**Forum:**          General Assembly 1 (DISEC II)

**Issue:**          Establishing Stronger Partnerships in the Peaceful Uses of Outer Space (SDG 17)

**Chair:**          Max Lin (Deputy Chair) & Katie Chu (Deputy Chair)

## Introduction

Outer space is a topic that is still undergoing research and is a place where many countries are setting goals to work towards. However, outer space is still a platform that could be dangerous, especially through an arms race. Without collaborating with each other, connections between countries would be damaged through competition against each other. With the fast-developing world, space is a major aspect that is an important part of our society and would need further research on different technologies of space. Now that countries have a lot of control over satellites, it is possible that these countries would want to control more space technologies, resulting in a new Cold War. Although there was a treaty[1] between nations about using space peacefully, enforcing it could be problematic as the uses and intended purposes are often not communicated between countries, or even falsely. With countries having more control over these technologies, there may be both danger and warfare. By using space peacefully, not only would it improve the relationships between countries, it would benefit humanity as a whole with the technology and new research.

Currently, there are multiple goals set on changing how space is portrayed in the UN and increasing the use of space and technology with collaborations between countries according to Space 2030 Agenda which was adopted in 2019[2]. Space exploration is connected to the SDG goals, for example, No Poverty, as by incorporating space technologies, natural disasters can be forecasted and also map out areas that are populated and allow for basic services to be provided to them according to where the areas are. Another SDG goal that could be related to space exploration can also be related to SDG goal number 5, as space exploration provides entrepreneurship opportunities for women and also development in career[3].

[1] 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space

[2] Space2030 agenda: Space as a driver for peace

[3] Sustainable Development Goal 5: Gender Equality

# Definition of Key Terms

**Outer Space**

Outer space is the space instantly outside the Earth's atmosphere. There has been an agreement in the UN stating that space should be used for exploration, and not be owned by a specific nation. The goal for the use of space is to be used peacefully and to not have any weapons be placed in outer space. There has been a UN committee set up by the General Assembly specifically targeting the idea that countries should not use outer space to store weapons but to collaborate peacefully with each other, called the committee on the peaceful uses of outer space.

**Satellite**

A manufactured object or vehicle intended to orbit the earth, moon, or another celestial body. Satellites are mainly used for civilian purposes, but the potential weaponization of satellites can pose a great threat to international security. The intended purposes of satellites are often not communicated, or even falsely, between countries. This could cause problems in enforcing treaties banning weapons in orbit.

**Military objective**

Any object which by its nature, location, purpose or use makes an effective contribution to military action and whose total or partial destruction, capture, or neutralization, in the circumstances ruling at this time, offers a definite military advantage. Many satellites could be considered as a military objective and can be used in warfare, but identification

**Cubesats**

Cubesats are miniature satellites used for low Earth orbit. Cubesats can be launched from a larger satellite. Since they are small, observation of these satellites and the purposes of these satellites can be hard to determine by other countries. Even though most cubesats are used to collect weather data, the future intended purposes are still unknown.

**Soft Kill Weapons**

"Soft kill" category weapons are those designed to disable the functionality of a satellite rather than destroying it. These attacks are usually done covertly, often mimicking routine malfunction and making it hard to detect the source. The high concentration of energy can target complex circuit systems without destroying it. In space warfare, there weapons will inevitably be used and are extremely effective

against targets. These weapons pose a particular threat as many non-state actors could obtain these weapons while ASAT technology is only within the grasp of great powers, but for soft kill weapons, the barrier of entry is a lot lower.

**ASAT**

ASATs stand for Anti Satellite weapons. These weapons destroy satellites with kinetic energy, often causing millions of shrapnel to fly at high velocity on impact. This may cause safety problems as the pieces could fly up to 7600 meters per second. In contrast, a standard military rifle's 5.56mm bullet travels at the speed of 940 meters per second. Countries such as China, Russia, the US, and India have demonstrated the capability to use these weapons. ASATs are considered to be one of the most serious threats to the space environment as the fragmentation effect caused by these weapons could render many orbital planes useless for military or commercial use.

**Arms Race**

An arms race is when there is a competition between countries pertaining to the collection of weapons. Arms race creates conflict between nations, which may also cause war to start if there is an intensification of the race. An example of an arms race is the cold war, which both the US and the USSR participated in it. Both of these countries also participated in the space race, which was also similar to the cold war as both of these nations were also competing with each other to see which country is better, however, instead of weapons, these nations were competing about space technologies and not weapons.

**Space Law**

Space Laws are rules that are used to govern activities that are being done in space. These laws contain treaties, resolutions, conventions and also rules. These space laws encourage the appropriate use of outer space and also raise up potential dangers when traveling to outer space. An example of these space laws is the outer space treaty which suggests that nations have the ability to explore outer space, but are not allowed to place any weapons in space and claim sovereignty over celestial bodies.

**United Nations Committee on the Peaceful Uses of Outer Space**

This is a committee that was organized by the General Assembly in 1959 and the main goal of this committee is to sustain peaceful relations between nations, especially on exploring outer space and researching space technology. This committee is significant due to its promotion for a more cooperative l use of outer space and enforcing the idea that countries should use space in a responsible manner.

# Background Information

## Cold War

The cold war was a conflict between the US and the USSR. The cold war started with the threat of the spread of Communism which started with the USSR. Both the US and the British were worried about the USSR having control of all of Eastern Europe permanently. Moreover, during the cold war, there was the Cuban Missile Crisis in 1962, which started when the USSR placed missiles into Cuba. However, after the Cuban Missile Crisis, both the USSR and the US signed a treaty called the Nuclear Test Ban treaty which banned the two countries from testing nuclear weapons. The USSR and the US signed this treaty since the Cuban missile crisis proved that both the US and the USSR do not have the ability to be prepared to use nuclear weapons.

### *Space Race*

The Space race was a race between the USSR and the US on which country can have more technological advancements in space. Some causes of the space race include espionage between multiple countries and the growing threat of the use of nuclear weapons. The tensions of the Space Race intensified especially after the Berlin wall was constructed and also when the Cuban missile crisis happened during 1961. The space race was also caused because of an increase in Space exploration that started after the launch of Sputnik I. Both countries wanted to participate in the space race as they would be able to show that their superiority in space technology against the other country.

## Launching of Sputnik I

Sputnik I was the first satellite launched into space by the USSR in 1957, after launching Sputnik I into outer space, it began a competition with the US to compete on the launching of multiple space technologies. Both the US and the USSR were opponents of the cold war, which led to competitive relations between the two countries. After the launching of Sputnik I, the US launched its own satellite called Explorer I in response to Sputnik I, this also caused the creation of the committee of the peaceful uses of outer space, since one of their goals is to have countries use outer space peacefully.

## Nuclear Test ban Treaty was signed in 1963

The Nuclear Test ban treaty prohibited countries, especially the ones that are capable of having nuclear weapons, from testing nuclear weapons in outer space, the atmosphere of Earth, and

underwater. As tensions between the US and USSR started to rise after the Cuban missile crisis, it showed how dangerous nuclear weapons could be. After knowing about how dangerous nuclear weapons can be, the US and USSR started a pledge suggesting that nuclear weapons will not be tested underwater, outer space or in the atmosphere.

### Outer Space Treaty was signed in 1967

The Outer Space Treaty was a treaty that was signed by the US, the USSR along with other countries in order to try to prevent them from placing weapons in space. According to this treaty, nations are also prohibited to claim sovereignty over any of the celestial bodies such as the Moon. This treaty is highly significant as it promotes the maintenance of peaceful partnerships between nations, without this treaty, countries would be able to place weapons may lead to warfare in the future.  Through this treaty, the main goal of the uses of outer space is to research and also explore and use it by peaceful means. Even though the treaty declares that all celestial bodies should only be used for peaceful purposes, meaning that lots of military activities would be acceptable such as intelligence gathering under the terms of this treaty.
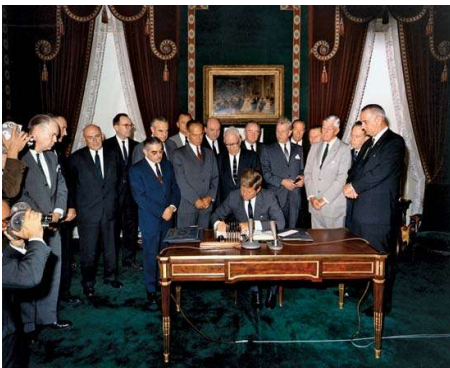


*Caption #1: The President of the US signing the Nuclear Test Ban Treaty that prohibits the testing of nuclear weapons in outer space.*

## Major Countries and Organizations Involved

### USSR (Russia)

The Soviet Union launched the first satellite in Space, Sputnik I. This started the space race with the United States in the 1950s trying to outdo the other into space. The Soviet Union won the first part of the Space Race against the US, launching the first satellite and man into space. Russia has signed the Outer Space Treaty and Nuclear Test Ban treaty which bans weapons and military activities in Space. They created one of the most successful space station called the Mir. It hosted astronauts from many different countries to show international cooperation. As the Soviet Union fell apart, the economic crisis

also affected the space program. The Societ Space Program is now the Roscosmos, the newly formed Russian space agency. Many Russian satellites such as the Kosmos 4299 could be used as kamikaze satellites.

## US

The US is one of the leading nations in space exploration and technology. The United State's space program, NASA, is responsible for the launching of many satellites with civilian purposes such as collecting weather data and providing telecommunications technology. NASA has conducted many joint missions with other countries hoping to achieve a better relationship with the international community. The United States has also signed the Outer Space Treaty and Nuclear Test Ban. The United States is highly dependent on satellites, so the US will try to avoid conflicts in Outer Space at all costs.

## China

China has been very active in space programs and exploration, and it is the 3rd country in the world to launch a human into space in 2003. China has also been constantly developing new technology in outer space. Even though China did not launch any weapons into space, one of its satellites, the Shiyan, is equipped with a grappling arm that could snatch any satellites out of orbit. China has been reportedly "blinding" US satellites using soft kill weapons. China is currently in a space war with India, both showing off their capabilities in destroying targets in outer space.

## Japan

Japan is starting to play a more active role in Space Exploration. The Japan Aerospace Exploration Agency (JAXA) may join NASA in bringing humans to the moon in exchange for a spot for Japanese CubeSats. Bridenstine, the administrator of NASA, said that the partnership between NASA and JAXA will not only benefit the two countries, but humanity as a whole. Neither China, Europe, nor Russia has deployed a rover on the surface of Mars, so if Japan successfully landed a rover, then its power in space would increase.

## India

India is currently involved in many space missions such as mapping the surface of Mars. The Indian Space Research Organization (ISRO) will try to find ways to collaborate with the United States on future missions on Mars. India has also signed documents with NASA to study the consequences of climate change and shows the commitment ISRO and NASA has to improve life on Earth. In all, India has successfully launched over 100 missions. The ISRO is mainly focusing on missions to Mars, but tensions between India and China also caused India to shoot down one of its retiring satellites to demonstrate its capability of destroying objects in outer space, accelerating the space race with China.

This puts India in a specific category with the US, China, and Russia with the ability to destroy targets in space.

## SpaceX

SpaceX is a private company that has been contributing to many space operations. SpaceX has secured over 100 missions on its manifest. Since SpaceX is a private company, it does not produce any weapons or objects that might threaten other countries. SpaceX is working with NASA to create space capsules to transport astronauts to the ISS. SpaceX has already conducted uncrewed tests of the "SpaceX's Crew Dragon" and it was a success. SpaceX has already launched 120 Starlink satellites in 2019 and plan to launch many more, planning to provide internet for the world.

## Boeing

Boeing is currently designing and making space capsules for NASA. These space capsules could carry astronauts to the ISS. Boeing's Starliner, the space capsule Boeing built, faced problems docking with the space station.

## Virgin Galactic

Virgin Galactic, a private space plane company, conducted two successful flights with crew on board in the past year. This year, it plans to send its first passengers to the edge of space

## Blue Origin

Blue Origin is a company founded by Jeff Bezos of Amazon. It has already conducted 12 flights of its capsules for tourist jumps to suborbital space.

## UN Office for Outer Space Affairs

The United Nations Office for Outer Space Affairs' goal is to promote cooperation between nations and to encourage peaceful exploration of space. United Nations Office for Outer Space Affairs also forms frameworks to be in control of space activities and strengthen the use of space technology in developing nations. The UN Office for Outer Space Affairs also collaborates with UN Platform for Space-based Information for Disaster Management and Emergency Response support offices.

## Timeline of Events

You must include short sentences to explain the timeline. Follow the format presented below:

**Date**                      **Description of event**

| | |
|---|---|
| October 4th, 1957 | USSR launched the first satellite Sputnik I into space, starting the Space Race. |
| January 31st, 1958 | US launched its first satellite, Explorer I, into space in response to the launching of Sputnik I |
| December 13th, 1958 | The first General Assembly resolution on space about the question of the peaceful uses of outer space. This resolution led to a creation of the Outer Space Committee. |
| 1959 | |
| 1963 | A permanent Outer Space Committee was created to maintain and enforce the International Law in Space |
| | The Nuclear Test Ban Treaty was signed prohibiting Nuclear testing in space |
| October 10th, 1967 | The Outer Space Treaty was in effect. |
| July 15-24th, 1975 | First joint mission between US and USSR called Apollo-Soyuz took place and it was a success. |

## Relevant UN Resolutions and Treaties

- International Co-operation in the peaceful uses of outer space **(A/RES/55/122)**
- Recommendations on national legislation relevant to the peaceful exploration and use of outer space **(A/RES/68/74)**
- Declaration on the fiftieth anniversary of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies **(A/RES/72/78)**
- Space Debris Mitigations Guidelines of the Committee on the Peaceful Uses of Outer Space **(ST/SPACE/49)**
- Safety Framework for Nuclear Source Applications in Outer Space **(A/AC.105/934)**

## Possible Solutions

**Encouraging countries to carry out more joint missions.** After the Vietnam War that ended in 1975, the US and USSR wanted to have a better relationship, so they went on a joint mission that could improve the tense relationship. After docking in space, they spoke in each other's native language to make the situation more comfortable. The mission was a success and this was a great leap forward for both the US and USSR in improving ties. This mission proved that countries could still work together to achieve a common goal.

**Requesting countries to share their uses of satellites to decrease tensions between countries.** Even though treaties have been signed to prevent weapons in orbit, enforcing it is nearly

impossible. The uses and future purposes of these satellites are hardly communicated between countries, and sometimes even falsely. Since the knowledge of other satellites are limited, countries would have no idea if weapons are currently in orbit and pose a threat to international security. By sharing how the satellites are used for peaceful purposes and increase transparency, countries would have a better reputation and civilians would know how satellites are benefiting their everyday lives.

**Encouraging country collaborations on projects.** In 1998, the International space station was launched, which allows for flight crews of different countries to work on projects together. An example of this was when Japan cooperated with its partners in the Asian Pacific region to work together to increase their collaborations and also planetary science in the International Space Station. By increasing the amount of cooperation between countries such as the use of the International Space Stations, there would be an increase in having peaceful relations between these countries, especially when both are working on the same project together. Some of these country collaborations can include projects that relate to SDG goals such that the countries not only collaborate more with each other, but they would also be able to work towards the specific goals that the UN has set in order to improve the conditions of Earth. These countries can also collaborate on missions that could help to benefit the two countries. However, some countries may not be willing to collaborate or countries especially developing countries may want to focus on other major problems they are facing first before actually collaborating on these projects.

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