Opinion of the European Economic and Social Committee on the 'Proposal for a Regulation of the European Parliament and of the Council on the European Earth Observation programme (GMES) and its initial operations (2011–2013)'

COM(2009) 223 final — 2009/0070 (COD)

(2010/C 339/04)

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On 30 June 2009 the Council decided to consult the European Economic and Social Committee, under Article 157(3) of the Treaty establishing the European Community, on the

Proposal for a regulation of the European parliament and of the council on the European Earth observation programme (GMES) and its initial operations (2011–2013)

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The Section for the Single Market, Production and Consumption, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 5 January 2010.

At its 459th plenary session, held on 20 and 21 January 2010 (meeting of 20 January 2010), the European Economic and Social Committee adopted the following opinion by 184 votes to 2 with 4 abstentions.

1. Conclusions and recommendations

1.1 The EESC welcomes the Regulation on Earth Observation (EO) and its initial operations as a strategic step forward in a new framework for developing a mature European space policy.

1.2 The EESC believes that in this context substantial benefits can be obtained by carrying out existing EU policies, designing new policies, intensifying the delivery of smart and tailor-made services for Europe and beyond, and by strengthening the position of the EU in international negotiations.

1.3 The benefits for society and citizens will be all the more rewarding, as space-based services affect a broad spectrum of highly relevant issues such as climate change, emergencies, environmental and health issues like water and air quality (pollution), agriculture and forestry, the depletion of natural resources, spatial issues, and public security topics and defence.

1.4 High quality is indispensable for both space components and in situ components, as well as their interactive capabilities and synergies. Space-based services will add substantially to ground-based, airborne and sea-based services ([1]).

1.5 European Agencies and public services in the Member States are the primary goal of space-based services. Private parties will also benefit from them. The range of useful services for the public and private sectors will increase as the market develops. The downstream sector - the most important being SMEs - calls for special attention and funding.

1.6 Governance is of paramount importance. Decisive elements include:

— coordination and coherence, which are based on the recognition of 'space' as an integrated EU theme and the full commitment of all Commission DGs and European Agencies involved in space-related policies and activities;

— coordination between the Commission and a variety of public parties in the Member States;

— operational knowledge in the Commission to deal with the downstream sector;

— satisfactory framework conditions to encourage private investments.

1.7 Full, reliable and continuous data will result from an effective interconnection between space-based and ground-based infrastructure. Full and open access to data is crucial to avoid distortions and to stimulate the downstream sector. Well-defined sensitive data for the Member States and the Union must be protected.

([1]) The contribution of space-based services will, for instance, ensure earlier access to relevant information, thus generating more time for decision-making and for the preparation of countermeasures. In addition, they will facilitate the global and regional interpretation of events and sudden irregularities.

1.8 The EESC takes note of the EUR 150 million envelope as a first step for the promotion of applications. For an overall positive judgment still pending questions have to be settled. A possible insufficiency of financial resources, the launch of B Sentinels in addition to the A Sentinels, and the Community Budget allocation among stakeholders call for further negotiation and clarification in order to ensure that the system successfully fulfils the policy's goals.

1.9 The forthcoming space-based services affect a broad spectrum of areas which directly respond to the needs of society and citizens. Therefore the EESC strongly recommends an EU communication strategy to raise public awareness for the future benefits of EO in giving also special attention to education and training of technical experts in this field.

1.10 Earth Observation should get a place in the post-2010 Lisbon strategy.

2. **European Space Policy in progress**

2.1 Political and economic strategic reasons are the main drivers for an intensified interest in space. Climate change, environmental and space objectives, the security of citizens as well as a complementary defence infrastructure make enhanced operational services in space highly desirable.

2.2 An autonomous European space policy and autonomous services are needed in response to the increase in worldwide space activities by a growing number of partners and competitors ([2]).

2.3 Following the Commission's Green and White papers, published during the last decade, and the Framework Agreement between ESA and the Commission in 2003, which were all welcomed, the EESC fully endorsed the policies outlined in documents of the Joint Space Council, the Commission and the European Space Agency (ESA) in April/May 2007 ([3]). In October 2009, President Barroso underlined the significance of Space for a broad spectrum of EU policies ([4]).

2.4 ESA has accomplished impressive work over a long period of time. In addition to research, space programmes have facilitated the development of operational services in cooperation with private companies. The EESC concluded last year that ESA had conducted a successful 'industrial policy'. Under the new division of labour between ESA and the Commission, the latter becomes entirely responsible for the operational phase of projects.

2.5 The EESC has already expressed its expectations that the Commission's involvement in policy-making and funding would and should enhance public as well as private sector activities in the space sector.

2.6 In the same vein, the Commission proposes the Regulation on GMES and its initial operations (2011–2013) as a further necessary step towards fulfilling the requirements for a mature European space policy.

2.7 GMES has led to enhanced interest and intensified programming by European Agencies and the public and private sectors across Europe.

2.8 In order to ensure the effective handling of the possible wide range of benefits of GMES, the EESC welcomed last year the establishment of a GMES Bureau within DG Enterprise to take charge of coordination. Such coordination is highly desirable as a number of DGs and the Seventh Framework Programme (FP7) are involved.

2.9 Intensified coordination at European level and between the Commission and the Member States will also be beneficial to integral approaches in Member States, where they are often lacking. It may also generate more awareness and improve the image of 'space' by connecting space with specific services for citizens.

3. **The Regulation**

3.1 In addition to GMES research and development, areas in which the Commission, ESA and the Member States, are acting partners, the Commission will concentrate on issues where Community action will provide clear added value.

3.2 This Regulation foresees operational GMES services on a larger scale. As this is a new step in a new framework, both the set-up of the programme, including the selection of priorities and governance have been subject to extensive consultations among all stakeholders, GMES coordinators in the Member States, (potential) users, and industry.

3.3 The Regulation on Earth observation provides a legal basis for the GMES programme and EU funding for initial operations in 2011-2013 amounting to EUR 107 million, i.e. from the Commission's budget, while an additional EUR 43 million is earmarked under FP7, amounting to a total of EUR 150 million, until agreement is reached on the EU's multi-annual budget for 2013-2020 ([5]).

([2]) In this context it is worth to point to the Global Earth Observation System of Systems, GEOSS. Through GMES Europe intends to play a highly relevant role in GEOSS.

([3]) OJ C 162, 25.6.2008, p. 24.

([4]) Introductory speech of the President of the Commission at the Conference 'The ambitions of Europe in Space, new opportunities for European enterprises and civil society', Brussels 15-16 October 2009.

([5]) These amounts are additional to the EUR 1,4 billion provided under the FP7 for space projects.

3.4 Five fields of actions are foreseen. For the period 2011–2013, the emphasis will be on emergency response services and land monitoring services ([6]).

3.5 The initial operations will be managed by the Commission as a part of the EU's overall GMES activities, which also cover EU research activities and the activities of GMES partners. This framework must be distinguished from the technical implementation level of the GMES space component which will be entrusted to ESA.

3.6 Apart from revealing overall agreement among stakeholders, the consultations demonstrated an overwhelming need for reliable and accurate data.

3.6.1 A variety of users like research communities, national and regional public authorities and security services badly need reliable data, sometimes even as a matter of extreme urgency.

3.6.2 Reliable and continuous data is an indispensable condition for the further development of EO markets in Europe by the downstream sector, enabling growth and job creation ([7]).

3.7 With regard to 'subsidiarity', it is worth noting that the overall assessment makes it clear that services to be provided under this Regulation need the aggregation of inputs from Member States at European level, allowing economies of scale as well as effective implementation of EU environmental legislation ([8]).

4. **General comments**

4.1 In addition to the existing research programmes, services, and some operations the EESC greatly welcomes the initial operations as foreseen in the Regulation on Earth observation as a strategic step forward.

4.2 By starting GMES, the Commission and ESA have initiated a programme for the civil operational use of satellite data that, in addition to its meteorological applications, is unique in the world due to its scale and depth. The sustained development and implementation of GMES will create the opportunity for European industry to position itself as a prime global player.

4.3 Broad consultations among all relevant stakeholders as well as the impact assessment demonstrate broad agreement on the programme's objectives and future opportunities. Several specific studies, which were carried out upon request, reflect similar benefits from GMES and increasing opportunities for public and private participants ([9]).

4.4 The benefits of new operations expected by a wide range of public and private stakeholders and the EESC can be summarised as follows:

— strategically, European EO reflects the EU's growing European and international responsibilities and lasting impact on European and world affairs;

— tailor-made and timely space-based information will help the Commission, Member States and regions to implement existing programmes more accurately;

— (new) policies can be designed more accurately;

— space-based information will contribute substantially to non-spaced-based operations by fine-tuning knowledge and broadening data collection ([10]);

— new information will generate complementary value for European Agencies, such as the European Environment Agency and the European Defence Agency;

— huge opportunities will be generated for downstream activities in the private sector;

— new services demanded by national public authorities and agencies will result in environmental and security benefits for citizens, costs savings based on the smart solutions identified, and will also constitute a factor for growth;

— the EU will take a more knowledge-based position in international negotiations on issues such as climate change and agreements aimed at better monitoring;

— specific services, based on tailor-made information, will support EU policies for developing countries.

4.5 The cost-benefit outcome is expected to be positive: relatively moderate turnover will generate substantial advantages.

4.6 ESA programmes are limited to a three-year implementation period. The Council should set long-term EU commitments for the period after 2013. The continuity of the operational programmes is crucial. Long-term planning is decisive for the benefits of EO for public objectives and services. It is also a basic condition for encouraging the downstream sector to develop services.

([6]) See Article 3 of the Regulation.

([7]) See Article 8 of the Regulation.

([8]) See also Article 4(3) of the Regulation.

([9]) See amongst others Socio-Economic Benefits Analysis of GMES, PriceWaterhouseCooper, October 2006, EU Space Policy and its potential for EU industrial sector competitiveness, study for the EP, 2007, and Study on the competitiveness of the GMES downstream sector, Ecorys and others, November 2008.

([10]) Examples are TERRAFIRMA, a ground motion hazard information service, e.g. in coastal and earthquake areas; PROMOTE, an air quality service; MY OCEAN, an ocean monitoring and forecasting service; SAFER, an emergency response service.

4.7 In the same context, it vital to ensure continuity, reliability, and full and open access to data for all parties concerned.

4.8 Public awareness across Europe is indispensable for the sustainability of space policy. An EU communication strategy to ensure public support that explains clearly the future benefits of space-based services for society and citizens is urgently needed.

4.9 In the same context the EESC emphasises the need of giving special attention for education and training of technical experts in this field.

5. **Governance**

5.1 As the initial operations will set the framework for extending the operations at a later stage, adequate management and governance should be guaranteed at the outset. Governance relates in particular to the points set out below.

5.1.1 For understandable reasons, 'Space' has long been a somewhat isolated policy area in the EU, but it should now be fully recognised in the range of Community policies. It will fit perfectly well in the post-2010 Lisbon Strategy ([11]).

5.2 All General Directorates of the Commission involved in space policies should effectively coordinate their activities so that overlaps are avoided and focused actions are foreseen when more than one Directorate is involved in EO.

5.3 European Agencies and DGs, namely Research, Environment, Agriculture, Justice and Home Affairs, Health and Consumers, Development, Trade and External Relations, need to be involved for two additional reasons:

— to deliver accurate information to set up satellite support services;

— to successfully reap the benefits of the services delivered.

5.4 Well-coordinated approaches within and by the Commission will also ensure coherence and interoperability between EO and other space-related programmes such as telecommunications and transport.

5.5 An efficient coordination is needed due to the large number of nation-based operators that are equally involved in information gathering.

5.6 Satellites, automatic measurement stations, and the Internet make it increasingly feasible to monitor environmental developments in real-time. GMES can deliver a contribution as an action 'Near real-time information for decision-making' in measuring the quality of environment within the framework of 'GDP and beyond' ([12]).

5.7 The increasing number of satellites requires a careful management of all space assets to avoid collisions in space which would highly undesirably result in space contamination and debris.

6. **Specific issues**

6.1 Earth observation is still a relatively small market when compared with space-related markets as a whole. In 2005, global revenues were EUR 1,3 billion, including EUR 0,4 billion in Europe, half of which were meteorological applications.

6.2 The upstream sector for EO is predominantly institutional and depends on public funding. Emerging commercial observation satellites are developed in the framework of PPP and are still dependent on public funding.

6.3 *Data is key*

6.3.1 The EESC underlines the need for full and open access to data as a condition for creating a level playing field between public and private parties, and for encouraging a still weak private sector to develop.

6.3.2 Uninterrupted data-delivery is of paramount importance for a viable downstream sector to evolve. Uncertainty in this respect would be a tremendous setback to the market due to assumptions that the required infrastructure would not meet expectations.

6.3.3 Feedback from industry on the first series of operational satellites for GMES – A Sentinels – is explicitly positive ([13]). However, the current space downloading data chain requires special attention to ensure optimal conditions.

6.3.4 Equally essential for sustainability are the planned B Sentinels, which are necessary to replace A Sentinels that come to an end, and to ensure continuity of service in case of failure of a satellite. The funding for the B Sentinels is still uncertain. It has to be secured.

([11]) See footnote 4.

([12]) See EC Communication 'GDP and beyond: Measuring progress in a changing world', COM(2009) 433 final.

([13]) See Industry Information Day on the GMES Sentinel Data Policy, Brussels, 11 September 2009.

6.3.5 To ensure continuity of service or the development of new services, the future mechanism for charging for the use of data must – after consultation – be clarified to the downstream sector as soon as possible.

6.4 *Financial conditions*

6.4.1 Financial resources for the initial operations for 2011-2013 amount to EUR 150 million, i.e. EUR 43 million under FP7 and EUR 107 million from the Commission's budget. The EESC urges clarification on several pending considerations.

6.4.2 Stakeholders must be certain of the financial envelope of EUR 107 million to be allocated as funding or credit. The participation rules must be clarified. Are the associated countries to be seen as potential beneficiaries of grants or contracts?

6.4.3 Given the envisaged results, EUR 150 million seem hardly sufficient. Firstly, there is a widespread view, e.g. at ESA and EADS, that the allocation of an additional EUR 30 million under FP7 is indispensable for ground-based installations to meet requirements. Secondly, it is not clear how 2013 will be covered even if the financial resources in the EU Budget for 2013-2020 are likely to be ensured.

6.4.4 A third area of concern is the envisaged launch of B Sentinels as the funding is not yet budgeted, and therefore still pending ([14]).

6.4.5 Another challenge is the funding of the adjacent Marine, Atmosphere and Security Services, which should have been decided at the same time as the financing of Land and Emergency Services. The EESC would welcome indications on funding for these services and on the extent of involvement of FP7 and FP8 and the Commission's DGs, in particular DG Environment. Such clarification is very relevant to the downstream sector.

6.4.6 The additionally needed financial expenditure should not necessarily be covered by the EU budget alone. Other sources, e.g. ESA or national contributions, are also conceivable.

6.5 *The downstream sector*

6.5.1 At the moment, the EO downstream sector - a sector in development - is a small fragmented sector comprising about 150 companies and employing around 3 000 persons in 2006. The total revenue in Europe amounts to EUR 250 - 300 million in 2006. Revenues from the public sector amount to around EUR 150 million. The customers are to a large extent public authorities and agencies. Profits are volatile. The US industry is two to three times the size of the European industry. It also has higher growth rates ([15]).

6.5.2 A desirable clustering of downstream activities is underway.

6.5.3 The longstanding relationship between ESA and industry, albeit on the limited scale of operations generated, has focused expertise in ESA as a facilitator of services. This has given rise to a successful industrial policy.

6.5.4 The EESC urges that since responsibility for applications will shift from ESA to the Commission, similar technical expertise regarding industry should be guaranteed within the Commission services.

6.5.5 The outlines of the upcoming programme are clear with a strong focus on the involvement of SMEs, whose creativity is of paramount importance in the EESC's view. In this context the EESC would emphasise two points:

6.5.5.1 Project budgets of EUR 25 million require the involvement of bigger companies. ESA has proactively sought the participation of SMEs. The same attitude must be taken by the Commission.

6.5.5.2 SMEs must be invited, on an equal footing, to become prime contractors in smaller projects.

6.5.6 In tendering projects relating to the EUR 150 million envelope for 2011-2013, the Commission must scrutinise possible distortions by public parties, which could be aggravated by the evaluations of consultants. At the moment, there is often insufficient clarity about the role of the public sector as the main customer for services.

6.5.7 Since GMES aims at creating an innovative geo-information service industry, the programme has to reach all industrial players. There is a tendency mainly to involve industries that are already connected with space. However, the EESC emphasises that if GMES is to have a sustainable future, participants from the whole geo-information service industry, both space and non-space related, must be brought in.

6.5.8 The EESC endorses financial support for the projects of private companies in order to compensate for market failure in this strategic and high potential sector.

6.5.9 At present, space activities are concentrated in one part of the EU. Given current capabilities, further development of the downstream sector can and must also be encouraged in the new Member States.

([14]) B Sentinels are being developed by ESA, but the operational costs should be covered by the Commission. According to EADS's calculations this amounts to EUR 165 million.

([15]) See the studies mentioned in footnote 9 for a complete and in-depth analysis.

6.5.10 The EESC considers the diminishing number of specialists in the field a cause for special concern. The current trend has to be reversed. Intensified education and training schemes for prospective public customers as well as in the high-tech downstream sector are needed to enable the industry to get the full benefit of opportunities.

6.6 *Security*

6.6.1 Bearing in mind that 'Space' was dealt with separately by ESA for reasons of 'national security', the EC-ESA Agreement of 2004 and the Council Resolution in May 2007 represented a major shift. The EESC welcomes the attention paid to the use of GMES data and information for the security of citizens and a data policy for ensuring the secure use of possibly sensitive data by Commission, European Agencies and Member States.

6.6.2 The EESC also welcomes the enhanced coordination between GMES and the European Defence Agency, which will ensure links between GMES data policy and applications with the foreseen European security capability planning and related future requirements.

6.6.3 The EESC fully supports the foreseen 'dual-use' (or civil-defence) approach, combining scientific and security-oriented uses as a strategic roadmap for GMES. Such an approach is extremely relevant to facing immediate, mid-term and long-term challenges by improving European capabilities in areas such as maritime surveillance, land and border monitoring, including monitoring ([16]) of the organisation of illegal migration, of smuggling and drug-traffic control and critical infrastructure protection as well as the fight against the proliferation of weapons.

Brussels, 20 January 2010.

The President
of the European Economic and Social Committee
Mario SEPI

([16]) In close cooperation with the ground-based border surveillance EU Agency Frontex.