



Montreal, 4 May 2022

**Written Submission to the Open-Ended Working Group (OEWG) on
Reducing Space Threats Through Norms, Rules and Principles of
Responsible Behaviours
from the
Institute of Air and Space Law of McGill University, Canada**

Introduction

1. Pursuant to the Letter dated 26 April 2022 by H. E. Hellmut Lagos Koller, Chairperson of the OEWG on Reducing Space Threats Through Norms, Rules and Principles of Responsible Behaviours (the Group), which affirmed the opportunity accorded to international organisations, commercial actors and civil society to provide written considerations on matters under consideration by the Group, the Institute of Air and Space Law (IASL) of McGill University of Canada is honoured to submit the following statement to support the Group in its vital and timely deliberations.
2. Established in Montreal, Canada, in 1951, the IASL is one of the foremost institutions in the world specialised in the teaching, research and dissemination of knowledge of in space law (and air law). Through its research arm, the [McGill Centre for Research on Air and Space Law](#), the Institute has conducted various renowned interdisciplinary research on topics relating to arms control and disarmament in outer space, global space governance, and the peaceful and military uses of outer space.
3. The IASL commends ongoing efforts by the General Assembly, the Conference on Disarmament and States in establishing the Group. These efforts to seek consensus on how to identify and reduce space threats will pave the way for multilateral discussions and agreement on how to strengthen transparency and confidence-building measures in outer space activities, minimise miscommunication, miscalculations and misunderstandings, enhance space security, and help to prevent an arms race in outer space— all of which are integral to maintaining international peace and security in outer space and on Earth.
4. This written submission seeks to respond to operative paragraph 5 of Resolution 76/231, namely, “To take stock of the existing international legal and other normative frameworks concerning threats arising from State behaviours with respect to outer space”.

5. The IASL's submission is in line with the desire expressed in UN General Assembly Resolution 75/36 to "reach a common understanding of how best to act to reduce threats to space systems in order to maintain outer space as a peaceful, safe, stable and sustainable environment, free from an arms race and conflict, for the benefit of all".

Recent developments

6. For over six decades, the peaceful exploration and use of outer space, and various space applications and technologies have provided humanity with immeasurable economic, technological, scientific, social, cultural, and environmental benefits on a global scale.
7. However, due to the strategic nature of outer space, and the fact that space technologies and assets are inherently tied to military and strategic uses, outer space is now often described as being increasingly "congested, contested and competitive".
8. In recent years, direct-ascent anti-satellite weapons tests, and rapidly developing technologies have propelled the development and testing of a variety counterspace capabilities. Worryingly, the notion that "conflict in space" or "war in space" is inevitable has gained traction amongst some in policy and academic circles. As the [International Committee of the Red Cross has outlined in its submission](#) pursuant to General Assembly Resolution 75/36, using weapons in outer space that could disrupt, damage, destroy or disable civilian or dual-use space objects "entails a risk of significant human cost on Earth", and that "[a]s with the development of any new means or methods of warfare, the weaponization of outer space is not inevitable but a choice".

Reaffirming the Applicability of International Law to Space Activities

9. It must be kept in mind that, since the beginning of the Space Age, there has been [clear consensus among States](#) that international law, including the Charter of the United Nations (UN Charter), applies to activities conducted in outer space and on celestial bodies, and that outer space and celestial bodies must be explored and used in conformity with applicable international law and the UN Charter.
10. The IASL submits that the clarification of how existing international space law and public international law apply to the peaceful exploration and use of outer space is timely and vital. All space activities must be conducted in accordance with binding obligations and rights to ensure the peaceful exploration and use of outer space in a safe, responsible, and sustainable manner. These obligations would be further

complemented by the identification of appropriate norms, rules and principles of responsible behaviours by the Group.

11. The Outer Space Treaty contains several provisions that are highly relevant to reducing space threats and enhancing space security. In addition to reaffirming that outer space, including celestial bodies, must be explored and used “for the benefit and in the interests of all countries” (Article I), activities in the exploration and use of outer space must be carried on in accordance with applicable international law “in the interest of maintaining international peace and security and promoting international co-operation and understanding” (Article III).
12. Furthermore, in the peaceful exploration and use of outer space, including the Moon and other celestial bodies, States:
 - i) must have due regard to the corresponding interests of other States when conducting space activities (Article IX);
 - ii) must undertake international consultation with other States before proceeding with any space activity which is expected to cause potentially harmful interference with the space activities of other States (Article IX);
 - iii) enjoy the right to request consultation regarding space activity planned by another State that “would cause potentially harmful interference with activities in the peaceful exploration and use of outer space” (Article IX);
 - iv) should “inform the Secretary-General of the United Nations as well as the public and the international scientific community, to the greatest extent feasible and practicable, of the nature, conduct, locations and results of such activities” (Article XI).
13. These obligations attach to the freedom of the peaceful exploration and use of outer space, regardless of whether such activities are military or non-military in nature, and regardless of whether such activities are performed by governmental or non-governmental entities.

Clarification of Principles and Rules of International Law Applicable to Space Activities

14. Since 2016, together with a consortium of international partner institutions, the IASL has been developing the McGill Manual on International Law Applicable to Military Uses of Outer Space (McGill Manual or MILAMOS: <https://www.mcgill.ca/milamos>). The McGill Manual is the collective work of highly recognised professionals, and academics specialising in *inter alia* general international law, international space law, and international telecommunication law from across the globe – including persons from all Permanent Five States.

15. The McGill Manual is the result of a transparent consensus-forming and stringent peer-review process involving input from subject-matter experts affiliated with governmental and intergovernmental institutions, research institutions as well as the armed forces, in their individual capacity. The McGill Manual was highlighted at UNISPACE+50 as a successful civil society initiative to bring together space stakeholders with the objective of fostering dialogue and consensus on matters relating to the sustainability, safety and security of outer space.
16. The McGill Manual will be the world's first manual clarifying the international law applicable to military uses of outer space in times of peace, including challenges to peace. The McGill Manual will set out over 50 rules outlining, in the opinion of the experts, the legality and illegality of various military and strategic uses and applications of outer space, and will serve to clarify the limitations international law places on the threat or use of force in outer space.
17. Important fundamental principles that underpin all space activities, regardless of whether they are military or civilian in nature, include: the prohibition on the threat or use of force; carrying on space activities in accordance with the principles of non-intervention; refraining from intentionally causing harmful interference with the activities of other States in the peaceful exploration and use of outer space; the prohibition on the placement and testing of weapons of mass destruction (WMDs); and international legal principles that apply to the use of weapons other than WMDs. (Selected McGill Manual draft rules pertinent to the work of the Group are set out in the *Annex* to this document).
18. For instance, what does it mean to undertake the exploration and use of outer space with "due regard" to the corresponding interests of other States? By turning to the *travaux préparatoires* of the relevant space law instruments (in this case, the Declaration of Legal Principles and Outer Space Treaty), looking at relevant State practice and opinions expressed by States, as well as analysing the jurisprudence of international courts and tribunals, due regard can be understood as refraining from actions that would unjustifiably interfere with the rights of other States. Clarifying fundamental legal principles such as due regard would place concrete and binding legal constraints on the variety of means and methods aimed at disabling, disrupting or destroying of space objects or space activities of other States.
19. Similarly, the right of self-defence has been identified by numerous Members of the Group as being applicable to outer space. It is important that there be consensus on how, bearing in mind the unique physical and legal characteristics of outer space, the right of self-defence is to be understood and applied. Self-defence is a UN Charter right which can

only be invoked “if an armed attack occurs”. What constitutes an “armed attack” in outer space must be considered in the unique environment of outer space and in the context of conducting space activities. It is possible that States may perceive an “attack” as involving non-kinetic means and methods of causing damage or harm. The intensity and duration of conducting a rendezvous proximity operation, engaging in intentional harmful interference with radio frequencies, or the jamming and spoofing of electromagnetic communications, must be assessed in light of existing jurisprudence and/or State practice coupled with applicable *opinio juris* to clarify what may be considered under international law as an armed attack in the context of conducting space activities.

20. Such efforts at clarifying the law are necessary to ensure that all States have a common understanding of basic fundamental principles of international space law that apply to the peaceful exploration and use of outer space. Such efforts are all the more important in light of the increased number of space debris in orbit, as well as the plans of various States and private space actors to explore, exploit and utilise space resources on the Moon and other celestial bodies in the future.

Concluding Remarks

21. Though the Outer Space Treaty and the other core UN space law treaties were drafted over six decades ago, they still remain relevant to this day, and are applicable to all new activities that may emerge in the near and distant future.
22. Though new binding treaty law may be difficult to negotiate and adopt, international space law can be clarified and restated to apply to modern contexts and space applications and technologies. The UN Committee on the Peaceful Uses of Outer Space (UNCOPUOS) Guidelines for the Long-Term Sustainability of Outer Space Activities builds upon applicable international space law, which must be reaffirmed. The clarification and restatement of international space law will ensure that, despite differing national, strategic and commercial interests at play in outer space, all States have a clear and uniform understanding and application of rights and obligations to their peaceful exploration and use of outer space.
23. Such clarification of binding legal norms will have direct relevance to many of the issues under consideration by the Group relating to identifying and reducing space threats. With the hope of contributing to ongoing discussions on ways and means to strengthen the responsible and peaceful use of outer space, an advanced draft of the Rules of the McGill Manual will be made publicly available for public consultation and comment in the second half of May 2022. The final publication of

the McGill Manual with detailed evidence-based commentaries is scheduled for the second half of 2022.

24. The IASL supports the recent United States White House statement underlining that “[c]onflict or confrontation in outer space is not inevitable”. Together with the [political commitment to no first placement of weapons in outer space](#), all States should continue to work together to keep space free from conflict, and commit not to test or use weapons of any kind to, in or from outer space.
25. It is hoped that the submission of the IASL and the forthcoming McGill Manual will help to advance international consensus that conflict in space is not inevitable, and that all States and stakeholders continue to work together to safeguard the sustainability, safety and security of outer space.

For more information about this submission, please contact: Kuan-Wei Chen, Managing Editor of the McGill Manual, at: [kuan-wei.chen\[at\]mcgill.ca](mailto:kuan-wei.chen[at]mcgill.ca)

Annex

Selected Advanced Draft Rules of the McGill Manual on International Law Applicable to Military Uses of Outer Space (McGill Manual)

Please note the following Rules are for informational purposes only.

To fully understand and appreciate the Rules, they must be read in the context of the McGill Manual in its entirety. The full text of the Rules and associated detailed and evidence-based Commentaries will be published in the second half of 2022.

ON THE APPLICABILITY OF INTERNATIONAL LAW

All space activities, including military space activities, shall be carried on in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international co-operation and understanding.

ON THE APPLICATION OF NATIONAL LAWS TO SPACE ACTIVITIES

A State may not rely on its national law as justification for failure to comply with its international obligations related to its space activities, including military space activities.

ON THE PROHIBITION OF THE THREAT OR USE OF FORCE

In carrying out space activities, including military space activities, States shall refrain from the threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the purposes of the United Nations.

ON NON-INTERVENTION

Space activities, including military space activities, shall be carried out in conformity with the principle of non-intervention under international law.

ON DUE REGARD

In the conduct of space activities, including military space activities, States shall be guided by the principle of cooperation and mutual assistance and shall conduct such activities with due regard to the corresponding interests of all other States.

ON INTENTIONAL HARMFUL INTERFERENCE WITH SPACE ACTIVITIES –GENERAL

States shall, to the extent required by international law, refrain from intentionally causing either physical or non-physical harmful interference with

space activities of another State in its peaceful exploration and use of outer space, including the Moon and other celestial bodies.

ON WEAPONS OF MASS DESTRUCTION

1. Placement in orbit around the Earth of any object carrying weapons of mass destruction, installation of such weapons on celestial bodies, and the stationing of such weapons in outer space in any other manner are prohibited.
2. International law prohibits *inter alia* the testing of any chemical, biological or nuclear weapon in outer space, including on the Moon and other celestial bodies.

ON WEAPONS OTHER THAN WEAPONS OF MASS DESTRUCTION

1. In addition to the prohibition on weapons of mass destruction, space activities involving other weapons shall be carried on in accordance with international law, including the Charter of the United Nations and international space law.
2. The Moon and other celestial bodies shall be used exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies are forbidden.

ON STATE RESPONSIBILITY FOR AN INTERNATIONALLY WRONGFUL ACT

Every internationally wrongful act of a State, including one related to a State's military space activities, entails the international responsibility of that State under the law of State responsibility.

ON THE PASSAGE OR TRANSIT THROUGH FOREIGN NATIONAL AIRSPACE

No passage rights, or any form of right of transit, apply to space objects, including those involved in military space activities, whenever passing or transiting through foreign national airspace, without prejudice to any agreement with the relevant State.

ON REGISTRATION OF SPACE OBJECTS WITH THE UNITED NATIONS

States Parties to the Registration Convention and international organizations which qualify as "States of registry" in accordance with the Registration Convention shall furnish to the Secretary-General of the United Nations, as soon as practicable, information, as specified in the Registration Convention, concerning each space object carried on their registries including space objects used for military space activities.