



# Newsletter #2

December 2019

As part of the Coastal Erosion project funded by ESA, the Space for Shore consortium led by i-Sea aims at setting up operational services for coastal erosion monitoring from space. The services, designed by and for end-users, will be applied to most coastal geomorphologies and produced over nine distinct coastal regions within five EU countries.

[spaceforshore.eu](http://spaceforshore.eu)

@shore\_space

## A message to our end-user community

The production of the indicators started last August. Experimental products are progressively integrated in a dissemination platform: the Hellenic EUGENIUS HUB, an open GIS on-line platform.

Thanks to the ground truth datasets you share with us, we are performing quantitative accuracy assessments. Based on these results and on your feedback, we will make all necessary improvements in the next phase of the project to better fit your expectations.

## Space for Shore Production in few numbers

**250 indicators** produced shared between 15 European regions !

**900 images** are exploited to highlight coastal erosion !

Almost half of the requested indicators tackles the waterline and the middle of swash zone !

## Next events

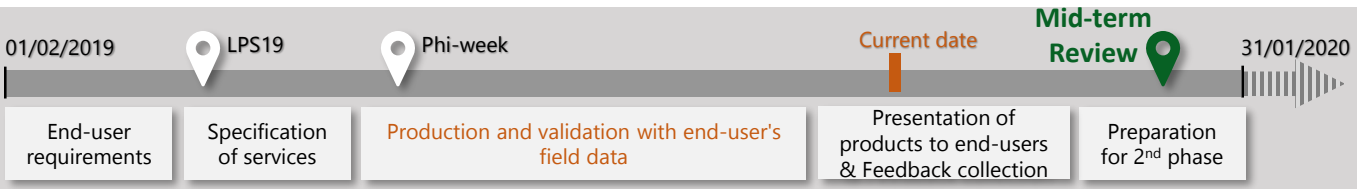
- ✓ December – Products evaluation phase. You are invited to evaluate our products and provide your feedback. Please contact us, or your local partner, to get your account on EUGENIUS HUB.
- ✓ 14th January, 2020 – Workshop: Littoral erosion & Space data co-organized by I-SEA the Région Nouvelle Aquitaine, the Observatoire de la Côte Aquitaine and the CNES.
- ✓ 15th January, 2020 – Mid-Term Review. Results of the Proof-Of-Concept phase will be presented by the consortium to ESA and end-users. Cap Sciences, Bordeaux, France

## SAVE THE DATE - 15<sup>th</sup> Jan. '20

Welcome to Bordeaux for the Mid-term review! Join the community to share your views on the use of satellite imagery for coastal monitoring and management



## Project progress & events – Project Phase 1



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## Production summary - Which product and where

### Normandie

- Cliff apex
- Cliff foot
- Top of cliff vertical movement

### Nouvelle Aquitaine

- Bathymetry
- Beach width
- Dune Foot
- Cliff apex
- Cliff foot
- Top of cliff vertical movement

### Aveiro

- Dune Foot
- Bathymetry

### Kiel Probstei & Sylt Odde

- Submerged sandbars
- Waterline

### NS Blauort

- Tidal flat morphology

### Sulina-Sf. Gheorghe

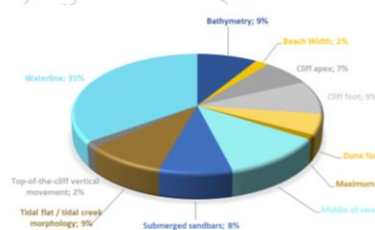
- Submerged sandbars
- Waterline
- Maximum swash zone

### Vistonis & Evros

- Bathymetry
- Waterline
- Dune Foot
- Cliff apex
- Cliff foot

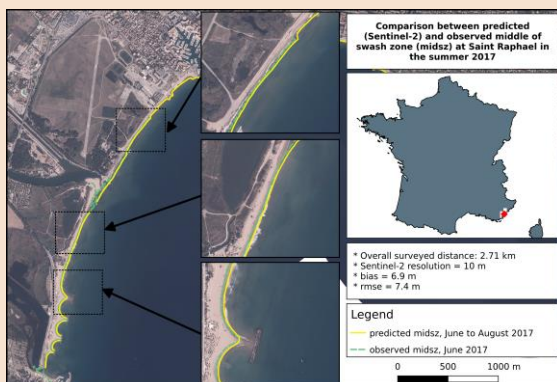
### PACA

- Bathymetry
- Beach width
- Middle of swash zone



## Middle of swash zone at Saint Raphael (PACA)

Validation has started! Here is an example of validation performed for the middle of swash zone. With very high-resolution optical imagery, a bias lower than 20 cm is observed between the field and satellite-derived measurements. With Sentinel-1 (SAR), Sentinel-2 and Landsat free images, the bias is lower than 8 m. **Better than the original resolution of the images, these performances constitute a major achievement!**



Results are now scrutinized by end-users in PACA region.

## EUGENIUS platform

All products will be disseminated to the end-users via the Hellenic EUGENIUS HUB, an open GIS on-line platform. All end-users will openly receive, upon request, credentials that will permit them the access to the platform, where they can navigate to all project test sites and visualize "Space for Shore" products. Meantime, a set of guidelines, as well as a helpdesk, have been set in place that will allow end-users to smoothly interface with the platform.

