

"ECOPOTENTIAL" : Improving future ecosystem benefits through Earth Observations

Start Date: June 2015

End Date: May 2019

Description:

Terrestrial and marine ecosystems provide essential goods and services to human societies. In the last decades, however, anthropogenic pressure has caused serious threat to ecosystem integrity, functions and processes. Knowledge-based conservation, management and restoration policies are thus urgently needed, in order to improve ecosystem benefits in face of increasing pressures. Fundamental to all these is effective monitoring and modelling of the state and trends in ecosystem conditions and services. Best use should be made of existing and incoming Earth Observation and field monitoring data, complemented by appropriate interpretation tools, data services and ecosystem models able to use these data.

The ECOPOTENTIAL project focuses its activities and pilot actions on a targeted set of internationally recognised protected areas (PA) in Europe, European Territories and beyond, including mountain, arid and semi-arid, and coastal and marine ecosystems. Building on the knowledge gained in individual PAs, the ECOPOTENTIAL project will address cross-scale ecological interactions and landscape-ecosystem dynamics at regional to continental scales, using geostatistical methods and the emerging novel approaches in Macrosystems Ecology, which is addressing long-term and large-scale ecological challenges. ECOPOTENTIAL addresses the entire chain of ecosystem-related services, by (a) developing ecosystem data services, with special emphasis on Copernicus services; (b) implementing model output services to distribute the results of the modelling activities; and (c) estimating current and future ecosystem services and benefits, combining ecosystem functions (supply) with beneficiaries needs (demand). In ECOPOTENTIAL all data, model results and acquired knowledge will be made available on common and open platforms, coherent with the Global Earth Observation System of Systems (GEOSS) data sharing principles and fully interoperable with the GEOSS Common Infrastructure (GCI).

Outputs/Results:

Results

- state-of-the art geospatial data platform linked to the GEOSS
- guidelines for data preparation, data sharing, and service interoperability

Outputs

The outputs to be produced/coordinated by UNEP/GRID-Geneva and University of Geneva are linked to the output of ECOPOTENTIAL Workpackage 10, namely to implement the service-based platform for a virtual (i.e. online distributed) and open (i.e. accessible) laboratory to study ecosystems and contribute to GEO/GEOSS: the ECOPOTENTIAL Virtual Laboratory Platform.

Knowledge acquired and methods developed in ECOPOTENTIAL will be transferred to and applied in other protected areas.

Clients/End Users:

Earth observation professionals, Scientists in all disciplines related to ecosystem services, Decision-makers, Communities

Link(s):

<http://www.ecopotential-project.eu>