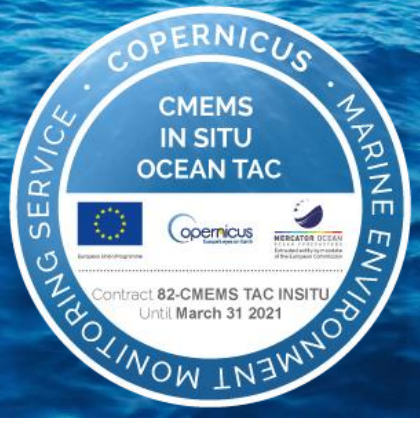

marine.copernicus.eu

boos.org/

BOOS
Baltic Operational Oceanographic System

CMEMS In Situ TAC

In Situ TAC Team

&

NRT ship data exchange

Johanna Linders, SMHI

Copernicus → In Situ TAC
Where we are?

3 components:

- Space
- Insitu
- Services

→

- Atmosphere Monitoring
- Climate Change
- **Marine Monitoring (CMEMS)**
- Land Monitoring
- Security
- Emergency Management

→

7 MFCs (Models)

- GLO MFC
- ARC MFC
- BAL MFC
- NWS MFC
- IBI MFC
- MED MFC
- BS MFC

8 TACs (Observations)

- **In Situ TAC**
- 6 Space TACs:
  - OCTAC,
  - SLTAC, …
- 1 Multi Ob.

CIS

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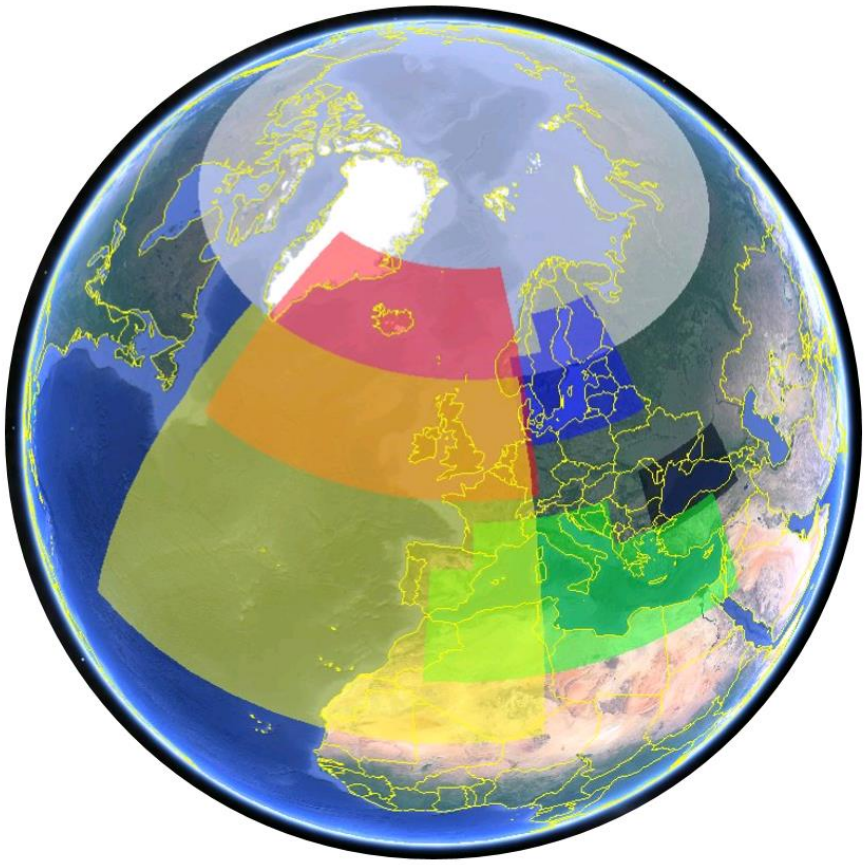
In Situ TAC: Organization (2018)

IN SITU TAC ORGANIZATION Leader: Ifremer / France



Management & Operations
7 Regions

Global:	Ifremer / France
Arctic:	IMR / Norway
Baltic:	SMHI / Sweeden
NWS:	BSH / Germany
IBI:	Puertos del Estado / Spain
MED:	HCMR / Greece
Black Sea:	IOBAS / Bulgaria

Scientific Expertise Cross Cutting

Product Quality:	Oceanscope-PdE-IMR
Multi Year:	SOCIB-OceanScope-PdE
BGC assim.:	IMR

System Evolution

HF Radar:	AZTI-CNR-SOCIB
Carbon Data:	UIB
BGC assessment:	IMR-HCMR-SYKE
Monitoring:	SOCIB-PdE-HCMR

In Situ TAC: general description

General characteristics:

- **Fully operational service** since April 2015
- **7 Components:** Global + 6 regions (Arctic, Baltic, NWS, IBI, MED and BlackSea)
- **Same data format** (NetCDF - OceanSites 1.2)
- **Same FTP structure**
- **Same RTQC** & quality indexes
- **NRT** (near real time) and **REP** (reprocessed) products

Functions implemented:

- **Acquisition** from international networks and regional providers
- **Quality control:** agreed procedures following EuroGOOS DATA-MEQ WG recommendations in coherence with international agreements (SeaDataNet,…)
- **Product validation & assessment**: assess the consistency of the data

In Situ TAC Products in 2018 V4

For CMEMS V4 (April 2018) the following REP products will be provided

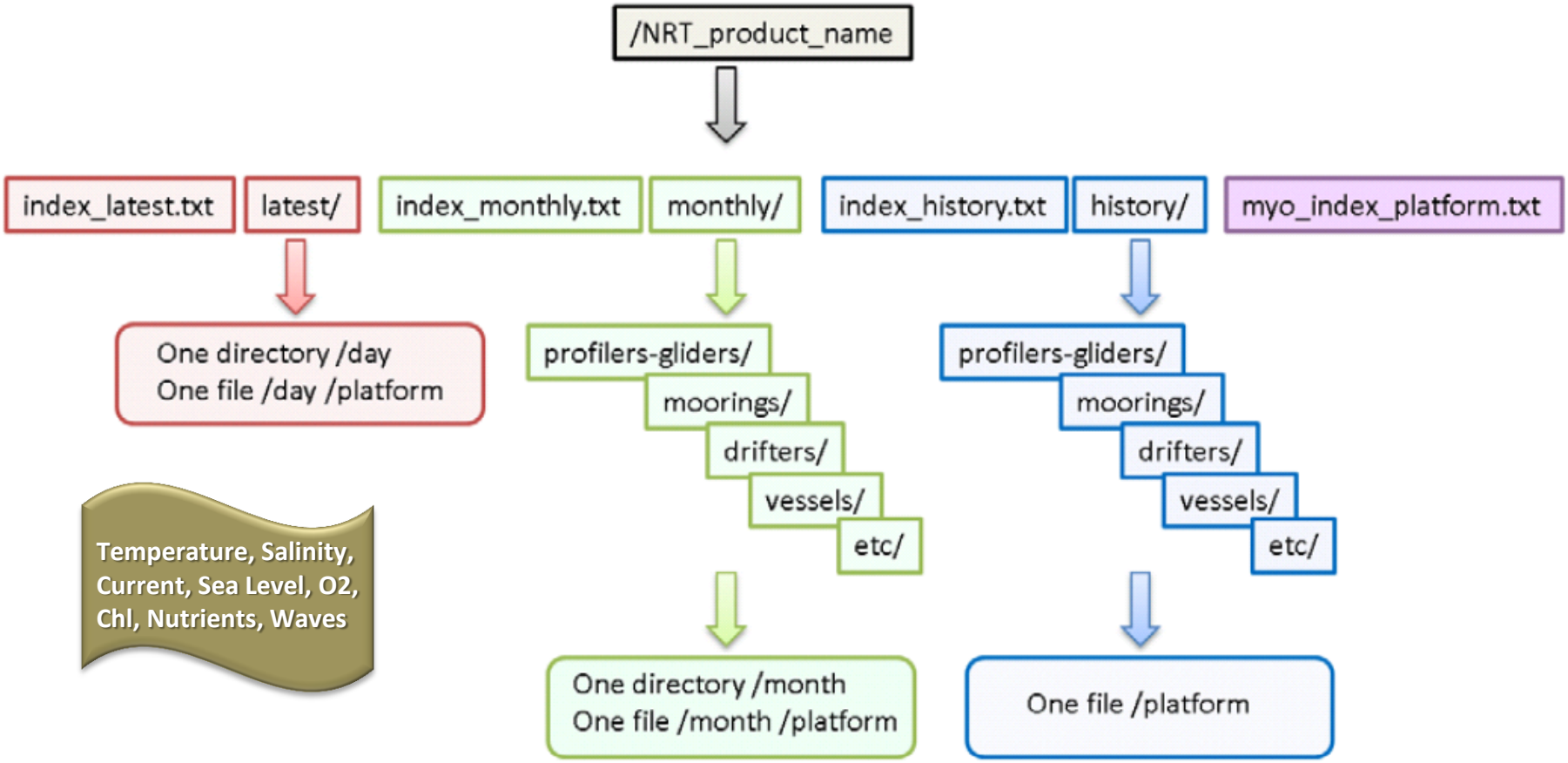
- **T&S REP** product at Global (CORA) and regional level
- **T&S REP** gridded product derived from CORA (GLO T&S REP product)
- **T&S UV REP** product from drifters
- **Wave** first version of REP product for Global Ocean and Regional European Seas
- **BGC** (Chl-a, O2) first version of REP product for Global Ocean

These products will cover 1990-2016 except the T&S GLO REP (CORA) that will cover 1950-2016 .

In Situ TAC: FTP structure (NRT)

Access with Copernicus user & passwd (free registration)

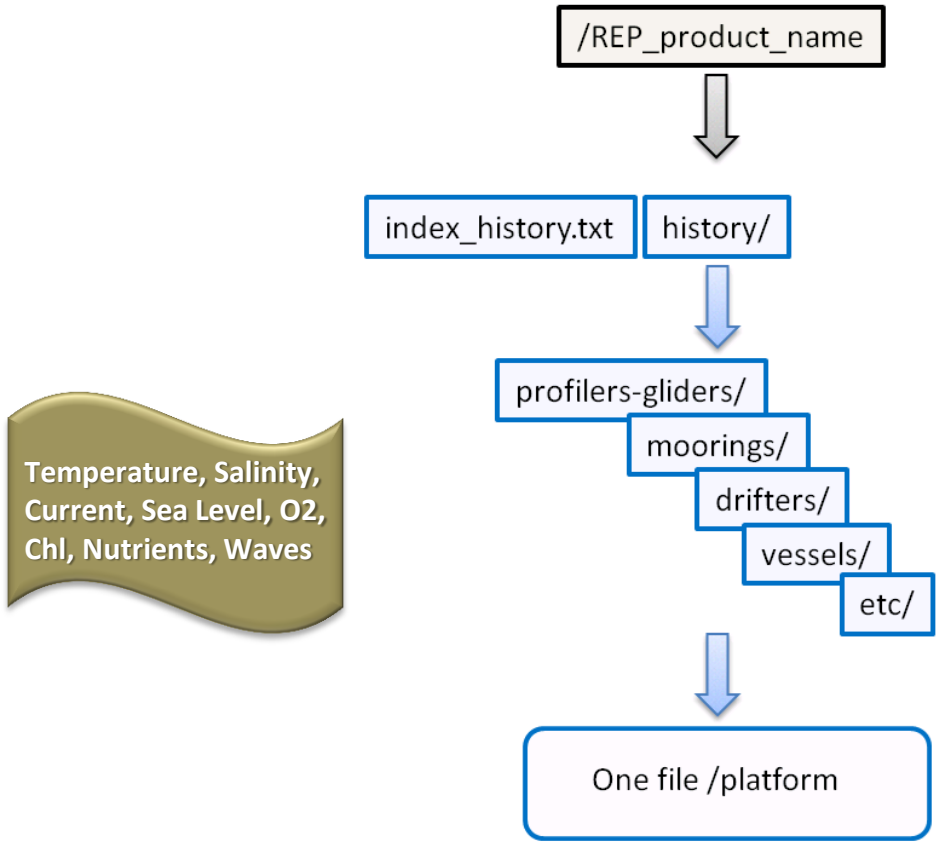
NRT product: data received in real time
history directory: aggregated NRT data



In Situ TAC: FTP structure (REP)

Access with MyOcean – Copernicus user & passwd

REP product: validated and assessed data
history directory: validated and assessed data from providers or NRT product



In Situ TAC: Changes and plans for Phase 2

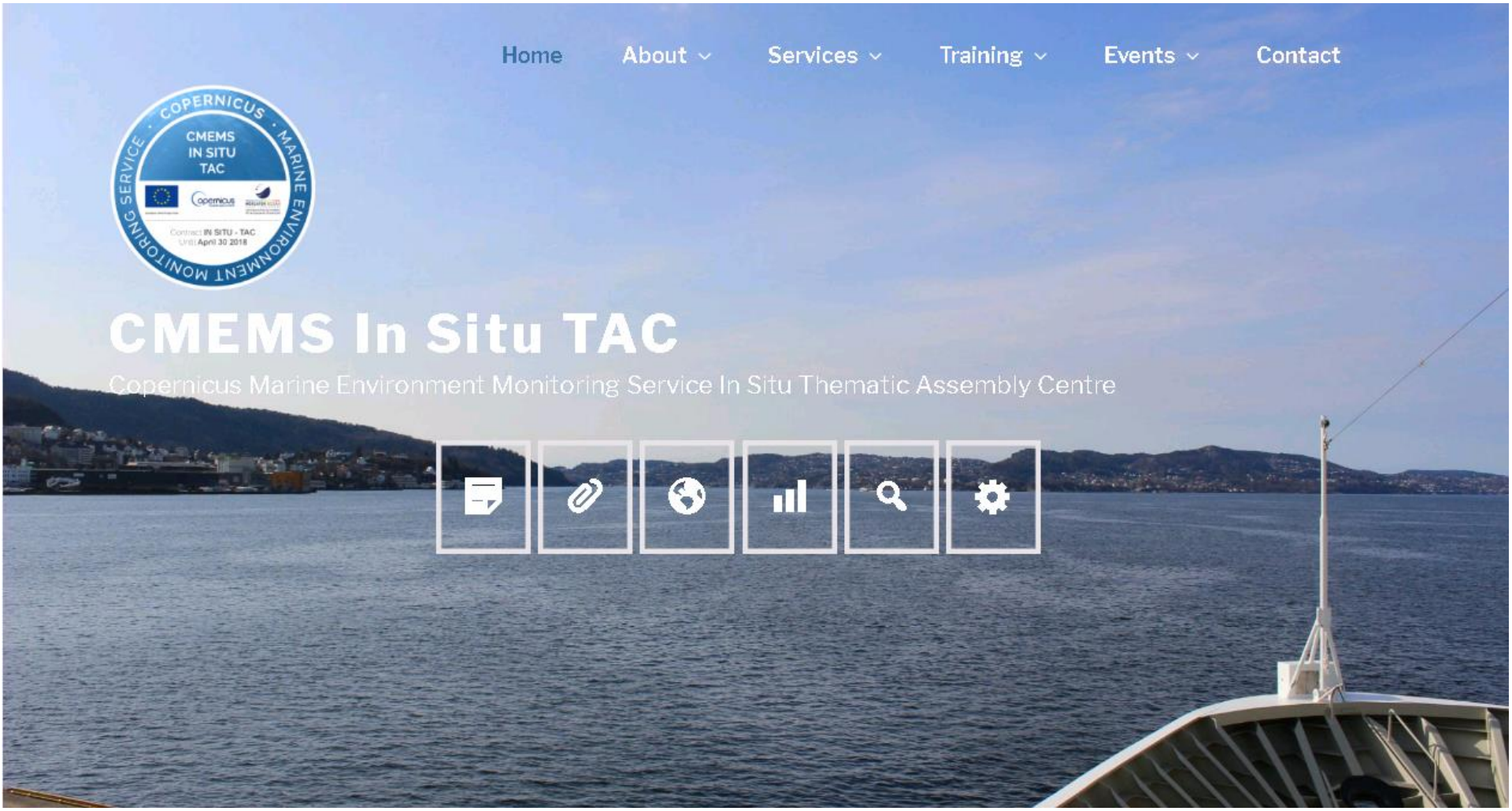
- **One common Distribution Unit**: DIAS (Data Information and Access Service) cloud system ➔ **Unique FTP access** for all the CMEMS products
- **HF Radar integration** following INCREASE Service Evolution project coordinated by AZTI

  Planned NRT for 2019 and REP 2020
- **Carbon data integration** in link with ICOS-Ocean operated by University of Bergen

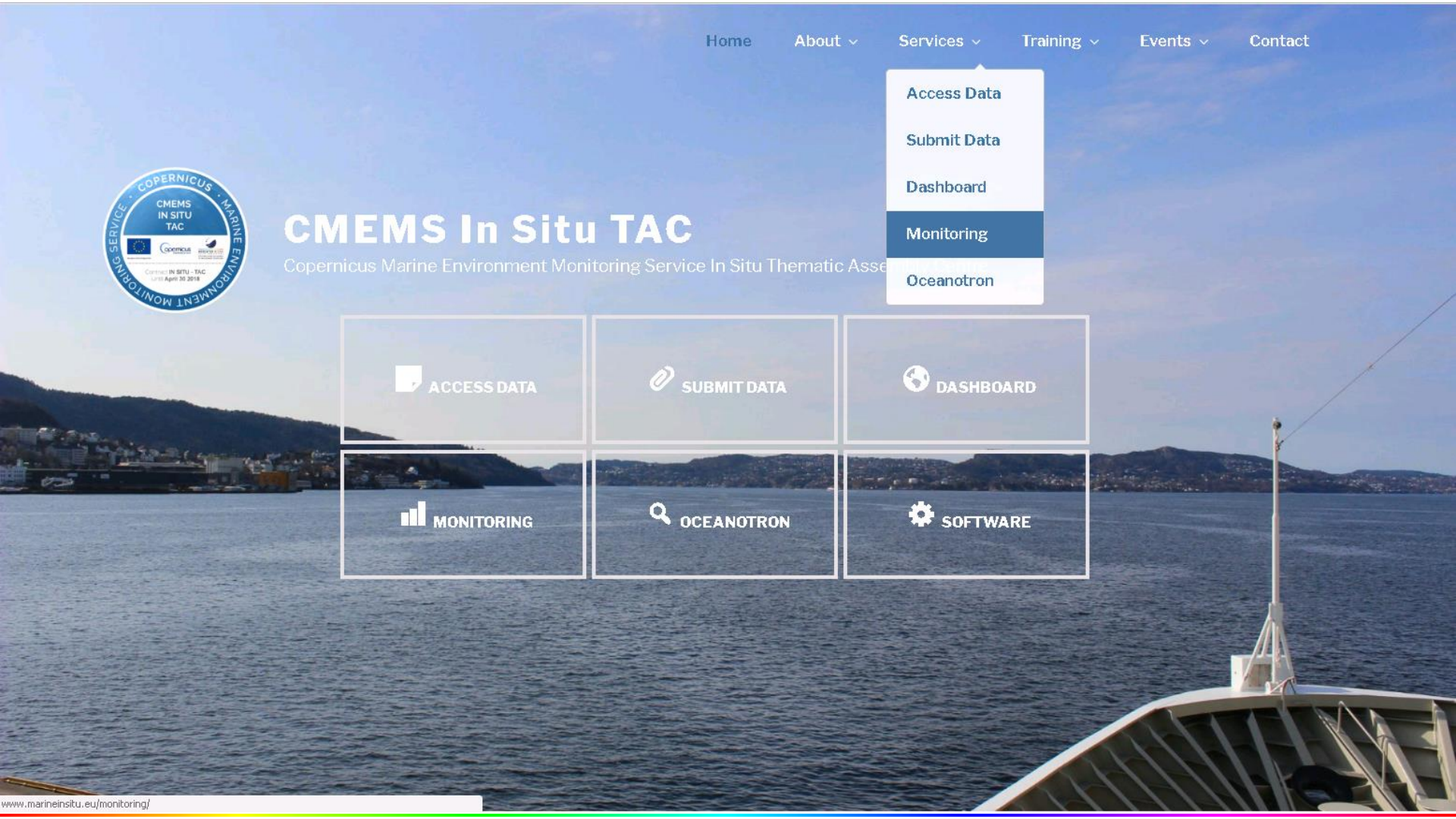
  Planned NRT & REP for 2019
- Prepare **Ocean Monitoring Indicators** (OMIs)

  Planned for 2018, 2019 & 2020

New In Situ TAC web site: http://www.marineinsitu.eu/



Monitoring
http://www.marineinsitu.eu/

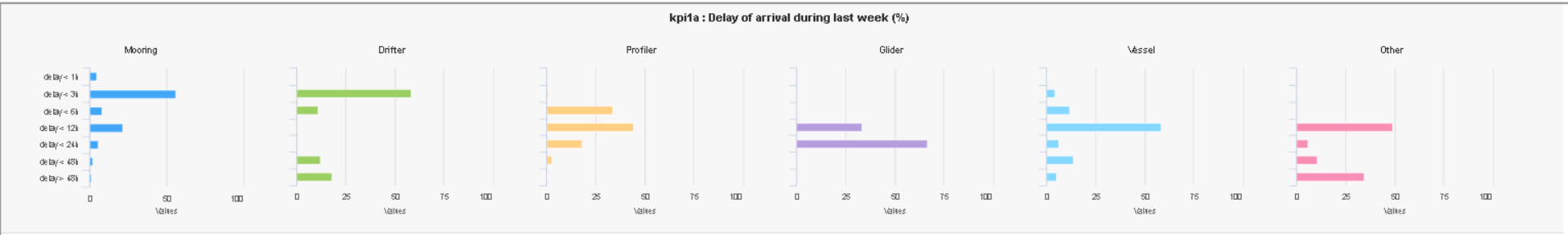


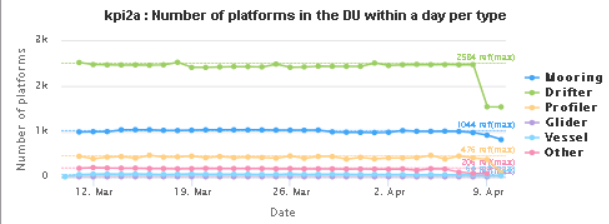
Monitoring http://www.marineinsitu.eu/

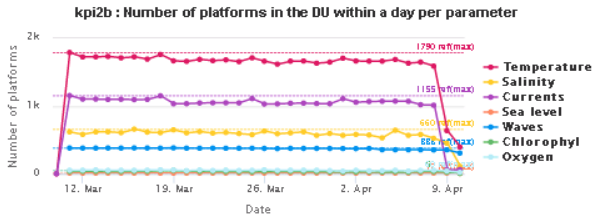
CMEMS In Situ TAC

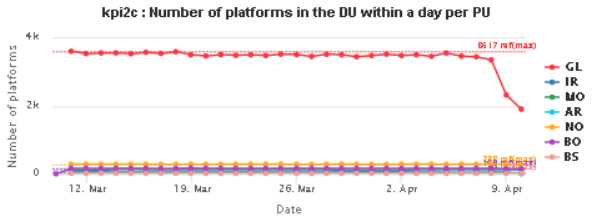
Copernicus Marine Environment Monitoring Service In Situ Thematic Assembly Centre

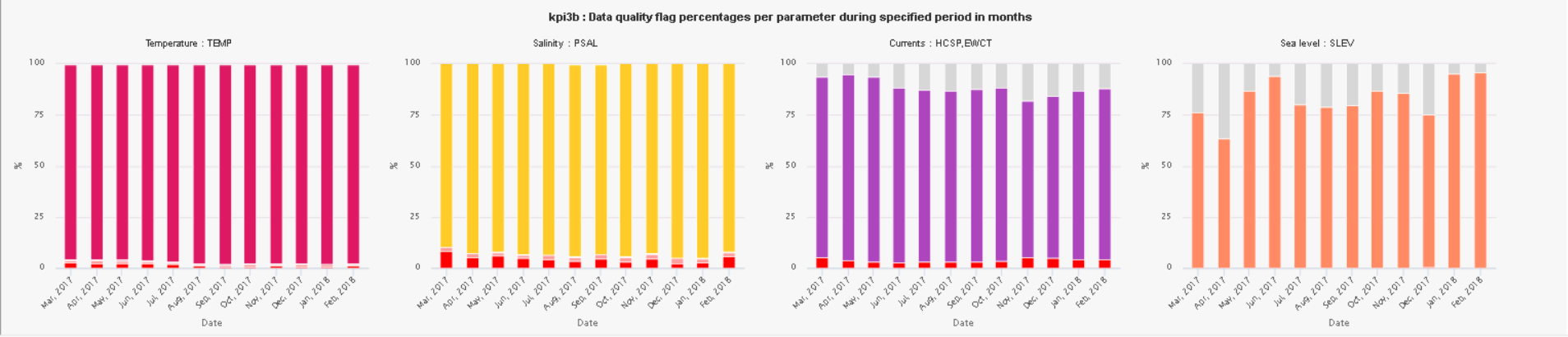
Home | About | Services | Training | Events | Contact



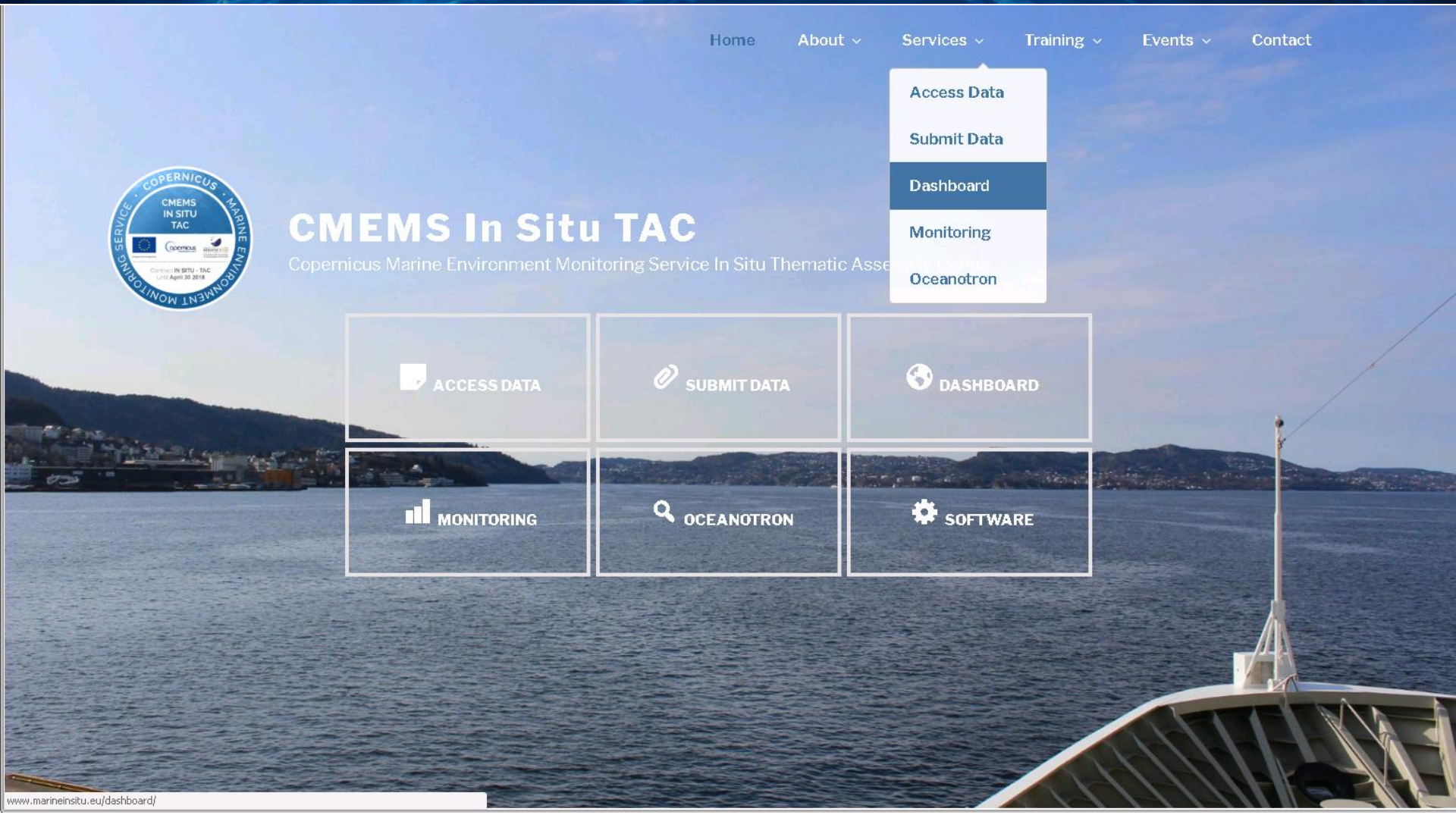








Dashboard
http://www.marineinsitu.eu/



Dashboard
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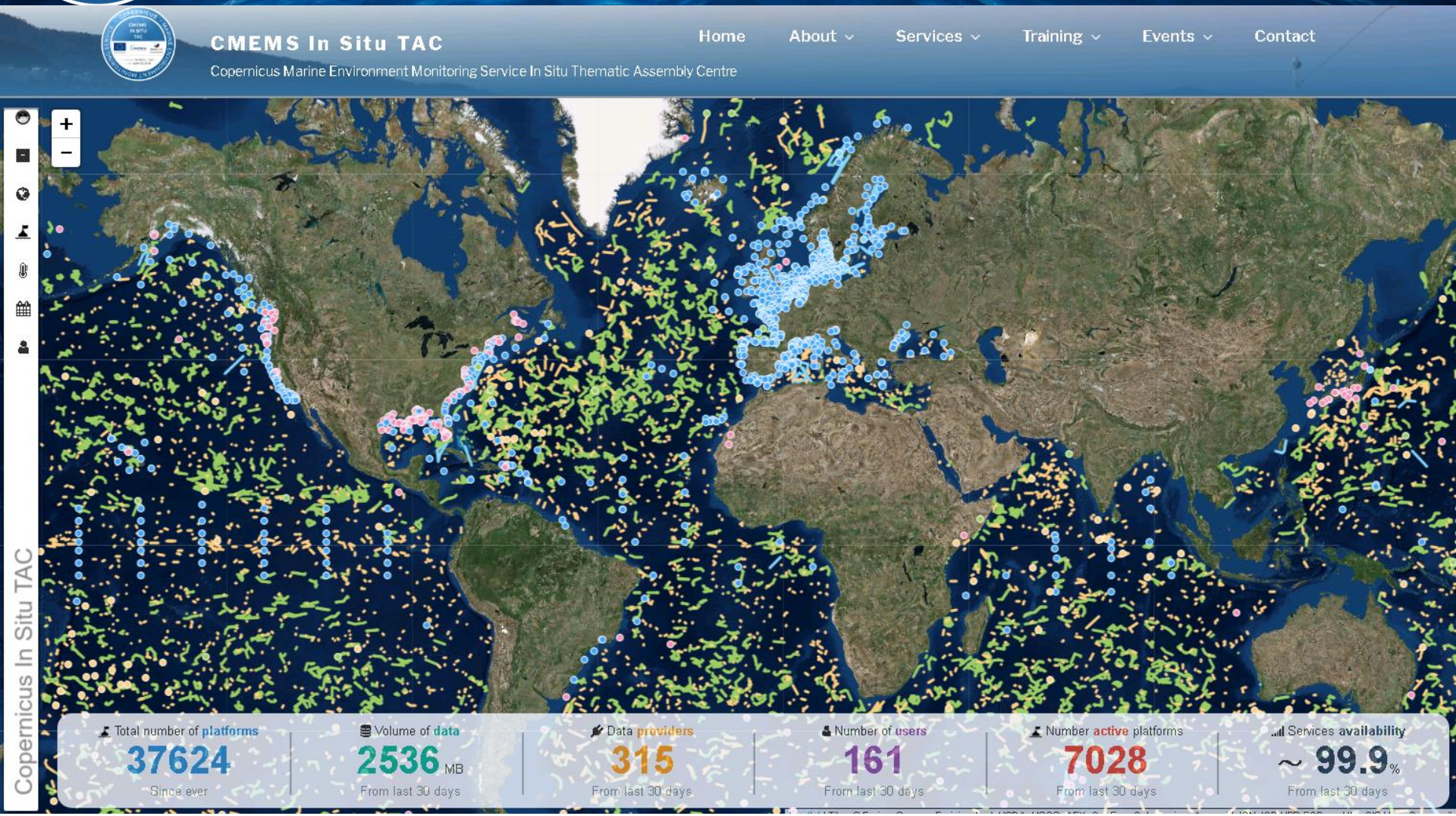

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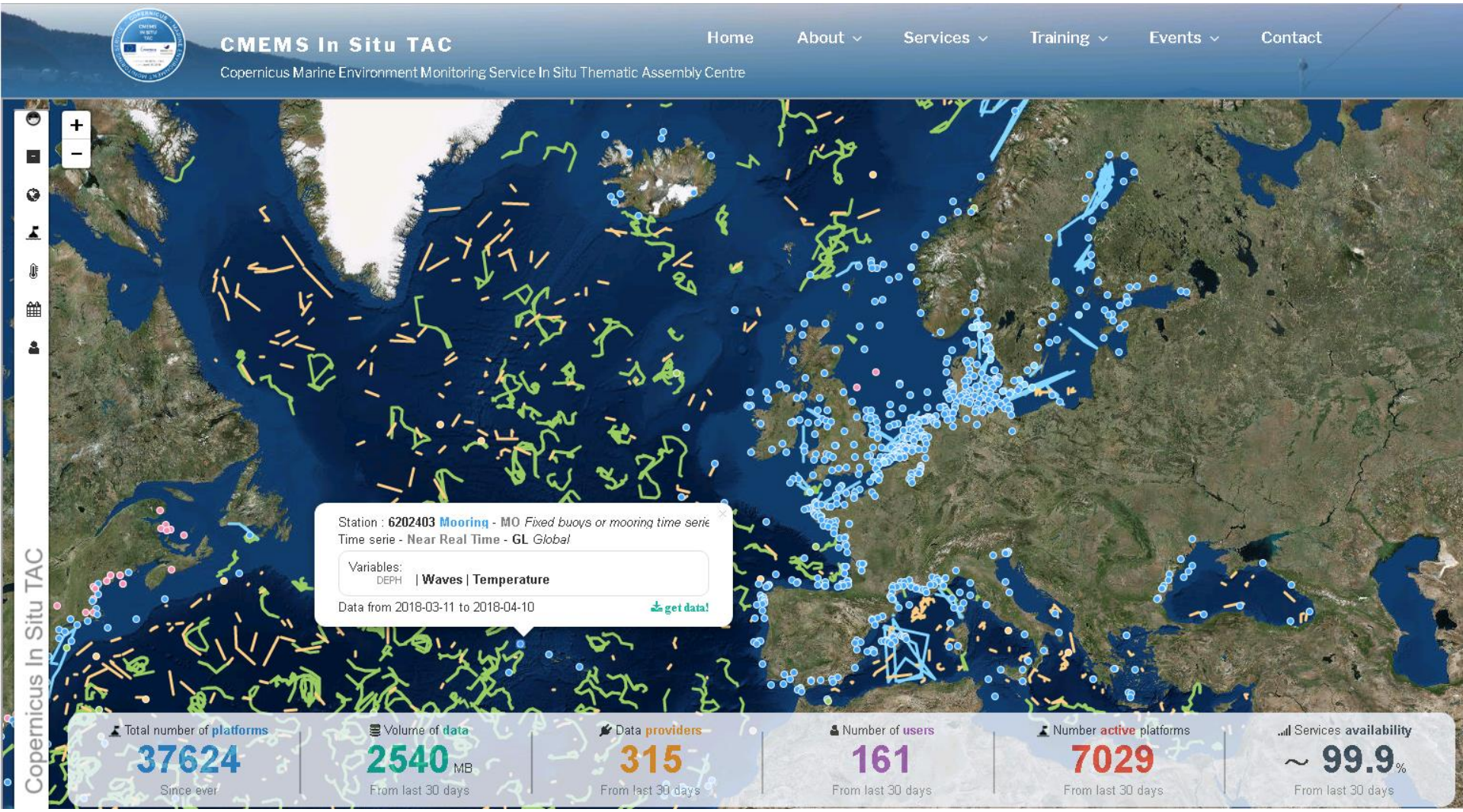


New web site: http://www.marineinsitu.eu/

In Situ TAC web site is not finished yet:

Missing acknowledgement of the providers!

- **Managed by EDMO (**SDN European Directory of Marine Organizations**) codes**
- **Waiting for some regions to implement it**
- **The name of the provider, logo & URL will appear**

➔ **Very soon!!**

Why Share data with CMEMS INSTAC

- **Adding value to the data**: making data available via CMEMS INSTAC allows datasets to be combined to create data products and improve CMEMS products in your area of interest. Underlying data sources are always carried with the data.

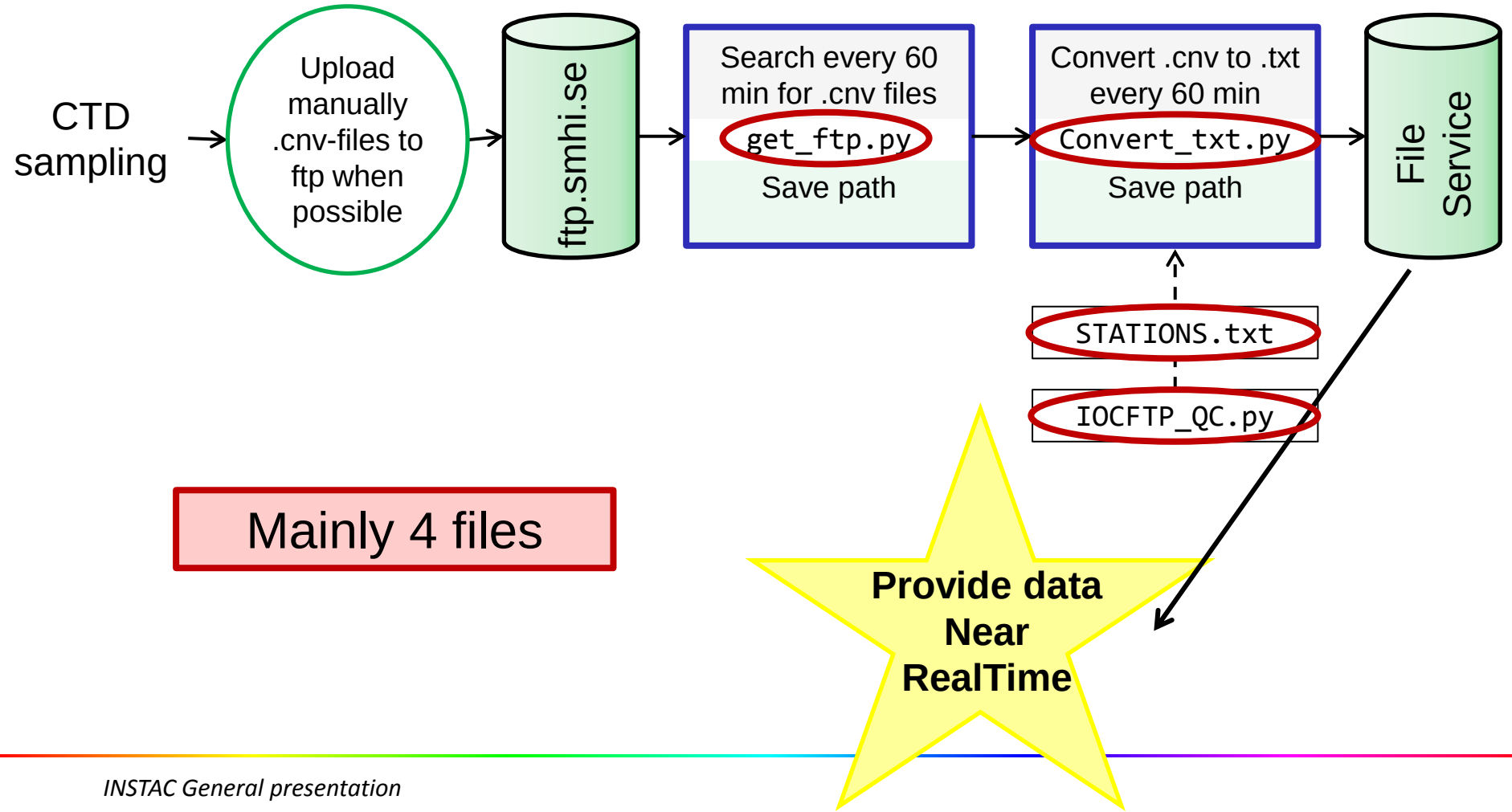
- **Satisfying funding requirements**: Increasingly funding bodies and governments require that data obtained using public funds are made freely available. Submitting data and making it available via CMEMS INSTAC ensures data is publicly shared for re-use in particular with EMODnet and SeaDataNet.

- **Enhancing Data Quality** : Making a data set available to CMEMS INSTAC allows you to benefit to additional assessment especially during the elaboration of historical products where coherency with neighboring observations is performed and feedback on anomalies detected provided back to providers .

CMEMS INSTAC - BOOS

- Provide **bottle data** from the SMHI's monthly monitoring cruises
- Include more **sea level stations** (with a common reference level) due to a collaboration between SMA (Swedish Marine Agency) and SMHI.
- Include more **near real time ship data** to BOOS/CMEMS?

NRT ship data exchange



Automatic QC

- Quality control flags: 0-9
- For every station: Monthly characteristic values per parameter and depth
- MIN, MAX, MEAN, STD
- THRH threshold high value for the spike test
- RCNT repeated observations (time) for the flat line test
- TEPS tolerance value for the flat line test to allow for a numerical round-off error,EPS
- NOBS number of observations

Is a second work shop wanted?

THANKS FOR YOUR ATTENTION