Ploughshares

REPORT

The Open-Ended Working Group on Space Threats

RECAP OF THE SECOND MEETING, SEPTEMBER 2022

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Acronyms and Abbreviations

ABM	Anti-ballistic missile
ASAT	Anti-satellite
ASEAN	Association of Southeast Asian Nations
DA	Direct ascent
EU	European Union
GNSS	Global navigation satellite system
ICRC	International Committee of the Red Cross
IHL	International humanitarian law
NPT	Nuclear Non-Proliferation Treaty
OEWG	Open-Ended Working Group
OST	Outer Space Treaty
PAROS	Prevention of an arms race in outer space
PPWT	Prevention of the Placement of Weapons and Threat or Use of Force
RPO	Rendezvous-and-proximity
SSA	Space situational awareness
TCBM	Transparency and confidence-building measure
UN	United Nations

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Overview

Following the Review Conference of the Nuclear Non-Proliferation Treaty (NPT) that failed to produce a final document, the second of four scheduled meetings of the United Nations (UN) Open-Ended Working Group to Reduce Space Threats (OEWG) took place in Geneva from September 12-16, 2022. The OEWG is mandated to develop recommendations on possible norms, rules, and principles of responsible behaviour and how they might contribute to a legally binding instrument.

The first session took stock of the existing international legal and normative framework (read the recap). The second went from existing law to current and future threats by states to space systems, including "actions, activities and omissions that could be considered irresponsible." This comprehensive discussion was organized into five themes:

- Nature and uses of the outer space environment and space systems in relation to current and future threats by states to space systems
- Current and future Earth-to-space threats by states to space systems
- Current and future space-to-space threats by states to space systems
- Current and future space-to-Earth threats by states to space systems
- Current and future Earth-to-Earth threats by states to space systems.

Presentations on these topics by global experts can be found here.

Building on the positive attitude and constructive engagement of the first meeting, the second nurtured interactive engagement and frank and substantive discussion, enlivened by references to hypothetical murder with icicles and shoes. The meeting saw statements delivered by 39 states and on behalf of the European Union (EU) and the Association of Southeast Asian Nations (ASEAN).

While some states continued to express concern that notions of responsible and irresponsible behaviour are subjective, the session produced a significant number of examples of capabilities, activities, behaviours, and their effects that were deemed to be threatening and thus irresponsible. Both kinetic and non-kinetic capabilities and their uses were discussed, as were concerns for effects on environmental sustainability, civilian critical infrastructure, and conflict escalation.

Also discussed were reassuring behaviours that might be considered responsible, many of which have strong links to the principle of due regard as expressed in Article 9 of the Outer Space Treaty (OST); and possible restrictions and restraints on particularly egregious capabilities and activities, such as destructive anti-satellite (ASAT) missile tests and other weapons capabilities in space, and additional initiatives to advance such restrictions at the UN First Committee on Disarmament and International Security.

Following is a more detailed recap of key points of discussion and debate.

The OEWG Objectives and Principles

The OEWG is clearly mandated by the UN General Assembly to make recommendations on "norms, rules and principles of responsible behaviour" that are based on existing legal and normative frameworks, with the aim of reducing current and future threats by states to space systems. Nonetheless, a few states continued to debate OEWG objectives and question the mandate itself. Fortunately, much of this discussion still emphasized key principles that might inform the development of recommendations on principles, rules, and norms of responsible behaviour.

Defining responsible and irresponsible behaviour

Some states continued to question the value of the concept of responsible behaviour. India, Egypt, China, and Russia considered the concept subjective, with India emphasizing the need to avoid ambiguity and to consider the practicalities and political implications of attempting to adjudicate and verify state behaviour. Iran cautioned that political norms are subject to "limitations and loopholes" that can lead to discrimination and competing interpretations; it submitted a working paper that refers to responsible behaviour as "elusive." Cuba, Egypt, and Russia, among others, insisted that only legal concepts and definitions are acceptable; Egypt claimed that a legal gap exists and must be filled but also insisted that existing law and instruments would produce a more objective approach than notions of responsible behaviour.

Canada, on the other hand, noted that the OEWG's job is to openly consider and evaluate a range of specific behaviours to alleviate possible ambiguity and remove subjectivity. The discussion did indicate several points of convergence (see below).

Non-discrimination

Non-discrimination rooted in equal and fair access to space is important to consider when defining norms of responsible behaviour and monitoring methods. ASEAN member states, as well as the United Arab Emirates and India, continued to emphasize the "inalienable" right of states to access and use space for "exclusively" peaceful purposes. ASEAN members also indicated a need for a "shared understanding of multilateral norms."

In contrast, China suggested that the development of norms – or what it referred to as a "code of conduct" – will result in the domination of outer space by one state. Russia asserted that space weapons are being pursued by states to ensure their dominance in outer space, and that only a legally binding agreement on PAROS (prevention of an arms rase in outer space) can maintain space as a domain of peaceful purposes and equality. Both were concerned that discrimination would result from the voluntary restraints on the destructive testing of direct-ascent (DA) ASAT weapons (see below).

States such as the United States and Canada, which support the pursuit of norms of responsible behaviour in outer space, insisted that a focus on norms rather than an agreement that would restrict access to, or the development of, technology is preferable precisely because it does not constrain the development of technical capabilities. Australia, Japan, the Philippines, and Canada describe this approach as "capability neutral," meaning that threats and possible rules or restrictions to mitigate threats focus not on technology, but on uses of the technology.

The Philippines emphasized that space programs are essential to achieve sustainable development goals but that developing states must commit a higher portion of national resources to acquire them; it saw norms as one way to ensure the secure functioning of such valuable capabilities for all.

Law versus norms

States including Algeria, China, Cuba, Iran, India, Indonesia, Mexico, Sri Lanka, Russia, and Venezuela clearly desire a new legally binding instrument to control arms in outer space. And most of this group see the current OEWG process as part of this effort. For example, India, which indicated a preference for a legally binding instrument that provides a "stronger guarantee of compliance with obligations," remains open to new non-binding outcomes, including norms and other transparency and confidence-building measures (TCBMs). In describing the position of the Non-Aligned Movement, to which it belongs, Venezuela labelled the OEWG approach as complementary to, but not replacing, law.

Other states continued to question the value of developing such norms. Russia asserted the need to stick to a "purely legal approach" that focused on strict compliance with laws already in place. China urged a legal approach that incorporated new law, such as the draft treaty Prevention of the Placement of Weapons and Threat or Use of Force (PPWT) that was first tabled in 2008. Brazil's response: "If we can't agree on what is to be voluntary, how can we agree on what is to be mandatory?"

Some discussion revealed an ongoing confusion about the relationship between norms and law, even though the first Working Group meeting in May established existing legal principles as the foundation for the development of more specific norms and rules of behaviour (although China did not agree that consensus on existing legal principles had been achieved). The Philippines reaffirmed its belief that the principle of due regard, which is enshrined in Article 9 of the OST, is the "foundational principle for responsible behaviour." Moreover, as noted by Canada, existing law such as the OST first began as non-binding principles adopted by the United Nations General Assembly. New Zealand described the dynamic between norms and legal agreements as an "iterative process."

Inclusivity

Openness and inclusivity are key to the OEWG approach to the discussion of norms. All UN Member States can attend meetings, while the private sector and civil society can participate informally. However, Iran indicated that the Chair's advanced summary of the first discussion did not adequately reflect the views of states that have "substantive difficulty" with the concept of responsible behaviour. This was the theme of a note verbale issued jointly by Belarus, Bolivia, China, Cuba, Iran, Myanmar, Syria, and Venezuela, which represented the views and positions of states that prefer to negotiate a legally binding instrument on PAROS, oppose efforts to elaborate concepts such as "use of force" or "armed attack" in the context of outer space, and desire an international mechanism to exchange space situational awareness (SSA) data.

Inclusivity was also raised by Ireland and Sweden, which supported the inclusion of gender-based perspectives. The UN Institute for Disarmament Research, Australia, and the Philippines hosted a joint side event on this topic.

Capabilities as Potentially Threatening

The substantive focus of the second meeting of the OEWG was on threats to space systems from Earth and space, as well as space threats to Earth. Key elements of this discussion fell broadly under themes related to capabilities and their uses, as well as activities, behaviours, and their effects.

The examination of the potential threats posed by capabilities is significant to informing the OEWG's focus on norms of behaviour and rules for the conduct of activities. The following potentially threatening capabilities were mentioned by states:

- Ground-based anti-ballistic missile (ABM) systems (Russia, China)
- Space-based ABM/missile interceptors (Switzerland, Pakistan, Venezuela)
- Co-orbital ASATs (Switzerland)
- Satellites with armaments (Brazil)
- Directed energy/laser capabilities (United Kingdom, Switzerland, Republic of Korea [South Korea], Ireland, Italy, Mexico, International Committee of the Red Cross [ICRC], EU)
- Cyber capabilities (ICRC, United States, Ireland, Poland, Brazil, Philippines, Switzerland, Japan, Austria, Germany, China, EU)
- Electronic/jamming capabilities (Republic of Korea, Brazil, Ireland, United Kingdom, Norway, Switzerland, China, EU).

The following themes mark significant points of discussion.

Space weapons

The non-weaponization of space remains a priority for many states. Russia suggested that space weapons are currently being developed to use force "in space, from space, or with regard to space" and called for an overall prohibition not to create, test, deploy, or use them. Mexico, Switzerland, France, and ASEAN also expressed concern with weapons placed in space. Pakistan called for a norm against the placement of weapons in space.

However, the United States asserted that it is not enough to focus on the placement of weapons in outer space if the goal is to address the broad scope of threats created by the misuse of space systems. It claimed that, in the absence of a robust verification regime to determine the capabilities of a satellite, it is difficult to ascertain whether there is a weapon on orbit or not. Instead, the United States urged the development of norms that promote transparency to help determine when a satellite is behaving abnormally, thus in a potentially threatening way.

Switzerland still saw the prohibition of weapons in space as essential, if not sufficient. Pointing to potential co-orbital ASATs and missile interceptors in space, it argued that such capabilities increase mistrust, encourage countermeasures, and have the potential to turn space into a warfighting domain.

Germany noted that there is no clear definition of a weapon in space and that defining such weapons has "severe difficulties" because many space capabilities are dual-purpose, such as technology to enable rendezvous-and-proximity operations (RPO). Only ABM interceptors were clearly seen as space weapons. While Russia referred to the "use of force" in space, from space, or with regard to space, discussions during the first Working Group meeting in May reflected a need to develop a common understanding of the threshold for legal concepts such as "use of force." Still, such discussion is viewed as off limits by Russia and the other authors of the note verbale described above. Russia also referred to capabilities that destroy, damage, or disrupt the normal working of space systems. The United States argued that a ban on capabilities based on such a broad definition would unduly constrain novel and useful applications such as the robotic arms used for on-orbit servicing.

Anti-ballistic missile systems

As noted, several states identified risks posed by space-based strike capabilities. Switzerland pointed to studies of ABM systems that include interceptors based in outer space. However, the United States referenced expert presentations to deny any serious risk that strike weapons might be placed in orbit, describing them as "impractical, expensive, and difficult to defend."

However, China noted that ground-based ABM missiles have been tested for use against satellites (see sections on dual-purpose and testing below). And the United Kingdom brought up the development of direct energy weapons capabilities that could have ASAT and/or ABM applications.

Non-kinetic counterspace capabilities

Although there is a popular view that kinetic counterspace capabilities such as missiles pose serious risks to security in space and on Earth, discussion at the OEWG also considered harm from non-kinetic capabilities such as cyber, electronic jamming, and directed energy or lasers. Recent events in Ukraine provided a critical context, with the United States, Germany, and Austria citing cyber interference against commercial operators of space systems in the context of the ongoing war. Based on this experience, the United States emphasized the need to consider a whole system approach to space protection, including ground and end-user components as well as communications and control links with satellites.

While non-kinetic interference with space systems may seem innocuous, Ireland asserted that it should be deemed irresponsible, noting that it could harm people by depriving them of satellite services. The EU working paper describes the use of such capabilities as irresponsible "when they jeopardise the security of people and goods." Brazil, Sweden, and the United Kingdom noted risks to critical civilian infrastructure. Possible spillover effects were emphasized by Norway, Germany, and Austria. Norway noted that jamming of global navigation satellite systems (GNSS) has affected the satellites that depend on GNSS service to operate. Germany pointed to the impact on civilian wind turbines from the cyber attack on ViaSat commercial operations in Ukraine.

Japan, Brazil, and the Philippines raised national security concerns about possible interference with sensitive or strategic military capabilities such as nuclear early warning and command-and-control capabilities. Japan also noted the potential for cyber interference

to raise collision or debris risks.

Nonetheless, Russia tried to exclude cyber discussions at the Space Threats OEWG because of ongoing work at the UN related to information and communication technology. China argued that military activities on land are already covered by comprehensive rules.

Civilian capabilities as threats

A few states saw possible threats in civilian and commercial space systems.

Russia accused the United States and allies of using components of civilian and commercial space systems and infrastructure for military purposes on Earth, noting that such components involve "in essence direct participation in armed conflict and can be legitimate targets for a retaliation strike." Iran agreed. Russia argued that such "provocative" use contradicted the Outer Space Treaty and should be condemned.

Sri Lanka referred to broader "threats by private entities" and highlighted difficulties in attributing sources of threat. Pakistan noted that the line between peaceful and military uses of space is becoming blurred, arguing that non-government actors no longer confine their activities to "peaceful exploitation" of space. China expressed concern for commercial participation in military activities and argued that the development of commercial constellations in low Earth orbit could produce debris.

The Netherlands and Germany replied that military uses of space are not prohibited, separating the use of space for military purposes from the weaponization of space. It should also be noted that the OST does not differentiate between military and civilian/commercial space systems. Nonetheless, the growing involvement of such space systems in armed conflict does raise questions about how or whether to apply international humanitarian law (IHL) in outer space, with Russia arguing against such an application despite comments about possible "legitimate targets" in space (see IHL under responsible behaviours below).

Dual-purpose capabilities

The implications of dual-purpose technology, which can be used for both helpful and harmful purposes and by military and commercia/civilian actors, were explored, with a focus on capabilities for RPO. The United Kingdom noted that such capabilities are integral to active debris removal and satellite servicing but could be repurposed.

Discussion highlighted the challenges of focusing exclusively on threatening capabilities and the importance of considering behaviours and uses. The United States argued that efforts to restrict capabilities with dual-purpose potential would constrain novel and useful applications. On the flip side, the United Kingdom observed that threatening capabilities do not always have the characteristics of a weapon. As Japan claimed, what matters in these contexts is behaviour.

The discussion focused mainly on specific uses of capabilities, the effects of such use, and the conduct of activities. The Canadian formula "threats = capabilities + behaviours" suggests that how capabilities are used is key. Although India raised concerns about defining behaviours as either responsible or irresponsible, it saw merit in a behavioural approach to security, since many space objects are inherently dual-use.

Behaviours as Potentially Threatening

Because threatening capabilities do not always look like weapons or function solely as weapons, the United Kingdom recommended a focus on threats that arise from activities, actions, and omissions of states that are more easily observed and regulated.

Discussion under this theme included consideration of specific activities and actions, certain harmful effects of activities and actions. and how space activities are conducted.

The types of threatening activity discussed by particular states included:

- Anti-satellite missile tests (EU, United States, Germany, Philippines, Türkiye [Turkey], Canada, United Kingdom)
- Other weapons tests, including non-kinetic (China)
- Destruction or damage of space objects (Ireland, France, Australia, Canada, Russia, Egypt)
- Interference with launch activities (China)
- Disruption of/interference with normal functioning of a space object (Russia, Romania, Ireland)
- Interference with command/control of space systems (China, Germany, Philippines)
- Use of kinetic force (Sweden, Ireland)
- First placement of a weapon in space (Russia)
- Use of space objects to destroy other objects (Ireland)
- Dazzling/blinding satellite sensors (United Kingdom)
- Release of undisclosed secondary objects on orbit (Ireland, Brazil, Germany, Philippines)
- Uncontrolled re-entry (Philippines)
- Use of stealth objects (Brazil)
- Taking control of space objects (Brazil)
- Uncooperative RPO (EU, Germany, Philippines, Republic of Korea, Brazil, Ireland, Russia, France, Japan, Switzerland, United Kingdom, Austria, Netherlands)
- Uncoordinated launches of vehicles/rockets (Germany, Philippines)
- Interference with civilian-critical infrastructure (Japan, Sweden)
- Interference with military command-and-control capabilities (Japan)
- Interference with situational awareness, surveillance, intelligence capabilities to conceal harmful or threatening activities in space (Germany, Philippines).

Most activities were deemed threatening and/or irresponsible because of the harmful effects that they can have.

Weapons tests as threatening

A significant focus in the discussions was on destructive tests of anti-satellite missiles, most of which are connected to ABM capabilities (see above). Russia, India, China, and the United States have already conducted such tests, but momentum is growing for voluntary moratoria against such testing (see below).

The United States described such testing as "the greatest near-term threat to space security." Türkiye concurred; Germany and the Philippines labeled such tests irresponsible; the United Kingdom emphasized that such behaviour is difficult for others to interpret.

Support for rules or restrictions against this testing is rooted in concern for the effects that tests generate, including space debris, as well as political tensions and instability in space. The EU argued that these tests demonstrate an intent to target adversaries.

Pointing to the threats posed by other types of weapons capabilities, such as on-orbit counterspace capabilities, the United Kingdom noted the danger associated with the difficulty of distinguishing between testing and actual use of such a capability against a foreign object. This recognition is related to another theme of discussion: the role of intent as a component of responsible or irresponsible behaviour.

Questioning intent

Some states viewed intent as a key component of threats. Russia equated threats purely with intent, arguing that actions that do not have a "peaceful" intent are irresponsible – and also illegal. Using accusations of "dangerous rendezvous in space" as an example, Russia argued that such an action is not "illegal" and that "insisting on perceiving it in a certain way itself violates law through an effort to re-interpret it." Mexico argued that the development of TCBMs in space could help to avoid such misinterpretations of intent.

Other states also saw value in a focus on behaviour to interpret intent. The EU asserted that testing of weapons systems signals an intent to use them; the United Kingdom argued that an understanding of behaviour associated with testing of capabilities can clarify the difference between an intent to test and an intent to use a capability against another operator or state. In this case, intent is only part of what determines threat. Australia's proposed framework for what constitutes a threat is "behavioural conduct by an actor with intent, causing or having potential to cause detriment to persons or things" – in other words, behaviour + intent + harmful effects. For Australia, the effects are key.

Other states saw intent as irrelevant. The Philippines described a threat as "any deliberate actions that harm space-based access, sustainability, or key services for the public or national security," regardless of intent. Romania equated any disruption of space systems, intended or not, with threat.

A focus on effects

Many states emphasized the harmful effects of certain behaviours – on the environment, persons or things – or the political dynamics of conflict escalation as threatening.

ENVIRONMENTAL EFFECTS

Space debris was the dominant concern. Speaking for ASEAN, the Philippines argued that

multilateral fora must mitigate threats of space debris and indicated its own willingness to work with all parties on this issue. Discussion illustrated the growing support for a moratorium on the destructive testing of direct-ascent ASAT capabilities (see responsible behaviour below).

IMPACTS ON CIVILIANS AND CRITICAL INFRASTRUCTURE

The United States raised this concern, noting that actions to interfere with military space systems would likely also interfere with civilian users. Discussion was particularly focused on the use of non-kinetic capabilities, particularly cyber. Using the damage to ViaSat ground terminals as an example, Germany made the point that cyber attacks can produce secondary effects on critical infrastructure on Earth. In this case wind turbines in Germany were disabled. Austria asserted that the resulting damage to critical infrastructure raises humanitarian concerns.

CONFLICT ESCALATION

Activities or behaviours that are deemed threatening can contribute to conflict escalation, both directly and indirectly. France noted that activities that cause damage to the space environment or produce serious consequences for the welfare of people might lead to conflict escalation, even if they are the result of the use of non-kinetic capabilities. The United Kingdom was concerned about electronic warfare, which could lead to miscalculation and miscommunication; as an example, Japan noted possible affects on sensitive military capabilities such as nuclear early warning or command-and-control.

Specific effects seen as threatening by some states include:

- Causing harm/detriment/damage to persons or things (Australia, Sweden, France)
- Destruction or damage of space objects (Ireland, France, Australia, Canada, Russia, Egypt)
- Disruption of/interference with the normal functioning of space objects/service (Russia, Romania, Ireland)
- Use of space objects to destroy other objects (Ireland)
- Loss of functionality/control (Brazil, China, Sweden)
- Irreversible damage to satellites (Philippines, Canada, Russia)
- Interference with launch (China)
- Harm to space access (Philippines)
- Harm to space environment/sustainability/debris (Philippines, Switzerland, ASEAN, EU, Egypt, ICRC, Sweden, Netherlands) (see also DA ASAT moratorium below)
- Harm to key services/infrastructure/civilians (Philippines, Sweden, France, Switzerland, United States, EU, ICRC, United Kingdom, Brazil, Austria, Germany)
- Escalation of political conflict/miscalculation (France, United Kingdom)
- Harm to critical military capabilities, i.e., early warning/command-and-control systems (Switzerland, Japan, Brazil).

Many of the specific effects overlap with behaviours and activities. For example, disruption or destruction of space systems, jamming, and blinding can be interpreted as either intentional behaviour or effect.

A focus on the conduct of activities

Discussion also explored the role of conduct – how capabilities are used or activities undertaken – in the perception of threat. India noted that certain behaviours can be misinterpreted as irresponsible even if intent is peaceful or not malicious. The United Kingdom argued that behaviour might be seen as threatening if it does not follow an expected pattern or the capabilities are unknown. The following examples are of conduct raised during the discussion that generally falls under the category of failures and omissions that obscure intent or cause capabilities and activities to be perceived as threatening:

- Failure to notify
- Failure to coordinate or seek consent if it involves/affects another satellite/operator/state
- Failure to communicate
- Failure to register/provide information
- Omission of information.

Geopolitical threats

Some states put space threats in the context of prevailing military conditions and orientations on the use of outer space.

POLICY THREATS

Calling physical threats to space systems "symptoms" rather than root causes, China described "policy threats" that are rooted in strategic national doctrines that promote dominance in space and refer to outer space as a "warfighting domain."

Iran was also concerned about domination in space. Pakistan pointed to the growing number of dedicated space commands. Mexico highlighted current geopolitical competition in outer space, re-organization of militaries to "tackle security and threats in space," possible "militarization" and quests for supremacy, all of which could result in accidents and conflict on Earth. France and Switzerland pointed to risks that military doctrines could escalate tensions or incentivize conflict.

To respond to these threats, France and the United States called for greater transparency. China urged the OEWG to rule out warfighting in space.

MILITARY THREATS

Russia saw "military threats" rooted in interstate relations (or geopolitics) that displayed the possibility of an outbreak of military conflict and a high level of readiness to use military force. In this context, Russia noted that its armed forces are tasked to "prevent an air-based or space-based attack, ensure readiness to repel strikes, deployment and maintenance of orbital space equipment ensuring armed forces activities, and the development of space-based defence mechanisms."

Reducing Threats

Although the creation of recommendations on how to ensure responsible behaviour in outer space is scheduled for the third meeting of the OEWG in early 2023, comments made during the second meeting included possible proposals.

The responsible conduct of activities

Behaviours that are seen to mitigate risks include those associated with the principle of due regard in Article 9 of the OST, which the Philippines and Germany described as "foundational" to responsible behaviour, as well as general practices related to transparency and communication. These include:

- Prior notification
- Coordination and communication
- Consultations
- Providing data
- Prior consent.

Restrictions on threatening capabilities/behaviours

One form of responsible behaviour is to refrain from – or even to institute possible formal restrictions against – the use of capabilities or activities deemed inherently threatening.

DESTRUCTIVE ANTI-SATELLITE MISSILE TESTS

The United States made the first commitment to a moratorium on destructive tests of DA ASAT missiles in April 2022 and was joined by Canada, Japan, and Germany during the first OEWG meeting. Six more states (Republic of Korea, Japan, United Kingdom, Switzerland, Australia, France) have since made a similar commitment. Such commitments were welcomed by additional states at the OEWG, including Norway, New Zealand, Italy, Belgium, Ireland, Poland, the Netherlands, Portugal, Austria, and Romania.

The United States argued that such a voluntary commitment meets the requirements for a TCBM because it is clear and precise, it can easily be confirmed by others, and it eliminates a source of mistrust or misunderstanding. More information is available in the submitted aide-mémoire. Switzerland called on all states that have conducted destructive DA ASAT missile tests to join the moratorium and asserted that the ban should extend beyond testing to a prohibition of such systems and include co-orbital capabilities; Brazil wanted a legally binding ban.

However, China indicated that it "opposes attempts to expand military superiority under the pretext of arms control." Pointing to the absence of restrictions on research, development, or deployment of such weapons systems, it argued that a moratorium on testing has much less practical value than a comprehensive agreement such as the draft PPWT treaty. Russia called the moratorium discriminatory, arguing that "certain states won't have a shield while others still have a sword" and claiming that there is no definition of ASAT tests.

WEAPONS IN SPACE

Russia asserted the need for a more comprehensive ban against creating, testing, or deployment of weapons in space, including for ABM defence or ASAT purposes, and called for destruction of any such systems that already exist.

Switzerland made the point that space-based ABM systems could be banned because they do not correspond to dual-use or dual-purpose systems.

HARMING SPACE OBJECTS

Russia recommended restrictions of activities to destroy, damage, or undermine the normal functioning of a space object belonging to another.

PROHIBITING THE USE OF FORCE IN OUTER SPACE

Russia called for a prohibition on the use, or threat of use, of force in outer space. However, Russia was also a signatory of the note verbale to the Chair that disagrees with suggestions from the first meeting of the OEWG to define concepts such as use of force in outer space. Russia's working paper does suggest that both kinetic and non-kinetic types of force would be prohibited.

A DECLARATION AGAINST WARFIGHTING

China called for the OEWG to confirm that "war in outer space can never be won and must never be fought," that no state should seek hegemony or dominance in space, and that no state should consider outer space a warfighting domain.

Establishing baseline behaviours for specific activities

The United Kingdom argued in favour of establishing baseline behaviours for specific activities; such behaviours would help not only to identify the nature of an activity but to differentiate it from other, potentially more harmful, actions.

Application of IHL in outer space

Austria argued that international law, including IHL, fully applies to outer space. This position was supported by Norway, Switzerland, the Netherlands, and Australia.

However, Russia and Cuba argued that, in principle, no armed conflict is legally possible in space and is in fact illegal (see recap of the first meeting). Norway countered that acknowledging the applicability of IHL to outer space did not legitimize the use of force or weapons in space, while the Netherlands called it an "illusion" to believe that if something is not regulated it will not happen. Switzerland noted that limits imposed by IHL and international law would likely help to prohibit many harmful activities and their effects in outer space.

Mechanisms

States saw the need for new means and mechanisms to encourage responsible behaviour. The Philippines stated the necessity for new channels of communication and mechanisms for consultation but was not sure how they would be created.

Austria called for improved sharing of information, including space situational awareness

data, to both enhance transparency and facilitate verification of activities and behaviours. China argued that SSA technology could potentially be used to detect and trace the orbits and features of space objects, but that any such mechanism must be "politically accepted, technically feasible, economically affordable, and have a legal basis."

The Netherlands pointed to existing mechanisms that could improve transparency, such as the UN Register of Space Objects, the Hague Code of Conduct Against Ballistic Missile Proliferation, and work in other fora related to space traffic management and commercial activities.

Next Steps

Several new initiatives related to the discussion at the second OEWG meeting have since unfolded in the context of the UN General Assembly First Committee on International Disarmament and Security, which mandates the work of the OEWG.

The United States introduced a new draft resolution that calls for states to adopt voluntary moratoria on destructive tests of direct-ascent anti-satellite missiles; the final resolution was adopted by the General Assembly by a vote of 155 in favour, nine against, and nine abstentions.

Russia and China were co-sponsors of a draft UN resolution pertaining to further practical measures to advance PAROS at the UN First Committee, asking the UN Secretary-General to establish another Group of Governmental Experts with a focus on preventing the placement of weapons in outer space. Under this proposal, the group would commence in the fall of 2023, after the conclusion of the final meeting of the current OEWG. Voting on the final resolution at the General Assembly was postponed pending a review of budget considerations.

Each of these actions is likely to influence discussion at the next meeting of the OEWG, which will take place in Geneva from January 30 – February 2 and will focus on identifying recommendations for responsible behaviour in outer space.

Additional Resources

Several states submitted working papers to the OEWG related to space threats. Working papers and some oral statements can be found here.

Live-tweeting of the exchange of views is available from Project Ploughshares:

- Day 1
- Day 2
- Day 3
- Day 4
- Day 5.

Web recordings of the exchange of views among states is available online:

- Day 1
- Day 2
- Day 3
- Day 4
- Day 5.

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