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High spatial and temporal resolution  
ocean colour coastal water products  
and services

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**HIGHROC** is a European Union 7th Framework Program (FP7) Collaborative Research Project carried out by a consortium of seven partners with experience in remote sensing and its applications in the management of coastal and estuarine waters.



The overall objective of HIGHROC is to develop new products and services to cater for the requirements of end-users involved in coastal water quality management and/or related activities such as dredging operations and offshore constructions and their environmental impacts.

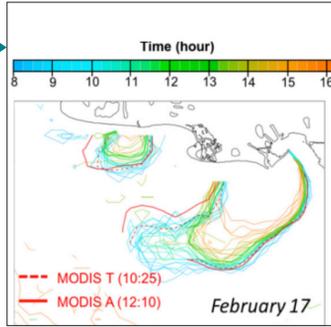
To reach spatio-temporal resolution required by users, HIGHROC derives coastal water quality parameters from Sentinel-2 (S2) at 10-20m resolution and SEVIRI at 15 minutes resolution, thus dramatically improving the spatial and temporal resolution.

## HIGHROC Activities

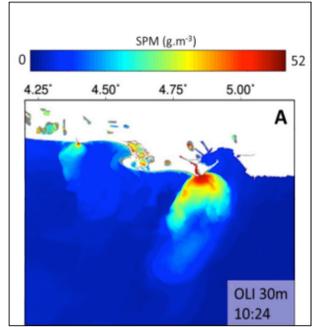
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- **Definition of user requirements**
- **Algorithm development** for atmospheric correction and development of L2 water products
- **In situ measurements** and production of in situ datasets
- **Image processing**
- **Product validation**
- **User Service Trials:** one year automatic production and delivery of HIGHROC products to partners and users
- **Dissemination** of results and products to scientific community and end-users
- **Business development and sustainability**

### Rhone river plume SPM monitoring

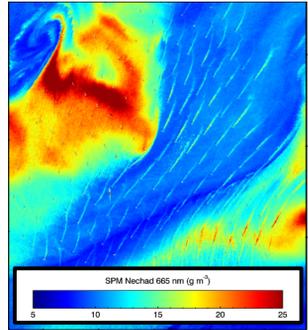


15-min temporal resolution (SEVIRI)



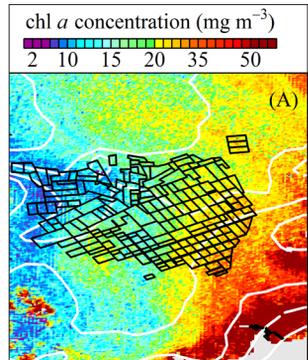
30-m resolution (Landsat 8 OLI)

### Wind farm environmental impact



SPM monitoring with S2 MSI

### Oyster farm water quality management



10-m resolution Chl-a map from S2 MSI data in the bay of Bourgneuf

**Project Acronym:** HIGHROC

Funded by EU/FP7 Space ("Stimulating development of downstream services")

**EU financial contribution:** 2,5M€

**Start date:** 1 January 2014, **Finish date:** 31st December 2017

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### PROJECT PARTNERS:

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**References and contributions:** Ody et al. 2016, Quinten Vanhellemont, Pierre Gernez  
**Photo credits:** Jan Haelters, Laurent Barillé