

## THE ROLE OF EUROPEAN REGIONS IN THE EU SPACE POLICY

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### ABSTRACT

The European Space Policy carries the promise of substantial economic social benefits for the enlarged Union and its citizens and brings new qualities to its external relations, especially in regard to security, environment and development. On this basis, after 50 years of European achievements in space science and technologies, Europe is now moving towards space applications, which open new markets in the field of telecommunications, positioning systems and Earth observation.

The Space Policy White Paper of 2003, as well as the future Treaty establishing a Constitution for Europe, states that space should become a shared competence between the Union and its Member States. Today, the critical point is to maintain expertise, to acquire new skills, to support technologies and infrastructures and to increase the use of space applications. In this stage of European space policy construction, the involvement of the regional dimension can represent a fundamental gear in order to collect users' requirements. Despite the different areas of competence and the different functions granted to the regional entities, most European regional governments deal with a number of issues in areas linked to environment, emergency and security, agricultural and fishery management, air quality monitoring, integrated management of coastal areas as well the economic development and the promotion of innovation systems. In line with these reflections, the European regional authorities launched the idea of a permanent Conference of European Regions Using Space Technologies. This initiative is to be considered a new form of cooperation between European Regional governments representing the new players in outer space.

### INTRODUCTION

The international scene has changed profoundly since 1967, when the Outer Space Treaty came into force. An essential aspect of this new era is a certain decline of State authority from its conventional role in international relations and the increase of importance of various new actors on the international scene.

These changes have also affected the space sector.

The originally scientific and military character of space activities began to change as opportunities to conduct activities for economic, social and cultural development arose. The international community is now using space technologies in many fields: to communicate via satellite, to forecast weather conditions, to monitor natural disasters, to study global environment and to develop navigation systems. Space activities today are

largely international both in their planning and implementation.

Nowadays, when we refer to space activities we take into consideration the changed global framework: the new applications of space technologies, the increased number of States involved with space activities, the commercialisation and privatisation of space activities, the link between space law and environmental law as well as the rights of information. In this context international organisations have gained a core competence with the consequent development of partnership among States, international organisations and private subjects.

These aspects require an enhancement of international cooperation and a greater attention towards the interaction between public and private activities.

Today, European Space Policy carries the promise of substantial economic and social benefits for the enlarged European Union and brings new qualities to its external relations, especially in the field of security, environment and development.

At this stage of European Space Policy construction, the involvement of the regional authorities can provide a fundamental impetus toward federating new users and their own needs.

Most European regional governments deal with a number of issues in areas linked to the environment, emergency and security, agricultural and fishery management, research and innovation.

In line with these reflections, the European regional authorities launched the idea of a Network of European Regions Using Space Technologies. This initiative is to be considered a new form of cooperation in Europe.

The aim of this paper is to review the course of the initiative and to analyse this new form of cooperation within the framework of international space law, taking into particular account the 1996 UN Declaration on Cooperation for Space Benefits.

Therefore, it will focus on this new approach to the governance of space activities in Europe with the attempt to explain why the

European regions take more and more specific interest in space matters. The last paragraph is focused on the Network of European Regions Using Space technologies - NEREUS.

## 1. INTERNATIONAL COOPERATION IN SPACE ACTIVITIES

Outer Space is a categorical object of international cooperation.

The basic principles of space law consider that the exploration and utilization of Outer Space should be carried out for the benefit and in the interest of all States<sup>1</sup>.

Article 1 of the Outer Space Treaty of 1967 declares the principle of "freedom of scientific investigation in Outer Space" and encourages States to "facilitate and encourage international cooperation in such investigation"<sup>2</sup>.

The concept of international cooperation has known a deep evolution since the launch of Sputnik 50 years ago.

On the content and the political evolution of international cooperation in space activities, a particularly important guideline is the 1996 Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries<sup>3</sup>. The Declaration bears the witness of how the use of space technologies supports the socio-economic and cultural development of all countries<sup>4</sup>.

The Declaration, which provides an interpretation of the cooperation principle of Article I of the Outer Space Treaty, is aimed to avoid ideological debate on the international order in space and to concentrate on the benefits obtainable for all countries<sup>5</sup>.

Historically the endeavour of the space activities has been performed foremost by the two space powers at the time of the Cold War. Besides the scientific spirit of exploration, the space activities in the first period was driven by the function of space for the strategic interests of foreign and defence policies.

Only when new space nations entered this field, economic and industrial aspects of

space and its applications developed a new dimension of space activities<sup>6</sup>.

The principle of freedom of exploration and use of Outer Space, declared in Article I of the Outer Space Treaty, changed the world order from a close, sovereignty-oriented international system to an open and collaborative system based on international cooperation.

This is particularly evident if we look at the new applications of space technologies and the consequent consolidation of new sectors, where space activities have an impact: the protection of the environment and natural resources management, the prevention of natural disasters, the global communications, the right of information and the development of space industry. These sectors require an enhancement of international cooperation.

For example in the field of earth observation, space law plays a great role in the protection of global environment by monitoring ecosystems and promoting international cooperation.

The European Space Policy can be taken into particular account to identify this rising awareness for the political and social implications of space infrastructures.

## **2. THE EVOLUTION OF SPACE COOPERATION IN EUROPE: TOWARDS A EUROPEAN SPACE POLICY**

The cost and the necessary long term investment led to the necessity of establishing permanent regional cooperation.

In 1975 the Western European Countries established the European Space Agency (ESA).

Today ESA is an important organization. The ESA Convention defines “not only the purposes and the main principles of the Agency and the structure and decision making powers of its organs, but also establishes important rules for the programs of the Agency and a design for a future European Integrated Space Policy”<sup>7</sup>.

After 30 years of European achievements in the development of space science and

technologies, Europe is now moving towards space applications, which have opened new markets especially in the field of telecommunications, positioning systems and Earth observation.

Recognizing space as a strategic tool to contribute to European cohesion and economic growth, the European Union strengthened its relationship with ESA for a closer cooperation.

Several events occurred in Europe in the last decades: the EU has expanded to include the new Member States, some of which have space related institutes, for example Poland, Slovenia and Czech Republic<sup>8</sup>.

At the European level there is no regional space law, while several EU and ESA Member States adopted their national space legislation. In order to fill this void the European Union is beginning to formulate its own Space Policy.

National space legislation and policy have been taken into account in the “White Paper on Space Policy”<sup>9</sup> titled “Space a New European Frontier for an Expanding Union”, which was adopted on 27-28 November 2003 by the EU Council.

The White Paper covers a range of activities from research to technological development of infrastructures and includes specific action points regarding the development of European space programmes such as roles and responsibilities of the Member States involved. The White Paper provides an Action Plan, including a list of recommended actions for the implementation of the European Space Policy. A European Space Policy will be implemented in two phases: the first (2004-2007) consists of implementing the activities included in the recent Framework Agreement between the European Community and the European Space Agency. The second phase will begin with the coming into force of the proposed European Constitutional Treaty<sup>10</sup>. The Draft Treaty establishing a Constitution for Europe<sup>11</sup>, adopted by consensus by the European Convention on 13 June and 10 July 2003, states that space should become a shared competences between the Union and its Member States<sup>12</sup>. Article III-155 establishes

that the Union “shall draw up a European Space Policy in order to promote scientific and technical progress, industrial competitiveness and the implementation of its policies”<sup>13</sup>.

The Framework Agreement between the European Community and the European Space Agency<sup>14</sup>, signed in 2003 and officially entered into force on 28 May 2004.

It represents a major step forward a closer cooperation between the European Community and ESA on specific related projects. According to the Preamble, ESA and EC recognize that they have “specific complementary and mutually reinforcing strengths” and “commit themselves to cooperate in an efficient and mutually beneficial manner”, to avoid “any unnecessary duplication of effort”<sup>15</sup>. Specific areas identified are the GALILEO satellite navigation system, the Global Monitoring for Environment and Security – GMES, the human space flight and microgravity, the launch systems, the communication by satellite<sup>16</sup>.

The Agreement forms the basis for supporting an expanding European Space Programme. The final aim of this Framework Agreement is to address the coherent and progressive development of an overall European Space Policy able “to link demand for services and applications using space systems in support of the Community policies with the supply of space systems and infrastructure necessary to meet that demand.”<sup>17</sup>

The Commission set out the preliminary elements of space policy in its Communication of May 2005<sup>18</sup>.

Accordingly, the European Commission has adopted on 22 May 2007 the European Space Policy<sup>19</sup>.

This Policy, has been compiled in consultation with the Member States and other interested stakeholders. The goal remains to pursue a closer and more efficient cooperation between EU and ESA in order to develop space systems and sustain related services responding to the relevant EU sectorial policies<sup>20</sup>. In this framework the European Space Policy establishes roles and

responsibilities of ESA, EU and Members States.

The European Union has the responsibility to identify and federate users’ needs for space-based services relevant to EU policies and for coordinating their delivery, while the European Space Agency has the responsibility for elaborating and developing the required solutions. The European Union should consequently ensure the full potential to aggregate the political will in support of these wider objectives.

The Member States should identify in the European Space Policy the rationale for national programmes, according to the principle of subsidiarity<sup>21</sup>.

Today the key to secure the maximum political, economic and social return from investment in space technologies consists in the development and exploitation of space technologies, meeting the objectives of EU policies and the needs of European enterprises and citizens.

In accordance with the European Union and national user needs, the involvement of the regional dimension can represent a fundamental gear in order to collect users’ requirements and to ensure the use of new space services.

In this framework, regional governments can represent the new players in outer space in an environment previously ruled only by national governments, the European Union and the European Space Agency.

### 3. THE ROLE OF EUROPEAN REGIONS

The concept of region varies considerable in Europe. The word is generally used to define different subnational territorial entities. Generally, in the context of EU, the word region refers to the territorial administration which is directly subordinated to the central administration<sup>22</sup>.

The structure of local and regional authorities is different in the European Union Member States and have different denominations: Länder, Regions, Counties, Provinces, Autonomous Communities .

At the beginning of 21<sup>st</sup> century, the development of international law is characterised by the globalization of markets, the diffusion of new technologies and in Europe by a stronger process of regional integration. In reaction to these developments we can observe a certain decline of State authority from their conventional role in international relations and an increase of the importance of various new actors on the international scene. The globalization is shifting authority from the level of State to different kinds of public and private actors, for example international enterprises or Non Governmental Organizations (NGOs)<sup>23</sup>.

Within this emerging framework, also sub-national territorial administrations have redefined their role.

Since regional or even local patterns of economic and territorial specificity gain importance in a globalized economy, sub-national actors started to cooperate quite independently with the aim to attract resources such as investments, knowledge or skilled persons. As a result, regions are today considerably more involved in international relations. External relations established by regions exist parallel to the traditional foreign policies of States.

There is no doubt that today regions are actors in the international community. Regions are present indirectly through the influence on their national governments, but they are also directly present. They conduct activities with neighbouring regions across national borders (transfrontalier cooperation). They cooperate with regions in other countries and they have political contacts with foreign central governments, international organizations, private sector, interest groups etc. They are members of international organizations. They also exercise influence on their own central governments and foreign States. In each of these forms, external relations of regions can be coordinated and complementary to activities of the central State level.

Within the European Union, regions exercise influence on the European Commission and the Council. The Treaty of Maastricht provides for a Committee of Regions<sup>24</sup> as a

consultative body of the European Council and the European Commission<sup>25</sup>. In this way, regions obtained a body equal to the Economic and Social Committee with consultative status.

The Committee of Regions is expected to rise its influence as regards regional policies in general.

The growth of regional influence in external relations has also affected the space sector.

In this stage of space activities, the success and the long term sustainability of space based services can only be achieved through a "user-driven approach"<sup>26</sup>. The European Commission, the European Council, the European Space Agency, the European Meteorological Satellite Organisation (EUMETSAT), the European Environment Agency (EEA) and their respective Member States at national, regional and local level are all concerned actors of the space environment. In this context, the regional dimension is essential to the definition and use of space based services and to the expansion of a market for these services. This affirmation can be justified by two observations of political and physical geography nature<sup>27</sup>.

Most European regional governments have an explicit or implicit mandate by their populations to fulfil a number of tasks in sectors where space activities have an impact. Despite the different size and territorial characteristic of European regions and the different functions granted to the regional entities, most European regional governments deal with a number of issues in areas linked to the environment, emergency and security, agricultural and forestry management, air quality monitoring, integrated management of coastal areas as well the economic development and the promotion of innovation systems.

In line with these reflections, a number of European regions, supported by the Committee of Regions, launched the idea to create a Network of Regions Using Space Technologies, following the example of other regional associations such as the Peripheral Maritime Regions Conference.

This Network aims to reinforce dialogue with all concerned actors, to develop a user base of services and to increase commercial opportunities for Small and Medium Enterprises (SME) as well as for major infrastructures suppliers.

#### **4. NETWORK OF EUROPEAN REGIONS USING SPACE TECHNOLOGIES**

During the GMES (Global Monitoring for Environment and Security) Conference “A Market for GMES in Europe and its Regions – The Graz Dialogue”, organised by the Austrian Government during its EU Presidency in Graz on 19-20 April 2006, it was agreed by the participating experts to establish a European Network on space technologies at regional level.

The focus of the Network shall be on the use of space technologies in order to federate new users and their information needs and to promote the development of solutions responding to the various needs.

The broader involvement of regional entities makes it possible to open up the space sector to players other than those of the traditional space industry: service providers, content providers, public and private users. This phenomenon considerably enhances the potential of the space sector in terms of benefits for European citizens.

European regions are involved in space activities from infrastructures to the use of applications. They are users of satellite data having competences in the field of environment, resources management, agriculture, emergencies and security. They contribute significantly to the creation and support of clusters and competitive zones that brings together manufacturers, as Small and Medium Enterprises (SME), higher education institutes and scientific research centres. They promote the process of transferring technologies from the research sector to the commercial sector. They are also involved in the installation, development and maintenance of space infrastructure such as launch facilities, satellite integration, equipment and

software and, in general, “ground segment” infrastructure.

The project of the Network of European REGions Using Space technologies – NEREUS<sup>28</sup> – is in progress. A significant advancement has been performed since the end of 2006 with the validation of the Political Charter on 12 July 2007.

The first NEREUS’ Constitutive Assembly is scheduled for December 2007.

More than 31 European regions, coming from 11 European Member States, have been involved in the working meetings for the construction of NEREUS since the beginning of 2006.

#### **4.1 OBJECTIVES AND ACTIVITIES OF THE NETWORK**

The Network supports the strategies set up by the European Union in its European Space Policy .

The Networks aims:

- “To introduce the regional level into the elaboration and development of European space programmes and activities
- To promote and implement partnerships, to foster trans-national and crossborder cooperative schemes between European regions, in order to develop common or complementary assets and approaches
- To fulfil and sustain end-users’ needs from the space services provided by the European Union programmes.
- To ensure that space services are used across all European regions so as to ensure a balanced development of the European Union and allow full exploitation of its space technologies potential.
- To support a better promotion of the European space dimension in the globalized economy.
- To increase citizens’ participation in European policy construction and in development of space services markets”<sup>29</sup>

In order to accomplish these objectives the Network could carry out researches, projects

and programmes in all major fields of space technologies. It could organize workshop, study seminars, educational activities and supervise scientific studies, plans in order to enhance the dissemination of knowledge on space technologies. It could carry out activities such as identifying final users, mapping common issues and needs and sharing problems related to space applications among regions across Europe, with the final aim to federate users' demand.

Concluding the Network could express opinions of the regions about European community publications.

NEREUS could also spread information concerning the available sources of financing in Europe, both public and private, in order to allow NEREUS members to build up projects on space technologies.

All the activities of the Network should be in harmony with the activities of the concerned institutions in Europe and open to international cooperation.

## **4.2 STRUCTURE OF THE NETWORK**

The Network of European REgions Using Space technologies will be an International non-profit making Association (AISBL) of the Belgian Law.

NEREUS has two categories of membership association: full members and associated members.

Full membership is open to regional administration of EU Member States.

As mentioned in paragraph 3, the word "region" refers to the territorial administration with a measure of autonomy which is directly subordinated to the central administration and endowed with an independent political representation.

When regions, in the sense of this definition do not exist, public institutions representing territorial area comparable to regions are eligible as full members. In the countries where regional authority is not in force, the admission as full members of lower level government authorities, will be taken into consideration, on condition that they are not municipalities. In this case, the adhesion to

the association of the national authority as full member will be taken into consideration.

Otherwise, associated membership is open to local authorities, companies, foundations, banks, universities, firms, private actors, stakeholders, other Networks as long as they have competences and interests in line with the aims and objectives of NEREUS<sup>30</sup>.

The NEREUS Statute will define the purposes of the Network, the structure and decision making powers of its organs as well as the rights of full and associate members.

The draft text of NEREUS Statute is actually under discussion.

## **CONCLUSIONS**

Presently, the project of the Network of European Regions Using Space Technologies, is on the way to be accomplished. Next steps to be completed in the establishing of an operational Network should include: the adoption of the final NEREUS Statute which will define the structure of the Network and the organisation of the Constitutive Assembly, scheduled for December 2007 in Toulouse.

The European objective to involve regions into the construction of the European Space Policy aims to consider the final users needs in the realization of space based services, following the subsidiarity principle.

This new form of cooperation in Europe opens a new dimension of space activities that look at space from a different point of view taking into consideration the new emerging concept of subsidiarity in the European governance as well as the European environment policy and law, the economic development and the scientific community.

This is an important moment in the history of European activities in space. With the adoption of the European Space Policy, the time has come to place space activities in the Union's political agenda as a key in the European integration process. Space applications represent an important tool at the service of numerous objectives and policies of

the enlarged European Union: such as transport and mobility, information society, environmental protection, land use planning, agriculture, sustainable development and, more generally, the Lisbon Strategy aimed at "making the Union the most advanced knowledge-based society in the world".

and activities, supporting the creation of new services for the benefit of citizens and exploiting new emerging markets. In particular regional entities have the opportunity to ensure an active participation of the different economic and social actors within their territory.

Regional authorities can give a significant contribution to European space programmes

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<sup>1</sup> Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, 610 UNTS 205, 27 January 1967.

<sup>2</sup> Ibidem Art.I: "The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.

Outer space, including the Moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies.

There shall be freedom of scientific investigation in outer space, including the Moon and other celestial bodies, and States shall facilitate and encourage international cooperation in such investigation."

<sup>3</sup> Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of all States, Taking into Particular Account the Needs of Developing Countries, UNGA Resolution 51/122, 13 December 1996

4 S. Marchisio, "General Conclusions on International Organisation and Space Law", in "Proceedings of the Perugia Colloquium: International Organisations and Space Law. Their Role and Contributions", Netherlands, 1999, pp. 347-357.

<sup>5</sup> E. Back Impallomeni, "Sources of Space Law", Proceedings of 11<sup>th</sup> European Summer Course on Space Law and Policy of ECSL, La Rochelle, 2-13 September 2002, p. 4-14

<sup>6</sup> C. Riess, "International Cooperation Trends of Future Space Regulation" in "Essential Air and Space Law 2. Space Law: Current Problems and Perspectives for Future Regulation", Edited by M. Benkö and K.U. Schrogl, Netherlands, 2005, p.175-190.

<sup>7</sup> V. Kopal, "Cooperation Agreements with ESA Central European Viewpoint", Proceedings of the International Colloquium "Legal Aspects of Cooperation between the European Space Agency and Central and Eastern European Countries" Prague 11-12 September 1997, Edited by ECSL, 1998, p. 31

<sup>8</sup> "Highlights in Space 2004", prepared in cooperation with the International Astronautical Federation, the Committee on Space Research and the International Institute of Space Law, United Nations Publications, New York 2005, p.63.

<sup>9</sup> COM (2003)673, White Paper "Space: a New European Frontier for an Expanding Union. An Action Plan for Implementing the European Space Policy", Brussels, 11 November 2003.

<sup>10</sup> Ibidem, paragraph 5.1 - p. 36

<sup>11</sup> CONV 850/03, "Draft Treaty establishing a Constitution for Europe", Brussels, 18 July 2003.

The proposed Constitution failed the ratification in France and Netherlands in 2005. In June 2007 the European Council reached an agreement on the framework of a new Treaty, "Draft Treaty amending the Treaty on European Union and the Treaty establishing the European Community". The new Treaty shall be finalised during an Intergovernmental Conference (IGC) that started on 23 July 2007.

<sup>12</sup> Ibidem, Art. I-13

<sup>13</sup> Ibidem, Art III-155 draft treaty: "1. To promote scientific and technical progress, industrial competitiveness and the implementation of its policies, the Union shall draw up a European space policy. To this end, it may promote joint initiatives, support research and technological development and coordinate the efforts needed for the exploration and exploitation of space.

2. To contribute to attaining the objectives referred to in paragraph 1, European laws or framework laws shall establish the necessary measures, which may take the form of a European space programme."

<sup>14</sup> Framework Agreement between the European Community and the European Space Agency, entered into force on 28 May 2004.

<sup>15</sup> Ibidem, Preamble: “the Parties recognise that they have specific complementary and mutually reinforcing strengths and are committed to cooperating in an efficient and mutually beneficial manner and to avoiding any unnecessary duplication of effort”.

<sup>16</sup> Ibidem, Art.3.

<sup>17</sup> Ibidem, Art. 1: “The aim of this Framework Agreement is to address the following issues:

1. The coherent and progressive development of an overall European Space Policy. Specifically, this policy shall seek to link demand for services and applications using space systems in support of the Community policies with the supply of space systems and infrastructure necessary to meet that demand.”

<sup>18</sup> COM(2005) 208 final, “European Space Policy - Preliminary Elements”, Brussels, 23 May 2005.

<sup>19</sup> COM(2007) 212 final, “European Space Policy”, Brussels, 26 April 2007.

<sup>20</sup> Ibidem, Paragraph 6.1

<sup>21</sup> COM(2005) 208 final, “European Space Policy - Preliminary Elements”, Brussels, 23 May 2005, paragraph 2.1 - p.7

<sup>22</sup> F. Massart, “Panorama des missions et competences régionales au travers de l’Europe”, Atelier GMES “ Le role des Régions européennes dans GMES”, Toulouse, 9 mars 2006. <http://recherche.midipyrenees.fr/IMG/pdf/gmes-session2-massart.pdf>

<sup>23</sup> S. Hobe, J. Hettling, “Challenges to Space Law in the 21st Century – Project 2001 Plus”, Proceedings of the 45<sup>th</sup> Colloquium on the Law of Outer Space of IISL, Houston, October 2002, p. 51-55

<sup>24</sup> The Maastricht Treaty, 7 February 1992, Art 4.: “The Council and the Commission shall be assisted by an Economic and Social Committee and a Committee of the Regions acting in an advisory capacity.”

<sup>25</sup> Ibidem, Art. 198 a-c.

<sup>26</sup> Report from the Presidency to the Council, “A Market for GMES in Europe and its Regions- the Graz Dialogue 19 – 20 April 2006”, acknowledged in Brussels on 15 May 2006.

<sup>27</sup> Ibidem

<sup>28</sup> The Network is named NEREUS - Network of European REgions Using Space technologies. [www.nereus-regions.eu](http://www.nereus-regions.eu)

<sup>29</sup> The Draft of the Political Charter on the Creation and Implementation of NEREUS- the Network of European REgions Using Space technologies (12 luglio2007)

<sup>30</sup> The Draft Statute of NEREUS- the Network of European REgions Using Space technologies (2 August 2007).