

Theme: Does International Law Matter?

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Audience: Delegates of UN Members of the Sixth (Legal) Committee

Threats to Peaceful Uses of Outer Space

By

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It is an honour and privilege to be invited by the Asian African Legal Consultative Organization to the United Nations to address you on *Threats to Peaceful Uses of Outer Space*. I am grateful for the opportunity to humbly share my thoughts with this distinguished audience of respected ambassadors, seasoned diplomats and legal professionals.

I will begin my address with a short narrative. The present is grounded in the past, a past that can either be a rude awakening or long-forgotten story for the future. As a custodian of humanity's hope, the UN must continually ask itself is: what is the version and vision of a safer, more sustainable, more prosperous and more equitable world humanity wishes to live in?

Not long after the devastation of the Second World War, the world found itself in the midst of the frigid relations between rival superpowers of the Cold War. The Space Age began with the launch of Sputnik in 1957, and it demonstrated the potential for human beings to finally reach for the stars. The technology that proved as the means to send satellites and human beings into space is the same rocket technology that destroyed cities and maimed civilians.

At the beginning of the Space Age, the horrors of the Second World War were still fresh in the both superpowers. Though distrustful of each other, they pursued diplomacy to broker consensus on basic ground rules in the exploration and use of outer space. At the same time, for those States emerging from the yoke of age-old colonialism, it was of paramount importance that the exploration and use of the final frontier must be for peaceful purposes and for the benefit all countries.

Shortly after the launch of Sputnik, the General Assembly unanimously adopted Resolution 1348 (XIII), the first ever resolution specifically dealing with outer space. In recognizing the interests of all States, Resolution 1348 acknowledged that "it is the

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common aim that outer space should be used for peaceful purposes *only*". There was little ambiguity what States desired and expressed in the resolution.

The General Assembly, considering the important role that can be played by the United Nations in outer space for peaceful purposes, established its Committee on Peaceful Uses of Outer Space (COPOUS). Since then, the UN has been the central intergovernmental setting for addressing outer space-related matters. Since then, the exploration and use of outer space for peaceful purposes has been the hallmark of the global space governance system established under several UNGA resolutions and the five UN space law treaties. The most important treaty is the 1967 Outer Space Treaty. Currently, there are 108 States Parties to the Treaty. This international instrument was recognized as capturing "spirit of compromise shown by the space Powers and the other Powers", and that "established a *fair balance* between the interests and obligations of all concerned, including the countries which had as yet undertaken no space activities".

Over the last sixty years, generally accepted international principle of peaceful exploration and use of outer space has brought unprecedented economic and social benefits to the entire humanity.

Currently there are over 1800 satellites that belong to over 60 countries and provide services of various kinds to all the nations of the world. Thirteen States have independent launch capability. If not all, at least these 60 States are space powers, big or small. Others can be expected to joining this category of States increasing.

The global space economy is estimated to be \$360 billion in 2018. However, by the 2040s, this is expected to grow between \$1 to \$2.7 trillion. The space sector has become a significant industry on its own, but it is also a very important catalyst for a host of other industries.

September 2018 has become an exceptionally significant and unique month in the history of human civilization. It is the first time ever that half of the world is now middle class or wealthier. About 3.8 billion people are considered to be middle class, mainly in Asia. Undoubtedly, space technologies and activities played an important role in reaching this global tipping point. The largest number of users of satellite phones are in the Middle East and Africa. Private companies are investing billions of dollars for the launch and operation of thousands of satellites for providing internet connectivity globally, especially in rural areas of the developing countries in Asia, Africa and the Latin America.

Satellites help us in global, instant and inexpensive communications; navigation aids for aviation, cars, ships and trucks; earth observation for managing forest fires and tsunamis; weather forecasting; for monitoring of violation of human rights, war crimes and disarmament agreements, and so on. We are seeing an emergence of a new space industry for safe, private, affordable and routine human space travel. The celestial bodies hold

unimaginable amount of wealth and resources that, when tapped into, can solve the looming energy crisis threatening to plunge the world into chaos and conflict.

Without a peaceful environment of outer space, these benefits from space and space applications may be severely impeded. Can you imagine a day without space? Can you imagine a day without satellite communications, guided navigation, reliable weather forecasts, or the ease of search and rescue in the vastness of the Earth's oceans?

However, like nuclear technology, space technology is a dual purpose technology. Just as space technology and applications have rapidly developed, the notion of "peaceful" uses of outer space has evolved and changed as well. With the realization that space is the ultimate high ground which holds strategic and security interests, by the adoption of the Outer Space Treaty in 1967, the obligation to use space for "only" peaceful purposes was dropped. This stands in contrast to the Antarctica Treaty, which still retained the language of "peaceful purposes only", and prohibits "any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military maneuvers, as well as the testing of any type of weapons".

In outer space, there are no such concrete prohibitions on military activities. Article VI of the Outer Space Treaty only prohibits States Parties to the Treaty from placing in Earth orbit "any objects carrying nuclear weapons or any other kinds of weapons of mass destruction" and from installing or stationing "such weapons on celestial bodies". This prohibition does not cover conventional weapons that are not nuclear and weapons of mass destruction (WMD), anti-satellite weapons (ASATs) and fractional orbital bombardment weapon systems (FOBS).

Space systems have become indispensable for the armed forces, especially of the developed countries. Space systems have become the eyes and ears of modern militaries, indispensable in peacetime, but also integral to conflict situations as well. We have witnessed an increase in the number of military satellites and in the number of States that have been launching such satellites, and billions are being spent to enhance and protect these vital strategic assets.

Geopolitical tensions and rapidly developing technologies have further propelled the development and testing of antisatellite weapons, and other types of space weapons. And today, we are seeing the adoption and propagation of military doctrines and political agendas, perpetuated by the media that advocate the development of space weapons and active national preparations for war in space.

Competing interests for gaining dominance in space, which is a global commons and strategically important environment, might have the effect of destabilizing international peace and security.

In brief, since the emergence of the Space Age, the purposes of space exploration and use have evolved and transitioned, from exclusively peaceful, to military but non-aggressive, to being an aid in actual war-fighting on Earth. How far are we from actually war fighting in space? We do not know, and we do not wish to know, for the consequences would simply be too devastating to fathom.

But there appears to be hope. In the past few decades, numerous efforts have been made by the international community at several occasions and through different fora. Sadly, none of them proved successful in diverting away from the worrying trend of the militarization and weaponization of space.

Threats to the peaceful purposes of outer space utilization, that I described earlier, are contrary to the provisions of the existing international legal regime, particularly as they tend to support the exclusive interests of some States and negate the interests of all other States. Moreover, the development and testing of space weapons and the threat to use them, may be considered threatening international peace and security, and contrary to the objective of promoting international co-operation and understanding in space exploration and utilization (Article III of the Outer Space Treaty).

Space is not, and has never been, a warfighting domain in the sense that the land, air and sea have been. Space is unique. The preservation of outer space for present and future uses must consider the uniqueness and fragility of the space environment.

Nobody knows precisely the nature, the scope, and the order of magnitude of devastation and death flowing a conflict involving space or actual war in space. According to an article published in the June 2018 issue of Journal WIRED, “space war could very well end with a crippled global economy, inoperable infrastructure, and a planet shrouded by the orbiting fragments of pulverized satellites”. A highly knowledgeable and experienced military officer has been quoted in a 2015 article that after a war in space “You go back to World War Two [...] You go back to the Industrial Age”.

It is therefore evident that a space war will not be limited to space and to the combatants. The collateral damage will be worldwide affecting directly or indirectly, combatants and non-combatants. Due to the physical characteristics of the outer environment and creation of space debris that will linger for decades, if not millennia, the damage caused to space systems might not be temporary in nature and could possibly be enduring forever. The world-wide dependency upon space is so pervasive that modern life without satellites will be highly problematic at best, and totally chaotic at worst. The economic gains the world has made during the last fifty years could possibly be washed away. The major victims of this might be the well-earned prosperity of the global middle class and entire infrastructures for the preservation of prosperity and security that exist throughout the world.

War in space is *not* inevitable. Evitability or inevitability of a happening is determined by policy decisions based on various relevant factors and the perspectives or interests of the decision-makers. If according to the policy of a State, war in space is inevitable, that could change if the relevant factors and/or the decision-makers change.

Peace matters, and international law is a powerful tool to securing and maintaining peace and security for all. It is vital that we collectively identify and agree on the common interests and benefits of our actions in this interdependent world. It is vital that in space, as on Earth, we recognize our actions and activities will have a bearing on other States, other human beings, and on humanity for generations to come.

For preserving the agreed upon outer space regime for peaceful purposes, we need to inform and educate, not only ourselves, but also to all the governments, and the members of the public, about the risks of war in space. We need to recognize that threats to peaceful uses of outer space are real. We need to fully realize that threats to strategic space assets by some States and non-State actors are a real possibility. We need to realize that both these types of threats give rise to a global problem, which ought to be resolved through global action and through rule-based mechanisms. We need to realize that unilateral actions would simply expand and intensify threats to the peaceful uses of outer space. We need to keep in mind that space, being is a global commons and indispensable to modern societies, economies and militaries of all countries, must be preserved for the long-term sustainability and even the survival of the human race.

To conclude, let me offer the following suggestions for advancing the cause of preserving outer space for peaceful uses:

- i. The United Nations must continue to play a central role in advancing the peaceful uses of outer space. A major global conference, with widest possible participation by all the stakeholders, should be convened to exclusively address the issue of threats to peaceful purposes of outer space and to explore means for achieving this purpose.
- ii. The UN Security Council should consider the possible threats to international peace and security posed by emerging activities that are threatening to turn space into a war fighting domain.
- iii. The UN should carry out or commission an international, interdisciplinary and objective study on the likelihood and possible outcome of a war in space. I believe that an objective and authoritative assessment of the situation, particularly from the perspective of the cardinal principle of peaceful purposes of outer space, will be extremely important for delegates and decision-makers at the UN and the general public as well.
- iv. The term 'peaceful purpose' lacks precise and authoritative definition. An advisory opinion of the International Court of Justice should be sought on the

precise meaning and scope of the term 'peaceful purposes' as used in the UN space law treaties.

- v. The UN General Assembly should adopt a resolution to recognize the substantial significance of conflict-free and pristine environment of outer space for the enjoyment of fundamental rights and freedoms as have been enumerated in the Universal Declaration of Human Rights, The resolution should clearly express that:
 - a. Everyone has the right to freedom of peaceful (non-military) exploration and use of outer space, in accordance with international law, including the Charter of the United Nations;
 - b. Outer space is a global commons that must be explored and used in accordance with the 1967 Outer Space Treaty; and
 - c. Intentional harmful damage to space environment is a crime against humanity.

My Institute, the Institute of Air and Space Law of McGill University, will be glad to assist in this matter, if we are called upon.

- vi. Finally, I would like to bring to your attention that since October 2016, my University has been carrying out an international project for drafting the McGill *Manual on International Law Applicable to Military Uses of Outer Space* (MILAMOS). We believe that the clarification of *lex lata* rules of international law governing military uses of outer space in times of peace and in times of rising tensions is currently important and urgently needed, particularly as the military uses of outer space, as well as the number of States and non-State actors involved in such activities, are rapidly increasing. The McGill Manual is intended for use by a wide spectrum of space operators, stakeholders, experts, and interest groups (e.g., officials from various ministries or department of government, private space actors, civil society, academics and others) with an interest in the security and sustainability of space activities. We would appreciate help from experts from various countries in reviewing our draft rules.

A peaceful and sustainable space environment governed by an international rules-based regime is in the interests of all States, big or small, spacefaring or non-space faring.

For peace to prevail, for the true spirit and meaning of peaceful purposes that are enshrined in the governance of space, would require concerted efforts by all nations, and by all peoples of the world.

Thank you for your attention!!!