General Assembly
Topic Guides

UNOOSA

MITIGATING THE THREAT OF SPACE DEBRIS

Chairs:

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InventMUN
Saturday, March 28, 2026

UNOOSA TOPIC GUIDE

Invent Model United Nations
March 28th, 2026

Chairs: Samuel Khanimov & Amy Bangaroo
Organ: General Assembly
Committee name: UNOOSA

I. Letter from the Dais

Dear Honorable Delegates**,**

My name is Samuel Khanimov, and I will serve as one of your chairs for this session of UNOOSA. I am a senior at Thomas A. Edison CTE High School in the Automotive program, and it is our privilege to welcome you to this committee.

In this committee, delegates must balance national interests with collective responsibility. Some states will prioritize innovation and security, while others will emphasize environmental protection, civilian safety, and equitable access to space technologies. The challenge before you is to strengthen cooperation and transparency while preserving development and technological progress.

We expect rigorous research, respectful diplomacy, and solution-oriented debate grounded in international law and the principles of the United Nations. We expect delegates to come prepared and knowledgeable about their country.

We look forward to a learning and productive session. You can reach me at samuelkhanimov.inventmun@gmail.com

Sincerely,
Samuel Khanimov
UNOOSA Chair

Dear Delegates,
Welcome to UNOOSA at Edison's INVENT MUN. My name is Amy, and I will also be one of your chairs. This committee puts you in the position to handle the urgent issue of space debris. As countries continue to explore space and its orbit, the accumulation of debris significantly increases and continues to increase risks to the sustainability of outer space activities. The decisions you make in committee will shape the future of outer space.

We urge you to contribute your originality, enthusiasm, and innovative concepts and solutions you may come up with during the conference. We hope to make this committee's debate lively and full of chances to lead, cooperate, and negotiate amongst other delegates. Your voice counts here, regardless of your level of experience with MUN. We are eager to see the enthusiasm and creativity you bring to the committee, and we hope this topic guide helps you get ready.

We look forward to seeing your strategy, creativity, and leadership as you navigate this moment in history! We expect delegates to come prepared and knowledgeable of their country. Feel free to contact me at amybangaroo.inventmun@gmail.com

Sincerely,
Amy Bangaroo

II. Introduction To Topic

The United Nations Office for Outer Space Affairs (UNOOSA) was established to promote international cooperation in the peaceful use and exploration of outer space. Through coordination with Member States and oversight of agreements developed under the UN Committee on the Peaceful Uses of Outer Space (COPUOS), UNOOSA works to ensure that space remains accessible, safe, and sustainable for all nations.

Today, space-based systems are deeply embedded in everyday life. Global communications networks, navigation systems such as GPS, weather forecasting and disaster response platforms, scientific research initiatives, and even issues of information access and transparency all depend on stable orbital infrastructure. As space activity accelerates and orbital congestion increases, the responsibility of this body is not only to encourage cooperation but to address emerging threats that jeopardize global infrastructure, civilian safety, economic stability, and international security.

The rise of mega-constellations, dual-use military technologies, and uneven transparency between states has transformed space from a domain of limited actors into a highly contested and crowded environment. Delegates must therefore consider how to preserve innovation and accessibility while preventing debris generation, reducing collision risks, and strengthening accountability mechanisms in orbit.

Over the past decade, orbital congestion has increased at an unprecedented rate. The number of operational satellites in low Earth orbit (LEO) has more than doubled, driven largely by commercial mega-constellations designed to provide global broadband access. Thousands of additional satellites are scheduled for launch in the coming years. The estimated chance for collisions, among active satellites and between spacecraft and existing debris fragments moving at over 25,000 km/h, rises with orbital density.

This growing congestion heightens the risk of cascading collision events, commonly referred to as the Kessler Syndrome, which could render critical orbital regions unusable for generations. Unlike previous decades, the issue is no longer hypothetical; congestion is measurable, accelerating, and increasingly driven by private-sector activity operating across multiple jurisdictions.

III. Topic History

The origins of the space debris problem can be traced to the beginning of the Space Age in 1957, when the Soviet Union launched *Sputnik 1*, the first artificial satellite to orbit Earth. The rapid technological competition that followed between the United States and the Soviet Union resulted in frequent launches, experimental missions, and limited consideration for long-term orbital sustainability. Abandoned rocket bodies, defunct satellites, and explosion fragments accumulated in orbit, establishing the foundation of today's debris environment.

Throughout the Cold War, space achievements became instruments of ideological rivalry and military strategy. Many technologies deployed during this period possessed dual-use capabilities, serving both civilian and defense purposes. As launch frequency increased, so did fragmentation events caused by rocket stage explosions and, later, Anti-Satellite (ASAT) weapons testing. These events significantly expanded the population of high-velocity debris fragments.

In response to growing concerns over militarization and sovereignty, the international community established foundational legal frameworks. The 1967 Outer Space Treaty affirmed that space should be used for peaceful purposes and prohibited the placement of weapons of mass destruction in orbit. Later agreements, including the Liability Convention (1972) and Registration Convention (1976), sought to clarify responsibility and accountability for objects launched into space. However, these treaties were developed before large-scale commercial satellite constellations and modern congestion trends emerged.

Major fragmentation events. such as satellite collisions and ASAT tests, showed that debris creation was no longer theoretical by the 1990s and early 2000s. The 2007 Chinese ASAT test and the 2009 collision between Iridium 33 and Cosmos 2251 marked turning points, dramatically increasing trackable debris and reinforcing concerns about cascading collision risks, commonly referred to as the Kessler Syndrome.

Today's orbital environment is the result of decades of rapid expansion, geopolitical competition, and incomplete regulatory enforcement. While awareness has increased, binding mechanisms to manage congestion, regulate mega-constellations, and prevent further debris accumulation remain limited.

Early Space Activity, 1957–1990
The collection of space debris began with Sputnik 1. Frequent launches with little regard for future sustainability are the result of the Cold War rivalry. Large clouds of debris are produced by multiple unintentional rocket body explosions.

1990s–2000s: Increasing Consciousness
NASA and ESA start systematically tracking debris. The first known satellite to be hit by space debris occurred during the Cerise collision in 1996. Guidelines for debris mitigation

are discussed at UN COPUOS.

2007–2009: Significant Events of Fragmentation
Fengyun-1C was destroyed in the 2007 Chinese ASAT Test, producing more than 3,000 trackable fragments. The first unintentional collision between two satellites occurred in 2009 when Iridium and Cosmos collided.

2010s–Present: Growth in Business
Launch frequency is significantly increased by mega-constellations. Active Debris Removal (ADR) is being investigated by states and business entities. Long-Term Sustainability (LTS) is adopted by the UN COPUOS.

2019 guidelines
Debris still builds despite all of these efforts. There is no legally enforceable framework in place to control mega-constellations, debris cleanup, or ASAT testing.

IV. Current Situation

Today, space travel is crucial to day-to-day existence on Earth. Satellite systems enable international trade, communication, navigation, climate forecasting, and disaster relief. The risks of uncoordinated competitiveness and political rivalry are growing along with the dependence on space-based infrastructure. Currently, one of the biggest risks to the future sustainability of space is space debris.

Many problems arise in the topic of space debris. The main problem is collision risks; debris travels at high speeds, going up to 28,000km/h. If debris were to collide with each other, satellites, space stations, or spacecraft, severe damage can be done. This not only endangers future missions but also puts our astronauts at risk of being injured. Collisions can cause multiple underlying issues, such as creating a Kessler syndrome, impacts on Global communications, navigation systems, weather forecasting, scientific research, censorship/transparency, and even human space exploration, which increases safety risks and can pose a threat to the environment if space debris re-enters.

Kessler Syndrome

Space debris and chain reaction collisions, which is a theory proposed by NASA scientist Donald. J Kessler in 1978. As the number of space debris continues to increase, so does the risk of further collisions. In the worst-case scenario, the density of debris can reach a point where entire regions of orbit become potentially unusable. This causes any new spacecraft to be able to operate safely in those orbits. The International Space Station, as well as many scientific, military, and commercial satellites would face a bigger threat of collision. This chain reaction can severely limit humanity’s access and reduce the benefits that satellites provide for life on Earth.

Global Communication

COMSATs(Communication Satellites) are used for television broadcasting, radio transmission, internet services, and long-distance telephone connections. A collision with one of these satellites can cause regional or global communication outages, loss of emergency broadcasting capabilities, and disruption of international phone and data networks. COMSATs are the backbone of global connectivity.

Global Internet Infrastructure(Satellite Internet), mega satellites such as Starlink, OneWeb, and Kuiper provide internet, maritime and aviation connectivity, and emergency communications after natural disasters. A collision with debris can interrupt internet access for millions, reduce bandwidth or coverage, and even delay the deployment of new satellites. This is critical for developing countries that rely on the internet for digital inclusion, such as rural regions of India, Indonesia, the Philippines, rural areas of Bangladesh, Kenya, rural regions of Tanzania, and more.

Navigation systems

Global Navigation Satellite System(GNSS) are core satellites that provide global positioning, navigation, and timing. Major GNSS systems that will be impacted are GPS(United States), Galileo(European Union), GLONASS(Russia), BeiDou(China), and regional systems such as India's NavIC and Japan's QZSS. GNSS satellites typically operate in Medium Earth Orbit(MEO), which has been at risk from fragmentations, cross-orbit debris, and long-lasting debris that cannot naturally deorbit. A single collision could disable a satellite and degrade global accuracy, since if debris damages a GNSS satellite, the world will lose the backbone of modern navigation and timing

Weather Forecasting

Meteorological Satellites(Weather Satellites) provide the core data for global weather models. Some key systems impacted include NOAA GOES & POES(United States), EUMETSAT Meteosat & MetOp(Europe), Himawari series(Japan), INSAT(India), and FY-series(China). Weather satellites usually operate in LEO and Geostationary Earth Orbit(GEO), so a collision could destroy the satellite, create new debris fragments, and leave major regions without weather coverage. These satellites provide cloud imaging, temperature and humidity profiles, storm tracking, and precipitation estimates. Without them, the forecasting accuracy drops dramatically.

Earth Observation Satellites Used for Climate and Environment Monitoring satellites support climate modeling, sea-surface temperature measurements, ice-sheet monitoring, and drought and wildfire detection. Some examples of these satellites include NASA Terra & Aqua, Sentinel-3 (Copernicus Programme), and Suomi NPP. Most of these operate in LEO, where a single impact can eliminate years of climate data continuity. If this data is lost, then we have less accurate climate predictions, reduced ability to track long-term environmental change, and weaker disaster preparedness

Storm-Tracking and Disaster Monitoring Satellites are essential for hurricane and typhoon tracking, flood prediction, volcanic ash monitoring and early-warning systems. Some examples include the GOES-R series, Himawari-8/9 and FY -4 . If debris disables a storm tracking satellite entire regions may lose real time storm imagery, early warning capabilities and evacuation planning tools. Without these this can cause delayed evacuation orders, increased casualties and reduced disaster response and their effectiveness

Numerical Weather Prediction(NWP) Data Systems are satellites that weather models rely on for data initialization. Examples of these models include ECMWF(Europe), GFS(United States) and the UK Met Office Unified Model. If debris collides with any of the satellites the models will receive less data, lower-resolution data and delayed data. This would cause the forecast accuracy to drop which affects aviation routing, maritime safety, agriculture and emergency management.

Scientific Research

Space telescopes provide deep-space imaging, exoplanet detection, galaxy formation studies and dark matter and dark energy research. Examples of these telescopes include Hubble Space Telescope, James Webb Space Telescope, Chandra X-ray Observatory and the Euclid Space Telescope. Even tiny debris fragments can puncture the mirrors, sensors and instruments. Telescopes do not have the ability to maneuver quickly to avoid debris damage that can permanently degrade image quality and end missions early. Losing or damaging them sets back decades of scientific progress

The International Space Station (ISS) and Microgravity Research Labs supports research in Medicine, Biology, Physics, Material science and Human spaceflight. A collision could endanger astronauts and can destroy research. These experiments cannot be replicated on Earth if damage were to be done to one of the stations.

Cosmic Microwave Background(CMB) and Astrophysics Missions study the origins of the universe. Examples of this include the Planck Observatory, WMAP and Future CMB-S4 missions. Debris can damage sensors and force missions to end early. These missions help scientists understand The Big Bang, Cosmic Inflation and The structure of the universe. Losing them delays fundamental discoveries.

Technology-Demonstration Satellites test new technologies for propulsion, robotics, materials, communications and earth science instruments. These satellites are often small, less maneuverable and become more vulnerable to debris collisions. These satellites pave the way for future scientific missions, safer spacecraft, improved sensors and more efficient propulsion systems. Collision can slow technological advancements.

Censorship & Transparency

Space debris doesn’t only threaten satellites physically, it also affects who has access to information, who controls data and how transparent space operations are.

Space Situational Awareness(SSA) Systems track objects in orbit and provide data on satellite positions, collision risks, debris clouds and maneuvers by countries and private companies. As debris increases, tracking becomes harder, small fragments go unmonitored, states may withhold tracking data for national security reasons and developing countries lack access to high-precision tracking. SSA is the foundation of transparency in space and without it states cannot verify each other's actions, misunderstandings and false accusations increase, risk of conflict rises and developing countries become dependent on major powers for orbital data. This will create information inequality in space governance.

Satellite-Based Journalism, Broadcasting and Information Access: Many regions rely on satellites for international news, independent media, anti-censorship tools and internet access. If debris disables these satellites populations may lose access to uncensored global media, governments can more easily restrict information and independent journalism becomes harder to broadcast. Satellite communication is often the only way for people in authoritarian or remote regions to access unfiltered news, international reporting and human right documentation. Collins can unintentionally strengthen censorship

Transparency in Military and Dual-Use Space Activities: Many satellites are used for surveillance, missile launch detection, verification of treaties and monitoring nuclear activity. If debris damages or destroys these satellites, countries lose the ability to verify each other's actions, misinterpretation of military maneuvers becomes more likely and accidental escalation risk increases. Transparency satellites help prevent: arms race, miscalculations, false alarms and conflict escalation. This reduces the world's ability to see what others are doing increasing geopolitical instability

Scientific Transparency and Open Data Systems: Many scientific missions share open data globally. Examples include the Earth-observation satellites, Climate monitoring missions and Atmospheric research satellites. If debris disables these satellites, climate and environmental data becomes incomplete, developing countries lose access to shared scientific information and governments can more easily manipulate or restrict environmental data. Open scientific data supports climate transparency, disaster preparedness, environmental accountability and global research collaboration.

International Reporting and Verification Mechanisms: Many UN systems rely on satellite data to verify humanitarian crises, environmental damage, conflict zones and treaty compliance. If satellites are lost UN agencies lose independent verification tools, governments can hide or distort information and human rights abuses become harder to document. Satellite imagery is often the only source of truth in war zones, closed regimes and disaster areas. Damage to these satellites reduces the world's ability to hold countries accountable.

Human Space Exploration

Human Spaceflight Vehicles including SpaceX Crew Dragon, Boeing Starliner, Orion spacecraft and Soyuz spacecraft. These spacecraft are the only way for humans to travel to and from space. A debris strike during ascent or descent could be fatal. Collisions risk threatens crew safety, mission reliability and international cooperation on crewed missions

Spacewalks(Extravehicular Activities, EVAs): Astronauts outside the station are extremely vulnerable. Even a 1 cm debris fragment can penetrate space suits. Debris cannot be easily detected or avoided during a space walk, because of this EVAs may be delayed or canceled due to debris alerts. EVAs are essential for repairs, upgrades, scientific experiments and maintenance of the ISS. Debris reduces the ability to maintain human rated systems

Lunar and Deep Space Mission: Future missions include NASA Artemis Program, Lunar Gateway Station and Mars mission prototypes. Debris can damage spacecraft before they even leave Earth's orbit. If LEO becomes unsafe, humanity’s path to the Moon and Mars becomes blocked

Commercial Human Spaceflight includes space tourism vehicles, private space stations and commercial crew transport. Commercial spaceflight is becoming a major part of the global space economy. Collisions threaten investment, innovation and access to space. This also leads to increased insurance costs, higher mission risk and reduced commercial viability

Delegates must determine whether voluntary guidelines are sufficient, whether binding frameworks are needed, and whether major space powers should have a greater responsibility compared to emerging countries. Delegates must be able to come up with solutions on how to stop the risk of collisions while also addressing any underlying issues, and thinking about how to promote responsible action that safeguards civilian safety and international stability.

V. Questions to Consider

- How should countries balance between economic, environmental and safety goals?
- How can states manage political rivalry in space without escalating conflict?
- What responsibilities do nations have when their space activities affect global safety and stability?
- How can transparency be promoted without undermining national security?
- Should prestige and national ambition be limited by collective responsibility?
- How can developing and non-spacefaring states gain equitable access to space-related benefits and protections?

VI. Delegations

● Algeria – Supports UN-led space debris mitigation and re-entry safety standards, prioritizing civilian protection and environmental safety.

● Argentina – Advocates transparency and debris mitigation measures to protect civilian satellites and ensure long-term orbital stability.

● Australia – Strong advocate for space sustainability, emphasizing tracking coordination, debris prevention, and responsible orbital use.

● Austria – Supports peaceful use of outer space and multilateral governance through United Nations mechanisms.

● Bangladesh – Focuses on Earth-safety concerns, highlighting risks from uncontrolled re-entry over densely populated regions.

● Brazil – Supports sustainable space practices while maintaining flexibility for developing national space capabilities.

● Bulgaria – Cooperative and supportive of international data-sharing systems to improve collision avoidance and debris tracking.

● Canada – Strong supporter of strict debris mitigation and re-entry safety, viewing space debris as a direct Earth-safety and liability issue.

● Chile – Supports international coordination to protect scientific, civilian, and commercial satellite infrastructure.

● China – Advocates UN-centered frameworks and collective responsibility in managing space debris while opposing unilateral governance.

● Denmark – Advocates transparency, peaceful research, and multilateral regulation of outer space.

● Egypt – Balances superpower relationships with leadership among developing states, supporting peaceful use, decolonization, and technological development.

● France – Strong proponent of binding international standards, treating space debris as an environmental issue requiring regulation.

● Germany – Emphasizes environmental-style governance of outer space and supports comprehensive sustainability norms.

● Ghana – A leading Non-Aligned Movement voice advocating peaceful space use, anti-colonial principles, and equitable access to emerging technologies.

● Guyana – Equity-focused, advocating protections and early-warning access for non-spacefaring states.

● Hungary – Neutral and cooperative, favoring low-cost, UN-led debris mitigation and safety solutions.

● India – Advocates responsible space sustainability while protecting its expanding national space capabilities. Supports debris mitigation and transparency measures while emphasizing sovereign rights to space development and strategic security interests.

● Indonesia – Focuses on re-entry and debris risks to equatorial regions and supports international coordination for population safety.

● Iran – Supports the peaceful use of outer space under United Nations frameworks while emphasizing national sovereignty and resistance to restrictive regulations that may limit emerging space programs.

● Israel – Prioritizes national security and early missile development while supporting peaceful scientific cooperation.

● Italy – Supports EU-aligned cooperation, shared standards, and multilateral approaches to orbital safety.

● Japan – Strong supporter of technological innovation for debris prevention, mitigation, and active debris removal.

● Kazakhstan – Strong advocate for debris mitigation and controlled re-entry due to direct exposure to launch and re-entry zones.

● Kyrgyzstan – Supports international safety guidelines to reduce risks to civilians in non-spacefaring countries.

● Libya – Supports UN-guided sustainability frameworks without imposing high technical or financial burdens.

● Luxembourg – Strong supporter of commercial space innovation while advocating international legal clarity and sustainability standards for emerging space industries.

● Mexico – Supports multilateral safety standards and regional coordination to protect populations and satellite services.

● Mongolia – Advocates peaceful, safe use of space and supports international cooperation on debris prevention.

● Netherlands – Emphasizes international law, scientific cooperation, and strong UN oversight of space activities.

● New Zealand – Supports responsible launch practices and international coordination on debris mitigation, recognizing its growing commercial launch role through private-sector partnerships.

● Nigeria – Emphasizes capacity-building and equitable access to debris alerts and tracking information.

● North Korea – Skeptical of restrictive frameworks, viewing debris regulations as potentially limiting national development and sovereignty.

● Norway – Supports peaceful space exploration and environmental protections.

● Pakistan – Seeks technological advancement and strategic partnerships to counter regional rivals and expand space capabilities.

● Paraguay – Focuses on Earth-impact prevention and supports protections for non-spacefaring and vulnerable states.

● Philippines – Supports peaceful space use while relying on major power partnerships for technological and security assistance.

● Poland – Supports EU-aligned sustainability standards and views orbital debris as a shared infrastructure risk.

● Russia – Supports shared responsibility for orbital sustainability while prioritizing national sovereignty and strategic interests.

● Saudi Arabia – Expanding its national space program and astronaut initiatives while supporting international cooperation that does not restrict emerging space capabilities.

● South Africa – Emphasizes equity, capacity-building, and shared access to space safety systems for developing nations.

● South Korea – Strongly supports debris mitigation to protect satellite-dependent economic and communication systems.

● Spain – Supports transparency, coordination, and international data-sharing for orbital safety.

● Sweden – Advocates demilitarization, scientific transparency, and strong UN oversight of space activities.

● Switzerland – Maintains strict neutrality, champions diplomacy, international governance, and non-militarization of space.

● Tanzania – Prioritizes civilian safety and supports international oversight of debris and re-entry risks.

● Thailand – Supports peaceful technological development and cooperative space governance.

● Trinidad and Tobago – Equity-driven approach supporting fair access to tracking and safety systems.

● Turkey – Supports Western strategic interests and views space technology as essential to regional security and modernization.

● Turkmenistan – Neutral but supportive of non-political, safety-focused international cooperation.

● Ukraine – Possesses historic launch and aerospace capabilities and supports sustainability frameworks that protect access to orbit while maintaining national sovereignty.

● United Arab Emirates – Rapidly expanding space actor advocating sustainability, innovation, and responsible governance while maintaining strong investment in advanced space exploration missions.

● United Kingdom – Focuses on coordination, transparency, and commercial accountability in space operations.

● United States – Supports debris mitigation and safety standards while maintaining flexibility to encourage innovation and leadership.

● Uzbekistan – Emphasizes environmental protection and regional safety related to orbital debris and re-entry risks.

VII. Glossary

Active Debris Removal (ADR)
The process of capturing and removing existing space debris from orbit in order to reduce long-term collision risks and prevent cascading debris events.

Anti-Satellite Weapon (ASAT)
A weapon or test designed to disable or destroy satellites in orbit. ASAT tests often create significant debris and increase long-term orbital congestion.

Collision Avoidance Maneuver
An orbital adjustment made by a satellite or spacecraft to reduce the probability of collision after receiving a conjunction warning.

Committee on the Peaceful Uses of Outer Space (COPUOS)
A United Nations committee responsible for developing international space law, sustainability guidelines, and cooperation frameworks for the peaceful use of outer space.

Communication Satellite (COMSAT)
A satellite used for broadcasting, telecommunications, internet connectivity, and emergency

communications services.

Conjunction
A close approach between two objects in orbit that may require monitoring or corrective action to avoid collision.

Deorbit
The intentional removal of a satellite or spacecraft from orbit, typically allowing it to safely burn up in Earth's atmosphere.

Dual-Use Technology
Space technology that can serve both civilian and military purposes, often complicating transparency and trust between states.

Fragmentation Event
An explosion, collision, or weapons test that breaks a satellite or rocket body into multiple debris fragments.

Geostationary Orbit (GEO)
An orbit approximately 35,786 kilometers above Earth in which satellites remain fixed over one location. GEO is commonly used for communications and weather satellites.

Global Navigation Satellite System (GNSS)
Satellite systems that provide positioning, navigation, and timing services worldwide. Major systems include GPS (United States), Galileo (European Union), GLONASS (Russia), and BeiDou (China).

Kessler Syndrome
A theoretical cascading chain reaction of orbital collisions, proposed by NASA scientist Donald J. Kessler in 1978, in which debris generation could render certain orbital regions unusable.

Low Earth Orbit (LEO)
An orbital region between approximately 160 and 2,000 kilometers above Earth where most operational satellites and debris are concentrated. LEO faces the highest congestion risk.

Long-Term Sustainability (LTS) Guidelines
Non-binding guidelines adopted by UN COPUOS aimed at promoting safe and sustainable use of outer space.

Medium Earth Orbit (MEO)
An orbital region between approximately 2,000 and 35,786 kilometers above Earth. GNSS satellites commonly operate in this region.

Mega-Constellation
A coordinated network of hundreds or thousands of satellites deployed in similar orbital paths

to provide global services such as broadband internet.

Meteorological Satellite
A satellite used for weather monitoring, storm tracking, climate observation, and environmental data collection.

Orbital Congestion
The increasing density of satellites and debris in key orbital regions, which raises the probability of collisions.

Outer Space Treaty (1967)
The foundational treaty of international space law establishing peaceful use of outer space and state responsibility for national space activities.

Post-Mission Disposal (PMD)
A practice or requirement ensuring that satellites are safely removed from orbit after completing their operational life.

Registration Convention (1976)
A United Nations treaty requiring states to register objects launched into space to promote accountability and transparency.

Re-entry
The process by which a space object returns through Earth's atmosphere, either in a controlled or uncontrolled manner.

Space Debris (Orbital Debris)
Nonfunctional, human-made objects in orbit, including defunct satellites, rocket bodies, and collision fragments.

Space Situational Awareness (SSA)
The ability to detect, track, and predict the movement of objects in space to prevent collisions and improve operational transparency.

Space Traffic Management (STM)
Proposed coordination systems and regulatory frameworks designed to manage satellite operations and prevent collisions in increasingly congested orbital environments.

United Nations Office for Outer Space Affairs (UNOOSA)
The UN office responsible for promoting international cooperation in the peaceful use and exploration of outer space and supporting the implementation of space law.

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