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UNOOSA

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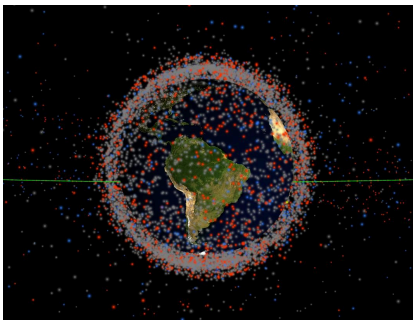
Committee Background:

The United Nations Office for Outer Space Affairs (UNOOSA) was established in 1958 by the United Nations General Assembly. It's an international organization focused on issues specific to the outer space environment. With an office based in Vienna, Austria, UNOOSA was established to promote international cooperation in outer space activities as well as help developing nations access benefits from satellite technology. Its creation was initially to address the growing popularity of space exploration and its possible consequences. Today, UNOOSA plays a critical role in ensuring the fair utilization of space, managing the rise of private space companies, and assuring that activities in outer space are in accordance with international law and ethical standards. Since space holds significant resources, and scientific potential, UNOOSA must work to prevent security threats, environmental harm, or unfair exploitation.

The COPUOS chairmanship is special in that it rotates every other year among member states, and the current chairperson determines the agenda and chairs committee discussions. There exists close cooperation by every chair nation with the United Nations Office for Outer Space Affairs (UNOOSA), which also maintains the secretariat and does the administrative tasks of committee activities. COPUOS benefits from contributions by observer agencies, including scientific institutions, non-governmental organizations, and private space organizations, which provide research, technical knowledge, and operational experience. Observers support cooperation schemes and working groups, therefore serving UNOOSA's overall goal of cooperative, sustainable space management.

The member nations of COPUOS have an equal voice on committee matters regardless of their influence or economic strength . Even though observer bodies don't hold voting power, they still play a crucial role in sharing reports, and bringing in real-world experience. They feed into the COPUOS debates and decisions on a regular basis to ensure that emerging issues are given thorough consideration. Together, the structure of COPUOS and guidance from UNOOSA offer a collaborative system where small and powerful voices both play their part in shaping global space policy.

Topic 1: Regulating the Use of Satellite Technology for Climate Monitoring



Satellite technology plays a vital role in monitoring climate change throughout the world and acquiring new data about temperature changes, rising sea levels, melting glacial cover, and chemistry in the atmosphere. Yet the rapid rate of satellite deployment in space activities present many regulatory challenges. In the last two years, over 5,000 satellites have been launched by private entities like SpaceX's Starlink constellation alone, contributing to orbital congestion and the risk of collision. This rapid rise is not only putting the operation of life-critical climate monitoring satellites in danger, but also the safety of commercial and scientific space operations .

Satellites have always had a dual role, they provide crucial data for science and society, yet they may also be used for military and surveillance purposes. The tension goes back to the early space race, when programs like Sputnik, from the Soviet Union and CORONA, from the United States paved the path for technology that could cater to both scientific and technological needs. Efforts such as the 1975 Helsinki Accords encouraged trust and cooperation in space activities, but since they had very little enforcement, they did very little to ease the issue. Now, the distinction between the peaceful and military use of satellites is blurrier than ever. Satellites with high-resolution sensors can monitor environmental changes such as deforestation or greenhouse gas emissions, but also reveal the locations of troops or military sites. Even initiatives which were designed solely to help the environment, like the EU's Copernicus or NASA's Earth Observing System, have been seen as a threat to nations who fear that the information will be used for defense. Such worries can escalate the tensions among nations, making it more difficult to cooperate on shared issues.

Developing countries are faced with even more substantial challenges. Although wealthier countries can afford and implement high-resolution satellite imagery, poorer countries lack the resources to utilize it. Even promises at meetings such as the 1992 Rio Earth Summit to share

technology have not yet taken shape. As a result, those countries at the highest risk for climate change are the last to gather the information needed for a well prepared response. This gap forces them to base their research and actions off of slower, less accurate information, minimizing their ability to combat threats like intense weather or deforestation. This dependence on a nation's wealth in order to secure proper defense against the environmental threats is leading to a rise in climate unreadiness globally.

Current global norms aren't doing much to reduce this problem either. The 1967 Outer Space Treaty specifies peaceful use but not the sharing of data or management of space debris. COPUOS's Space Debris Mitigation Guidelines are recommendations, but there are no means of enforcement. The consequences of this discrepancy are felt the hardest in developing countries. Climate agreements like the Paris Accord recognize the importance of satellite data but don't establish equitable data access requirements for private satellite firms. The consequences of a lack of regulation are increasingly clear. Space debris poses ongoing threats to satellite operation, with potential data blackouts leading to the disruption of climate monitoring worldwide. At the same time, secrecy in satellite use erodes cooperation and trust. While satellite technology is becoming increasingly widespread, it's essential to establish effective systems of government so that satellite resources are used responsibly and benefits are distributed throughout the globe.

Key Questions:

1. How can international norms for satellite debris mitigation be upheld to safeguard climate-monitoring infrastructure?
2. What types of systems or policies can ensure that satellite data is shared fairly, specifically with developing countries?
3. Should both private and government agencies be given tighter transparency and data-sharing rules to build trust and cooperation among countries?
4. How can dual-use issues be resolved to ensure that satellite technology for climate monitoring continues to have peaceful uses?

Useful Links:

1) UNOOSA “Space and Climate Change”

https://www.unoosa.org/oosa/en/ourwork/topics/climate-change.html

2) UN-SPIDER “Space Technologies in the UN”

https://www.un-spider.org/about/space-technologies-united-nations

Topic 2: First Contact Protocol: Preparing for Extraterrestrial Life

The possibility of extraterrestrial life presents profound scientific, ethical, and political challenges to the international community. Despite no confirmed contact, recent discoveries make the possibility of discovering extraterrestrial life very likely. NASA's Kepler and TESS telescopes discovered over 5,000 exoplanets, showing that habitable planets like our own aren't uncommon. The perseverance rover on Mars discovered complex organic molecules, Europa uncovered subsurface oceans, and the James Webb telescope can analyze the atmospheres of exoplanets, bringing the prospect of life outside of earth even closer. Global space law, like the Outer Space Treaty of 1967, promotes peaceful exploration of outer space while avoiding unnecessary contamination. Such laws show more of an interest towards preventing the contamination of earth by extraterrestrial material and vice versa, rather than providing clear instructions in case of actual contact. The lack of clear instructions is a cause of concern over miscommunication, security risks, and ethical treatment of the life forms encountered.

There are also ethical questions regarding how humanity should engage with extraterrestrial life. It is widely debated whether humans should attempt to actively communicate with newfound aliens, who would speak on behalf of humanity, and what safeguards exist to protect humans and the aliens against unwanted harm. The risk of biological contamination goes both ways, humans can unintentionally introduce harmful pathogens which could infect the aliens due to a lack of immunity or vice versa. Scientific opinion remains divided between those who would support sending active messages to extraterrestrial intelligence and those who would prefer a more rigorous risk assessment before even attempting contact. A new, more complicated angle is added when considering the rights of alien life forms, consent for communication attempts, and the potential psychological and social impacts on humanity.

Questions to Consider:

1. How can nations agree on a standardized protocol for detecting, verifying, and publicly disclosing evidence of extraterrestrial life?
2. What protocols can ensure global cooperation in responding to first contact scenarios, while balancing security and scientific openness?
3. How should ethical guidelines be developed for communication attempts and interactions with extraterrestrial beings?
4. What role should international organizations like the United Nations play in coordinating first contact responses and managing potential risks?

Useful Links:

1) https://www.unoosa.org/oosa/en/aboutus/index.html
2) https://www.unoosa.org/documents/pdf/aboutus/spacecamp/2024/UNOOSA-Space-Camp-2024-18November2024FINAL.pdf

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