



2025

Research Report

Special Committee

The Question of the Weaponisation of Space



Foundation

A THIMUN Affiliated Conference

Background

Space has long been a place of scientific discoveries. However with the fast advancement in technology this has changed, where today's nations depend on space for communication, defence and stability. Space is now also seen as a source of opportunity for militarisation and deployment of devices to protect countries such as: communication satellites, surveillance systems, space forces and GPS. The escalation of space militarisation, has led many international bodies to believe that space weaponization - the placement of weapons in outer space - would soon follow, which would raise a myriad of ethical and security concerns.

Historically, through several treaties and initiatives, the United Nations has done a lot to prevent the weaponization of space, such as the PAROS and the 1967 Outer Space Treaty alongside others. Nonetheless, although admitting that it has had an impact in stagnating the severity of the weaponization of space, great powers like the USA, Russia or China, have increased their space investment, amplifying the worries among this topic.

The weaponization of space raises so many concerns, as it risks creating a battlefield beyond Earth and a potential arms race. Several nations believe that it would be history repeating itself, and a mutated Cold War. Consequently, endangering global stability, international peace and disrupting essential services.

Definition of Key Terms

Weaponisation - Making something that has the potential to become destructive or cause harm to others.

Weaponisation of space - The placement of weapons and military technologies in outer space.

Militarisation of space - The use of space for military purposes, such as deploying satellites for surveillance, communication and defence; it does not necessarily anchor around the placement of weapons in space.

Missile warning - Warning and alert system that identifies incoming missile threats, which allows for time for defensive actions to prepare against a potential attack.

Missile tracking - The process of determining a missile's path to figure out its trajectory, speed, potential target and other details to be able to respond efficiently or operate defensively if needed.

Launch vehicles - A rocket used to carry satellites, spacecraft and other payloads into space.

Range updates - Real-time adjustments or reports on distance and position of an object - like a satellite or spacecraft - to ensure accurate tracking and monitoring of its location and movement.

Global Positioning System (GPS) - Satellite technology that pinpoints the exact location of an object or individual on Earth at a particular moment in time.

Anti-Satellite weapon (ASAT) - A space weapon used to destroy or disrupt other satellites in space.

Low Earth Orbit (LEO) - Orbit that is comparatively near from the Earth's surface (usually altitude smaller than 2000 km but can be lower).

Space debris - Pieces of fragmented satellites, rocket parts or other machinery left to orbit around Earth.

Overview of Current Issue

Developing Arms Race

Although the weaponisation of space is not a new concept, it is advancing at a faster rate than it ever was before. For instance, military units in space have been formed for very influential nations, including: China, the US and Russia; leading to people mastering the theme of space weaponisation. Consequently, the UN's First Committee, which includes the disarmament and international security, has begun to question whether or not they should fear an arms race and opened a debate on this issue.

If an arms race were to happen, not only might this immensely threaten world peace but it might change everyone's lives by causing the destruction of vital gadgets and technologies used in daily lives, such as the demolition of important satellites. Additionally, it will prompt an acceleration in the process of space weaponization, where each nation will attempt to design more powerful weapons or technologies. This could potentially result in more space debris, polluting space and endangering the stability of other satellites and machines deployed in space that could be destroyed by this debris.

Lack of International Regulation and Treaty Limitations

As space weaponization progresses, the cracks and flaws of existing international treaties designed to regulate space militarisation start to gradually show more. For instance, the 1967 Outer Space Treaty - which forbids the placement of nuclear weapons in space - does not prohibit any other form of weaponization, such as anti-satellite (ASAT) weapons. It is important to note, that in this case, ASAT has never been used but some nations (the US, Russia, China and India)

have successfully done a show of force.

On top of that, the United Nations have been unable to agree on a common ground on many terms regarding space weaponization, like a proper definition for weapons in space, making it difficult for nations' to proceed their spatial activities using similar principles. Another example, is the PAROS initiative which is a proposal that fully banned weapons in space; due to the clashing stances and perspectives taken by each nation, this has led states like the United States to vaguely disregard it. Without shared understanding and mutual agreement, it is impossible to create a comprehensive treaty, causing tensions to intensify, as nations would rather protect themselves because they are unsure of the activities happening in other countries.

Relevant Countries and Organisations

The United States

The United States is a key player of space militarisation and has invested a vast sum of money into solidifying its dominance in space. For example, in 2019 the U.S. Space Force marked the first, in over 70 years, creation of a new US' military branch, which was dedicated to space militarisation. Despite the fact that the US has shown no proof of space weaponisation, they have clearly stated that they will not support any treaty that curbs their potential and that their main priority is their own safety and "space superiority" Furthermore, the new US National Space Policy forged by the Obama administration conveys the idea that they are open to consideration of space peace treaties as long as the US' safety is not obstructed. Nonetheless, they firmly stand against the PAROS and PPWOT proposals as it does not align with their interest. Moreover, the US is continuously investing more money in the space force; their requested budget in 2024 was \$30.3 billion. It has catalysed its efforts partly because it views China and Russia's growing power as a threat to its security. Over the last couple of years, they have concentrated a part of their budget on missile warning, missile tracking, launch vehicles, range upgrades and for an improved protection or resistance of satellites.

China

Over the last decades, China's militarization of space has increased at an unprecedented pace. It started with the desire to minimise dependence on the US' systems, and it is now the second most dominant country regarding global space powers, right behind the United States. They have been investing more money into space endeavours, going from a spending of \$2.5 billion in 2022 to \$14 billion in 2023. With that money, China has been able to possess ASAT (Anti-Satellite missiles), robot grappling satellites and electronic jammers; which could be used to endanger US' space systems.

China has openly been an opponent of arms race and took initiatives to encourage space peace, like being a strong supporter of the PAROS Treaty and drafted a proposal called The Threat or Use of Force Against Outer Space Objects (PPWT) alongside Russia to accelerate PAROS' goals. However, some of its actions have been contradicting its public opinion with space weaponization. For instance, in 2007 it launched an ASAT, destroying one of its own satellites and as a result causing an immense amount of debris (a cloud of 3000 pieces of space debris), which has greatly alarmed many nations on China's position regarding spatial peace. Overall, the rate at which China is expanding its spatial power and the budget it is putting into it, demonstrates that they are determined to establish themselves as a dominant space force, which raises questions on future arms race and potentially calls for more efforts needed to update international space regulations.

The United Nations

The United Nations has long taken a stance against the weaponization of space. To prevent an arms race in space, it has proposed initiatives such as PAROS (Preventing Arms Race in OuterSpace), which completely prohibits rights for nations to have any weapon in space. It is important to note that it's not a binding treaty yet, thus each nation projects a diverging opinion on it. However, overall, PAROS aims at ensuring peace in outer space. Moreover, the United Nations in 1967 formed the Outer Space Treaty which fully banned nuclear weapons in space. The treaty was used as a foundation for all proceeding treaties and agreement that promoted spatial peace and eased tensions. Although it demonstrates the UN's commitment in minimising space weaponization it has not always been very effective. The lack of clear, enforceable agreements and international bodies prioritising national security over cooperative disagreements have limited the influence that the UN has over the world.

Possible Solutions

A Space Weapon-Free Zone

One of the central issues of regulating the weaponization of space is that it's a very vague subject where individuals and international bodies wear different lenses to form their opinion on it. Therefore, it is difficult to identify when a country has gone against a treaty or agreement. Furthermore, a space weapon-free zone would make the terms very clear to understand and thus it would be simple to pinpoint when a nation has violated this agreement, as long as explicit boundaries and areas are set by consensus (such as low earth orbit). This would reduce the power of nations in space and would also strengthen global security, as military technology and weapons would be kept away from countries if, for example, they are restricted beyond a certain distance from Earth.

International Cooperation on Space Debris Management

In account to anti satellite weapons and testing, a vast amount of space debris is left to orbit for decades, if not longer. Consequently, there is a high chance that those fragments going at an incredibly fast speed, collide with other satellites, causing potential destruction of them. Today, there is no efficient technology to remove debris from space, leaving one solution left - minimising the production of them. Thus, if nations jointly limited Anti-Satellite (ASAT) Weapon testing, which is responsible for a large amount of the debris in space, this would slacken the momentum at which the world is approaching space weaponization. Additionally, it would abate tensions between countries, like the USA and China, as they would both unite to decrease the amount of debris created by military activity, fostering a collaborative atmosphere. This cooperation might prevent the escalation of the unspoken arms race.

Installing Verification and Monitoring Systems

Once again, another problem of regulating the weaponization of space, is that it is arduous to know what activities each nation is undertaking behind closed doors, making it challenging to identify if any country is defying an agreement. A strategy to deal with this would be establishing a space monitoring agency, which would solely focus on the tracking of space activities, similar to the International Atomic Energy Agency (IAEA) which is used for nuclear monitoring instead. Not only would this ensure that every nation is aligning their activities with the stipulated terms, but it would also fuel trust in colder relationships, as they would have less fear of unknown operations happening, incentivising them to minimise their own space undertakings.

Relevant Websites and Articles

Debris in Brief

This article explains the increasing trend of debris in space and how it has an impact on the world. It also goes into details about how development of destructive ASAT weapons is affecting the quantity of debris.

[Debris in Brief | Union of Concerned Scientists](#)

NBC NEWS

This article states that China has fastened the rate at which they are expanding on the militarisation of space. It follows by explaining how this threatens the US' position and that China is catching up to them.

[How China is challenging the U.S. military's dominance in space | NBC NEWS](#)

Outer space

This report goes into details about the difference between space militarisation and weaponization, it continues with showing how this is leading to an arms race and explains what the United Nations has or is doing to minimise the chances of awakening an explicit arms race,

[Outer space | Reaching Critical Will](#)

The United Nations

The United Nations outlines how there has been a concerning augmentation in the military activities in space, which emphasises the need to question a potential arms race. It also highlights the difference stances countries have on that topic.

[Outer Space Becoming Contested Domain for Supremacy... | The United Nations](#)



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