

Global Monitoring for Environment and Security (GMES)



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The objective of the GMES programme¹ of the European Commission and the European Space Agency (ESA) is the establishment an Earth Observation-based European capacity for Global Monitoring for Environment and Security (GMES) by 2008. The 4th GMES Forum hosted under the Italian Presidency in Baveno, Lago Maggiore between 26-28 November 2003, had the goals to assess the adequacy of the current available capacity to provide information for European Environment and Security policies, and to identify the needs for improvement in the scientific, technical socio-economics and institutional domain. The event attracted over 300 experts from more than 30 countries, much more as it was expected by the organisers². Among the NGOs, EUROGI, EuroSDR and EuroGeographics were represented the Pan-European GI communities. As it was

written by Commissioner for Research P. Busquin and DG of the ESA J-J Dordain in the GMES Newsletter No 1 circulated in Baveno, Europe's commitment to promote sustainable development and global governance requires reliable, timely and independent information.

Background

Based on the preliminary concept elaborated by the DG JRC in the late 90's, the European Commission and ESA launched a consultation forum on Earth Observation-based Global Monitoring for Environment and Security in July 2002,. The consultation took place as part of the 1st GMES Forum, held in Brussels on 15-17th July 2002, where the Pan-European GI associations were represented by EuroGeoSurvey and EuroGeographics only. The issue was how combine aerospace remote sensing and land based in-situ technologies to make better use of Europe's existing and planned capabilities and infrastructures and to develop a mechanism for improved collection and distribution of information. Priority target application areas of GMES include sustainable development, global climate change, and the European Common Foreign and Security Policy.

After the preparation of the initial period of the GMES Action Plan (2002-2003) the activities pursued in three parallel channels as follow: i) European Commission's thematic projects under framework programmes 5 and 6, as well as ESA's service elements within its Earth Watch Programme³, ii) Cross-cutting assessment studies and iii) GMES fora, ensuring dialogue with all parties involved including NGOs.

The 4th GMES Forum

As key element of the action plan the last GMES Forum focused on the results of the activities of the initial period and on the recommendations for actions for the

¹ <http://www.gmes.info>, <http://earth.esa.int/gmes/index.html>

² Organised jointly by the Italian Ministries for Environment and Research, the European Space Agency and the European Commission.

³ <http://earth.esa.int/gmes/index.html>

implementation period. The Draft GMES Initial Period (2001-2003) Report Version 3.5 was distributed to the participants describing the Information needs, the Capacity in 2008, the Implementation and organisation as well as the recommendations for the 2004-2008 period. In the agenda of the GMES Forum, after the introductory addresses given by among others the Italian minister of Environment A.Matteoli and DG C.Day of EC DG for Environment, the Forum had 3 plenary sessions devoted to the i)Objectives, content and recommendations for the implementation period's actions 2004-2008, ii) Some lessons learnt, iii)Presentation and discussions of the results. Additional 4 embedded sessions were organised parallelly around the topics i) Meeting the user needs (participated actively by EUROGI representative), ii) The observing and servicing technical capacity, iii)RTD role and capacity building, as well as iv)Multi-level co-operation (local, regional, national, international)(visited shortly). The major outputs of the parallel sessions highlighted and discussed by the plenary will be circulated as addendum at the EUROGI ExCom meeting between January 23-24 2004.

Exhibition

An exhibition was accessible close to the conference rooms displaying activities related to the EC thematic projects(see Table) and the ESA GMES service elements (including forest monitoring, urban mapping services, GI support of coastal zone management, global monitoring of food security and crop monitoring services), the GMES related European level activities of JRC(e.g. in external aid and security, environment and agriculture and fisheries), ESA and others, as well as the GMES related international activities of GEO, the Group on Earth Observation. It was space available for all participants to display leaflets and folders. Only EuroGeoSurvey presented directly its activities on behalf of the participating

European GI-related NGOs including EUROGI and EuroGeographics. At the folder's shelf, HUNAGI and CelkCenter leaflets were displayed. It would be useful to print a 2 pages colour EUROGI leaflet to attract people about the activity of the organisation.

Table Thematic project themes in the initial period 2002-2003

The GMES priority themes
Land cover change in Europe
Environmental stress in Europe
Global vegetation monitoring
Global ocean monitoring
Global atmosphere monitoring
Support to development aid
Systems for risk management
Systems for crisis management and humanitarian aid
Information management Tools and contribution to European Spatial Data Infrastructure (ESDI)

Based on the results and conclusions of the GMES thematic projects highlighted by M.Cornaert of DG Research, actions are needed on observing systems (Earth Observation satellites, in situ networks, socio-economic statistics, basic data); data quality(standards, error reporting, network design); modelling (knowledge, interoperability, error reporting); access to data and information(data services, metadata, archives, practicabilities, data policies); information services(support pilot services to provide urgent information); and improve knowledge and tools on the above issues by Research and technology development.

The way forward

According to the GMES Vision in 2008 the capacity for GMES should be an operational system as requested by the Göteborg Summit, consisting the following three components:

i)A partnership of the key European actors including and particular EEA, EC, ESA, EUMETSAT, EUSC. Among the NGOs EuroGeographics and EuroGeoSurvey were explicitly mentioned underlining, they play a crucial role of co-ordination of

the activities of their corresponding national organisations in some areas of the chain of production of information (e.g. data collection, information production and dissemination).

ii) European shared information services (it consists a large number of distributed facilities, which is coordinated such a way that their individual outputs can easily and routinely assembled into policy relevant information).

iii) A permanent dialogue between the stakeholders (research centres, industry, governmental and non-governmental bodies)

In order to ensure the continuity between the initial and implementation periods, the action plan based on the evaluated recommendations will be financially supported by the Sixth Framework Programme and ESA, but other potential funding sources are also anticipated.

The three conditions formulated by the relevant EC and Council documents⁴ were also approved by the Baveno Forum: the European GMES Capacity in 2008 should be i) autonomous and operational, ii) guarantee sustainable, long term and coherent monitoring, iii) combine in situ (land, sea, air) and space based monitoring. As working principle the complementarity with ongoing activities within the European Commission was emphasized and the INSPIRE and the activities of DG JRC were explicitly mentioned. The experience of Centre of Earth Observation and networks such as the Environment Information and Observation Network seeking added value. In order to facilitate the implementation, special emphasis will be given to the information exchange and dissemination.

EUROGI - lack of visibility

In information document of the GMES Support Team distributed to the participants of the 4th GMES Forum an overview was given on the European activities of relevance to GMES.

Describing organisations, associations, groups, data centres and programmes with direct relevance to GMES, no reference was made to EUROGI but the objective, partners web access and features (e.g. number of affiliated professionals) or products available were listed in case of EuroGeoSurveys and EuroGeographics respectively. This situation should and could be changed: in case of comments or info on missing European activities of GMES relevance, feedback can be provided to tobias-berthold.fuchs@cec.eu.int.

Interventions of the EUROGI representative:

The role of NGOs were emphasized and the example of EUROGI was called. As pan-European interdisciplinary GI organisation representing national GI associations and their 6000 strong community (covering the academia, industry, governmental and NGO bodies), EUROGI is logical actor and partner in the GMES arena. This was the expressed and welcomed message of two comments made by the EUROGI representative at the



User needs session panelists and lecturers

Parallel Session “Meeting the user needs” (chaired by Anver Ghazi, EC DG Research) and at the Discussion Panel of



Chris Patermann, Director of the DG Research

the final plenary (chaired by Chris Patermann, who was participating the

⁴ OJ C 350 of 11/12/2001

GSDI6 on behalf of the European Commission in September 2002). Additional question was put to the Plenary Discussion Panel asking, how GMES will support and accelerate the soon implementation of the INSPIRE legislation framework understanding that INSPIRE is necessary also for the GMES implementation. The question was answered by Timo Mäkelä of the DG Envi saying, at this stage the actions to be taken are the homework of the European Commission.

GEO

After the first ad hoc intergovernmental Group on Earth Observation (GEO) meeting (followed the first GEO Summit held in Washington DC in July 2003 as response on the challenges given by the Johannesburg World Forum on Sustainable Development and the G-8 Summit held in Evian-les-Bains), the 2nd GEO meeting was hosted in Baveno immediately after the GMES Forum in order to give a 10 year plan to implement a coordinated and sustained Earth Observation System or set of systems, linking thousands of individual technological assets into a comprehensive EO effort and provide critical information needed to address important global economic, social and scientific challenges.



The venue of the 2nd GEO Meeting in Baveno

The meeting, participated more than 30 countries, was co-chaired by representatives of EC DG Research, NOAA, and the Japanese and South African Ministries of Science & Technology. The meeting paved the way for the 2nd GEO Summit in Spring 2004. GEO welcomes national point of contacts,

application have to be made by formal letter addressed to the DG of the EC DG Research. According to CRED report⁵ circulated in Baveno, alone in the field of natural disasters during the last 25 years 4.1 billion people were affected and lead to the loss of 1.3 million lives worldwide. Also the economical damages can be measured in trillions of Euros.

This is why the WFS in September 2002 called for improved coordination and cooperation among global observing systems and research programs for integrated global observation and the G-8 Summit held in June 2003 called for strengthened international cooperation on global observation of the environment. Now, taking into account the fact, EUROGI pan-European member organisation the AERSC, it is more than logical, EUROGI should be visible also in this area, due to the fact, remote sensing/Earth Observation as tool has the same interdisciplinary feature in the application as EUROGI by its members. It would be useful for EUROGI to be represented in GEO via the GSDI Association.

The ad hoc Group on Earth Observations started with 5 subgroups (in brackets the European co-chairs as of 27th November 2003) as follows: Architecture (F, ESA), Capacity building (-!), Data utilisation(-!), International co-operation(-!) and User requirements and outreach (IT, UK).

The GEO Secretariat is hosted by NOAA. The mechanism is based on bi-weekly teleconferences, subgroup coordination teleconferences, secretariat liaisons and communication tools (website, list servers and briefing).

⁵ <http://www.cred.be>