



GMUNC X

UNITED NATIONS OFFICE FOR OUTER SPACE AFFAIRS

REGULATION OF PRIVATE COMPANIES IN SPACE



**UNOOSA**

## **Conference Information**

GMUNC will be held in person on October 21st, 2023. For more information about the conference, please visit the GMUNC website at [gmunc.weebly.com](http://gmunc.weebly.com). Delegates can find guidelines for position papers, as well as an example position paper, on the website. Position papers submitted by October 14th will be eligible for all awards (research and committee). Position papers submitted by October 20th will be eligible for only committee awards. If delegates have any questions or concerns, please contact [unoosa.gmunc@gmail.com](mailto:unoosa.gmunc@gmail.com).

## **Chair Bios**

### **Head Chair: Daniel van Schewick**

Daniel van Schewick is currently a senior at Gunn. He's been doing Model UN since 8th grade and has been active in both attending and organizing various conferences. Outside of school, Daniel enjoys spending time with his friends, playing video games (his personal favorite is Fireboy and Watergirl), working out, and attempting to teach himself how to play the guitar.

### **Co-Chair: Siddarth Kota**

Siddarth is currently a senior at Foothill High School. He's been doing Model UN since 6th grade and has attended over 40 conferences all over the country. Siddarth likes to spend time with friends, listen to music, and build things to decorate his house with. He also loves to code, and 3d model video game characters for different projects he's working on. Overall he is very excited to be your vice chair for GMUNC X and looks forward to seeing what you all create during committee!

## Letter from the Chair

Dear Delegates,

In this committee, you will represent countries from around the world in a meeting of the United Nations Office for Outer Space Affairs. Because GMUNC is a conference designed as an opportunity for new delegates to enter the Model UN world and experienced delegates to hone their skills, we will have a short review of parliamentary procedure at the beginning of the committee. I do not see the position paper limit as a hard cut-off: aim for 3 pages, but don't stress about a few lines on the next page. Lastly, remember that the United Nations is a place of diplomacy and collaboration, so we hope that you will embody this goal and spirit during this conference.

As delegates to the UN, you mostly have advisory powers and not complete executive control over the countries you represent. While in committee, always keep your country's stance and goals in mind: this is what will lead you through the committee and help when creating resolutions. Be sure to spend time researching both the overall topic and more specific information about your country to be prepared for the committee.

I look forward to seeing all of you in committee and hearing your proposed solutions.

Best wishes,

Daniel van Schewick

## Scope of UNOOSA

The United Nations Office for Outer Space Affairs (UNOOSA) is a branch of the UN that executes any General Assemblies resolutions relating to outer space. UNOOSA helps countries develop their space sectors through a mix of training resources and development programs, while also increasing nations' understanding of international space law (1). Thus, the resolutions you work toward should align with this mission.

## Introduction to Topic

For decades, the vacuum of space has been a nearly insurmountable barrier to human expansion. While space travel is possible, a variety of “grand challenges” have made it prohibitively expensive. These “grand challenges” cover a wide range of needed advancements, from overcoming the negative effects of low-gravity environments to a lack of closed-loop systems needed for permanent colonization (2). However, the main bottleneck has been the exorbitant cost of transporting goods and personnel from Earth to space: the US Vanguard rocket of the 1950s cost one million dollars per kilogram of payload (3). Modern launch systems are several orders of magnitude cheaper, thus opening the space market up to players besides governmental agencies (3).

**In this committee, you will represent countries of the General Assembly working to adapt space law to the modern era’s needs.** Specifically, you are debating if and how the rapidly growing private space sector should be regulated. **While treaties concerning international space law exist, many are either ambiguous or outdated,** thus making a new international framework necessary (4) (5).

## Historical Context

The Cold War space race between the USA and USSR set both the legal and technical groundwork for large parts of modern commercial space use. The legal groundwork, that will be discussed in the Past UN Action, was set largely by international organizations. Building on innovation of ballistic missiles following WWII, by 1955 the Cold War giants had set their sights on space exploration. When the USSR surprised Western nations by launching the Sputnik satellite, the US redoubled its investments in research and development to catch up, with the end goal of sending astronauts to the moon (6). This fierce competition pushed both nations to new technological heights, with inventions ranging from the Vanguard rocket to portable computers or solar panels (7). Thus, the space race laid the technical foundations for future space travel while also inventing many technologies which would be adapted for commercial use. However, with the success of the US's Apollo program and the collapse of the USSR, the political will to fund further research strongly subsided: "In Congress' mind, they viewed it as a race with the Russians, and once the race with the Russians was won...there was not anything more to do" (6). Since the end of the space race, development of space-related technology has continued, but at a much slower pace.

When considering how activities in space should be regulated, regulation of companies on Earth, specifically in labor laws, taxation, and sustainable development proves useful. The origin of labor laws can be traced back to the Industrial Revolution, when harsh working conditions, exploitative practices, and unsafe working conditions were widespread. These corporate abuses of power would eventually be curbed by a combination of labor movements and government intervention, like the Interstate Commerce Act. Together, these established the norm that **"private greed must henceforth be subordinated to public need"** (8). The evolution of

corporate taxation can be linked to a growing need for revenue from governments. In the modern era, corporate use of tax havens and legal loopholes has highlighted the issues that arise when international businesses can exploit differences in national policy. This can be extended to a new space law framework: since companies must only follow the laws of the country their spaceship launched in, corporations could pick countries with weak regulations to have free reign in space. With this in mind, a unified and international framework is essential. The importance of sustainability in regulation emerged as environmental and social concerns again gained prominence in the second half of the 20th century. Growing societal awareness of pollution, resource depletion, and ecological damage led to new corporate regulations and oversight, once again reaffirming that social responsibility is more important than corporate profit. Ultimately, delegates must weigh this historical knowledge to decide whether regulation in space is needed, and if so, what aspects should be regulated.

## **Current Situation**

Unlike in the past, it has become increasingly cheaper to launch satellites into space. As a result of this, the globe has seen an increasing number of private actors joining the space industry. This mainly consists of private companies launching satellites for commercial purposes. Astronaut Stephen Gerard “Steve” Bowen called for increased regulation of space. He believes that rules such as the right of way (priority order for spacecraft traffic), which weren’t needed in the 1960s, have now become relevant and thus need to be dealt with. As he says “In the past, there have been instances where the Space Agency has been getting in touch with a private company because they're on a collision course," he said. Unfortunately, these private companies failed to respond.

This recent space boom can be seen with the introduction of SpaceX. In recent years, SpaceX has achieved many substantial feats including being the first private company to develop a liquid-propellant rocket that has reached orbit, to launch, orbit, and recover a spacecraft, etc. In 2022, SpaceX launched 31 rockets which are 10 times any of its American competitors. The company operates 2500 Starlink satellites for high-speed internet connection. This company's rapid expansion into the space industry and influence in key government programs and services represent just how much space development has been privatized. In the past year, new space companies have appeared, challenging the international community to act and regulate the expansion. In the last 15 years, commercial activity in space has tripled, from \$110 billion in 2005 to \$357 billion in 2020, and it is projected to rise to \$1.1 trillion by 2040.

The issues with recent space expansion lead to a plethora of risks. Increased competition and new technological advances will drive down costs and increase launches. This will just add to the congestion within many crowded orbits, which leads to an increased risk of space collisions. This will emulate a nightmare scenario known as the Kessler Syndrome, which represents a cascade event of space debris leading to more crashes, thus filling up the orbit with even more debris. Due to the current lack of restrictions private companies are launching a large quantity of space objects, which are quickly filling up the orbit. To prevent this the International community must take action by creating more specific restrictions on this domain.

## **Past U.N. Action**

In order to address the issues associated with this rapid expansion, the UN has taken many actions in the past. In 1967 the UN passed the Outer Space Treaty which set the basic principles for exploration and use of space. This included prohibiting the colonization of celestial

bodies and that all space activities are for the benefit of all countries. Although this treaty is centered around the activities of countries in space, it serves as a basis for how private companies conduct their operations in space. Following this, in 1976, the Registration Convention also known as the Convention on Registration of Objects Launched into Outer Space, was adopted by the UN. This established an obligation for countries to register all objects they launch into space. This also includes objects launched by private companies. With this treaty, the UN was hoping to improve transparency and accountability in space activities and help prevent potential hazards associated with space debris.

In addition to this, the UN created the Moon Agreement of 1984. This document, although not widely adopted, addresses the exploitation of natural resources on the moon and other celestial bodies. This document states that all activities regarding resource collection should be done for the benefit of all countries to prevent ownership by one country. With the involvement of private companies in space, this document has gained relevance once more. As of recent, talks regarding its relevance and possible revisions to the agreement. To promote international cooperation in space, the UN established the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS). This committee serves as a platform to discuss space-related issues, including the role of private companies. COPUOS addresses matters such as space debris mitigation, space traffic management, and the sharing of benefits that result from space exploration. COPUOS's actions for space debris mitigation consist of developing guidelines for space debris mitigation. These restrictions mainly target governmental space missions, however, they can also be relevant to private companies engaged in space exploration. These guidelines mainly aim to minimize space debris and reduce the risks of collisions in orbit.



Recently there have been discussions of developing an international Code of Conduct for Outer Space Activities. A code like this could provide guidelines for the best practices to ensure sustainable and safe space exploration. While still in the proposal stage, this code could become a crucial solution for regulating private companies in space.

## Possible Solutions

There are three potential paths or a mix of all three, that delegates can take to regulate space as they see fit. Depending on the resolutions, these paths may or may not be mutually exclusive.

### ➤ Deregulate Space Law

- Delegates can choose to **remove or prevent restrictions** on the space economy. This would give companies more freedom, but risk companies acting outside the interests of humanity.

### ➤ Regulate Space Law

- Delegates can choose to **regulate as much or as little as they see fit**, ranging from safety oversight boards to applying labor laws in space. These regulations could prevent abuses of power or negligence from corporations, but raise barriers of entry into the space market.

### ➤ Disallow Private Companies from Operating in Space

- Delegates can choose to prevent companies from operating in space, either only for specific industries (like space tourism), or private enterprises as a whole. This would shift power back to government organizations like NASA or ESA. Only

allowing government organizations to operate in space may potentially reduce abuses of power, but may potentially stunt innovation and investment.

## Questions to Consider

1. Existing space law states no entity can own parts of extraterrestrial bodies. If companies want to expand operations to space, who decides who gets what?
  - a. For instance, if two companies want to mine the same asteroid, whose asteroid is it? Should there be a bidding process? A first come first serve system?
  - b. Would a Space Police be needed to enforce such property rights? Who would command such a police force?
2. The commercial space sector is dominated by more economically developed nations. Would encouraging the expansion of the space sector widen existing wealth gaps?
  - a. Many less economically developed nations are reliant on natural resource exports. Activities like asteroid mining could flood the market with raw resources, harming emerging economies. How can this be prevented?
3. Is it morally responsible to allow the expansion of the space sector, considering the environmental impacts ([see black carbon](#))?

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