USER WORKSHOP

WP1 – Detecting, sensing and sampling

About EOMAP

o   Spin-Off of DLR since 2006

o   Core services: EO mapping & monitoring of inland and coastal environments

o   Headquarters: Seefeld near Munich/Germany, subsidiaries in Australia, US

Water Color determined by Absorption and Scattering
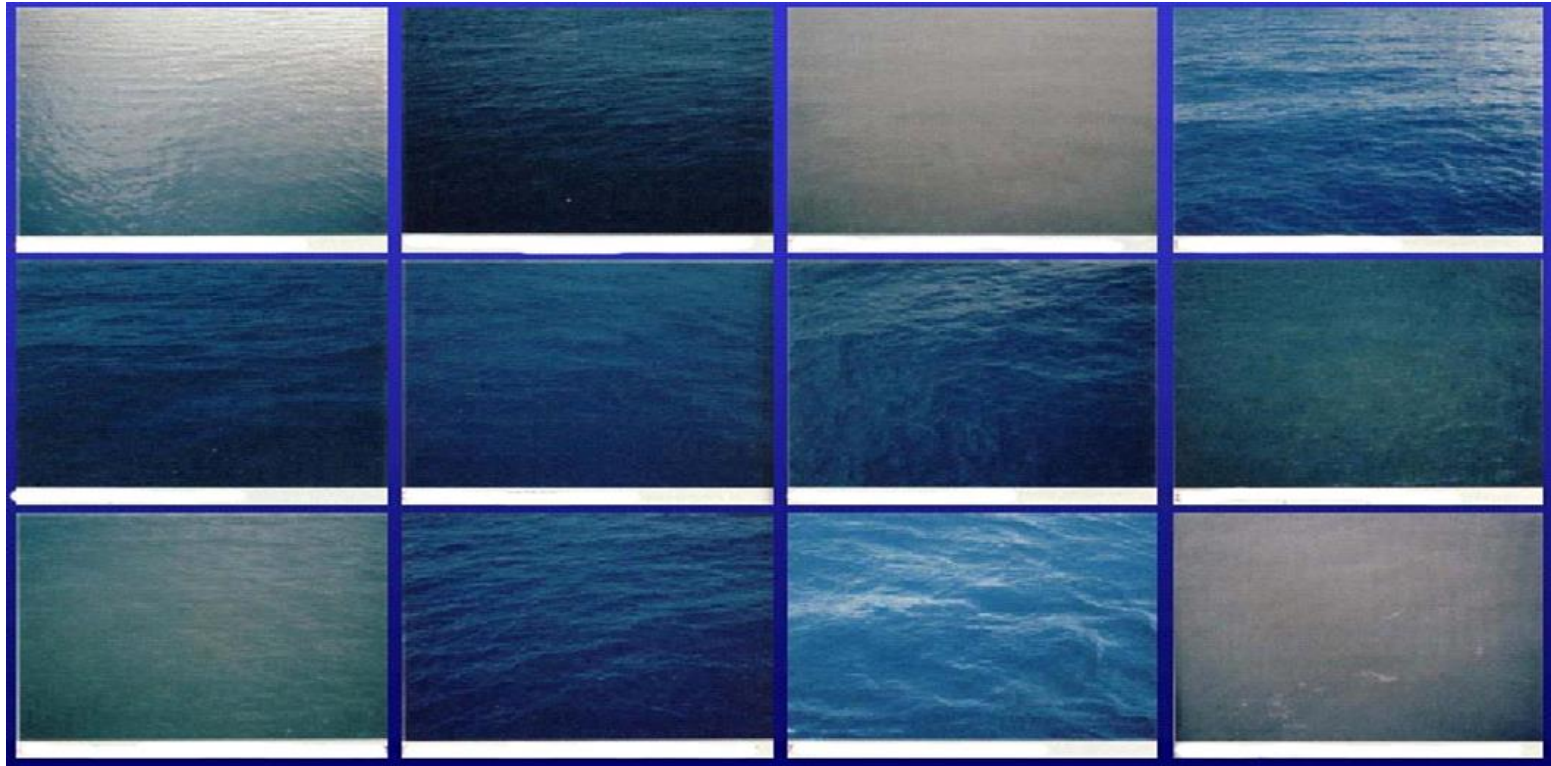
© Süddeutsche Zeitung

Algae, sediments, … define the water color.

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and Humanitarian Aid

The Satellite perspective …

... a sea of possibilities!
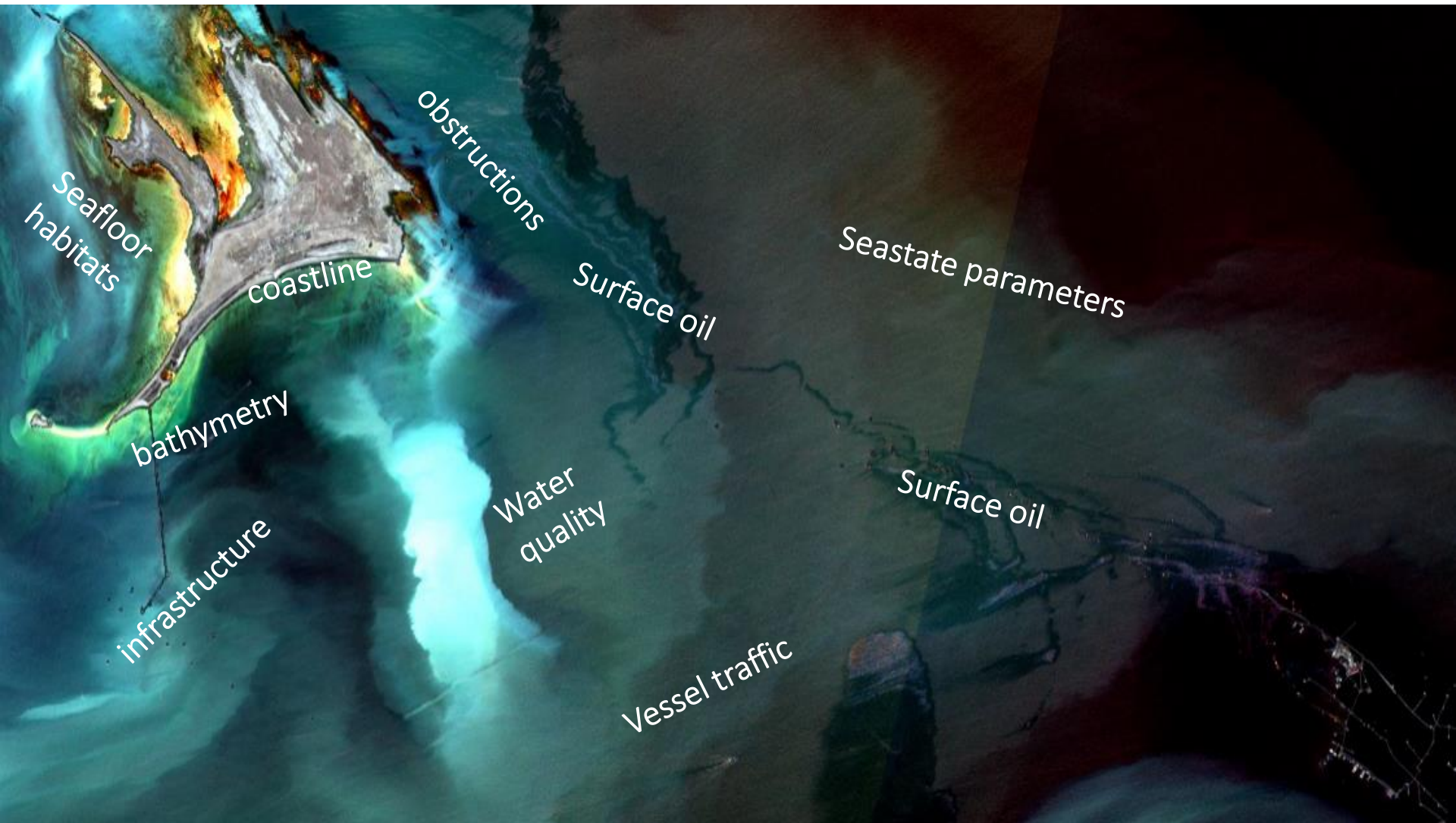
Seafloor habitats

obstructions

coastline

Surface oil

Seastate parameters
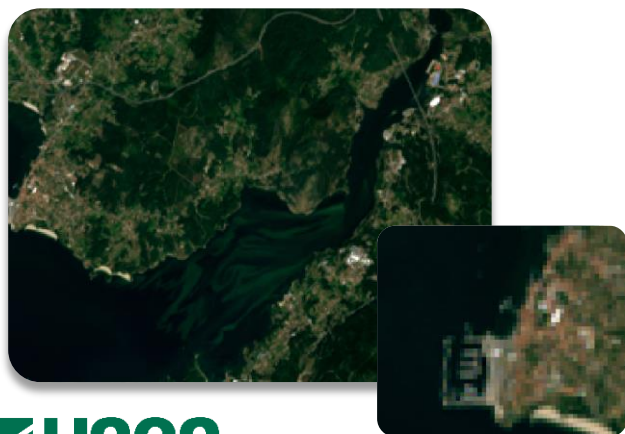
bathymetry

Water quality

Surface oil

infrastructure

Vessel traffic

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SENSORS – Optical

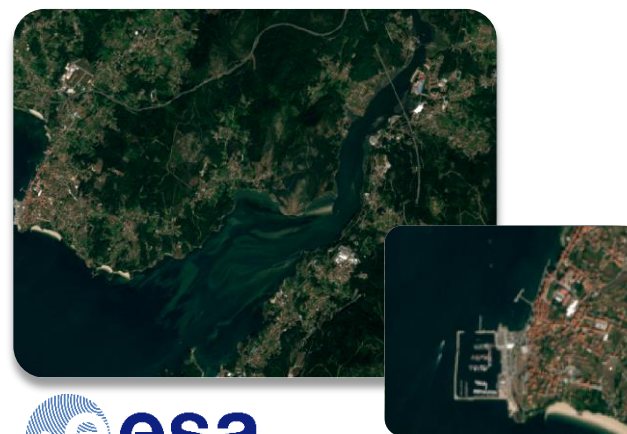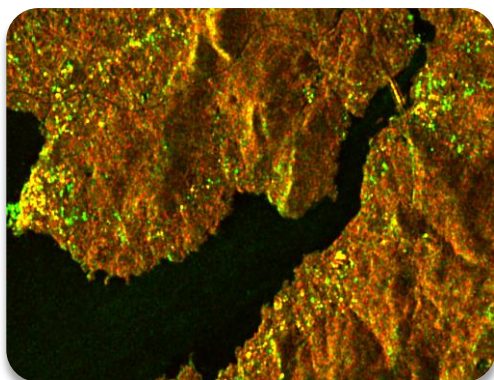**Landsat 8 – 30m**

A picture is worth a thousand words. A satellite image is worth a million dollars. - *Sarah Parcak*
                    (American Archaeologist)

Sentinel-2 – 10m

Red-**G**reen-**B**lue-NIR

443 – 2202nm

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SENSORS - Radar

Sentinel-1 – 10m
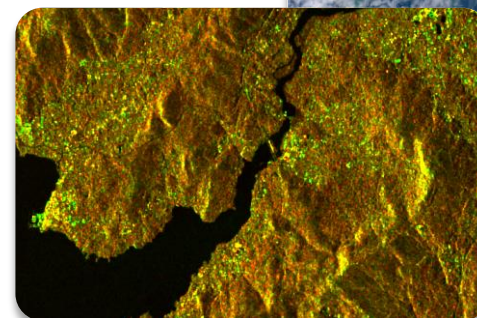

Radar X-Band

Images every 2-3 days!

+ Penetrates through clouds
+ Day and night acquisitions
+ Dense Time-Series
+ Unique properties

– Processing!
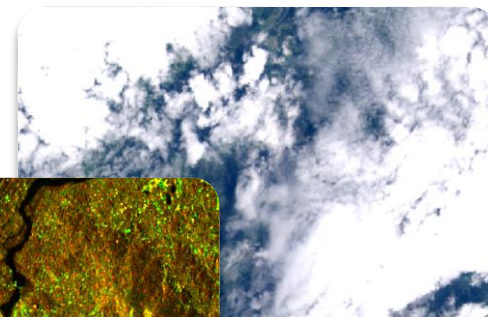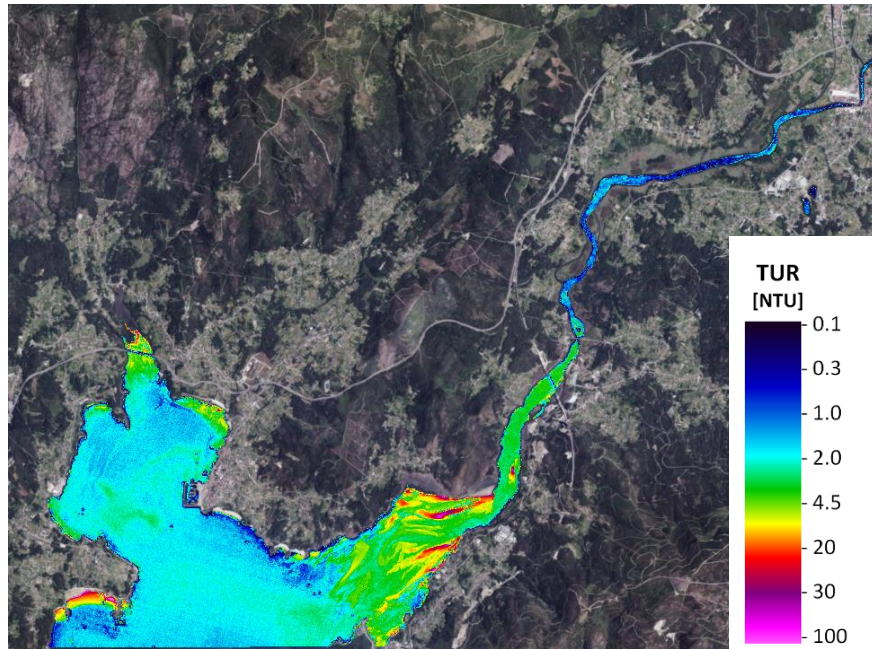

Landsat 8

Sentinel-1

2.7.2018

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Preliminary Results

Rio Ulla Estuary

Water extent

Turbidity

- Derived from Landsat 8 and Sentinel-2
- 01.2018 – 12.2018
- 29 measurements

- Derived from Landsat 8 and Sentinel-1 & 2
- 01.2018 – 12.2018
- More than 250 scenes processed

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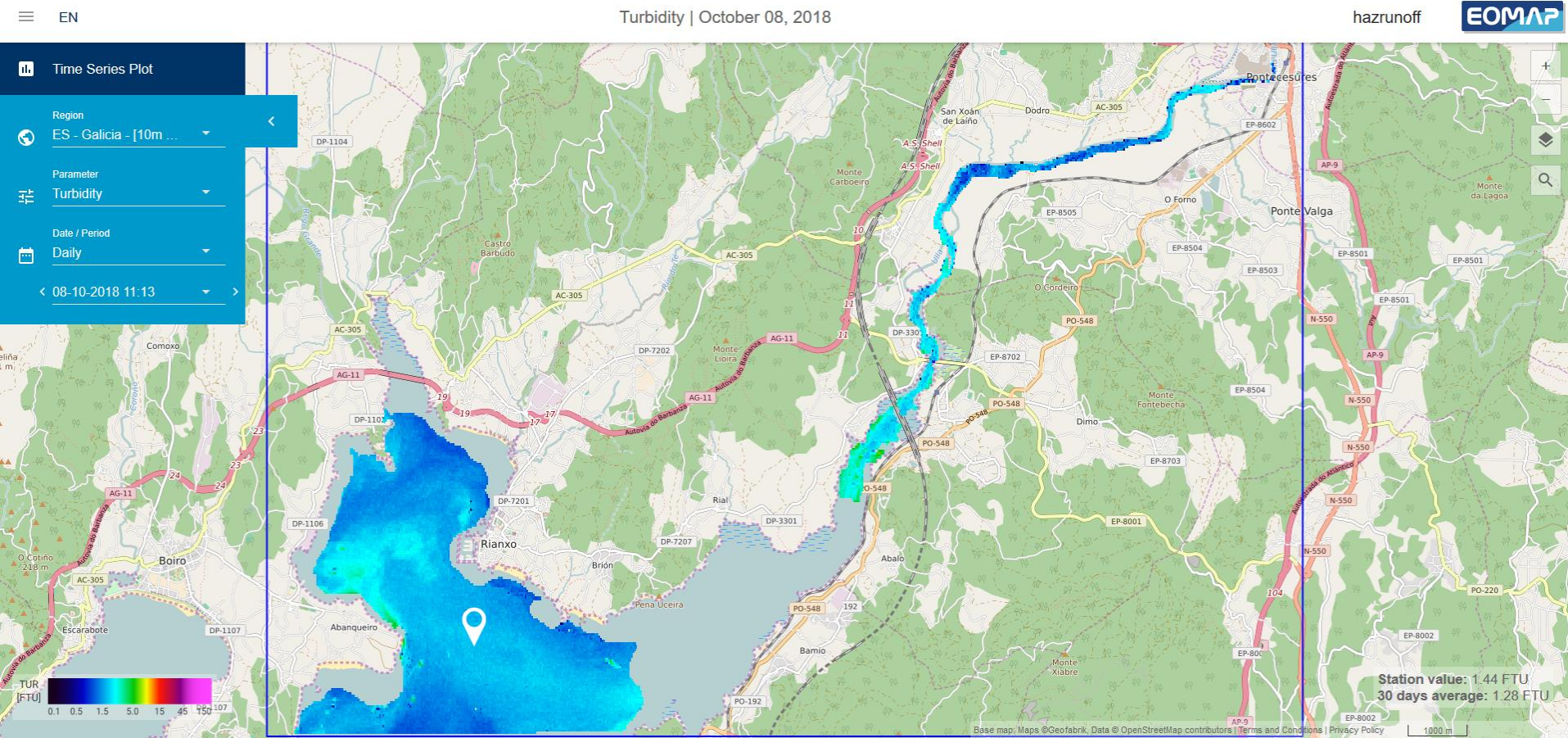Funded by European Union Civil Protection and Humanitarian Aid

Turbidity Example

http://eoapp2.eomap.com
User/PW: **hazrunoff/eo4hazrunoff**
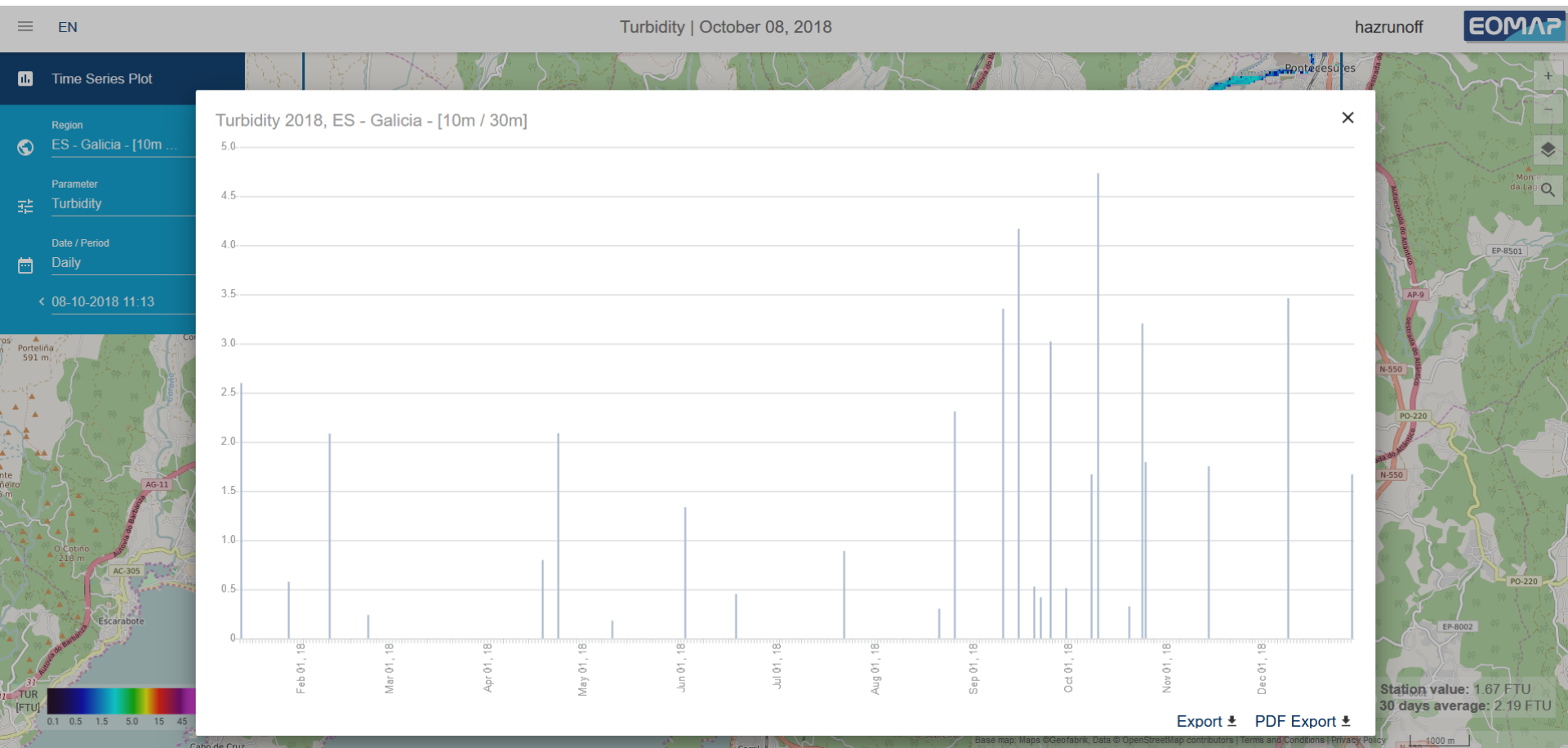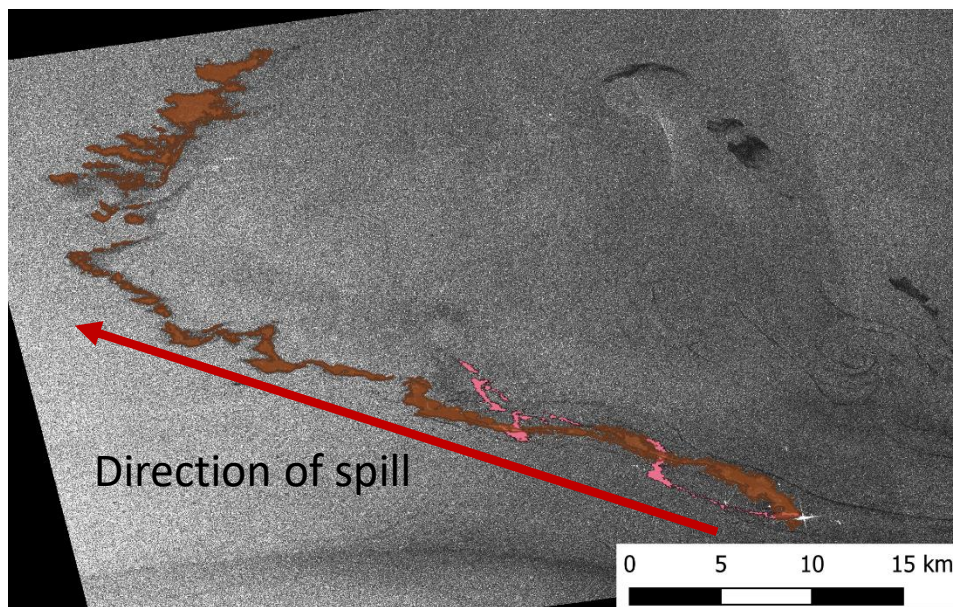

03/04/2019 USER WORKSHOP

Time-Series Plots

Oil Spill Monitoring

thelocal.it

Example: Corsica Oil Spill
Mediterranean Sea
08.10 + 09.10.2018 seen by Sentinel-1

"...600 tonnes of propulsion fuel
had spilled into the sea."

Direction of spill

| 0 | 5 | 10 | 15 km |

Upcoming:
- Oil spill probability
- Chemical spill application
- Fusion of optical and radar

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Outlook

- Operational System for **Water coverage** and **Turbidity**

→ Accessible through HazRunOff webpage

→ For all 4 pilot areas

- **Oil** and **Chemical Spill** detection algorithms fusing optical and radar imagery

→ Improvement to the early warning of EMSA
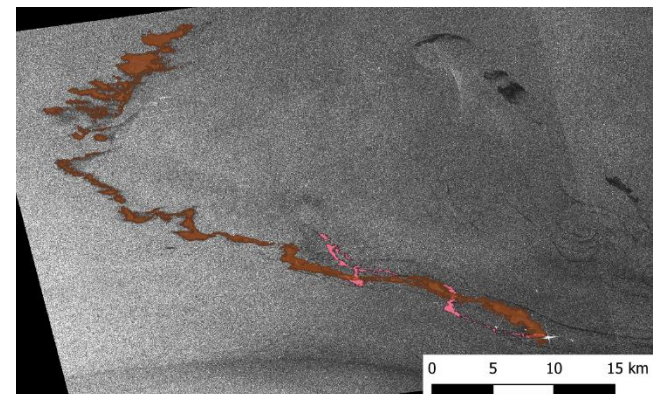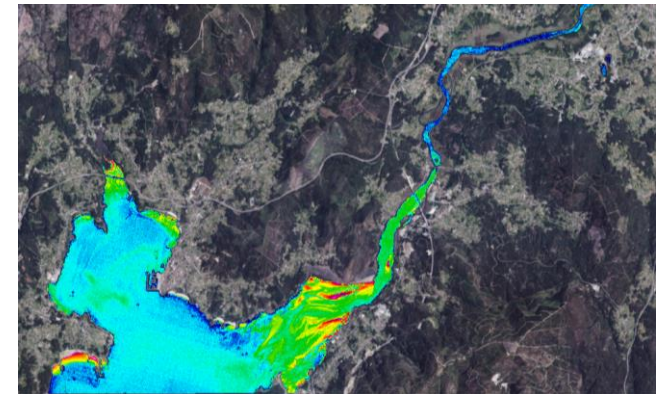
THANK YOU

You're WELCOME TO
EOMAP HQ near Munich

EOMAP HQ
Castle Seefeld, DE