

Imaging spectroscopy and Integrated Coastal Zone Management, a promising marriage

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Overview of the coastal and marine hyperspectral projects executed by VITO and it's partners

- Monitoring of sand transport processes along the Belgian coast

Erosion mapping, monitoring of sand transport processes
(AWZ-Coastal div.)

- Coral reef monitoring in Fordate (Indonesia)

Mapping of endangered reef ecosystems in Tanimbar
(Belspo)

- Mapping of sediment habitat types on the Molenplaat (Westerschelde)

Mapping of grain size, chl-a, org. mat., water content
Ecotope map
(Belspo)

- Water quality monitoring (North Sea and Schelde)

Monitoring of chl-a, SPM, CDOM
(Belspo)

- Atmospheric correction above water bodies

Adaptation of terrestrial atm. corr. for aquatic env.
(Belspo)



An overview of these projects is published in:

Deronde B., Sterckx S., Bertels L., and W. Debruyn, 2005,
*Imaging spectroscopy and integrated coastal zone management,
a promising marriage, Proceedings EARSeL Coastal workshop, Porto, Portugal, submitted.*



Bruhyp 2005 workshop - Brugge

An operational method for vegetation mapping based on airborne imaging spectroscopy, applied to the Belgian dunes

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Objective

Development of an operational method for supervised vegetation classification, applied to the Belgian dunes. We served two users with two objectives:

- the type of vegetation influences the dune stability (AWZ-coastal division)
- the species composition is important with respect to nature conservation (IN)

>> 2 levels of classifications: detailed (22 classes), general (11 classes)

Classification methodology

Supervised approach based on extensive field work; classification performed with LDA.

Data

AISA-Eagle, VNIR, 32 bands, 1m spatial resolution

Partners

This project was financed by the Belgian Science Policy under the national remote sensing program STEREO I and by the Flemish Government (Administratie Waterwezen en Zeewegen, Afdeling Kust).

Three partners were actively involved in the project:

- OC GIS-Vlaanderen
- Flemish Institute for Technological Research (VITO)
- Insititute for Nature Conservation (IN).



