

EEA Briefing

March 2012

GMES

Summary

Global Monitoring for Environment and Security (GMES) is an EU-wide flagship programme that aims to support policymakers, business, and citizens with improved environmental information. GMES integrates satellite and in-situ data with modelling to provide user-focused information services. GMES Initial Operations are now underway and the programme is expected to evolve towards operational status by 2014. EEA plays a key role in coordinating in-situ observations and contributing to the development of the services, in particular to the technical coordination of the Land Monitoring Service. Use of the GMES services is an integrated part of EEA's strategy to improve environmental information. GMES also plays an important role in the implementation of the principles of the Shared Environmental Information System (SEIS), and has the potential to make effective use of existing infrastructures in accordance with the INSPIRE directive. In the global context, GMES is an integral part of the Global Earth Observation System of Systems (GEOSS).

GMES evolution

In May 1998, institutions involved in the development of space activities in Europe gave birth to the Global Monitoring for Environment and Security (GMES) programme through a declaration known as the 'Baveno Manifesto'. The Manifesto called for a long-term commitment to the development of space-based environmental monitoring services, making use of, and further developing, European skills, and technologies. In October 2010, the programme entered a new phase with the adoption of a Regulation on GMESⁱ which provided for an initial operational governance framework and funds (EUR 107 million). This Regulation paved the way for the evolution of GMES to a fully operational programme from 2014.

GMES services provide data combined from in-situ sources, satellite sources (space) and modelling capacities. In-situ sources include all ground-based, air-borne, and ship/buoy-based measurements. To date, the services are provided by consortia (research or commercial) contracted to the European Commission (EC). For services entering the GMES Initial Operations (GIO) phase, the EC has appointed technical coordinators; for Land Monitoring Service to EEA and for Emergency Management Service to JRC.

In support of European policies, GMES will provide comprehensive geographic coverage of state and trends of key environmental parameters for Europe and beyond. Critical decisions that need to be made quickly during emergencies, such as floods and humanitarian crises, will be supported. Businesses and citizens will also benefit through innovation and incentives to create new practical applications using environmental information.

EEA role

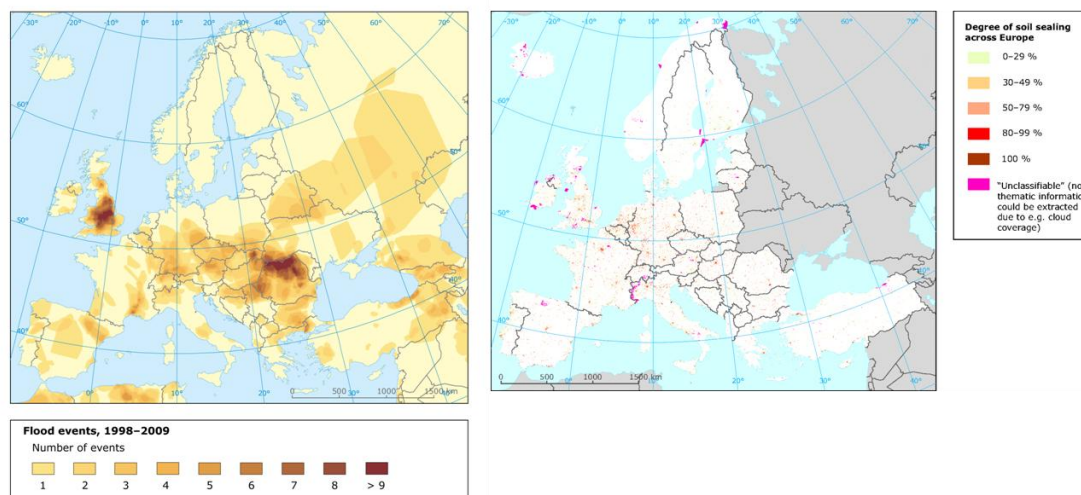
Through the coordination of the European environment information and observation network (Eionet), EEA coordinates networks of data providers in countries in order to fulfil its mandate of providing European environmental information and assessments. Through this role, EEA strengthens coordination mechanisms and develops partnerships with other EU-level stakeholders.

EEA coordinates the GMES in-situ component through the **GISC**ⁱⁱ (GMES In-Situ Coordination) project. GISC aims at linking data providers and service providers using the principles of the Shared European Environmental Information System (SEIS) and the Infrastructure for Spatial Information in the European Community (INSPIRE). GISC is proposing sustainable mechanisms for in-situ data delivery/access, based on existing information capacities (e.g. national systems, European networks). The ultimate goal is to

build up an Initial Framework (IF) that comprises tools and methods necessary for an efficient and sustainable interface between in-situ data providers and the GMES services. GISC's role is to effectively manage this interface.

EEA also contributes to the development of GMES services – in particular, the technical coordination of the pan-European and local components of the Initial Operations of the Land Monitoring Service (GIO Land). Furthermore, the EEA Strategy 2009-2013 – Multi-annual Work Programme foresees use of the GMES services for marine, air quality, land, and climate change, elements of which are already present in the EEA's European environment state and outlook 2010 report.

Figure 1: Examples of the use of GMES services by EEA presented in the European environment state and outlook 2010 report.



Global dimension

GMES has strategic importance since it provides capacity to support the EU as a global actor. For example, GMES is designated as Europe's main contribution to the global ten-year implementation plan of the Global Earth Observation System of Systems (GEOSS). GEOSS is designed to provide decision-support tools to a wide variety of users. GEOSS will link existing and planned observing systems around the world and support the development of new systems where gaps currently exist. The Group on Earth Observations (GEO) is coordinating efforts to effectively build GEOSS.

In addition, GMES provides the EU with tools for participating in international efforts such as strengthening the global climate observation system. It will contribute to the EU Strategy for Africa through the development of an African observatory and the implementation of the African Monitoring of the Environment for Sustainable Development initiative. GMES has also been highlighted in the EU's dialogues with USA, Russia, China and India.

More about GMES:

- <http://ec.europa.eu/enterprise/policies/space/gmes/>
- <http://www.gmes.info/>

More about SEIS: <http://ec.europa.eu/environment/seis/>

More about INSPIRE: <http://inspire.jrc.ec.europa.eu/>

ⁱ Regulation of the European Parliament and of the Council of 22 September 2010 on the European Earth monitoring programme (GMES) and its initial operations (2011 to 2013):

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:276:0001:0010:EN:PDF>

ⁱⁱ GMES in-situ data coordination is entrusted to the European Environment Agency (EEA) in close coordination with the Commission, through the SP1-Cooperation, Coordination and support action, FP7-Adhoc-2007-13 funded Coordination Action "GMES In-Situ Coordination – GISC".