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Open-ended working group on reducing space threats through norms, rules and principles of responsible behaviours

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Item 6(c) of the agenda

Consideration of issues contained in paragraph 5 of General Assembly resolution A/RES/76/231

To make recommendations on possible norms, rules and principles of responsible behaviours relating to threats by States to space systems, including, as appropriate, how they would contribute to the negotiation of legally binding instruments, including on the prevention of an arms race in outer space

Recommendations on possible norms, rules and principles of responsible behaviors relating to threats by States to space systems

Submitted by the Federal Republic of Germany and the Republic of the Philippines

1. Principles of responsible behaviour support the efforts in the context of preventing an arms race in outer space (PAROS). The aim of defining principles for responsible behaviour in space is to enhance the security of space activities, to prevent misunderstandings, misperceptions, and miscalculations and to reduce the risk of unintended escalation. Intended as initial steps, they reflect the expectations of the international community to pragmatically find ways to increase space security.
2. Safety and security are equally important for preserving outer space as a peaceful, safe, stable, secure, and sustainable environment for the benefit of humankind. Whereas best practices of safety such as the adherence to the Guidelines for the Long-Term Sustainability of Outer Space Activities (LTS Guidelines) are a baseline requirement for the use of and free access to space, in times of geopolitical tensions principles of responsible state behaviours must go beyond and also address the security aspects. Defining these principles is crucial for establishing a common understanding against which to contrast state activities and how to respond to actions considered to be irresponsible.
3. These principles of responsible behaviours are distinct from and without prejudice to binding norms of international law. In this context, the concept of due regard enshrined in Article IX of the legally binding 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (Outer Space Treaty) is most relevant. The duty of due regard does not constitute a blanket limit on state conduct, but it also does not permit states to merely note other states' rights and still do as they wish.
4. Its application rather depends upon the nature of the rights and obligations involved, their importance, the extent of the anticipated impairment, the nature and importance of the activities contemplated, and the availability of alternative approaches. In this regard, the rules of responsible behaviours may inform state-practice on the application of existing space law.
5. In the second session of this Open-Ended Working Group (OEWG), the Federal Republic of Germany and the Republic of the Philippines presented a working paper

containing an analysis of threats and security risks in outer space. Building on this paper as well as on the feedback received, this joint working paper of Federal Republic of Germany and the Republic of the Philippines seeks to present a non-prescriptive initial set of principles and proposals which the two countries believe can effectively address and mitigate the threats and security risks identified before.

I. Principles of responsible behaviours

6. As an initial step, it is essential to identify and discuss basic principles that can constitute the backbone of responsible behaviours in outer space. They are useful for determining the scope of later norms and paving the way for their acceptance in principle. These considerations apply in times of peace only, since international humanitarian law (IHL) applies in times of armed conflict.

- **Not conducting destructive direct-ascent ASAT testing:** States should commit not to conduct destructive, direct-ascent anti-satellite missile testing. Experience has shown that such tests result in the creation of a large amount of space debris that put at risks the crewed and uncrewed space systems of other states. The adoption of United Nations General Assembly Resolution A/C.1/77/L.62 has shown large support for a universal commitment not to conduct destructive direct-ascent anti-satellite missile tests.
- **No testing and usage of kinetic counter-space capabilities:** States should not test or use or threaten to use co-orbital kinetic counter-space capabilities against satellites and other space systems. This includes but is not limited to satellites deliberately colliding with another satellite or physically forcing another satellite to disrupt its normal operation or to manoeuvre into safety-inflicting damage with robotic arms to other satellites, ejecting projectiles or similar objects targeting other satellites within its range.
- **Conducting rendezvous (docking) operations requires consent:** States should not conduct or knowingly-support rendezvous (docking) operations with space systems of another State unless the affected State has given prior consent. States should submit a request for consent to the affected State in advance of such an operation. Notifications should include at least the planned timing, trajectory and objective of the operation.
- **Considerations regarding conducting proximity operations:** States should not conduct or knowingly-support proximity operations which impair the safe operation of space systems of another State. States should aim for the greatest possible transparency and avoid ambiguity in their operations that could be misperceived or misinterpreted by the other State as a threat.
- **No interference with other space systems:** States should not conduct or knowingly support activities (e.g. through cyber, electromagnetic or laser interference) that lead to a loss of operational control over or irreversible damage or permanent loss of space systems of another State.
- **No interference with space-based critical services:** States should not conduct or knowingly support activities (e.g. through cyber, electromagnetic or laser interference) that impair the provision of space-based services critical to the public and severely affect or even harm civilians. In particular, they should not disrupt or impair the provision of Positioning, Navigation and Timing (PNT) signals from space. States should not impair the provision of space-based services for strategic stability and early warning.
- **Considerations regarding launching of missiles and space launch vehicles:** States should conduct launches of missiles and space launch vehicles in a way that ensures to the greatest extent possible and feasible maximum the safe and secure operation of satellites and crewed space stations and other space systems. When launching space launch vehicles, the launching State should issue pre-launch notifications and conduct prior coordination with potentially affected countries including those identified as

potential drop zones of re-entering debris (e.g. rocket stages) from the launch that pose a potential risk of injury to people, damage, or destruction to property. They are further strongly encouraged to adhere to the Hague Code of Conduct Against Ballistic Missile Proliferation (HCoC), which encourages transparency in the conduct of missile launches.

II. Measures for trust and confidence building

7. States should always adhere to the highest standards of good governance in the obligation to preserve a peaceful use of space. Such standards should include measures of transparency, responsibility and accountability. The principles of responsible behaviours identified earlier need to be operationalized by existing and future measures for trust and confidence building.

8. For this, the potential of the existing conventions and regimes, above all the Outer Space Treaty, the UN Register on Objects Launched into Outer Space, the Hague Code of Conduct Against Ballistic Missile Proliferation (HCoC) and the Missile Technology Control Regime (MTCR), should be used and further strengthened. Keeping in mind the transparency and confidence-building measures (TCBMs) contained in the Report of the Group of Governmental Experts (GGE) on Transparency and Confidence Building Measures in Outer Space Activities (United Nations General Assembly A/68/189), further measures might include:

- **Transparency and information-sharing:** Without prejudice to their core national security interests, States should seek to make national space security policies, strategies, and doctrine publicly available. States should share open-access space situational awareness data and catalogues to the greatest extent possible, as their data provide the basis for observing space activities of other States and for identifying patterns that may not be consistent with principles of responsible behaviour.
- **Common mechanism for de-confliction:** States should establish a common mechanism of de-confliction with national contact-points which allows to quickly contact and coordinate with another State and to clarify and resolve issues of security and safety. This de-confliction measure will reduce the risk of misperceptions and miscalculations among States.
- **Network for communication and notification between States:** States should establish permanent communication channels with other States regarding the conduct of their outer space activities that could have implications on the interests of other States. They should issue notifications that are timely and contain sufficient information about their relevant space-related activities through these channels.
- **Collecting, establishing, and making use of best practices for transparency:** Best practices from current space operations, including those from previous United Nations and other international fora and private-sector space actors, as well as from other domains with certain similarities such as cyber or maritime security, should be collected and discussed with a focus on its implications on space security.
- **Involvement of national private-sector space actors:** Private-sector space actors become increasingly important in exploring and using outer space. States should thus adopt and implement appropriate measures, including by establishing a regulatory and supervisory framework, to ensure that their national private-sector space actors follow internationally agreed principles of responsible behaviour. Enforcement measures are to be implemented.