جامعة الشارقة
UNIVERSITY OF SHARJAH

University of Sharjah Journal of Law Sciences

A Refereed Scientific journal

Vol. 23, No. 1
Ramadan 1446 A.H. / March 2026 A.D.

ISSN : 2616-6526

University of Sharjah Journal for Law Sciences, Volume 23, No. 1 March 2026
https//:doi.org/10.36394/jls.v23.i1.27

Establishing a Legal Framework to Prevent Military Escalation in Outer Space

Saud Tariq Alnoman[(1)]

Sheer Abbas[(2)]

Received on: 20-11-2024 **Accepted on: 28-01-2025**

Abstract:

The militarization of outer Space has a deep historical context that began during the Cold War, when the United States and the Soviet Union explored Space for military advantages, initially focusing on early missile warning systems. By learning from the Cold War era and the global tension it created, engaging spacefaring nations through a diplomatic channel became crucial for building a consensus on a proposed legal framework to curb potential escalation. A Global organization like the United Nations and the International Telecommunication Union (ITU) facilitates negotiations and fosters cooperation among nations. A future necessity for establishing a pan-global legal framework to prevent accelerated militarization in outer Space should prioritize addressing current research gaps to chart a viable way forward. This article aims to develop a practical step for implementing a comprehensive legal framework to prevent outer Space militarization. The focus is to identify and address a challenge associated with the current legal landscape and propose viable solutions that an international community can adopt. The scope includes examining existing international treaties, a national policy, and the role of technological advancement in monitoring enforced compliance. The study aims to provide a detailed framework or roadmap for achieving a building-to-enforceable framework that promotes peaceful use of Space and its resources.

Keywords: Military escalation, National Space Policy, Bilateral and multilateral agreements, Unilateral actions, Geopolitical tension, Arms race.

(1) College of Law – University of Sharjah (Sharjah – UAE)
U22105783@sharjah.ac.ae

(2) College of Law – University of Sharjah (Sharjah – UAE)

Introduction

The militarization of outer Space has a deep historical context that began during the Cold War when the United States and the Soviet Union explored Space for military advantages, initially focusing on reconnaissance early missile warning systems (Shmigol, 2022). That period saw a significant development in Space technology, urged by a Space race, which carried an undercurrent of military competition (Hart & Blechman, 2021). In the recent decade, a landscape has evolved with more nations and private entities entering Space, leading to advancements such as anti-satellite weapons (ASATs) and potential space-based missile defense systems. The current geopolitical tensions among major spacefaring nations like the USA, Russia, and China are to escalating risk of the arms race in Space, and it is imperative to establish a legal framework with the purpose of preventing an escalation to ensure long-term sustainability and peaceful usage of outer Space (Galeotti, 2022).

The implementation of such militarization is vast, affecting not only national security but also the global community's networks, weather forecasting, navigation, and numerous other critical services reliant on Space infrastructure. This article aims to develop a practical step for implementing a comprehensive legal framework to prevent outer Space militarization. The focus is to identify and address a challenge associated with the current legal landscape and propose viable solutions that can be adopted by an international community (Pedroza-Arceo, Weber, & Ortega-Argueta, 2022). It goes as far as examining existing international treaties, a national policy, and the role of technological advancement in monitoring enforced compliance. The current study thus seeks to propose a framework or roadmap for achieving a building-to-enforceable framework that promotes peaceful spacefaring and exploitation of its resources.

Current State of Space Militarization and Legal Landscape

Existing International Legal Instruments

The Outer Space Treaty (OST) of 1967 provides foundational legal documentation to govern state activities in outer Space (United Nations, 1967). The treaty established a Space that shall be free for exploration used by all the nations, and this prohibited the placement of nuclear weapons or any other kind of weapons of mass destruction in an orbit or a celestial body (Kostenko, 2020). The OST emphasized that celestial bodies and the moon should be used exclusively for a peaceful purpose. The treaty does not specifically address the deployment of conventional weapons or using military force in Space. The Moon Agreement of 1979 extended the OST by expanding the latter's principles, specifically regarding collective responsibility concerning access to celestial bodies and their resources (United Nations, 1979). However, only a few countries ratified the treaty (i.e., 18), thus limiting its impact. The Limited Test Ban Treaty (LTBT) of 1963 bans nuclear tests in the atmosphere, outer Space, and underwater, in addition to indirect demilitarization of Space. Through various resolutions and the work of the Committees on the Peaceful Uses of Outer Space (COPOUS), the United Nations continued to reinforce the 1981 PAROS (i.e., Prevention of the Arms Race of Space) resolution.

National Space Policies and Legislation

Space policies and legislation vary significantly among its major spacefaring nations. For example, the United States National Space Policy, first adopted in 2006, explicitly recognized Space as a part of military operational activities, emphasizing a need for Space superiority to protect national interests. Striving for dominance could only accentuate

skepticism regarding the supposed equality of signatories entering a Space agreement, especially in Russia and China. Unsurprisingly, while officially supporting the prevention of the arms race in Space, Russia and China have developed their military Space capabilities, including anti-satellite (ASAT) technologies (Pace, 2023). A comparative analysis of national Space law reveals a significant difference in how countries interpret and implement international Space treaties that directly reflect their strategic priorities and technological capabilities (Xu, Su, & Mehdi, 2020). These discrepancies challenge achieving a cohesive and universal acceptance of the legal framework for Space activities.

Analysis of Existing Legal Framework

The Outer Space Treaty (OST)

The international community considers the Outer Space Treaty a pivotal document and an indispensable framework governing activities in outer Space. Article IV of the OST prohibits the placement of weapons of mass destruction in Space and mandates that Space activities be dedicated to the benefit of all countries (Alyassi et al., 2024). It asserts that outer Space exploration and exploitation should be free from militarized motives and only reserved for benign purposes. Despite the rule, the OST has its notable limitations, specifically lacking a robust enforcement mechanism and failing to address newer technological developments and dual usage of the nature of many Space technologies. In Svec's (2022) perspective, the OST gaps could encourage ambitious signatories to exploit the loopholes they created by potentially deploying conventional weapons in Space.

Role of International Agreements

The Moon Agreement further echoed the sentiment that the OST was fraught with limited ratification that undermined its efficacy. The Limited Test Ban Treaty (LTBT) of 1963 contributed to Space demilitarization by banning nuclear tests in Space yet it does not address the broader issue of conventional weapons or military use of Space (Beard, 2021). The ratification of the UN PAROS resolution reflected a wider international consensus on preventing an arms race in Space (Jakhu, Chen, & Goswami, 2020). However, despite the success of the LTBT in its objective, the PAROS resolution remains non-binding and lacks a legal framework to compel compliance. Collectively, that agreement highlighted a need for more comprehensive and enforceable legal instruments that were addressed to a full spectrum of military activities in Space.

National Legislation and Policies

National Space policy within the administrative domain of key players such as the USA, Russia, and China often prioritizes national security and strategic interests, leading to a divergent approach to Space governance. For instance, an integral part of the US Space Policy is the maintenance of a Space Force, which highlights America's dominant objective, which contrasts with China's posture. Russia calls for a new international agreement to prevent Space weaponization despite its advancement in military Space capabilities (Schreiber, 2022). It is worth noting that formulating a Space national policy reflects broader geo-political strategies and complicated efforts to achieve an international consensus on Space governance (Jakhu & Mishra, 2023). A comparative analysis between the legal and policy positions of sovereign states, their national concerns, and the challenges of collective responsibility revealed a significant discrepancy in how countries

implement and interpret Space law (von Bonsdorff, 2024). Unsurprisingly, achieving a unified legal framework to govern Space activity effectively is a highly challenging undertaking.

Establishing a legal framework to prevent militarization in Outer Space is crucial to maintaining global security and ensuring a peaceful use of outer Space. Moreover, the deterrence successes of the Outer Space Treaty of 1967 made it a cornerstone of international Space law in the global community by prohibiting the placement of nuclear weapons in space, restricted by using the Moon and other celestial bodies (Harrison, 2022). In some areas, the OST treaty lacks specific provisions for addressing challenges such as deploying conventional weapons, ASAT, and other military-related technologies.

A primary hurdle to establishing a comprehensive legal framework is the rapid advancement of Space technologies, which will increase the number of state and non-state actors involved in Space activities. During the Cold War, when the United States and the Soviet Union mostly dominated Space, the Space environment was more crowded and competitive. A multi-polarity increases the risk of misunderstandings and conflicts (Sagan & Narang, 2023). Therefore, a modernized legal framework must include all spacefaring nations and a relevant private entity to ensure broad compliance and cooperation. As a general rule of international agreements, transparency and measures related to confidence-building measures (CBMs) are essential to the legal framework to prevent military escalation in Outer Space. These measures share information on Space missions, notify launch and maneuvers, and establish communication channels to avoid misunderstanding and miscalculations. To foster transparency, CBMs reduce suspicion by promoting trust among spacefaring nations (Tepper, 2023). Trust then incentivizes the urge to formulate agreements based on good faith.

Challenges in Developing a Legal Framework

Technical and Operational Challenges

The challenges that stand in the way of international treaties and agreements concerning opportunities and threats in Space necessitate implementing a legal framework to curb uncertainty and overcome technical and operational challenges. The extant loopholes in exploiting opportunities and curbing threats thwart any attempt at monitoring actors and ascertaining their Space activity. It is further complicated by the vastness of Space and the rapid technological sophistication that requires accurate tracking of objects and activities. The dual-use nature of many Space technologies serves civilian and military purposes and complicates the distinction. In developing advancements, Space Situational Awareness (SSA) capabilities and technological frameworks are essential for monitoring effectiveness, but this requires prominent investment and international cooperation (Kennewell & Vo, 2013). Every country and region seems to have taken its custom approach to SSA, which creates inconsistencies regarding Space alerts, who to blame, and how to diffuse arising disagreements.

Diplomatic challenges

Geopolitical tension and mistrust among nations substantially hinder the implementation of a legal framework to create certainty in the Space exploration landscape. Therefore, a legal framework would nudge spacefaring nations towards a consensus, especially those with advanced military Space programs that are challenging. With consensus comes compliance, which will require a robust diplomatic effort to build trust and establish mutually agreed-upon norms and standards (Pražák, 2021). Confidence-building measures for transparent communication channels

are crucial for overcoming these political and diplomatic challenges. However, ambiguities and enforcement challenges characterize the current legal framework, and enforcement mechanisms are mostly weak. Therefore, any meaningful corporation has relied on volunteer compliance and peer pressure rather than binding legal obligations that strengthen an international legal institution to create and reinforce a dispute resolution mechanism.

Proposed Legal Framework

Defining Peaceful Use and Prohibited Activities

A comprehensive legal framework for Space exploration and the management of emerging conflicts clearly defines peaceful use. It prohibits specific military activity like deploying space-based weapons and using ASATs (Žilinskas & Marozas, 2022). So, these definitions should be precise and unambiguous to prevent the exploitation of loopholes and ensure that all activities are conducted for the benefit of all humankind (Vlasic, 2021). An effective verification and compliance mechanism is essential to ensure adherence to the legal framework. The process involves establishing an international body for monitoring Space activity conducted for satellites to perform on-site inspections.

Transparency and Confidence-building

Mandatory registration and notification of Space missions, data sharing, and transparency initiatives are crucial to building trust by verifying compliance. Those measures would help reduce the risk of misunderstanding and miscalculations leading to conflict. It is worth noting that mandatory registration builds trust and confidence in signatories, which should pave the way for joint Space missions and cooperative Space projects, which are

vital in fostering practical international cooperation (Iyengar, 2021). The continuation of the corporation predicts possible long-term engagement and mutually beneficial interdependence.

Steps for Developing a Comprehensive Legal Framework for Outer Space

Diplomatic Initiatives and Consensus Building

Engaging spacefaring nations through a diplomatic channel is crucial to building a consensus on the proposed legal framework. An International organization like the United Nations and International Telecommunication Union (ITU) facilitated negotiation and cooperation among nations (Renaud, 2023). The presence of diplomatic initiatives should focus on developing mutually agreed-upon norms and standards for space-related activities and addressing the stakeholders' concerns about enhancing SSA through the development of advanced monitoring technologies, which are essential for verifying compliance with the legal framework. Investing in SSA capabilities would improve the ability to detect and track Space objects and activities, ensuring adherence to the legal framework and international cooperation in developing SSA technologies that are crucial for its effectiveness. Harmonizing national laws with international regulations is necessary to successfully implement the proposed legal framework by creating certainty on how national legal institutions and local courts can handle disputes and enforce compliance, which provides an essential legal backup for the proposed framework (Schaefer, 2019). Creating more robust agreements and conflict resolution frameworks strengthens existing institutions to oversee Space activities.

Key Stakeholders

Governments and International Organizations

Spacefaring countries are directly responsible for compliance and enforcement of the applicable law, while the UN is essential in advancing new agreements and monitoring state compliance. The balance between the UN and national (e.g., NASA and ROSCOSMOS) and regional agencies (e.g., European Space Agency) creates an environment for advancing norms and establishing a platform to communicate and solve controversial. These organizations (i.e., the UN and member states and regional Space agencies) provide technical cooperation and capacity-building to help countries fulfill the obligations of a certain framework (Jasentuliyana, 2023).

Private Sector and Non-Governmental Organizations

The role of private Space companies (e.g., SpaceX, Blue Origin, and Virgin Galactic) and Non-Governmental Organizations (e.g., Celestrak, Space Foundation, and the Planetary Society) has become an equally crucial factor in actualizing the framework for Space law. Most of the current happenings in the Space business are spearheaded by a private company, which has so far taken a commercial path to Space exploration that distinguishes itself from state-propelled militarization (Goessler, 2022). Stakeholders include NGOs and research institutions to offer insights, technical assistance, advocacy, and support regarding the development and implementation of the framework (McDonough and Rodríguez, 2020).

Case Studies and Best Practices

Successful International Agreements in Other Domains

The solution to international disputes in another field reveals useful information on legal regulation that will prevent an armed conflict in outer Space. For instance, signatories of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) developed the framework for monitoring state compliance through the International Atomic Energy Agency (IAEA) inspection. Another example is the Chemical Weapons Convention (CWC), which states the comprehensive verification measures for the vigorous enforcement of regimes to hinder the origin and use of chemical weapons (Crowley & Dando, 2024). Sustaining these agreements underscored the need for cooperation among nations, understanding what was forbidden and permitted, and the efficiency of verification and compliance.

Recent Diplomatic Efforts in Space Security

Recent diplomatic efforts and UN resolutions also proved that creating an international consensus is a highly challenging issue yet desired by the global community. The COPOUS also plays a key role in encouraging diplomacy to work towards setting standards for the responsible utilization of outer Space (Beard, 2021). By establishing a group of government experts on transparency and confidence-building, tracking Outer Space Activities has provided a forum for states to discuss and develop measures for enhancing transparency and building trust (AlHosani, 2022). In addition, adopting the United Nations resolution to prevent an Arms Race to Outer Space underscores a global consensus on the need to avoid the weaponization of Space despite the non-binding nature (von Bonsdorff, 2024). The efforts highlighted the importance of multilateral dialogue and the potential for building consensus on Space and its security issues.

Bilateral and Multilateral Agreements

Bilateral and multilateral agreements between countries have contributed to Space security. The United States and Russia have engaged in several bilateral agreements and dialogues by managing their Space activities to reduce the risk of conflict. In 1972, the Anti-Ballistic Missile (ABM) Treaty, while primarily focused on missile defense, included a provision that limited deployment to a space-based system that set a precedent for future space-related (Grunert, 2022; U.S. Department of State, 1972). The presence of multi-national initiatives, such as the 2008 European Union Code of Conduct for Outer Space activity, aims to establish a best practice for Space operations that encourages behavior to reduce conflict.

Diplomatic Efforts in Space Security

Recent UN resolutions and initiatives and current bilateral and multilateral agreements offer valuable case studies for formulating viable international agreements that transcend such challenges as trust and goodwill. Analyzing these efforts can identify a best practice and highlight areas where further diplomatic efforts are needed (Garsten & Sörbom, 2023). For example, the UN's committee of government experts on transparency and confidence-building measures of outer Space activities has significantly contributed to Space security discussions. Implementing a legal framework to prevent a military escalation in Outer Space to a real-world necessity is a multifaceted and collaborative approach. The existence of treaties, the OST of 1967, should be modernized by addressing contemporary threats and technologies such as an anti-satellite weapon and a dual-use capability. Modernization should involve a detailed definition and prohibition to close any loopholes that states might exploit (Janosek, 2020).

An international body like the United Nations must spearhead the creation of a new binding agreement that emphasizes the non-weaponization of Space. The agreements should also be facilitated through dedicated working groups and diplomatic negotiations that include all the major spacefaring nations to ensure a comprehensive and universally acceptable norm. In addition, a robustness verification mechanism must be established, possibly under the aegis of a new international Space authority, by monitoring the compliance that fosters transparency (Francek, 2023). It would involve satellite monitoring, data sharing, and an on-site inspection. Confidence-building measures such as mutual notifications of Space launches and activities further enhance trust among nations. A framework should incorporate a conflict resolution mechanism, providing a diplomatic and legal avenue by addressing and de-escalating potential conflicts (Prem, 2021). Crucially, a private sector engagement is mandatory to ensure a commercial Space activity aligned with international peace and security objectives. By integrating an element, the international community can build a practical and enforceable legal framework that mitigates a risk caused by military conflicts in outer Space, safeguarding peaceful and cooperative exploration.

Different Nations Perspectives

United States Perspective

As the Space race heats up, the United States focuses on maintaining its dominance in Space and protecting its commercial interests, reflecting its strategic priorities and economic ambitions in Space to protect its private commercial interests. The US economic posture becomes clearer by reflecting on its current Space assets (Hasin, 2023). This includes a significant investment in Space technologies and defense systems like

satellite-based missile defense and space-based surveillance capabilities. The US advocates for transparency and confidence-building measures (TCBMs) to reduce the risk of misunderstanding and foster. Furthermore, there needs to be more clarity about compliance and verification mechanisms. The US aims to balance security interests with a need for effective international oversight. This idea of dominance and openness is a perfect example of how the American strategy concerning Space security is quite multifaceted.

Russian Perspective

The Russian perspective is shaped by being one of the leaders in Space exploration and possessing tactical military Space capability. Russia's insistence on banning an arms race in outer Space aligns with its general military-strategic interest in ensuring the lack of a spiral effect in global relations, thus excluding the possibility of an escalation of the conflict (Bendett et al., 2021). Therefore, Russia contributes to comprehensive international treaties by limiting weapon placements in Space, which the treaties are considered crucial for security. However, Russia is concerned with unilateral actions against other Space powers, especially the US, deemed a possible threat to strategic stability (Kofman et al., 2021). The skepticism about America's goodwill highlights the Russian desire for balance and equality in decision-making at a multilateral level regarding the militarization of Space.

Chinese Perspective

The Chinese perspective has rapidly grown a Space program with military and civilian aspects, proving that the country aims to be one of the most important Space nations. China advocates a peaceful use of outer

Space, strongly opposed to weaponizing Space, reflecting its strategic goals to ensure a stable and secure Space environment. China called for an inclusive international agreement that recognized and accommodated the interests of new and emerging spacefaring nations (Jianlan, 2019). This inclusivity is essential for China, emphasizing sovereignty and non-interference to national Space activities; this seeks to protect its rights for development and utilization. However, considering China's doubling in competitiveness, other players in the same Space (e.g., the United States and India) may be skeptical of China's ultimate objective and take a conservative approach to cooperating with it.

Future Directions and Research Needs

Identifying Research Gaps

A future direction in establishing a legal framework is to prevent military escalation in Outer Space and must prioritize addressing current research gaps to develop a new capability. A critical area for future research is the advancement of monitoring and verification effectiveness of monitoring as essential features to ensuring an international agreement for detecting a potential violation (DeSimone, 2021). This includes advancing SSA tools that track objects in Space with the greatest precision and technologies that vary the objects' nature and intent. In addition, there is a need to study the potential impacts of emergency threats, like cyberattacks on Space assets, that disrupt or turn off critical Space infrastructure. There is a need to explore legal and diplomatic solutions to prevent military escalation in Space. A current international agreement like the OST lacks a comprehensive foundation to address the challenges (Kröll, 2023).

The interdisciplinary research involving an expert in law, technology, and international relations can yield as a new approach that is legally sound and technologically feasible. Legal scholars worked with technologists for new verification protocols that leverage blockchain or other emerging technologies by ensuring transparency and trust. The immutability of blockchain technology could come in handy for monitoring and generating logs of rocket launches into space or space incidents and activities, such as erratic behavior of satellites outside their designated operational parameters or sudden energy bursts emanating from human-made objects orbiting the Earth. Therefore, developing a read-only log of event series will ensure transparency and traceability of activities that necessitate collective decision-making. Deployment of blockchain remains a discussion restricted to academia even though diplomatic brainstorming continues.

Diplomats and international relations experts have developed strategies (e.g., the management of Space debris) for a multilateral negotiation that was considered to be of interest and concern for all spacefaring nations to promote broader and effective cooperation (Kröll, 2023). Furthermore, interdisciplinary studies helped establish new norms and standards (e.g., prohibiting derogation or use of force) followed by the members of the international community. That involves identifying and distinguishing between good and bad uses of Space, establishing a limit that cannot be crossed, and ensuring a way to enforce the requirements and punish the violators (Edlund Otterstedt, 2020). The cooperative investigations paradigm directly engaged with the socio-political effects of Space militarization that aid policymakers in grasping the social consequences of their international and regional security decisions.

Long-term Vision for Space Governance

To avoid military escalation in Outer Space, practical and sustainable legal mechanisms must be developed to create a comprehensive strategic framework for controlling militarization. It is necessary to state that the vision of a demilitarized Space needs to stand on the foundation of periodic updates to cement international strategies seen in the realities of an evolving Space landscape (von Bonsdorff, 2024). The proposed framework should ideally build on the OST to specifically target artificial threats, such as ASAT, cyber-attacks in Space, and the introduction of conventional weaponry (Alzaabi, 2022). Additionally, the proposition augmenting the provisions of the OST should also state that limits on Space behavior should be set to ensure that all countries that engage in Space have signed a sense of peace in Space.

At the core of this strategic perspective is the application of transparency and conflict measures (TCBMs). These measures are essential for building confidence amongst space-faring nations to avoid any misconception that might lead to a long-term vision that should have arrangements of a robust verification and compliance system to ensure that all the parties involved obey norms and regulations. Implementing technology such as blockchain in technologies can increase the transparency and confidence in the verification procedures suggested by these technologists (Ajayi-Nifise et al., 2024). Therefore, it is evident and rational that specific and effective repercussions for a violation, accepted by the international community, are necessary to prevent aggressive conduct and punish delinquents

Space governance effectiveness depends on having an influential international institution with decision-making power and enforcement assets apt for supervising compliance with legal rules and resolving conflicts. Establishing monitoring organs like the United Nations Office for Outer Space Affairs and a committee on the peaceful uses of outer Space is essential, even if its enforcement reach is still lacking for reasons of national sovereignty (Jasentuliyana, 2023). Such institutions should have been empowered to provide periodic updates to this international agreement due to technological advancement and its associated threats. The enforcement bottleneck may require a new approach to international cooperation, such as taming the overriding effect of national sovereignty to specifically address Space security and its regulation to provide a holistic and integrated vision.

Conclusion

International law must be set up to prevent the militarization of outer Space, which is fundamental to global safety, and guarantee that suitable areas are used peacefully. With Space activities growing and developing further and the international community focusing on updating and enhancing the existing treaty framework, the best transparency practice and CBM are implemented. One possible development involves a proposed framework to avoid having a war in Space by outlining what can be considered the proper use of Space. It also creates efficient registration and compliance procedures to encourage accountability and enhance credibility.

References

AlHosani, A. (2022). The General Rules for Using External Space. University of Sharjah (UoS) Journal of Law Sciences, 18(1), 217-234. https://doi.org/10.36394/jls.v18.i1.8

Alyassi, A. ., Farooqui, M., & Alshdaifat, S. . . (2024). Disarmament in Outer Space and sustainable development. University of Sharjah (UoS) Journal of Law Sciences, 21(3). https://doi.org/10.36394/jls.v21.i3.11

Alzaabi, A. (2022). Legal Reasoning and investigation in the crimes related to the Outer Space: An analytical study in UAE legislation. University of Sharjah (UoS) Journal of Law Sciences, 18(1), 676-703. https://doi.org/10.36394/jls.v18.i1.22

Ajayi-Nifise, A. O., et al. (2024). Blockchain in US accounting: A review: Assessing its transformative potential for enhancing transparency and integrity. Finance & Accounting Research Journal, 6(2), 159-182. https://doi.org/10.51594/farj.v6i2.786

Beard, J. M. (2021). Nuclear non-proliferation and planetary defence: Competing potential disasters. In Legal Aspects of Planetary Defence (pp. 246-265). Brill Nijhoff. https://doi.org/10.1163/9789004467606_018

Bendett, S., et al. (2021). Advanced military technology in Russia. Chatham House.

Crowley, M., & Dando, M. (2024). Regulation of toxins and bioregulators under the Chemical Weapons Convention and the Biological and Toxin Weapons Convention. Journal of Biosafety and Biosecurity. https://doi.org/10.1016/j.jobb.2024.03.003

DeSimone, J. K. (2021). Using commercial Space situational awareness as a verification mechanism for orbital debris mitigation (Doctoral dissertation, Naval Postgraduate School).

Edlund Otterstedt, A. (2020). Peaceful purposes in international Space law.

Francek, C. R. (2023). An examination of outer Space activities and technology through the common heritage of mankind principle: The need for an international regulatory system (Doctoral dissertation, ResearchSpace@ Auckland).

Galeotti, M. (2022). The weaponisation of everything: A field guide to the new way of war. Yale University Press. https://doi.org/10.12987/9780300265132

Garsten, C., & Sörbom, A. (2023). Discreet diplomacy: Practices of secrecy in transnational think tanks. The Cambridge Journal of Anthropology, 41(1), 98-117. https://doi.org/10.3167/cja.2023.410108

Goessler, A. (2022). The Private Sector's Assessment of U.S. Space Policy and Law. Center for Strategic & International Studies.

Grunert, J. (2022). Outer Space policy and the "security dilemma": Is America destined for Space conflict? In The United States Space Force and the Future of American Space Policy (pp. 165-240). Brill Nijhoff. https://doi.org/10.1163/9789004524064_006

Harrison, T. (2022). International perspectives on Space weapons. Center for Strategic and International Studies (CSIS).

Hart, D., & Blechman, B. (2021). East-West arms control and Soviet military doctrine. In Soviet Military Doctrine and Western Policy (pp. 331-382). Routledge. https://doi.org/10.4324/9781003107088-7

Hasin, G. (2023). From "Space law" to "Space governance": A policy-oriented perspective on international law and outer Space activities. Harvard International Law Journal, 64, 385. https://doi.org/10.2139/ssrn.4179934

Iyengar, U. R. (2021). Trading of Space technology and the role of international cooperation: Achieving sustainable development goals through the global Space agency (Doctoral dissertation, McGill University).

Jakhu, R. S., & Mishra, N. (2023). The beginning of the end of international Space law. In Human Flourishing: The End of Law (pp. 845-883). Brill Nijhoff. https://doi.org/10.1163/9789004524835_029

Jakhu, R. S., Chen, K.-W., & Goswami, B. (2020). Threats to peaceful purposes of outer Space: Politics and law. Astropolitics, 18(1), 22-50. https://doi.org/10.1080/14777622.2020.1729061

Janosek, D. M. (2020). Innovative thinking: Modernizing outer Space governance. Catholic University Journal of Law and Technology, 29, 63.

Jasentuliyana, N. (2023). International Space law and the United Nations. Brill.

Jianlan, S. (2019). China emphasizes international cooperation in future lunar and deep space exploration. Bulletin of the Chinese Academy of Sciences, 33(2), 73-79.

Kennewell, J. A., & Vo, B. N. (2013, July). An overview of Space situational awareness. In Proceedings of the 16th International Conference on Information Fusion (pp. 1029-1036). IEEE.

Kofman, M., et al. (2021). Russian military strategy: Core tenets and operational concepts (Vol. 104). CNA.

Kostenko, I. (2020). Current problems and challenges in international Space law: Legal aspects. Advanced Space Law, 5(1), 48-57. https://doi.org/10.29202/asl/2020/5/5

Kröll, H. (2023). Beyond the Outer Space Treaty - A comprehensive analysis of current challenges in Space policy (Doctoral dissertation).

McDonough, A., & Rodríguez, D. C. (2020). How donors support civil society as government accountability advocates: A review of strategies and implications for transition of donor funding in global health. Globalization and Health, 16, 1-18. https://doi.org/10.1186/s12992-020-00628-6

Pace, S. (2023). US national security interests in Space. In The Oxford Handbook of Space Security (p. 275). https://doi.org/10.1093/oxfordhb/9780197582671.013.16

Pedroza-Arceo, N. M., Weber, N., & Ortega-Argueta, A. (2022). A knowledge review on integrated landscape approaches. Forests, 13(2), 312. https://doi.org/10.3390/f13020312

Pražák, J. (2021). Dual-use conundrum: Towards the weaponization of outer Space? Acta Astronautica, 187, 397-405. https://doi.org/10.1016/j.actaastro.2020.12.051

Prem, B. (2021). The regulation of private military and security companies: Analyzing power in multi-stakeholder initiatives. Contemporary Security Policy, 42(3), 345-370. https://doi.org/10.1080/13523260.2021.1897225

Renaud, J.-L. (2023). The role of the International Telecommunication Union: Conflict, resolution, and the industrialized countries. In The Political Economy of Communications (pp. 33-57). Routledge. https://doi.org/10.4324/9781032642253-2

Sagan, S. D., & Narang, V. (2023). Multipolar deterrence in the emerging nuclear era. In The Fragile Balance of Terror: Deterrence in the New Nuclear Age (p. 1). Cornell University Press. https://doi.org/10.1515/9781501767036-001

Schaefer, M. (2019). What level of detail in national commercial space legislation is ideal for the harmonization and enforcement of such legislation and the Outer Space Treaty? Proceedings of the International Institute of Space Law, 239-251. https://doi.org/10.5553/IISL/2019062003003

Schreiber, N. H. (2022). Man, state, and war in Space: Neorealism and Russia's counterbalancing strategy against the United States in outer Space security politics. Astropolitics, 20(2-3), 151-174. https://doi.org/10.1080/14777622.2022.2143043

Shmigol, V. (2022). The United States is enabling an outer Space arms race: An overview of current security threats and recommendations for abating an outer Space arms race. Seattle University Law Review, 46, 175.

Svec, M. (2022). Outer Space, an area recognized as res communis omnium: Limits of national Space mining law. Space Policy, 60, 101473. https://doi.org/10.1016/j.spacepol.2021.101473

United Nations. (1979). Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Agreement). UN Treaty Series, 1363, 3.

United Nations. (1967). Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies. UN Treaty Series, 610, 205.

U.S. Department of State. (1972). Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems (ABM Treaty).

Tepper, E. (2021). The big bang of Space governance: Towards polycentric governance of Space activities. New York University Journal of International Law and Politics, 54, 485.

Tepper, E. (2023). The laws of Space warfare: A tale of non-binding international agreements. Maryland Law Review, 83, 458.

Vlasic, I. A. (2021). The legal aspects of peaceful and non-peaceful uses of outer Space. In Peaceful and Non-Peaceful Uses of Space (pp. 37-55). Routledge. https://doi.org/10.4324/9781003111016-3

von Bonsdorff, S. (2024). From satellites to battlegrounds: Use of outer Space for peaceful purposes, the use of force and the right to self-defence in the modern Space landscape.

West, J. (2023). Arms control and the myth of peaceful uses in outer Space. In The Oxford Handbook of Space Security (p. 223). https://doi.org/10.1093/oxfordhb/9780197582671.013.14

Xu, F., Su, J., & Mehdi, M. (2020). A re-examination of fundamental principles of international Space law at the dawn of Space mining. Journal of Space Law, 44, 1.

Žilinskas, J., & Marozas, T. (2022). Weapons reviews for ASATs: Assessing distinction, proportionality, and effects on the natural environment of Space. Air and Space Law, 47(2). https://doi.org/10.54648/AILA2022012

إنشاء إطار قانوني لمنع التصعيد العسكري في الفضاء الخارجي

سعود طارق النومان الشامسي[1]

شير عبّاس[2]

ملخص البحث:

إن عسكرة الفضاء الخارجي لها سياق تاريخي عميق بدأ أثناء الحرب الباردة عندما استكشفت الولايات المتحدة والاتحاد السوفييتي الفضاء لتحقيق مزايا عسكرية، وركزت في البداية على أقمار الاستطلاع وأنظمة فطام الصواريخ المبكرة. تهدف هذه المقالة إلى تطوير خطوة عملية لتنفيذ إطار قانوني شامل مصمم لمنع عسكرة الفضاء الخارجي. وينصب التركيز على تحديد ومعالجة التحدي المرتبط بالمشهد القانوني الحالي واقتراح حلول قابلة للتطبيق يمكن أن يتبناها المجتمع الدولي. إن إشراك الدول التي تسافر في الفضاء من خلال قناة دبلوماسية أمر بالغ الأهمية لبناء إجماع على الإطار القانوني المقترح. وقد سهلت منظمة عالمية مثل الأمم المتحدة والاتحاد الدولي للاتصالات التفاوض وتعزيز التعاون بين الدول. ويتمثل أحد الاتجاهات المستقبلية في إنشاء إطار قانوني في منع التصعيد العسكري في الفضاء الخارجي ويجب إعطاء الأولوية لمعالجة فجوات البحث الحالية لتطوير قدرة جديدة. إن أحد المجالات المهمة للبحث في المستقبل هو تطوير تقنيات المراقبة والتحقق

الكلمات الدالة: التصعيد العسكري، السياسة الفضائية الوطنية، الاتفاقيات الثنائية والمتعددة الأطراف، الإجراءات الأحادية الجانب، التوترات الجيوسياسية

(1) كلية القانون - جامعة الشارقة (الشارقة – دولة الإمارات العربية المتحدة)
U22105783@sharjah.ac.ae

(2) كلية القانون - جامعة الشارقة (الشارقة – دولة الإمارات العربية المتحدة)