Statement by the Delegation of the Islamic Republic of Iran

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Agenda Item 5: Space Debris

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Madam Chair, Distinguished Delegates,

We stand at a critical juncture in the space age, where space technologies have become integral to nearly all aspects of human life**.** Yet, despite these advancements, ensuring safe and sustainable space activities is increasingly challenging. Among the most pressing concerns is the **continuous generation and accumulation of space debris**, which poses a significant threat to the global space community.

Space debris not only endangers current space operations but also jeopardizes the ability of future generations to access and benefit from space resources. This contradicts the fundamental principle of long-term sustainability in outer space activities.

While experts generally agree that the present levels of space debris remain manageable, they caution that, at the current rate of accumulation, many orbital regions could become unusable within decades.

The deployment of **mega-constellations of small satellites** introduces new risks, and some projections indicate that the total volume of space debris could double every decade**.**

A key issue requiring urgent attention is that a small number of spacefaring nations have been responsible for generating the majority of space debris. These states must assume **primary responsibility** for addressing the issue through:

- **Advanced research and development** of mitigation and remediation technologies,
- **Debris mitigation and removal operations,**
- **Investments in sustainable practices,**

- **Financial and technical support** for global debris management efforts.

At the same time, it is crucial to assess whether **developing countries** possess the necessary financial and technical capabilities—or even the incentive—to actively participate in debris mitigation and removal. Without **substantial incentives**, the contribution of emerging space actors is likely to be minimal. To foster broader engagement, leading spacefaring nations should facilitate the sharing of experiences, knowledge, space situational awareness (SSA) data, enabling technologies, and critical infrastructure**.**

Although space debris has not yet rendered space activities impossible, it has significantly **increased operational costs**. The necessity for **frequent collision avoidance maneuvers** places additional burdens on spacecraft design, operations, and long-term mission planning.

Moreover, even when satellites are maneuverable, executing an avoidance maneuver can be time-consuming and operationally complex. Some debris objects are too large to remove easily**,** while others are too small to track but large enough to cause serious damage**.**

Efforts in **Active Debris Removal (ADR)** must be guided rigorously in a way to respect safety and prevents unintended collisions and secondary fragmentation.

In this regard, critical factors to consider include:

- **Ensuring ADR operations do not create additional hazards**
- **Addressing ownership rights and obtaining necessary permissions for debris removal**
- **Prioritizing the removal of the most hazardous debris**
- **Assessing post-mission risks associated with ADR interventions**

Scientific research must identify the most effective and economically viable removal technologies for different types of debris. Additionally, the current asymmetry in access to tracking infrastructure is unacceptable. No single nation should monopolize this critical capability solely for the protection of its assets. **Tracking infrastructure and SSA data**

must be accessible to all space actors to enable coordinated and effective debris management.

In this regard, the **United Nations Office for Outer Space Affairs (UNOOSA)** can play a pivotal role in establishing a global cooperative platform for enhancing international cooperation to address space debris.

Madam Chair,

Finally, as space activities expand beyond Earth's orbit, the issue of **debris accumulation around other celestial bodies**, particularly the **Moon**, must be proactively addressed. Developing comprehensive regulatory frameworks for sustainable operations in cislunar space and beyond is imperative.

Only through **constructive, multilateral cooperation** can we effectively mitigate the space debris problem. Our collective efforts must aim to preserve outer space as a sustainable domain for all current and future generations and to advance the broader goals of long-term space sustainability.

Thank you.