

**ADVANCE UNEDITED**

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**Open-ended working group on reducing space threats through norms, rules and principles of responsible behaviours  
Geneva, 12–16 September 2022**

Agenda item 6 (b)

**Consideration of issues contained in paragraph 5 of General Assembly resolution A/RES/76/231:****To consider current and future threats by States to space systems, and actions, activities and omissions that could be considered irresponsible****Chair's Summary of discussions under agenda item 6 (b)****Prepared under the responsibility of Chair and without prejudice to the position of any State**

1. Delegations exchanged views on their threat perceptions with respect to current and future threats by States to space systems as well as on actions, activities and omissions that could be considered irresponsible. This included threats that could include kinetic and non-kinetic means to deny, disrupt, degrade, damage or destroy any segment of a space system along four vectors: earth-to-space, space-to-space, space-to-earth and earth-to-earth. It was noted that such effects could be either reversible or irreversible. The view was also expressed that the classification of threats by vector was artificial and unhelpful.
2. Many delegations expressed specific concerns regarding threats to critical national security infrastructure in outer space. A number of delegations considered that certain national space strategies, policies and doctrines could also be perceived as a threat, such as declaring space to be a warfighting domain. In this regard, it was suggested that States affirm that a war in space cannot be won and must never be fought. It was emphasized that threat perceptions could be subjective and that this was regarded as a reason why discussion on these matters is important.
3. Many delegations emphasized that the development of norms, rules or principles should not impede the exploration and use of outer space for peaceful purposes, the development of beneficial new technologies or the economic development of emerging space nations. Many delegations also emphasized that new regulations regarding outer space activities should not hamper the right of all nations to equitable access to the benefits derived from the peaceful uses of outer space.
4. Regarding current and future earth-to-space threats by States to space systems, many delegations expressed concern regarding the use or testing of direct-ascent anti-satellite weapons. In this connection, many delegations expressed concern with the deliberate destruction of space objects that could result in the creation of long-lasting space debris, which could in turn have a widespread and negative impact on the space environment and on the activities of third parties. The view was also expressed that space debris was addressed in other fora, including the Committee on the Peaceful Uses of Outer Space, and that overlap in this regard should be avoided. Many delegations also expressed concern at non-kinetic threats, which could have wide-ranging and unpredictable effects, and which include directed energy weapons such as lasers, electronic warfare and other intentional acts of harmful interference.

5. Many delegations welcomed commitments by several States not to conduct destructive direct-ascent anti-satellite missile tests. The view was also expressed that such a commitment, while welcomed, added little value. Concerns were also expressed regarding the deployment of missile defense capabilities that could also function as direct-ascent anti-satellite weapons.

6. Regarding current and future space-to-space threats by States to space systems, which can include co-orbital kinetic or non-kinetic anti-satellite capabilities as well as uncoordinated close approaches. It was also suggested that the space assets of emerging space nations were particularly vulnerable to space-to-space threats, due to their lack of access to space situational awareness data and to lower manoeuvrability of their space objects.

7. Delegations discussed rendezvous and proximity operations, including for on-orbit servicing and active debris removal. It was noted that while such technologies could be used to enhance the sustainability of outer space, they could also be used in a hostile manner. Many delegations noted that rendezvous and proximity operations conducted without sufficient transparency, notification and consent could constitute a threat. It was suggested that capabilities needed for on-orbit servicing and active debris removal were inherently dual use and that standards for such operations be developed.

8. Regarding current and future space-to-earth threats by States to space systems, it was noted that nuclear weapons had already been addressed by various international instruments, including the Outer Space Treaty. Many delegations expressed concern at the possibility of the use of weapons in outer space to strike terrestrial targets, including on the ground, in the air or at sea. In this context, a ban on the deployment and use of such weapons was suggested, and the draft Treaty on Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects was recalled. The view was also expressed that the deployment of such systems would be infeasible, impractical and uneconomical and therefore this should not be regarded as a high priority. The threat posed by uncontrolled launches or re-entries was emphasized.

9. Many delegations welcomed the commitments of over 20 States not to be the first to place weapons in outer space. A number of delegations considered that such a commitment constituted an important confidence-building measure.

10. Regarding current and future earth-to-earth threats by States to space systems, it was noted that these could include cyberattacks, physical attacks on ground stations, jamming and spoofing. It was noted that attacks on control centres were within the capability of a larger group of actors than direct attacks on space objects. The view was also expressed that land-based armed conflict was already regulated by a comprehensive set of norms. A number of delegations expressed particular concerns regarding cyberattacks, which could include sending malicious commands to a space object, leading to a loss of data or control, render a satellite unmanoeuvrability and result in the creation of space debris. It was also noted that cyber threats were being discussed in other United Nations fora. One principle that could be applied from the existing normative framework is that a State should not intentionally damage critical infrastructure. The view was expressed that the jamming of global navigation satellite systems could also constitute a threat.

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