Towards a space strategy for the European Union that benefits its citizens

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PURPOSE: Communication setting out practical options for developing an EU space strategy.

CONTENT: Article 189 of the TFEU conferring on the Union a shared competence on space which it pursues alongside that of the Member States, opened up new perspectives for developing an EU space strategy. In this new framework, Europe's space policy is aimed at achieving the following objectives: (i) promoting technological and scientific progress; (ii) stimulating industrial innovation and competitiveness; (iii) enabling European citizens to reap the benefits of space applications and (iv) raising Europe's profile on the international stage in the area of space. In order to achieve those goals, Europe needs to **keep independent access to space.** This Communication sets out the priority actions designed to put those objectives into practice.

Priority actions for EU space policy: the Communication notes that the European Parliament in its Resolution of November 2008 approved the European Space Policy and urges that definite action be taken on the four proposed priorities – climate change, security, innovation and exploration. The fifth Space Council reaffirmed these as priority areas where specific action continues to be required.

Satellite navigation: the Galileo and EGNOS programmes: these two programmes form an integral part of the Europe 2020 strategy, as they are intended to push the EU to the forefront by developing innovative ways of exploiting satellite navigation, boosting economic activity in the market further downstream, creating new business opportunities, facilitating the provision of humanitarian aid and enhancing the wellbeing of Europe's citizens (by making transport safer, increasing civil protection and developing social services for the elderly and the disabled, to give but a few examples). The benefits of these programmes for the EU cut across all sectors of the economy, such as transport, telecommunications, the environment and security. The GNSS applications markets are growing rapidly, and their annual turnover worldwide is expected to reach around EUR 240 billion by 2020. Moreover, as a result of the advantages of Galileo and EGNOS compared with the other competing systems, they are expected to generate economic and social benefits worth around EUR 60-90 billion over the next 20 years. Later in the year, the Commission will draft a proposal for legislation aimed at adapting the institutional framework that covers the Galileo and EGNOS programmes to take account of the guidelines put forward by the European Parliament and the Council.

The GMES Programme: the GMES programme plays a vital role in monitoring the sea, land and atmospheric environment, aiming to facilitate better understanding of the European and global environments as a basis for policy. It will help underpin a sustainable use of resources as well as providing better information on climate change. Regulation (EEC) No 911/2010 governing the initial operations of the GMES programme 2011-2013 was adopted in 2010 by the European Parliament and the Council. The current priority is to ensure that the programme is implemented quickly and effectively, in partnership with the Member States, and that it is fully operational by 2014.

Secure space to achieve security and defence objectives: the seventh meeting of the Space Council in November 2010 recommended that within the GMES programme, additional consideration should be given on how to meet the specific needs of security policies and the services dedicated notably to maritime surveillance, border control and support for EU external actions.

The S (Security) component of the GMES programme must therefore be enhanced. Discussions are taking place to analyse how new developments affecting space technologies can contribute to effective solutions for areas such as monitoring borders, support for the EU's external action, maritime surveillance, complex emergencies, humanitarian aid and civil protection.

Furthermore, in 2008, the fifth Space Council meeting confirmed that the Union needs to play an active role in the implementation of the Space Situational Awareness (SSA) system and its governance mechanisms. Implementing this system involves gathering existing resources, making good any shortfalls and maintaining and operating the system. The SSA system should be organised according to a structure, yet to be defined, that would take account of the level and extent of participation of each Member State and of the other bodies involved, depending on the missions to be accomplished and constraints to be respected.

Space Exploration: active involvement by the EU in this area would enable it to establish a closer link between space exploration and social and economic challenges by merging the interests of the different Member States and ensuring that internal resources are used effectively. There is a political dimension to space exploration that goes beyond the issues inherent in research and development. The Union could also explore options to work with the ISS, ensuring that all Member States participate in it. The EU's independent access to space also means increased European capability to pursue independent missions from Europe's spaceport in Kourou.

Furthermore, a high-level international platform should be set up in order to identify the areas of space exploration open to international cooperation, to strengthen the political dimension of international discussions on space exploration and to enhance cooperation synergies with non-Member States; in short, a platform enabling the EU to coordinate the European space effort.

Space industry policy: the space industry is a key sector given society's increasing dependence on space infrastructure and applications for both civilian and military use. In the space industry, there is a high degree of concentration but few SMEs. In Europe, in common with other space powers, the space sector is highly reliant on public procurement, and has to contend with increased competition on the world market. The Commission believes that it is vital to draw up quickly a space industry policy that fully reflects the specific needs of each sub-sector. The main objectives of such a policy would be the steady, balanced development of the industrial base as a whole, including SMEs, greater competitiveness on the world stage, non-dependence for strategic sub-sectors such as launching, which require special attention, and the development of the market for space products and services.

Research and innovation: space policy can make a decisive contribution to making the Innovation Union a reality. Mobilising innovation support mechanisms will make it possible to improve developing infrastructure by boosting the market for applications and services derived from the Galileo/EGNOS and GMES programmes, as well as for the telecommunications sector. In turn, the setting of ambitious space objectives will stimulate innovation.

Telecommunications satellites: in order to maintain Europe's lead in satellite communication technologies, research must be carried out at European level, given the spin-offs it can create for other application sectors. The availability of the appropriate radio spectrum will be necessary to ensure that satellite communications and space infrastructure help achieve the European Digital Agenda and EU space policy objectives

International dimension: the EU, in close collaboration with the ESA, will continue to strengthen its "space dialogues" with its strategic partners – i.e. the United States and Russia – with a view to increasing cooperation. It will also propose that space dialogues, the scope and objectives of which will be set out in appropriate bilateral arrangements, be established with other existing and emerging space powers, in

particular China. The EU will seek constructive solutions to issues of cooperation and sharing open frequencies in the field of satellite navigation

Governance: the communication discusses the importance of strengthening cooperation with Member States as well as developing relations with ESA. The Commission is looking into the possibility of presenting a proposal for a **space programme in 2011**.