

COOPERATION OF ESA AND EU CONSIDERING CURRENT CHALLENGES DURING IMPLEMENTATIONS OF COMMON PROJECTS

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ABSTRACT

In light of the coexistence of the European Space Agency (ESA) and the European Union (EU) as international platforms of cooperation for European space flight a coherent institutional structure proves to be the basic prerequisite for effective and successful European collaboration in space. However the current institutional form of European space flight does not sufficiently allow future developments of the European integration in the area of space flight. Additionally, the international competitiveness of the European space industry requires further considerations regarding the institutional structure of European space flight.

Presently the two existing European organisations aim to benefit Europe in multiple ways, i.e. by various legal systems. A closer cooperation between ESA and EU poses questions concerning both institutional aspects (which kind of model of cooperation with respect to the inhomogeneous member

structure of ESA and EU) and substantive law.

Concerning the institutional aspects, the creation of institutional requirements for the integration of military aspects in European space politics also plays an important role. Furthermore every institutionalised form of cooperation has to provide clear and efficient procedures for decision making and financing. Recent challenges during the implementation of GALILEO and GMES have to be analysed and considered for the harmonised approach of ESA-EU.

INTRODUCTION

In the first years after its foundation, the EU did not focus on space matters but on the establishment of a single European common market. Over the last decades, this attitude was revised and has led to an intensive ESA-EU cooperation with two significant space projects: GALILEO and GMES. The ongoing research project “Development of the European Space Agency as “implementing agency” of the European Union: legal framework and the need for adjustment”¹ carried out by the Institute of Air and Space Law at the University of

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Cologne, supported by the German Aerospace Centre (DLR) and the German Federal Ministry for Education, Sciences and Research (BMBF) analyses the current structures of the ESA-EU cooperation. One important aspect deals with the European Space Policy and its implementation of common GMES projects.

EUROPEAN SPACE POLICY

The European Space Policy is the common strategy of the European Union, ESA and its member states. Its goal is to strengthen the space policy of Europe and to coordinate and optimise existing common projects in this matter. Hereby, Europe should be enabled to have independent and cost efficient access to space.

At the same time, security and progress will be ensured. In this way, future global problems, such as in the area of foreign aid or climate change can be better managed.² Additionally, the European Space Policy covers European foreign affairs and its security interests.³ Concerning this matter, the European Space Policy has to develop means and ensure its efficient funding.⁴

Topics of European Space Policy

The co-ordination of European Space Policy should emanate from ESA. ESA is also responsible for the management of European space related activities and supports the commission as technical specialist during the development of new space related activities in Europe.⁵ Respecting national sovereignty, synergy effects among national, ESA and EU efforts should be achieved.⁶ The core areas of European Space Policy⁷ are GALILEO (European satellite based navigation system)⁸ and GMES (Global Monitoring for Environment and Security)⁹. Both are civilian systems under civilian control.¹⁰ However the European Space

Policy should generate synergy effects from the coordination of civilian and defence oriented space programmes for the area of public security.¹¹

GMES

Along with GALILEO, GMES is the second largest space related joint initiative from ESA and EU. The implementation of the GMES project should consider experiences from the GALILEO project. GMES is part of European Space Policy jointly established by EC and ESA to support environmental and security policies in the context of sustainable development. ESA implements the coordinated access to space-based earth observation data.

RECENT STEPS IN THE ONGOING ESA-EU COOPERATION

In order to better coordinate common European space activities, several initiatives were started.

Graz Dialog 2006

The first half of the year 2006 was marked by the Austrian EU presidency. From 19-20 April 2006 the conference on "A market for GMES in Europe and its regions" was held in Graz (Austria) under the responsibility of the Austrian ministry of transportation and technology.

The conference target was to develop an expert report on the future elaboration of the European space programme which should be presented to the Council of the European Union. Important topics were the identification of markets for GMES offerings and the development of a potential governance structure.

Also, the so-called fast-track services on emergency response, land monitoring and marine services, which were launched by the European Commission in 2005, were an

important topic. They should be available for civilian use to all EU Member States and ESA Member States. They should be further developed and in operation by 2008. Moreover, funding of the GMES project was discussed.

Munich Road Map 2007

Under German EU presidency (first half of 2007), the so-called Munich Roadmap (17.04.2007) was developed. The Munich Roadmap contains a summary of the agreed GMES architecture, as well as a proposal on basic principles regarding the operational implementation of GMES.¹²

For the period 2007 to 2013, the GMES funding level cannot exceed the upper limit as specified in the correspondent EU's long-term budget.¹³ Furthermore, with immediate effect, a stable and long term management and funding structure should be implemented.¹⁴ This should be done with regards to the Graz Dialog at which the German EU presidency was appointed to deal with topic of EU funding of GMES via the *Seventh Framework Programme*¹⁵. Council and European Commission were called upon to undertake actions in their divisions.

The German EU presidency was also appointed to bring forward the cooperation between the European Commission, ESA, EUMETSAT, its member states and industrial partners concerning the implementation of GMES. This relates also to the area of data access.¹⁶

A further topic was the integration of new member states in the GMES project.¹⁷

4th Space Council: Resolution on the Space Policy

The 4th Space Council (consisting of European Council of Ministers and ESA Council) passed on 22 May 2007 the resolution on European Space Policy.¹⁸

This resolution stresses the strategic value of space activities and focuses on task sharing between EU and ESA: EU defines the framework, ESA implements the technical aspects of the EU projects.

The European Space quests have to clearly focus on projects with specific value, which should increasingly tap dual use potential. The resolution on Space Policy contains additional specifications for their realisation. Another crucial topic of this resolution is the recommendation to extend the 2003 EC-ESA framework agreement¹⁹ beyond May 2008.²⁰ This Framework Agreement is regarded as a sustainable political and legal basis for a closer cooperation between EC and ESA.

ESA Council Overall Roadmap

On 1 June 2007 the ESA Council Overall Roadmap was approved. It determines the upcoming major steps until the 2008 ESA Council meeting at ministerial level. A roadmap needs to be implemented so that the ESA Council meeting at ministerial level can pass its resolution in Oct/Nov 2008. Therefore, between September 2007 and the council meeting of March 2008, informal consultations with the heads of delegations will be held ending by setting up council working groups.

Further Steps during 2007

Under Portuguese EU presidency, a public mini hearing on European Space Policy with the title "A European Space Policy: A New Approach to Industrial Policy?" was held in the European Parliament (Committee on Industry, Research and Energy) on 16 July 2007 in Brussels. In this hearing, results of the 4th Space Council were mainly presented. It was pointed out that Europe's future will not be decided only on planet earth but in space as well. Therefore, the upcoming EU 'Reform Treaty' has to

disclose space related topics as areas of exclusive competence of the EU.

Besides upcoming challenges for the European Union in this matter, Europe can be proud of its 30 years of successful ESA activities. Thereby the space market is influenced by government activities and investments. That means it is an institutional market which is not only affected by open competition.

ESA success is based on its industry policy which is founded on the four ESA principles. In accordance with art. VII ESA-Convention²¹ these principles are cost-effectiveness, competitiveness, fair return and exploitation of Competition.

EC-ESA FRAMEWORK AGREEMENT

Generally speaking, the extension of the EC-ESA Framework Agreement was highly positively regarded. There was no need for any short-term changes.

Evaluation of the implementation of EC-ESA Framework Agreement

Evaluation of political matters contained in art. 1 to art. 3 of EC-ESA Framework Agreement

Due to the set up of the space council, aeronautics have gained higher importance on the political level and among European citizens. The Framework Agreement has led to a definition of priorities and task sharing in order to best use synergies among ESA and EC. Furthermore, the Framework Agreement facilitated step by step implementation of the European Space Policy, especially of its space programme. This programme was highly welcomed by the space industry as it serves as a planning basis for the optimisation of European resources. Some aspects will need to attract further attention in the near future, such as the consideration of security aspects (art.

2.3), the dual usage technologies and its arising applications to support security and defence requirements.

The target of European Space Policy is to better comply with the requirements of the Common Foreign and Security Policy (CFSP) and the European Security and Defence Policy (ESDP) under consideration of the security aspects of GALILEO and GMES. However, the future role of ESA and EC in the area of security and defence must be clearly defined under consideration of its relevant relation to the European Defence Agency (EDA).

Evaluation of Joint Initiatives (art. 4 to art. 5 of EC-ESA Framework Agreement)

The implementation of both common projects GALILEO and GMES have shown that the existing coordination techniques have to be further developed.

Apart from decision-making procedures that are not sufficiently flexible, the current EC financing modalities are also not ideal to ensure efficient management of commonly financed space projects.

The current difficulties during the development of common projects, such as GMES, are not due to technical problems but rather due to heterogeneous financing modalities. The crucial factor is that the EU currently has no suitable, long term funding and financing mechanism. Long term commitments are thus not feasible.

Additionally, the EU does not finance any projects fully, meaning that all space projects have to be co-funded. The remaining costs will be covered by ESA from optional programmes. The consolidation of all funds of all involved parties is quite difficult, as those funds are subject to their own regulations. Therefore, during the Graz Dialog it was recorded that by mid 2007 not only the tasks of all GMES

involved parties had to be defined, but mainly their financial contributions.²²

CURRENT DEVELOPPMENTS OF FINANCING STRUCTURES

Regarding GMES, the utmost goal is to reach functionality by the end of 2008. With the involvement of all member states and ESA, the commission is requested to present proposals regarding financing, infrastructure and efficient management.²³

Future GMES financing structure

The GMES will be allocated a substantial majority of the funding available for space under the Seventh Framework Programme for Research, Technological Development and Demonstration Activities (FP7). However, the research project GMES is a long term and high cost project which cannot be compared to any other established research projects. Therefore, in mid 2006 the EC has set up a so-called *Financial Engineering Working Group*, whose target is to develop scenarios in how to best allocate the GMES funds as defined as such in the FP7, to its relevant parties, especially to ESA.

As the FP7 covers only the period from 2007 to 2013, a pragmatic solution is highly needed. Also with regards to the fact that upon receipt of the fund, ESA needs to close contracts with subcontractors as per official procedures. Furthermore, the EU financial review will be held in 2009.

Important regulations of FP7²⁴ for GMES

FP7 contains several regulations which might lead to difficulties during the GMES implementation by ESA, e. g grants are assigned on a yearly basis only. Only 80 % of assigned grants can be allocated to sub contractors, a minimum of 20 % needs to be used by the grantee, namely ESA, itself.

Important aspects are „no retro-activity“ of costs and decisions. Also, projects, which are funded by FP7, are not allowed to be subject to geo return. Regarding co-funding, the complete project must be subject to the regulations of FP7. This means, any funds provided by ESA are also subject to these controversial regulations of FP7.

Financing of GMES projects according to art. 53 and 54 Council Regulation²⁵

According to the DG budget, a *lex specialis* based on the common EU budget rules can be applied to the standard regulations of FP7. This is with particular respect to art. 53 and 54 of Council Regulation (CR) Nr. 1605/2002 dated 25 June 2002 regarding the Financial Regulation applicable to the general budget of the European Communities. Thus, the question arises whether funds from FP7 can be used based on the common EU budget regulations.

Application of art. 53 und 54 CR

According to art. 53 para. 1 c) CR a joint management with an international organisation is a prerequisite. According to art. 53 para. 1 d) a joint management is possible if efficient finance and budget controlling are set up (art. 53 d). In order to allow implementation tasks to the international organisation, a long term frame agreement or the setup of a common programme between the Commission and the international organisation (i.e. ESA) is needed as defined in art 53 d). Art. 54-2 allows the Commission to delegate the implementation of certain tasks to an international public institution if an effective control (art. 54-1) persists.

Currently, the EU is requested to further explore this proposal with respect to feasible implementation and to present a decision paper, possibly in joint cooperation with ESA. This should be done by September/October 2007 to ensure

successful implementation of the GMES project.

CONCLUSION

Although some progress can be seen in the general cooperation between ESA and EU, the major role for the success of a common European Space Policy is the successful implementation of the GMES project.

Moreover, Europe's international cooperation, not only with USA and Russia, but also with China, India and other interested countries, is of high importance.

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²⁰ Council of the EU, Press release on 4th Space Council, 22 May 2007, p. 7.

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²⁵ Council Regulation (EC, Euratom) No. 1605/2002 of 25 June 2002 on the Financial Regulation applicable to the general budget of the European Communities as amended by Council Regulation (EC, Euratom) No. 1995/2006 of 13 December 2006 amending regulation Nr. 1605/2002 on the Financial Regulation applicable to the general budget of the European Communities (OJ L 390/2006 of 30 December 2006).