

## **The use of high temporal resolution satellite data for monitoring of water quality**

### **Abstract**

Present study compares possibilities of sea water quality monitoring using high temporal resolution satellite data. The theoretical part describes basic principles of remote sensing, the spectral characteristics of water and their change caused by substances present in the water. The analytical modeling methods of chlorophyll-a concentration retrieval from MERIS data are described. In the study three processors are used, standard MERIS processor Case 2 Regional, FUB/Wew Water processor and FLH/MCI processor. In total 10 satellite images are processed, five for each of the two studied areas, the Golfe du Lion in France and Skagerrak and Kattegat straights in Northern Europe. As there is only limited dataset of *in situ* measurements available to validate the results, it is impossible to decide which of the processors is the most suitable one. It is however clear that none of the globally applicable algorithms can be as accurate as algorithms developed for the exact location and atmospheric actual conditions.