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**Statement Item 10: Space and Water.**

Mr. Chair, Distinguished Delegates,

Italy recognizes the crucial role of space technologies in the sustainable management of water resources. Satellite data provide essential tools for monitoring water availability, detecting changes in rivers, lakes, and aquifers, and managing extreme events such as droughts and floods. They also support agriculture, help control water quality, and assist in maritime traffic monitoring and integrated water basin planning.

The Italian Space Agency (ASI) is actively working in this domain through its **downstream programme**, which supports the development of space-based applications for societal benefit. One key line of activity focuses on **agriculture and sustainable water use**. Several pilot projects are underway to demonstrate the pre-operational value of satellite-derived products, developed in close collaboration with the scientific community.

An example is the **TETI project**, implemented with the National Research Council (CNR), the Council for Agricultural Research (CREA), the University and Polytechnic of Bari, and the Capitanata Reclamation Consortium. Operating in the Foggia irrigation district, TETI combines satellite data and water balance models to develop a **Spatial Decision Support System**. This system helps farmers, water authorities, and irrigation consortia to optimize water use and increase resilience in the agricultural sector.

Looking ahead, ASI is preparing a new Earth observation mission called **LUCE**, which will significantly advance our understanding of the Earth system. LUCE will carry the world's first spaceborne **Raman-elastic-fluorescence lidar**, providing new insights into the roles of aerosols and clouds in climate, weather, and air quality.

Importantly, LUCE will also deliver **unprecedented ocean profiling**, offering new data on marine biological productivity—such as phytoplankton and zooplankton—with implications for fisheries and the global carbon cycle. The mission will also provide new estimates of **snow depth and related water availability**, as well as key indicators of plant health.

These initiatives reflect Italy's commitment to leveraging space technologies to address water-related challenges, promote sustainability, and support evidence-based decision-making at national and international levels.

Thank you.