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Open-ended working group on reducing space threats through norms, rules and principles of responsible behaviours
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Developing norms for enhanced Security in Outer Space: Process and Priorities[1]

Submitted by Project Ploughshares[2]

I. Why norms?

1. The Open-ended Working Group (OEWG) aims to make recommendations on possible norms, rules, and principles of responsible behaviours relating to threats by States to space systems.

2. Norms refer to standards of acceptable – and expected – behaviour that are often rooted in, and reflective of, shared values and principles. Norms inform the ways in which we interact with one another, the behaviours that we observe, and the processes that we follow. As such, norms, and the core values on which they are based, are at the centre of collective governance and are a necessary starting point for progress on efforts to prevent an arms race in outer space (PAROS).

3. While the collective effort to mitigate threats in space through norms of behaviour must include a shared understanding and appreciation of the types of activities and behaviours that States find threatening, mitigating these concerns requires a shared commitment to principles, norms, and rules of behaviour that nurture reassurance.

4. Norms provide many important benefits in a security-related context.

- Norms help to build trust and nurture common understandings and interpretations of events and behaviours among diverse space actors, reducing the opportunity for misperception and unintentional escalation of conflict.

[1] This document reflects research and analysis conducted by Project Ploughshares Senior Researcher Dr. Jessica West and Gilles Doucet of Spectrum Space Security on how the existing normative framework in outer space can serve as a basis for informing the development of additional norms of behaviour for security-related activities. Insights draw from the detailed coding of 90 space governance documents, expert feedback from an online survey, and a global series of workshops. This research was funded by the Mobilizing Insights in Defence and Security (MINDS) program of the Canadian Department of National Defence.

[2] Project Ploughshares is a Canadian nongovernmental peace and security research institute with 20 years of experience in research, policy development, and international engagement related to the peaceful use of outer space.

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- Norms can also help to limit potentially harmful activities and promote behaviours that contribute to long-term and mutual security in outer space.
- Norms can provide the basis for additional security-related and arms control measures.

5. Further details about the relationships that connect norms, transparency and confidence-building measures (TCBMs), and legally binding arms control agreements can be found in the paper published by UNIDIR entitled Norms for Outer Space: A Small Step or a Giant Leap for Policymaking?

6. The following are recommendations on how to approach the development of new security-related norms in outer space, as well as possible priorities.

II. Process

Nurture an inclusive approach to norm-building

7. While norms can arise spontaneously through the actions and behaviours of States, a deliberate effort to develop norms for collective security requires an inclusive process that nurtures and expands cooperation and understanding among diverse actors.

8. In addition to the broadest possible engagement with relevant stakeholders, including non-spacefaring States, the private sector, and non-state actors, an inclusive approach to norm-building can be facilitated by:

- prioritizing mutual obligations as well as clear benefits and incentives that are shared by all;
- emphasizing positive behaviours that make operators in outer space feel safe, secure, and confident in the intentions of others;
- including diverse perspectives that extend beyond national security, such as environmental sustainability, humanitarian protection, gender considerations, and commercial and civilian interests, which can help to identify shared interests;
- developing shared and objective definitions of key concepts.

9. While the focus of this process is on behaviours related to military and other security-related activities in outer space, the impact of such behaviours is more universal. Space is clearly a domain of growing military activity, but it has become overwhelmingly civilian and commercial. The deep integration of capabilities with critical civilian infrastructure around the world also means that capabilities used in the space environment have humanitarian implications.

10. Finally, the Outer Space Treaty (OST) designates space a province of humankind and stipulates that activities in outer space shall be carried out for the benefit and in the interests of all countries.

Build on shared values, principles, and existing norms

11. Principles are at the heart of norms; agreement on principles is needed in any effort to identify and promote new norms.

12. Existing principles related to activities in outer space are clearly defined in the Outer Space Treaty and can provide the basis for the development of security-related norms and rules. The use of space should be informed by a commitment to peaceful use, international cooperation, and equality.

13. Additionally, activities in outer space are to be conducted:

- with due regard to the corresponding interests of all other States and,

- so as to avoid harmful contamination of the environment.

14. States also have a duty to consult if there is reason to believe that planned activities in space may cause harmful interference to the exploration or use of space by others. Given the extent to which satellite services – including some military capabilities – are used to provide critical civilian services, principles of international humanitarian law are also relevant.

15. The OEWG effort to advance the practical expression of these and other principles is not starting from scratch. Indeed, for current efforts to succeed, they must build on existing norms and agreed-upon practices. This is because norms are relational; individual rules and behaviours do not exist independently of one another and of the prevailing values that inform and motivate conduct. Furthermore, military- and security-related space activities share the same orbital space as other users and uses.

16. Currently, safety and sustainability norms are among the mostly widely accepted, and provide a realistic starting point. Expressions of these norms are found in agreements such as the recently adopted Guidelines for the Long-Term Sustainability of Outer Space Activities, which emphasize the transparency, safety, and sustainability of all space activities; and the UN Debris Mitigation Guidelines.

17. Additional information on the current normative context in outer space can be found here.

III. Priorities for norms

Transparency

18. While hardware and technical capabilities pose many risks to individual objects in space, it remains true that the nature of the operating environment is itself a key source of insecurity. A key feature is the lack of transparency that results from an abundance of secrecy and poor communication practices.

19. At an operational level, transparency can be enhanced through improved communications practices, including:

- pre-notifications,
- registration and disclosure,
- information exchange,
- data sharing,
- consultations,
- establishing direct lines of communication.

20. Additional efforts to enhance transparency in a security-related context could draw from the recommendations of the 2013 United Nations Group of Governmental Experts on transparency and confidence-building measures, which have yet to be adequately implemented.

21. Increased transparency of space activities is essential to avoid misinterpretation and an unintended escalation of conflict in outer space. Without deliberate efforts to be transparent from all actors, it is difficult to discern capabilities and intentions, especially because many capabilities are dual-use and can serve multiple purposes.

22. Capabilities that would benefit from transparency measures include but are not limited to:

- close approaches and physical interactions with objects in space, known as rendezvous and proximity operations;
- the release of secondary objects in space;

- the development of laser capabilities.

Safeguard the environment

23. Outer space is a fragile environment that is used by a growing number of global actors. The ability to use space can be easily disrupted by the production of space debris, which creates a long-lasting and indiscriminate risk to all objects in, and users of, the space environment.

24. Deliberate destruction of objects in space is one of the most significant causes of space debris. Such actions are unnecessary, while the risks are considerable – to the environment, satellites and other objects in orbit, humans in space and on Earth, and international security. Efforts to mitigate and prevent the deliberate creation of space debris are long-standing, including the United Nations Space Debris Mitigation Guidelines.

25. An effort to apply such guidelines to a military context can be seen in a State's recent unilateral declaration that it will no longer conduct destructive direct-ascent ASAT missile testing and will seek to establish this as a new international norm for responsible state behaviour. Other States could make similar commitments. A general agreement that military activities should not create space debris could provide the basis for more elaborate new restraints.

26. Efforts to avoid harmful contamination of the space environment inspired some of the earliest military restraints in outer space, particularly the Partial Test Ban Treaty, which prohibited nuclear explosions in outer space, as well under water and in the atmosphere.

Protect critical infrastructure

27. A key principle of the OST is to avoid harmful interference. Non-interference with critical infrastructure – both military and civilian – is key to avoiding the unintentional escalation of conflict and extending humanitarian principles to space activities. While the principle of non-interference applies to all systems in space, systems that may warrant specific protections include:

- strategic capabilities such as those connected to the command and control of nuclear weapons systems;
- Global Satellite Navigation Systems, which provide space-based positioning, navigation, and timing services; they are strategically sensitive because they underpin extensive civilian infrastructure on Earth relating to, inter alia, aviation, shipping, financial systems, global communications, and power grids.

Advance mechanisms for implementation

28. To produce effective norms, it is important to consider how they will be implemented and observed. Norms largely involve interactions among multiple actors, but institutions and mechanisms to facilitate these interactions in outer space are sparse at both the diplomatic and operational levels.

29. New mechanisms should be created to enable safe and transparent practices by space operators, particularly in support of the transparency and communications practices noted above. They can build on existing commitments in the OST, such as the duty to consult in the event of potentially harmful activities. Other transparency measures, such as the exchange of and access to data. also require clear mechanisms to allow for fair and accessible implementation. Finally, existing mechanisms, such as the Registration Convention, should be better utilized.

30. Such mechanisms will not only help to mitigate the perception of threats in outer space and maintain collective security, but will support the ongoing development and promotion of norms of behaviour, as well as accountability.

IV. Conclusion

31. Improved security governance in outer space depends on strong principles, clear rules, trusted information, inclusive processes, and mechanisms that put key elements of the OST into practice. Such tools would go a long way toward maintaining peace in outer space.