

Brussels, 3 February 2004

## **A safer, cleaner Europe: EU Global Monitoring for the Environment and Security**

***The European Commission today adopted an action plan on GMES - Global Monitoring for the Environment and Security. The plan outlines firm steps towards the establishment of a system that will harness, co-ordinate and enhance existing Earth observation and monitoring information from satellites and Earth-based sensors, in order to support better decision-making for the environment and security. The initiative aims at providing independent, cost-effective, and user-friendly services that can help to anticipate or address crises such as forest fires or floods, and lead to better management of issues ranging from the protection of the environment to combating illegal immigration. Today, a lot of data on these matters are available from many different sources, but for technical reasons or due to a lack of co-operation, they are often inconsistent or not fully integrated. With its Communication, entitled "Establishing a GMES capacity by 2008 (Action Plan (2004-2008))", the European Commission - in co-operation with the European Space Agency - is laying out the way forward.***

"The greater the accuracy and timeliness of the information available, the greater the ability for decision-makers to act effectively," said European Research Commissioner Philippe Busquin. "Global Monitoring for the Environment and Security (GMES) will pull together a wide range of diverse information so that it can be used to better manage and anticipate potentially dangerous and costly situations, from environmental crises to security issues. It will also provide a strategic tool to support a wide range of European policies including agriculture, transport, regional development, fisheries and external relations. GMES has also a great potential to stimulate economic growth by fostering the creation of new innovative services – so much so that it has been selected as one of the "Quick Start" projects in the Commission's Initiative for Growth.<sup>1</sup>"

### **Good decisions need good information**

Accurate decision-making for the environment and security is complex. In the past, substantial investment has been made to gather and treat information that can better support environmental and security policies. But raw information, including data from diverse and often unrelated sources, has to be processed frequently, often within demanding time constraints. The end result is that the information, in its current form, is not useful to those who need it.

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1 COM(2003)690, 11/11/2003: Communication from the Commission, "A European Initiative for Growth, Investing in Networks and Knowledge for Growth and Jobs - Final report to the European Council"

The GMES initiative aims to bring together and make the most of existing data collected from Earth-based *in-situ* monitoring capacities, as well as airborne and space-based Earth observation tools. It will then deliver it to service providers through an efficient information management system. These providers will create and offer targeted services to groups of specific users, such as public authorities, aid agencies and private enterprises.

### **Ready for action**

The Commission's Communication provides an Action Plan on how to establish a working GMES capacity by 2008, including a structure for its management, funding aspects and a step-by-step approach on how to move forward. The first priority is to create services that can bring data and information together to create useful services. To do this, two key elements are required. First, the main sources of data need to be reined in and integrated. Next, a means of effectively distributing the information to those that require it needs to be developed.

Specifically, the Action Plan outlines tasks required to accomplish this in the next four years, including:

- Developing the right tools (space and *in-situ* components) that can collect the required information;
- Designing the appropriate data integration and information management infrastructure that will allow users to easily access and share the information;
- Providing regular and reliable services that are tailored to the specific needs of users;
- Establishing a structure for effectively funding and managing the new GMES capacity.

### **Required resources**

The combination of existing funds from the EU 6th Research Framework Programme (FP6 2002-2006) plus European Space Agency (ESA) "GMES Services Element" funds will help to develop information delivery services in the 2004-2006 timeframe. It is estimated that €80 million would be required in 2007, with an increase to €150 million in subsequent years for service provision alone.

As is the case with the GALILEO satellite navigation system, a funding mechanism will need to be developed (by a new "GMES Programme Office" involving the European Commission, ESA, EU Member States and private sources) to ensure that users of GMES services (public or private) contribute to the operating costs through an appropriate business model.

### **Next Steps**

The Action Plan will be implemented in close cooperation with ESA, EU and ESA Member States, other international organisations and the private sector. In early 2005, the Commission will make formal proposals for the management scheme and funding resources needed for an operational GMES capacity by 2008.

For further **information on GMES**, please visit:

<http://www.gmes.info/>

### From idea to action

The GMES concept was initiated in 1998 and was endorsed by the EU and European Space Agency (ESA) Councils in 2001. In its Communication to the EU Gothenburg Summit (2001), the Commission called for "...establishing by 2008 a European capacity for Global Monitoring of Environment and Security" to gather, interpret and use data and information in support of sustainable development policies.

An initial exploratory period, undertaken jointly by the EC and ESA, took place between 2001 and 2003 (following the GMES EC Action Plan (2001-2003)<sup>2</sup>), the detailed outcomes of which are presented in the Initial Period (2001-2003) Final Report<sup>3</sup>, together with the lessons learnt. The importance of GMES has also been recognised in the recent European Space Policy White Paper<sup>4</sup> and in the 2003 Environment Policy Review<sup>5</sup>.

The GMES initiative has now reached a stage of maturity where it can progress to its development and implementation phase, following which GMES will be truly operational.

The aim of the Commission's Communication on GMES is threefold:

1. to outline the key lessons learned as a result of the initial phase and identify further challenges;
2. to determine how to establish a GMES capacity by 2008, including a governance structure and funding strategy;
3. to present an Action Plan for the next stage (2004-2008).

### The benefits of GMES for Europe – and beyond

The information provided by GMES will be used to support a wide range of EU objectives and policy domains including:

- Europe's environmental commitments, within EU territory and globally, by contributing to the formulation, implementation and verification of the Community environmental policies<sup>6</sup>, national regulations and international conventions;
- Other EU policy areas such as agriculture, regional development, fisheries, transport, external relations with respect to the integration of the environmental dimension in the respective domains and their specific requirements;
- Common Foreign and Security Policy (CFSP), including the European Security and Defence Policy (ESDP);

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<sup>2</sup> COM (2001) 609 final

<sup>3</sup> Final Report for the GMES Initial Period 2001-2003 (final). Cf. web site <http://www.gmes.info>

<sup>4</sup> European Space Policy - White Paper COM (2003) 673

<sup>5</sup> 2003 Environment Policy review – Consolidating the environmental pillar of sustainable development COM(2003) 745 final

<sup>6</sup> The 6th Environmental Action Plan (2004 to 2010) addressing climate change, nature and biodiversity, environment and health, natural resources and waste

- Other policies relevant to European citizens' security at Community and national levels<sup>7</sup>, notably the potential for application to policies related to Justice and Home Affairs activities of the European Union, such as border surveillance.

### **Some specific examples:**

*In Europe* it is estimated that an improvement in the understanding of natural hazards such as floods and forest fires could lead to a savings of about €370 million per year, while improved forecasting and prediction could result in savings of up to €1,000 million per year in Europe. Scientists estimate the annual economic impact of air pollution in Europe at €360 billion, with hundreds of thousands of people dying each year because of pollution-related illnesses. GMES can improve prediction, monitoring and assessment to better cope with natural and human-made hazards, including reducing the loss of life and property.

*Beyond Europe*, cartographic information is lacking to support the efficiency of operations linked to humanitarian aid, food security, crisis management and conflict prevention.

*Worldwide*, GMES will also be instrumental in the development of a European leadership role in global environmental monitoring and through cooperation at global level. Since the first Earth Observation Summit in July 2003, GMES was considered as the European contribution to the establishment of a comprehensive and coordinated global Earth Observation System. The European Commission coordinates the European position and has a leading role in the ad hoc Group on Earth Observation (GEO) as co-chair, alongside the USA, Japan and South Africa (representing developing countries).

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<sup>7</sup> "A secure Europe in a better world—European Security Strategy" Javier Solana 12/12/2003