The Copernicus Marine Week
25/29 SEPTEMBER 2017 - BRUSSELS

The EU Copernicus Marine Service has been launched in May 2015.

Mercator Ocean, entrusted by the European Commission to implement and operate the Service has decided to carry out an open mid-term review during a dedicated event:

The Copernicus Marine Week

The Marine Week is an open forum meant for stakeholders, contributors and for beneficiaries of the EU Marine Service and beyond. It is therefore open to a large panel of institutions, agencies, regional stakeholders, entrepreneurs, service providers and scientists.
The purpose of the week is to present and openly release the Copernicus Marine Environment and Monitoring Service (CMEMS) major achievements with regards to economy, societal challenges, science and EU leadership worldwide and is also meant to propose CMEMS future prospects for the benefits of Member States, Regions, and of the Society in general.

One week, Five days to cover CMEMS achievements and to open dialogue with major Global Blue Growth forces.

Learn, Meet, Exchange, and Share, Get trained, Join up to the Copernicus Marine Week!

The Copernicus Marine Week Partnership Committee:
BSH, CLS, CMCC, CNR, DMI, ECMWF, EEA, EMSA, ESA, EUMETSAT, EuroGOOS, IFREMER, INGV, IPMA, MERCATOR OCEAN, MET NORWAY, NERSC, PUERTOS del ESTADO, UK MET OFFICE.

DAY 1: 25th SEPTEMBER

13h30 – 18h30: PLENARY SESSION

FROM THE EU VISION TO AN EU OPERATIONAL SERVICE

Overall Session content	**CMEMS Ecosystem in the EU**
Chairs:	P. Bahurel (Mercator Ocean), M. Facchini (DG GROW)
ROOM	**Ballroom 1+2**

☑ **Keynote**

13h30 - 13h45: CMEMS Ecosystem in the EU – M. Facchini (DG GROW)

☑ **Setting the scene for the week**

13h45 - 14h15: "Where the Copernicus Marine Service stands now and expectations for Copernicus Marine Week", P. Bahurel (Mercator Ocean)

☑ **Linked with all Copernicus Components**

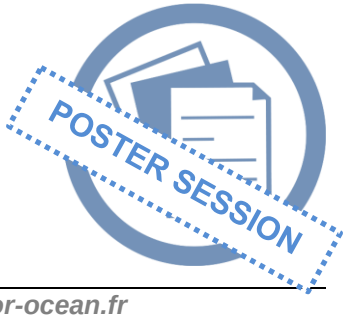
14h15 - 14h45: The Space Component: Live exchanges, S. Mecklenburg (ESA), P.Counet (EUMETSAT)
14h45 - 15h15: The In-Situ Component: Live exchanges, H.S. Andersen (EEA), G. Nolan (EUROGOOS)
15h15 - 16h30: Bridges with other Copernicus Services, F. Rabier (ECMWF) + more to be decided

1630h-17h00: Coffee Break

☑ **Addressing European Commission DGs needs and requirements,** moderated by C. Roeland (EC DG GROW)

17h00 - 17h15: Synergies between CMEMS and DG Needs, C. Thomas-Courcoux (MO)
17h15 - 18h30: Round Table: Next Opportunities, C. Thomas-Courcoux (MO), I. Shepherd (EC DG MARE), C. Martinez (EC DG CONNECT) (+ additional speakers to be announced)

18h30: SESSION END



DAY 2: 26th SEPTEMBER

9h00 – 13h00: SPLINTER SESSIONS

USER SPLINTER SESSION	HF RADAR in EUROPE
ROOM : Ball Room1+2	ROOM : Madrid
Moderators: D. Obaton (MO) + more to be decided	Chairs: J. Mader (AZTI), G. Nolan (EUROGOOS)

PART I:
Improving CMEMS data service. What is planned for the next years in terms of service?

9h00-10h30: 30 min presentation, 1 hour discussion/requests

PART II :
User feedback on current catalogue search
11h-11h45: 15 min presentation, 30 min feedback/requests

Next generation of catalogues

- Catalogue for expert users
- Catalogues by areas of benefit: marine resources, maritime safety, coastal and marine environment & weather, climate and seasonal forecasting

11h45-13h: presentation around 10 min followed by discussion/requests 30 min for each subject

PART I:
Introduction to HF radar [presented by INCREASE Team; 45min]

- How does HFR work and what data can they produce? (15min)
- Paving the way to European HFR network in line with international efforts (15min)
- Outline of INCREASE project (15min)

PART II:
Showcases of HF radar applications [presentation of 15min + 5min for questions]

1- "Review of applications worldwide", INCREASE Team.

SECURITY
2- "HFR and Security in Portugal", C. S. Fernandes, IH
3- "Operational Data Delivery and Forecasting for emergency responders (SAR operators)", J. Tintoré & E. Reyes, SOCIB

PORT MANAGMENT
4- "Port management in The Netherlands", R. Schroevers, Deltares
5- "Port management in Spain", E. Alvarez, Puertos del Estado

MARINE RESOURCES AND ENVIRONMENTAL MANAGMENT
6- "HF radar and coastal fisheries: some experiences gathered in the Mediterranean Sea", F. Fiorentino, A. Griffa, F. Raffa, CNR
7- "Impact on Marine Litter management, LIFE LEMA project", M. Delpey, RPT SUEZ-Environnement
8- "Integration of HF radar, satellites and models for the generation of downstream services: from environmental monitoring to sea safety in Tuscany", C. Brandini, LaMMA

CMEMS Service Desk Practical Sessions from 9am to 1pm (Room Copenhagen)
CMEMS for Beginners (2x1h sessions), How to download data using Python? (1h30)

13h00: SESSION END

DAY 2: 26th SEPTEMBER

14h00- 18h30: PLENARY SESSION
PRODUCING AND DISSEMINATING RELIABLE & USER-DRIVEN DATA AND INFORMATION

Overall Session content	**Ensuring Availability, Timeliness, Reliability. How does it work with Space Data, In-Situ Data, Models, and Quality for a user-driven service?**
Co chairs:	G. Coppini (CMCC), R. Gilmore (EC DG GROW), J. Johannessen (NERSC)
ROOM	**Ballroom 1+2**

14h00 - 14h10: Producing data and information: overview – M. Fabardines (MO)
14h10 - 14h25: Upstream satellite observations – C. Donlon (ESA), S. Wannop (EUMETSAT)
14h25 - 14h40: Upstream in-situ observations - G. Nolan (EUROGOOS), S. Pouliquen (Euro-Argo)
14h40 - 15h10: Preparing ocean products based on observations– Y. Faugère (CLS)
15h10 - 15h40: Preparing ocean products based on 3D models – M. Tonani (UK Met Office)
15h40 - 16h10: Deriving information through multi-year assessments – K. von Schuckmann (MO), S. Isoard (EEA)

16h10-16h40: Coffee Break

16h40 - 17h00: Assessing the quality of data & information, F. Hernandez (MO)
17h00 - 17h20: Managing all the data sets, G. Gasciarino (MO)
17h20 - 17h40: Serving data and supporting users, S. Ciliberti (CMCC), C. Giordan (MO)
17h40 - 18h00: Getting feedback from users and adapting the service, A. Delamarche (MO)
18h00 - 18h30: Q&A

18h30: SESSION END

DAY 3: 27th SEPTEMBER

8h30 – 12h30: PLENARY SESSION
SERVING USERS AND SOCIETY

Overall Session content:	**CMEMS benefits for Member States, Regions and Society**
Chairs:	Bernd Brügge (BSH), Enrique Alvarez (Puertos del Estado),
ROOM	**Ballroom 1+2**

☑ **8h30 - 8h45: Keynotes on market development,** Cecile Thomas-Courcoux (Mercator Ocean)

☑ **8h45 - 9h35: MARITIME SAFETY**

- CMEMS downstream Ice Service in the Baltic Sea: land fast ice extent and thickness, M. Mäkynen, FMI, Finland
- Search and rescue and oil spill combat in the Med Sea, P. Marra, LINKS, Italy
- Seismic Ship Operation performance at sea, L. Dollon, CGG, France
- Saving fuel thanks to ship routing, P. Bara, CMA CGM, France
- Copernicus Maritime Surveillance: an integrated Maritime Service, EMSA, Portugal

☑ **9h35 - 10h05: MARINE RESOURCES**

- Multi-platform integrated assessment for the sustainability of Bluefin Tuna in the Mediterranean Sea, J. Tintore, SOCIB, Spain
- SIMOcean, Meteo-Ocean data in Portuguese EEZ to model the sardine and mackerel distribution, N. Almeida, Deimos, Portugal
- SEAWETRA: an integrated platform for monitoring marine systems, P. Tepsich, Cima Foundation, Italy

☑ **10h05 - 10h30: COASTAL & ENVIRONMENT**

- Downstreaming CMEMS products to serve Port needs: The SAMOA system, M. Garcia Sotillo, Puertos del Estado
- EarthLab for coastal services – The case of water quality monitoring, C. Barbey, Telespazio, France

10h30-11h: Coffee Break

☑ **11h00 -11h20: COASTAL & MARINE ENVIRONMENT**

- Support to exploration activities for Deep Sea Mining, J. Carvalho, ISQ, Portugal
- Environmental monitoring of offshore wind farm in the Mediterranean Sea, M. Lux, Noveltis, France

☑ **11h20-11h30: WEATHER, CLIMATE AND SEASONAL FORECASTING**

- Seasonal Forecasting at ECMWF, J-N. Thépaut and D. Dee ECMWF

☑ **11h30 - 12h30: ROUND TABLE "Understanding and Meeting EU Member States and Regions expectations", moderated by** Mercator Ocean

R. Ayazi NEREUS, Representative of the Azores (+ additional speakers to be announced)

12h30: SESSION END

DAY 3: 27th SEPTEMBER

14h00 – 18h30: SPLINTER SESSIONS

Copernicus Space Component and CMEMS: current state of the system	In situ Infrastructure and CMEMS current state of the system	User Uptake Activities 14h00-17h00
ROOM : Madrid	ROOM: Lisbon	ROOM: Ballroom 1+2
Chairs: A. Reppucci (MO), C. Donlon (ESA), F. Montagner (EUMETSAT)	Chairs: P.Y. Le Traon (MO), H.S. Andersen (EEA), S. Pouliquen (Ifremer)	Chairs: E. Durand, T. Delourme (DG GROW)
Introduction CMEMS : A . Reppucci (MO) S1 (marine capabilities and status). P. Potin (ESA) S2 (marine capabilities and status). G. Donlon (ESA) S3 (marine capabilities and status). S. Mecklenburg (ESA) & H. Wilson (Eumetsat) Contributing missions: F. Montagner (Eumetsat), S. Mecklenburg (ESA) CMEMS satellite TAC activities (products, algorithms, requirements, impact of sentinels): • SST (Met Office) • Sea Level (CLS) • Ocean Color (CNR) • Sea Ice (Met.no/DMI) • Wind (KNMI/Ifremer) • Waves (CLS) Overview of impact of satellite observations In CMEMS MFCs: E. Remy (MO)	Introduction CMEMS : P.Y. Le Traon (MO) Euro-Argo / Argo and CMEMS: S. Pouliquen (Ifremer) ROOSes and CMEMS: G. Nolan and ROOses chairs In-situ TAC and its links with Emodnet and SeaDataNet/Cloud: S. Pouliquen (Ifremer) with inputs from Emodnet (A. Novellini) and SeaDataCloud (D. Schaap). Impact of in-situ observations on CMEMS products: • Impact in CMEMS global systems: F. Gasparin (MO) • Impact in CMEMS Med Sea systems (speaker to be announced) • Impact in CMEMS Baltic Sea systems: J She (DMI)	Introduction CMEMS: E. Durand (MO) *Demonstration of coastal operational services downstream of CMEMS* Service of coastal modelling downscaled from CMEMS • French coasts: SHOM, • Portuguese harbours: Lisbon and Madeira, Hidromod • Spanish harbours: Barcelona, Algeciras, No Login Services on water quality • Along Italian and Greek coasts, Planetek • Along Romanian coasts, NIMRD Service on tidal energy, Noveltis *Projects (H2020) ongoing* • Copernicus App Lab, V. Venus (Ujuizi) • Odyssea (to be announced) • Aqua-users (to be announced)

4-4:30pm Coffee Break

CMEMS Service Desk Practical Sessions from 2 to 6pm (Room Copenhagen)
How to download data using Python? (1h30), How to visualize data using QGIS (2h00)

18h30-20h00 Social Event

DAY 4: 28th SEPTEMBER

8h30 - 12h45: PLENARY SESSION
R&D ACHIEVEMENTS AND SERVICE EVOLUTION CHALLENGES

Overall Session content	**CMEMS paves the way of tomorrow's challenges**
Chairs	P.Y. Le Traon (Mercator Ocean), P. Brasseur (CNRS/STAC), L. Santoleri (CNR)
ROOM	**Ballroom 1+2**

☑ **8h30-8h45: Keynote on Service Evolution and R&D (strategy, challenges): P.Y. Le Traon** (MO)

☑ **8h45-9h45: Main R&D achievements from TACs and MFCs and user testimonies**

- High level altimetry data processing: G. Larnicol (CLS)
- Advanced sea ice monitoring from a multi-sensor approach: L.A. Breivik (Met.NO)
- High resolution ocean monitoring and forecasting : Y. Drillet and J.M. Lellouche (MO)
- Biogeochemical modelling in the Black Sea and MSFD: M.L. Gregoire (ULG)

☑ **9h45-10h30: Benefits of CMEMS Service Evolution R&D projects / three examples**

- Increase. Innovation and networking for the integration of coastal radars into European marine services (Increase). J. Mader (AZTI)
- Wave2nemo. Coupled ocean-wave model development in forecast environment : J. Staneva (HZG)
- Greenup: a new ecosystem variable for marine resources sector: P. Lehodey (CLS)

10h30-11h00: Coffee Break

☑ **11h00-11h45: Big data challenges and opportunities for CMEMS**

- The Copernicus DIAS platforms: D. Quintart (EC DG GROW)
- The Eumetsat/ECMWF/MO DIAS: Y. Buhler (Eumetsat)
- Big data and data science : S. Nativi (CNR/STAC)

☑ **11h45-12h00: CMEMS R&D priorities and roadmap**: the main thematic areas: P. Brasseur (CNRS/STAC)

☑ **12h00 - 12h45: ROUND TABLE: THE ROLE OF H2020 TO ADDRESS CMEMS LONG TERM EVOLUTION AND SCIENTIFIC CHALLENGES, moderated by** P.Y. Le Traon (MO) – Participants: P. Breger (DG GROW) (TBC), V. Puzzolo (REA), P. Brasseur (CNRS/STAC).

12h45: SESSION END

DAY 4: 28th SEPTEMBER

14h00-16h00: SPLINTER SESSIONS

14h - 16h00 : Long term evolution of Copernicus satellite component & marine requirements	**14h - 18h30**: (To be continued until 18h30) CMEMS Service Evolution and H2020 R&D
ROOM : Madrid	ROOM : Ballroom 1+2
Chairs: A. Reppucci (MO), C. Donlon (ESA), F. Montagner (EUMETSAT)	Chairs: P.Y. Le Traon (MO), P. Brasseur (CNRS/STAC), J. Siddorn (UK Met Office)
Introduction and main CMEMS long term requirements: A. Reppucci (MO) (10') User Requirement analysis : (EC DG GROW) (15') Evolution of Sentinels and contributing missions: C. Donlon (ESA), F. Montagner (Eumetsat) (20') Impact of future satellite observations in CMEMS : • Swath altimetry: A. Bonaduce (MO) (10') • Sea Ice thickness: L. Bertino (NERSC) (10') • Ocean Colour: P. Brasseur (CNRS/STAC) (10') • Sea Surface Salinity : B. Tranchant (CLS) (10') • Sea Surface Temperatures: S. Good, J. Siddorn (UKMO) (10') • Sea state from space: L. Aouf (Meteo France), F Ardhuin (Ifremer) (10'). Discussion	Introduction: P.Y. Le Traon/P. Brasseur Ocean/Wave/Atmosphere/Ice Coupling (40') • Ocean-wave-atmosphere interactions in regional seas. H. Lewis (UK Met Office) • Impact of additional contributions to the vertical mixing for the simulation of Arctic ocean and sea-ice states C. Lique, F. Ardhuin (Ifremer) • Toward an improved representation of air-sea interactions in high-resolution global oceanic forecasting systems : F. Lemarié (INRIA) Mesoscale/sub-mesocale dynamics (25') • Diagnose, interpret, monitor upper ocean circulation: novel data synergies via dynamical exploration. L. Gaultier (Ocean data lab), A. Ponte (Ifremer) • Understanding meso/submesoscale ocean interactions to improve Mediterranean cmems products. S. Ruiz (CSIC/IMEDEA) Data Assimilation (25') • Statistical-dynamical observation operator for sst data assimilation. (To be decided) • Stochastic coastal/regional uncertainty modelling: Sensitivity, consistency and potential contribution to cmems ensemble data assimilation. V. Vervatis (Univ. of Athens) Advances in global and regional ocean reanalyses (30') • Global ocean physical reanalyses at high and low resolutions: M.Drevillon (MO)/G. Garric (MO) • Regional reanalyses for biogeochemistry / Arctic example: L. Bertino (NERSC)
16h00 - 16h30: Coffee Break	***16h00 - 16h30: Coffee Break***

DAY 4: 28th SEPTEMBER

16h30-18h30: SPLINTER SESSIONS

16h30 - 18h30 : Long term evolution of in-Situ observing systems & marine requirements	**16h30 - 18h30 :** CMEMS Service Evolution R&D and H2020 R&D (Follow up)
Chairs: A. Reppucci (MO), E. Buch (EUROGOOS)	Chairs: P.Y. Le Traon (MO), P. Brasseur (CNRS/STAC), J. Siddorn (UK Met Office)
ROOM : Madrid	ROOM : Ballroom 1+2
CMEMS vision: A. Repucci (MO) (10') Evolution of Euro Argo-ERIC: S. Pouliquen (Ifremer, Euro-Argo ERIC) (20') Evolution of Rooses (20'): G. Nolan (Eurogoos) Contribution of H2020 projects: Atlantos (10') M. Visbeck (GEOMAR) Intaros (10') S. Sandven (NERSC) Odyssea (10') G. Sylaios (Democritus University of Thrace) Towards EOOS (EuroGOOS/Marine Board) (20') Discussion (20')	Coastal ocean (60') • High resolution ocean colour (FP7 Highroc): K. Ruddick (IRSBN) • Copernicus evolution and applications for the coastal zone (H2020 Ceaseless): A. Sanchez-Arcilla (UPC-BarcelonaTech) • Upscaling. Propagating information back from coastal/regional models to CMEMS. A. Barth (Univ. of Liège). • Co-ReSyF – Coastal Waters Research Synergy Framework. (H2020 Co-Resyf). N. Catarino (Deimos). Biogeochemistry and ecosystems in the marine environment (40') • Advances in ocean colour data processing in CMEMS : V. Brando (CNR). • Massimili. Development of a biogeochemical multi-data assimilation scheme to integrate Bio-Argo data with ocean colour data. G. Cossarini (OGS). • Tosca. Towards operational size-class chlorophyll assimilation. S. Ciavatta (PML). Discussion / Synthesis (20')

CMEMS Service Desk Practical Sessions
from 2 to 6pm (Room Copenhagen)
How to view products with Ncview? (2x 1h sessions),
How to visualize data using QGIS (2h00)

DAY 5: 29th SEPTEMBER

9h00 - 13h00: PLENARY SESSION
CMEMS FUTURE PROSPECTS

Overall Session content	**YOUR COPERNICUS MARINE SERVICE TOMORROW**
Chairs:	P. Bahurel (Mercator Ocean), N. Pinardi (UNIBO/CMCC)
ROOM	**ROOM : Ballroom 1+2**

- ☑ **9h00 - 9h15: Keynotes: CMEMS in the EU Space Strategy**

- ☑ **9h15 - 10h15: Copernicus Marine Service Towards an Improved Offer**
  - The Space Component,
    - ESA perspective, (speaker to be announced)
    - EUMETSAT perspective, A. Ratier (EUMETSAT)
  - The In-Situ Component, E. Buch (EUROGOOS)
  - Copernicus Marine Service Tomorrow: What offer for what needs? P.Y. Le Traon (MO), D. Obaton (MO)

- ☑ **10h15 - 10h30: "Video message" Industry and Public Sectors, Complementarity & New Paradigm**, A. Veispak (DG GROW)

10h30-11h00: Coffee Break

- ☑ **11h00 - 11h15: CMEMS to Serve EU Leadership Worldwide**, (speaker to be announced)

- ☑ **11h15 - 11h30: CMEMS and OECD,** (speaker to be announced)

- ☑ **11h30 - 11h45: CMEMS and GMES Africa,** (speaker to be announced)

- ☑ **11h45 - 12h00: Training the next generation of CMEMS actors**, N. Pinardi (UNIBO/CMCC)

- ☑ **12h00 - 12h45: ROUND TABLE**: "**CMEMS II, Future Prospects**", moderated by P. Bahurel (MO), A. Ratier (EUMETSAT), expected speakers from DG GROW, EEA, ESA, OECD, GEO (to be announced)
  - ☑ **12h45 - 13h00: Your Copernicus Marine Service: What's next?** P. Bahurel (MO)

13h00: CLOSURE