

The 45th Session of the Committee on the Peaceful Uses of Outer Space

Vienna, June 5 - 14, 2002

Statement of the Delegation of Romania

Agenda item 3: General Exchange of Views

Mr. Chairman, Distinguished delegates,

Let me, Ambassador Raimundo Gonzales, to express the satisfaction for seeing you in the main chair of the Committee and to congratulate you for the excellent accomplishment of your difficult task during the last three years. I would also to take this opportunity to express my warm congratulations to Prof. Mazlan Othman, for the outstanding management of the permanent activities of the Office for Outer Space Affairs during her relatively short, but consistent and very active period of duty. Together with regrets for not having in the future the pleasure to accomplish together some important tasks of the Office generated by your distinguished personality, I would like to express my wishes of success in the unique enterprise you will involve in the next years. Be sure of our permanent trust and support in your difficult construction, and good luck.

Mr. Chairman and distinguished delegates,

Romania is committed to further develop peaceful space development in a joint effort with the wider international space community. I would like to recall that, since the previous session of the Subcommittee, the space activities in Romania continued to develop. Since July 2001, the Romanian Space Agency became the coordinator and contracting authority for the National Research and Development Programme on Space And Aeronautics. Designed for 2001-2005 on a multi-year budget basis, the first call for tenders happened in July 2001 and the new projects were started at the end of September 2001. The Programme includes the main directions:

- Space and aerospace policy and infrastructure;
- Space exploration;
- Space applications;
- Aerospace technology and spin-off.

The duration of the projects is between 3 and 5 years and more than 45 public and private groups are involved as main contractors.

In the field of Space and aerospace policy and infrastructure, I would like to mention the development of the Advanced Space and Aerospace Technology Park, to be established this year in Bucharest, as a consortium of several research, academic and industrial organizations. The inputs of the Park are: scientific and academic competence, existent high-technology infrastructure and venture capital. The presumed outputs consist in: high level skilled professionals, high technology products derived from space research and financial results to support new projects.

During this spring, the Program supported also the establishment of some Centers of Excellence in Space science and applications, in the fields of High-energy Astrophysics, Parallel computing and GRID, Complex fluids in microgravity, Precision agriculture and Space applications in medicine and health monitoring. The concept of Public-Private-Partnership is promoted in the establishment of the Centers and in the project management.

As for space exploration, during 2001 the Romanian scientists took part to the development of several international space missions, within the programmes of the European Space Agency (ESA)–missions PLANCK, SPORt, National Aeronautics and Space Administration (NASA), for the Alpha Magnetic Spectrometer, astrobiology, microgravity, NASDA - Japan, for life support in the ISS.

In the field of space applications, progresses were performed in precise applications making use Earth observation data, space communications and global navigation satellite systems. Among the ongoing projects, I would like to mention:

- Study for seismic risk assessment using space techniques, with a pilot study for the area of Bucharest,
- Space applications for disaster management - applications for floods, deforestation and land degradation
- Radar interferometer applications for the Black Sea coast
- Telemedicine pilot for diagnostic, clinical and educational applications

An outstanding development is the ADAM Project – cooperation between ROSA and the French Space Agency (CNES) in agro-modeling using space data for precision farming. Harvesting machines fully equipped with space technology, as GNSS and GIS, acted for the first time in Romania during the last summer agricultural campaign. The future challenge of the project is oriented directly to the farmers, in order to optimize the agricultural process. The farmer's input consists in data about the field's coordinates, plant culture characteristics, permanent soil characteristics, and agricultural practices. Based on Internet servers, crop models assimilate remote sensing data in order to give information in real time. The data delivered by the system consist in information during the phenological cycle, as water stress, mineral nutrition stress, wild plant infestation, and pest attack.

I would like to point out, Mr. Chairman, that precision farming is utilizing the complete set of space applications: optical and radar remote sensing imagery, navigation and positioning systems for data registration and agricultural machines navigation, satellite communications for meteorological data.

The project is also promoting the new concept of data mining – the multitude of optical and radar satellite data are gathered on a server to be opened for the scientific community during the next months. Since only a few days, the project is utilizing also data from the NASA multispectral sensor Hyperion and from the newly launched French satellite SPOT-5.

In the field of aerospace technology, the projects are oriented to small payloads and vehicles, as:

- Command, control and communications onboard system for light aerospace platforms;
- Applications of optimal control methods for atmospheric and orbital flight;
- Active flow control with synthetic jet actuators;
- Light Unmanned Aircraft Vehicle for monitoring and satellite remote sensing data complementarities;

I would like to emphasize, Mr. Chairman, the growing role of space science, technology and applications in more and more sectors and aspects of human life and development. In particular, I would like to mention the space science and technology contribution to the process of building the global information society and the relevance of space activities for regional, continental and global security.

Space activities generate valuable sources of data for the global information society. Space science - by means of astronomy, space experiments and deep space missions - and space applications generate a wide amount of precise data in a spectrum extending from the large scale Universe to the daily phenomena of our planet. In the same time, space applications are providing the infrastructure for the information society, by means of satellite communications, Earth observation, positioning and navigation systems and others.

Space systems together with the permanent developing information technology contribute to a qualitatively new concept of a global information and communication system. Internet, broadband mobile applications, GIS, GRID, distant learning, telemedicine, virtual manufacturing, e-commerce, and e-government become more and more essential elements of our permanent activity. Public authorities, private companies and citizens are sharing and building this summon of concepts and tools with visible results towards a better life on our planet – for both development and stability.

Mr. Chairman, with reference to the fourth point of the Agenda – ways and means of maintaining outer space for peaceful purposes, I would like to stress the role of wider international scientific and technical cooperation as a mechanism of stability.

Since the last Session of the Committee, Romania continued to strengthen the cooperation in the frame of the European Space Agency towards a better integration of its space research and industry capabilities in the European programmes, as for space science, microgravity, Earth observation, telecommunications, navigation and positioning, space engineering. Romania is also contributing directly to the European Commission Fifth Framework Programme. Project proposals are already in preparation for the next Framework Programme Six, which contains Aeronautics and Space as priority directions, in particular for the European initiatives Galileo and Global Monitoring for Environment and Security (GMES).

Agreements already concluded between the Romanian Space Agency and significant organizations, as NASA, the French Space Agency (CNES) and the Italian Space Agency (ASI) include projects directed to both science and direct applications of space technology as precision agriculture, environmental monitoring and telemedicine.

Romania gave also concerned attention to support for space-related applications in developing countries. Experts from ROSA, in cooperation with the Food and Agricultural Organization (FAO), assisted Azerbaijan in developing their own Land Information System. The Government of Angola benefited of consultancy given by ROSA for the organization of the events concerning the Total Solar Eclipse from June 2001. A new cooperation with FAO has been started since a few weeks for the utilization of satellite data in the more precise determination of the land use and land cover to support the agricultural reform in Romania.

Mr. Chairman, concerning the fifth item of the Agenda, the opinion of my delegation is that we should concentrate our efforts to contribute to an efficient follow-up of the UNISPACE III recommendations in taking into consideration the appropriate local and regional capabilities and needs. Romania has an outstanding interest in improving international and regional cooperation in space activities. In particular, we continue to give the full support to the initiative of the Network for Education and Research in Space Science and Technology for Central, Eastern and South Eastern Europe and we believe in an increasing contribution of this cooperation to the stability and the development of the region. At this point, Mr. Chairman, we declare our full support for the organization of an appropriate working group in the Committee, which would take into account the work of the Scientific and Technical Subcommittee on the matter.

Regarding agenda items six and seven, we would also like to express our satisfaction, Mr. Chairman, for the excellent work done by the Scientific and Technical and by the Legal Subcommittees during their last sessions, and we have the pleasure to congratulate the Chairmen of the Working Groups and the secretariat for their outstanding efforts in drafting the reports to the Committee.

With reference to the Agenda item eight, in our opinion, Mr. Chairman, most of the modern industrial and societal products contain spin-off benefits of space technology and it is more and more a quite extensive task to nominate and evaluate them. However, it would be important to distinguish and promote the newer spin-offs of the research and development activity, having as objectives to increase the awareness on the importance of space activities among users and decision-makers and to obtain the necessary support for developing and maintaining the longer-term space programmes.

Mr. Chairman, regarding Space and Society – agenda item nine – the Romanian delegation declares the full agreement with the need of action in promoting education in space science and engineering by both Government and private activities. As space is the widest multidisciplinary area of human activity, in the same time having one of the fastest rates of development, the need of professionals is rapidly growing. If education in space science and technology would not be not considered as a primarily goal of global space programmes, the lack of scientists and engineers could become a major impediments for future developments. In particular for the space faring and developing countries, if the best conditions of training and management of specialized human resources are not ensured at national and regional levels, the local capability - not only to develop, but also to benefit of space technology and applications - will decrease. The polarization of space professionals towards the few space-developed countries could have as side effect the reduction of the global space market. It is the opinion of my delegation that the Committee should consider appropriate recommendations to the Member States. It could be also important to develop international space missions and projects able to allow the direct participation of countries with lower space technology potential, as a mean for global capacity building.

I would like here to mention the development in common by the Romanian Space Agency and the European Space Agency of a software program dedicated for remote sensing education, starting from the secondary school level. This professional high-level software, developed mainly by experts of ROSA, is intended to offer tools for online electronic education. Capabilities as supervised and unsupervised classification, registration of images, filtering are included. The Romanian Space Agency had already developed a curriculum for a one-year academic term, and is offering this course, since the fall 2002, for the Network of Space Science & Technology Education & Research Institutions of Central-Eastern & South-Eastern Europe.

Mr. Chairman, my delegation will ask you for taking the floor during the specific items of the Agenda we might be able to be concerned.

Thank you, Mr. Chairman and distinguished delegates, for your attention.