

III. Developments in space security governance

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In 2023 one United Nations multilateral process on space security concluded and another began. The open-ended working group (OEWG) on reducing space threats convened its third and fourth sessions and concluded on 1 September 2023.¹ While the sessions sparked useful exchanges on substance, exhibiting high levels of engagement with states across regions, states' inability to reach consensus, even on procedural issues, meant that the OEWG concluded without a final report. Then at the 78th session of the UN General Assembly, the United Kingdom and the Russian Federation each proposed a new multilateral process in the form of an OEWG, with both groups scheduled to commence in the coming years. New initiatives for space security measures are welcome, given the ongoing deadlock at the UN Conference on Disarmament and rapid shifts in the space domain, including rising trends in competition, weaponization and the diversification of actors and activities. However, with multiple UN processes occurring simultaneously there is risk of further polarization, overlap of work and a lack of state capacity to contribute to parallel processes.

This section presents an overview of developments within the UN OEWG on reducing space threats in 2023, analyzing key issues and the outcome of the final session. It concludes by assessing how exchanges at the OEWG and the proposed two new multilateral processes can shape the future of space security governance.

Space security governance at the United Nations

Space systems provide critical services for military and civilian purposes. Regulation of outer space, particularly security aspects and prevention of an arms race in outer space (PAROS), have been the subject of discussion at various UN forums for decades.² This includes the Conference on Disarmament, the General Assembly and several groups of governmental experts (GGEs). However, states have been divided on mechanisms for space security, with differing views on what types of capabilities to regulate, and the most feasible means of doing so.³ New governance measures for space secur-

¹ Documents and statements from all sessions of the OEWG on reducing space threats are available online at, respectively, <<https://meetings.unoda.org/meeting/57866/documents>> and <<https://meetings.unoda.org/meeting/57866/statements>>.

² Raju, N., 'Space security governance: Steps to limit the human costs of military operations in outer space', *Humanitarian Law & Policy Blog*, 22 Aug. 2023.

³ West, J. and Azcárate Ortega, A., *Space Dossier 7—Norms for Outer Space: A Small Step or a Giant Leap for Policy-making?* (UNIDIR: Geneva, Mar. 2022), pp. 9–10.

ity have thus seen limited progress, while technology and activity in outer space have continued to expand. Amid heightened geopolitical tensions and several divisive regional conflicts, the scope for escalation and even conflict involving the space domain is growing.

In 2021 the UK initiated an OEWG through a General Assembly resolution on responsible and irresponsible behaviours in space activities, in an attempt to overcome states' differing views and adopt measures to reduce threats to space systems.⁴ This OEWG convened twice in 2022 and concluded in 2023 with two more sessions. However, despite constructive discussions, states were unable to reach consensus, even on procedural issues. According to reports, a small minority of states, primarily Russia, along with Iran, China, Venezuela and others, raised various objections.⁵ Some of these states, such as Iran and Russia, opposed the approach and focus of the OEWG, namely on responsible behaviour to mitigate threats to space systems.⁶

While consensus may have been difficult to achieve within the OEWG, the UN Disarmament Commission adopted a consensus-based report in 2023 on recommendations for transparency and confidence-building measures (TCBMs) for space.⁷ The report builds on recommendations of the previous consensus-based report of the UN GGE on TCBMs for outer space activities in 2013, and makes recommendations to promote the practical implementation of TCBMs with the goal of preventing an arms race in outer space. This development shows that consensus-based outcomes for space security are not impossible and can be achieved on specific issues despite ongoing political challenges.

After the OEWG concluded in September, a new GGE on further practical measures on PAROS convened in November 2023, with the aim of producing a consensus-based report in 2024.⁸ This GGE differs from the OEWG in both format and number of states participating. The OEWG was open to all states, and the resolution that established this particular OEWG expressly

⁴ UN General Assembly Resolution 76/231, 24 Dec. 2021.

⁵ See e.g. Hitchens, T., 'Russia spikes UN effort on norms to reduce space threats', *Breaking Defense*, 1 Sep. 2023.

⁶ See OEWG on reducing space threats, Third session, 'On the consolidated OEWG Chair's elements paper on reducing space threats through norms, rules and principles of responsible behaviours, dated 20 July 2023', Working Paper submitted by Iran, A/AC.294/2023/WP.20, 22 Aug. 2023; and 'Document of the Russian Federation regarding the possible elements of the final report of the open-ended working group, established by the UNGA resolution 76/231, prepared by the Chair on agenda item 6(c)', Working Paper submitted by Russia, A/AC.294/2023/WP.19, 22 Aug. 2023.

⁷ UN Disarmament Commission, Working Group II, 'Recommendations to promote the practical implementation of transparency and confidence-building measures in outer space activities with the goal of preventing an arms race in outer space, in accordance with the recommendations set out in the report of the group of governmental experts on transparency and confidence-building measures in outer space activities', 20 Apr. 2023.

⁸ UN General Assembly Resolution 77/250, 9 Jan. 2023. A previous GGE with this mandate convened during 2018–19 but was unable to reach consensus. See Porras, D., 'Creeping towards an arms race in outer space', *SIPRI Yearbook 2020*, p. 517.

permitted participation by international organizations, civil society and academia. In contrast, the GGE conducts closed sessions among experts from 25 states, including the five permanent members of the UN Security Council, with other states nominated based on geographic representation.

In addition to the ongoing GGE, two new multilateral processes with differing objectives for space security were proposed at the UN General Assembly's 78th session, which commenced on 5 September 2023. The UK submitted a resolution for a two-year OEWG (scheduled for 2025–26) to develop norms of responsible behaviour to mitigate space threats, building on the work of the previous OEWG, while Russia submitted a resolution for a four-year OEWG (scheduled for 2024–28) aimed at a legally binding initiative to ban weapons and the use of force in outer space.⁹

The initiation of two different processes at the same time led some delegations to express concern about the potential for further polarization and fragmentation in space security governance.¹⁰ Indeed, space security issues are already deliberated in several UN forums, including the Conference on Disarmament, the Disarmament Commission and past GGEs, while space safety and sustainability issues are discussed at the UN Committee for Peaceful Uses in Outer Space. Two new OEWGs occurring simultaneously risks the processes being misconceived as competing or contradictory. Avoiding overlap and ensuring substantive progress in each forum will require dedicated coordination efforts. Simultaneous processes may also pose challenges for states with limited capacity and resources.

Overall, the lack of consensus at the final session of the OEWG on reducing space threats in 2023, and the multiple upcoming processes underscore the difficult path ahead for space security governance.

Key issues at the third session of the open-ended working group on reducing space threats

Despite the lack of consensus, some exchanges at the OEWG were useful in that they suggest which substantive issues might be successfully pursued in these upcoming processes. Whereas the first and second sessions of the OEWG in 2022 focused on taking stock of the current international framework and threats to space systems, the third session encouraged states to make recommendations on possible norms, rules and principles of respon-

⁹ UN General Assembly Resolution 78/20, 6 Dec. 2023; UN General Assembly, First Committee, 'Further practical measures for the prevention of an arms race in outer space', Draft resolution, A/C.1/78/L.55, 12 Oct. 2023; and UN General Assembly, 'Prevention of an arms race in outer space', Report of the First Committee, A/78/407, 10 Nov. 2023.

¹⁰ United Nations, 'Consensus scuttled in First Committee over two competing draft resolutions on space security, creating parallel processes, polarization, say speakers', Meetings coverage, GA/DIS/3730, 31 Oct. 2023.

sible behaviours.¹¹ Substantive discussion during the third session was initially delayed when Russia raised objections to non-state participation, including of international organizations, in the formal discussions.¹² These objections reflect a growing sentiment among a small number of states that are opposed to the inclusion of non-state entities, particularly civil society, in formal multilateral discussions.¹³

In substantive discussions, the third session discussed several topics with the aim of formulating recommendations for states on norms, rules and principles, including those derived from existing international legal and other normative frameworks, that covered Earth-to-space, Earth-to-Earth, space-to-Earth and space-to-space threats. The third session also considered recommendations for regulation of dual-use capabilities, prevention of the placement of weapons in space, and the use of force or threat of use of force. States also exchanged views on measures for information exchange, risk reduction notifications and enhancement of international cooperation. The following issues emerged as a potential baseline for developing future measures, although the degree of agreement among states differs for each topic.

Compatibility of norms, rules and principles with legally binding treaties

Numerous states acknowledged that norms, rules and principles are not incompatible with, but rather can lay the foundation for, a legally binding treaty on space security issues. This is a notable development, as it shifts the perception that these two approaches are competing views. Improving overall acceptability of norms and non-binding measures can arguably encourage states to adopt such measures as a starting point for rebuilding trust and confidence, eventually directing states to identify more agreeable foundations for legally binding measures. At the OEWG, this view about compatibility of norms with binding treaties was articulated by multiple states across different regions, including those that have consistently advocated for a legally binding treaty for PAROS. China, for example, was among those states. Despite continuing to advocate, jointly with Russia, for their draft treaty on the prevention of placement of weapons in outer space, China acknowledged that ‘hard law’ and ‘soft law’ (such as TCBMs) can be complementary, while underscoring that TCBMs cannot replace binding treaties.¹⁴ This emphasis

¹¹ On the OEWG sessions in 2022 see Raju, N. and Saalman, L. ‘Space and cyberspace: Impacts from the war in Ukraine’, *SIPRI Yearbook 2023*, pp. 495–97.

¹² OEWG on reducing space threats, Third session, First meeting, 30 January 2023, UN Web TV; and OEWG on reducing space threats, Third session, Second meeting, 30 January 2023, UN Web TV, 00:24:00–00:26:22.

¹³ See for eg. Pytlak, A., ‘Cyberspace and the malicious use of information and communications technology’, *SIPRI Yearbook 2021*, pp. 564–65.

¹⁴ OEWG on reducing space threats, Third session, Working paper submitted by China, A/AC.294/2023/WP.2 (Informal translation), 19 Jan. 2023, pp. 2–3.

on compatibility suggests that there may be scope to prioritize TCBMs on a multilateral, bilateral or even unilateral basis, perhaps as initial steps, while simultaneously debating legally binding arms control measures.

Protection of civilians

Space systems have been used for both military and civilian purposes since their inception. They are now essential to a wide range of civilian applications, including the provision of services to facilitate communications, navigation, healthcare, disaster management, climate change monitoring and transportation. Targeting of space systems therefore risks significant harm to civilians. At the OEWG, the International Committee of the Red Cross (ICRC) underscored the importance of space systems for civilian use and clarified their protected status under international law and the international space treaties, as well as under international humanitarian law (IHL).¹⁵

The 1967 Outer Space Treaty establishes that international law applies to outer space.¹⁶ This would include IHL in the event of armed conflict. However, some states, including China, Cuba and Russia, deemed discussion of IHL within the OEWG as contentious. For example, Russia acknowledged in a working paper that ‘IHL has effect anywhere there is an armed conflict, including outside national jurisdiction’ but then argued that it was ‘counter-productive’ to discuss IHL in the OEWG because it would open a ‘Pandora’s box’ and send ‘a false signal’ to the world about the possibility of war in space.¹⁷ However, as the ICRC confirmed, clarifying how IHL applies to space does not legitimize or encourage use of force, militarization or weaponization in space, but rather reinforces existing limits on space activities, which in turn helps to minimize risk of civilian harm and contributes to overall conflict prevention.¹⁸ There were some differences between the Chinese and Russian objections to discussing IHL at the OEWG. Russia expressed a blanket refusal to discuss IHL. While China argued that discussing IHL was not the purpose of the OEWG, it still engaged in discussion of some of the legal

¹⁵ OEWG on reducing space threats, Third session, ‘Preliminary recommendations on possible norms, rules and principles of responsible behaviours relating to threats by States to space systems’, Working paper submitted by the ICRC, A/AC.294/2023/WP.7, 31 Jan. 2023.

¹⁶ 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), Article III. For a summary and other details of the Outer Space Treaty see annex A, section I, in this volume.

¹⁷ OEWG on reducing space threats, Third session, ‘Considerations concerning the counter-productivity of considering the applicability of international humanitarian law (IHL) to space activities’, Working paper submitted by Russia, A/AC.294/2023/WP.11, 2 Feb. 2023, paras 1, 11.

¹⁸ See e.g. OEWG on reducing space threats, First session, ‘Constraints under international law on military operations in, or in relation to, outer space during armed conflicts’, Working paper submitted by the ICRC, A/AC.294/2022/WP.4, 11 May 2022, para. 8.

challenges to applying the IHL principles of distinction and proportionality to outer space.¹⁹

The civilian uses of space systems and the need to limit potential harm to civilians were the subject of recommendations from many states. Recommendations from Brazil, Canada, Mexico, Peru and the United States, as well as European Union (EU) member states, suggest that there may be scope to pursue measures protecting critical space systems and infrastructure.²⁰ This could entail focusing on specific sectors that provide essential services; for instance, identifying the role of space systems in transportation, to clarify that global navigation satellite services for civilian transportation are off-limits to attacks or disruption. Similarly, the Philippines highlighted the need to protect space systems used for climate-change monitoring and mitigation, as another example of critical infrastructure, with such systems especially relevant to developing states.²¹ A possible step forward in building on these state recommendations would be to convene discussions on identifying which space systems are relevant for critical infrastructure, with the objective of minimizing risk of potential civilian harm in military space operations.²² Notably, the mandate of the upcoming OEWG on reducing space threats scheduled for 2025–26 includes ‘Protecting critical space-based services to civilians as well as services that support humanitarian operations’.²³

Destructive anti-satellite tests

Following the 2022 US-led General Assembly Resolution 77/41 against destructive (debris-creating) direct-ascent anti-satellite (DA-ASAT) tests, which was adopted with a vote of 155 states in favour, several states made national pledges committing not to conduct such tests.²⁴ In 2023 more states made national pledges, including the member states of the EU, bringing the

¹⁹ OEWG on reducing space threats, Third session, Fifth Meeting, 1 Feb. 2023, UN Web TV, 02:48:20–02:56:52 (China).

²⁰ See working papers and statements at the OEWG on reducing space threats, Third session: ‘Destructive anti-satellite weapons’, Working paper submitted by Brazil, A/AC.294/2023/WP.13, 2 Feb. 2023; Statement by Canada, 3 Feb. 2023; ‘Comentarios del Perú en atención al papel que contiene elementos sobre las cuestiones 6(a) y 6(b)’ [Comments from Peru regarding the paper that contains elements on issues 6(a) and 6(b)] (Non-paper, in Spanish), 20 Feb. 2023; ‘Proposals of the United States of America regarding responsible state behaviour for outer space activities’, Working paper submitted by the USA, A/AC.294/2023/WP.5, 26 Jan. 2023; ‘EU joint contribution on the works of the [OEWG]—Fourth part: Recommendations on possible norms, rules and principles of responsible behaviour relating to threats by States to space systems’, Working paper submitted by the EU on behalf of its member states, A/AC.294/2023/WP.18, 14 June 2023. See also OEWG on reducing space threats, Fourth session, ‘Chairperson’s summary’, A/AC.294/2023/WP.22, 1 Sep. 2023, p. 9.

²¹ OEWG on reducing space threats, Third session, General exchange of views on agenda item 6(c), topic 6, Statements by the Philippines, 2 Feb. 2023, p. 2.

²² Raju, N. and Wan, W., ‘Escalation risks at the space–nuclear nexus’, SIPRI Research Policy Paper, Feb. 2024.

²³ UN General Assembly Resolution 78/20 (note 9), para. 4(d).

²⁴ UN General Assembly Resolution 77/41, 7 Dec. 2022.

total number of states that have made the commitment to 37, as of 2023.²⁵ DA-ASAT tests utilize ground-based kinetic anti-satellite weapons that can be repurposed from missile defence systems.²⁶ At the OEWG, some states considered how to advance the test ban, including encouraging those states which had abstained or voted against the resolution to join the commitment against DA-ASAT tests. Despite the significant majority vote in favour of Resolution 77/41, the three states (in addition to the USA) that have tested DA-ASATs—China and Russia, which voted against the resolution, and India, which abstained—have not made the commitment. China criticized the scope of the resolution, noting that the moratorium did not extend to the development, deployment or actual use of the weapons.²⁷ This rationale suggests that states which did not vote in favour may be more inclined to consider joining if the scope of the DA-ASAT ban is extended beyond testing to include these issues. However, doing so would raise questions about simultaneously regulating missile defence capabilities, given that the same technologies can be repurposed as DA-ASATs.²⁸ The issue of missile defence is in turn tied to states' broader concerns regarding the overall strategic balance and global arms control.²⁹

Nonetheless, steps can still be taken to limit DA-ASATs in the space context, given the indiscriminate consequences of debris stemming from their testing or use. Some US experts have suggested that the next step is to propose a legally binding treaty prohibiting DA-ASAT tests.³⁰ Some experts have alternatively recommended bilateral exchanges between the USA and China on possible variations of the DA-ASAT test ban, with the objective of enhancing mutual confidence in the initiative.³¹

Non-kinetic threats to space systems

States that expressed support for banning DA-ASAT tests also underscored the harmful effects of non-kinetic disruptions of and interference with space systems. Non-kinetic counterspace capabilities include electronic interference and cyberattacks, as well as directed-energy attacks through lasers

²⁵ See e.g. UN OEWG on reducing space threats, Third session, Working paper submitted by the European Union, A/AC.294/2023/WP.18, 14 June 2023, p. 2.

²⁶ Grego, L., 'Outer space and crisis risk', eds C. Steer and M. Hersch, *War and Peace in Outer Space: Law, Policy and Ethics* (Oxford University Press: Oxford, 2020), p. 275.

²⁷ OEWG on reducing space threats, First session, Statement by China, 9 May 2022, p. 4.

²⁸ Raju, N. and Erästö, T., 'The role of space systems in nuclear deterrence', SIPRI Background Paper, Sep. 2023, pp. 12–13.

²⁹ See Raju and Wan (note 22).

³⁰ Samson, V. and Weeden, B., 'A window of opportunity for space security?', Stimson Grand Strategy Blog, 30 Oct. 2023.

³¹ See e.g. Zhao, T., 'Managing the impact of missile defense on US–China strategic stability', eds T. Zhao and D. Stefanovich, *Missile Defence and the Strategic Relationship among the United States, Russian and China* (American Academy of Arts and Science: Cambridge, MA, 2023), p. 23.

or microwave pulses.³² In these cases, disruption of space systems can be temporary, and there is no consensus on whether such attacks would amount to a use of force under international law. Indeed, jamming and spoofing of navigation signals, and interference by way of cyberattacks, are increasingly considered tools of modern warfare by states. Yet non-kinetic forms of interference with space systems can be extremely destabilizing, also risking impacts on civilians. In this regard, the UK was among several states that emphasized the need to avoid jamming, spoofing or other non-kinetic attacks that impacted civilian use of space systems.³³ Australia, Brazil, Egypt, and Germany jointly with the Philippines were among states that highlighted the threat of interference with space systems.³⁴ The USA also cautioned that interference could lead to misunderstandings, noting potential escalatory risks of interference with specific systems such as those used for command, control and communications of nuclear forces, as well as potential impacts of interference with systems used to provide space traffic management or to support critical infrastructure.³⁵

Notably, the Outer Space Treaty uses the term ‘harmful interference’ in Article IX, but does not define it.³⁶ Article IX places an obligation on states to engage in consultations if they have ‘reason to believe’ that an activity would cause potentially harmful interference with other states’ activities. The evident subjectivity in this wording means that clarifying what constitutes harmful interference, and circumstances under which states should engage in consultations, would be useful steps forward. Recommendations at the OEWG indicate a willingness by states to also engage on improving regulation of non-kinetic forms of attacks on space systems by focusing on effects—that is, by clearly prohibiting non-kinetic attacks that risk civilian harm.

Information-exchange mechanisms and notifications

Throughout the OEWG, states emphasized the need to improve the exchange of information in space activities. Recommendations proposed in the 2013 GGE report on TCBMs for space activities were mentioned repeatedly,

³² See Weeden, B. and Samson, V. (eds), *Global Counterspace Capabilities: An Open Source Assessment* (Secure World Foundation: Washington, DC, 2023).

³³ See e.g. OEWG on reducing space threats, Third session, ‘Reaffirming the existing legal regime for space and building on it through new non-binding norms, rules and principles of responsible space behaviours’, Working paper submitted by the United Kingdom, A/AC.294/2023/WP.4, 25 Jan. 2023, para. 10.

³⁴ See working papers submitted to the OEWG on reducing space threats, Third session, by Australia, A/AC.294/2023/WP.14, 6 Feb. 2023; Brazil, A/AC.294/2023/WP.13, 2 Feb. 2023; Egypt, A/AC.294/2023/WP.12, 2 Feb. 2023; and Germany and the Philippines, A/AC.294/2023/WP.1, 19 Jan. 2023.

³⁵ OEWG on reducing space threats, Third session, ‘Working paper submitted by the USA, A/AC.294/2023/WP.5 (note 20), p. 3.

³⁶ Raju, N., ‘Diluted disarmament in space: Towards a culture for responsible behaviour’, SIPRI Commentary, 17 Nov. 2020.

with some states suggesting that the proposed measures would help reduce misperceptions and miscalculations.³⁷ Proposed measures on information-sharing ranged from unilateral measures, such as pre-launch notifications (including under the Hague Code of Conduct) and publication of national space policies and military space expenditure, to bilateral or multilateral measures, such as communication channels for de-escalation, exchange of data on space situational awareness, and improving registration practices under the 1976 Registration Convention.³⁸ The EU also mentioned its Space Strategy for Security and Defence published in March 2023, to highlight the utility of public disclosure of such information for not only enhancing transparency but also encouraging others to do the same.³⁹

Uncoordinated rendezvous and proximity operations (RPOs)—wherein a space system is manoeuvred close to a rival space system without prior communication—were also a recurring concern of many states. RPOs can be highly escalatory, risking inadvertent escalation due to misperceptions or miscalculation, based on worst-case scenario thinking that the close approach of a rival's space object will result in an attack on a valuable asset. In the absence of prior notifications or information about the manoeuvre, a state may consider attacking the rival space object pre-emptively.

Incidents of uncoordinated RPOs, including some involving space objects of China, Russia and the USA, have increased in recent years.⁴⁰ In discussing the need to regulate uncoordinated RPOs, some states proposed that RPOs must not undertaken without prior notification or communication with the concerned party. Notifications of uncontrolled re-entry of rockets were also suggested, with some states referring positively to the 2023 joint statement of China and the Philippines which indicated that both states are willing to establish a notification system on rocket launches and work on procedures to retrieve and return space debris on a bilateral basis.⁴¹ Overall, these discussions at the OEWG suggest potential to develop measures for information exchange on a bilateral or multilateral basis, or to adopt state commitments to provide notifications on a unilateral basis.

Role and governance of commercial entities

In 2022 Russia made inflammatory statements at the UN which suggested that quasi-civilian space infrastructure may be legitimate targets, likely referring to the role of commercial entities, particularly SpaceX, in the war in Ukraine.

³⁷ See United Nations, General Assembly, GGE on transparency and confidence-building measures in outer space activities, Report, A/68/189, 29 July 2013.

³⁸ On developments in the Hague Code of Conduct see chapter 10, section III, in this volume.

³⁹ European Commission and EU High Representative for Foreign Affairs and Security Policy, 'European Union Space Strategy for Security and Defence', Joint Communication to the European Parliament and the Council, JOIN(2023) 9 final, 10 Mar. 2023.

⁴⁰ See Weeden and Samson (note 32).

⁴¹ Chinese and Philippine governments, Joint Statement, Beijing, 5 Jan. 2023.

SpaceX provided Starlink terminals to Ukraine and was criticized by Russia for its overall role in the war.⁴² In February 2023 SpaceX president Gwynne Shotwell announced that SpaceX had limited Ukraine's ability to use Starlink for offensive drone operations, stating that 'this was not SpaceX's intention in providing Starlink services'.⁴³ Nonetheless, Russia reiterated statements about 'quasi-civilian infrastructure' during exchanges at the OEWG in 2023.⁴⁴ China also expressed concern regarding the role of commercial entities in armed conflict, reminding states of their binding legal obligation under Article VI of the Outer Space Treaty to exercise authorization and ongoing supervision over actions of their non-governmental entities.⁴⁵ The USA responded by arguing that both China and Russia had engaged in similar activity, claiming that Russia had purchased satellite imagery from Chinese commercial firms for use in armed conflict.⁴⁶ In line with the US allegations, some reports suggested that Chinese firms provided satellite imagery to the Russian-affiliated Wagner Group to assist with combat in Ukraine, as well as in Libya, Mali, the Central African Republic and Sudan.⁴⁷

These exchanges between China, Russia and the USA regarding the role of commercial entities in military space operations and armed conflict point to the lack of common understanding on the legalities surrounding this issue. This lack of clarity is concerning as it is unclear how actions of a commercial entity may impact a state's neutral status in an ongoing conflict.⁴⁸ Some experts have also argued that intentionally intertwining military services with commercial space systems is highly escalatory and potentially violates IHL in certain circumstances.⁴⁹ As the private sector will continue to play a key role in providing space services, states may need to clarify the overarching legal and normative framework governing these entities, to limit scope for escalation stemming from their actions.

⁴² Raju and Saalman (note 11), pp. 498–99.

⁴³ Roulette, J., 'SpaceX curbed Ukraine's use of Starlink internet for drones: Company president' Reuters, 10 Feb. 2023.

⁴⁴ Remarks of Russia in the general exchange of views at the OEWG on reducing space threats, Third session, Fifth meeting, 1 Feb. 2023, UN Web TV, 2:18:40–2:20:17.

⁴⁵ OEWG on reducing space threats, Third session, A/AC.294/2023/WP.2 (note 14), p. 3.

⁴⁶ United States remarks on the morning session of day 2 at the OEWG on reducing space threats, Third session, Third meeting, 31 January 2023, UN Web TV, 02:53:14–02:54:02.

⁴⁷ Jones, A., 'US sanctions Chinese satellite firm for allegedly supplying SAR imagery to Russia's Wagner Group', *SpaceNews*, 27 Jan. 2023; and 'Chinese firm sold satellites for intelligence to Russia's Wagner—Contract', *Moscow Times*, 5 Oct 2023. On the role of the Wagner Group see chapter 4, section I, in this volume.

⁴⁸ Wang, G. 'The complex neutrality of commercial space actors in armed conflict', *Humanitarian Law & Policy Blog*, 16 Nov. 2023.

⁴⁹ Koplow, D., 'Reverse distinction: A US violation of the law of armed conflict in space', *Harvard National Security Journal*, vol. 13, no. 25 (2022).

Conclusions

States were unable to reach consensus at the OEWG on reducing space threats, failing to agree even on a procedural report. This outcome not only reveals the decades-long challenges surrounding space security governance, but also highlights continually deteriorating state relations and ongoing challenges for multilateralism. Still, substantive exchanges at the OEWG suggest there may be scope to reach consensus on modest TCBMs. A joint submission on behalf of 34 states on a 'cross-regional initiative in support of' the OEWG contended that consensus could be found on specific thematic areas, including applicable law to the space environment, TCBMs, debris-causing threats to space objects, RPOs, and protection of critical space-based services for civilians.⁵⁰ These issues will likely be discussed in the upcoming UN processes, with some of these issues mentioned in the mandate of the next OEWG on reducing space threats.⁵¹ The UN Disarmament Commission recommendations adopted by consensus also indicate that there is potential to adopt measures focused on specific issues.

However, the visible surge in simultaneous processes—the ongoing GGE on PAROS, the upcoming four-year OEWG on PAROS and the upcoming two-year OEWG on reducing space threats—will require dedicated efforts and state engagement in good faith to ensure that multilateral measures for space security governance are advanced in a complementary and coordinated way.

⁵⁰ OEWG on reducing space threats, Third session, 'On a cross-regional initiative in support of [the OEWG]', Working paper submitted by Brazil, Germany, the Netherlands and the Philippines on behalf of 34 states, A/AC.294/2023/WP.21, 1 Sep. 2023, p. 1.

⁵¹ UN General Assembly Resolution 78/20 (note 9).