**THE REMOTE SENSING ESTIMATION OF SHALLOW WATER OPTICAL PROPERTIES AND APPLICATION TO THE HABITAT MAPPING.**

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The availability of the photosynthetically active radiation (PAR) is one of the limiting factors for the benthic habitats distribution in costal zones. In the coastal waters, the proportion of optically active constituents may vary significantly, which changes the water transparency, and amount of light energy penetrating to the bottom. Water quality and the euphotic zone lower limits are estimated from in situ data and from ocean color satellite data. In situ data was collected over the period 2010-2012 for the Baltic Sea shallow costal water areas. Bio-optical measurements were accompanied with benthic cover detection (video data and biomass samples). Satellite observations provide global coverage of the water quality properties at high spatial and temporal resolution. We were using MERIS and MODIS standard products for water quality, Kd(PAR) and euphotic zone estimation. In situ measured irradiance was used in conjunction with satellite estimated parameters to calculate the residual energy at the lower limits of benthic algal cover.

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