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Session 3: Space: A tool for crisis prevention and management

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Today we live in a globalised world of societies and nations characterised by intertwined economies, trade commitments and international security agreements. Mutual dependencies are more important than ever before. Many of the pressing problems - from terrorism to climate change to the demand for energy - are global in nature. Countries must be prepared to address a wide variety of security problems that might arise with almost no warning.

Adaptive and flexible reaction capabilities require much more versatile and relevant intelligence and information capabilities.

In this context, Europe has become more sensitive to debates about the military and strategic uses of space, and space applications are increasingly mentioned as a necessary step for enhancing European security, whether in the military sense or as a way to increase the safety of populations confronted with natural disasters or catastrophes.

Space is recognised as a fundamental contribution to the Common Security and Defence Policy of the EU. The European Space Policy (ESP) already provides that the relevant actors in the security field in Europe need to better consider synergies between civil and military programmes. The Structured Dialogue, called for by the 2007 Space Council gathers all major institutional players concerned. This is the forum where these players can elaborate a clearer vision of what Europe can achieve in space for security taking into consideration the challenges of joining forces.

As a consequence, ESA is reforming itself to address security issues more boldly. ESA has long been considered, by habit surely, a 'civil' agency. Yet, if you read the ESA Convention, it does not define ESA as such. The only element that could clearly lead to this conclusion is the source of its financing: 99% is of a civil origin. Yet, nothing in the ESA Convention prohibits ESA from conducting military-funded programmes or for defence and security uses, as long as those programmes are undertaken for peaceful purposes. And the spectrum of activities opened by the Convention is extremely wide.

Today, in crisis management, several national, European and commercial space assets are used for Earth observation, satellite communications and navigation. However, all these programmes are frequently undertaken in isolation from one another, and usually aim at providing information at the strategic level but without providing the required capabilities and information on the ground for crisis management teams. Furthermore, there is a growing consciousness that the pooling of these space capabilities is both a political and a financial necessity. Finally, an increased responsiveness would be a clear added value and assets need to be better integrated to bring the right information to the right people, where they need it, in times of crisis. These ideas have been accepted by the 7th Space Council on 25 November 2010: "... it therefore INVITES the European Commission, the EU Council, assisted by EDA, together with Member States and ESA, to explore ways to support current and future capability needs for crisis management needs through cost-effective access to robust, secure and reactive space assets and services, taking full advantage of dual-use synergies as appropriate ...".

With this goal in mind., we at ESA have conducted several studies and published experts' reports to understand the needs of several security user and defence user communities. We have identified the need for improvement to be brought in the field of data collection and processing, data transmission capabilities and integrated tools combining Earth observation, telecommunication and navigation technologies.

We have initiated a number of concrete programmes, with a pragmatic user-driven or service-driven approach, and not with the usual technology push approach.

I will give you a few examples:

- We have launched the European Data Relay System programme which aims at the provision of relay services via geostationary satellites, precisely in view of improving the data transmission capabilities of Earth Observation sensors whilst improving their responsiveness. Moreover, this programme is developed in partnership with a private service provider Astrium.

- We have launched an initiative to define the scope of a satellite-based Automated Identification System that would complement the existing coastal devices in view of providing additional maritime surveillance information to a variety of European communities of users. This initiative is developed in cooperation with EMSA and may lead to the development of a hybrid satellite system - possibly made of non-homogeneous satellite components. The satellite-based infrastructure will then deliver data that eventually will be merged with different information from a variety of other sensors.

- More generally we have launched a programme named Integrated Applications Promotion programme which allows to assess the feasibility and set-up demonstrations of services in an approach where from the inception, the users and all the value chain actors are involved and financially contribute .

We believe that space-based assets, either existing or expected to be available by 2015, are capable of supporting some new security and emergency-response services. These services could reach a pre-operational or even operational status provided that a suitable

programmatic framework is set up and a partnership with the targeted user community is well established.

Therefore, all relevant stakeholders, whether they are public institutions or private companies, should join forces to overcome quickly the political hurdles and set up in a pragmatic manner the frameworks allowing the deployment of these first operational services.

Then, obviously in parallel to this user-driven, service-driven bottom-up approach, Europe must keep on developing the new space technologies.

Europe must keep on investing in the new technologies required for higher performance space assets, rethinking the whole space architecture allowing a better reactivity of the different space components in particular via a better use of space telecommunication and data relay capabilities, and promoting a better integration of these assets into larger systems to deliver the expected services to the end users.

We at ESA wish to keep on contributing to these investments.

I thank you for your attention.