

JODHAMAL YOUTH CONCLAVE

establishing morality in mayhem

UNCOPLUS BACKGROUND GUIDE



**AGENDA: DELIBRATING UPON
FRAMEWORK ON SPACE MINING
REGULATIONS**

EXECUTIVE BOARD:-

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LETTER FROM THE EXECUTIVE BOARD:

Greetings Delegates,

We welcome you to this simulation of United Nations Committee on the Peaceful Uses of Outer Space at Jodhamal Youth Conclave 2022. The first treaty to be widely accepted among space actors, the Outer Space Treaty in 1967, was pioneering the legal dimension of Space, by drawing from the Antarctic Treaty, but also regulating utilisation of a new territory: space. This treaty became of the utmost importance as the URSS and the USA fuelled heavy tensions in the 60s, weaponizing outer space. Whilst a total of 5 space treaties were developed and more or less ratified by UN Member States, none managed to reach consensus since 1984. It is however particularly clear, as of today, with the emergence of new industries like space tourism – or the global privatisation of space including mining – and the absence of international Law on the matters, that such regulations shall become a matter of the primary importance in the coming years.

The United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS) is the leading international forum for discussion among States regarding cooperation in space activities and for the progressive development and codification of international space law and norms for behaviour.

As every fan of science fiction knows, the resources of the solar system appear virtually unlimited compared to those on Earth. There are whole other planets, dozens of moons, thousands of massive asteroids and

millions of small ones that doubtless contain humongous quantities of materials that are scarce and very valuable (back on Earth).

Start with the fact that space belongs to no country, complicating traditional methods of resource allocation, property rights and trade. With limited demand for materials in space itself and the need for huge amounts of energy to return materials to Earth, creating a viable industry will turn on major advances in technology, finance and business models. That said, there's no grass growing under potential pioneers' feet. Potential economic, scientific and even security benefits underlie an emerging geopolitical competition to pursue space mining.

This Committee would work towards fully aligning our policies, create new regulations and putting restrictions on the exploitation of Outer Space by the Superpowers. The main aim of this Council is to achieve maximum utilisation of space resources with its long-term sustainability. We look forward to an exciting and interesting committee, which should certainly be helped by the relevance of the agenda in today's time. Hopefully we, as members of the Executive Board, do also have a chance to gain from being a part of this committee.

Feel free to contact us if you have any queries or doubts. Good Luck!

Regards

Chairperson

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MANDATE OF THE COMMITTEE:

The overall mandate of the Committee and its two Subcommittees aims at strengthening the international legal regime governing outer space, resulting in improved conditions for expanding international cooperation in the peaceful uses of outer space. The mandate also specifies that the Committee should support efforts at the national, regional and global levels, including those of entities of the United Nations system and international space-related entities, to maximise the benefits of the use of space science and technology and their applications. Overall, the Committee aims to increase coherence and synergy in international cooperation in space activities at all levels.

“ALSO, THE COMMITTEE WILL SERVE AS A SEMI-CRISIS COMMITTEE” and hopes all the delegates to be prepared for the same ; be spontaneous as well as influential at the same time and wish all the delegates to have a fruitful debate ending the committee successfully.

Committee on the Peaceful Uses of Outer Space, 66th session at JYC'22

INTRODUCTION TO COPUOS:

The Committee on Peaceful Uses of Outer Space (COPUOS) was created by the General Assembly of the United Nations.

It is tasked with reviewing international cooperation in the peaceful uses of outer space, studying space-related activities that could be undertaken by the United Nations, encouraging space research programmes, and studying legal problems arising from the exploration of outer space.

To support this effort, the Committee on Peaceful Uses of Outer Space is supported by a scientific and technical subcommittee and a legal subcommittee. COPUOS is the principal institution of the United Nations dealing with space affairs and sets the standard regarding regulating space.

The Committee was instrumental in the creation of the five treaties and five principles of outer space. International cooperation in space exploration and the use of space technology applications to meet global development goals are discussed in the Committee every year. Owing to rapid advances in space technology, the space agenda is constantly evolving. The Committee therefore provides a unique platform at the global level to monitor and discuss these developments.



AIM AND OBJECTIVE:

It would be prudent for the U. N. Committee on the Peaceful Uses of Outer Space the long term Sustainability of Space Activities to seek to develop practical safety guidelines to avoid dangers to Earth and to allow space mining to proceed while minimising future problems of an environmental or other nature.

HISTORICAL BACKGROUND:

The United Nations has been involved in space activities ever since the very beginning of the space age. Ever since the first human-made satellite orbited the Earth in 1957, the UN has been committed to space being used for peaceful purposes. This launch, as part of International Geophysical Year, marked the dawn of the space age, the first use of satellite technology for the advancement of science, and the beginning of human efforts to ensure the peaceful uses of outer space. This was followed in the 1960s by a rapid expansion in the exploration of space, starting in April 1961 when Yuri Gagarin became the first human being to orbit the Earth, and culminating in Neil Armstrong's 'giant leap for mankind', in July 1969.

In 1958, shortly after the launching of the first artificial satellite, the General Assembly in resolution 1348 (XIII) established an ad hoc Committee on the Peaceful Uses of Outer Space (COPUOS), composed of 18 members, to consider the activities and resources of the United Nations, the specialised agencies and other international bodies relating to the peaceful uses of outer space, organisational arrangements to facilitate international cooperation in this field within the framework of the United Nations and legal problems which might arise in programmes to explore outer space.

SIGNIFICANCE OF COPUOS:

The Committee on the Peaceful Uses of Outer Space (COPUOS) was set up by the General Assembly in 1959 to govern the exploration and use of space for the benefit of all humanity: for peace, security and development. The Committee was tasked with reviewing international cooperation in peaceful uses of outer space, studying space-related activities that could be undertaken by the United Nations, encouraging space research programmes, and studying legal problems arising from the exploration of outer space.

The Committee was instrumental in the creation of the five treaties and five principles of outer space. International cooperation in space exploration and the use of space technology applications to meet global development goals are discussed in the Committee every year. Owing to rapid advances in space technology, the space agenda is constantly evolving. The Committee therefore provides a unique platform at the global level to monitor and discuss these developments.

FUNCTION OF COPUOS:

The Committee on the Peaceful Uses of Outer Space (COPUOS) was set up by the General Assembly in 1959. Since its establishment, the Committee's Membership has continued to expand. The Committee is the only committee of the General Assembly dealing exclusively with international cooperation in the peaceful uses of outer space, and its role as a forum to monitor and discuss developments related to the exploration and use of outer space has evolved alongside with the technical advancements in space exploration, geopolitical changes, and the evolving use of space science and technology for sustainable development.

INTRODUCTION TO SPACE MINING:

Space mining comprises the exploration, exploitation and utilisation of natural resources to be found in the Moon, other planets and near-Earth asteroids (NEAs); primarily, what can be encountered is a rich diversity of useful materials such as minerals, gases (mainly Helium-3), metals and water. This activity is envisaged to be key to the future of space exploration, as it may sustain human life in the long term by providing energy and raw materials – manufactured from space mining findings – and, consequently, it may enable the future and deeper exploration of outer space.

In hindsight, harvesting space resources has proved its great potential, as evidenced by the samples and data brought back from the reiterative expeditions to the Moon and NEAs by space powers like the United States, Japan, the former Soviet Union and, most recently, China; which proved the mineral wealth of lunar rocks and dust, and showed the existence of large deposits of water ice in lunar poles.

In regard to this issue, we expect participants to tackle extremely relevant topics to the sustainable development of outer space, including:

The lawful character of space resources extraction and commercialization, taking into consideration that Article II of the Outer Space Treaty – the main international legal instrument in International Space Law – establishes the non-appropriation principle, specifying nothing concerning the validity of the exploitation of space resources, which has been interpreted in different ways according to each nation's best interest. The potential environmental impact of asteroid mining, especially with respect to the contamination it may entail both at space and back on Earth – if the materials are brought back –, and the possible ways to translate these regulatory concerns into a legal text.

The universality of space resources: how can we ensure that the free exploration of outer space is conducted for the benefit and in the interests of all States, and not just for few? How do we avoid conflicts of interests between countries?

The regulation of space mining, paying special attention to how this topic should be legally addressed at both national and international levels and the body that could be entrusted with this task.



SCOPE OF SPACE MINING: -

Today the practical uses of satellites have grown and grown. First there were telecommunications satellites (which now include broadcasting satellites, mobile communications satellites, search and rescue and data relay satellites, and so on). Shortly after the first communications satellites were deployed, there were also remote sensing satellites, weather satellites, and navigation and timing satellites. We may soon have robotic repair and refuelling satellites, solar power satellites, as well as increasingly sophisticated satellites for various types of defence and security operations. However, something entirely new is on the horizon for space applications. This next major commercial space application may redefine the future of space activities to include major offworld activities. It would constitute a serious attempt to reclaim natural resources from space, and is called, quite simply, space mining. Some of those engaged in this activity also envision the processing of materials in space and even space manufacturing. The question for the next decade is whether new space ventures will be able to successfully launch commercially viable space mining companies.

SIGNIFICANCE OF SPACE MINING:-

There are many asteroids that have a high metallic content, and some of them contain precious metals and rare earth minerals. has estimated that the resource content of just a single asteroid to be nearly \$200 billion. Other asteroids and the Moon have water, and the Moon contains not only water but a valuable isotope known as helium 3 that could be used as a fuel for a nuclear fusion reactor.

SPACE MINING AND INTERNATIONAL COMMUNITY: -

The tendency in almost any institution that creates new laws, conventions and especially international treaties is: “Let’s wait until there is a clear problem to be addressed and then we will address it.” The major issues associated with atmospheric and oceanic pollution, climate change, orbital space debris, destruction of the rainforests, etc., are some cases in point. These are now major contentious issues where an effective international response to these problems has proved to be very difficult and expensive to address. Such problems can become severe over time. Ameliorative action can result in major restrictions on industries and even governmental programs. Severe economic penalties, fines or limits on usage can be imposed to limit such programs. If these issues had been addressed decades ago, the economic and political costs could have been substantially minimised.

GENERAL SPACE LAW RESOURCES:

Space law consists of international space law, governing the activities of States and international intergovernmental organisations, and national space law, governing the activities of individual countries and their nationals. Advancing technology and scientific progress extend human activities in space more and more. These developments will require new regulations of space tourism, space debris, satellites, space mining, property rights on celestial bodies and encounters with alien entities.

MAJOR TREATIES AND CONVENTIONS:

Outer Space Treaty

Formally known as the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, the Outer Space Treaty provides the basic framework of international space law.

The Rescue Agreement.

Formally known as the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, the Rescue Agreement elaborates on Articles 5 and 8 of the Outer Space Treaty.

The Liability Convention

Formally known as the Convention on International Liability for Damage Caused by Space Objects, the Liability Convention elaborates on Article 7 of the Outer Space Treaty.

The Registration Convention

Formally known as the Convention on Registration of Objects Launched into Outer Space, the Registration Convention builds on the Outer Space Treaty, Rescue Agreement, and Liability Convention.

The Moon Agreement

Formally known as the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, the Moon Agreement reaffirms and elaborates on many of the provisions in the Outer Space Treaty. The U.S. is not a signatory to this agreement.

Limited Test Ban Treaty

Formally known as the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, the Limited Test Ban Treaty places limits on the testing of nuclear weapons in outer space.

PRIVATISATION OF SPACE:

If the quest to become an interplanetary species becomes entirely propelled by profits, we risk losing sight of the values that make space exploration so important.

The forces driving human expansion into space are changing. For decades, the world's most fearsome superpowers chose space as the battleground on which to fight for scientific superiority.

The United States and the USSR sprinted to the stars, spurred on by the nationalist bluster of the Cold War. Pride and paranoia fuelled the race, as two clashing political philosophies went head to head in a galactic face-off - the communist all-for-one spirit of the Soviets against the fearless frontier cowboys of the United States.

When the Cold War cooled, and later the Soviet Union collapsed, the two countries began to cooperate. The end of international competition in the cosmos failed to take space exploration to new levels, however, and something of a lull took hold of humanity's ambitions in the wider Universe.

Space enthusiasts often express a bitter regret that after the Moon landing in 1969, progress stalled. By now we were supposed to have bases on the lunar surface, hotels orbiting the Earth, and colonies on Mars. The reality has been a lot less inspiring. Government-led agencies have achieved amazing things since the Moon landings, but none have captured the attention of the world in the same way. Some of those jaded space-lovers happened to be extremely wealthy and took it upon themselves to build a private space sector capable of re-energising the pursuit of our cosmic goals.

Now, these companies have taken up the baton, and the likes of SpaceX, Blue Origin, Virgin Galactic, and many other companies are looking to make up lost ground in the mission to explore and ultimately colonise the Solar System.

There are several companies now looking to establish the world's first private space station. This would bring obvious benefits - it would open up space as a laboratory to anyone who could pay, and would theoretically bring down the costs of manufacturing in space.

But space isn't the bastion of free-floating freedom some think it is, and it's ripe for exploitation by monopolies.

The further we look into the future of humans in space, the more reality resembles science fiction. That's why it's difficult to make people take the issues which could potentially arise seriously. But now is the time to consider the problems that could arise from a commercially-led space race, and take the necessary small steps now to avoid potentially disastrous consequences in the future.



(Above picture shows the Training of “SWARMIE” robots for space mining)

ARTEMIS ACCORDS:

The Artemis Accords is a bilateral agreement between the United States government and other world governments participating in the Artemis Program, an American-led effort to return humans to the Moon by 2025, with the ultimate goal of expanding space exploration to Mars and beyond. As of July 2022, 21 countries and one territory have signed the accords, including eight in Europe, seven in Asia, three in North America, two in Oceania and two in South America.

NASA ACCORDS

As the world counts down to the planned Aug. 29 lift-off of the Artemis 1 mission, which will use a Space Launch System (SLS) mega rocket to send an uncrewed Orion spacecraft around the moon, NASA and its international partners are already planning for the future.

More than 20 nations have signed on to the NASA-led Artemis Accords, a set of agreements that lay out a framework for responsible exploration of the moon.

Through Artemis, NASA aims to land the first woman and first person of colour on the Moon, heralding a new era for space exploration and utilisation.

While NASA is leading the Artemis missions, international partnerships will play a key role in achieving a sustainable and robust presence on the Moon while preparing to conduct a historic human mission to Mars.

With numerous countries and private sector players conducting missions and operations in cislunar space, it's critical to establish a common set of principles to govern the civil exploration and use of outer space.

The Artemis Accords will describe a shared vision for principles, grounded in the Outer Space Treaty of 1967, to create a safe and transparent environment which facilitates exploration, science, and commercial activities for all of humanity to enjoy.

More than a dozen countries have signed the Artemis Accords.

Recommendations for Sustainable International Lunar Base Utilisation and Exploration Approaches

The return to the Moon is widely regarded as the next step of space exploration. Fifty years after the first Apollo mission, a renewed interest is fostering large global efforts in pursuing the scientific and economic opportunities offered by cislunar space. The ultimate goal is to establish a sustainable human and robotic presence on the lunar surface as specified in Phase 2 of NASA's Artemis Program. These perspectives are deeply intertwined with the rapid growth of the private space sector and the arising geopolitical complexities, related to utilisation of outer space among space-faring nations. This study summarises the results and recommendations of the NASA-sponsored Space Exploration Working Group within the Space Generation Congress 2019, organised by the Space Generation Advisory Council in Washington, D.C. The Working Group consisted of 26 delegates from 15 different countries and representatives from NASA Headquarters. The group examined the evolution of lunar exploration in terms of international cooperation, socio economic and technological challenges, and the inclusion of private industry. This report discusses the political, economic, and technological trade-offs between a multi-agency/multinational monolithic lunar base to multiple lunar bases operated by individual nations. Using the International Space Station as a model for international cooperation, the working group concluded that an initial infrastructure of a single station requiring a collaborative effort between nations and commercial stakeholders is the recommended approach. From this foothold, the presence is expanded to multiple bases with a standardisation of planning, building, and operating lunar bases. Strategic recommendations were identified to be addressed to the United Nations and other public/private stakeholders with the vision of a cooperative legal and technical framework as the optimal foundation for a sustainable lunar economy. Recommendations include developing international guidelines for cooperation, establishing international standards for stakeholders, implementing conflict resolution avenues, configuring a single international base, and expanding global partnerships.

ANNEXURE 1

FORMAT OF A POSITION PAPER

NUMBER: JYC22/UNCOPUOS/PP/001,2,3....

AUTHOR: 1 Max.

AGENDA: XYZ

Content:

DEADLINE OF POSITION PAPER(BEFORE FIRST COMMITTEE SESSION)

CHIT/NOTE MAKING FORMAT

From:

To:

(Via EB)

BODY:

FORMAT OF A DIRECTIVE

INDIVIDUAL/JOINT DIRECTIVE 01,2,3.....

AUTHOURS:
CO-AUTHORS:
SIGNATORIES:
TOPIC:
CONTENT:

FORMAT OF THE DRAFT RESOLUTION

DRAFT RESOLUTION 01,2.....

AUTHORS:
CO-AUTHORS:
SIGNATORIES:

CONTENT: (IN CLAUSES)

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