

## **GMES**

### **EUROPEAN PROGRAMME FOR GLOBAL MONITORING FOR ENVIRONMENT AND SECURITY**

**GMES (Global Monitoring for Environment and Security) is one of the most important programmes developed by ESA and the European Commission. Its goal is to build a complete environmental monitoring system, with particular focus on security and civil protection.**

The GMES project aims to develop new expertise in the changes taking place on Earth and in the response to emergencies, especially natural or man-made disasters. Telespazio, the leading European operator in the Earth Observation sector, is playing a major part in developing the programme and its applications.

Since the programme will use data from the COSMO-SkyMed satellite constellation of the Italian Space Agency (whose control centre is based at the Fucino Space Centre), Telespazio will contribute to improving GMES services, both in terms of image quality and in terms of planning and the frequency with which data is acquired.

As part of the GMES programme, Telespazio is also

co-ordinating three security projects: G-MOSAIC, MARISS and LIMES.

**G-MOSAIC** (*GMES services for Management of Operations, Situation Awareness and Intelligence for regional Crises*) aims at identifying and developing products, methodologies and pilot services for the provision of geo-spatial information in support to EU external relations policies and at contributing to define and demonstrate sustainability of GMES global security perspective.

The project (total costs 15,2 M€) is currently under negotiation for the FP7 with EC, DG Enterprise and Industry. The project duration is of 36 months, activities are likely to start within 2008.

G-MOSAIC will provide services for security to:

- Support intelligence and early warning, with the objective to deploy and validate those information services which contribute to the analysis of the causes leading to regional crises, such as weapons proliferation, fight for natural resources, population pressure, land degradation, and illegal activities. One important aspect will be the development of crisis indicators.
- Support Crisis Management Operations, with the objective of deploying and validating those information services which



contribute to support the planning for EU intervention during crises, the EU intervention and citizen repatriation during crises, the crisis consequences management, reconstruction & resilience.

Reference Users are: DG-RELEX (and DGs Development, ECHO, Environment, etc.); Council Entities: EU Military Staff, Situation Centre; National Institutions: Ministries of Foreign Affairs, Intelligence Centres.

The goal of **MARISS** (*European Maritime Security Services*) is to set up maritime and coastal monitoring services to support European institutional clients, such as navies, coastguards, interior ministries and Frontex (the newly-formed European agency to control the EU's external borders) whose job is to control and organise maritime traffic and security of territorial waters.

As well as meteorological and oceanographic services, the programme will offer services that monitor

the borders of territorial waters, detect and identify ships, monitor their routes, detect any anomalies (such as vessels that should not be in a given area, the identification of unusual routes, or vessels remaining at anchor for long periods in a given area), and monitor illegal trade.

The area covered comprises the central and eastern Mediterranean, the Baltic Sea and the north-eastern Atlantic. To this end, a consortium has been formed by the biggest European companies with experience in maritime surveillance, in which Telespazio is prime contractor, responsible for co-ordinating, harmonising and managing all the project's operations.

In terms of maritime surveillance, Italy's geographical position is certainly another strategic element that favours and further strengthens Telespazio's acknowledged leadership in the project.

**LIMES** (*Land and Sea Monitoring for Environment and Security*) is Europe's biggest research and development project for the use of space technologies for security. Co-ordinated by Telespazio, LIMES has a budget of approximately 20 million Euro; started in December 2006 and it will run for about four years and involve around 50 European partners.

The project aims to develop GMES applications relating to security, applying innovative solutions and services based on Earth Observation systems and satellite communication and positioning technologies.

It foresees applications in the surveillance of European seas and the monitoring of borders and critical infrastructure (nuclear power stations, pipelines, etc) in Europe and beyond. It also provides services for support of humanitarian missions, such as the management of humanitarian aid, the consequences of natural disasters such as tsunamis or earthquakes, the movement of refugees, reconstruction and development aid.

