



## Grid Based Environment Oriented Tools and Applications

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Earth Science application development is a challenge to software methodologies as well as to software developers. Huge data, distributed processing, accessing policies, user interaction, technological compatibilities, required performance and usability, are just a few issues faced by Grid application developers.

This presentation highlights particular subjects of Grid related issues such as interoperability between the geospatial and Grid platforms, gridification of OGC Web services, secured user access to distributed resources, spatial data visualization, Grid based environment application development methodology, Grid based teaching tools, etc. The examples concerns as well with tools and applications such as eGLE – GiSHEO eLearning Environment, gProcess – Grid based platform supporting the execution of satellite image processing workflows, ESIP – satellite image processing platform, GreenView and GreenLand – land cover classification Grid applications based on the satellite image processing, and gSWAT – Grid based SWAT hydrological model calibration and execution application.

The presentation reveals experience acquired through a few research projects such as EnviroGRIDS (FP7) [1], SEE-GRID-SCI (FP7) [2], GiSHEO (ESA) [3], and MedioGrid in order to highlight the challenges to the development of Grid based environment oriented tools and applications.

### References:

- [1] EnviroGRIDS Project - Black Sea Catchment Observation and Assessment System supporting Sustainable Development, <http://www.envirogrids.net/>
- [2] SEE-GRID-SCI Project - SEE-GRID eInfrastructure for regional eScience, <http://www.see-grid-sci.eu/>
- [3] GISHEO Project - On demand Grid services for high education and training in Earth observation, <http://gisheo.info.uvt.ro/>