A L G A S E D

Remote Sensing for Characterization of Intertidal Sediments and Microphytobenthic Algae

Investigation the variation of microphytobenthos (MPB) at various time and spatial scales

(2007 – 2009)

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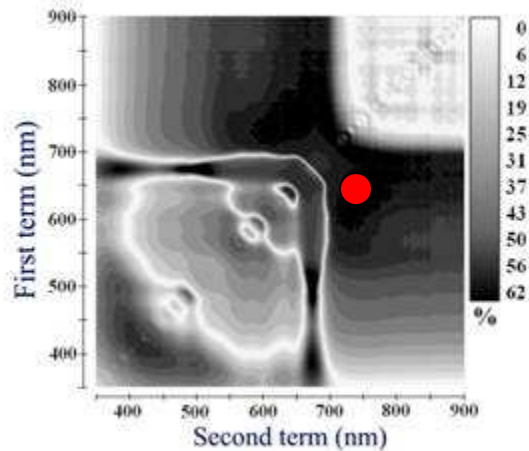
Molenplaat

IJzermonding

Western Scheldt

Objectives

➢ *Improvement and fine-tuning of biomass estimates (exploration of ratio's and vegetation indices) and modeling of primary production (PP)*
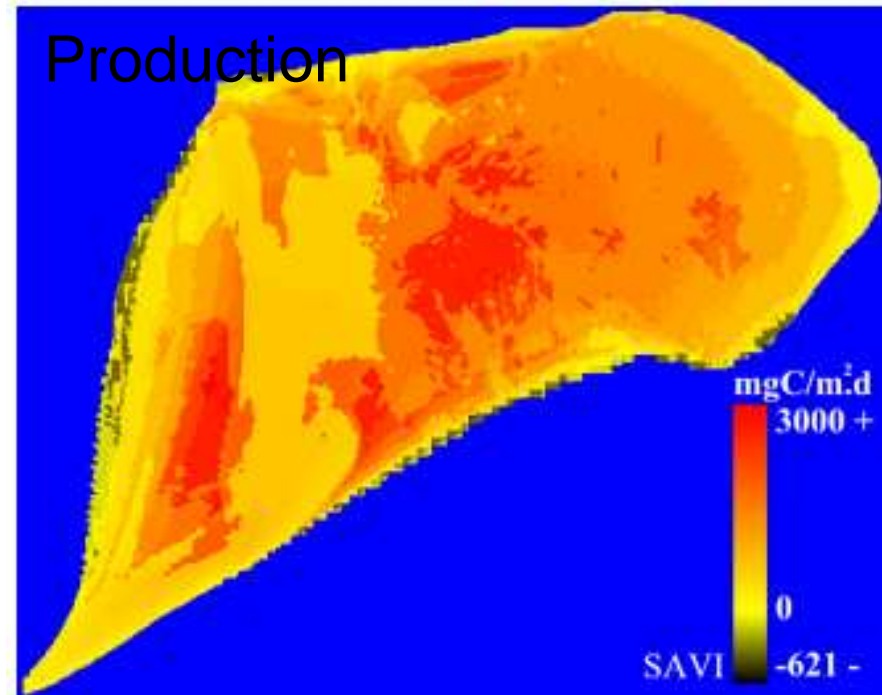
R^2 for correlation of index obtained from field spectra with Chl *a* data

➡ Chl *a* ➡ Primary production

Production

Objectives

➢ *Accuracy assessment and improvement of supervised and unsupervised classification methods for hyperspectral imagery*

■ High Chl-a
■ Low Chl-a

Hard clustering   Fuzzy clustering   Probabilistic clustering

**unsupervised classification of a hyperspectral image by different techniques:
classifying the IJzermonding in two classes of chl-a**

Investigating different techniques using artificial data sets
- Varying spatial properties
- Varying spectral properties

Objectives

> *Assessment of the performance of various types of satellite data for the quantification of MPB biomass and sediment physical properties*
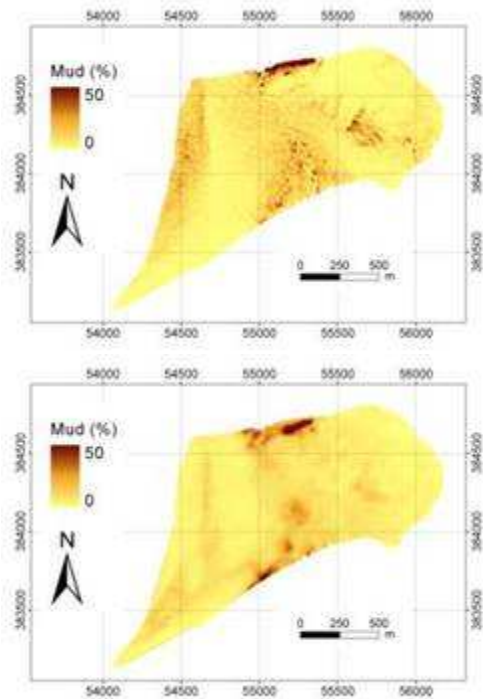
> *Multi-scale analysis incorporating ground, airborne and satellite data*

Figure: Mud content from CASI (above, 5m res) and from SPOT (below, 10m res), 27 May 2005

Reflectance spectra of a pixel by an ASD

◆ Sand with low chl-a content