



Workshop on shallow water and floating matter remote sensing

Date: 20-21 September 2022,

Venue: CNR, Via Corti 12, Milan, Italy

Scope

The Water-ForCE project will develop a Roadmap for future Copernicus water services. The Roadmap, among other things, will include recommendations for expanding the Copernicus service portfolio and recommendations for technical characteristics of future Copernicus sensors to enable production of the new products requested by different users. Gap analysis of current Copernicus water quality products showed that there are two broad groups of products not covered by the Copernicus services: shallow water products (benthic habitat maps, bathymetry, etc.) and floating material products (cyanobacteria, plastic or other litter, macroalgae and seagrasses floating on the water surface, etc.).

Objective

The aim of the workshop is to bring together remote sensing specialist with relevant experience to discuss:

- What kind of products are feasible at present in the fields of shallow water and floating material remote sensing?
- What can be done with current Copernicus sensors (Sentinel-2) and contributing missions (Prisma, EnMAP, Planet, etc.)?



Water-ForCE is a Coordination and Support Action (CSA) that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101004186.



- Recommendations for future Copernicus sensors (spectral and spatial resolution, SNR, revisit time, etc.) to enable required products?
- To what extent these products should be part of free Copernicus services and to what extent these should be provided on demand by remote sensing companies?

Recommendations will be included in the project deliverables 2.4 “Future Copernicus higher-level biogeochemical and other new water quality products” and 2.5 “Technical needs for future Sentinels” as well as in the Water-ForCE Roadmap for Copernicus water services.

Agenda

Day 1 Shallow water products

Start from 13:00 CEST

Welcome and practicalities

Claudia Giardino (CNR) 10'

Overview of the Water-Force and introduction to the workshop

Tiit Kutser (University of Tartu) 30'

ESA activities on shallow water products

Marine-Helene Rio (ESA) 20'

EMI experiences in bathymetry and habitat mapping using Sentinel-2 and hyperspectral data

Ele Vahtmäe (University of Tartu) 20'



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Substrate mapping using optical remote sensing of Italian inland and coastal waters

Claudia Giardino (CNR) 20'

Experiences and needs in using remote sensing data for coastal applications

Gema Casal (Maynooth University) 20'

Automated production of bathymetry and benthic reflectance products from Sentinel-2

John Hedley (Numerical Optics) 20'

TBD

Thomas Heege (EOMAP) *presenter may change* 20'

Discussion on future perspective of including shallow water products in the Copernicus portfolio

90'

Day 2 Floating material products

Finish before 14:00 CEST

Introduction

Tiit Kutser (University of Tartu) 5'

Recognizing different types of floating material in remote sensing imagery

Kaire Toming (University of Tartu) 20'

Requirements for plastic monitoring MARLISE project outcomes



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Els Knaeps (VITO)

20'

CNR experiences in using multi-source remotely sensed data for detecting floating matter

Mariano Bresciani (CNR)

20'

Latest developments, challenges and opportunities to detect floating marine plastic litter from satellite remote sensing

Victor Martinez Vicente (PML) **virtual. 10 AM UK time**

20'

TBD

Thomas Heege (EOMAP) **presenter may change**

20'

Discussion on future perspective of including shallow water products in the Copernicus portfolio

90'



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