

Committee on the Peaceful Uses of Outer Space
Scientific and Technical Subcommittee
Fifty-ninth session - Vienna, 7-18 February 2022

Statement of Italy on item 7. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment

Mr. Chair, distinguished delegates,

Among the space technologies, Remote sensing of the Earth remains the strongest tool in support of the activities devoted to the achievement of sustainable socio-economic development and certainly all those related to the management of the environment.

Italy has made its major investment in the field of Earth observation from space, financing and developing national programs that are proving to be relevant tools in supporting decision-making processes in different domains. Let me provide you with some recent information about them.

Only two weeks ago, on 1st February, another satellite of the Italian radar "CONstellation of small Satellites for Mediterranean basin Observation", the so-called COSMO-SkyMed constellation, has been successfully launched from Cape Canaveral, in the US. With it, the constellation reaches the number of six elements, four satellites of the first generation, still operational although they have exceeded their nominal life, and two of the second generation.

The second-generation satellites have been designed and built taking into consideration the long experience matured with the previous four satellites, and their design has undergone improvements under all aspects of the mission. Allow me to say that, today, the COSMO-SkyMed Second Generation satellites are state-of-the-art among the Earth observation systems based on the radar technology. They are capable of guaranteeing significant improvements in terms of performance, quality of images, efficacy of the services provided to civil and governmental users and higher operational life. The high agility of the system, combined with a generational leap in technological terms, allow a

significant expansion of the possible applications, particularly in the fields of risk management, disaster management support, environmental monitoring, management of natural resources.

Mr. Chair, distinguished delegates,

Allow me to recall that part of the data of the COSMO-SkyMed constellation are devoted to the international scientific community, through the so-called International Open Call, launched by the Italian Space Agency in 2015, with no expiry date so far. A technical presentation will be made tomorrow morning by an expert of the Italian Space Agency. I warmly invite delegations that are interested in getting more details on this initiative, and on how to apply, to join the relative session.

Mr. Chair, distinguished delegates,

Italy has also a new kind of Earth observation satellite, called PRISMA, which was launched 2019. PRISMA is a cutting-edge Earth observation system, equipped with electro-optical tools, which integrates a hyperspectral sensor with a medium-resolution panchromatic camera, sensitive to all colours. This means that the satellite is not only able to distinguish the geometric characteristics of the observed objects, but also the chemical-physical composition of the surface of the Earth, and this because each material has its own spectral signature, an actual fingerprint, which is a unique combination of colours, known as spectral bands. Placed at an altitude of 615 km, PRISMA analyses such fingerprint thanks to an electro-optical equipment made up of an imaging spectrometer, capable of acquiring visible and near-infrared, as well as short-wave infrared products, with a 30-meter spatial resolution, and a panchromatic camera with a 5-meter spatial resolution.

PRISMA is the first of its kind in Europe. It allows, for instance, to identify minerals in rocks and soils, to analyse vegetation types and conditions, and to detect pollutants in water and air.

I would like to remind delegations that PRISMA data are open and free of charge and available for the international community by just accessing the PRISMA portal and registering.

Mr. Chair, distinguished delegates,

Let me conclude by stressing that Italy remains deeply committed to raising the awareness on the benefits of the integration of Earth-observation data in the fields of Earth sciences, environmental monitoring, management of natural resources, disaster management support and risk management, for much more informed analysis and decisions.

I thank you very much for the attention.