

FP7 European Commission Research Projects in EuroGEOSS Domain Area

1. EBONE – Europe Biodiversity Observation Network

EBONE will develop an integrated monitoring system based on key biodiversity indicators and implementation within an institutional framework operating at the European level. This framework will provide continued access to indicator data for CBD reporting (Convention on Biological Diversity) against the 2010 target and will form the basis for the continued development of a European Biodiversity Observation system.

The project focuses on unifying many of the disparate biodiversity observing systems and creating a platform to integrate biodiversity data with other types of information. It will contribute from a European perspective to the development of a global biodiversity observation system, spatially and topically prioritized. The project plays a leading role in supporting the global GEO-BON initiative developed as a GEOSS task and international partnership.

Project website: www.ebone.wur.nl

2. e-SOTER

Soil and land information are often inaccessible, incomplete, or out of date. e-SOTER addresses the felt need for a global soil and terrain database. It will deliver a web-based regional pilot platform with data, methodology, and applications, using remote sensing to validate, augment and extend existing data. Technical barriers include: quantitative mapping of landforms; soil characterization and pattern recognition by remote sensing; standardization of measures to convert legacy data. Major research thrusts involve: 1) improvement of the current SOTER methodology at scale 1:1 million in four windows in Europe, China and Morocco, using optical remote sensing and legacy data; 2) within 1:250 000-scale pilot areas, advanced remote sensing applications.

Project website: www.esoter.net

3. AEGOS – African-European Geo-resources Observation System

The sustainable use of resources of geological origin such as minerals and non-energy raw materials, groundwater and geothermal energy require knowledge based on data, information and expertise. Collectively, European and African geological surveys have a unique archive of public Africa-related georesources data that needs to be shared and valorised. Providing access represents a major stake for sustainable development policy making and capacity building in geosciences in Africa.

The AEGOS project (2008-2011) is a Support Action involving 23 partners from 20 European and African countries. It designs a continental infrastructure of public, interoperable geology-related data as well as user-oriented services. This observation system will provide support to a wide range of end-users: policy-makers at all geographic levels, development agencies, private sector actors, geoscientific communities and civil society.

The expected results of AEGOS include i) operational procedures for data management (Spatial Data Infrastructure, metadata, data specifications and systems architecture), ii) user-oriented products and services including the preparation of innovative spin-off projects, iii) the African-European partners network and charter of partnership, iv) a geoscience contribution to GEOSS, in the context of the Infrastructure for Spatial Information in Europe (INSPIRE); v) a common strategy for capacity building and training programmes.

Project website: www.aegos-project.org

4. DevCoCast

Many Developing Countries are exposed to serious environmental risks and their need for adequate, environmental information is high. Unfortunately, reliable and continuous access to this information is often lacking. The GEONETCast concept overcomes existing data delivery limitations and provides this much needed operational and fast access. The “GEONETCast for and by Developing Countries” (DevCoCast) project will bring together many disparate sources of environmental, added-value datasets (both in situ and satellite based) in Africa, South-America and Europe and will disseminate these datasets in (near) real time and at low cost via GEONETCast, servicing a broad range of user communities. It will thus improve the involvement of Developing Countries in the GEONETCast component of the global GEO System of Systems (GEOSS).

To accomplish this, DevCoCast will build upon existing production (e.g. SPOT-VGT), research projects and partnerships (e.g. GEOLAND, VGT4AFRICA, GOOS-Africa, YEOS) and it will utilise and expand the existing EUMETCast dissemination infrastructure, one of the 3 cornerstones of GEONETCast. The main project objectives are to put the provided datasets to actual use, and building-maintaining capacity in Developing Countries through training workshops, networking and outreach. The relevant information, partly produced in the Developing Countries and disseminated through GEONETCast, is thus embedded in a systematic manner into reporting systems in support of research, planning and decision making processes. This will enable authorities in Developing Countries in fulfilling their increasing monitoring and reporting obligations and help them to better manage their natural resources through their sustainable development policies.

Project website: www.vgt4africa.org/

5. EnviroGRIDS

The Black Sea Basin is internationally recognized for its ecologically unsustainable development and inadequate resource management leading to severe environmental, social and economical problems. EnviroGRIDS aims at developing a Black Sea Basin Observation System that will store, analyze, visualize and disseminate information on past, present and future states of the region to assess and predict its sustainability and vulnerability. A gap analysis will identify specific areas where most efforts are needed. As climatic and hydrological changes are of concern, their impacts on several societal benefits areas of the Group on Earth Observation will be evaluated, namely on environment and health, energy, water, ecosystems, agriculture, biodiversity and environmental risks. EnviroGRIDS will rely on ultra-modern technology using the largest gridded computing infrastructure in the world. It will serve as a benchmark for the development of the European directive on Infrastructure for Spatial Information and for the Global Earth Observation System of Systems. Spatially-explicit scenarios of drivers of changes such as climate, demography and land cover will be created. EnviroGRIDS will be validated through several thematic implementations within the Black Sea basin. Finally, a web-based observation system including attractive visualisation tools will warn target populations about environmental risks and help regional/governmental agencies to prepare the most adequate responses. Capacity building will be based on a networking platforms supported by state-of-the-art e-learning courses on the internet and on DVD. The aim is to raise public and decision makers' awareness on key environmental issues and observation system technologies by organizing live and virtual trainings. Through the combination of all these activities,

EnviroGRIDS will improve data access and use in the Black Sea basin, and build regional capacity on Observation Systems to favour its sustainable development.

Project website: www.envirogrids.org

6. EUGENE

Coordinated European contributions to GEO and GEOSS at all levels are key to making GEOSS a success for Europe, its States and its Organisations. There is consensus within the European GEO community that visibility and impact of European GEO contributions should be reinforced, mainly by improved coordination. The ultimate goal is to develop an adequate European GEO component that reflects the excellence and importance of European Earth Observation capabilities as well as the European needs from GEOSS. The EUGENE project, with a series of workshops and other activities, will lead to a more strategic and structured European GEO component and to a higher level of visibility and involvement of the political level. In the short term, EUGENE will yield concrete contributions to the next GEO Ministerial summit in 2010. This will intensify the global impact of European GEO activities and facilitate international networking. EUGENE will mainly, but not exclusively, address the major relevant European Organisations and Programmes in the field of earth observation, with regards and complementary to GMES, INSPIRE and FP7 GEO projects.

Project website: www.eugene-fp7.eu/

7. GEONetCab

The purpose of the GEO Network for Capacity Building (GEO-Net-CaB) project is to create the conditions for the improvement and increase of the GEO capacity building activities and framework, with special emphasis on developing countries, new EU member states (and EU neighbouring states) and climate monitoring. It will also serve the bigger goal of improved effectiveness and efficiency of GEO capacity building for applications in the GEO societal benefit areas. Coinciding with this purpose, successful brokerage with (potential) clients for earth observation products and services will be facilitated.

To achieve maximum impact demonstration projects will be carried out in Southern Africa, the French-speaking African region, Czechia and Poland, with spin-offs to EU neighbouring countries and Latin America and Asia.