Discussion on “Exploring space technologies for sustainable development and the benefits of international research collaboration in this context”

Statement submitted by

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Presently, the national strategy of Romania is built around the concept of 3S (Three S’s): the first S means Science and technology, the second S is represented by Services and the third S comes from Security.

The first S - Science and technology includes space exploration, space science and all research, development and industrial efforts to produce the launcher, spacecraft and specific space instruments.

Romania is participating to space exploration, in particular to the largest international cooperation programme in science and technology – the International Space Station, and since 2019 became member of the International Space Exploration Coordination Group (ISECG).

Space is a driver for development and the 2030 Agenda for Sustainable Development, within the United Nations, contains 17 Sustainable Development Goals (SDGs) where space technologies have an important role to play. Furthermore, the UN "Space2030 Agenda: space as a driver for sustainable development” is structured around four pillars that are complementary and mutually reinforcing: space economy, space society, space accessibility and space diplomacy. Romania is supporting the development of the Space2030 Agenda within the United Nations system, as Vice-chair of its Working Group, as we could see its development as a necessity due to the major contributions of space to the achievement of the Sustainable Development Goals.

The second S - Space services provided by infrastructures as GNSS and EO became operational at the user level, after a longer time of implementation, and today this became critical. Therefore, they need to be supported and upgraded for long term and the access to information and data granted, in the context for a wider and enhanced international cooperation. New technologies, as Artificial Intelligence and Quantum Communications are to improve the capability and resilience of space services.

The third S - Security - represents an important area of the space endeavor. Short and long term disaster management, space traffic management providing the security of space systems, in particular for the critical ones, space weather and planetary defense (NEO). Romania is an active participant in the ESA safety and security programme. The Romanian Space Agency is participating in the European SST consortium, offering operational optical information and soon radar capacity necessary for space traffic management and space debris measurements.

Romania is supporting the development of tools for the monitoring and protection of our planet. I mention the participation to the ESA mission ALTIUS which will measure both stratospheric ozone and other atmospheric trace gases such as nitrogen dioxide and aerosols that affect air quality. Another important
participation is the ESA - UK mission TRUTHS which will improve the capability to estimate radiative imbalance underlying climate change. The ground and airborne lidar instruments operational in Bucharest are measuring the aerosols content in the atmosphere. Since 2015 Romania is part of the Space Climate Observatory agreement.

Space Systems became critical infrastructures for our planet and have the potential to actively contribute to the achievement of all the Sustainable Development Goals.