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ITALY'S LEADERSHIP IN LONG-TERM SUSTAINABILITY OF OUTER SPACE: POLICY,  
INNOVATION, INTERNATIONAL COOPERATION AND CAPACITY-BUILDING FOR EMERGING  
SPACE NATIONS

**Abstract**

As the space environment becomes increasingly congested with satellites and debris, dedicated policies, responsible governance, and international cooperation are more critical than ever. Without sustainable practices, risks such as orbital collisions and environmental-related risks could jeopardize future space endeavours. The long-term sustainability of outer space activities is a global priority and a collective commitment, bringing together both traditional and emerging space nations to ensure that space remains accessible and beneficial to all of humanity. Italy, through the Italian Space Agency, champions international cooperation as a key pillar for space sustainability, advocating for joint projects, technology transfer, and education programs to empower developing nations. This vision is reflected in Italy's active support for the implementation of Agenda Space 2030, which strengthens international cooperation and space sustainability, and in ASI's leading role in advancing the LTS guidelines adopted by COPUOS in 2019, with a focus on international collaboration, capacity-building, and raising awareness, proactively supporting emerging space countries, with notable examples such as ASI's collaboration with Sapienza University of Rome, to promote educational initiatives in Kenya, focusing on legal and policy frameworks for sustainable space activities. Italy's engagement in space sustainability has further resulted in the upcoming national space legislation, establishing a clear regulatory framework for sustainable space activities, integrating stringent debris mitigation measures and environmental impact assessments. Aligning with EU commitments, the law mandates sustainability as a core requirement for space activity authorization, assessing the environmental footprint of space objects throughout their entire lifecycle—from design and production to operation and end-of-life. Following this cooperative approach, ASI also has a solid tradition in space debris monitoring and mitigation, participating in key initiatives such as the EU Space Surveillance and Tracking framework, ESA's Space Safety Programme, and the Inter-Agency Space Debris Coordination Committee. Nationally, ASI has invested in scientific research and advanced observational technologies, including a Space Debris Laser Station and the Fly-Eye telescope network, enhancing space situational awareness and reducing collision risks. These efforts, funded by the EU Recovery Fund (Next Generation EU), reinforce Italy's commitment to space safety and sustainability. The paper explores Italy's diplomacy and legal contributions, demonstrating how proactive leadership and revolutionary capacity-building strategies can secure a sustainable future for outer space activities. By harmonizing national legislation with international best practices and fostering global partnerships, Italy exemplifies a holistic approach to long-term space sustainability, aiming at preserving space for the durable well-being of the next generations.