

Forum: United Nations Official Outer Space Affairs (UNOOSA)

Issue #1: Means to Address Militarization in Outer Space

Student Officers: Ria Harten and Alberto Norte

Position: Chair of United Nations Official Outer Space Affairs (UNOOSA)

Introduction

61 years ago, the first man reached outer space, and since then, space technology has evolved into something that has created both unity and conflict. Humans question each day what outer space may hold and how it can be used to our advantage. Society looks for ways to grow and expand into space. Countries and organizations, such as the United States and Russia, increase military resources and technologies in hopes of militarizing outer space. Satellite surveillance, the potential use of space weapons, and missile defense systems are only a few examples of current advancements.

Launching satellites and other spacecraft into orbit has caught the interest of more countries and companies, meaning the potential for an arms race in space. This raises concerns about the future of international relations and global security.

Some governments believe it's beneficial and say that military abilities in space are required to prevent violence and preserve countries' interests. As well as such abilities that may possess essential practical uses, for example, surveillance systems and aid. For instance, in early 2022, the United States deployed two space domain intelligence satellites capable of identifying hostile spacecraft and providing critical data to America's space surveillance network. On the other hand, other countries believe that political tensions, issues related

to national security, and the determination to secure important space assets such as telecommunication, navigation, and monitoring instruments are responsible for militarization.

Definition of Key Terms

Satellite: An artificial object or celestial body that orbits a planet or star. In usual cases, it's referred to as a man-made object that can collect and/or transmit information.

Telecommunication: Exchange of information from one place to another over technological devices.

Satellite Surveillance: A type of intelligent satellite that may provide information on the military activities of foreign countries or basic observations of outer space activities.

Orbit: A celestial object's or spacecraft's stretched course around a star, planet, or moon

Global Security: Measures taken to ensure mutual safety and security throughout the world.

Cybersecurity: The security of information that aims to preserve the privacy, authenticity, and accessibility of information as well as combating unauthorized entry to networks, and devices.

Spatial Analysis: The process of examining the locations, attributes, and relationships of features in spatial data through overlay and other analytical techniques to address a question or gain useful knowledge.

Spatial data: Also known as geospatial data, is a term used to describe any data related to or containing information about a specific location on the

Earth's surface.

Arms Race: a competition between two or more nations to gain military superiority.

Debris: scattered pieces of waste or remains.

General Overview

NASA

NASA, also known as the National Aeronautics and Space Administration, was founded in 1958 and since then has achieved to send many astronauts to space. This is a United States private program that is centered on developing their understanding of space, promoting scientific discovery, and developing new technologies for space exploration. But most importantly, NASA is responsible for the creation of the International Space Station (ISS), which contributes to international cooperation and collaboration. This is essential to maintaining a safe and secure space environment between nations and perfect for international partners to promote peaceful exploration and militarization of space.

Impacts on Space Exploration

Space exploration is based on peaceful collaboration between nations, however, many countries see space exploration as a race or competition. During the Cold War, the USSR, and the United States fought for the most achievements regarding outer space to prove who had leadership over the development of space. Even though the USSR no longer exists, tensions over space exploration continue to exist between the USA, Russia, and even China. This affects relationships between countries and may affect a nation's opinion in the future regarding space militarization.

Space Debris

When nations send satellites or any type of spacecraft into outer space they eventually no longer function. This creates debris in space and even small pieces of debris can cause significant damage to a functional spacecraft. In 2007, China conducted a test of an anti-satellite missile, which resulted in the creation of over 3,000 pieces of debris in orbit. To this day, the debris from the 2007 incident still appears to be a risk to other nations' satellites. When it comes to space militarization, space debris can eventually increase and become an issue if the testing of weapons and the use of other satellites occurs more frequently.

Weaponization of Outer Space

Deploying weapons into outer space can create immense conflict between nations. A potential arms race could occur and disrupt the current peace between certain nations. There have been initiatives to stop the weaponization of space, especially through international treaties and agreements. For example the Outer Space Treaty. However, allegations have been made that some countries may be developing and deploying space-based weapons systems in secret.

Major Parties Involved and Their Views

United States: The United States contains many private companies that aim for the exploration of space, such as NASA. Hence, the US recognized how the militarization of space can help the country economically, and with its national security. Various treaties were signed by the United States that promote the safety and peaceful use of space. "President Biden's Interim National Security Strategic Guidance clearly states that the United States will explore and use outer space to the benefit of humanity, and ensure the safety, stability, and security of outer space activities." ("United States Remarks for Conference on

Disarmament Subsidiary Body 3 – Prevention of An Arms Race in Outer Space CD Session on Space”)

Russia: Russia has created its own military capabilities in space, such as missile warning systems and abilities to obtain observations and surveillance. But according to Russia, its armed activity in space is defensive in morality and essential to safeguarding its interests in national security. Russia has been developing its own military space programs, however, it's been partnered with NASA for around 20 years.

China: China views outer space as a domain for military power and strategic advantage. China declines the militarization of space and supports the peaceful utilization of space. However, they have also been working to build their own space-based military powers. China's space program has improved their satellites by obtaining the ability to connect one satellite with another in orbit. Facilitating close-range killings, either by shooting down an enemy satellite with a projectile or disrupting it with lasers. However, this rapid growth can be seen as threatening to other nations. According to defense.gov “China and Russia have weaponized space and turned it into a warfighting domain,” Kitay said. “Their actions pose the greatest strategic threat with the ongoing development, testing, and deployment of counters pace systems and the associated military doctrine designed to hold the allied and U.S. space systems at risk.” (Lopez)

India: India has made many efforts to promote international cooperation in space and has been generally well-received by other countries. They acknowledge the importance of space for military operations and global security. India, alongside other countries, developed a number of security

devices that are situated in space, such as missile warning systems, surveillance, tracking equipment, and navigation and communication appliances.

Timeline of Events

Date	Description of event
August 2, 1955	The USSR successfully launched Sputnik 1, the first Earth-orbiting satellite in history
January 31, 1958	The US launched Explorer 1 into orbit, and months later the National Aeronautics and Space Administration (NASA) was created in the US.
May 5, 1961	The Soviet Union launches Yuri Gagarin into space becoming the first nation to send a human to space. Achieving a clear triumph in the Space Race.
January 27, 1967	The Outer Space Treaty is created and signed by over 110 nations prohibiting the placement of mass destruction weapons in orbit or on celestial bodies.
April 19, 1971	The USSR launches the first space station, Salyut 1. Becoming the first time humans had lived and worked in space for an extended period of time.
1983	The Strategic Defense Initiative (SDI) was announced by US President Ronald Reagan. The Strategic Defense Initiative

(SDI) works to defend the United States from the Soviet intercontinental ballistic missiles (ICBMs)

November 20, 1998

The International Space Station (ISS) is launched by Russia in combination with the United States' NASA, Russia's Roscosmos, Japan's JAXA, Europe's ESA, and Canada's CSA.

January 2002

The United States founded the Missile Defense Agency that uses defense systems for ballistic missile defense systems.

February 2008

China and Russia jointly submitted a draft treaty to the United Nations known as the Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects (PPWT).

December 14, 2014

The General Assembly of the UN passed two resolutions on preventing an arms race in outer space.

December 20, 2019

The United States Space Force (USSF) was established as the first independent space force.

UN involvement, Relevant Resolutions, Treaties, and Events

The United Nations in collaboration with UNOOSA have created a variation of treaties regarding the militarization of outer space. UNOOSA actively promotes

the peaceful international cooperation of outer space and is involved in regulating/prohibiting the development of mass destruction weapons.

The outer space treaty “bans the stationing of weapons of mass destruction (WMD) in outer space, prohibits military activities on celestial bodies, and details legally binding rules governing the peaceful exploration and use of space” (Rusek). The Treaty was opened for signature by the three depository Governments; the Russian Federation, the United Kingdom, and the United States of America, and it entered into force in October 1967.

The Outer Space Treaty includes the main bases on international space law, such as the following principles: “The exploration and use of outer space shall be carried out for the benefit and in the interests of all countries and shall be the province of all mankind; outer space shall be free for exploration and use by all States; outer space is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means; States shall not place nuclear weapons or other weapons of mass destruction in orbit or on celestial bodies or station them in outer space in any other manner; the Moon and other celestial bodies shall be used exclusively for peaceful purposes; astronauts shall be regarded as the envoys of mankind; States shall be responsible for national space activities whether carried out by governmental or non-governmental entities; States shall be liable for damage caused by their space objects; and States shall avoid harmful contamination of space and celestial bodies.” (“The Outer Space Treaty”)

Evaluation of Previous Attempts to Resolve the Issue

Treaties regarding outer space and its militarization have been made to control and prohibit a conflict. For instance the outer space treaty, which promotes the peaceful international cooperation of outer space, and the PAROS treaty which

prevents any nation from placing objects carrying any type of weapon into orbit. These treaties have set regulations among countries, however the issue of the militarization of space remains present, as some nations continue to persevere in the development of anti-satellite weapons and other space-based military capabilities.

Possible Solutions

Since the UN has already made efforts to control the militarization in space and treaties have been signed by most of the countries. New and/or developed agreements or regulations may need to be made since space activities and security challenges continue to evolve. This entails establishing norms of behavior for responsible space activities; this may include sanctions for unfollowed regulations. Enhancing space situational awareness to maximize space safety and sustainability, and last but not least promoting transparency among nations to reassure nations are following agreements.

Sustainable Development Goal (SDG)

The Sustainable Development Goal number 16 aims to promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels. This goal is crucial to the militarization of space since the potential risk of an arms race has grown concerns and tension around the world. The deployment of military assets and satellites could jeopardize the progress towards achieving this goal and presents a significant threat to international peace and security as well as international cooperation. To achieve SDG number 16 and develop our outer space knowledge and exploration, nations have to come together and preserve peace and clearness between nations as well as strengthen laws and regulations already established.

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Appendix

- I. All about the “Outer Space Treaty” and which countries signed and which did not;

<https://2009-2017.state.gov/t/isn/5181.htm>

- II. This link provides information about the militarization of space and its transformation into a war-fighting domain. As well as space debris and space security;

https://www.spf.org/iina/en/articles/nagashima_02.html

- III. Great source to learn about space militarization and possible challenges;

<https://medium.com/law-and-policy/space-law-revisited-the-militarization-of-outer-space-d65df7359515>

- IV. The timeline between the USA and the USSR (now Russia) regarding space militarization. Helpful to get insight into how it all started and who were the first two nations to join the space “race”;

<https://www.rmg.co.uk/stories/topics/space-race-timeline>

- V. All about the space Force;

<https://www.space.com/us-space-force-history-mission-capabilities>

VI. General Overview on SANSA;

<https://engage.safe.com/blog/2021/10/non-spatial-data-difference-fme/>