

The Open-Ended Working Group on Space Threats

RECAP OF THE FIRST MEETING, MAY 2022

By Jessica West and Mehnaz Hossain



ABOUT THIS REPORT

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ACRONYMS AND ABBREVIATIONS

ASAT	Anti-satellite
ASEAN	Association of Southeast Asian Nations
IHL	International humanitarian law
OEWG	Open-Ended Working Group
OST	Outer Space Treaty
PAROS	Prevention of an arms race in outer space
TCBM	Transparency and confidence-building measure
UN	United Nations
UNGA	United Nations General Assembly

Whether or not we realize it, we all depend on capabilities in outer space. They provide data and support services essential for the running of hospitals and other medical services, electricity grids, banking, most communication media including the Internet, and transportation operations that bring food and other goods to our local communities.

But our ability to continue to access these services is not assured. The entire terrestrial-space infrastructure is threatened by new technology and a deteriorating international security environment, in which more and more states see space as an appealing target for disruption and even violence. This threat to our way of life could be on the scale of climate change, with repercussions that will be felt for generations.

To prevent such a catastrophe, the United Nations (UN) Open-Ended Working Group (OEWG) on Space Threats held its first meeting in Geneva from May 9-13, 2022. Bringing together state delegations as well as representatives from civil society, this event was the first in a series that is intended to identify and develop a shared understanding of the threats posed by state behaviours in outer space; and to recommend norms, principles, and rules of behaviour that foster greater stability and security for all.

The success of this OEWG will be determined by how well it meets the core interests of all states. Some favour efforts to regularize and make transparent military behaviours that might otherwise lead to accidents, misunderstandings, and escalating conflict dynamics. Others prefer a ban on activities and capabilities linked to weapons and warfighting. While the first meeting of the OEWG rehashed many long-standing debates, it also suggested opportunities for complementarities and convergence, and reflected a pervading sense of common purpose.



A group photo from the first meeting of the Open-Ended Working Group on Space Threats, held in Geneva, May 2022.

Meeting overview

Approximately 50 states from all regions of the world participated in the first OEWG session. Such representation was itself a mark of success; this success was amplified by excellent and active contributions from many delegations. As OEWG Chair Hellmut Lagos of Chile noted, such efforts proved that a threatened outer space “is indeed a global priority that affects everyone.”

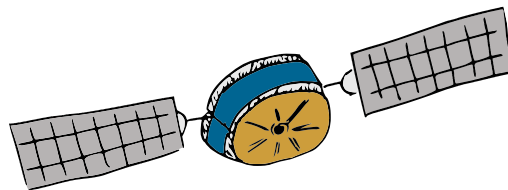
Civil society organizations holding consultative status with the United Nations Economic and Social Council (ECOSOC) were invited to participate in the proceedings; other civil society groups as well as private sector organizations were allowed to attend the meeting and participate in informal sessions. In addition to Project Ploughshares, the meeting was attended by Canadian Pugwash Group, the Stockholm International Peace Research Institute (SIPRI), and Secure World Foundation.

This first meeting allowed for a general exchange of views and took stock of “the existing international legal and other normative frameworks concerning threats arising from State behaviours with respect to outer space.”

To facilitate discussion, global experts gave [presentations](#) on topics that included:

- a) existing international law concerning threats arising from state behaviours with respect to outer space;
- b) international law relating to the use of force in international affairs in the context of threats arising from state behaviours with respect to outer space;
- c) protection of civilians, civilian objects, and the natural environment in relation to threats arising from state behaviours with respect to outer space;
- d) applicable elements of the legal regimes governing aviation and the sea in the context of threats arising from state behaviours with respect to outer space; and
- e) voluntary mechanisms and regimes applicable to outer space in the context of threats arising from state behaviours with respect to outer space.

The following is a recap of key points of discussion, agreement, and debate.



A summary of the general exchange of views

The OEWG and the PAROS mandate

The OEWG falls under the [decades-old](#) UN General Assembly (UNGA) mandate on the prevention of an arms race in outer space (PAROS). The PAROS mandate stems from a desire to maintain the dedication to peaceful uses that marks the spirit of the Outer Space Treaty (OST). But the treaty itself provides few guardrails that would prevent non-peaceful uses. Article III contains a general obligation to conduct activities in outer space “in the interest of maintaining international peace and security and promoting international co-operation and understanding.” Article IV prohibits the placement in orbit or on celestial bodies of weapons of mass destruction, and bars military activities and installations on the Moon. There are no other restrictions on military activities, which have never been barred from space.

For many states, the focus of PAROS is strictly on arms control, specifically the prevention of the deployment or use of weapons in space; this view is applied to the OEWG. For example, China stressed that the OEWG “must prevent the weaponization of outer space”; Russia echoed this sentiment. A statement on behalf of the Association of Southeast Asian Nations (ASEAN) asserted that “PAROS and the prevention of weaponization is of vital importance.” The Philippines declared that “preserving space means keeping it free of weapons.”

But others interpret PAROS more broadly. The United Kingdom – the lead state in the effort to create the OEWG – has argued that it is not sufficient to address only the presence of weapons in space: “PAROS requires addressing a wide range of threats that could lead to conflict.” France expressed the need to address “behaviors that fall under the threshold of force” but which might disrupt normal operations of space systems during peacetime. The United States pointed to the growing interaction of military satellites with other space systems, which could be misinterpreted and miscommunicated, heightening security risks.

During the meeting, the European Union stressed that norms are the most practical way to strengthen space security by increasing the transparency and predictability of space activities. Australia pointed to the role of norms in producing “certainty and stability.”

However, the OEWG does not neglect arms control.

Finding linkages between behaviours and capabilities

The narrower approach to PAROS as arms control has historically prioritized controls on weapons capabilities or hardware. The OEWG approach focuses on behaviours – what Norway described as “the way that activities are conducted.”

The desire for a behavioural approach to PAROS is in part due to the perceived challenges of arms control posed by the dual-use and dual-purpose nature of space-based infrastructure and technical capabilities. As Germany noted, because space-based capabilities can be misused, efforts to limit or restrict certain capabilities or objects don’t solve the problem. Pointing to the Canadarm as an example, Canada explained that not all dual-use capabilities are threatening. Instead, the OEWG must determine threat based on behaviour or how something is used.

France called on the OEWG to focus on “deliberate actions,” such as the intentional creation of space debris, when determining threats to international security in outer space. However, Russia questioned the ability to determine if an act is deliberate, while also pointing to the ability to use weapons capabilities for peaceful purposes.

The discussion also demonstrated a range of links between a focus on hardware and one on behaviours. In addition to a ban on weapons in space, Russia promoted a prohibition on the threat or use of force against space objects, or the use of capabilities for this purpose. The Netherlands indicated that “armed attacks” in space should be prohibited. Pakistan stated that, because the “use of some capabilities may be deemed irresponsible,” it is not possible to avoid discussing capabilities even while working on behaviours. In its closing statement, the United Kingdom noted that discussion had almost exclusively centred on “actions, activities, and behaviours in space rather than capabilities.” Mexico embraced this linking of capabilities and behaviours. Brazil suggested that the OEWG could seek to define weapons “by their effects and how they are used.”

This linkage was played out in real life in the U.S. unilateral moratorium on the destructive testing of direct-ascent (ground-based) anti-satellite (ASAT) capabilities, which was announced just before the OEWG’s first session (see below).

Getting past the law-versus-norms debate

If the substantive focus of PAROS has been on weapons, its operational focus has been on a new legal agreement that bars them. This objective remains a priority for some states at the OEWG. Noting existing laws that fail to bar weapons or the use of force in outer space, China emphasized the need for full implementation of international law to avoid conflicts and a legally binding arms control agreement. The OEWG, however, looks beyond law to include “principles, rules, and norms.”

As the discussion in May indicated, a focus on norms is not contrary to a focus on law. Indeed, the OEWG is [mandated](#) to “make recommendations on possible norms, rules and principles of responsible behaviours,” and how they might “contribute to the negotiation of legally binding instruments.”

Many states view norms and the OEWG process as transparency and confidence-building measures (TCBMs) that can aid in the development of a legally binding arms control agreement. Spain, Switzerland, Sri Lanka, and Venezuela saw the focus on TCBMs or “soft law” as responsible behaviour that could complement existing law and serve as a gateway or intermediate step to binding rules or negotiation of a treaty. South Africa and Algeria were among the states that supported the pursuit of both. However, states including Cuba, Egypt, Venezuela, the United Arab Emirates, and members of ASEAN presented views like that of India, which stated that “norms cannot substitute for legally binding international law.”

States that favour norms have become less likely to posit them as an alternative to a new legal arms control agreement. New Zealand described the OEWG process as iterative and noted that the focus on norms does not rule out a legal agreement in the future. Secure World Foundation argued that norms can evolve into law.

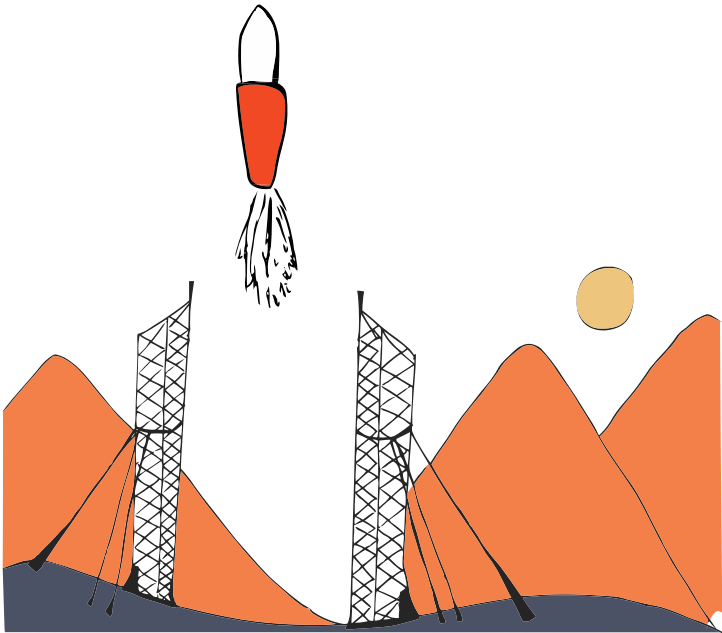
Ultimately, however, a universally accepted understanding of “responsible behaviour” and its relationship to law remained illusive.

Establishing what constitutes responsible behaviour

Sri Lanka expressed concern about the lack of a clear and universal understanding of “responsible behaviour.” Some other states concurred. Russia noted that the OEWG has yet to identify criteria and mechanisms to define and assess responsible behaviour.

The United Kingdom and Canada described responsible behaviour as desirable and irresponsible behaviour as undesirable, while noting that some activities deemed undesirable may be permissible under international law, in this way distinguishing norms from laws. The United Kingdom explained that undesirable behaviours may fall into a legal grey zone or prove difficult to define in strictly legal terms. Both Russia and Cuba, however, denied the existence of this grey zone, insisting that responsible behaviour is always legal behaviour and irresponsible behaviour illegal.

India maintained the view that it had expressed at the UN First Committee: the concept of responsible behaviour is subjective; however, it remained willing to engage on the topic. Iran insisted that because of the principle of sovereign equality, states could not judge the actions of others. Canada indicated that labels are applied to behaviours and not states. States including France believed that the OEWG, working with the existing legal and normative frameworks, should be the judge of what constitutes responsible behaviour.



A summary of the exchange of views on the existing legal and normative framework

The first substantive task of the OEWG involved laying out the existing legal and normative framework.

India described the role of the OEWG as one that promoted “common understandings” about this existing governance framework, which New Zealand stressed could be used in identifying and developing norms of responsible and irresponsible behaviour. While this view was generally accepted, Cuba cautioned against “re-interpreting the existing legal framework,” and emphasized the need to avoid different interpretations of law in practice.

Several key principles embedded in existing governance documents (see below) were used as a basis for determining responsible behaviour in outer space. Additional key points of discussion are listed in the following section.

The applicability of international law

Unanimity on the applicability of international law to outer space activities marked a much-needed point of consensus. There was disagreement, however, on specific applications of international law to space.

- **Civilian protection and IHL**

International humanitarian law (IHL) regulates the conduct and methods of war and outlines necessary protections for civilians. Numerous states, including Sri Lanka, Switzerland, Mexico, Norway, the Netherlands, and Austria, as well as the International Committee of the Red Cross, expressed concern that conflict in outer space could harm civilian infrastructures, activities, capabilities, and users on Earth. But even though it was clear that civilians need protection in these cases, not all states would agree that IHL should be applied to conflict in outer space.

Most states stressed that IHL, as an element of international law, applies to outer space. But China and Russia insisted that agreeing to apply IHL in space is premature. As China stated, “support for IHL will result in the acknowledgement of space as a domain for war.”

South Africa noted that the militarization of space is already widely accepted and that the role of the OEWG is to encourage common understandings of the conditions under which IHL could be applied to space activities, and a commitment to implementation. Brazil claimed that IHL made warfare in space less likely because it limited the number of legitimate options available to parties in a conflict. Such limits were particularly important now, with many states developing weapons for use in outer space. Ignoring this reality will not help to prevent conflict.

France declared that consensus on the applicability of international law to outer space must include IHL. And a path for consensus remained open. In its closing statement, Russia acknowledged that “IHL is part of international law as a whole.”

- **Self-defence and the use of force**

France also reiterated the right to resort to armed conflict in self-defence, as acknowledged in Article 51 of the UN Charter. However, the threshold at which force may be employed in outer space has never been established, nor have the criteria for a justified armed attack. Australia stated that “thresholds and limitations on self-defence apply to space” and called on states to share views about the use of force in outer space, including the use of non-kinetic weapons or those with reversible effects.

Cuba stressed that while international legal norms on the use of force applied to all domains, including outer space, scope and applicability were not clear. It argued that the legitimate right to defence in space cannot override other international obligations, including the obligation to compensate for potential damage caused by exercising that right.

The Outer Space Treaty

Building on existing principles and international commitments is key to developing consensus on norms. Of particular importance is the OST, which the United States referred to as “the cornerstone governing principle for space activities.” Numerous principles embedded in it, particularly those found in Articles I and IX, were brought forward as bases for responsible behaviour.

- **Peaceful use**

Discussion reflected an overwhelming commitment to the principle of the peaceful exploration and use of outer space. Even so, different points of emphasis emerged.

Many saw the peaceful use of outer space as an obligation. Argentina stated that, if outer space is to benefit all countries, as stipulated in Article I of the OST, then the use of space “needs to be peaceful.” South Africa emphasized peaceful use as essential for development.

Others went further and indicated that the OST restricted non-peaceful uses. Describing military activities in space as concerning, Mexico insisted that all exploration and use of space must be “exclusively” peaceful. This view was echoed by Syria. However, passive military uses have long been accepted as peaceful; France noted that military activities have never been barred from space.

Other states viewed the peaceful use of outer space as an important right. ASEAN stressed that “states have an inherent right to peaceful uses of space technology.”

- **Access to space, equity, and equality**

Canada referred to Article I of the OST to validate free and accessible use of outer space as another point of consensus. On this point, too, different emphases could be detected. Many states with emerging space programs, such as Argentina, stressed “equal access without discrimination,” expressing a concern that the adoption of new norms and rules might unfairly hinder less developed states. The United Arab Emirates stated that “equal and fair access to space is important to the definition of norms that address threats to space systems. States with emerging space programs need a chance to develop them to

address social-economic development.” China insisted that norms not discriminate against any states that seek to use space resources peacefully. Venezuela stated that space must only be used for peaceful purposes, without discrimination.

Emphasizing equality in terms of “equal security,” Pakistan expressed the view that advanced states have a greater responsibility for PAROS. Nigeria asserted that states without the capacity for weapons systems deserved solid non-use commitments from those states that did. Pakistan called for “equal security for all states.”

- **Due regard and international consultation**

Featuring prominently in the discussion were principles outlined in Article IX of the OST, particularly the obligation that States Parties to the Treaty conduct space activities “with due regard to the corresponding interests of all other States Parties to the Treaty,” and that they pursue international consultation before conducting potentially harmful activities.

In discussions on responsible behaviour, the Philippines emphasized the principle of due regard, submitting a [working paper](#) on this topic. Other countries that valued this principle included the United States, Nigeria, Japan, Germany, South Korea, Australia, the Netherlands, and Canada. Nigeria described the principle as a “balancing of rights and interests among states and the international community as a whole” and indicated a desire to include it in any possible outcome document, while Canada described the value of this principle as a point of consensus. Nonetheless, as the Philippines noted, norms are needed to give this principle “concrete expression.” Japan indicated that norms would make the content clearer; Australia and Germany believed that norms would ensure a shared understanding of expectations of due regard.

The OEWG heard presentations on international law that dealt with other domains, such as the seas and the air, and illustrated the parallels in such shared concepts as due regard. China, however, focused on differences, including how such principles operated. The Netherlands expressed concerns about attempts to define the scope of due regard, arguing that its application varied according to the situation. Cuba claimed that while due regard sounded nice politically, it was legally limited.

Some states expressed the view that obligations to consult informed concepts of responsible behaviour, but were poorly developed in practice. Turkey, Germany, and France believed that mechanisms such as contact points or direct channels of communication would help to facilitate consultations. The Philippines saw such mechanisms as “low hanging fruit.”

Japan and Australia both commented on the lack of a common understanding of related concepts from Article IX, including “harmful contamination” and “harmful interference.”

- **Cooperation and mutual assistance**

As Japan and Mexico noted, Article IX also obliges states to pursue principles of co-operation and mutual assistance in the exploration and use of outer space.

Russia emphasized international cooperation in the development of a shared understanding of risks, hazards, and dangers in outer space; and joint definitions of measures to be

undertaken. States including India and Algeria called for the principle of cooperation to extend to technical assistance and capacity building. Iran noted the need for such cooperation to help developing countries to implement international commitments such as the UN's long-term sustainability guidelines for space activities.

Security-related norms and commercial actors

The OEWG is mandated by the UN First Committee on Disarmament and International Security and reports to the UN General Assembly and its member states. Under the OST, states are responsible for the activities of commercial operators. Still, there was general agreement that the discussions were relevant to commercial operators, particularly because many space systems are dual-use and some technical capabilities are dual-purpose. Thus, commercial actors were invited to attend the meeting and participate in informal sessions. None attended the event in May, but their importance to the discussion was raised during the week. Australia noted that the development and implementation of norms would contribute certainty and stability to outer space activities, which would benefit commercial operators. China asserted that rules were needed in space to avoid potential misinterpretation and conflict escalation and to ensure safety and the ability for all to use space.

A norm proposed: A moratorium on destructive ASAT testing

Before the OEWG meeting began, the United States announced a unilateral moratorium on the destructive testing of direct-ascent ASAT capabilities to reduce the risk to the environment, reduce the risk of misperception and misunderstanding, and build trust. Describing these ASAT tests as "the most pressing threat to all countries using outer space," the United States reiterated its commitment in a statement at the OEWG meeting, referring to the moratorium as a first step that could provide the basis for future arms control agreements. The United States also stressed that it was working with others to make the moratorium multilateral.

In its first statement to the OEWG, Canada announced that it had officially signed on to the moratorium. Both the United States and Canada stressed that the moratorium was to be viewed as one step toward new norms of responsible behaviour, and not the only outcome desired or needed from the OEWG.

Although no other states formally pledged to join the moratorium, states including France, South Korea, Ireland, Turkey, Spain, Japan, Austria, Chile, Mexico, Australia, Switzerland, Poland, the Czech Republic, Norway, the United Kingdom, Italy, South Africa, and Ireland voiced encouragement and support. Brazil suggested that the security environment in outer space would be much better if such a commitment were reciprocated by others; Germany called for a universal norm against destructive ASAT tests.

Although Russia noted that the declaration was a positive response to practical initiatives on PAROS, it described it as too narrow, leaving open both the development of kinetic ASAT systems and non-destructive testing. China welcomed any arms control initiative that contributed to PAROS but also expressed concern about the narrow scope of the declaration and suggested that it was a means of seeking advantage under the guise of arms control. China maintained that efforts to reduce space debris would be in vain if the weaponization of space were not prevented.

Summary of suggestions

Although not all were discussed in detail, many ideas for principles and mechanisms to implement them were raised. These include the following.

Guiding principles

- Freedom of use
- Peaceful use
- Due regard
- Prior consultation
- Fair/rational/equal use for the benefit of all
- Cooperation
- Mutual assistance
- Non-appropriation
- Non-militarization/weaponization
- Responsibility for damage caused by space activities/liability
- No dominance in outer space
- Non-discrimination
- Civilian protection/protection for critical infrastructure and services
- Equal security for all states
- Self-defence

Measures to enhance transparency and communication

- Emergency contact lists
- Direct communication channels
- Exchange of information on space activities/budgets/policies
- Exchange of information/warnings on orbital parameters of space objects
- Data sharing to monitor near space/mitigate space debris
- Pre-notifications
- Improved/shared space situational awareness for verification/attribution
- Improved registration practices
- Consultations

Restrictions, rules, and restraints

- Ban on lasers used to blind satellites
- Ban on developing or testing ASAT weapons

- Ban on space-based strike weapons
- No first placement of weapons in space
- Restrictions on missile defences, space forces
- Avoiding intentional destruction of any on-orbit spacecraft
- Avoiding the intentional creation of space debris
- Avoiding harmful Interference with satellite systems
- Avoiding interference with control space systems/critical services
- Rules for the interaction of satellites/rendezvous-and-proximity operations
- Legal reviews of new methods/means of warfare
- Full implementation of the UN Charter and space treaties

Capacity building

- Sharing of best practices
- Technical assistance

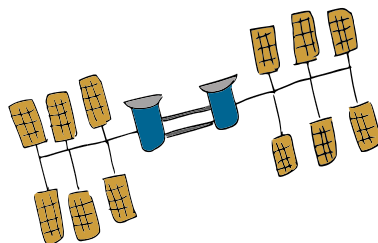
Dispute resolution

- A specific mechanism for dispute resolution, beyond consultations

Concepts to clarify

While there is general agreement that international law applies to outer space, existing law is woefully vague. During discussions, states noted the need to clearly define several key concepts related to law and to the development of norms of behaviour. They include the following.

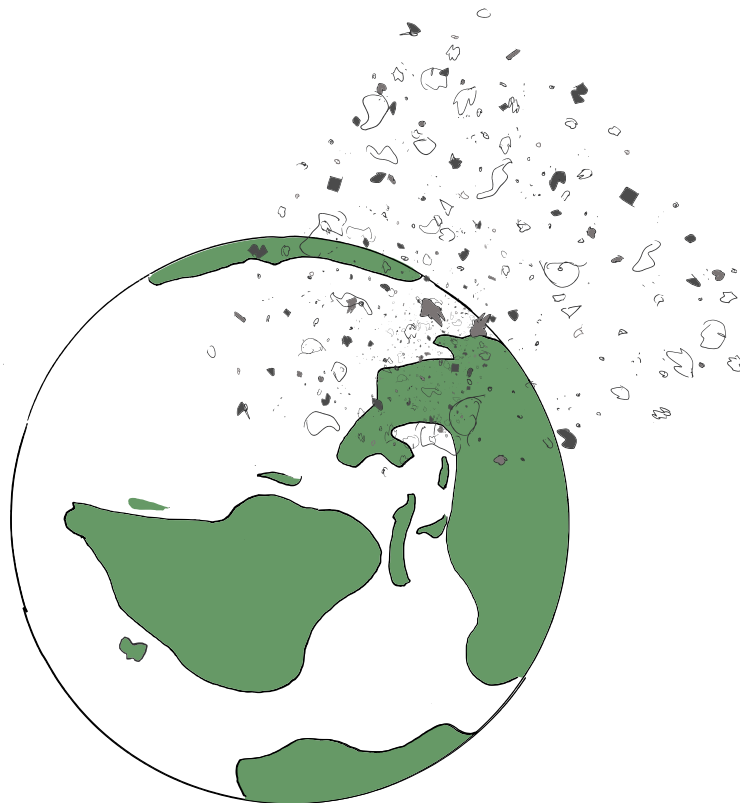
- Responsible behaviour
- Use of force
- Armed attack
- Harmful interference
- Dual-use and dual-purpose
- Due regard
- Peaceful use



Next steps

The next OEWG meeting on space threats takes place September 12-16, 2022, and will focus on current and future threats to space systems. Two additional meetings will be held in 2023 to discuss recommendations for principles, rules, and norms of responsible behaviour; and possible contributions to legally binding measures. They will be followed by a report to the UNGA.

Echoing the guiding principle of nuclear restraint, China and Egypt stressed that “war in space cannot be won and must not be fought.” Good-faith discussions at the OEWG are key to this outcome. While the ideal conclusion would be the adoption of common understandings of high-level principles and rules to put them into practice, the very process of having the discussion opens the door for a better understanding of how others see the rules of operating in space and can help states to avoid the worst outcomes.



ADDITIONAL RESOURCES

Looking for more information on the OEWG?

Documentation related to the OEWG is available on a dedicated [website](#) hosted by the UN Office of Disarmament Affairs.

Meeting Chair Hellmut Lagos has provided an unedited [summary](#) of the general exchange of views and statements relating to the existing international legal and normative framework.

A more detailed [analysis](#) of state positions on specific topics, including the numerous [working papers](#), has been prepared by Pranav R. Satyanath of the Takshashila Institution.

Daily Twitter [threads](#) of the discussion captured live are available from @JessLuella_West.



Project Ploughshares is a Canadian peace research institute with a focus on disarmament efforts and international security, specifically related to the arms trade, emerging military and security technologies, nuclear weapons, and outer space.

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