European Earth monitoring programme (GMES) and its initial operations 2011–2013

2009/0070(COD) - 02/08/2016 - Follow-up document

This report from the Commission sets out the main conclusions resulting from the ex post evaluation on the European earth monitoring programme (GMES) and its Initial Operations (GIO) (2011 to 2013). The evaluation is part of a wider evaluation, covering three related elements, namely the GMES Preparatory Actions, as well as the parts funded by the 7th framework research programme (FP7) of the GMES space component.

The European Earth monitoring programme GMES GIO (renamed Copernicus in 2014) is a flagship programme of the European Union on space activities. In order to respond to ever growing challenges at global level Europe needs a well-coordinated and reliable Earth observation system of its own. GMES GIO was that system.

GMES GIO was a long-term programme built on partnerships between the Union, the Member States, the European Space Agency (ESA) and other relevant European stakeholders.

Main results of the evaluation: the evaluation had two overarching objectives:

- to evaluate **the relevance, effectiveness, coherence, efficiency, sustainability and European added value** of the GMES GIO; and
- outline the **overall societal value**, in terms of the balance between the investments made in space infrastructures and services, and the value of data gathered for the selected services.

The main observation of the report are as follows:

- five years after the publication of the GMES GIO regulation (2010), **the GMES programme, as well as each of its six services** - atmosphere monitoring; climate change monitoring in support of adaptation and mitigation policies; emergency management; land monitoring; marine environment monitoring; security -**remains important** for serving the information needs of Europe’s policy makers and public services;
- the GIO programme was **broadly effective in contributing to its stated objectives**. It had a positive impact on the build-up of the present Copernicus programme, establishing two out of the six services, coordinating access to other space and in situ data, and contributing to developing, building, launching and operating the "Sentinels" satellites;
- the required outputs were **delivered by the programme at reasonable and proportionate costs.** The GMES space component produced substantial direct benefits for Europe’s space industry, with more than 230 suppliers benefitting from €530M in ESA contracts, including 48 SMEs. industrial statistics indicate that the total societal benefits produced by the GMES infrastructure reach up to **EUR 3 billion**;
- the programme also **provides substantial added value** through the provision of harmonised data and technology applied across EU Member States. It also had positive effects on **intra-EU and international cooperation** and enabled the creation of a permanent European earth monitoring system;
- GIO **demonstrated its usefulness** through its support to Member States during various extreme flood events (e.g. in Poland) or forest fires, for data on crop yield forecasting, for the monitoring of bio-diversity, urban development, water basins, rivers, lakes, ice-caps and much more.

Recommendations and follow-up: the main concern of the GIO stakeholders, namely the sustainability of the GIO programme has been addressed by the creation of the Copernicus programme. The evaluators nevertheless **underline several aspects where further attention may still be worthwhile:**

- strengthen the user orientation of the core services, with explicit strategies that are driven by the information and functional needs of key market segments, and which are a little less in thrall to the technological ambitions of the space sector;
- **continue to invest in user uptake**, within both institutional and private sector client groups, and in particular strengthen the development of substantial impact case studies, which will showcase benefits;
- increase interaction with Member States and regional authorities within the governance structures (and consultative processes) of the core services, in order to leverage the INSPIRE process. Increased international cooperation and standardisation would be valuable too;
- continue to **support innovation** in both the core services and their platforms, looking to make greater use of data linking (and big data more generally). It would be helpful to retain some kind of research budget for this riskier, blue skies activity, perhaps through Horizon 2020 and its successor;
- increase substantially the **support available to develop downstream applications**, including universal and easy access to Copernicus satellites and in-situ data and focusing in particular on incentives for smaller businesses.

Beyond those recommendations, efforts to create EU wide open **geospatial reference data** should be continued.