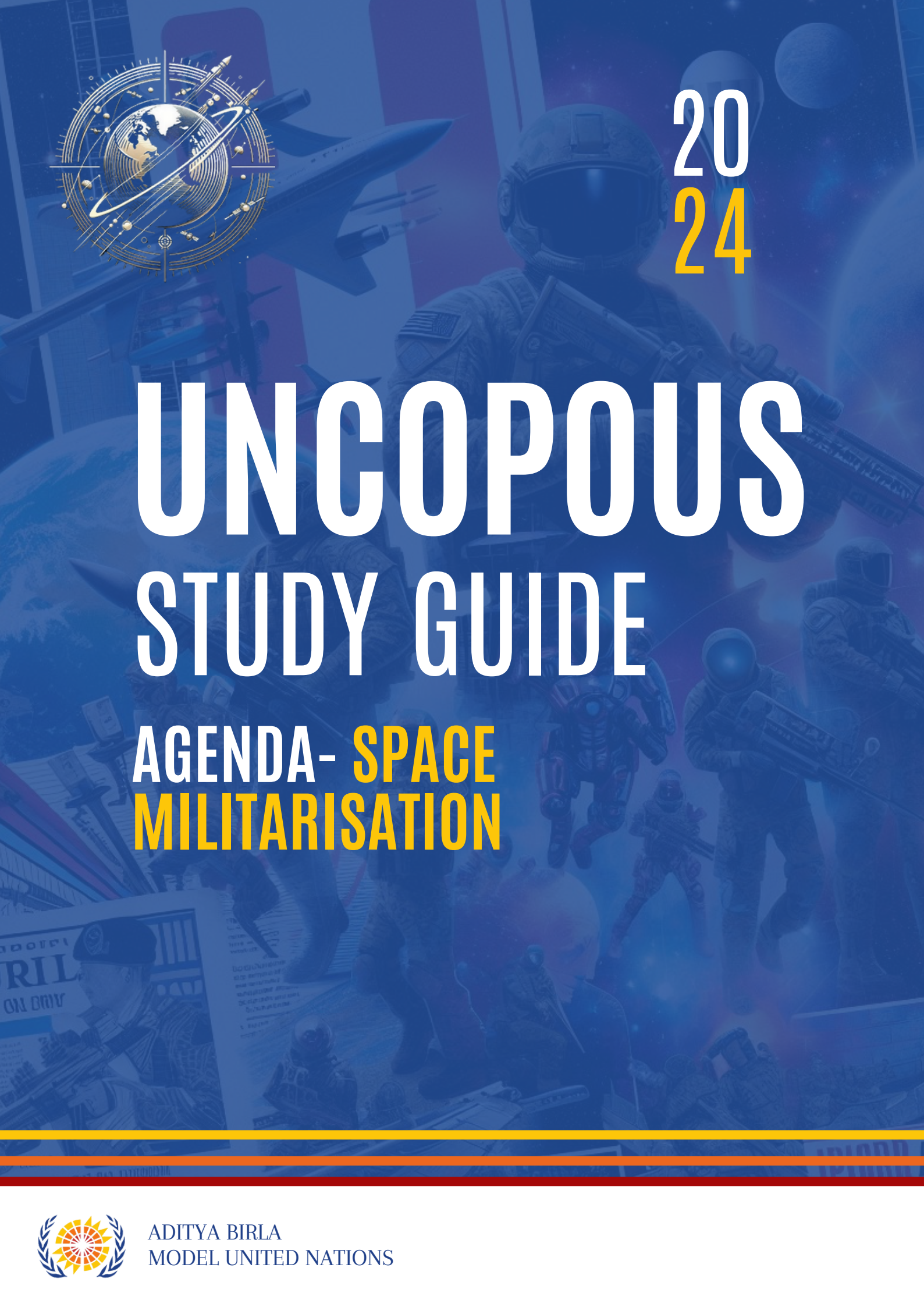

2024

UNCOPOUS

STUDY GUIDE

AGENDA- SPACE MILITARISATION

ADITYA BIRLA
MODEL UNITED NATIONS

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Letter from the EB

Dear Delegates,

I am delighted to welcome you to the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS) as chairperson at this year's Model United Nations hosted by Aditya Birla World Academy. As you embark on this exciting journey, I encourage you to delve deeply into your research concerning the agenda, especially in relation to your assigned country. Remember, while the study guide provides a foundation, your preparation should extend beyond this document to include comprehensive and varied sources of information.

Throughout our sessions, the board will focus on honing your skills in diplomacy, logical analysis, and argumentative debating. These sessions are designed to be intense and intellectually stimulating. As you engage in debates, I expect and encourage heated yet mature arguments along with well-drafted paperwork. It is through vigorous and respectful discourse that we can explore the complexities of the issues at hand and develop well-rounded, effective solutions.
This guide is intended to provide you with a clear understanding of the agenda and to aid you in structuring your addresses. However, it is crucial to recognise that it offers only a basic overview. I look forward to seeing each of you contribute thoughtfully to our discussions, respecting diverse perspectives, and maintaining the highest standards of decorum.

The importance of our discussions cannot be overstated. The issues we tackle in this committee are of global significance and require serious, informed debate. I expect you to understand the gravity of these issues and approach our sessions with the dedication and seriousness they deserve.
Should you have any questions or need any clarifications, do not hesitate to reach out to the Executive Board. We are here to support you and ensure a productive and enriching experience.
I eagerly anticipate your participation and look forward to the dynamic and enlightening debates that will unfold.

Best regards,
Dev Chheda
Chairperson, UNCOPUOS
Aditya Birla World Academy Model United Nation

Letter from the EB

Dear delegates,

I am pleased to introduce myself as the Assistant Director of the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS). It is both an honor and a privilege to serve in this role, where I am committed to advancing the peaceful and sustainable exploration and utilization of outer space.

Our committee stands at the forefront of international efforts to try and ensure the benefits of space activity are brought closer to every human being. We work closely to foster international cooperation, develop the right legal framework, and enhance knowledge and technology exchange among countries. The space exploration sector is rapidly changing, with a high number of opportunities and challenges lying before us that require perfect collaboration and expertise.

As we look to the future, I am eager to work with each and every one of you on how we can further strengthen our cooperative efforts; from managing heightened concerns about space debris, enhancing space traffic management, or ensuring long-term sustainability in space, it is our shared mission to sustain a safe and secure outer space for future generations.

I will develop your diplomatic skills, and logical analysis, and debate with you on this. These sessions are all planned to be very tough and intellectually productive. In any discussion that you take part in, I invite arguments that are passionate but respectful, supported by well-prepared documents. In this way, energetic and respectful dialogue permits us to look deeper into difficult situations and develop full and efficient solutions.

The gravity of our discussions cannot be overstated. The issues that we shall discuss at any point in time during committee are of global significance and call for serious, informed debate. I expect you to grab the gravity of the issues and thus be dedicated to attending our sessions seriously.
I look forward to the opportunity of this work close to accomplishing a lot and learning valuable insights from you in building a solid foundation of international cooperation established by UNCOPUOS.

Best regards,
Reyhan Sahana
Co-Chair, UNCOPUOS
Aditya Birla World Academy Model United Nation

Introduction to the Committee

The United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) was established by the UN General Assembly in 1959, following the launch of Sputnik by the Soviet Union in 1957. This event marked the beginning of the space age and highlighted the need for international cooperation and regulation in outer space activities. Initially, COPUOS had 24 member states, but its membership has since grown significantly to include 95 countries, reflecting the increasing global interest in space exploration and utilization.

The primary aim of COPUOS is to promote the peaceful use and exploration of outer space. The committee works to prevent the militarization of space and ensure that it is used for peaceful purposes only. It also plays a crucial role in developing international space law, including key treaties such as the 1967 Outer Space Treaty, which forms the cornerstone of space law by establishing principles for the activities of states in the exploration and use of outer space. Another significant achievement is the 1979 Moon Agreement, which extends the provisions of the Outer Space Treaty to the Moon and other celestial bodies, emphasizing their use for peaceful purposes and preventing their exploitation by any single nation.

In addition to developing space law, COPUOS facilitates international cooperation by providing a platform for member states to share information, collaborate on space missions, and discuss challenges and opportunities in space exploration. The committee also addresses contemporary issues such as space debris, the sustainable use of outer space, and space traffic management. Through its work, COPUOS ensures that the benefits of space exploration and technology are accessible to all countries, supporting capacity-building initiatives to help developing nations enhance their capabilities in space science and technology. By promoting international cooperation and developing comprehensive legal frameworks, COPUOS has significantly contributed to maintaining outer space as a domain of peaceful activity and ensuring that its exploration and use benefit all humanity.

Introduction

From the very moment when the Space Age started, humanity has been reaching out beyond the cradle of Earth for an exploration of the universe—or even further pushing scientific limits while using the vast potential from space to benefit humankind. Coupled with these noble pursuits is the danger of competition and, in due course of time, conflict in outer space.

What used to be the sanctuary of space to be explored peacefully and cooperated on is now contested and congested. The threat is being made to develop and deploy space-based weapons, anti-satellite capabilities, and offensive military technologies, and transform the heavens above into another arena of geopolitical rivalry and confrontation.

The struggle for supremacy in space has come to be; as nations vie to project power, deter, and control this expanse beyond the terrestrial borders. That is to say, in terms of developing and fielding space-based assets—be it reconnaissance satellites, communication networks, or missile defence systems—it does not only guarantee technological might but also tools of geopolitical influence and military advantage.

The militarization of space is a subject that raises some of the deepest questions about power balances, the dynamics of security, and the nature of conflict in the background of an increasingly interdependent and interconnected world. It testifies to the juncture of geopolitics, technology, and security in which improved space capabilities continue to "remake the geopolitical environment and change the character of strategic rivalry.".

We look into the geopolitical dimensions of space militarization with regard to strategic motivations, regional dynamics, and global implications of this multi-faceted phenomenon. Herein, we discuss the excitements and policies of major spacefaring nations with respect to their strategies for space militarisation and assess consequences in regard to international security.

It is in this light that we call on our readers to delve deeper into the geopolitical drivers and implications of space militarization, undertake a critical analysis, and engage in a debate on the militarization of space.

International Space Law

International space law and treaties are the legal frameworks according to which activities regarding outer space are conducted. They are key to cooperation, regulating behaviour, and ensuring the peaceful use of space. This explains international space law and some of the key treaties as follows:

1. **Outer Space Treaty, OST**: The Outer Space Treaty was developed by the United Nations General Assembly in 1967 and was thereby established as the cornerstone of international space law. Its operative principles are as follows:
   - No national appropriation: Outer space, including the Moon and other celestial bodies, shall not be subject to national appropriation.
   - Peaceful purpose: All extraterrestrial activities should be conducted for peaceful purposes; no nuclear weapons or any other weapons of mass destruction shall be placed in space.
   - International responsibility: States bear responsibility for national space activities, including those executed by nongovernmental entities, and are liable for damage caused by their space objects.
2. **Rescue Agreement**: Officially called the Agreement on the Rescue of Astronauts, the Return of Astronauts, and the Return of Objects Launched into Outer Space, accepted in 1968, it provides for procedures for the rescue and return of astronauts and the return of space objects.
3. **Liability Convention**: The Convention on International Liability for Damage Caused by Space Objects was adopted in 1972 and relates to the principles of liability for damage caused by space objects. It makes launching states liable for damage caused due to their space activities.
4. **Registration Convention**: The 1975 Convention on Registration of Objects Launched into Outer Space requires States to register their launched space objects and provides a procedure for an international registry maintained by the United Nations.
5. **Moon Agreement**: Even though it has not, up to now, been largely ratified, the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies set down principles on the peaceful exploitation and exploration of the Moon and other celestial bodies, particularly in the exploitation of their resources.
6. **Space Debris Mitigation Guidelines**: This is not a treaty, but guidelines adopted by the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), recommending ways to mitigate the generation of space debris in order to reduce the risks from space debris during space operations.

Events

2007: Chinese ASAT Test (Operation Shuangchengzi)

- On January 11, 2007, China conducted an anti-satellite missile test, destroying its own defunct Fengyun-1C weather satellite in low Earth orbit using a kinetic kill vehicle launched by a ground-based missile. This test generated thousands of pieces of debris and raised significant international concerns about space debris and the militarization of space.

2008: U.S. Navy Satellite Shootdown

- In February 2008, the United States Navy conducted a missile interception test in which it destroyed a malfunctioning U.S. spy satellite, USA-193, using a modified Standard Missile-3 (SM-3) launched from the USS Lake Erie in the Pacific Ocean. This action was undertaken due to concerns over the satellite's hydrazine fuel tank potentially surviving re-entry and causing harm.

2013: Chinese ASAT Test (CK-2 Interceptor)

- In May 2013, China conducted another anti-satellite missile test, using a new kinetic kill vehicle known as the Dong Neng-2 (DN-2) interceptor to destroy a target satellite in low Earth orbit. This test demonstrated China's continued development of ASAT capabilities.

2019: India's Mission Shakti

- On March 27, 2019, India successfully conducted an anti-satellite missile test under Mission Shakti. The test involved the destruction of a live satellite in low Earth orbit using an indigenously developed ballistic missile defence interceptor. India became the fourth country after the United States, Russia, and China to demonstrate ASAT capabilities.

2021: Russian ASAT Test (Nudol Missile System)

- In December 2021, Russia conducted an anti-satellite missile test using its Nudol missile system. The test targeted a defunct Russian satellite, Kosmos 1408, in low Earth orbit. This test raised concerns about space debris and the implications of such actions for international space security.

Cyberattacks and Space Operations

- In recent years, there have been reports of cyberattacks targeting satellite communication systems and ground stations. These incidents underscore the vulnerability of space assets to cyber threats and the potential for cyber warfare to disrupt or disable critical space-based infrastructure.

Implications

- Inevitably, space militarization will increase tension among countries that have space capabilities. Competition for strategic advantage in space could give way to a feeling of an arms race, where nations develop and field space-based weapons systems to gain military superiority over other nations. The militarization of space could revamp the geo-political dynamics of the world with countries possibly achieving weapons of mass destruction in space.

- Military activities in outer space would involve threats to key space assets through actions such as anti-satellite weapons tests or the actual deployment of space-based weapons, wherein satellites used for communication, navigation, and surveillance, may be targeted, thus disrupting important services and connectivity worldwide.

- The kinetic energy weapon or anti-satellite missile generates debris in orbit, thereby heightening the possibility of collisions and making the environment hostile to carrying out space activities. Collision with junk in space may mean the loss of a satellite, spacecraft, or associated equipment, thus generic collateral damage, and leaving long-term debris fields behind.

- Military activities in space may hence impact civilian space activities in terms of scientific research, commerce, and international cooperation in space exploration. Increased militarization will ultimately lead to restricted access to this environment, hinder collaboration among nations, and drain resources from peaceful space careers

Military Space Programs

Military space programs and strategies encompass the development, deployment, and utilization of space assets for defence and national security purposes. These programs and strategies vary among countries depending on their technological capabilities, security concerns, and strategic priorities. Here's an explanation of military space programs and strategies:

1. **Space-Based Surveillance and Reconnaissance**: Among many military space programs are satellite systems intended for surveillance and reconnaissance. They collect intelligence on Earth, monitoring various activities and providing situational awareness to deployed military forces. They may cover enemy observation, following military movements, or detection of possible threats.

2. **Communications Satellites**: Military forces have to operate secure and hardened communications networks for command, coordination, and sharing of information by necessity. Military space programs develop and operate dedicated communications satellites that assure reliable and secure communications for defence operations in the most remote or hostile environments.

3. **Navigation and Timing**: The navigation and timing capabilities that systems like GPS can provide are integrally necessary for military operations, most especially navigation, targeting, and time synchronization. Satellite navigation systems optimized for military use are either operated or accessed by too many countries to provide better precision and effectiveness on the battlefield.

4.**Early Warning Systems**: Military space programs could comprise early warning satellites designed to detect and track ballistic missile launches, providing significant time for defensive responses and countermeasures. Such systems may assist in crisis stability by averting surprise attacks and effectively managing crisis situations.

Military Space Programs

5. **Space-Based Missile Defense Systems**: Some nations develop the components of space-based missile defence systems, including sensors, interceptors, and command and control systems. The major function of these methods would be to detect, track, and intercept the flying ballistic missiles at different phases to provide an additional layer of protection to national security against the missile threat.

6. **ASAT Weapons**: The weapons are designed for the disablement or destruction of satellites of adversary countries. Military space programs may initiate, test and develop ASAT capabilities—ground-based missiles, co-orbital vehicles, or directed energy weapons— aimed at degrading or denying enemy space capabilities in times of conflict.

7. **Space Control and Denial**: This includes the retention of access to and freedom of action in space; and Space Denial, ensuring that adversaries' space capabilities are either disrupted or degraded. Military space programs may develop offensive and defensive solutions to protect friendly assets, deny enemy satellites access, or degrade adversary space systems.

Space Security and Risk Mitigation

Space security refers to the protection of space assets, infrastructure, and activities from threats, risks, and disruptions. Risk mitigation in space involves identifying potential hazards and implementing measures to minimize their impact on space operations, assets, and stability. Here's an explanation of space security and risk mitigation:

1. Threats to Space Security:

- **Physical Threats:** Physical threats to space assets include collisions with space debris, natural space phenomena (e.g., solar flares), and intentional attacks (e.g., anti-satellite weapons).

- **Cyber Threats**: Cyber threats involve malicious activities targeting space systems, such as hacking, malware, and cyber espionage. These threats can compromise the integrity, confidentiality, and availability of space assets and data.

- **Policy and Legal Challenges**: Policy and legal challenges, including the absence of clear norms and rules of behaviour in space, regulatory gaps, and geopolitical tensions, can also undermine space security and stability.

2. **Risk Mitigation Strategies:**

- **Space Situational Awareness (SSA)**: SSA involves monitoring and tracking objects in space to assess the space environment, predict collisions, and avoid potential hazards. SSA data helps operators manoeuvre satellites to prevent collisions with debris or other objects.

- **Debris Mitigation**: Debris mitigation measures aim to minimize the creation of space debris and reduce the risks of collisions. These measures include spacecraft design standards, end-of-life disposal practices, and collision avoidance manoeuvres.

- **Resilient Space Architectures**: Resilient space architecture involves designing space systems with redundancy, flexibility, and survivability to withstand and recover from disruptions. Redundant components, distributed networks, and rapid reconstitution capabilities enhance resilience against threats and failures.

Space Security and Risk Mitigation

- **Cybersecurity Measures**: Cybersecurity measures for space systems include encryption, authentication, intrusion detection, and secure communication protocols. By safeguarding space assets and networks against cyber threats, these measures protect critical functions and data.

- **International Cooperation and Transparency**: International cooperation and transparency initiatives promote collaboration among spacefaring nations, information sharing, and confidence-building measures. By fostering trust and dialogue, these efforts contribute to collective security and risk reduction in space.

- **Norms of Responsible Behavior**: Establishing norms of responsible behaviour in space, such as the prevention of debris-generating activities and the avoidance of interference with space assets, helps mitigate risks and enhance space security. Multilateral agreements, guidelines, and best practices support the development and adherence to these norms.

Countries Involved

United States
The United States has been a leader in space militarization for decades. The establishment of the U.S. Space Force in December 2019 underscored its commitment to maintaining space dominance. The Space Force focuses on protecting U.S. space assets, such as satellites used for communication, navigation, and intelligence. The U.S. also has advanced missile defence systems and is developing capabilities for space-based missile interception.

Russia
Russia has a long history of military space activities dating back to the Cold War era. The Russian Aerospace Forces, particularly its Space Forces branch, are responsible for military operations in space. Russia has been developing anti-satellite (ASAT) weapons, including direct-ascent missiles and co-orbital ASAT systems. The country also focuses on electronic warfare capabilities to disrupt or disable enemy satellites.

China
China's interest in space militarization has grown rapidly in recent years. The People's Liberation Army Strategic Support Force (PLASSF) oversees China's military space operations. China demonstrated its ASAT capabilities by destroying one of its own satellites in 2007. The country is also developing space-based surveillance, navigation, and communication systems to enhance its military effectiveness.

India
India's space program has traditionally focused on civilian applications, but recent developments indicate a growing military dimension. In 2019, India conducted Mission Shakti, an ASAT test that showcased its ability to target satellites in low Earth orbit. The Indian Space Research Organisation (ISRO) collaborates with the Indian military to enhance satellite-based reconnaissance and communication capabilities.

France
France has been enhancing its military space capabilities through the French Space Command, established in 2019. The country is investing in surveillance satellites, early warning systems, and space-based defence mechanisms. France aims to protect its space assets and ensure its strategic autonomy in space.

Countries Involved

United Kingdom
The United Kingdom has been increasingly focusing on space as a domain for defence and security. It established the UK Space Command in 2021 to coordinate military space operations and protect British interests in space. The UK is investing in satellite capabilities for intelligence, surveillance, reconnaissance, and communication purposes. It collaborates closely with allies like the United States through initiatives such as the UK-US Space Dialogue.

Israel
Israel has developed advanced space capabilities primarily for intelligence and defence purposes. The Israeli Defense Forces (IDF) utilize satellites for surveillance, reconnaissance, and early warning systems to monitor regional threats. Israel's space program includes satellite launches and technological advancements aimed at maintaining military superiority in the Middle East.

Japan
Japan's space activities are primarily driven by civilian applications but have significant military implications. The Japan Aerospace Exploration Agency (JAXA) collaborates with the Japan Ministry of Defense on satellite projects for reconnaissance, surveillance, and disaster response. Japan has also shown interest in enhancing its space situational awareness and defence capabilities amidst regional security concerns.

Germany
Germany has been expanding its military space capabilities through the establishment of a dedicated space command within the German Armed Forces (Bundeswehr). The German military uses satellites for reconnaissance, communication, and monitoring purposes. Germany collaborates with European partners through initiatives such as the European Union's Space Surveillance and Tracking (SST) program to enhance space situational awareness and protect space assets.

Australia
Australia has increasingly recognized the importance of space in defence and national security. The Australian Defense Force (ADF) leverages satellites for intelligence gathering, surveillance, and communication. Australia collaborates with international partners, including the United States, in joint space ventures and information sharing to strengthen its defence capabilities.

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