YK '25 MUN

Antalya Private Yükseliş College Model United Nations Confrence 2025

UNOOSA

Agenda Item:

International cooperation on peaceful usage of outerspace

Under Secretary General:

İPEK VILMAZ

&

EMRE VILMAZ

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1. Letter From the Secretariat

Esteemed Participants,
It is our paramount pleasure to welcome you to the second installment of Yükseliş Model United Nations Conference 2025. We, Neva Nas Aydın and Ramazan Yandı, will be serving you as your Secretary General's in the upcoming three days. Our Executive Team has put not only the best Academic Team but the Best Organization team so that you can enjoy creating memories in our conference.

Essentially Model United Nations Conferences are great opportunities to improve your debating capabilities, your confidence, your foreign language level and understand how policy is implemented. We can state that Model United Nations Conferences helped us both in our academic and social lifes. For this reason it is our duty to transfer these experiences to the next generations and ensure that they affect them in a similar way.

We hope you have one of the best MUN experiences of your lifes in YKMUN 2025!

Sincerely,
Neva Nas Aydın & Ramazan Yandı

2. Letter From the Co-Under-Secretary-General

Dear Delegates,

My name is İpek Yılmaz. I'm a recent graduate of Antalya Anatolian High School, and I would like to give you a warm welcome to YKMUN'25 as one of the Under Secretary Generals of the United Nations Office for Outer Space Affairs.
We created this committee with my precious Co-Under Secretary General, Emre Yılmaz, in order to provide our delegates with a better perspective on international cooperation in the peaceful usage of outer space, encouraging collaborative efforts to ensure sustainable and responsible space activities. While doing so, we wanted to provide you with comprehensive knowledge of space-related problems and the benefits of space to give you a better understanding of the agenda. We aimed to enhance your comprehension of current international affairs and improve your ability to analyze and address global problems, and also help you develop critical thinking and diplomatic skills.

Since my first time as a board member, I have always wanted to create a UNOOSA committee, and now I am feeling the joy of forming this committee with my beloved brother Emre. We definitely had our ups and downs, but I confidently believe that we were able to provide you with a comprehensive and well-prepared study guide. I highly encourage you to pay your full attention to this guide and do further research when necessary. I would also like to remind you that our study guide should not be your only source of information and that it was mainly written to assist you in understanding the agenda and guide you on places to further research.

Please do not hesitate to contact me about any questions you may have in mind. You can contact me via: 07ipekyilmaz@gmail.com

I wish you all the best experience ever.

Sincerely

İpek Yılmaz

3. Letter From the Co-Under-Secretary-General

Distinguished delegates,

As your Co-Under-Secretary-General, Emre Yılmaz, it is an honour to welcome you all to the YKMUN'25 conference and the United Nations Office for Outer Space Affairs.

Our agenda focuses on the topic of International cooperation on the peaceful usage of outer space. This study guide contains highly important information regarding our agenda. I would be pleased if each and every one of you studied the entire guide. Also, keep in mind that this guide shouldn't be your only source of information. I highly recommend conducting further research to gain more comprehensive knowledge that you can use during your debates.

I sincerely wish this committee could be an experience that contributes to your debate and document writing skills, understanding of our world's current problems, and, well, your MUN career.

If you have any kind of questions in mind, do not hesitate to contact me. You can reach me through my email, dremreyilmaz0707@gmail.com

I wish everyone an inspiring YKMUN'25 experience.

Emre YILMAZ

4. Introduction of the Committee

The United Nations Office for Outer Space Affairs (UNOOSA) is a special agency established in 1958, working under the UN Secretariat, in order to promote and establish peaceful international cooperation for all outer space affairs. UNOOSA facilitates the legal and regulatory frameworks for space activities and supports developing countries in their effort to take part in space affairs in order to implement sustainable socioeconomic development.

As the only UN office entirely dedicated to space affairs, UNOOSA works across the legal, policy, scientific, and technical aspects of the peaceful use of outer space. To enhance the impact and scale of this work, UNOOSA partners with stakeholders from across the international community, such as international organisations, national and regional space agencies, and a range of other

public, private, academic, and civil society institutions.

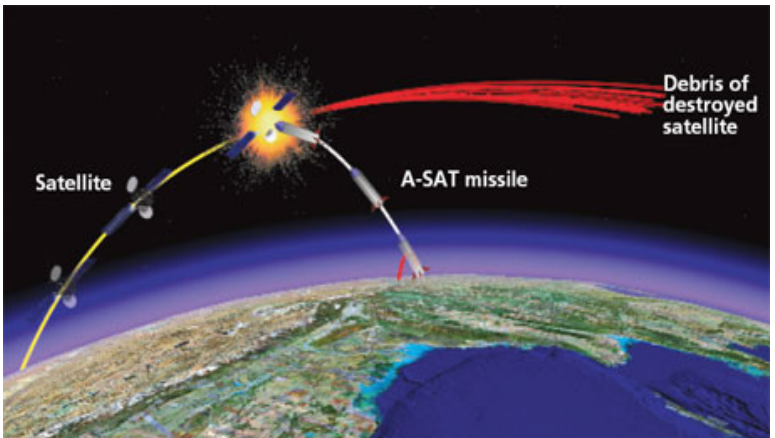
5. Introduction of the Agenda Item

6.1 Space Politics

The beginning of the pro-space activities occurred in the late 50's, leaving world states in a phase of choosing whether to take proactive action on the exploration of outer space and enhance national and global productivity. The leading countries of the time, such as the United States of America and the Soviet Union, and their outer-space activities were led into a phrase called "Space Race". In this competition, both sides practiced imperialistic behaviour, colonising landmasses and spending time, effort, and finance to set up systems and operators that are and will be responsible for space affairs, leading and fastening the race of space while also enhancing the time's systemic and information technology. These races amongst states ended up creating a new phrase called "Space Politic", opening up questions about space's political, technological, and military stability.

6.1.1 Militarization of Outer Space

The militarization of space began with the 1957 launch of Sputnik-1, sparking Cold War competition between the United States and the USSR. Both nations developed satellites for exploration, communication, and navigation.



The UN General Assembly established COPUOS in 1959 to promote the peaceful use of outer space,

leading to the Outer Space Treaty, which prohibits nuclear weapons in orbit and mandates the peaceful use of celestial bodies. However, the definition of "peaceful purposes" allows military activities like exploration and fueling ongoing militarization.
Today, military satellites support communications, intelligence, and navigation for nations like America, China, and Russia. Anti-satellite weapon tests threaten space sustainability, with over 20000 pieces tracked globally.

The Outer Space Treaty's Article IV bans weapons of mass destruction in space but permits conventional military activities, creating regulatory gaps. Other treaties, like the 1972 Liability Convention, address damage from space objects, while COPUOS initiatives like the 2010 Space Debris Mitigation Guidelines aim to reduce risks from military activities. However, geopolitical tensions, dual-use technologies, and private sector involvement complicate enforcement.

Militarization undermines international cooperation by increasing debris risks, threatening civilian satellites, and fostering arms race dynamics. Over 80 countries rely on space for critical infrastructure, making disruptions a global concern. Yet, competing national interests and the lack of enforceable rules hinder progress. UNOOSA/COPUOS must advocate for stronger norms, debris mitigation, and confidence-building measures to preserve space as a peaceful domain.

6.1.1.1 Transparency and Confidence-Building Measures in Outer Space

The push for Transparency and Confidence Building Measures (TCBM) grew from early space activities during the Cold War, when nations recognized the need to prevent conflict over borders. Over the years, tests of anti-satellite

technologies have raised concerns by creating debris that endangers all space activities. Like sharing information about space policies or notifying others before it is launched, TCBM's help build trust and reduce the risk of miscalculations.

Today, TCBMs include voluntary steps outlined in past UN reports, such as exchanging data on space activities and committing to responsible behavior, like minimizing debris. Guidelines from COPUOS, adopted in 2010, encourage nations to limit debris from their space operations, while the 1976 Registration Convention asks countries to register their space objects for greater transparency. Recent efforts, like discussions in a UN working group, explore new norms, such as pledges to avoid destructive tests. However, not all countries fully share information, and the involvement of private companies in space activities adds complexity.

The rise of military space programs and new technologies strains international cooperation, as nations prioritize security over openness. TCBMs counter this by encouraging dialogue and accountability, ensuring space remains a shared resource. Yet, differing national priorities and the lack of binding rules make progress slow. COPUOS must continue promoting TCBMs, urging nations to adopt clear practices and work together to safeguard space for peaceful purposes.

6.1.1.2 Exchanges of Information on Major Military Outer Space Expenditure and Other National Security Space Activities

The main target of information exchange between countries is building trust and preventing conflicts in outer space. When nations openly share what they're spending on military space programs or what kinds of activities they're

conducting, it reduces suspicion and helps ensure space stays a shared resource for all, and keeps the stability of outer space affairs.

At the beginning of the space race, countries realized that space could be militarized and taken advantage of. The idea of sending satellites for spying or communication purposes raised eyebrows. The Outer Space Treaty set rules to keep space peaceful but didn't ban all military activities, leaving room for uncertainty. The increasing usage of ASATs only made this uncertainty worse. Sharing information about budgets and plans that might or might not be suspicious by breaking the Outer Space Treaty helps clear up these unknowns, letting countries see what others are up to and avoid jumping to worst-case assumptions.

Note from the USG: We highly recommend debating on the topic of "the usage of Anti-Satellite Weapons" since it is a crucial topic for the 21st century.

Today, the transparency and reality of the exchanges of information are uncertain, because of the rise of high communication technologies, but countries are highly encouraged to talk about the space program plans by the UN. With the increasing involvement of private space companies, the transparency topic is getting trickier.

6.2 Benefits of Space

The United Nations Office for Outer Space Affairs works to promote international cooperation in the peaceful use and exploration of space, and in the utilisation of space science and technology for sustainable economic and social development. Space technologies have an impact on almost all aspects of development.

6.2.1 Sustainable Development

Sustainable development has been divided into three: Economic development, social development, and environmental development. Using space technologies to get knowledge about the enhancement of sustainable development is costly but effective in most ways. Monitoring deforestation or rising sea levels, getting information about the global and national environmental crisis at its fastest, and providing data that can prevent short-term and long-term disasters became possible in the 21st century, leading the world to a possible "No-disaster planet" idea, aligning with Sustainable Development Goals (SDGs) such as zero hunger, quality education, and climate action.

In the previous annual sessions, sustainable development has come to mind too.

Agendas like the 2030 Agenda, encouraging states to cooperate in order to set up frameworks, create data and technology for global sustainable development. But with challenges such as military-caused space debris threatening the benefits by risking outer space operations. Limitations in specific developing or underdeveloped countries on space technology also affect technological progress.

Despite the challenges, sustainable development and its potential that occurs from space progression is undeniable. By prioritizing global peace and cooperation, it can be ensured that space continues to be impartial and progress-friendly.

6.2.2 Education

It's clear that space technologies open new doors for education. Technologies like web and videoconferencing and voice over Internet protocol allow educators and students to create virtual classrooms, regardless of physical locations, enabling access to online resources in areas with limited infrastructure. Other versions of distance learning allow learners to access web-based course materials on their own schedules, and communication between students and teachers may take place through e-mails, message boards, or video recordings. Programs like UNOOSA's Access to Space for All provide training in climate, agriculture, or astronomy. These efforts show how space can transform education by making it more inclusive and inspiring.

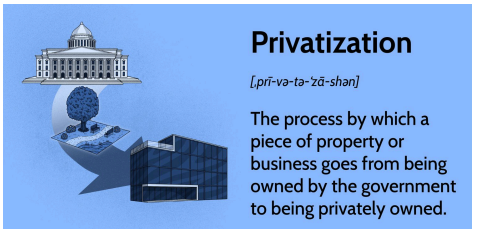
COPUOS plays a big role in promoting these benefits. Through initiatives like the Space2030 Agenda, it encourages countries to share educational resources and space data. Workshops and lessons offered by UNOOSA help educators and students in less-resourced regions engage with space science. The Office also maintains a collection of national space laws and regulatory frameworks, and in 2014, the Office launched the Education Curriculum on Space Law that can be freely used as a teaching tool by educational institutions and training initiatives.

6.2.2 Communication

Daily life for a large portion of the world's population now involves sharing information via mobile phones, personal computers and other electronic

communication devices. Space-based technologies, namely communications satellites, enable global telecommunications systems by relaying signals with voice, video, and data to and from one or many locations. While Earth-based alternatives to space technologies are sometimes possible, space-based technology can often reduce infrastructure requirements and offer more cost-effective service delivery options. For instance, instead of constructing a series of transmission and relay towers to broadcast television programmes to far-to-reach places, one satellite dish could be provided to a remote community to pick up broadcast signals sent from a satellite.

6.3 Privatization of Space Activities and Research



In the past years, space activities were in the hands of governments due to extremely high financial requirements, technological barriers, and national security considerations. However, since the late 20th century, commercial businesses have increasingly entered the field utilizing from reduced launch costs, miniaturization of technology and the potential for profit in telecommunication, resource exploration and tourism. The privatization of outer space activities refers to this growing shift of responsibilities in space exploration, operations and innovation from government related agencies to private establishments. These days, companies as Virgin Galactic, SpaceX, and Blue Origin are conducting private launches, developing reusable rocket systems, and even offering commercial space tourism services. Smaller enterprises are also making a contribution through apps that utilize data, orbital servicing, and satellite manufacturing. Numerous factors have contributed to these including the possibility of significant financial gains, quick technical advancement, and government

assistance in the form of contracts, funding, and changes to legislation like the U.S. Commercial Space Launch Competitiveness Act of 2015.

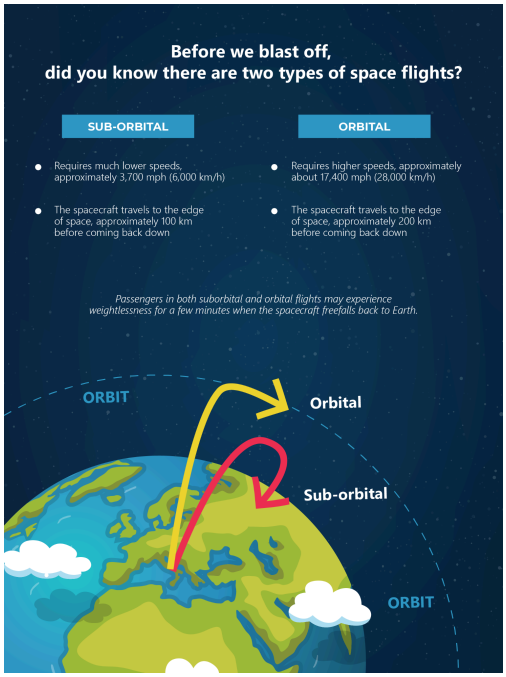
These circumstances surely provided some kind of benefits. Launch costs have reduces ensuring it is easier for developing countries or small nations not to fall behind on space activities. Broader access has been provided to various nations, universities and research institutions. It fostered competition and increased efficiency of the companies. Also provided economic growth, job opportunities, accelerated technological innovation.

Despite all those benefits, privatization of the space sector presents several challenges and risks. These include regulatory loopholes since current international space law does not adequately address commercial operations because it was created for state actors. Moreover, growing numbers of commercial launches increase the risk of collisions and raise questions about long-term sustainability by adding to orbital congestion and space debris. Significant environmental effects also include possible ecological harm from resource extraction and rocket emissions. Furthermore, the industry poses the risk of being controlled by a group of strong companies, which might result in monopolization and unequal access to resources in space. Finally, the dual-use nature of many space technologies introduces potential security threats, including their misuse for military or surveillance purposes.

Note From Under Secretary General: To improve your perspective on privatization of the space industry through an environmental lens, PLEASE visit the following link. The topic has been thoroughly and expertly explained.

[The Privatization of the Space Industry: Through An Environmental Lens | by The Environmental Defense Initiative | Medium]

6.4 Space Tourism



Space travel refers to flights to space for touristic purposes made by individuals who are not professional astronauts. Individuals - mostly billionaires and millionaires- spend an unfathomable amount of money on these flights, aiming to experience no gravity, see Earth outside of the atmosphere, feel like an astronaut, and several other personal reasons. There are different types of space tourism, including orbital, suborbital, and lunar space

tourism. Suborbital space travel is made with supersonic planes and rockets. The vehicle reaches space but doesn't complete an orbit around Earth, instead briefly experiencing weightlessness before returning. On the other hand, orbital missions are longer and therefore far more expensive, considering they circle the Earth at least once steadily. Whereas lunar space travel can simply be explained as flights to the Moon.
Behind the

History of Space Tourism

The first ever touristic space travel was made by American businessman and engineer Dennis Tito in April 2001 with a Soyuz-TM32 spacecraft. Tito has described his experience as 'unbelievable' and 'like being in heaven'. After his successful flight, there had been 8 other space travels made by 7 space travellers aboard a Russian Soyuz spacecraft to the International Space Station mediated by an American company, Space Adventures, alongside Roscosmos and RSC Energia, between the years 2001 and 2009. In 2010, Russia halted orbital space tourism due to the increase in the International Space Station crew size, using the seats for expedition crews that would previously have been sold to paying spaceflight participants. The Orbital touristic flights that were set to resume in 2015 were postponed indefinitely. Russian orbital tourism eventually resumed with the launch of Soyuz MS-20 in 2021.
On 7th of July 2019, NASA announced its intention to permit private individuals to travel to the International Space Station beginning in 2020. This initiative was set to utilize commercially developed spacecraft, including SpaceX's Crew Dragon and Boeing's Starliner, to transport private astronauts. Alongside these developments, aerospace companies such as Blue Origin and Virgin Galactic have been actively developing suborbital space tourism

vehicles, aiming to make space more accessible to non-professional travelers. In 2018, SpaceX revealed plans to send a private passenger on a circumlunar mission aboard the Starship. However, this project was officially cancelled on the 1st of June 2024.

Note-From-Under-Secretary-General: I do not feel the need to write down all the projects on space tourism and overwhelm you with unimportant data, but if you insist on learning more, you can check space tourism's successful and ongoing projects on Wikipedia. You can find all the necessary information and more. Here is the link: https://en.wikipedia.org/wiki/Space_tourism

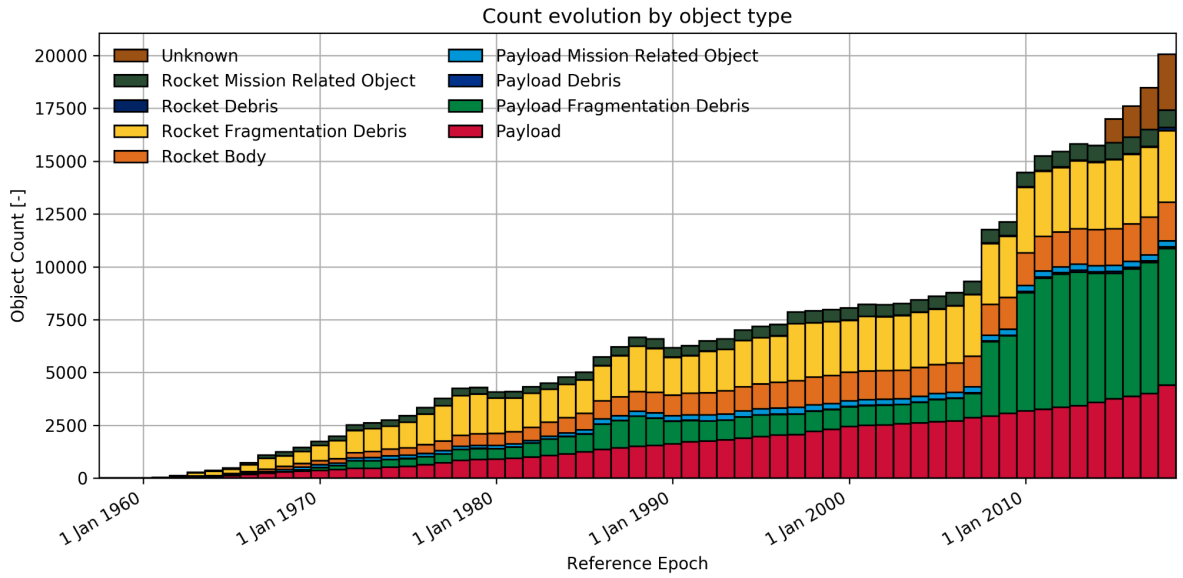
The touristic purposes and personal interests behind these travels are obvious. But it wouldn't be accurate to allege that space tourism hasn't brought anything to humankind, considering the travelers signing contracts with third parties to conduct certain research activities while in orbit. These studies have been helping scientists understand changes the human body undergoes during space travel, ways to maintain the health and well-being of crew members, and even extremely detailed scientific matters such as DNA damage and repair.

Note-from-Under-Secretary–General: For further and more detailed information about these scientific experiments, I highly encourage you to visit NASA's official website. I believe you will gain a better understanding of the importance of the matter.

6.5 Space Pollution

Space pollution, also referred to as orbital debris, is the accumulation of human-made objects remaining in Earth's orbit despite no longer serving any functional purpose. These objects include nonfunctional spacecraft and abandoned launch vehicle stages, mission-related debris, and, particularly numerous in Earth orbit, fragmentation debris from the breakup of derelict rocket bodies and spacecraft. Space junk includes unburned particles from solid rocket engines, solidified liquids discharged from spacecraft, paint flecks, and

parts from breakdown, erosion, or collisions, in addition to abandoned human-made objects left in orbit.



The object count graphic above, determined by the European Space Agency (ESA), clearly shows that space pollution is a rapidly increasing problem. Yet there has not been adequate legal action to address it.

One of the main concerns of space pollution is that, considering the extremely high speeds space junk can travel at, even small fragments are capable of damaging operational spacecraft and satellites. Space pollution threatens the

essential services provided by satellites, such as communication, navigation, and weather monitoring, causing serious legal complications and diplomatic tensions between countries, and making future space missions more dangerous and expensive.

It should also be taken into account that the possible re-entry of space debris poses a risk to humankind. Every day, reentries are made by satellites, rocket stages, or fragments into the denser layers of the atmosphere, where they generally burn up. According to ESA's data, only a few very large objects, such as heavy scientific satellites, reenter Earth's atmosphere in a year. In fact, to date, there have been no known injuries resulting from reentering space debris. In total, about 75% of all the larger objects ever launched have already reentered. Objects of moderate size, i.e., 1 m or above, reenter about once a week, while on average, two small tracked debris objects reenter per day.

Although it is a rare case when the debris actually lands on Earth's surface, this

doesn’t negate the risk associated with reentries. During the burn-up while reentering the atmosphere, various gases and particulates, such as aluminium oxides, metal oxides, are released by debris, contributing to atmospheric pollution. Moreover, chemicals released during reentry may participate in chemical reactions that damage the ozone layer, eventually creating significant environmental issues.

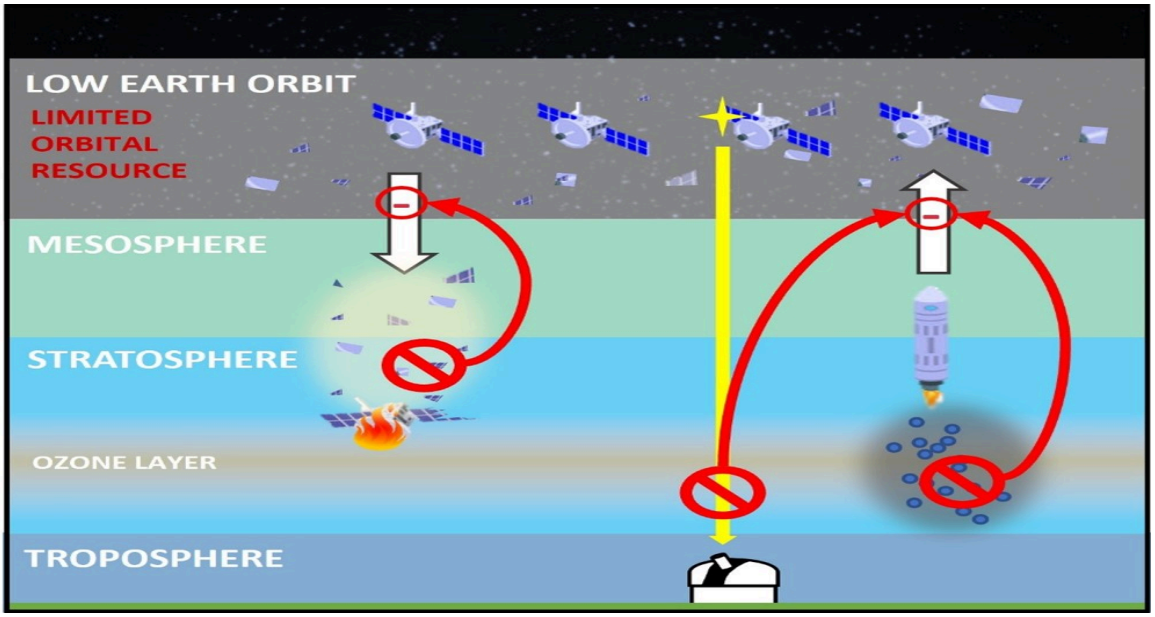
6.6 Minimizing the Effects of Outer Space Activities on the Environment

It would be impossible to claim that space activities do not have enormous impacts on the environment. As previously mentioned, spacecraft leave behind chemicals and particles both during takeoff and reentry, which interact in complex and often unpredictable ways with the natural composition of air and clouds, and also with each other. Rocket engines burn huge quantities of fuel that release various gases directly to the atmosphere, including carbon dioxide, water vapor, black carbon, and aluminium oxide. These emissions do not simply vanish; they linger, accumulate, and interact with other atmospheric components. These incidents end up exacerbating the atmosphere’s current situation by altering its delicate balance. Over time, the presence of these gases contributes to the warming of the atmosphere, intensifies the greenhouse effect, and accelerates climate change.

Moreover, there can be local effects like disrupted weather, rainfall, and cloud patterns, imbalanced ozone concentrations, and an impact on flora and fauna in sensitive regions.

The particles can damage the ozone layer, which protects Earth from ultraviolet radiation, creating a higher risk of health problems around the globe, including skin cancer and sunburn, eye problems, and a weakened immune system. UV radiation can also harm various ecosystems, create material degradation by accelerating the breakdown of human-made materials like plastics and paint, affect crops, and thereby affect agricultural productivity.

Furthermore, noise pollution created by launches can disrupt wildlife in nearby regionsand leftover debris or failed rocket stages can pollute oceans and land areas.



The extreme usage of the world's resources is also a highly significant issue. According to NASA, "the two Solid Rocket Boosters consume 11,000 pounds of fuel per second." The amount of fuel required for these ships is immense, and there is no certainty that the amount will be sufficient to ensure their return to Earth. In recent years, growing concerns over fuel shortages and the continuous

rise in fuel prices have led to increased questioning of the justification for investing substantial resources into space activities.

6.7 **Maximizing the Productivity of Space Research**

Space research thrives when countries, scientists, and organizations work together. Sharing data from satellites, such as weather or environmental observations, prevents duplicated efforts and accelerates discoveries. For instance, collaborative projects like the International Space Station demonstrate how cooperative endeavors can lead to breakthroughs in medicine, materials, and climate science. COPUOS promotes this through initiatives like the Space2030 Agenda, encouraging open access to research tools and findings. Programs such as UNOOSA's Access to Space for All help smaller nations join global efforts, ensuring diverse perspectives drive innovation.

7. Major Countries and Organisations

United States of America

As part of its response to the first Sputnik launch, the United States government debated how best to organize itself for its space activities. It was instrumental in drafting the 1967 Outer Space Treaty, pushing for provisions to prevent the militarization of space with weapons of mass destruction. The U.S. has consistently advocated for transparency measures, such as sharing launch data through the UN Register of Objects Launched into Outer Space. Through NASA, it has contributed to COPUOS initiatives by providing training and satellite data for developing nations, notably via UNOOSA's Access to Space for All program. The U.S. has also supported the 2013 Group of Governmental Experts report on transparency and confidence-building measures (TCBMs), emphasizing voluntary data sharing to reduce space tensions.

China

China owns and manages the second-largest fleet of spacecraft in orbit, currently
operating several constellations of navigation satellites, remote sensing satellites,
communication satellites, surveillance, and spacecraft. China is one of three nations with the capability to recover satellites and conduct a manned space flight. The Chinese National Space Administration (CNSA) handles the planning and development of national space programs, while the state-owned China Aerospace Science and Technology Corporation (CASC) is the prime contractor responsible for the design and development of launch vehicles and satellites, as well as commercial launch services. China actively participates in

TCBM discussions, advocating for cooperative norms while balancing its national security interests.

Russian Federation

The origins of the Russian space program can be traced back to 1957 when the The world's first artificial satellite, Sputnik 1, was launched by the Soviet Union. The country now operates the third-largest fleet of spacecraft, including communications, meteorological, and reconnaissance satellites. Its military space activities, including anti-satellite tests, have raised concerns about debris, prompting discussions at COPUOS on mitigation guidelines. Russia has engaged in TCBM dialogues but faced criticism, notably from the EU, for actions like its 2020 ASAT test, which complicated cooperative efforts.

European Space Agency

The ESA, an observer organization in COPUOS since 1975, has been a key partner in advancing peaceful space use. Members include Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, and the United Kingdom. Cooperative agreements have been signed by various countries, including Canada, which participate in some ESA projects. The headquarters of the agency are in Paris. Representatives of ESA’s member nations form the agency’s policy-making council. A science program committee established by convention deals with matters related to the mandatory science program; the council may form other such bodies to assist in decision-making. ESA co-developed the UN Space Solutions Compendium in 2019, aligning space technologies with the Sustainable Development Goals (SDGs).

6. Questions To Be Addressed

1. How can the peaceful usage of outer space be ensured, while addressing the militarization of space and emerging security threats?
2. What safeguards can be introduced to prevent monopolization of space resources by a small number of corporations?
3. How can the benefits of space, including sustainable development, communication, education etc., be developed efficiently with the assistance of UN bodies, governments and non-governmental organizations?
4. What regulations should be implemented to ensure the safety and environmental responsibility of space activities of all kinds?
5. How can space tourism contribute to advancing scientific knowledge or technology without purely being recreational?
6. What measures can be taken to decrease space debris in order to prevent Kessler Syndrome from occurring?
7. How can smaller and developing nations be better integrated into global space research initiatives?
8. What mechanisms can be introduced to facilitate greater data sharing between nations, research institutions and private companies while taking confidence building measures?
9. How can the international cooperation on peaceful usage of outer space be achieved?
10. What legal actions can be taken to ensure the future equal access and usage of outer space and celestial bodies?

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