Agenda Item No. 10: General Exchange of Information and Views on Legal Mechanisms relating to Space Debris Mitigation and Remediation measures, taking into account the work of the Scientific and Technical subcommittee

Mr Chair and distinguished delegates,

India is a signatory to all major treaties for outer space and believes that outer space should be preserved for continued, unhindered utilisation and exploration of humankind. Indian space programme is envisioned to ensure that the benefits of space-based technologies permeate all strata of the society.

Mr Chair,

India has been regularly submitting pre-launch notification of launch vehicle missions and has been reporting its annual launch plans. The practice of registering all Indian objects is followed with regular submission to UN.

As a responsible space agency, the Indian Space Research Organisation follows UN and IADC guidelines for space debris mitigation as well as UN adopted guidelines on Long Term Sustainability of Outer Space Activities. Regular COLision Avoidance (COLA) assessments are carried out to ensure safe, collision-free lift –off times within designated launch windows for all its launch vehicle missions. Any collision risk among injected satellites immediately after the separation from Launch vehicle is avoided by properly designing the separation sequence. Continual close-approach analyses are performed for all operational spacecraft to mitigate any collision risk with catalogued space objects.

For instance, the recent exercises of effecting uncontrolled re-entry of Cartsoat – 2, controlled re-entry of Meghatropiques 1 and de-orbiting of upper stages of PSLV C56 & PSLV-C58 to significantly reduce their orbital lifetime, exemplify the proactive efforts to improve compliance with mitigation guidelines. Recognizing the crucial role of Space Situational Awareness for ensuing safe and sustainable space operations, India has undertaken measures for indigenous capacity building for tracking and monitoring of space objects. Through the ISRO System for Safe and Sustainable Space Operations Management (IS^4OM), concerted efforts are underway for space debris related studies.

While encouraging the participation of private entities to bolster the Indian space sector, Indian Space Policy 2023 addresses the overarching requirements for safe and sustainable operations. The Indian National Space Promotion and Authorization Centre (IN-SPACe) engages with emerging space actors to ensure compliance with space debris mitigation guidelines, which is an integral part of authorisation of space activities.

Mr Chair,

With progressively easier access to space and a rapidly diversifying scope of activities, outer space is becoming more congested than ever. The sharp increase in the number of space objects due to growing launch traffic and deployment of multiple large constellations of satellites in Low

Earth Orbits stem from a growing trend towards more disaggregated, resilient space systems comprising numerous, smaller satellites. Apart from the consequent increase in collision risks, the frequent re-entry of rocket bodies and defunct satellites re-entering the atmosphere at end-of-life has detrimental effects on upper atmosphere, apart from generating increased ground casualty risks.

With the deployment of multiple large constellations, as expected in the near future, active satellites will dominate the object population in the lower Earth orbits. Therefore, safety of spaceflight now entails greater coordination and collaboration among the operators and stricter adherence to mitigation guidelines.

As indicated by several technical studies, mitigation alone would be insufficient to curtail the growth of space debris. More proactive measures like remediation with active debris removal (ADR) and on-orbit servicing are imperative to sustain safe space-based operations. However, in addition to the associated technological challenges, there are several legal issues, such as establishing ownership of a defunct object, creation of fresh debris due to operational issue, etc., which need to be addressed. Therefore, it is of paramount importance that any remediation activity be performed with adequate transparency and prior notifications to eliminate any room for misgivings.

Mr Chair,

India recognizes that self-regulation and voluntary adoption of the prevalent international guidelines can be a good starting point towards arriving at future legally binding mechanisms for mitigation and remediation of space debris. In this context, India commends the technical contributions of STSC of the UN-COPUOS which provide the foundational inputs. India also believes that Legal Subcommittee of UN-COPUOS is the ideal global forum where the member states can deliberate and exchange views to evolve instruments to tackle the growing menace of space debris. Such instruments are also crucial to encourage emergent nations to embrace space technology and harness its vast potential for capacity building.

India looks forward to constructive deliberations and collaborative efforts of the Legal Subcommittee of UNCOPUOS to preserve the space environment for generations to come.

Thank you Mr. Chair and distinguished delegates.