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COMMITTEE ON THE PEACEFUL USE OF OUTER SPACE (COPUOS)

Creating a Framework to Resolve Space Territory Disputes

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Territorial Disputes in Outer Space: Legal Frameworks, Emerging Conflicts, and Paths Forward

Outer space is experiencing unprecedented activity, with an increasing number of states, private entities, and commercial systems participating in exploration, resource utilization, and orbital infrastructure development. As technological advancements make space more accessible, territorial disputes over resources and rights are becoming increasingly likely. Such disputes encompass disagreements regarding resource extraction, orbital positions, satellite rights, safety zones, and future habitation. Although explicit territorial claims to land in space have not yet occurred, tensions are escalating as competition for valuable resources intensifies. Companies such as Planetary Resources and iSpace are actively pursuing space mining, focusing on lunar resources like water and helium-3, as well as asteroids containing precious metals.[1] If multiple actors target the same celestial object or site, disputes may arise rapidly, underscoring the urgent need for clear international frameworks to prevent and resolve conflicts.

Outer space has shifted from a symbolic arena of Cold War rivalry into a core component of global economic infrastructure and national security strategy. Satellites underpin telecommunications, navigation, disaster response, climate monitoring, and financial systems.[2] At the same time, space is increasingly framed as the next frontier for industrial expansion and human presence. This transformation has placed unprecedented pressure on legal frameworks designed for a far less crowded and commercialized environment. While international law prohibits sovereignty in space, technological realities now allow actors to establish long-term operational control, raising difficult questions about how non-appropriation can coexist with sustained use.[3]

As a result, the international community faces a critical governance challenge: how to prevent competition from evolving into conflict in a domain where enforcement is limited, access is unequal, and the consequences of miscalculation can extend far beyond Earth orbit. This guide is designed to equip delegates with the legal foundations, institutional context, and practical scenarios necessary to craft realistic, UN-aligned solutions over the course of a four-day conference.

Defining “Space Territory” and Key Concepts

In international law, territory traditionally implies sovereignty, exclusivity, and the authority to regulate and exclude. Outer space fundamentally disrupts this framework. No state may claim territory in space, yet states exercise jurisdiction over space objects they launch and retain control over personnel aboard those objects.[4] This creates a functional separation between territorial sovereignty and operational control. When discussing “space territory,” delegates should therefore understand the term as describing contested access or influence rather than legally recognized ownership.

A crucial distinction exists between appropriation and utilization. The Outer Space Treaty

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[1] “Space Resource Extraction: Overview and Issues for Congress.” n.d. Congress.Gov | Library of Congress. https://www.congress.gov/crs-product/R48144.

[2] “How Space Diplomacy Secures Critical Orbital Infrastructure.” 2026. World Economic Forum. January 19, 2026. https://www.weforum.org/stories/2026/01/future-of-space-governance/.

[3] Santos, Edmarverson A. 2026. “Geopolitics of Outer Space: Power, Competition, Governance.” *Diplomacy and Law* (blog). January 9, 2026. https://www.diplomacyandlaw.com/post/geopolitics-of-outer-space.

[4] Santos, Edmarverson A. 2025. “International Law and the Regulation of Outer Space.” *Diplomacy and Law* (blog). July 4, 2025. https://www.diplomacyandlaw.com/post/international-law-and-the-regulation-of-outer-space.

explicitly prohibits national appropriation but permits use and exploration.[5] Utilization includes scientific research, satellite deployment, infrastructure construction, and potentially resource extraction. Appropriation, by contrast, implies a permanent claim or exclusive entitlement. As operations become longer-term and more capital-intensive, activities that are legally framed as utilization may resemble appropriation in practice, creating legal and political tension.

Disputes in outer space do not require formal claims of ownership. A dispute may arise from harmful interference with satellites, denial of access to critical orbits, conflicting safety zones, or environmental damage that affects other actors.[6] These disputes may be legal, technical, political, or strategic in nature. Understanding the broad scope of what constitutes a dispute is essential for proactive governance.

Delegates must also distinguish between celestial bodies and orbital space. Celestial bodies such as the Moon and asteroids are governed by non-appropriation principles, while orbital regions—particularly geostationary orbit—are regulated through allocation systems administered by the International Telecommunication Union. Unlike celestial bodies, orbital slots are finite and congested, making disputes more immediate and frequent. Finally, legal presence must be distinguished from physical presence: landing a probe or establishing a base does not confer sovereignty, but it can create de facto control that complicates legal interpretation.

Key Stakeholders and Actors

States remain the primary actors in outer space governance, as international law assigns responsibility for all space activities to national governments. Major spacefaring nations such as the United States, China, Russia, and members of the European Union possess advanced technological capabilities, extensive satellite constellations, and significant influence within international institutions. Their national policies and bilateral agreements often shape emerging norms, even in the absence of binding international rules.[7]

Emerging space nations, including India, the United Arab Emirates, Brazil, South Korea, and others, are rapidly expanding their capabilities. These states seek economic development, technological prestige, and strategic autonomy, while also advocating for more inclusive governance structures. Developing states with limited access to space technologies are indirect but critical stakeholders, as they rely heavily on satellite services for development, disaster management, agriculture, and connectivity.[8]

Private and commercial actors now play a transformative role. Space mining companies, satellite operators, launch providers, and space tourism firms drive innovation and investment but also introduce regulatory complexity. While private actors operate under state authorization, their multinational ownership structures and cross-border operations complicate accountability. Disputes involving private actors often implicate multiple states simultaneously.

International organizations serve as coordinating, regulatory, and norm-setting bodies.

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[5] Robert.Wickramatunga. n.d. “The Outer Space Treaty.” https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introouterspacetreaty.html.

[6] Mahulena, Hofmann, and Blount Pj. 2019. “Space Law Disputes.” *Max Planck Encylopedia of International Procedural Law*, October. https://doi.org/10.1093/law-mpeipro/e2812.013.2812.

[7] Sandler, Ely. 2025. “Governing Outer Space: A Conference of the Parties for the Outer Space Treaty.” The Belfer Center for Science and International Affairs. December 8, 2025. https://www.belfercenter.org/research-analysis/space-cop-governance.

[8] Paravano, Alessandro, Matteo Patrizi, Elena Razzano, Giorgio Locatelli, Francesco Feliciani, and Paolo Trucco. 2024. “The Impact of the New Space Economy on Sustainability: An Overview.” *Acta Astronautica* 222 (June): 162–73. https://doi.org/10.1016/j.actaastro.2024.05.046.

The United Nations Office for Outer Space Affairs facilitates cooperation, capacity-building, and registration.[9] The International Telecommunication Union manages orbital slots and frequencies, making it central to disputes involving geostationary orbit. The Committee on the Peaceful Uses of Outer Space functions as the primary forum for legal development. Understanding the roles and limitations of each actor allows delegates to assess power asymmetries and institutional constraints.[10]

Strategic Importance of Space Territories

The economic value of space resources is a central driver of competition. Water ice on the Moon can support life, produce rocket fuel, and enable sustained exploration. Asteroids contain platinum-group metals and other rare materials with potential industrial applications.[11] Helium-3, while not yet commercially viable, is often cited as a potential future fusion fuel. These resources make specific locations disproportionately valuable and contested.

Space also confers strategic and military advantages. Satellites support intelligence gathering, missile early warning, navigation, and secure communications. Control over orbital infrastructure enhances national security and deterrence capabilities. As more states integrate space into defense doctrines, the risk of escalation through misinterpretation or interference increases.

Civilian and scientific interests further reinforce space's importance. Climate monitoring, weather forecasting, and disaster response depend on uninterrupted satellite access. Scientific research and long-term human settlement carry symbolic and practical significance, reinforcing national prestige and technological leadership. These overlapping motivations ensure that space disputes are never purely legal in nature.

Current and Emerging Areas of Dispute

The lunar South Pole represents one of the most prominent emerging flashpoints. Permanently shadowed regions are believed to contain water ice, and multiple states and companies have announced plans targeting the same limited areas.[12] Safety zones established to protect operations may function as exclusionary mechanisms, raising concerns about de facto appropriation.

Asteroid mining presents similar challenges. Exclusive extraction operations may deny others access without formally claiming ownership. Geostationary orbit congestion remains an ongoing issue, with satellite interference and slot crowding disproportionately affecting developing states seeking access.[13]

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[9] Robert.Wickramatunga. n.d. "Space Law: Capacity Building." https://www.unoosa.org/oosa/en/ourwork/spacelaw/capacitybuilding.html.

[10] Mbe, Joanne Wheeler. 2025. "Space Law: International Telecommunication Union and Access to Spectrum." Lexology. December 19, 2025. https://www.lexology.com/library/detail.aspx?g=29cc4af4-0414-440c-975a-615889da1822.

[11] Coulton, Jeff. 2025. "The Final Investment Frontier: The Economics of Space Resources." UNSW BusinessThink. June 1, 2025. https://www.businessthink.unsw.edu.au/articles/space-resource-utilisation-investment-governance-benefit-sharing.

[12] "New Lunar Mission to Demonstrate Search for Water Ice at Moon's South Pole." n.d. https://www.dlr.de/en/latest/news/2025/new-lunar-mission-to-demonstrate-search-for-water-ice-at-moon-s-south-pole.

[13] Kendal, Evie, Tony Milligan, and Martin Elvis. 2025. "Technical Challenges and Ethical, Legal and Social Issues (ELSI) for Asteroid Mining and Planetary Defense." *Aerospace* 12 (6): 544. https://doi.org/10.3390/aerospace12060544.

Space debris further complicates disputes. Safety-driven exclusion zones may be necessary, but without oversight, they risk being abused. Future space stations and lunar bases will intensify these dynamics by introducing permanent or semi-permanent human presence.

Challenges in Creating a Global Framework

Global governance efforts face significant obstacles. Many treaties lack universal ratification, and enforcement mechanisms are weak. Compliance relies heavily on transparency, diplomacy, and reputational costs.

National interests often conflict with collective benefit, particularly where strategic or economic advantages are concerned. Private actors operating under divergent national regulations further complicate harmonization. Technological disparities risk entrenching inequality, while militarization raises escalation risks.

Ethical and Equity Considerations

Beyond legal and strategic considerations, disputes over space territory raise profound ethical and equity-based questions that are central to the United Nations system. One of the most frequently cited normative principles in space governance is the concept of the "common heritage of humankind," articulated most explicitly in the Moon Agreement and echoed in numerous General Assembly resolutions.[14] This principle holds that outer space and celestial bodies are not merely unclaimed environments but shared domains whose benefits should accrue to all humanity, including future generations. However, translating this ideal into operational policy has proven difficult, particularly as space activities become capital-intensive and technologically complex.[15]

A key ethical concern is equitable access. While major spacefaring nations and private corporations possess the resources to exploit space opportunities, many developing states remain dependent on external actors for satellite services and data. Without safeguards, emerging frameworks risk entrenching a system in which early movers dominate valuable locations and resources, leaving late entrants with limited options. This dynamic mirrors historical patterns of inequality in other global commons, such as the high seas and deep seabed mining. Delegates must therefore consider how frameworks can prevent a "first-come, first-served" model that undermines fairness.[16]

Environmental stewardship is another critical ethical dimension. Space is often perceived as infinite, yet key operational zones are finite and fragile. Orbital debris, contamination of celestial bodies, and irreversible alteration of lunar or asteroid environments pose long-term risks.[17] The principle of intergenerational responsibility—ensuring that future generations can access and benefit from space—requires that current actors adopt sustainable practices. Ethical

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[14] Pic, Pauline, Philippe Evoy, and Jean-Frédéric Morin. 2023. "Outer Space as a Global Commons: An Empirical Study of Space Arrangements." *International Journal of the Commons* 17 (1): 288–301. https://doi.org/10.5334/ijc.1271.

[15] Rüdiger, Wolfrum. 2009. "Common Heritage of Mankind." *Max Planck Encyclopedia of Public International Law*, November. https://doi.org/10.1093/law:epil/9780199231690/e1149.

[16] Gümplová, Petra. 2025. "Justice on the Seafloor: A Critical Appraisal of the Extension of Sovereign Rights to Natural Resources on the Continental Shelf." *German Law Journal* 26 (4): 636–67. https://doi.org/10.1017/glj.2025.28.

[17] Directory, Sustainability. 2025. "Environmental Space Stewardship → Term." Pollution → Sustainability Directory. December 12, 2025. https://pollution.sustainability-directory.com/term/environmental-space-stewardship/.

governance must balance innovation with restraint, recognizing that short-term gains may produce irreversible harm.

Finally, ethical considerations intersect with peace and security. The gradual militarization of space raises concerns about escalation and the normalization of exclusionary practices under the guise of security. Ethical frameworks rooted in UN principles emphasize cooperation, transparency, and confidence-building as means of preventing conflict. For delegates, ethics are not an abstract add-on but a lens through which legal and policy choices must be evaluated.

Militarization of Space and Emerging Power Imbalances

An increasingly important factor in future space territorial disputes is the growing militarization of outer space. In recent years, most major spacefaring powers—including the United States, China, and Russia—have established dedicated space-focused military forces or commands. While these entities are currently framed as defensive and primarily focused on supporting terrestrial operations, their existence reflects a broader shift in how space is perceived: not merely as a scientific or commercial domain, but as a strategically contested environment.

At the same time, states have accelerated the development of counterspace capabilities such as anti-satellite (ASAT) weapons, electronic warfare systems, and proximity operations. Although justified as deterrence or asset protection, these capabilities could be repurposed to deny access, enforce exclusion zones, or exert pressure in disputes over valuable orbital regions or resource-rich celestial locations. This raises concerns that legal or diplomatic disagreements could escalate into security-driven confrontations, particularly in the absence of clear international oversight.

These military developments intersect directly with accelerating lunar exploration efforts. The United States–led Artemis program represents a critical milestone, with Artemis II set to conduct a crewed lunar mission in the near term. A successful mission would likely enable Artemis III, which aims to return humans to the lunar surface as early as 2027. Notably, Artemis III's proposed landing site is the lunar South Pole, a region of exceptional strategic and resource value.

While a crewed landing does not constitute a legal territorial claim, sustained presence, infrastructure development, and safety zones could generate de facto control and perceptions of preferential access—particularly given that no other state is currently close to achieving a comparable mission. Combined with growing military capabilities in space, these dynamics risk intensifying competition and mistrust, underscoring the urgency of developing a UN-aligned framework capable of preventing emerging power asymmetries from hardening into territorial-style disputes.

Role of the United Nations and COPUOS

The United Nations occupies a central role in shaping the norms, principles, and expectations that govern activities in outer space. Since the creation of the Committee on the Peaceful Uses of Outer Space (COPUOS) in 1959, the UN has served as the primary forum for negotiating treaties, developing guidelines, and fostering cooperation among spacefaring and non-spacefaring states alike.[18] COPUOS operates through two subcommittees—the Legal

[18] United Nations. n.d. "International Space Law Explained | United Nations." https://www.un.org/en/peace-and-security/international-space-law-explained.

Subcommittee and the Scientific and Technical Subcommittee—allowing both legal norms and technical realities to inform governance.

Through COPUOS, the UN facilitated the negotiation of the five core space treaties, including the Outer Space Treaty, Liability Convention, and Registration Convention. While these instruments established foundational principles such as non-appropriation and state responsibility, they intentionally avoided detailed regulation of future commercial activities. In recent decades, COPUOS has shifted toward "soft law" mechanisms, including the Long-Term Sustainability (LTS) Guidelines, which promote responsible behavior, transparency, and risk mitigation without creating binding obligations.[19]

General Assembly resolutions further reinforce these norms by articulating expectations around peaceful use, international cooperation, and confidence-building measures. Although non-binding, such resolutions contribute to customary international law over time and shape state behavior through reputational incentives. The UN also plays a critical role in capacity-building, helping developing states participate more fully in space governance through training, data-sharing, and technical assistance.

However, the UN framework faces limitations. COPUOS operates by consensus, which can slow decision-making and limit ambition. Enforcement mechanisms are minimal, relying largely on voluntary compliance. Delegates must therefore grapple with how the UN system can be strengthened—whether through expanded mandates, new agreements, or enhanced coordination with existing institutions such as the ITU—while preserving inclusivity and legitimacy.

Policy Options and Approaches

In crafting a framework to resolve space territory disputes, delegates are not expected to choose a single solution but to evaluate a range of policy options grounded in existing UN principles. One approach involves the creation of international licensing or registry systems for resource extraction and long-term installations.[20] Such systems, potentially administered through the UN or a specialized body, could provide transparency and reduce overlapping claims without conferring sovereignty.

Another option is the establishment of temporary usage zones rather than permanent claims. Under this model, actors would receive time-limited rights to operate in specific areas, subject to renewal and oversight. This approach aligns with non-appropriation principles while recognizing the need for operational stability. Multilateral resource-sharing agreements could further ensure that benefits are distributed more equitably, particularly to developing states.[21]

Mandatory consultation and notification procedures represent a less intrusive but potentially effective mechanism. Building on Article IX of the Outer Space Treaty, such procedures could require actors to notify others of planned activities and engage in consultations when risks of interference arise. This would formalize existing norms and reduce the likelihood of miscalculation.[22]

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[19] Robert.Wickramatunga. n.d. "Space Law Treaties and Principles." https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html.

[20] Mahulena, Hofmann, and Blount Pj. 2019. "Space Law Disputes." *Max Planck Encylopedia of International Procedural Law*, October. https://doi.org/10.1093/law-mpeipro/e2812.013.2812.

[21] United Nations. n.d. "Multilateral System | United Nations." https://www.un.org/en/global-issues/multilateral-system.

[22] Robert.Wickramatunga. n.d. "Outer Space Treaty." https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html.

Delegates may also consider strengthening dispute resolution mechanisms, such as specialized arbitration panels or advisory bodies. Environmental impact assessments for major space activities could address sustainability concerns. Each option carries trade-offs between flexibility, enforceability, and political feasibility, which must be carefully weighed.

Case Study: Competing Claims at the Lunar South Pole

Consider a scenario in which two private companies, each authorized by a different state, announce plans to extract water ice from the same permanently shadowed crater at the lunar South Pole. Both argue that their activities constitute lawful utilization rather than appropriation. To ensure safety, each establishes an exclusion zone around its equipment, effectively preventing the other from accessing the site.

As operations progress, diplomatic tensions escalate. One state raises concerns at COPUOS, arguing that the exclusion zone constitutes de facto territorial control. The other contends that safety measures are necessary and consistent with international law. Developing states express concern that valuable lunar resources are being monopolized by a small number of actors, undermining the common heritage principle.

This scenario highlights multiple governance challenges: ambiguity in treaty interpretation, the role of private actors, enforcement limitations, and equity concerns. It also underscores the importance of existing UN mechanisms, such as consultations, transparency measures, and potential arbitration. Delegates must consider how a new framework could clarify safety zones, ensure access, and provide dispute resolution without violating non-appropriation.

Conclusion

Territorial-style disputes in outer space are no longer hypothetical concerns but emerging realities driven by rapid technological advancement, commercial expansion, and strategic competition. As more states and private actors seek sustained access to orbital regions, lunar resources, and future habitation sites, tensions are increasing in a domain where sovereignty is prohibited yet operational control can still be exercised. While existing UN treaties and principles provide a strong normative foundation, they were not designed to manage the complexity and permanence of modern space activities.

This guide has outlined how legal ambiguity, private sector involvement, orbital congestion, militarization, and growing power asymmetries contribute to the risk of conflict in outer space. The case of the lunar South Pole demonstrates how safety zones, infrastructure, and early presence can create de facto territorial dynamics without formal claims, raising serious concerns regarding equity, sustainability, and peaceful use.

The objective of this committee is to build upon existing UN frameworks to create a realistic and forward-looking mechanism for resolving space territory disputes. Delegates must balance flexibility with accountability, innovation with restraint, and national interests with collective responsibility. By proposing clear norms, transparency measures, and dispute resolution processes, this committee can help ensure that outer space remains a peaceful, cooperative, and equitable domain for all nations and future generations.

Guiding Questions for Research

1. What are your country's current space programs, capabilities, and priorities? How do these initiatives reflect economic, scientific, strategic, or military interests in outer space?
2. Which international treaties and agreements related to outer space has your country ratified or endorsed (e.g., Outer Space Treaty, Moon Agreement, Liability Convention)? How does your country interpret its obligations under these treaties?
3. Does your country authorize or regulate private space companies? How do domestic policies balance commercial opportunities with compliance to international law?
4. Are there particular celestial regions (e.g., lunar South Pole, asteroids, geostationary orbit) that your country is most interested in? What strategic, scientific, or economic motivations drive this interest?
5. How does your country view equitable access to space resources and the "common heritage of humankind" principle? Does it advocate for multilateral frameworks, resource-sharing agreements, or unilateral control?

Guiding Questions for Debate

1. How should the international community balance national interests with collective benefits to prevent disputes in space? Could temporary usage zones or licensing systems reduce tensions effectively?
2. Given that private companies often operate across borders, how can UN frameworks ensure accountability and prevent monopolization or exclusionary practices?
3. How should the UN or member states regulate safety zones, orbital debris, and resource extraction to protect space environments without hindering technological progress?
4. What measures could be introduced to ensure that developing nations can access space resources and infrastructure, rather than being left behind in a "first-come, first-served" system?
5. If conflicts arise over space territory or resource extraction, what forms of dispute resolution—such as arbitration panels, consultation procedures, or UN-led oversight—would be most effective while remaining aligned with non-appropriation principles?