

Global Monitoring for Environment and Security (GMES):the services establishing an initial GMES capacity

Peter Breger, Marco Malacarne, Alain Podaire, Gordon Campbell, Mark Doherty, Stefano Bruzzi
European Commission

Peter.Breger@cec.eu.int

The Global Monitoring for Environment and Security (GMES) initiative is to enable decision-makers in Europe to acquire the capacity for global as well as regional monitoring so as to effectively realise the objectives of the European Union in a wide variety of policy areas. GMES addresses the (potentially common) needs of public authorities in various policy areas, as, for example, in the case of information on land cover, which will contribute to prediction and management of floods, forest fires and crop yields, as well as monitoring of carbon sinks and sources in the framework of the Kyoto protocol. Investments to develop monitoring technologies and information systems in these areas have been and continue to be made without co-ordination and with varying degree of effectiveness. GMES aims at co-ordinating existing as well as new technologies and systems to better meet a structured demand for information on the part of European, national, regional and local decision-makers and users. Based on the information gathered during the preparatory phase of GMES (2000-2003), in particular concerning user requirements, and of the preliminary results of the interim implementation phase, the paper describes how the full implementation of GMES capacities can be demonstrated on a pilot scale based on a limited number of initial services. The paper illustrates the range of initial services that GMES can already provide and the areas of societal benefit that they can address in many areas as diverse as, e.g., marine and coastal environment, air pollution, water quality and land use, forest monitoring, food security, maritime security, etc. It also highlights the main steps in the process that leads to the provision of those services: starting from space and in-situ observations, through the networking and management of data, down to the provision of added-value products and services, tailor-made to the needs of the end-users. Finally the paper outlines how data and information originated and developed in relation to different policy areas of GMES can be integrated and mutually enriched, through appropriate data networking and data harmonisation, so as to allow better quality services and the sharing of key infrastructure and capacities. This process of integration of information allows GMES to present itself as an open system also in relation to other Earth observation systems. The paper illustrates examples of how GMES can exchange information and extend its capacity to provide essential services to other regions of the world, including developing countries.