Geophysical Research Abstracts
Vol. 13, EGU2011-1856, 2011
EGU General Assembly 2011

FP7 GLOWASIS – A new collaborative project aimed at pre-validation of a GMES Global Water Scarcity Information Service

Rogier Westerhoff (1) and Albrecht Weerts (2)
(1) (rogier.westerhoff@deltares.nl), (2) (albrecht.weerts@deltares.nl)

The main objective of the project GLOWASIS is to pre-validate a GMES Global Service for Water Scarcity Information. It will be set up as a one-stop-shop portal for water scarcity information, in which focus is put on:
- monitoring data from satellites and in-situ sensors;
- improving forecasting models with improved monitoring data;
- linking statistical water data in forecasting;
- promotion of GMES Services and European satellites.

In European and global pilots on the scale of river catchments it will combine hydrological models with in-situ and satellite derived water cycle information, as well as government ruled statistical water demand data. By linking water demand and supply in three pilot studies with existing platforms (European Drought Observatory and PCR-GLOBWB) for medium- and long-term forecasting in Europe, Africa and worldwide, GLOWASIS' information will contribute both in near-real time reporting for emerging drought events as well as in provision of climate change time series. By combining complex water cycle variables, governmental issues and economic relations with respect to water demand, GLOWASIS will aim for the needed streamlining of the wide variety of important water scarcity information. More awareness for the complexity of the water scarcity problem will be created and additional capabilities of satellite-measured water cycle parameters can be promoted.

The service will use data from GMES Core Services LMCS Geoland2 and Marine Core Service MyOcean (e.g. land use, soil moisture, soil sealing, sea level), in-situ data from GEWEX' initiatives (i.e. International Soil Moisture network), agricultural and industrial water use and demand (statistical – AQUASTAT, SEEAW and modelled) and additional water-cycle information from existing global satellite services. In-depth interviews with a.o. EEA and the Australian Bureau of Meteorology will take place.

GLOWASIS will aim for an open source and open-standard information portal on water scarcity and use of modern media (forums, Twitter, etc). Infrastructure of the GLOWASIS portal is set up for dissemination and inclusion of current and future innovative and integrated multi-purpose products for research & operational applications with open standards.

GLOWASIS will establish public and governmental awareness and promotion for GMES, EO and in-situ data in a new service for the specific purpose of water scarcity. By linking existing ESA services with user communities, government and public GLOWASIS will aim for a significant uptake of these services. Furthermore, GLOWASIS will aim for the global uptake of the use of GMES Core Service Information by public, government, and industry, each working with its own software and protocols and each interested in short-term and long-term impact of drought. It will help ongoing activities (a.o. GEO, GEWEX, HYMEX) of combining observation and modelling techniques of the water cycle to be used for water resource management.

GLOWASIS will demonstrate the use of new and future European satellites SMOS, CryoSAT-2 and Sentinel-1.

The project starts in January 2011 and the duration is 24 months. Participating institutions are: Deltares, (Netherlands, coordinator), CNR-ISAC (Italy), ECWMF (UK), JRC (EC. Belgium), NEO (Netherlands), University Utrecht (Netherlands), TU Wien (Austria), TNO (Netherlands), University of Santiago de Compostela (Spain), IMGW (Poland), and University of Kwazulu-Natal (South Africa).