



GC-GMES-2011/15

GMES DATA AND INFORMATION POLICY ROADMAP

In Regulation 911/2010 on the European Earth monitoring programme (GMES) and its initial operations (2011 to 2013), the EU Parliament and the Council empowered the Commission to adopt delegated act(s) defining further a GMES data and information policy.

This document describes the roadmap to a coherent GMES data and information policy. It summarises a three phase approach, from the current environment to a fully implemented GMES data and information policy.

The members of the GMES Committee (GC) are invited to provide their comments on this roadmap.

- Is the three phase approach suitable ?
- Are the issues to be tackled with a GMES data and information policy appropriate ?
- Is an important data and information policy issue missing in this roadmap ?
- How should the data and information policy evolve in the future ?

GMES DATA AND INFORMATION POLICY ROADMAP

1. INTRODUCTION

The acquisition, processing and exploitation of Earth Observation (EO) data¹ is at the centre of GMES activities making the access to GMES data and information a fundamental policy issue. This policy must take into account the great variety of data origins – including in situ data, satellite data from GMES Sentinels and GMES Contributing Missions (GCM) – as well as the mixed flows of data processed through GMES operational services and delivered as information. In view of the complexity of these interrelated data and services networks, an articulated data and information policy is needed to address adequately each component in its specificities while including them in a harmonious framework built on common objectives.

The following objectives of the data and information policy were set out by the EU Parliament and Council when they adopted the GMES Regulation²:

- a) promoting the use and sharing of GMES information and data;
- b) full and open access to information produced by GMES services and data collected through GMES infrastructure, ...;
- c) strengthening Earth observation markets in Europe, in particular the downstream sector, with a view to enabling growth and job creation;
- d) contributing to the sustainability and continuity of the provision of GMES data and information;
- e) supporting the European research, technology and innovation communities.

The objective of "full and open access to information produced by GMES services and data collected through GMES infrastructure" defines a strong data and information policy principle. However, the EU Parliament and Council subjected this principle to the limitations arising from "relevant international agreements, security restrictions and licensing conditions". In legal terms, "full and open access" to data and information is the rule and the above limitations, the exceptions. With regard to financial conditions, recital 39 of the GMES Regulation mentions a free-of-charge licensing for the Sentinel data.

To ensure the achievement of these objectives and to set out the licensing conditions for users of GMES data and services, the Regulation confers to the Commission the power to adopt delegated acts. Most analytical work described in this document aims at preparing the

¹ EO data includes in situ and satellite data

² See ART. 9 of Regulation 911/2010 dated 22 September 2010 on the European Earth monitoring programmes (GMES) and its initial operation (2011 to 2013). These objectives are mostly similar to those adopted by ESA Participating States to the GMES Space Component Programme in an ESA/PB-EO (2009)98 document "Joint Principles for a Sentinel Data Policy" stating that "The Sentinel Data Policy will be part of the overall GMES Data and Information Policy, under EC's responsibility".

contents of this (these) delegated act(s) on GMES data and information policy and at ensuring compliance with existing legal framework such as the INSPIRE directive.

Developing a GMES data and information policy should not be seen in isolation, but against the backdrop of European and worldwide initiatives on data licensing. Adopting licenses emerging from such initiatives could make the future GMES data access conditions better understandable to the users and also accelerate the adoption of these licenses for other kind of data, achieving critical mass in the exchange and cross-fertilisation of data licensed under the same conditions. As an example, GEO/GEOSS data sharing initiative will need to be closely monitored and taken into account to the maximum possible extent.

Public procurement of data is another essential area as it commends the licensing conditions under which the primary data will be acquired, processed and possibly disseminated by GMES operational services. A public procurement policy for GMES services should serve user needs while taking into account the (evolving) business models of the data providers through a well designed licensing model. Building on past and present improvements of data procurements, the Commission should continue to play an important role in procuring data to meet its mission requirements for the benefit of all actors involved.

GMES, as a system of systems, is entering into full operational mode with components being progressively made available and combined with already existing ones. Taking into account this evolving landscape, the following roadmap proposes a three phase approach to design a coherent GMES data and information policy³.

2. THE ROADMAP

2.1. Objectives and phases

The suggested roadmap pursues short term and long term objectives and comprises three phases.

Long term objective:

Optimising the access to GMES data and services through a coherent data and information policy framework supported by

- delegated act(s) on GMES data access policy streamlining licensing conditions and integrating security constraints;
- inscribing to the maximum extent GMES data and information policy into a broader worldwide scheme of data licensing and dissemination;
- a data procurement policy supporting GMES licensing policy.

Short term objective:

Defining a transitional data and information policy applicable to GMES services operating prior to the adoption of a coherent data and information policy.

Three phases:

³ As a roadmap, this document only details a process leading to a policy.

1. Current licensing environment (applicable to GIO funded GMES services operating on data made available under current conditions): consolidation of the acquis and conducting additional analysis
2. Transitional licensing environment, in line with the progressive roll out of GMES operational infrastructure (e.g. availability of Sentinel data): preparing, drafting and adopting a coherent data and information policy
3. Optimised licensing environment: applying the data and information policy in full

2.2. Description of the three phases

2.2.1. Current environment (2011-2012)

A. Consolidation of the acquis and additional analysis

At this stage, it is important to take stock of existing works on data and information policy, including security concerns, done by the various actors involved (Commission, Parliament, Council, Member States, ESA, EEA, JRC, EUMETSAT, GEOSS and other stakeholders...). In this regard, example of important political decisions, documents and events should be mentioned:

- ✓ The GMES Regulation and the European Parliament and Council discussion on data and information policy in the context of the Regulation adoption;
- ✓ The already mentioned ESA/PB-EO document "Joint Principles for a Sentinel Data Policy" prepared by ESA and the European Commission's services and adopted by ESA States participating in the GMES Space Component Programme⁴;
- ✓ The Industry Information Day on GMES and Sentinel data policy, jointly organised by the European Commission and ESA on September 11, 2009;
- ✓ The DLR contribution to the discussion through its detailed "Elements of a GMES data an procurement policy"⁵;
- ✓ Association position papers.

Beyond this considerable work already performed, it is still important to conduct additional analyses on the many issues to be tackled through a data and information policy taking into account the specificities of the data and information involved (e.g. Sentinel or GCM or in situ data; information produced by each GMES operational service,...). Service delivery issues will also be reviewed when relevant to the future data and information policy.

- GMES Actors' Expectations

⁴ ESA/PB-EO (2009)98. While this document was not adopted as such by the EU, it has been used in the preparation of the GMES Regulation

⁵ Version: 2.0 dated 29.09.2009

User requirements and legitimate expectations of GMES data providers are fundamental determinants of a data and information policy and should be adequately reviewed using available channels. Previously collected views expressed by stakeholders at different occasions will also be reviewed.

- Legal Aspects

An overview of the legal status of EO datasets, services and licensing conditions must be conducted with regard to (1) the EU and Member States legal framework, (2) GMES specific legal issues and (3) existing data licensing schemes for datasets.

(1) The legal framework analysis should review important EU directive like the INSPIRE directive 2007/2/EC, the PSI directive 2003/98/EC and the public access directive 2003/4/EC, looking closely at concepts such as access, sharing and reuse. It also concerns specific Member States' legislation on relevant topics like the German law SatDSiG – Satellitendatensicherheitsgesetz BGBI. I S. 2590 or the French law No 2008-518 relative to space activities. The status of EO data and information under IPR and contractual law under EU and a sample of Member States legislation should also be reviewed.

(2) Regarding GMES itself, legal issues relevant to the definition of a data and information policy will be analysed component by component. The following example should illustrate the kind of issues to be clarified. In the GMES operational service component, an analysis of the status of information delivered through the services will be conducted (many input datasets will be made available to these services under specific licensing conditions (e.g. GCM data) and will undergo transformation processes that should affect their legal nature to such extend that new licensing conditions can be attached to the output information). This mechanism will be analysed to increase legal security for the service operator. For the same component, general service terms and conditions should also be reflected upon. As a last example in another component, the legal status of the Sentinel data will be reviewed.

(3) Existing licensing schemes of datasets such as open data commons, creative commons, open government licence should be analysed as well as different approaches such as an absence of licence. Examples of good practices in data and service sharing documented in the context of the INSPIRE directive should be reviewed.

- Structural Aspects

Being a system of systems, GMES is complex by nature and a good understanding of the datasets' origins and flows is important. GMES is also an evolving system and due consideration must be given to projections into the future such as initiated by the "Dialogues with Member States owning space infrastructure and with EUMETSAT" (GC/PB-GMES-2011/09) where data access models are discussed. The continuation of such dialogues provides important inputs to the definition of a data and information policy.

- Technical Aspects

A sample of relevant data and metadata formats and processing will be reviewed to test the possibility of tagging data flow with metadata licensing codes in order to reduce transaction cost through automation and enhance legal security. This entails gaining some understanding in the data processing of EO and GMES services, cataloguing data and metadata formats in use as well as interacting with standardisation bodies active in the definition of EO data formats.

- Security Aspects

The GMES Security Board will assist the Commission in the review of the security aspects relevant to the data and information policy.

- Other Aspects

Topics such as data certification (authenticity, traceability, integrity) and the various economic models for EO service delivery and take up of downstream services should be kept in mind.

B. Administration

The above analysis will be carried out in 2011-2012 and will be conducted using both Commission internal and external resources (a study will be procured on the subject and external experts will be contracted on an ad-hoc basis).

C. Outcome

In 2011, as a short term objective, the main outcome will be the definition of a temporary information policy for GMES emergency service when this service will replace the FP7 project SAFER (GMES emergency pre-operational service). The land monitoring service will progressively reach operational level in 2012 and will fall under either the fully defined data and information policy or under a temporary information policy.

The acquis consolidation and additional analyses will take the form of a background document or set of documents providing a sound conceptual basis for the future GMES data and information policy .

2.2.2. Transitional environment – Preparing, drafting and adopting a coherent data and information policy (2012-13)

This phase will take place in a moving environment where elements of the GMES infrastructure will become progressively operational.

A. Process

When preparing and drawing up the delegated act(s), the Commission will involve experts from the EU Parliament and the Member States. In the process, all GMES fora (Partners Board, GMES committee, User Forum) will be consulted as well as experts

from third countries and from international organisations. The Commission will also take into account inputs validated through the GMES Security Board.

B. Outcome

The main outcome will be the adoption of the delegated act(s) by the Commission and its transmission to the EU Parliament and Council. When establishing access conditions for GMES users, the delegated act(s) will apply, in accordance with GMES Regulation, the "full and open access" principle as a rule and its limitations as exceptions.

Implementing measures related to data access restrictions shall be adopted by the Commission through the examination procedure involving the GMES Committee.

Another expected outcome would be the endorsement of a multi-facet licensing scheme defining a limited number of clearly identifiable licensing categories with specific conditions attached taking account of the different GMES actors' needs and ranging from total and open access to limited access (e.g. open data, open data non commercial, limited access rights or time limited access rights). This multi-facet and coherent scheme would allow automated combination of datasets within the same or compatible licensing categories. A GMES licensing scheme should ideally rely on an existing international licensing scheme, at least for the licenses granting the broadest rights to the users. A clear and recognisable licensing scheme, also used or usable for non GMES data and information, would reassure the various actors upon their rights and obligations, it will support the development of a data and information environment and will further contribute to the achievement of the data and information policy objectives set out in the Regulation, in particular the uptake of downstream services.

C. Preparation of the next phase

This task will mainly aim at harmonising the procurement policy with the defined data and information policy. It will seek to streamline further licensing conditions from input data providers along the lines of the licensing scheme for GMES data and information outputs. It will build on the improvements achieved in the on-going data procurement process.

2.2.3. Optimised environment – Applying the data and information policy in full (2014 and onwards)

A coherent data and information policy should be in place at the beginning of 2014 relying on the delegated act(s), the licensing scheme and the new public procurement policy.