

MULTISPECTRAL SATELLITE REMOTE-SENSING OF MICROPHYTOBENTHOS CHLOROPHYLL A CONCENTRATION USING MERIS

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Multispectral ocean color satellite remote-sensing have proven extremely useful to monitor phytoplankton structure and functioning in the coastal ocean over a continuum of space and time scales relevant to ecosystems studies. Among available sensors for the 2002-2012 decade, the MEdium Resolution Imaging Spectrometer (MERIS), being characterized by a set of 15 narrow bands in the spectral range from 412 to 900 nm and by a ground resolution of 300 m in every band, shows the greatest promises to study the spatio-temporal dynamics of benthic microalgae biofilms covering intertidal sediments. The potential of MERIS to retrieve biogeochemical information on microphytobenthos is investigated here. A library of *in-situ* and synthetic hyperspectral reflectance data will be used to determine the most suitable reflectance indice to indirectly measure microphytobenthos chlorophyll *a* concentration using MERIS data. Preliminary examples of applications will be shown in Bourgneuf Bay (France) and other intertidal zones of the European coast.