



marine.copernicus.eu



CMEMS

Copernicus Marine Environment Monitoring Service: An in situ operational data provision system for operational oceanography

Petit de la Villeon, Sylvie Pouliquen, Henning Wedhe, Joaquin Tintore, Thierry Carval, Lid Sjur Ringheim, Susanne Tamm, Stéphane Tarot, Veselka Marinova, Leonidas Perivoliotis, Marta De Alfonso-Muñoyerro, Thomas Hammarklint, Fernando Manzano Muñoz, Charles Troupin, Kevin Balem and Corentin Guyot



In Situ Observations

"Without sufficient observations, useful prediction will likely never be possible. Models will evolve and improve, but, without data, will be untestable, and observations not taken today are lost forever"

C. Wunsch et al. (2010) PNAS

From an idea from Fernando Manzano Muños (PdE)



Outlines

- Copernicus general presentation
- CMEMS Copernicus Marine Environment Monitoring Service
- The IN SITU Component of the CMEMS (INSTAC)
 - Rationale
 - Challenges are to maintain:
 - Near real-time data delivery
 - Reprocessed datasets delivery (CORA)
 - Catalogue and visibility of the products
 - Documentation
 - Enhanced data delivery facilities
 - Service desk
 - Next steps



Copernicus, EU program with a strong marine component

SATELLITES



IN SITU



SERVICES



MARINE

ATMOSPHERE

LAND

SECURITY

EMERGENCY

CLIMATE

Copernicus includes 3 components (space, in situ and services)

The services component includes a Marine Monitoring service



GROWTH

Internal Market, Industry, Entrepreneurship and SMEs



The Copernicus Marine Service,
 prepared with and invented by the
 marine community :
 60 partners / 28 countries





The Copernicus Marine Environmental Monitoring Service - CMEMS

REAL-TIME
Daily, hourly

FORECAST
2 to 10 days

**IN SITU
OBSERVATION**

REANALYSES
10 to 45 years

Delayed mode

*ESSENTIAL MARINE
VARIABLES*



- 1 Global
- 2 Arctic
- 3 Baltic
- 4 NWS
- 5 IBI
- 6 Med Sea
- 7 Black Sea

DISCOVER

VIEW

DOWNLOAD

Open & Free

CURRENTS

**TEMPERATURE
SALINITY**

SEA LEVEL

SEA ICE

SEA WIND

**BIOGEO
CHEMISTRY**



Areas of benefits

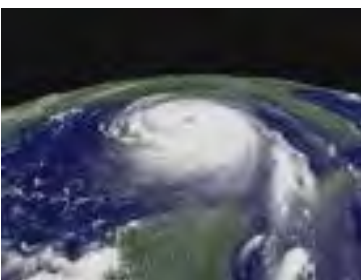


Coastal & marine environment



Marine resources

Weather, climate & seasonal forecasting



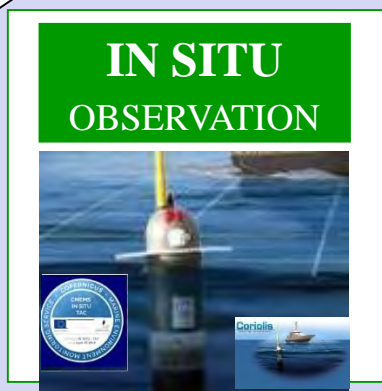
Maritime safety



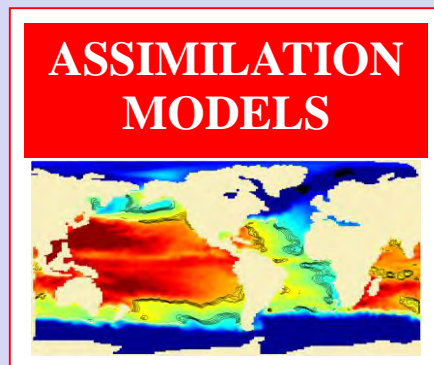


General System

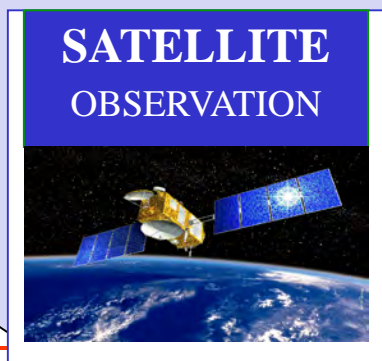
CMEMS



Assimilation
Near real-time

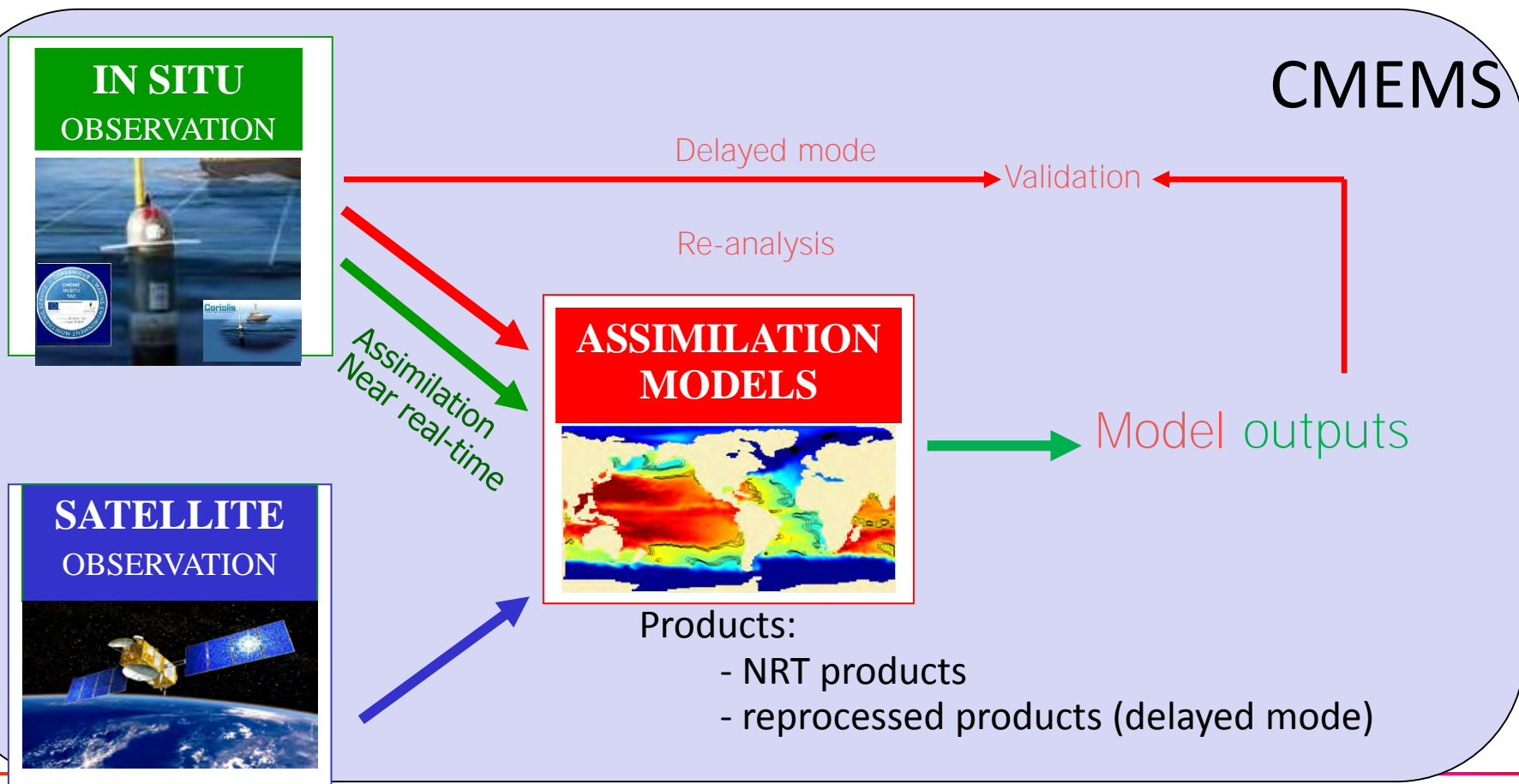


Model outputs



Products:
- NRT products

General System





General System

Near real-time


Other uses
(monitoring, alerts,
climate studies)

Delayed mode

**IN SITU
OBSERVATION**



**SATELLITE
OBSERVATION**



CMEMS

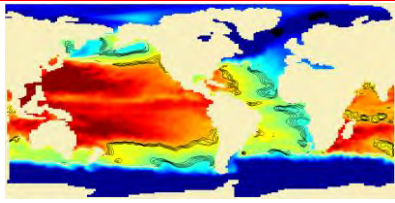
Delayed mode

Validation

Re-analysis

Assimilation
Near real-time

**ASSIMILATION
MODELS**



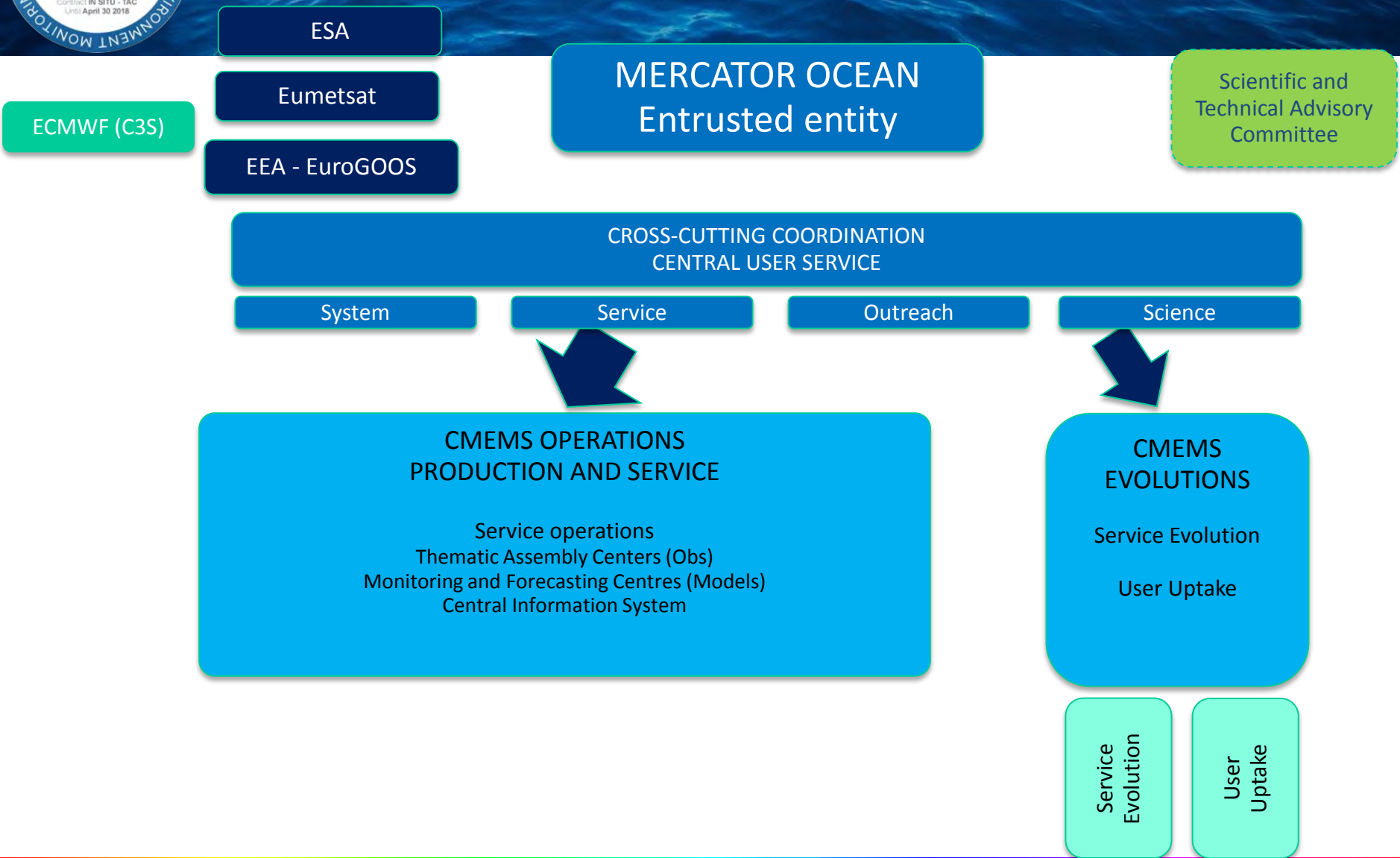
Model outputs

Products:

- NRT products
- reprocessed products (delayed mode)

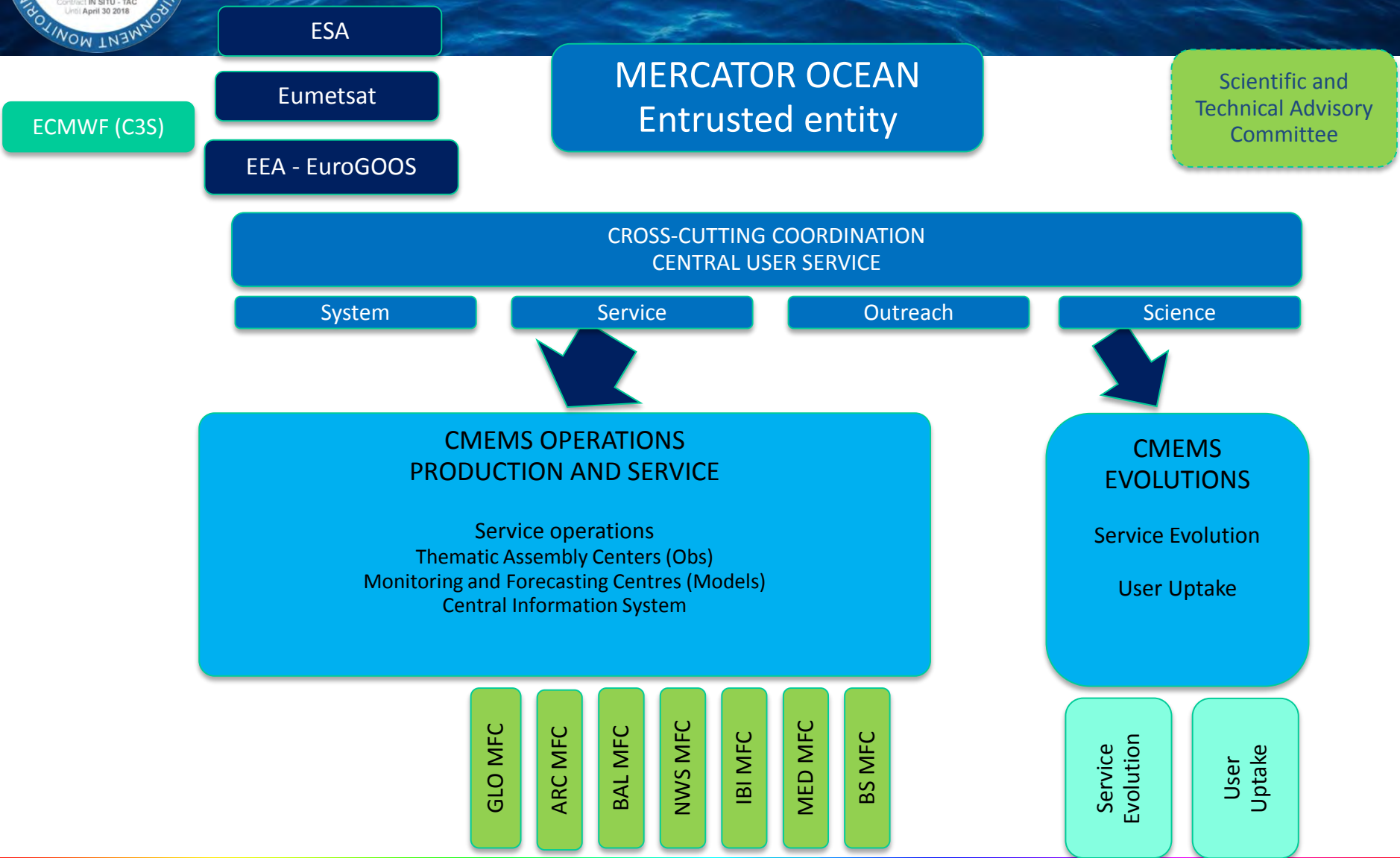


Copernicus Marine Service organisation



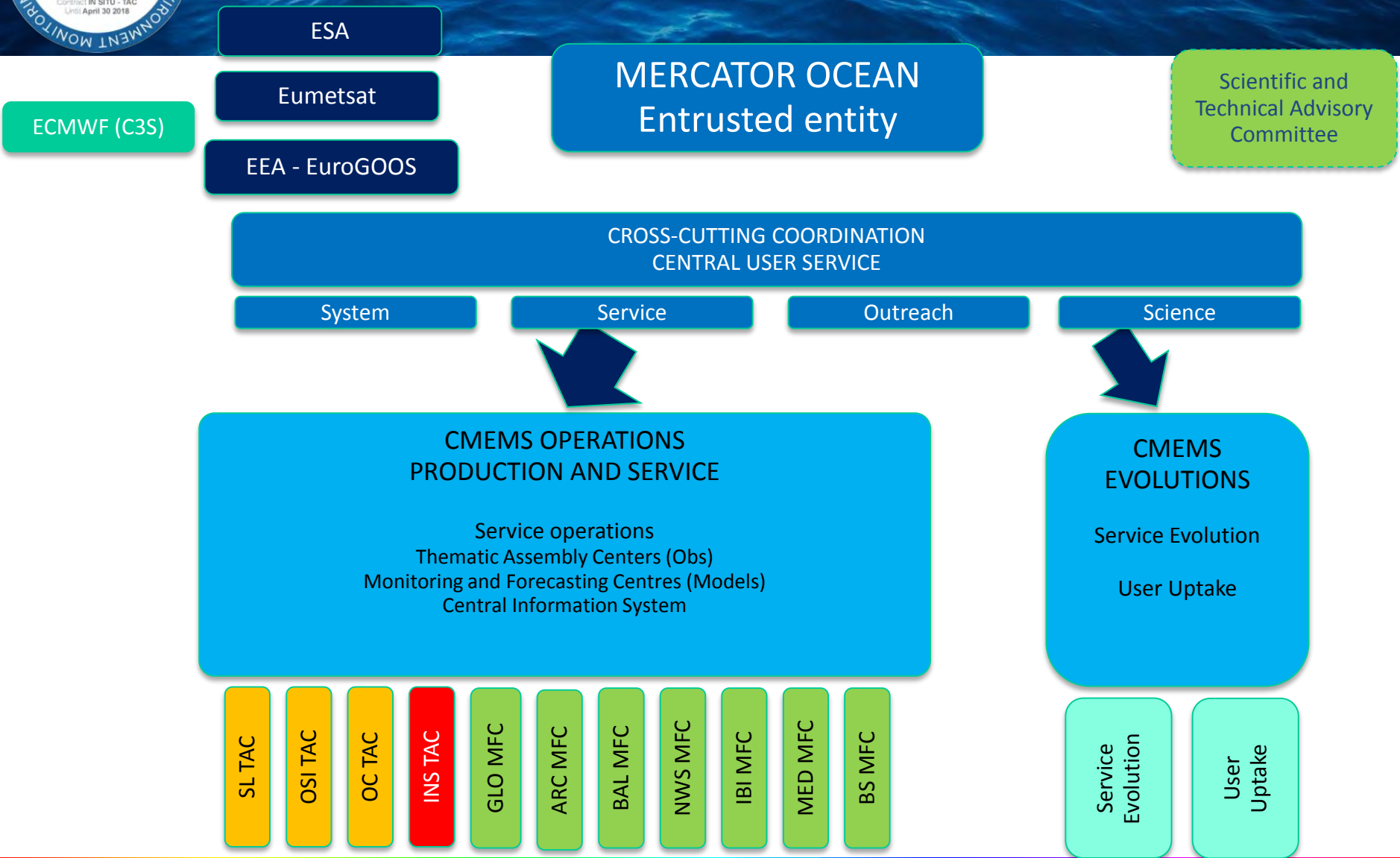


Copernicus Marine Service organisation



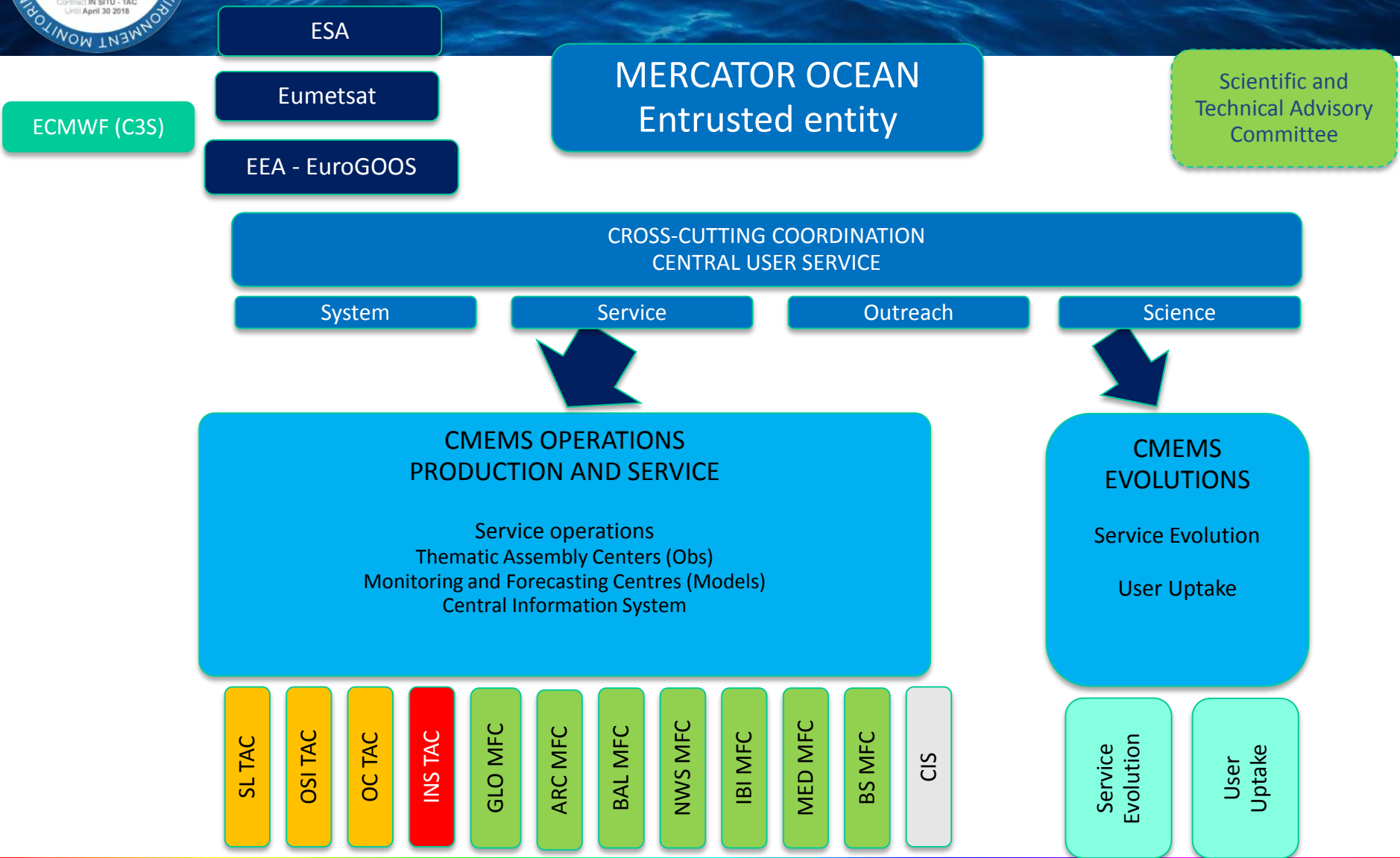


Copernicus Marine Service organisation





Copernicus Marine Service organisation





Challenges

So, in this context, what are the challenges for the IN SITU TAC ?

- To be able to provide an operational NRT ocean data delivery service
- To be able to provide an operational delayed mode (Reprocessed datasets) ocean data delivery service
- At both global and regional levels



Challenges

So, in this context, what are the challenges for the IN SITU TAC ?

- To be able to provide an operational NRT ocean data delivery service
- To be able to provide an operational delayed mode (Reprocessed datasets) ocean data delivery service
- At both global and regional levels

And in addition

- To maintain a helpdesk which will be the link with the data users and data providers
- To proper deliver the detailed corresponding documentation
- To update on a regular basis the product catalogue
- To monitor carefully the service availability



Challenges

So, in this context, what are the challenges for the IN SITU TAC ?

- To be able to provide an operational NRT ocean data delivery service
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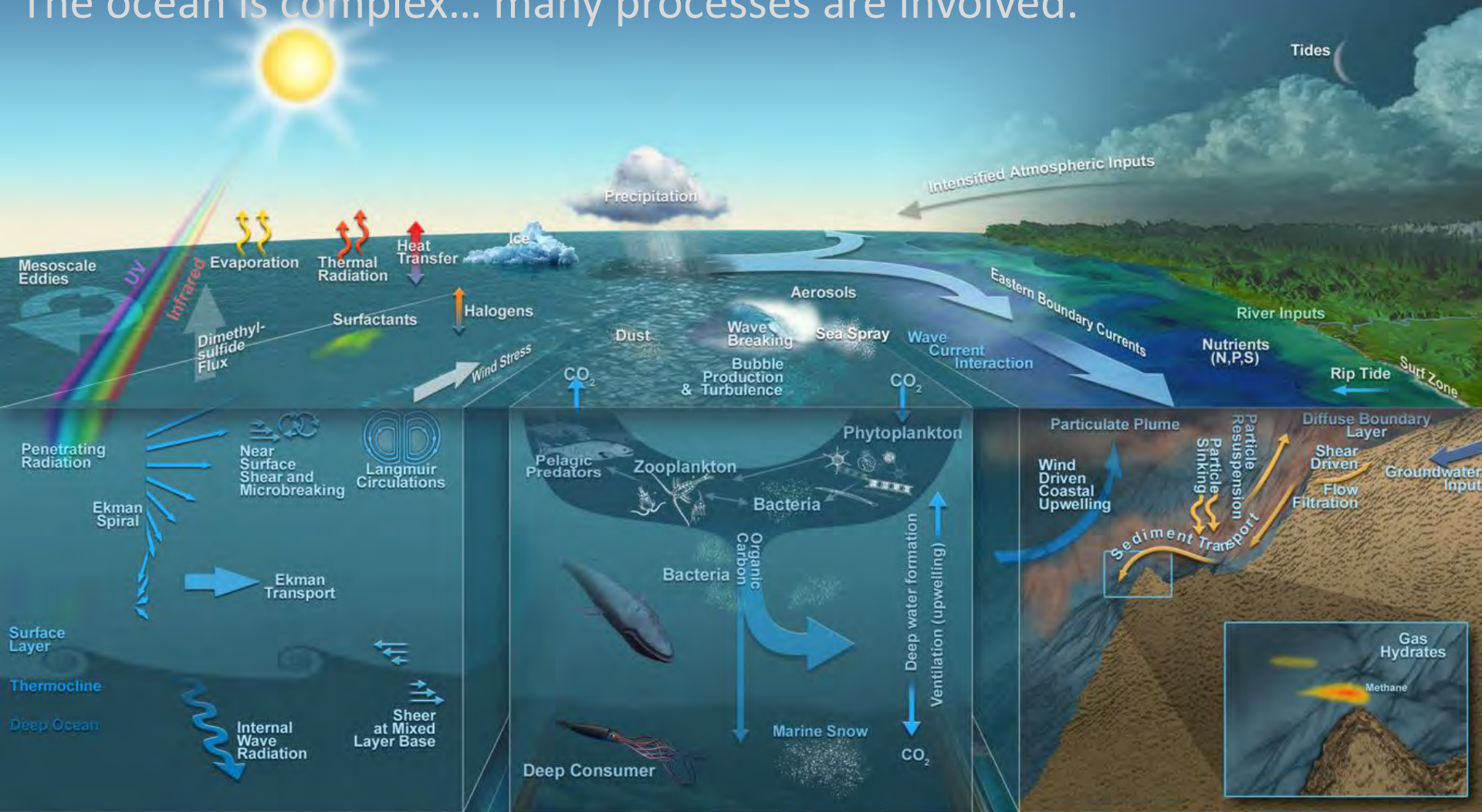
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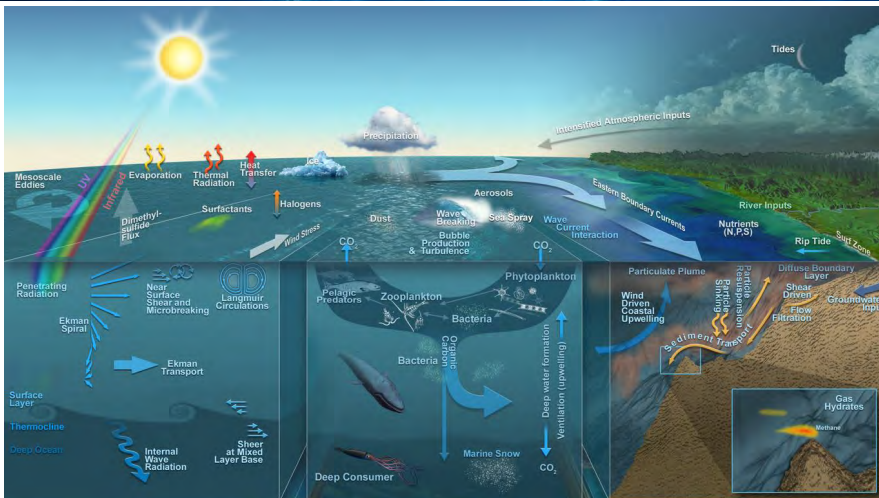
- Versions 1 focussed on **Temperature & Salinity data**
- Versions 2 is focussing on Temperature & Salinity data + **Current data**
- Version 3 will take into account Version 2 + **waves parameters**
- Version 4 will take into account Version 3 + **Biogeochemical parameters**

In Situ Observations

The ocean is complex... many processes are involved.



In Situ Observations



The ocean is complex... many processes are involved.

And

the way we observe it is also complex



A multi-platform approach is essential



Credit: Global Ocean Observing System Office (IOC-GOOS)



In Situ Observations

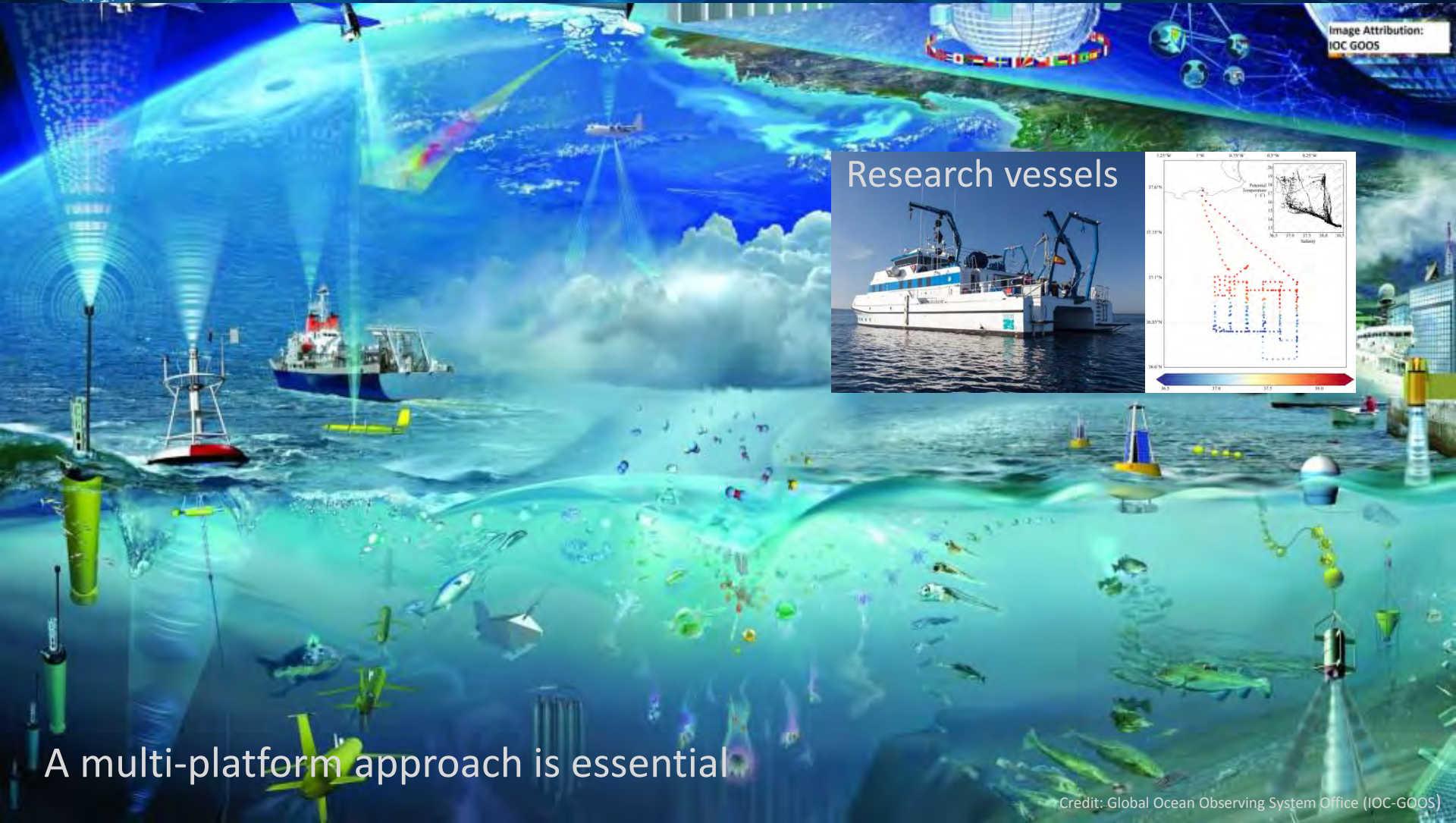
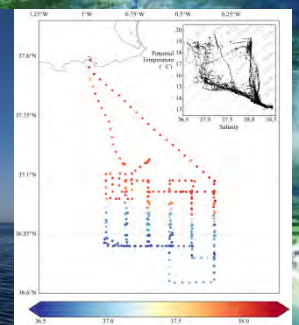


Image Attribution:
IOC GOOS

Research vessels



A multi-platform approach is essential

Credit: Global Ocean Observing System Office (IOC-GOOS)



In Situ Observations

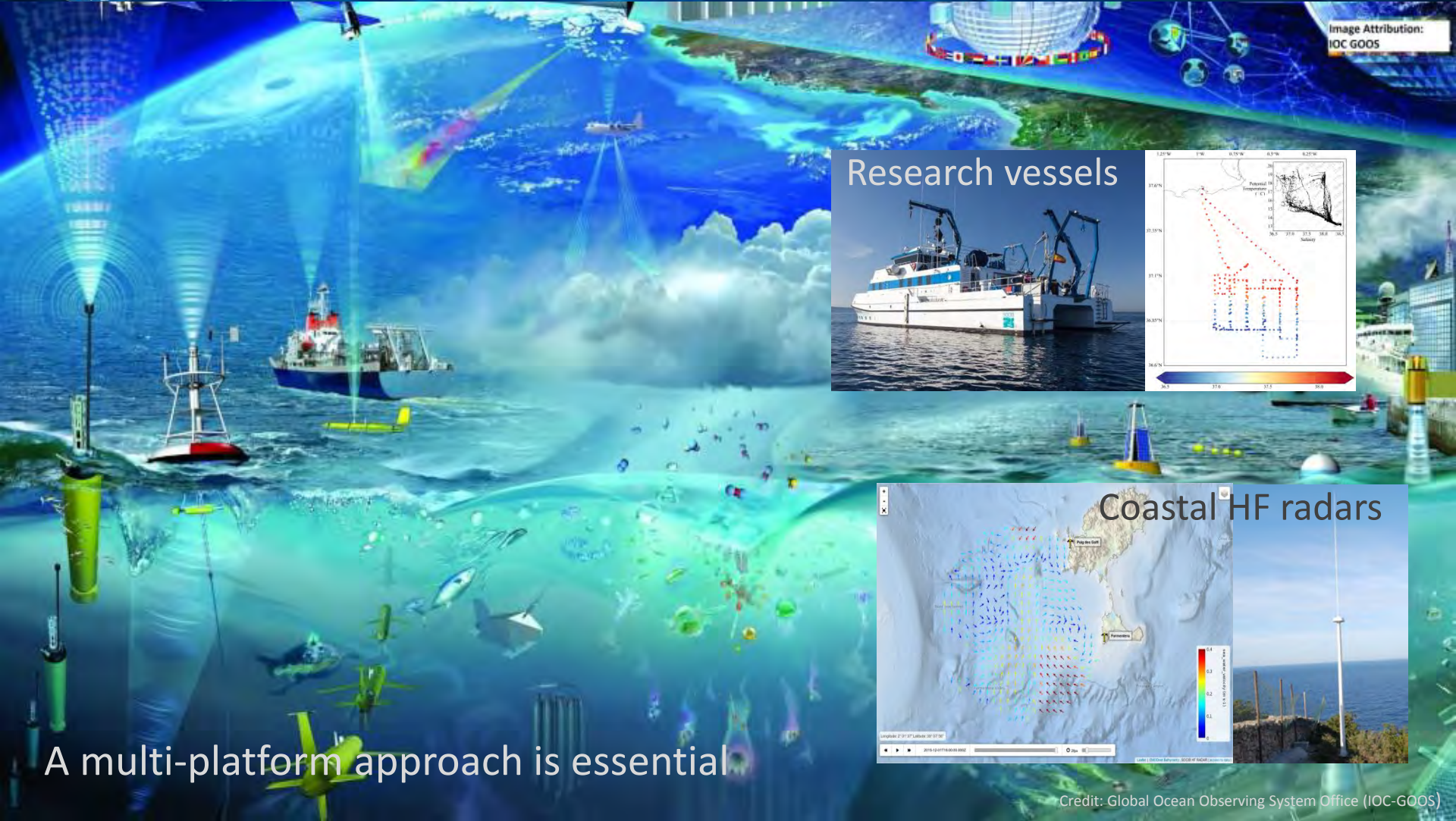
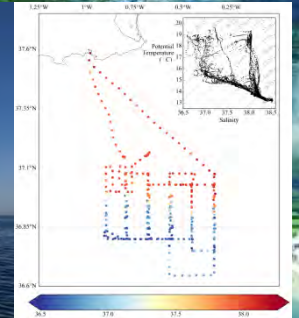
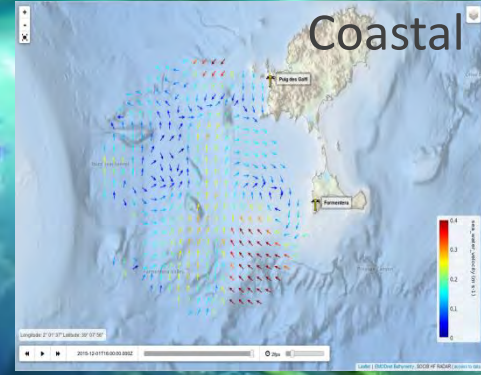


Image Attribution:
IOC GOOS

Research vessels



Coastal HF radars



Credit: Global Ocean Observing System Office (IOC-GOOS)



In Situ Observations

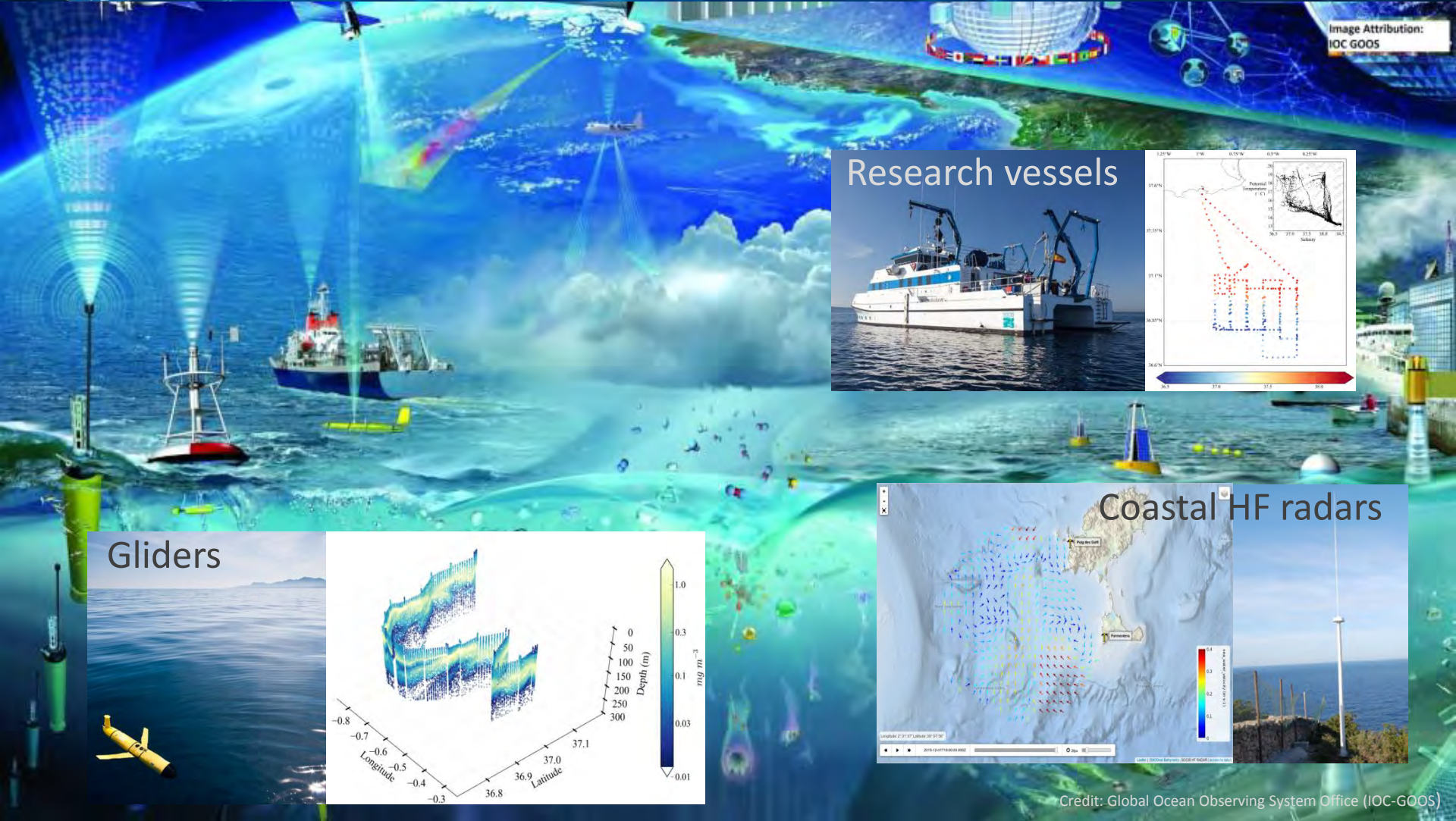
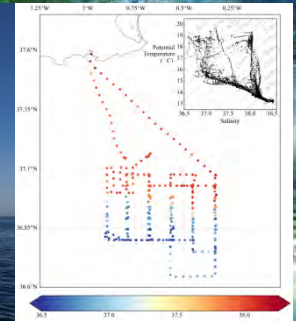
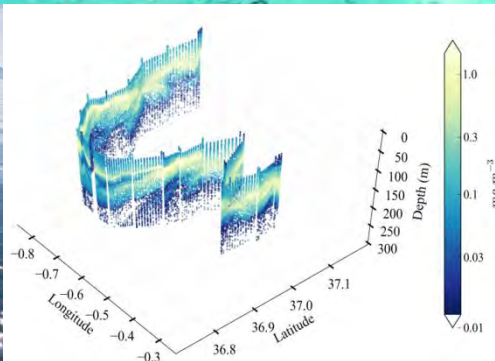


Image Attribution:
IOC GOOS

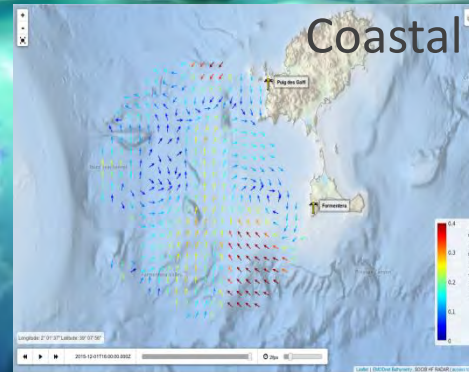
Research vessels



Gliders



Coastal HF radars



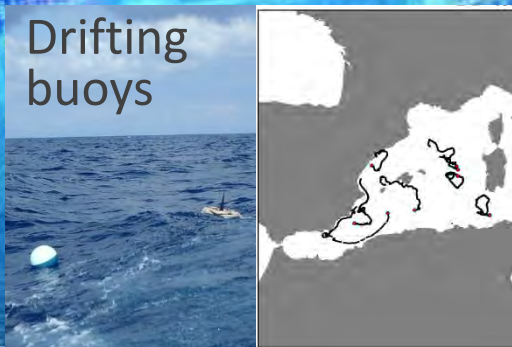
Credit: Global Ocean Observing System Office (IOC-GOOS)



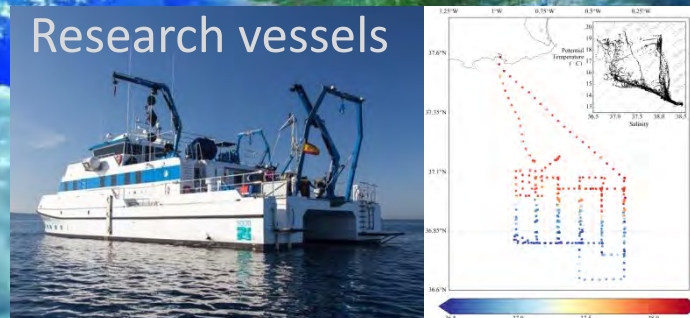
In Situ Observations

Image Attribution:
IOC GOOS

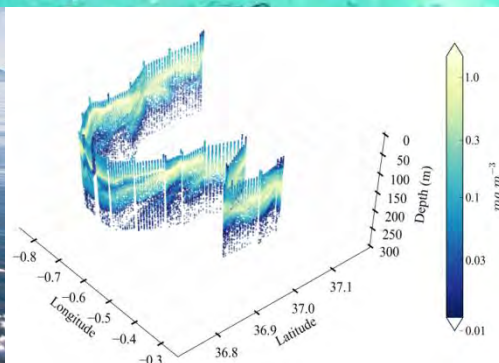
Drifting buoys



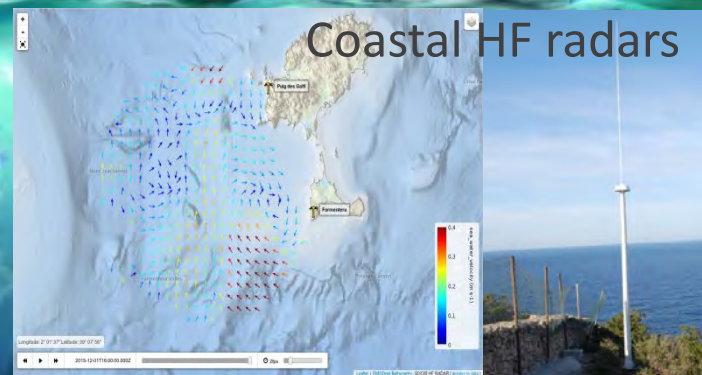
Research vessels



Gliders



Coastal HF radars



Credit: Global Ocean Observing System Office (IOC-GOOS)



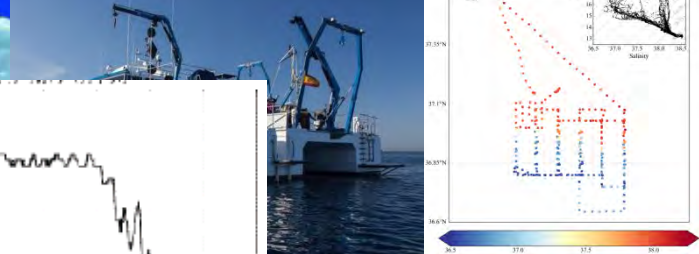
In Situ Observations

Image Attribution:
IOC GOOS

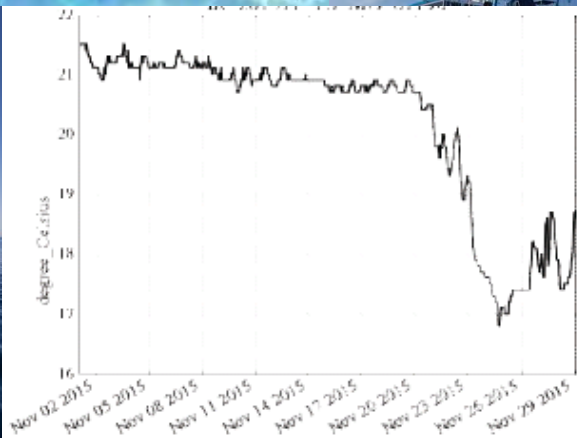
Drifting
buoys



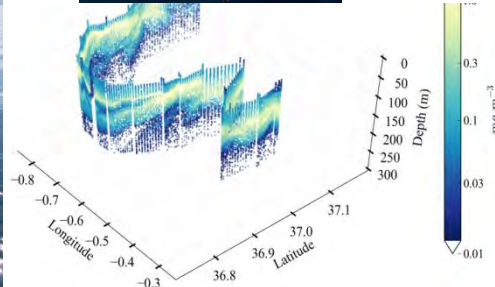
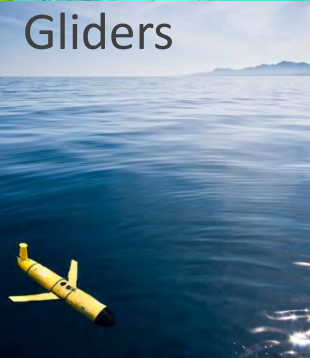
Research vessels



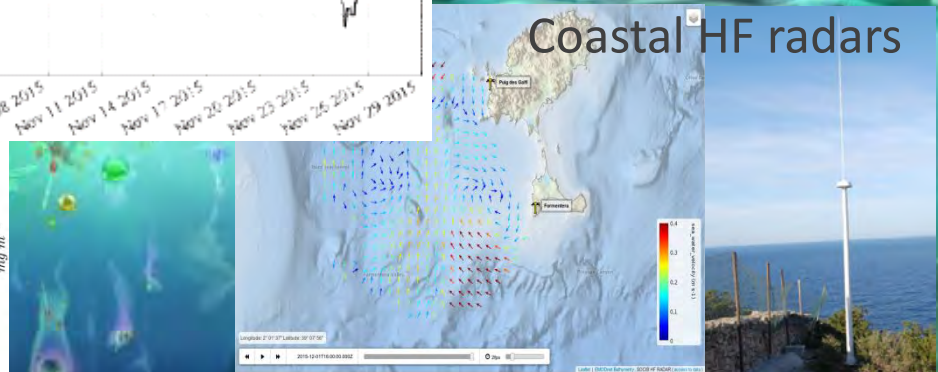
Moorings



Gliders



Coastal HF radars



Credit: Global Ocean Observing System Office (IOC-GOOS)



In Situ Observations

Argo floats

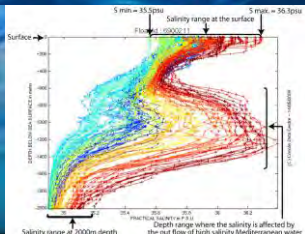
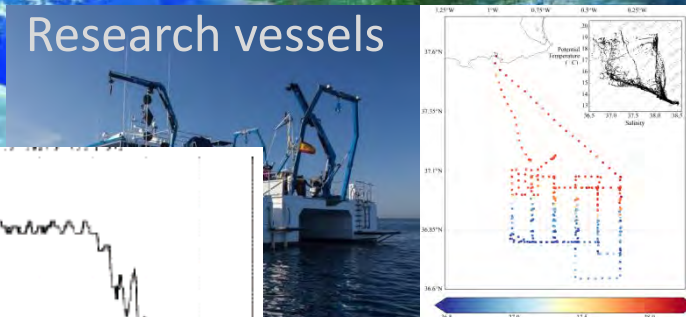


Image Attribution: IOC GOOS

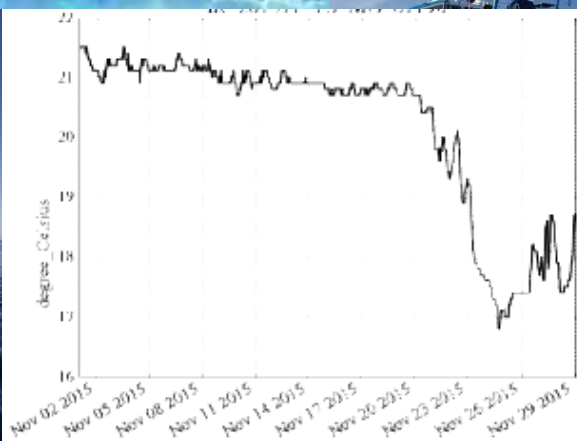
Drifting buoys



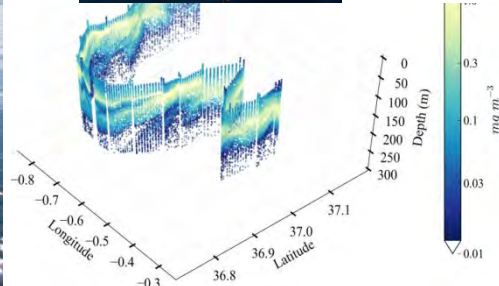
Research vessels



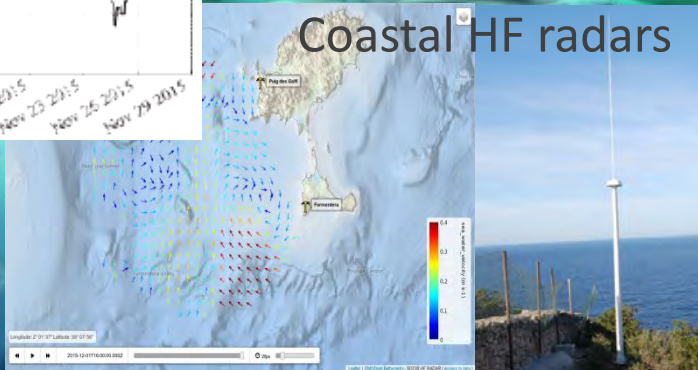
Moorings



Gliders



Coastal HF radars



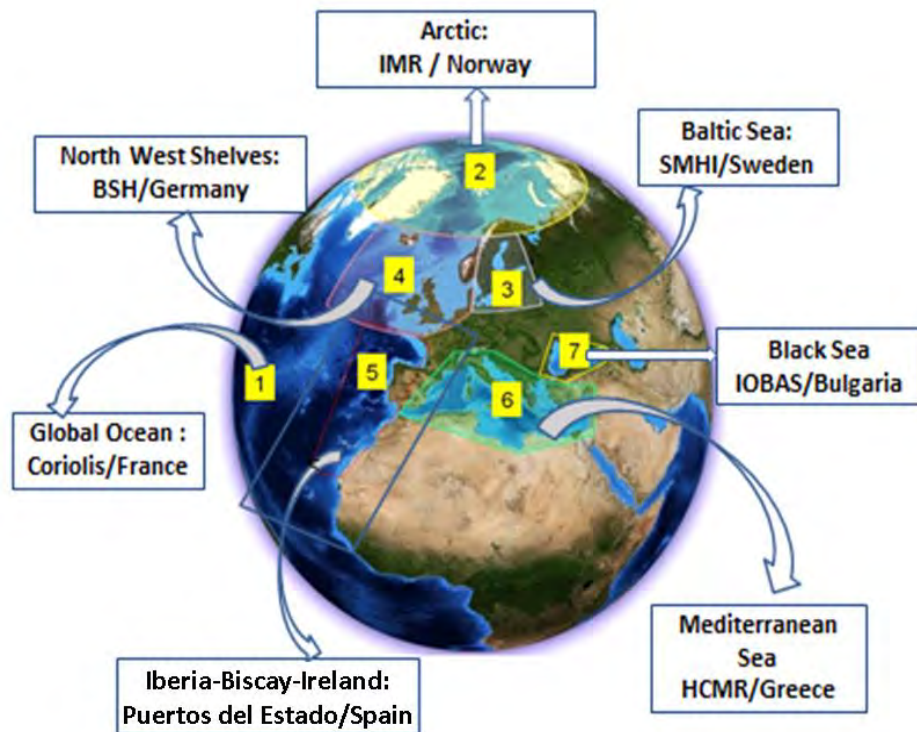
Credit: Global Ocean Observing System Office (IOC-GOOS)



To provide an operational NRT ocean data delivery service

We decided to organise the INSTAC operations with both a regional approach and a global approach

- each region activity is coordinated by a research institute
- Coriolis is in charge of the links with the global networks (JCOMM networks Argo, OceanSites, DBCP, ...)
- The INSTAC activity is coordinated by Ifremer

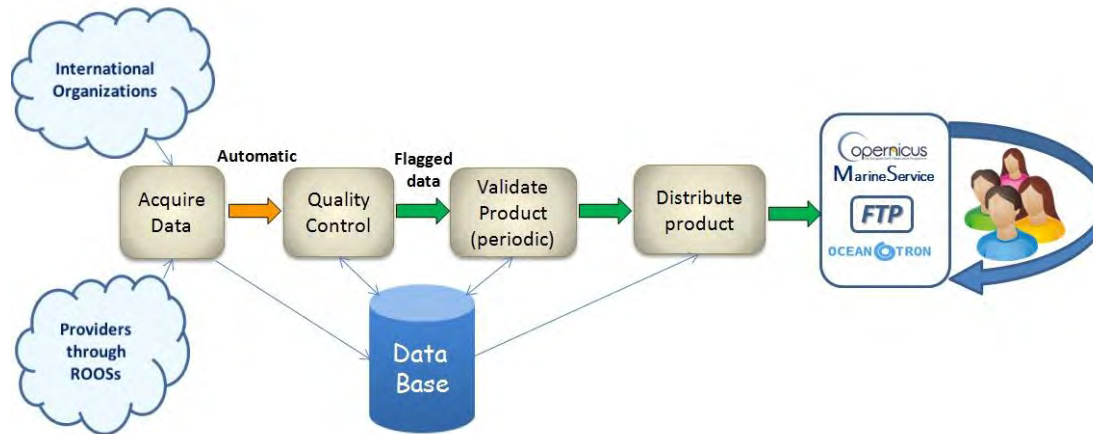


Challenge 1: provide an operational NRT ocean data delivery service

- Distribute in a single place (regional or global) the most comprehensive dataset
 - from different sources or networks
 - from different platforms
 - with different parameters
 - collected at different time periods

-But

- with a unique format
- which pass through consistent and common QC steps



Challenge 1:

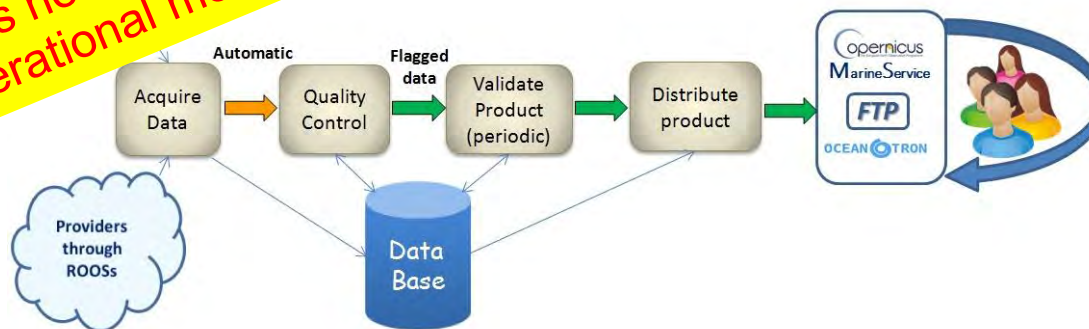
provide an operational NRT ocean data delivery service

- Distribute in a single place (regional or global) the most comprehensive dataset
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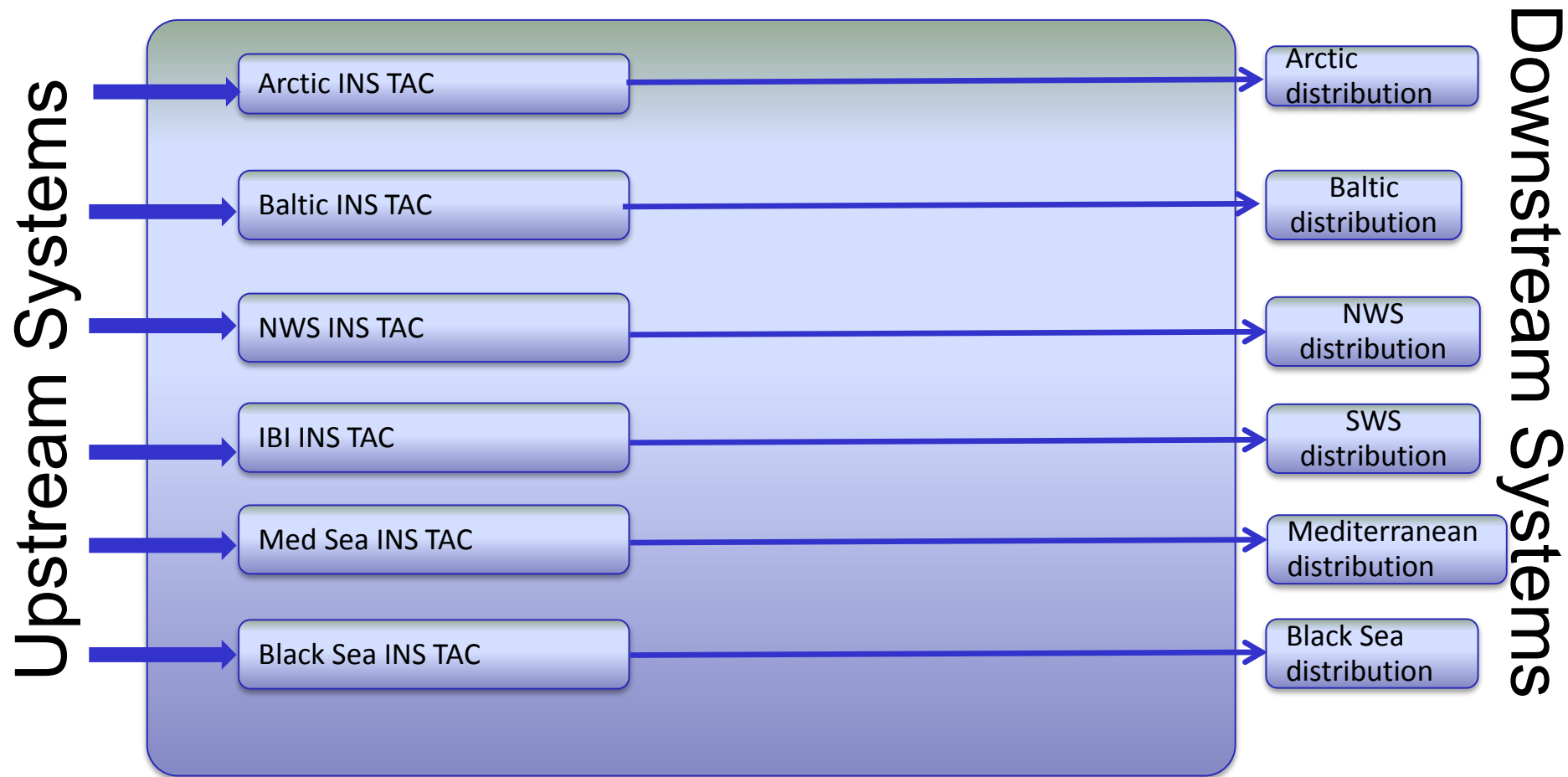
- with a unique set of common QC steps
- which

I know: for all of us, it is our dream. This is our shared challenge. What is new here is to do so in Near real time and in an operational mode !!



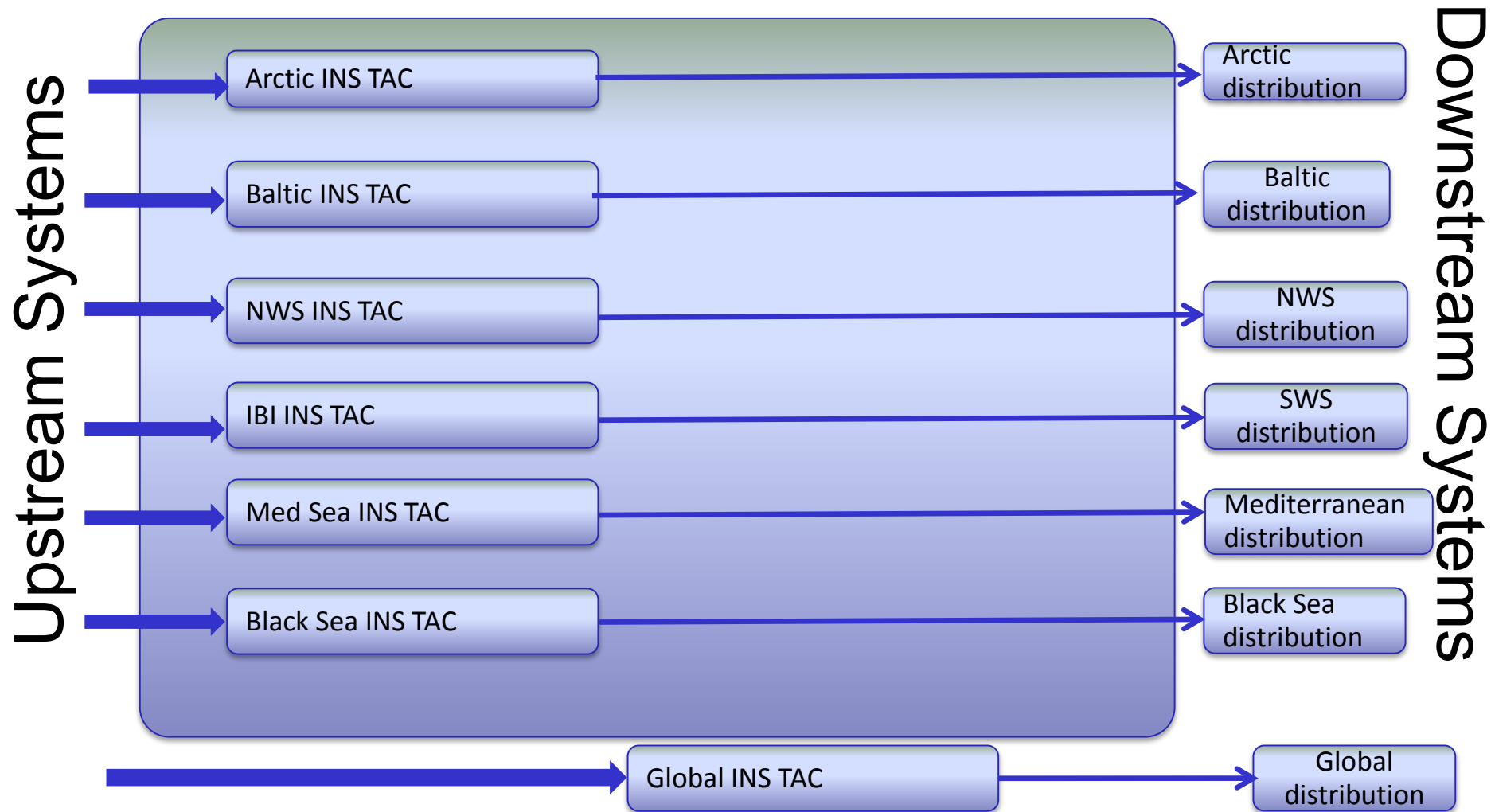


INSTAC organisation



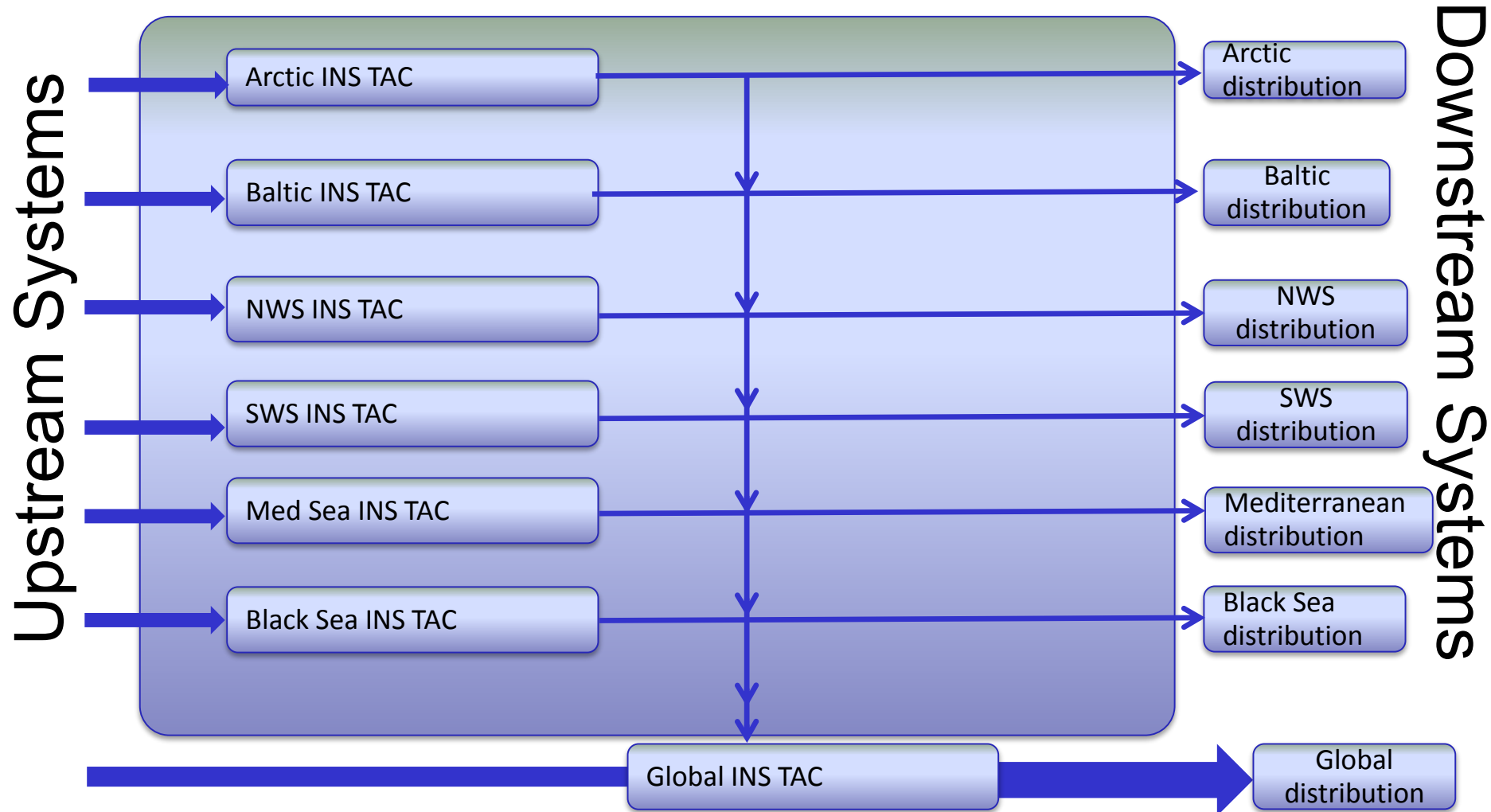


INSTAC organisation



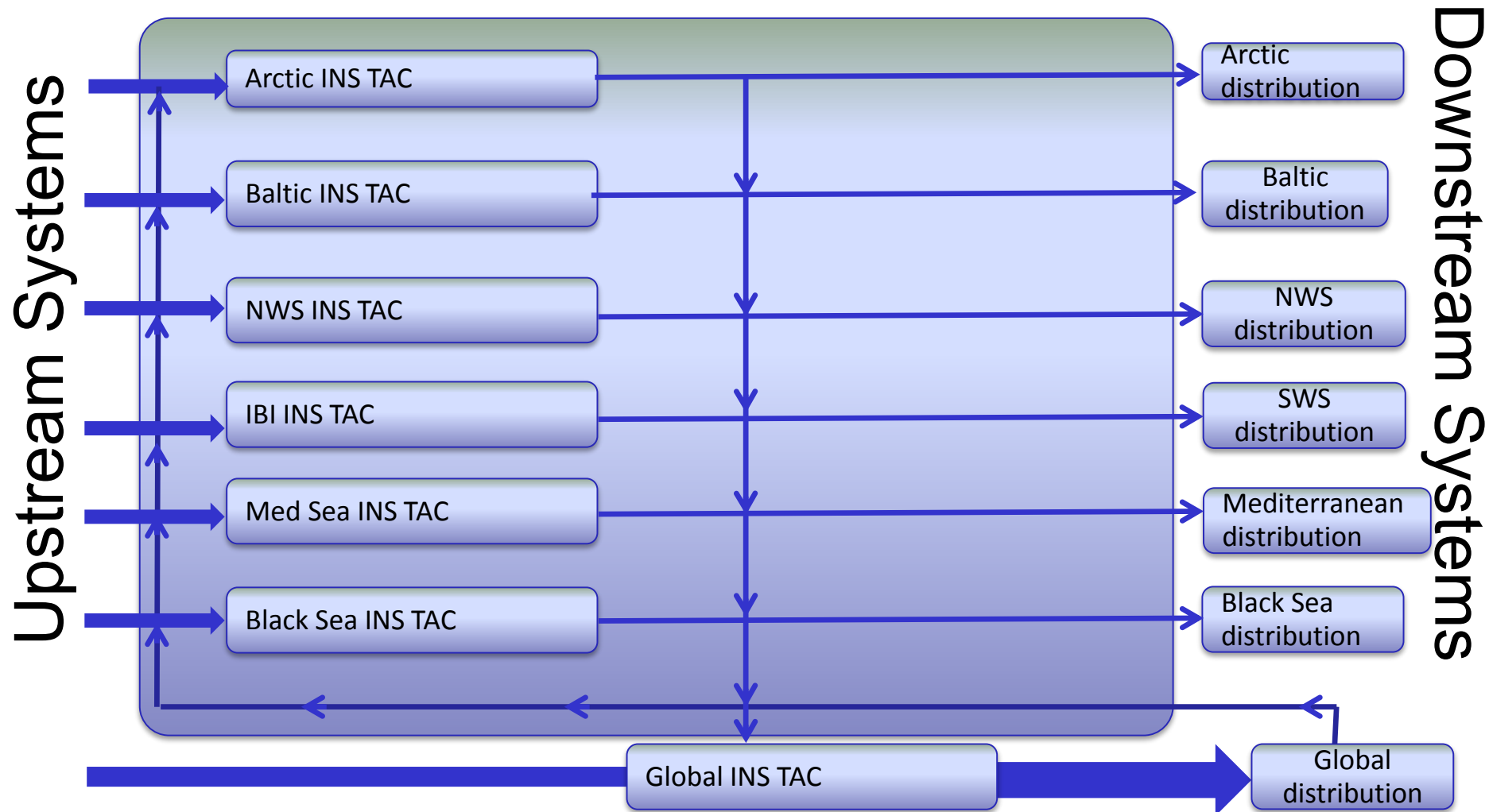


INSTAC organisation





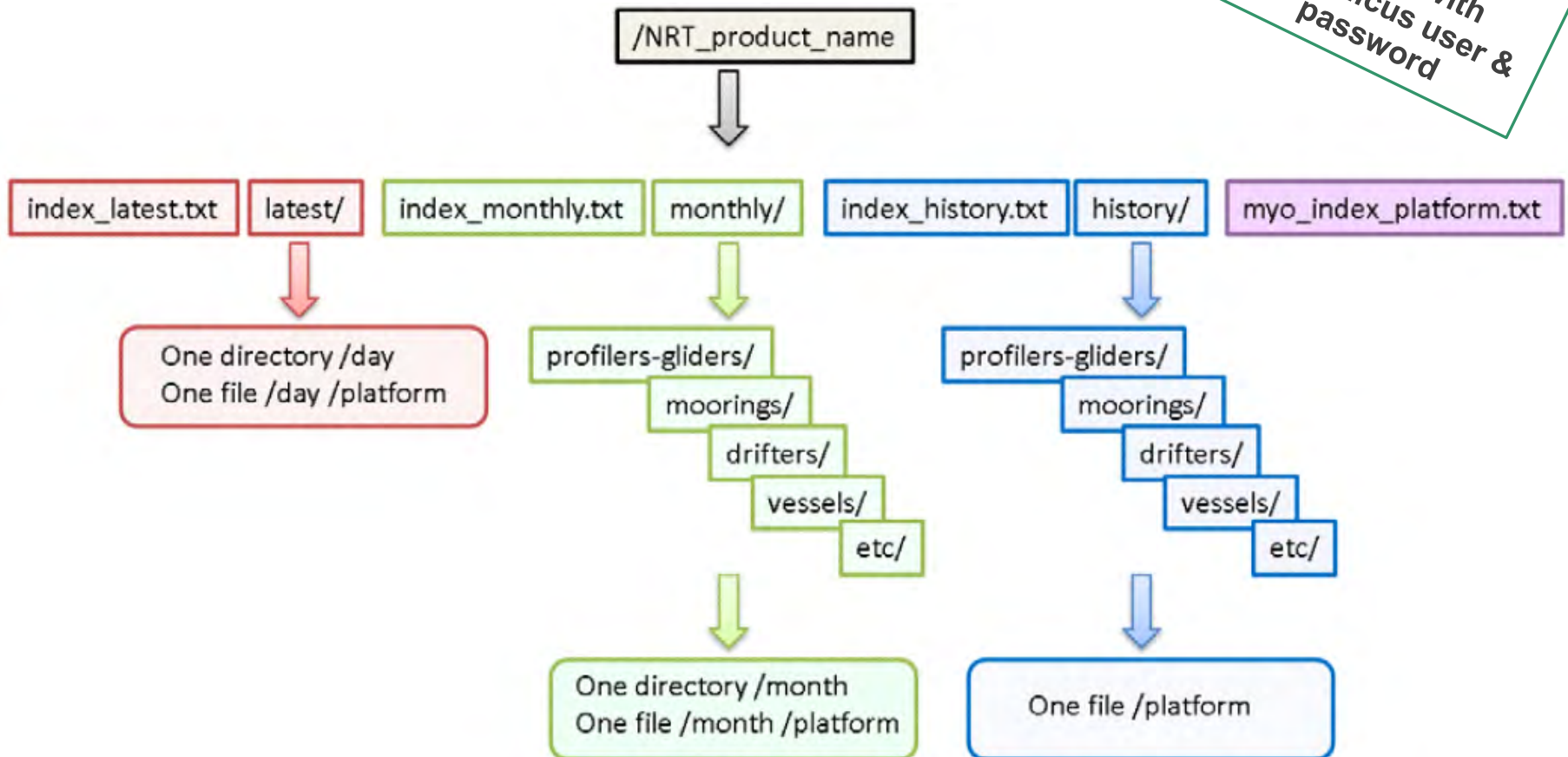
INSTAC organisation



The result is available on an FTP server (NRT)

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

Access with Copernicus user & password





Challenge 2: provide an operational delayed mode ocean data delivery service

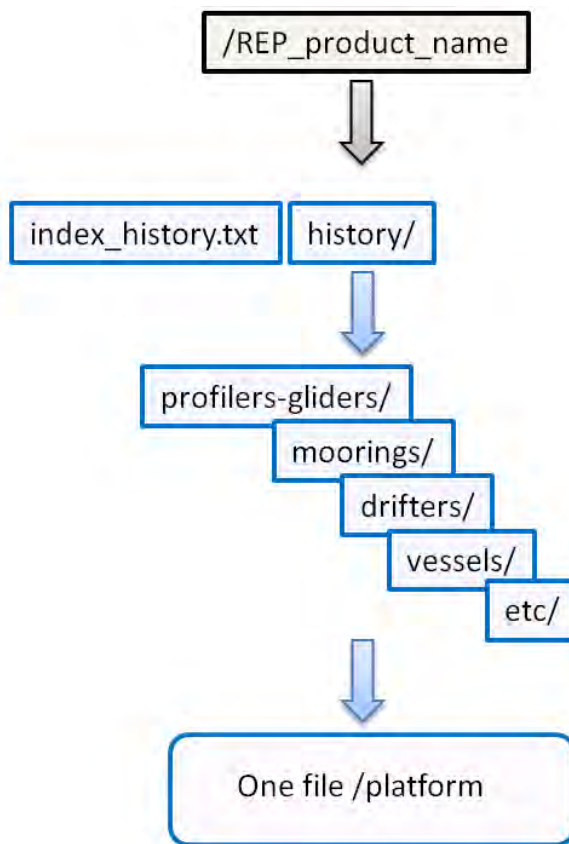
- This includes:
 - Regional reprocessed datasets (rep products)
 - A global reprocessed dataset (CORA Product)



FTP Structure (REP)

REP product: validated and assessed data

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



Access with
Copernicus user &
password



Metadata Index Files

index_latest.txt

```
# Title : in-situ observations catalog
# Description : catalog of available IBI in-situ observations per platform.
# Project : MyOcean (generated by Puertos del Estado-SPAIN).
# Format version : 1.1.
# Date of update : 20151120072253
# product_id,file_name,geospatial_lat_min,geospatial_lat_max,geospatial_lon_min,geospatial_lon_max,time_coverage_start,time_coverage_end,
  provider,date_update,data_mode,parameters
MYO_IBIROOS_01,ftp://arcas.puertos.es/Core/INSITU_IBI_NRT_OBSERVATIONS_013_033/latest/20151109/GL_LATEST_PR_GL_58970_20151109.nc,43.3013,43.38,7.91735,8.03727,2015-
  11-09T01:19:34Z,2015-11-09T22:43:07Z,INSU Institut National des Sciences de l'Univers,2015-11-17T08:12:15Z,R,DC_REFERENCE PRES CNDC TEMP_DOXY CDOM TEMP PSAL
MYO_IBIROOS_01,ftp://arcas.puertos.es/Core/INSITU_IBI_NRT_OBSERVATIONS_013_033/latest/20151110/GL_LATEST_PR_GL_58970_20151110.nc,43.2865,43.3531,7.91254,8.0125,2015
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  15.79102,2015-10-22T00:00:00Z,2015-10-22T23:00:00Z,Puertos del Estado (Spain), 2015-10-24T18:10:03Z,R,DEPH VTDH VTZA VDIR ATMS DRYT WSPD WDIR HCSP HCDT TEMP
  PSAL
MYO_IBIROOS_01,ftp://arcas.puertos.es/Core/INSITU_IBI_NRT_OBSERVATIONS_013_033/latest/20151023/IR_LATEST_TS_MO_13130_20151023.nc,28.18848,28.19824,-15.80078,-
  15.79102,2015-10-23T00:00:00Z,2015-10-23T23:00:00Z,Puertos del Estado (Spain),2015-10-25T18:10:02Z,R,DEPH VTDH VTZA VDIR ATMS DRYT WSPD WDIR HCSP HCDT TEMP
  PSAL
```

myo_index_platform.txt

```
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# Description : catalog of available IBI in-situ platforms.
# Project : MyOcean (generated by Puertos del Estado-SPAIN).
# Format version : 1.0.
# Date of update : 20151120074057
# platform_code,creation_date,update_date,wmo_platform_code,data_source,institution,institution_edmo_code,parameter,last_latitude_observation,
  last_longitude_observation,last_date_observation
1900602,2010-01-01T00:00:00Z,2014-12-13T20:56:01Z,1900602,GL_LATEST_TS_PF_1900602 GL_XXXXXX_TS_PF_1900602,IFREMER,1054,DC_REFERENCE POSITIONING_SYSTEM PRES TEMP
  PSAL,9.96921E36,9.96921E36,2013-04-23T21:36:58Z
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```



File Naming

File naming convention in the latest directory:

RR_LATEST_XX_YY_CODE_YYYYMMDD.nc

Example: GL_LATEST_PR_GL_58970_20151112.nc

- **RR**: region bigram
- LATEST: fixed name
- **YYYYMMDD**: year month day of observations
- **XX**: TS (timeserie) or PR (profile)
- YY: data type
- **CODE**: platform code
- .nc: NetCDF file extension

Data types

- **BA** Data from Bathy messages on GTS
- **CT** CTD profiles
- **DB** Drifting buoys
- **FB** Ferrybox
- **GL** Gliders
- **MO** Fixed buoys or mooring time series
- **PF** Profiling floats vertical profiles
- **RE** Recopesca
- **RF** River flows
- **TE** Data from TESAC messages on GTS
- **TS** Thermosalinographs
- **XB** XBT or XCTD profiles

Region bigram

- **GL** Global
- **AR** Arctic
- **BO** Baltic
- **NO** North West Shelf
- **IR** IBI (Iberia-Biscay-Ireland)
- **MO** Mediterranean
- **BS** Black Sea



File Naming

File naming convention in the latest directory:

RR_LATEST_XX_YY_CODE_YYYYMMDD.nc

Example: GL_LATEST_PR_GL_58970_20151112.nc

File naming convention in the monthly directory:

RR_YYYYMM_XX_YY_CODE.nc

Example: IR_201510_TS_MO_62024.nc

File naming convention in the history directory:

RR_XX_YY_CODE.nc

Example: IR_TS_MO_MotrilTG.nc

- **RR**: region bigram
- **LATEST**: fixed name
- **YYYYMMDD**: year month day of observations
- **XX**: TS (timeserie) or PR (profile)
- **YY**: data type
- **CODE**: platform code
- **.nc**: NetCDF file extension

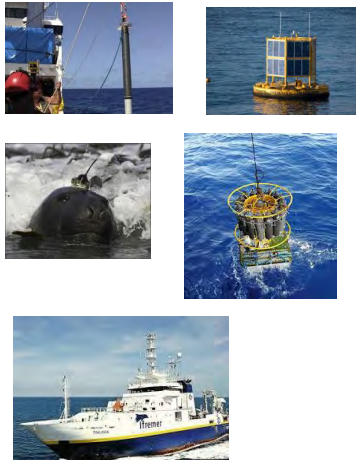
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Region bigram

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- **MO** Mediterranean
- **BS** Black Sea

The global reprocessed dataset (CORA)

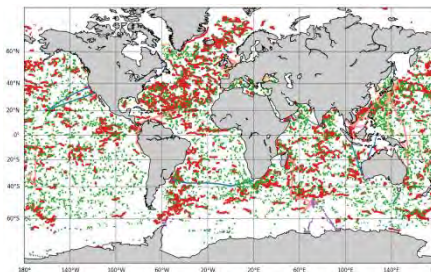


In-situ Measurements

- Regional TAC
- ARGO
- GTSP & GOSUD
- Scientific cruises
- SeaDataNet
-

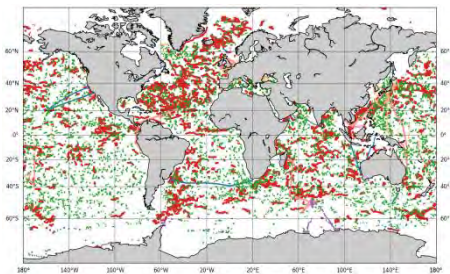
Formating

Real Time Dataset



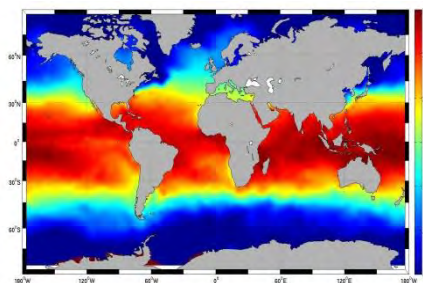
Validation

CORA Dataset



Objective Analysis

CORA OA

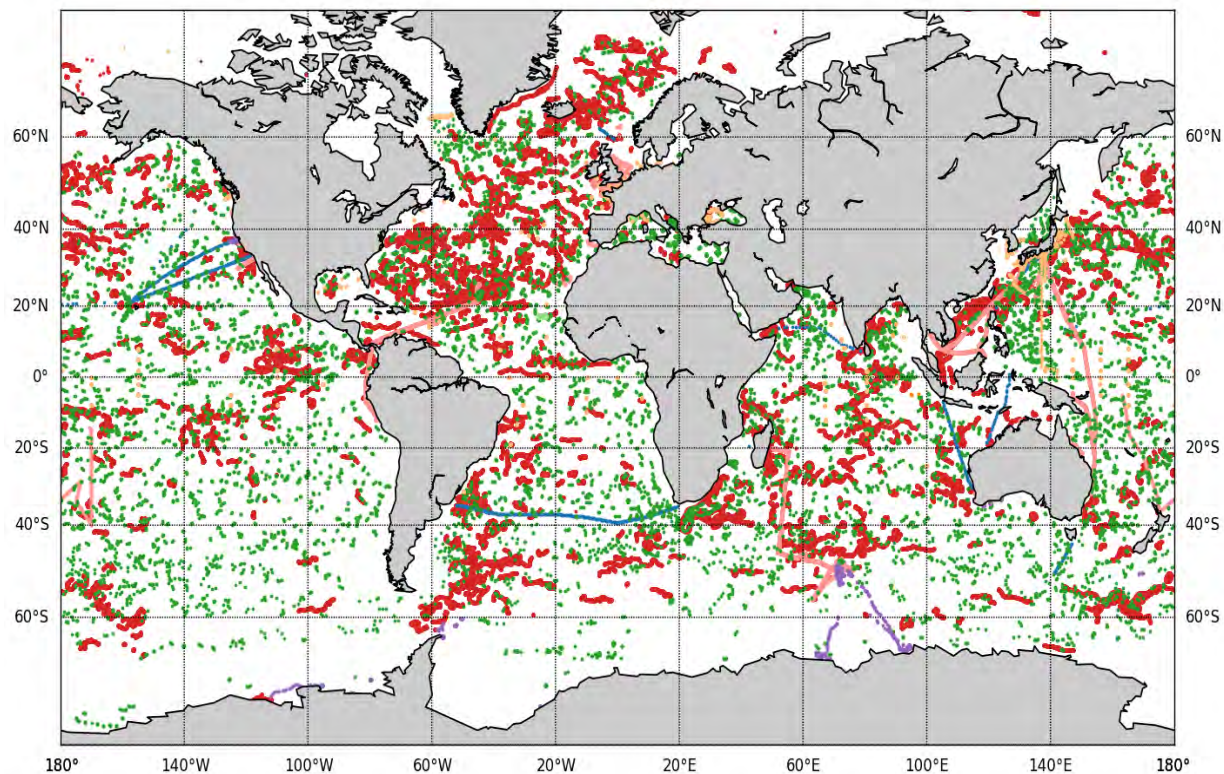




CORA dataset



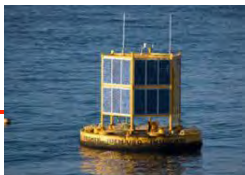
Available data



January 2015

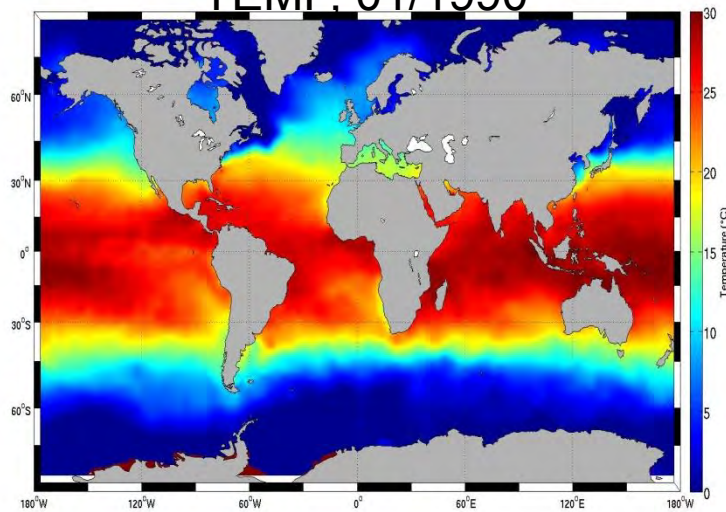


CORA dataset

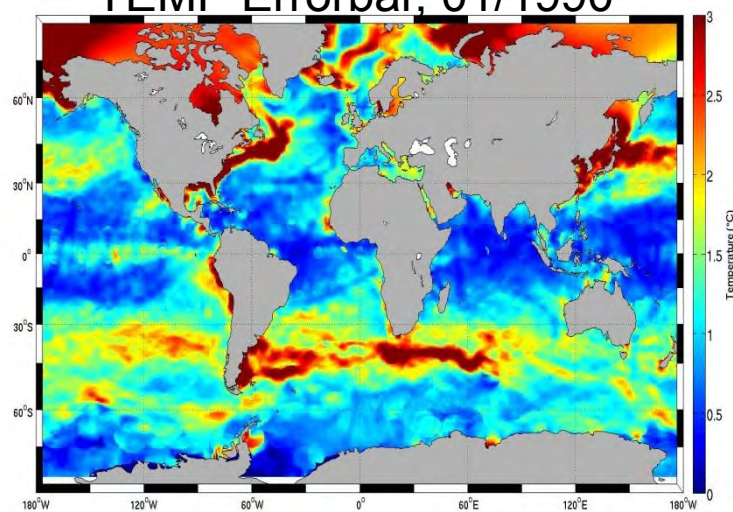


Objective analysis

TEMP, 01/1990




TEMP Errorbar, 01/1990



- Objective analysis on a standard 3d grid
- Global coverage, 1990-2015
- 152 vertical levels
- Easy to handle





CORA aggregation

	Provider	Coverage	Validation	Data types	Distributed data
WOD13 	Nodc.noaa.gov	1772-2012	Automatic – standard levels	Profilers + timeseries	All profiles + flags






CORA aggregation

	Provider	Coverage	Validation	Data types	Distributed data
EN.4 	Metoffice.org	1900-2015	Automatic, all levels	Profilers only	Best profiles + meta profiles + flags
WOD13 	Nodc.noaa.gov	1772-2012	Automatic – standard levels	Profilers + timeseries	All profiles + flags




CORA aggregation

	Provider	Coverage	Validation	Data types	Distributed data
CORA 5.0 	Copernicus CMEMS	1950-2015	Semi – Automatic, all levels	Profilers + timeseries	All profiles + flags
EN.4 	Metoffice.org	1900-2015	Automatic, all levels	Profilers only	Best profiles + meta profiles + flags
WOD13 	Nodc.noaa.gov	1772-2012	Automatic – standard levels	Profilers + timeseries	All profiles + flags

Cora 5.0 is taking advantage from Cora previous versions + EN.4 and WOD 13 contents

CORA usage

Global Temperature and salinity datasets

	Provider	Coverage	Validation	Data types	Distributed data
CORA 5.0 	Copernicus CMEMS	1950-2015	Semi – Automatic, all levels	Profiles + timeseries	All profiles + flags

- Designed for **Reanalysis** purposes
- All profiles are **validated** and **distributed**, fitted for scientific studies
- Timeseries (**surface/subsurface** studies)



Challenge 3: to maintain a regularly updated catalogue of the products

Copernicus catalogue: <http://marine.copernicus.eu/>

COPERNICUS MARINE ENVIRONMENT MONITORING SERVICE
Providing PRODUCTS and SERVICES for all marine applications

Search terms

ABOUT US | BENEFITS | NEWS | SCIENCE & LEARNING | TRAINING | SERVICES PORTFOLIO

ACCESS TO PRODUCTS
Search and download your datasets!

Select your:

- AREA
- PARAMETERS
- TIME COVERAGE
- OBSERVATIONS/MODELS

- GLOBAL OCEAN
- ARCTIC OCEAN
- BALTIC SEA
- EUROPEAN NORTH WEST SHELF SEAS
- IBERIA-BISCAY-IRELAND REGIONAL SEAS
- MEDITERRANEAN SEA
- BLACK SEA

2015 17 NOV

LATEST NEWS FLASH
CMEMS-3325
WebPortal Downloading
Services Temporary
Unavailable
Resolved

28 MONDAY EVENTS AGENDA

PARTNERS AND STAKEHOLDERS

FOCUS ON

COLLOQUIUM - 23/27 MAY 2016 - THE 48TH INTERNATIONAL LIÈGE COLLOQUIUM ON OCEAN DYNAMICS
Submesoscale Processes: Mechanisms, Implications and new Frontiers
This colloquium aims to advance our collective understanding of submesoscale processes, their mechanistic functioning, relevance, and implications across a range of oceanic disciplines. Discussions will include observational, modeling and theoretical

scale Processes: Mechanisms, Implications and new Frontiers
International Liège Colloquium on Ocean Dynamics
Liège, Belgium
23rd - 27th May 2016

ANY QUESTION?
Get help from the Service Desk

Funded by the European Union Copernicus

ABOUT US | PARTNERS & STAKEHOLDERS | BENEFITS



Challenge 3: to maintain a regularly updated catalogue of the products

ONLINE CATALOGUE

CATALOGUE PDF FIRST VISIT ? MY CART 0

AREA

- All areas
- Global Ocean (6)
- Arctic Ocean (2)
- Baltic Sea (2)
- European North-West Shelf Seas (2)
- Iberia-Biscay-Ireland Regional Seas (2)
- Mediterranean Sea (2)
- Black Sea (2)

PARAMETER

- All parameters
- Ocean Temperature (18)
- Ocean Salinity (18)
- Ocean Currents (9)
- Sea Ice (0)
- Sea Level (9)
- Winds (0)
- Ocean Optics (0)
- Ocean Chemistry (7)
- Ocean Biology (0)
- Ocean Chlorophyll (7)

TIME COVERAGE

- All time coverages
- Forecast Products (0)
- Near Real Time Products (9)
- Multi Year Products (9)
- Time Invariant Products (0)

OBSERVATIONS/MODELS

- All observations/models
- Models (0)
- Satellite Observations (2)
- In Situ Observations (18)

GRID TYPE

GLOBAL OBSERVED OCEAN PHYSICS TEMPERATURE SALINITY HEIGHTS AND CURRENTS PROCESSING

In-Situ-Observation, Satellite-Observation, Salinity, Temperature, Currents, Sea-Level, Near-Real-Time, Global-Ocean

GLOBAL_ANALYSIS_PHYS_001_016



MORE INFO ADD TO CART

You can find here the Global T,S,H,U,V Armor-3D L4 Analysis: Combined products from satellite observations (Sea Level Anomalies, Mean Dynamic Topography and Sea Surface Temperature) and in-situ (Temperature and Salinity profiles) on a 1/4 degree regular grid;

GLOBAL OBSERVED OCEAN PHYSICS TEMPERATURE SALINITY AND CURRENTS REPROCESSING (1993-2012)

In-Situ-Observation, Satellite-Observation, Salinity, Temperature, Currents, Sea-Level, Multi-Year, Global-Ocean

GLOBAL_REP_PHYS_001_013



MORE INFO ADD TO CART

You can find here the Global T,S,U,V,H Armor-3D L4 Reprocessing: Combined products from satellite observations (Sea Level Anomalies, Geostrophic Surface Currents, Sea Surface Temperature) and in-situ (Temperature and Salinity profiles) on a 1/4 degree regular grid over the time period 1993-2012.

GLOBAL OCEAN- IN-SITU NEAR-REAL-TIME OBSERVATIONS

In-Situ-Observation, Ocean-Chlorophyll, Ocean-Chemistry, Sea-Level, Salinity, Temperature, Currents, Near-Real-Time, Global-Ocean

INSITU_GLO_NRT_OBSERVATIONS_013_030



MORE INFO ADD TO CART

For the Global Ocean- The In Situ Thematic Assembly Centre (INS TAC) integrates near real-time in situ observation data. These data are collected from main global networks (Argo, GOSUD, OceanSITES, GTS) completed by European data provided by EUROGOOS regional systems and national data providers assembled by the In Situ TAC regional components. The data are quality controlled using automated procedures and assessed using statistical analysis residuals. It is updated continuously and provides observations with 24-48 hours from acquisition in average.

GLOBAL OCEAN- REAL TIME IN-SITU OBSERVATIONS OBJECTIVE ANALYSIS

In-Situ-Observation, Salinity, Temperature, Near-Real-Time, Global-Ocean

INSITU_GLO_TS_OA_NRT_OBSERVATIONS_013_002_a



For the Global Ocean- Gridded objective analysis fields of

Funded by the European Union Copernicus

ABOUT US PARTNERS & STAKEHOLDERS BENEFITS

ANY QUESTION? Get help from the Service Desk



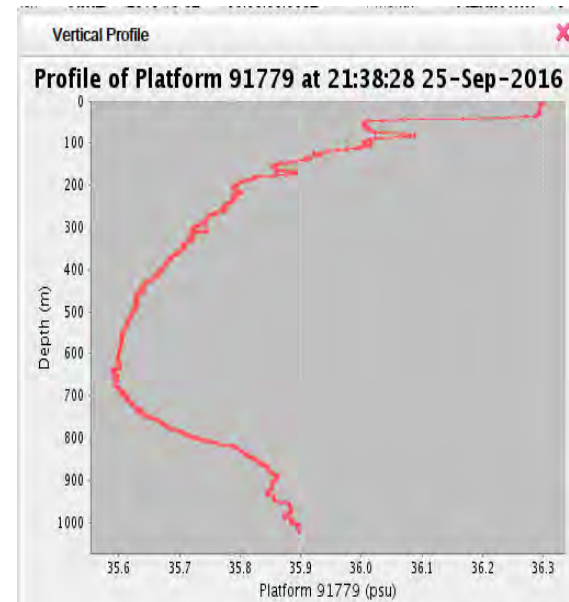
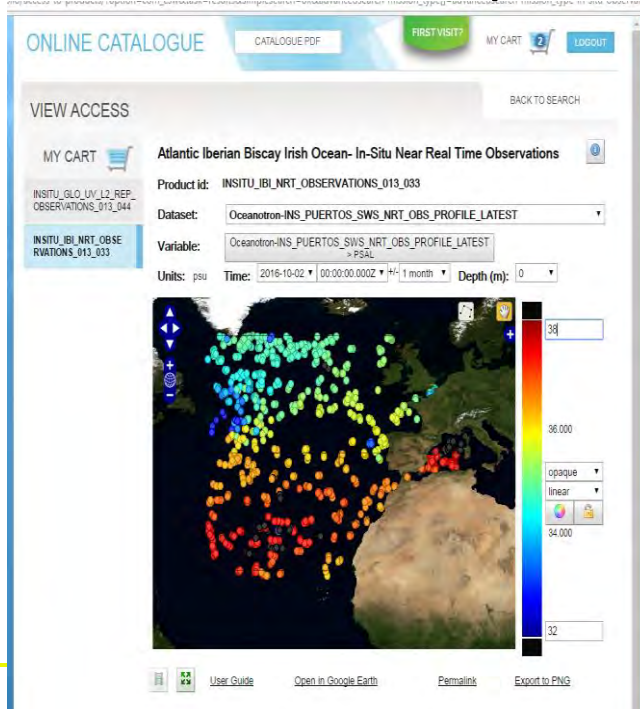
Challenge 4: to provide an easy access to the all CMEMS INSTAC products: an advanced data access for in situ dataset

Visualization with OGC/WMS back-end:

Implemented with Oceanotron at Dissemination Unit level (7 deployed servers).

Connected to the web portal since 2014

One month salinity at surface from profiles





Challenge 4: to provide a easy access to the all CMEMS INSTAC

Advanced data access (in-situ)

Download with subsetting or advanced access:

Implemented with Oceanotron, OGC/SOS service for NetCDF or OGC/O&M or GeoJSON formats

Démonstration client under development

Demonstration client in oceanotron

_netcdf_download_client_openlayer.html

Subsetting and Downloading client

This client enables to subset observation collection datasets and download the subsets as netcdf4 files. The client uses as a back-end the OGC/SOS service implemented by oceanotron.

[How to use](#) [Available files](#)

Select a dataset

INS-CORIOLIS-GLO-NRT-OBS_PROFILE_LATEST INS-CORIOLIS-GLO-NRT-OBS_POINTSERIES_LATEST

Select an area

Base maps

- Sextant
- Geoserver
- Water color
- OSM
- Global Imagery

Time subset

From: To:

Distribution of results in temporal files:

- One result file
- Daily result files
- Monthly result files
- Yearly result files

Platform subset (optional)

es: 198...

- INS-CORIOLIS-GLO-NRT-OBS_PROFILE_LATEST#14047
- INS-CORIOLIS-GLO-NRT-OBS_PROFILE_LATEST#1900617
- INS-CORIOLIS-GLO-NRT-OBS_PROFILE_LATEST#1900726
- INS-CORIOLIS-GLO-NRT-OBS_PROFILE_LATEST#1900726
- INS-CORIOLIS-GLO-NRT-OBS_PROFILE_LATEST#1900818



Challenge 4: to provide a easy access to the all CMEMS INSTAC

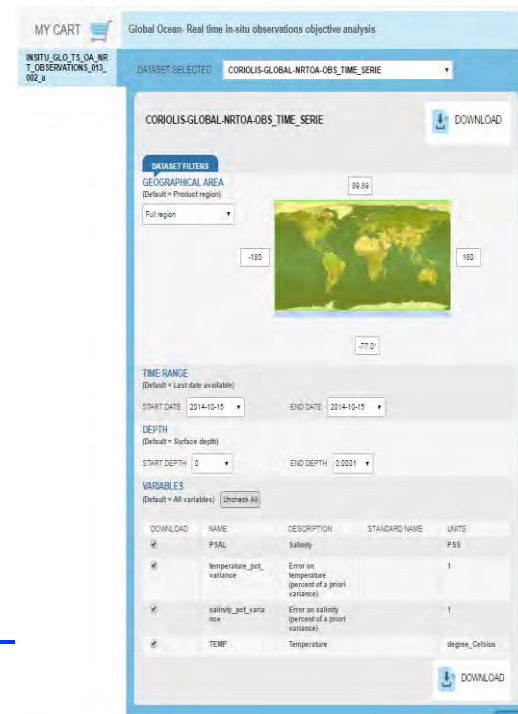
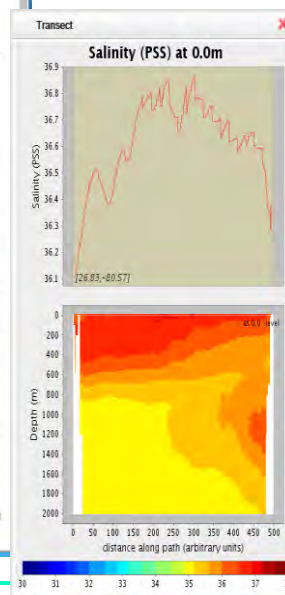
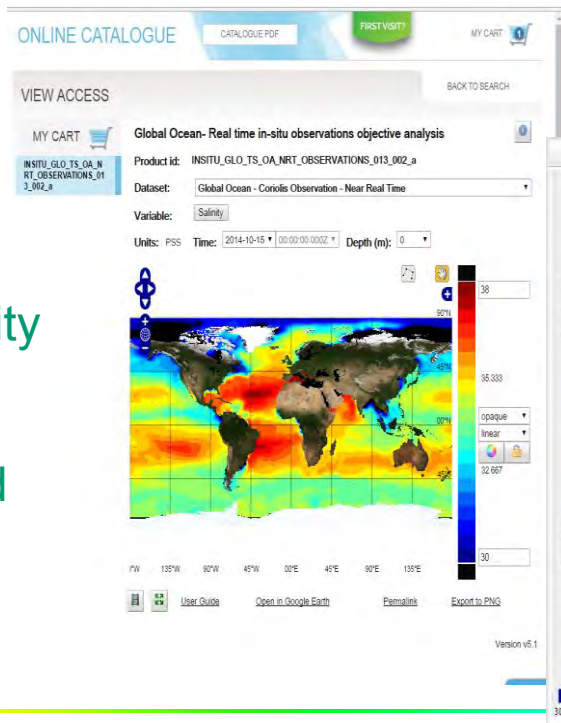
Gridded datasets (THREDDS Data Server)

Gridded datasets are published through THREDDS Data Server:

OGC/WMS for visualization

OPenDAP + MOTU dedicated gateway for NetCDF download with subsetting

Gridded salinity interpolated maps, view and download from the web





Challenge 5: Maintain an operational user service desk

cmems-service@imr.no

Arctic Service Desk

cmems-service@smhi.se

Baltic INS TAC Service Desk

cmems-service@bsh.de

NWS INS TAC Service Desk

cmems-service@puertos.es

IBI INS TAC Service Desk

cmems-service@hcmr.gr

Med Sea INS TAC Service Desk

cmems-service@io-bas.bg

Black Sea INS TAC Service Desk

cmems-service@ifremer.fr

Global + coordination
INS TAC

servicedesk.cmems
@mercator-ocean.eu

Central Service
Desk (Mercator)



Challenge 5: Maintain an operational user service desk

cmems-service@imr.no

Arctic Service Desk

cmems-service@smhi.se

Baltic INS TAC Service Desk

cmems-service@bsh.de

NWS INS TAC Service Desk

cmems-service@puertos.es

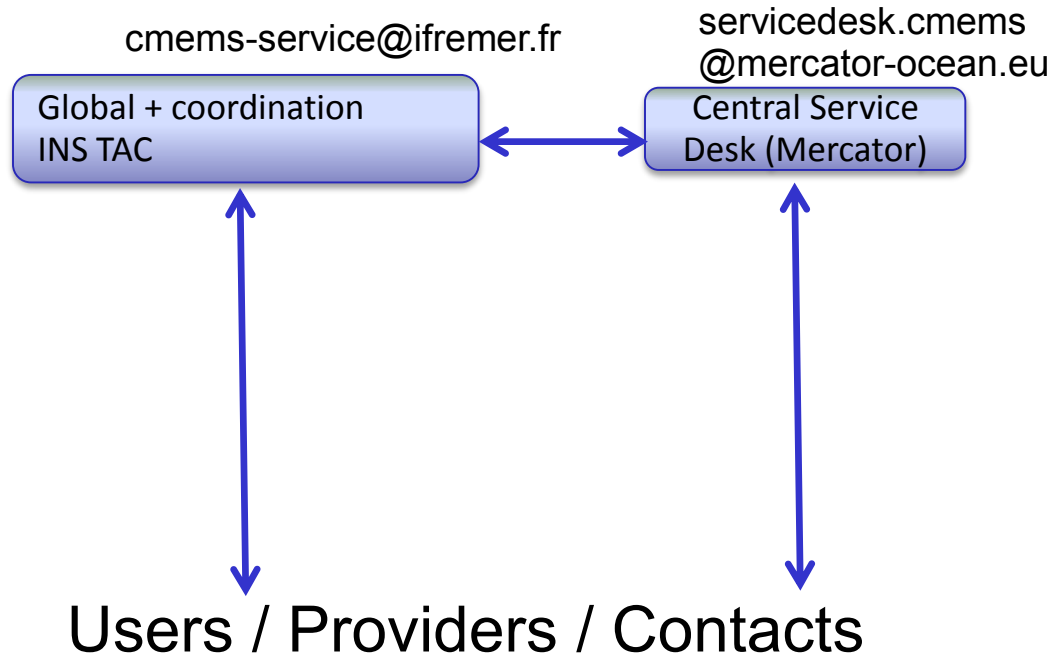
IBI INS TAC Service Desk

cmems-service@hcmr.gr

Med Sea INS TAC Service Desk

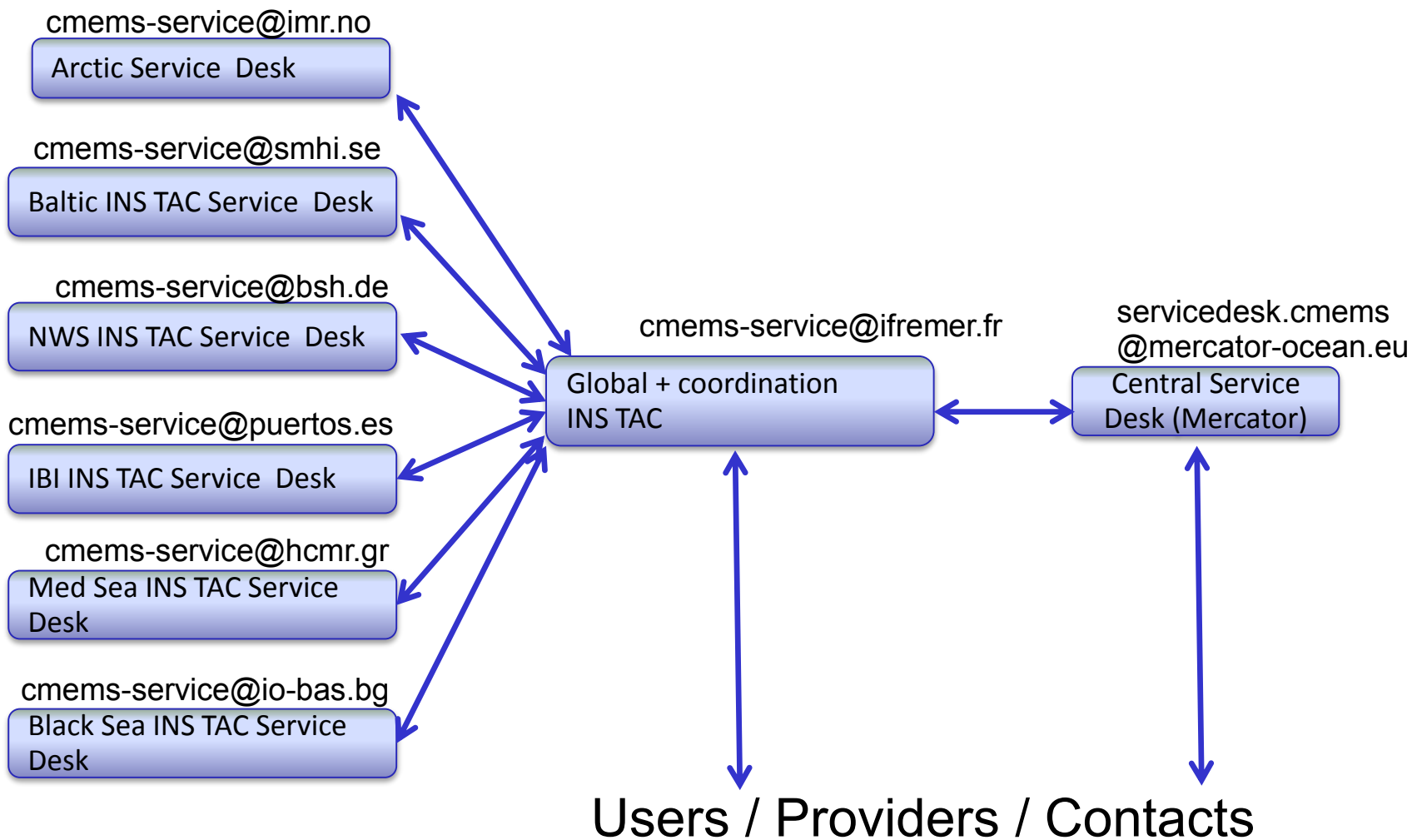
cmems-service@io-bas.bg

Black Sea INS TAC Service Desk





Challenge 5: Maintain an operational user service desk





Challenge 6: to provide an updated documentation set for each products

ONLINE CATALOGUE

GLOBAL OCEAN- IN-SITU
NEAR-REAL-TIME OBSERVATIONS

PRODUCT IDENTIFIER: INSITU_GLO_NRT_OBSERVATIONS_013_008

VARIABLES

- mass_concentration_of_chlorophyll_a_in_sea_water
- mode_of_skyport_per_unit_mass_of_sea_water
- sea_surface_height_above_sea_level
- sea_water_salinity
- sea_water_temperature
- sea_water_velocity
- sea_water_velocity

GEOGRAPHICAL COVERAGE

Area: global ocean



Challenge 6: to provide an updated documentation set for each products

ONLINE CATALOGUE

GLOBAL OCEAN- IN-SITU NEAR-REAL-TIME OBSERVATIONS

PRODUCT IDENTIFIER: INSITU_GLO_NRT_OBSERVATIONS_013_008

OVERVIEW

For the Global Ocean, The In Situ Thematic Assembly Centre (IS TAC) integrates near real-time in situ observation data from networks (Argo, GO-SIO, CoastSIREO, GTS) compiled by European data providers by EUROCOOS regional systems and national data providers. The data are quality controlled using automated procedures and assessed using statistical analysis residuals. It is observations with 24-48 hours from acquisition in average.

VARIABLES

- sea_water_temperature
- sea_water_salinity
- sea_water_velocity

GEOGRAPHICAL COVERAGE

Area: global ocean

COPERNICUS MARINE ENVIRONMENT MONITORING SERVICE

PRODUCT USER MANUAL

PRODUCT USER MANUAL

For In Situ Products

- INSITU_GLO_NRT_OBSERVATIONS_013_030
- INSITU_MED_NRT_OBSERVATIONS_013_035
- INSITU_NWS_NRT_OBSERVATIONS_013_036
- INSITU_BAL_NRT_OBSERVATIONS_013_032
- INSITU_IBI_NRT_OBSERVATIONS_013_033
- INSITU_ARC_NRT_OBSERVATIONS_013_031
- INSITU_IBI_NRT_OBSERVATIONS_013_034
- INSITU_ARC_TS_OBSERVATIONS_013_037
- INSITU_BAL_TS_OBSERVATIONS_013_038
- INSITU_IBI_TS_OBSERVATIONS_013_040
- INSITU_MED_TS_OBSERVATIONS_013_042
- INSITU_NWS_TS_OBSERVATIONS_013_041
- INSITU_NWS_TS_OBSERVATIONS_013_043

Contributors: INS TAC partners

CMEMS version scope: Version 1.0

Approval Date: March 15, 2016

PUM: Product user manual
provide information on how to use and
access the product



Challenge 6: to provide an updated documentation set for each products

PUM: Product user manual
provide information on how to use and
access the product

QUID: Quality information document
provides relevant on how the product
has been elaborated



Other challenges to face (not detailed here)

As we are in an operational mode, we have also to :

- monitor carefully the delivery service availability
 - Ifremer monitor all the regional Distribution units
 - HCMR cross – monitor all the regional Dus and also the Coriolis global DU



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 - Ifremer monitor all the regional Distribution units
 - HCMR cross – monitor all the regional Dus and also the Coriolis global DU
- report any anomaly or incident to the central service desk which will inform (alert) the users and inform once the service has been re-established
- pass to a long process of design review and acceptance review before any operational entry into service (EIS) of a new product
- communicate on all INSTAC activities
provide use cases every 3 months



Next steps

Prepare Version 3 (EIS April 2017 which will include wave products)

Prepare Version 4 'EIS (April 2018) which will include Bio-geochemical data

Prepare phase 2 (After april 2018) which will include new datasets (ie ADCP data, HF Radar ,)



How to join and contribute ?

By using the INSTAC products (NRT and delayed mode) and provide us any feedback on the data quality, level of metadata, lack of data or need of further informations

By sharing any datasets relevant to the project.
Contact the regional distribution unit or the global one



Thanks to all the INSTAC team!

to all the co-authors but especially to
Fernando Manzano Muños who provided an important contribution

and also Tanguy Szekely and Thomas Loubrieu for their specific contributions

For further information

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