



## PROBA4COAST Proba-V for total suspended matter and turbidity retrieval in coastal areas

**Programme**  
STEREO III

**Contract**  
SR/00/326

**Start - End**  
1 December 2015 - 30 November 2017

**Project type**  
Exploration

<https://eo.belspo.be/PROBA4COAST>

### Context and objectives

PROBA4COAST evaluates PROBA-V imagery for deriving concentrations of Total Suspended Matter (TSM) and Turbidity (T) in near shore waters. The high revisit time, coastal coverage and the good image quality, provides opportunities to expand its current use from the typical land applications to coastal water applications. PROBA-V TSM/T products are particularly relevant in combination with TSM/T products from other sensors (to obtain increased temporal coverage).

Therefore the project has the following objectives:

1. Evaluation of the feasibility of a PROBA-V TSM/T product;
2. Comparison with MODIS TSM/T products;
3. Using PROBA-V for the calibration and validation of a sediment transport model.

### Project outcome

#### Results

- PROBA4COAST field dataset with satellite matchups
- ICOR atmospheric correction developed and validated for PROBA-V
- PROBA-V TSM/T products generated and validated with field data and MODIS TSM products
- A depth-averaged (2DH) numerical sediment transport model has been set up with the TELEMAC-MASCARET modelling system for the Belgian coastal area, including the mouth of the Scheldt Estuary.

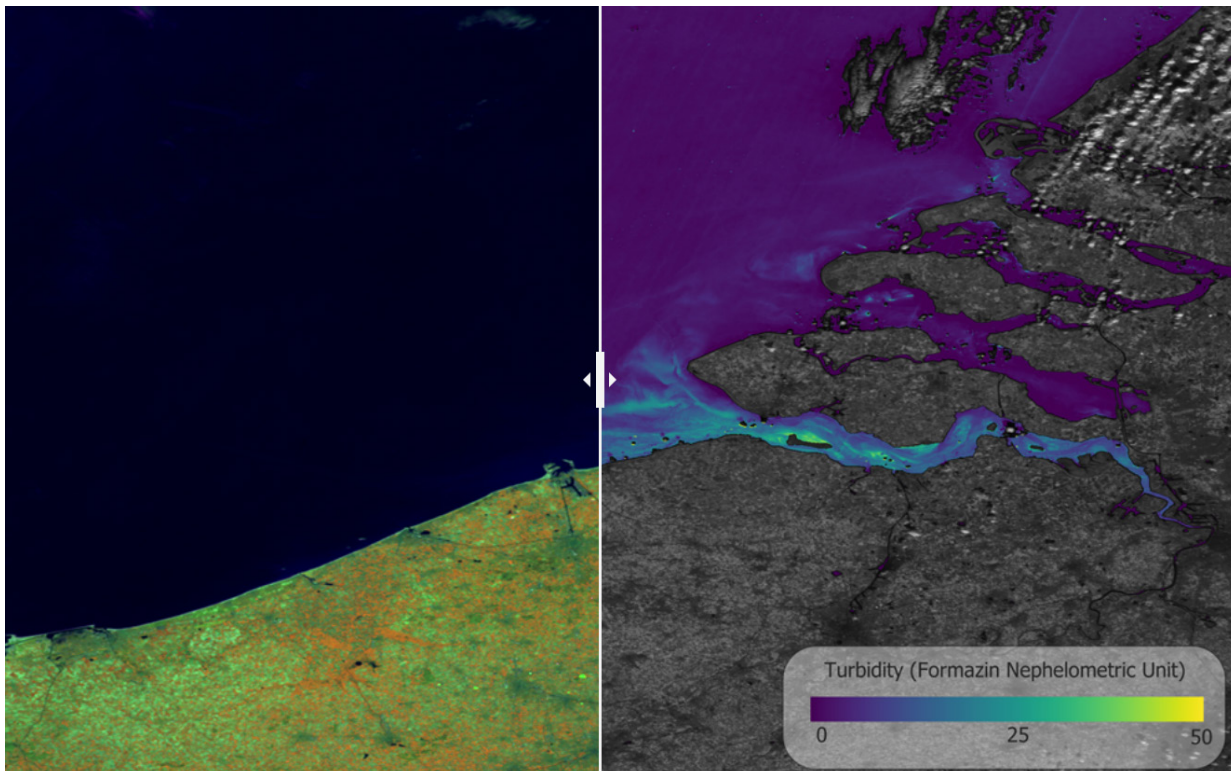


## Products and services

- ICOR atmospheric correction for PROBA-V
- PROBA-V TSM/T products

## Potential users

Users of the final results/products are private companies, consultancies in the dredging sector and governmental agencies responsible for permitting of large scale coastal construction works. Modelling of TSM concentrations can be a valuable tool in assessing the impact of dredging and coastal constructions works both in the planning as in the execution phase.



### Project leader(s)

*KNAEPS Els* | VITO - Remote Sensing - Teledetectie en aardobservatieprocessen  
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### Belgian partner(s)

*MONBALIU Jaak* | KULeuven - Hydraulics Laboratory - Afdeling Hydraulica  
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### Location

North sea

### Website

<http://proba4coast.vito.be>



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