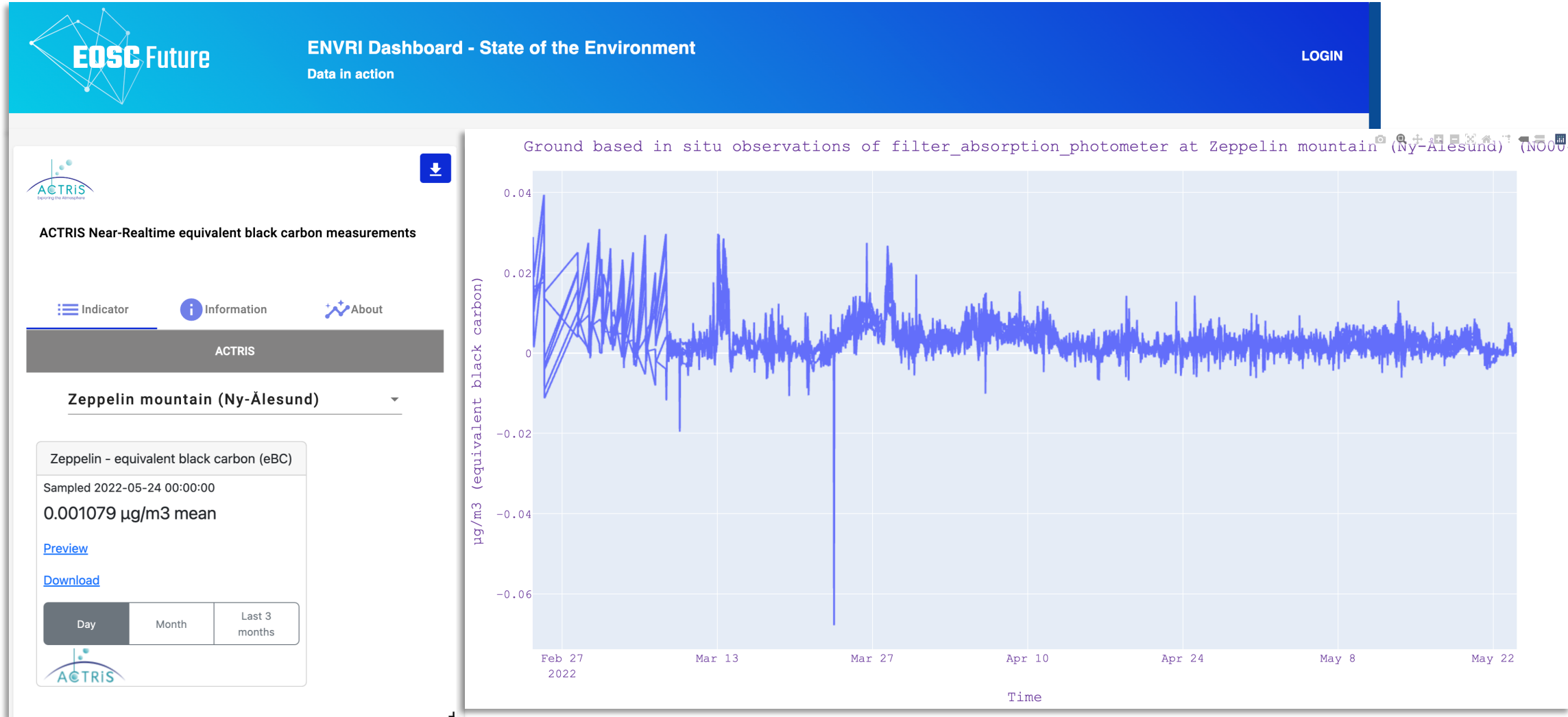
ACTRIS Measuring the Atmosphere

[CONTACT](#)

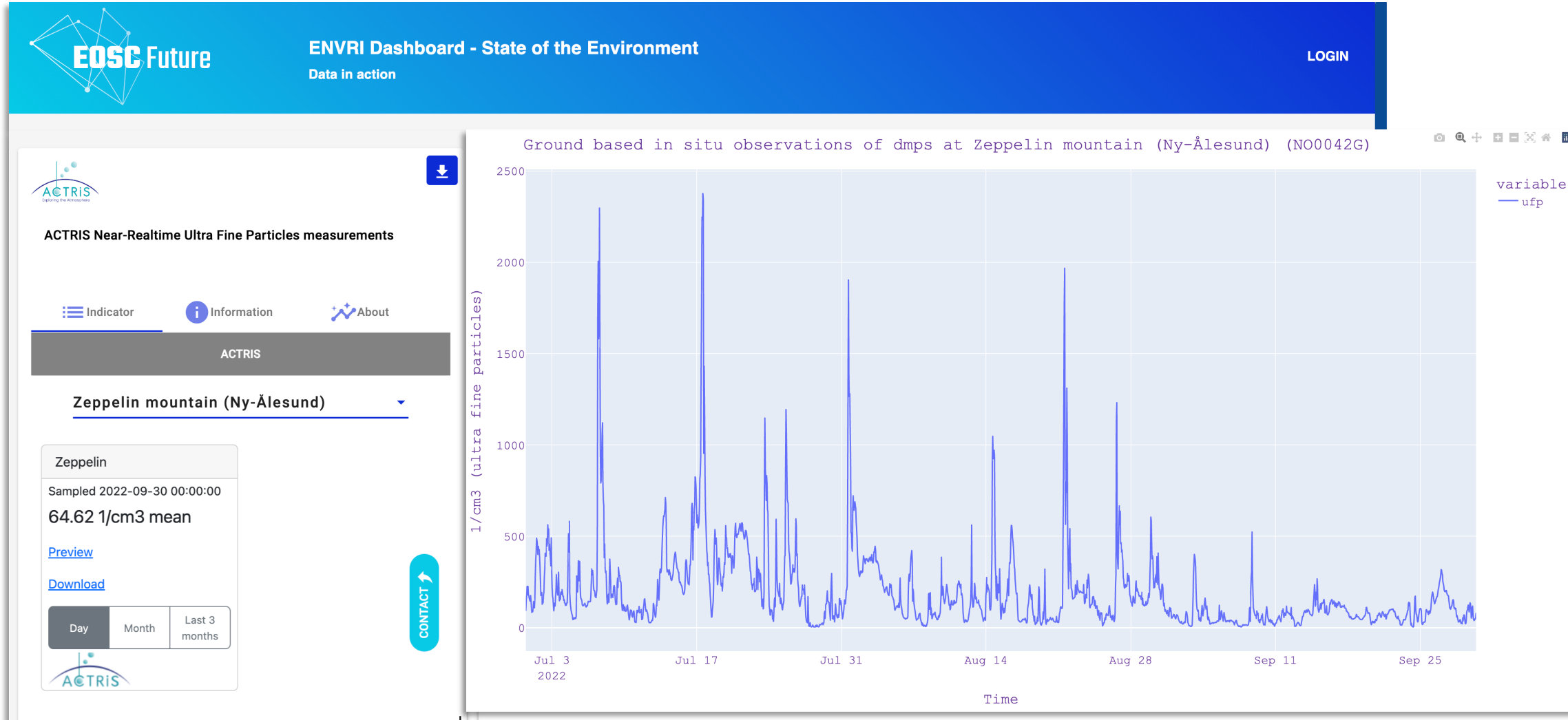
Air Quality



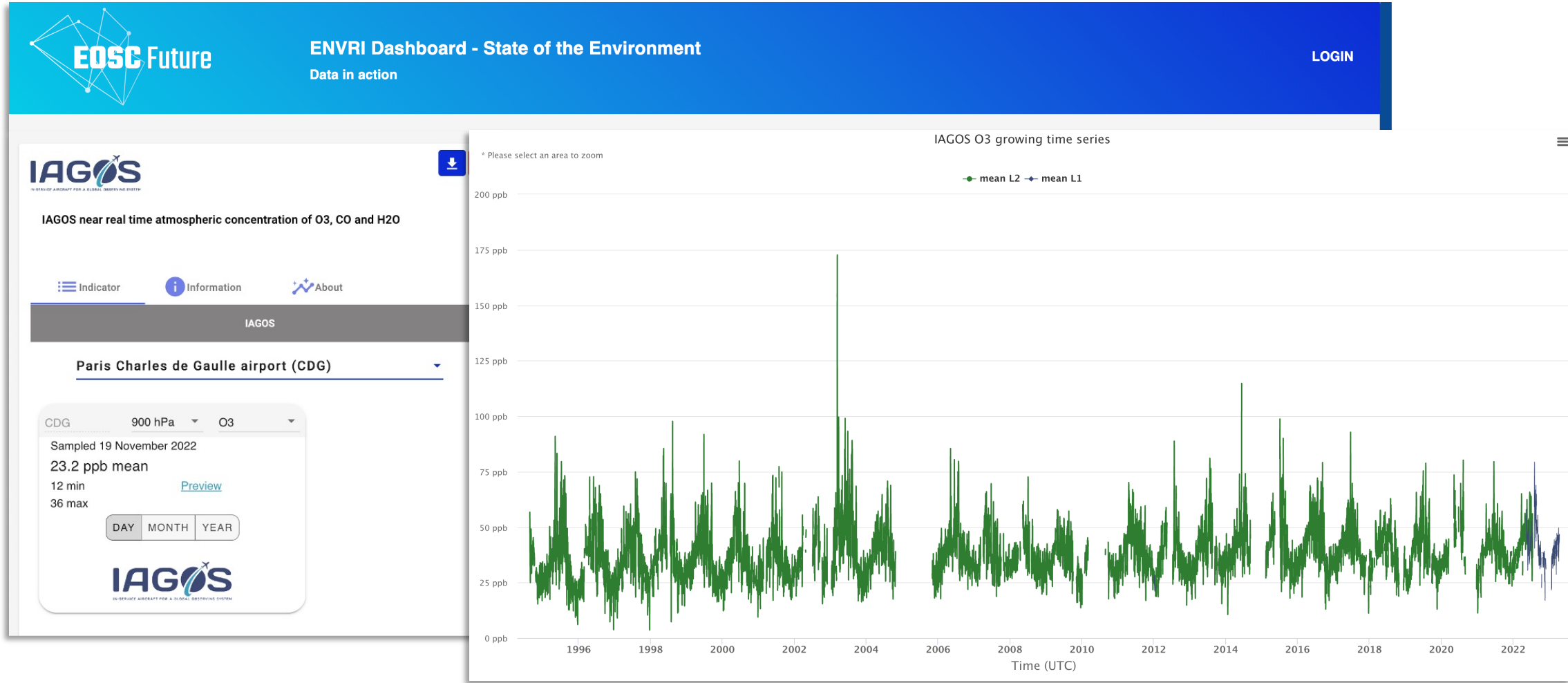
Air Quality



Air Quality



Air Quality



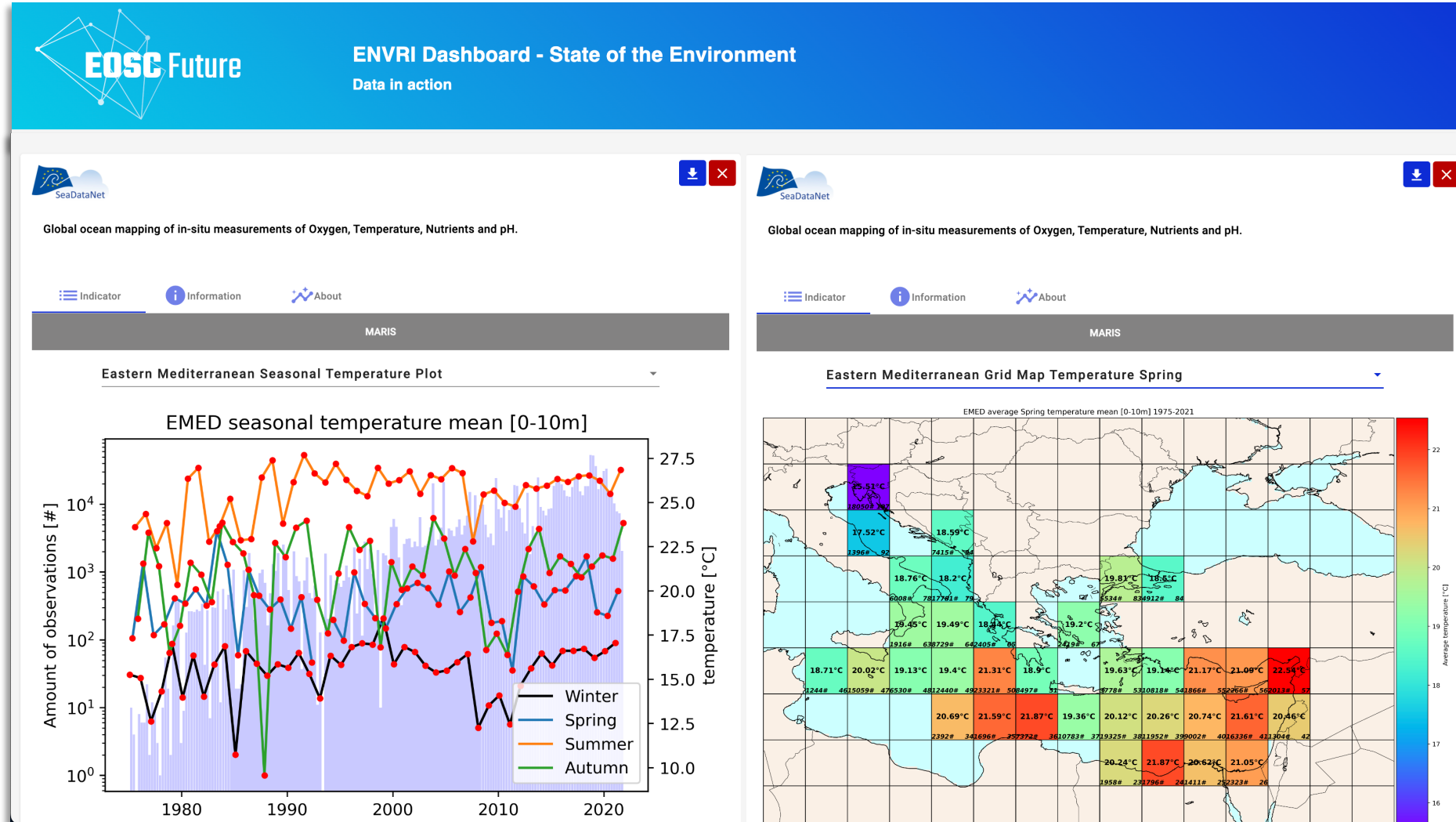
Coastal Management

Goals for Scientists and Policy Makers

- Address the challenges of climate change and marine ecosystem conservation
- Develop policies to regulate coastal development
- Design strategies to mitigate risks
- Preserve marine ecosystems while supporting sustainable economic activities



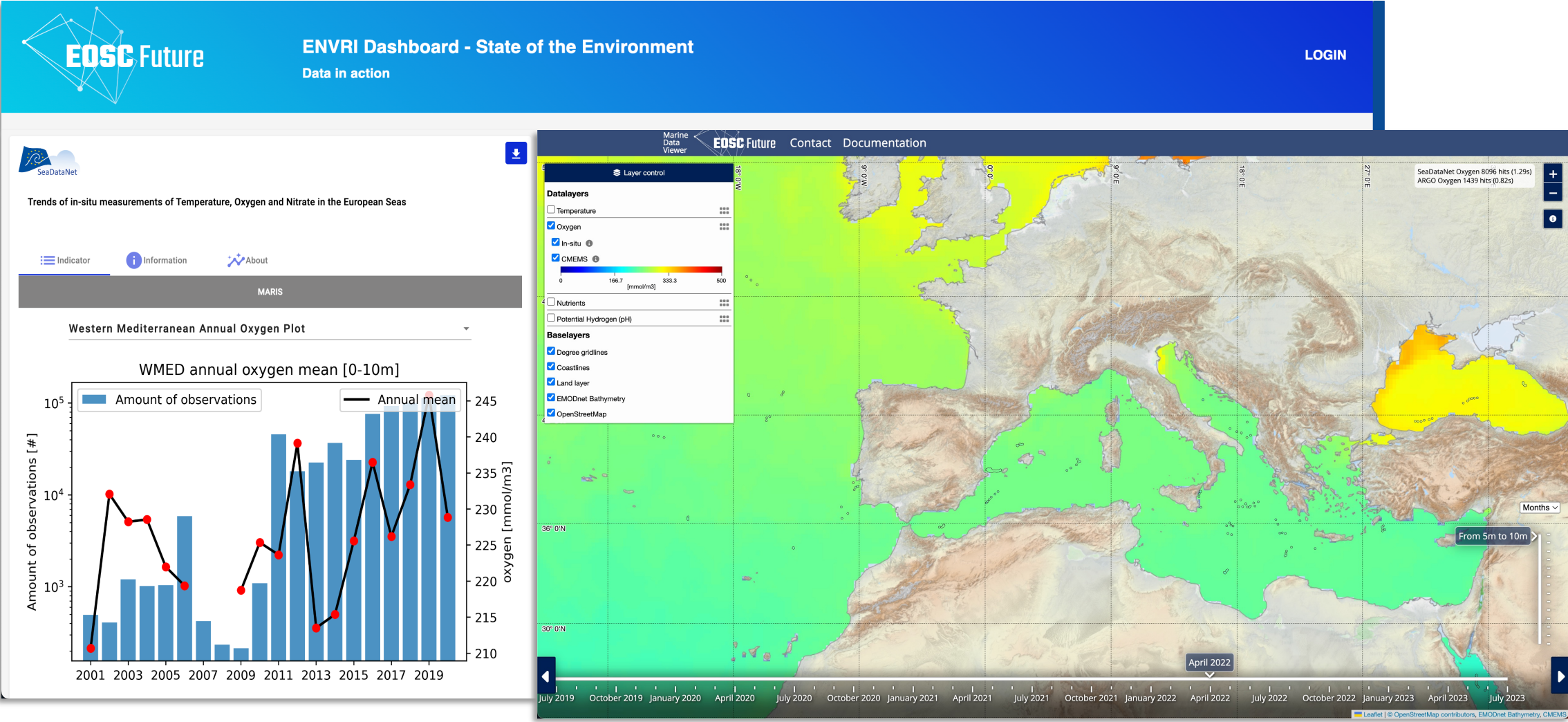
Coastal Management



Coastal Management

The screenshot displays the EOSC Future ENVRI Dashboard interface. At the top, the EOSC Future logo is on the left, and the text "ENVRI Dashboard - State of the Environment" and "Data in action" is in the center. A "LOGIN" button is on the right. Below the header, there are navigation links for "SeaDataNet", "Indicator", "Information", and "About". The main content area is titled "Trends of in-situ measurements of Temperature, Oxygen and Nitrate in the European Seas". A sub-section titled "MARIS" contains a "Western Mediterranean Annual Temperature Plot". This plot shows the "Amount of observations" as blue bars and the "Annual mean" as a black line with red dots, spanning from 1960 to 2020. The left y-axis represents the number of observations on a logarithmic scale from 10³ to 10⁵. The right y-axis represents temperature in degrees Celsius, ranging from 17.0 to 19.5. To the right of the plot is a "Marine Data Viewer" map of the Western Mediterranean. The map shows a color-coded temperature distribution with a legend for "Datalayers" (Temperature, In-situ, CMEMS) and "Baselayers" (Degree gridlines, Coastlines, Land layer, EMODnet Bathymetry, OpenStreetMap). The map includes a "Layer control" panel, a "SeaDataNet Temperature 58898 hits (2.45s)" and "ARGO Temperature 18969 hits (3.17s)" indicator, and a "Months" dropdown menu set to "April 2022". A timeline at the bottom of the map shows dates from April 2019 to January 2023.

Coastal Management



What is necessary for science and technology today will be crucial for society tomorrow



Embrace disciplinary and interdisciplinary research approaches



Support data sharing and integration across disciplines



Foster collaboration and communication among disciplines



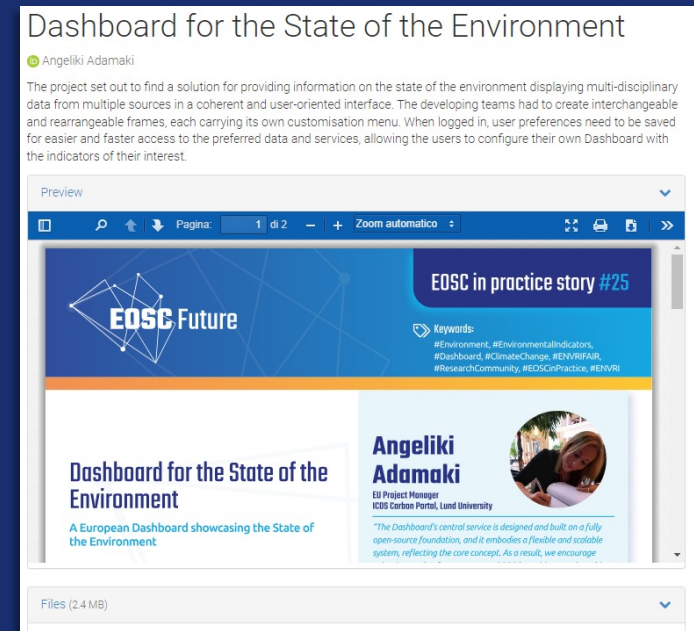
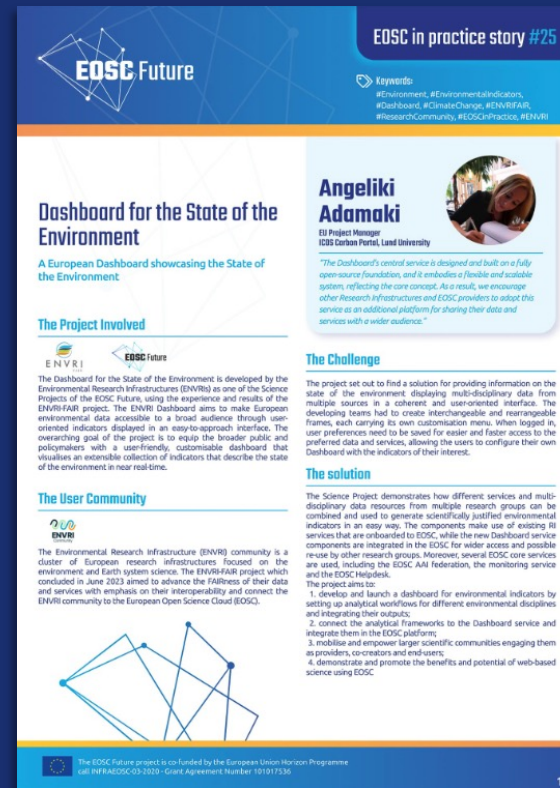
Engage scientific communities and other stakeholders



Invest in capacity building for interdisciplinary research



EOSC in Practice Stories Booklet




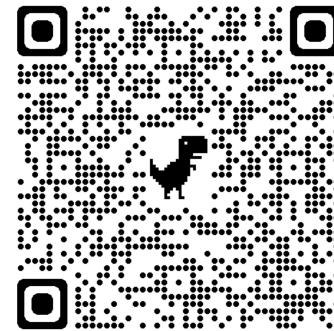
Send your EOSC in Practice Story here

<https://eosc-portal.eu/we-are-looking-eosc-practice-stories-submit-yours>

● Thank you for your attention!

Visit the EOSC and find out more about the ENVRI Dashboard!

 An interactive environment that gives clear and easy access to the **ENVRIs**.



Climate change is a scientific fact and

Science means knowledge, awareness and understanding!

See you at the ICOS booth for more Demos!