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MEDIA INFORMATION

# Expo 2020 Dubai: Leonardo contribution to the Global Goals week

**Rome, 10 March 2021** – With a speech titled "*The Space Technologies challenge to reconcile necessities for the Planet's future: sustainability and development",* hosted within the programme of the Italian Pavilion at Expo 2020 Dubai, Luigi Pasquali – Coordinator of Leonardo's space activities – explained the contribution that space technologies can offer towards a more sustainable world. The speech is part of the pre-Expo digital talks dedicated to the UN "Global Goals".

"*The Sustainable Development Goals of the UN 2030 Agenda give very clear indications: we have less than ten years to tackle the issue of climate change, and space technologies can offer an extensive contribution to manage this challenge*", said Pasquali. Today, data from Earth observation satellites are at the basis of **monitoring climate change** and for the analyses related to desertification, rise in sea levels, or pollution. Satellites such as **PRISMA** (owned by the Italian Space Agency - ASI) which is equipped with the most powerful hyperspectral sensor in the world and made by Leonardo, or the Italian constellation **COSMO-SkyMed** (of ASI and the Italian Ministry of Defense) and the Sentinels of the European programme **Copernicus**. These satellites already observe phenomena, such as the melting and displacement of glaciers, oil spills, water and land consumption, illegal deforestation, but also monitor the state of the **cultural and artistic heritage**.

"*For instance, the satellite services offered for **precision farming** allow to monitor the use of critical resources, to save water and reduce the consumption of fertilizers and monitor, and therefore respect, the phenological cycle of plants*", continued Pasquali. In fact, satellite technologies can optimize the management and quality of crops, allowing an increase of up to 20% in crop yields and a reduction between 40 and 60% in the use of water resources.

**Smart Cities** can also benefit from space technology. Pasquali commented that: "*satellites can support the creation of increasingly resilient and sustainable cities*", for example through the monitoring of traffic flows, critical infrastructures, and new urban settlements.

Satellites provide a large amount of data destined to grow with the advent of numerous private players in the sector and the exponential growth of satellite constellations. "*For climate change, satellite technology together with artificial intelligence and big data analytics can offer accurate information which is useful in identifying the most suitable measures to limit the problem and, successively, control and monitor the effects of the measures adopted*", explained Pasquali. It will even be possible to create a digital twin of the territory, allowing us to prevent some of these phenomena. In order to transform the acquired data into useful information, Leonardo, through e-GEOS (Telespazio 80%, ASI 20%), uses proprietary algorithms, artificial intelligence and big data analytics techniques, capable of processing satellite data and integrating them with those from other sensors and open sources, such as social media.

"*At Leonardo, sustainability is a key development factor to generate shared value that guides choices towards the future, in line with the strategic plan Be Tomorrow - Leonardo 2030. We believe that space technologies, in particular, can offer a solid contribution to face the greatest future challenges: supporting growth, development and safety, for the benefit of people and the planet, for the prosperity of all*", concluded Pasquali.