EARSC
European Association of Remote Sensing Companies

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EARSC comments on

GMES Data and Information Policy

EARSC represents the Earth Observation geo-information services companies in Europe. Today EARSC has 68 members coming from 20 countries in Europe and including nearly 50% of the total number of European EO service companies. Over 60% of these are small or medium sized enterprises. Our members include both commercial operators of EO satellites and downstream, value-adding companies. The sector plays a key role in providing value-added geo-spatial information to its customers in Europe and the world. In 2010, the revenue of EARSC members is estimated to be around €700m and giving work to around 2600 highly skilled employees. The industry is growing at around 10% per annum.

Introduction:

This paper is written as a short response to the EC document "Elements for a Data and Information Policy" discussed at the Workshop on GMES Data and Information Policy held in Brussels on 12th and 13th January 2012.

EARSC is pleased that a number of the ideas and issues addressed in our Position Paper; GMES Data and Information Policy published in October 2011 have been reflected in the Commission document. Therefore we broadly welcome the views and proposals expressed therein. Further opinions and inputs have been invited and we are delighted to suggest some additional elements or clarification on some of those already included.

General Comments:

As an introduction to EARSC's comments, we would like to express some general thoughts from the industry concerning GMES data and information policy.

1 - GMES data and information policy is considered by EARSC as an important instrument that will shape the future of earth observation in Europe. EARSC encourages the GMES bureau to maintain the dialogue on data and information policy with the GMES stakeholders, in particular with industry. For this purpose, EARSC has proposed in a previous paper the creation of a "GMES Suppliers Forum".

EARSC would also remind that a GMES data and information policy cannot be defined in isolation and has to be integrated within efficient governance and sustainable funding.

In addition, procurement policy and data policy are closely linked (as recognized in point 3.2.4 of the EC document) hence whilst many key issues will be dealt with by an effective and appropriate data policy, we remain prepared to discuss the procurement policy at a later time.

2 –The infrastructure on which GMES will depend is being developed by a combination of public and private efforts. The core Sentinel satellites and missions are being built with public funding whilst the Contributing Missions and the contributing ground segment are being built with private investment. In addition industry has been investing alongside the public sector in the development of applications for GMES and downstream services.

As a result, GMES data and information policy has to satisfy simultaneously 2 objectives that may seem contradictory.

- An easy flow of information at low cost or no cost for the users;
- The development of a competitive industry.

These objectives are also part of the European Space Policy.

The difficulty to satisfy simultaneously the 2 objectives has been highlighted by RAND Critical Technologies Institute (CTI) in a study for the White House Office of Science and Technology Policy and NASA in the USA:

"*In practice, it is difficult to simultaneously encourage the free flow of information, low prices, and strong IPR protections. The free flow of information may benefit society as a whole but discourage private investment in acquiring the information as the benefits may not be appropriable. Low prices are good for consumers but may not provide the returns necessary to attract private investment. Having strong IPR protects private investment but may increase the costs of information products to the consumer and restrict the flow of information to the broader society.*

A policy of free access to GMES data and information products has been proposed by EARSC as the means to offer the best support to developing a competitive downstream industry. We believe that, in line with current PSI thinking, this will also lead to the best economic return from the public infrastructure investment.

Consequently, the GMES data and information policy must balance a policy of "full and open access" to data and information with recognition of the IPR of the data providers and the service providers ie. Licenses for the use of GMES products must reflect the license conditions associated with GCM data procurement.

3 –One goal of the GMES data and information policy should be to contribute to developing returns balanced across all the components of the space industry's value chain, including data providers and service providers. During the workshop, it has been recognized that, from an economic perspective (refer to the presentation from Reinhilde Veugelers), the space component (infrastructure) and the service component are governed by specific economic models:

- The space component is characterized by a high level of investment, generating a strong concentration of suppliers. It requires public intervention to maximize access to the data and incentives to encourage investment.
- The service component is a very competitive market that requires an open, transparent and fair access to high quality data and an IPR framework granting sufficient protection for capturing value from services.

EARSC strongly recommends that this economic analysis should be further developed to identify the policies and the incentives that would optimally support the development of each sector, in particular in the domains where the sectors may have divergent interests. Some key issues are discussed below.

Data providers

The competitiveness of the European data providers relies on their capacity to invest in new satellites or to negotiate access to satellite resources from non-European countries. European data providers need to build on a solid internal market in order to develop their capacity to invest and their attractiveness for non-European actors. Currently, the European market is very fragmented and GMES is seen as the key initiative to concentrate the demand and create a strong market. European data providers are facing a strong competition from US competitors that benefit from huge public contracts, in particular the EnhancedView contracts for an amount of 7.5B$ over 10 years. In comparison, the GMES data access contracts represent a total of less than 150M€ between 2009 and 2013.

Concerning the licensing conditions, the owners and/or operators of the GCM are ready to provide open access conditions to a large range of public institutions from both the EU and the MS. The current "Data Warehouse" contracts have been negotiated with the data providers in such a way that they generally allow the institutions to use the data for their own use (including the right to pass the data to sub-contractors for generation of added-value), to share the data between public institutions or to publish the data on internet. Future GCM licenses and contract conditions will need to reflect the degree to which free access is given to GMES products (geographical and commercial extent).

Service providers

European service providers also suffer from the fragmentation of the public market for geo-information and welcome GMES to consolidate the demand of public users and to boost the development of downstream services. From an industry point of view, the success of GMES relies on the development of procurement practices adapted to the geo-information market in order to ensure a right balance between public and private organizations and to maintain fair competition for the supply of GMES services.

The private sector can generate economic returns by developing profitable revenues and jobs over and above those linked to the GMES products and services. By exploiting these services into other markets, increased value will be generated that can help all parts of the value chain. The European EO service providers envisage three distinct areas in which they can develop new markets based on free, full and open access to GMES products:

- Export customers for standard or added-value GMES products.
- Commercial customers whether in Europe or outside also for standard or added-value GMES products
- European public sector customers for added-value GMES products.

The GMES data and information policy will have a very high influence on the ability of European industry to develop a competitive position in the global market. The EU has a good opportunity to help establish a global, industrial leadership in this area.

4 - GMES data and information policy should be a tool to promote the visibility of GMES and of European space industry. The English word "free" covers 2 different notions: "at no cost" and "free of rights". Data or information product distributed "for free" means "at no cost" but not "free of rights". The rights of the mission owner or the producer should be acknowledged by a copyright and GMES should also be mentioned.

With the same purpose, an efficient registration mechanism should be set up in order to control that GMES data and information are used in accordance with the GMES data and information policy. The registration mechanism should also be used as a tool to measure the impact of GMES in terms of number and distribution of users.

Detailed comments on the paper

2.1 Existing data and information framework

It is worth noting that legislations mentioned in the paper contain exclusions, in particular for data protected by copyright:

- Aarhus convention: paragraph 5, article 4 states that « A request for environmental information may be refused if the disclosure would adversely affect:… (e) Intellectual Property Rights".
- INSPIRE directive: The INSPIRE directive is applicable to spatial data themes listed in annexes II and III. Satellite data are covered by INSPIRE in the sense that they can be processed into elevation data and orthorectified imagery, both of these being spatial data themes included in annexe II. Non-orthorectified data are therefore not covered by INSPIRE. Paragraph 5, article 4 states that "*In the case of spatial data sets which comply with the condition set out in paragraph 1(c), but in respect of which a third party holds intellectual property rights, the public authority may take action under this Directive only with the consent of that third party.*".

2.5 International initiatives

The same applies for GEOSS data sharing principles that states: "At the same time, it is important to underscore the fact that GEOSS is composed of voluntarily contributed systems and data, which are governed by pre-existing laws, policies and practices that may not be fully compatible with the Principles. The association of GEO Members and Participating Organizations and thus their adherence to the Data Sharing Principles are not legally binding."

3.2.3 Recommendations (on Instruments for a data and information)

Future recommendations should also address the implementation of the GMES data and information policy by clarifying basic definition (data and information types, user types, usages types, etc) for which a common framework is required. Refer also to comments on 5.3.2.

4.1 Objectives of the GMES programme

A sentence of this paragraph is confusing: "This GMES information is delivered to users to serve their needs. These users may find an opportunity to add further value to the GMES information and to distribute the results as a downstream service."

It could be interpreted as if the public end users of the GMES services are the producers of the downstream services. The sentence should be modified to reflect more accurately the GMES value chain.

4.2 GMES architecture

The Collaborative Ground Segment for the Sentinels is not limited to ground receiving stations. It could also include extensions of the Core Ground Segment that will generate products at an advanced level of processing.

5.3.1 Access to Sentinel data

It should be stated explicitly that the Sentinel data policy applies exclusively to the data generated by the Core Ground Segment of the current definition of the Sentinels:

- Current definition of the Sentinels: future Sentinels, using the same "brand", may have different specifications that may change their commercial impact on the earth observation market and therefore should be subject to a different data policy. As we noted in our March paper, "raw data from future public infrastructure should not compete with that from the private operators". It is therefore key that future public infrastructure must be developed in close co-operation with commercial operators.
- GMES Collaborative Ground Segment: Some companies are considering investing in collaborative ground infrastructures. This can be encouraged by ensuring that products and services coming from a Collaborative Ground Segment are able to generate commercial revenues. The GMES data and information policy should allow for this possibility.

Non-European users with similar observing capacity, should be given free access to Sentinel's data on the expectation that they give reciprocal conditions of access.

Concerning Sentinel data security policy, it would be worth analysing to which extent national law may apply to Sentinel data and reciprocally how Sentinel data policy may apply in the MS.

5.3.2 Access to GMES Contributing Missions

It should be added that the GCM will still be intensively used by GMES after the launch of the Sentinels.

The objective to "secure the continuous provision of remote EO data to operational services at the lowest possible cost, complementing Sentinel data once available" might be difficult to be achieved separately. Buying the data at the "lowest possible cost" will not encourage the data providers to replenish the satellites therefore impairing the long term continuity of data provision. Procurement of the data should be done at a fair price sustainable by both parties.

Alternate models have to be studied as proposed by the joint EC/ESA "dialogues with MS owning space infrastructure and with EUMETSAT". EARSC recommends continuing actively this dialogue, including with industry.

Concerning the licensing conditions provided in the Data Warehouse Requirement Document and translated by ESA, the definitions should be clarified, simplified and probably harmonized between ESA and JRC in order to have a unique EC framework.

Concerning "C – Access to GCM data by Users / Downstream services outside GMES infrastructure", it should be clarified if it concerns the right to order new data outside the DAP or the right to use data already acquired by GMES as a part of the DAP.

Concerning "D – Security aspects for the access to GCM data", it should be noted that ordering, tasking and delivery of sensitive data through the ESA Coordinated Data Access System should be avoided because this architecture "have not been designed to handle sensitive information" as mentioned in 5.3.1.C.

5.6 Long term conservation of input data

The need for the creation and maintenance of a GMES data catalogue should be mentioned. The catalogue should also be INSPIRE compliant.

6.2.2 Processing of input data by GMES services

Transparency and quality of the processing should be regularly audited or guaranteed by an independent certification such as ISO 9001. GMES procurement procedure should require the service providers to provide this certification.

6.2.3 Dissemination of GMES information

The dissemination of the information produced by the GMES services should be restricted to European users.

6.2.4 Long term conservation of input data

The need for the creation and maintenance of a GMES products catalogue should be mentioned. The catalogue should also be INSPIRE compliant.

Conclusions:

To conclude, GMES is a unique programme with a global dimension and EARSC believes that through GMES, the EU has a strong opportunity to establish a world leading industry. Policies should be created that support this goal and we look forward to continue regular discussions to develop the appropriate policy framework.