FOSS4G2006 - Free And Open Source Softwa

Contribution ID : 82

Processing MODIS satellite images for phytoplankton chlorophyll estimates

Friday 15 Sep 2006 at 09:00 (00h30')

Satellite remote sensing is widely used for phytoplankton distribution evaluation. For mapping of chlorophyll, multivariate calibration was applied to validate MODIS satellite data against automated fluorescence records of chlorophyll. The measurements were carried out with a ferrybox system on board the ferry Finnpartner with regular route from Travemünde to Helsinki (Alg@line data). The satellite data was received in HDF-EOS format. Data for each band was extracted with HDFLook-MODIS software and further analyzed together with chlorophyll data with GRASS-GIS versions 6.1 and 5. Statistical analysis was done with PLS and PCR analysis with the R statistical software.

Partial least square (PLS) regression analysis was used to validate chlorophyll records against 1 km resolution bands. Satellite data was received from Sodankylä Station, Finland and NASA GES Distributed Active Archive Center (DAAC) Data Pool through the Internet. The production of daily maps is automated with shell scripts and published in the Internet on www.balticseaportal.fi.

Primary authors : Mr. KAITALA, Seppo (Finnish Institute of Marine Research)

Co-authors : Mr. STUTZ, Henrik (Finnish Institute of Marine Research) ; BOJCZUK, Przemys?aw (Finnish Institute of Marine Research)

Presenter : Mr. KAITALA, Seppo (Finnish Institute of Marine Research)

Session classification : Session 16 : Organizational empowerment through Open GIS

Track classification : --not yet classified--

Type : Conference