

Finnish Environment Institute (SYKE) participates to several international projects for developing satellite earth observation (EO) methods and services for water quality. The European Earth observation program GMES (Global Monitoring for Environment and Security) is extensively covering water quality monitoring, and SYKE is well integrated in these activities. As MarCoast and MyOcean projects concentrate merely on providing and developing GMES services for the marine environment, projects such as AquaMar and upcoming CoBios projects focus on improving and introducing new services based on the existing GMES (core) services, the so called GMES Downstream services. As another starting EU GMES Downstream project, FreshMon is focusing on lake, river and river estuary waters. FreshMon is focusing on high spatial resolution: Currently standard products derived from MERIS full resolution 300 m data will be complemented with estimates of parameters such as turbidity with a resolution up to 5 m. Integration and co-development of different optical in situ ground/laboratory and remote sensing techniques, from measurement device development to integrated systems of models, EO and in situ are being studied in a strategic partnership project WaterS: Several European researchers are coming to and leaving for visits in different European companies and research institutes. However, wide international co-operation is designed to support our national activities, such as GISBLOOM EU Life+ project for integrating remote sensing and other sources of information to modeling. As a part of our international efforts, operational EO services for water quality for Finnish waters are being provided.