

Theoretical Basis of International Legal Aspect of “Space Debris” Removal¹

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Abstract. The present article examines the issue of the concept of “space debris,” which is widely used in discussions on international “space” platforms: what the term – introduced into international circulation in the 1970–1990s – means from the point of view of the norms of international space law when discussing the problem of contamination it creates in near-Earth space. The material used for the study includes treaties of international space law; the 1969 Vienna Convention on the Law of Treaties; resolutions of the UN General Assembly; reports of the UN Committee on the Peaceful Uses of Outer Space, as well as of its Legal and Scientific and Technical subcommittees, and statements of certain delegations at their sessions; works of Russian and foreign scientists; the materials of international entities, in particular the Inter-Agency Space Debris Coordination Committee; and U.S. regulations. The author conducts a comparative analysis of normative and other documents of these entities, as well as some provisions of international treaties (taking into account their conceptual and terminological content, and vocabulary used) using the general scientific method of cognition. The current heightened interest in the issue of space debris removal has revealed the need to clarify the international legal basis for the emergence and use of this concept for further possible practical and international legal actions aimed at solving problems associated with this. The lack of uniformity in the use of terms and word combinations for the issues under study is noted. The definitions of “space debris” that have developed without due regard to the applicable norms of international space law are considered. And regulatory explanations of the status of documents adopted in this area by various international entities and organizations are given. Assessing the current state of near-Earth space contamination, it can be noted that the issue of the active removal of “space debris” should be addressed with consideration to ensuring safe access to space, which is an integral part of the triune problem of space traffic management, the regulation of which is becoming a pressing issue and requires the development of a generally accepted legally binding international treaty.

Keywords: space object and its component parts, ownership of them, including the three powers of use, possession and disposal, “space debris” and its active removal as an integral part of cleaning outer space, Space Debris Mitigation Guidelines of the Inter-Agency Space Debris Coordination Committee and UN Committee on the Peaceful Uses of Outer Space

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This article presents the author's subjective views on the topics discussed. This article and the conclusions contained herein should in no way be considered as a reflection of the position of institutions and organizations with which the author has had labour or other relationships. The author declares the absence of any conflicts of interest.

1. Introduction

The urgency of addressing human-caused pollution in near-Earth space is steadily increasing. This issue originated with the launch of the first artificial Earth satellite in 1957, which eventually became non-functional after completing its mission. By 1961, there were already 54 defunct objects orbiting Earth. A pivotal moment came when the upper stage of the U.S. spacecraft *Ablestar* exploded in near-Earth space, generating about 300 large debris fragments and significantly adding to the then “official record” of inactive space objects (Chaddha, 2011). This incident marked a critical step toward recognizing the importance of ensuring safe access to outer space.

Safe access to outer space is threatened by the growing number of defunct space objects, as well as component parts from destroyed spacecraft that continue to orbit Earth.² In broad terms, the recognition of the need to address human-caused pollution of near-Earth space is reflected in Article IX of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, dated January 27, 1967 (the “Outer Space Treaty”).³ This Article specifically states: “States Parties to the Treaty shall pursue studies of outer space, including the moon and other celestial bodies, and conduct exploration of them so as to avoid their harmful contamination <...> and, where necessary, shall adopt appropriate measures for this purpose.”

Article IX also requires that consultations take place if an activity of any party to the Outer Space Treaty could cause “potentially harmful interference with activities of other States Parties in the peaceful exploration and use of outer space.”

In the early stages of near-Earth space exploration, the vastness of outer space gave the false impression that it could be utilized without disrupting the activities of any parties to the Outer Space Treaty. However, advancements in space technology – particularly, the rapid growth in the number of satellite constellations in recent years – have transformed this issue into one that urgently requires international legal regulation.

² This issue is discussed in detail in (Veniaminov, Chervonov, 2012).

³ United Nations: The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, dated January 27, 1967. URL: https://www.un.org/ru/documents/decl_conv/conventions/outer_space_governing.shtml (in Russian, Accessed: 12.04.2024).

Given the current level of space activity, the practical implementation of Article IX of the Outer Space Treaty appears to be of limited feasibility. Nevertheless, the lack of a comprehensive international legal framework to ensure secure access to near-Earth outer space does not diminish the necessity of developing appropriate regulations recognized by the global community. Considering the present international legal landscape, the author believes that this complex issue should be addressed by taking into account its multiple facets.

2. Lack of an adequate legal framework addressing space pollution

Article 2 of Space Policy Directive-3, *National Space Traffic Management Policy*,⁴ approved by U.S. President Trump in 2018, identifies space situational awareness, space traffic management, and space debris as the three key elements for ensuring safe access to space. Meanwhile, the International Academy of Astronautics' definition of "space traffic management," outlined in the report *Cosmic Study of Space Traffic Management* (IAA Report, 2006, p. 10), which was presented at the 43rd session of the Scientific and Technical Subcommittee (STSC) of the UN Committee on the Peaceful Uses of Outer Space (COPUOS) in 2006, highlighted the regulatory – rather than purely managerial – nature of the proposed measures.

The formulation of international legally binding decisions in this field falls under the responsibility of the COPUOS Legal Subcommittee (LSC). On December 12, 1959, the UN General Assembly adopted Resolution 1472 (XIV), titled "International Cooperation in the Peaceful Uses of Outer Space," which established a permanent Committee on the Peaceful Uses of Outer Space composed of 24 member States. This resolution also mandated the Committee to examine any legal issues that could arise from outer space exploration (Zhukov, 2007, pp. 195-216). Over time, COPUOS has become a recognized central forum for the development of international space law norms. Currently, five treaties developed under its auspices are in force, including the most recent one – the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies – adopted on December 18, 1979.⁵

After some time, "the rule-making process within UN specialized bodies came to a standstill" (Abashidze, Vylegzhanin, Gugunskij, 2021, p. 2), and this stagnation is acknowledged in official COPUOS documents. For example, paragraph 4 of Annex II in the LSC's 1998 report on its work noted that "(s)ince the entry into force of the Outer

⁴ The White House. Presidential Memoranda: Space Policy Directive-3, National Space Traffic Management Policy. URL: <https://trumpwhitehouse.archives.gov/presidential-actions/space-policy-directive-3-national-space-traffic-management-policy/> (Accessed: 12.04.2024).

⁵ UN: Agreement Governing the Activities of States on the Moon and Other Celestial Bodies dated December 18, 1979. URL: https://www.un.org/ru/documents/decl_conv/conventions/moon_agreement.shtml (in Russian, Accessed: 12.04.2024).

Space Treaty on 10 October 1967, as well as other treaties and sets of principles, the body of law governing space and space activities has considerably developed, to a great extent outside the Committee on the Peaceful Uses of Outer Space and without its Legal Subcommittee being involved. In consequence, space law as a whole has become fragmented, difficult to grasp and, in some areas, of doubtful coherence.”⁶

On the UN Office for Outer Space Affairs (UNOOSA) website, within the *Space Law: Resolutions* section, materials produced directly by COPUOS are listed as “documents,”⁷ while UN General Assembly resolutions are described as not legally binding.⁸

According to the LSC’s 2013 report, “(a) number of non-legally binding instruments such as declarations, principles, resolutions, guidelines and frameworks related to outer space activities and to maintaining outer space for peaceful purposes have been developed by the Committee on the Peaceful Uses of Outer Space and its Subcommittees and have been adopted or recognized by the General Assembly in various resolutions.”⁹

In light of the need to address the safe use of outer space – an issue for which the author considers the national practice of employing such instruments to be of secondary importance – the Japanese delegation proposed adding a new item to the LSC session agenda, titled “General exchange of information on non-legally binding United Nations instruments on outer space,” thus explicitly referring to “non-legally binding instruments.”¹⁰

The information above provides insight into the status of instruments under Committee’s review and highlights that the Committee has not made decisions regarding legally binding international agreements for over half a century. Several international legal scholars have also noted the stagnation in the development of international space law (Abashidze, Vylegzhanin, Gugunskij, 2021, p. 2; Volynskaja, 2017, pp. 82-95; Ijajia, 2017; Zhao, 2018). A clear indication of this stagnation is the near absence of a standardized terminological framework, which is essential for establishing consistent approaches to the international legal regulation of space activities. This observation is particularly relevant to the issue of “space debris.”

⁶ UN General Assembly: Report of the Legal Subcommittee on the Work of Its Thirty-Seventh Session (23-31 March 1998). URL: https://www.unoosa.org/pdf/reports/ac105/AC105_698E.pdf (Accessed: 12.04.2024).

⁷ In the Anglo-Saxon legal tradition, the term “document” refers to any information recorded on a physical medium, while “instrument” denotes a legal act or legally binding document.

⁸ UNOOSA: Space Law: Resolutions. URL: <https://www.unoosa.org/oosa/en/ourwork/spacelaw/resolutions.html> (Accessed: 12.04.2024).

⁹ UN: Report of the Legal Subcommittee on its fifty-second session. New agenda item on general exchange of information on non-legally binding United Nations instruments on outer space. URL: https://www.unoosa.org/pdf/limited//AC105_L288E.pdf (Accessed: 12.04.2024).

¹⁰ UN: New agenda item on general exchange of information on non-legally binding United Nations instruments on outer space, Proposal submitted by Japan and supported by Austria, Canada, France, Nigeria and the United States of America. URL: <https://digitallibrary.un.org/record/753426?ln=fr&v=pdf> (Accessed: 12.04.2024).

3. Non-legally binding definitions of “space debris” and its constituent elements

The Outer Space Treaty requires participating countries to take measures to prevent pollution of outer space. However, neither the treaty nor other space-related agreements define the sources or the specific nature of such pollution. In common usage, the term “space debris” is employed to describe the fundamental elements of this pollution (with English being the author’s chosen reference as the predominant language of international communication). This terminology is notably reflected in the name of the Inter-Agency Space Debris Coordination Committee (IADC),¹¹ established in 1993.

Sh. Chaddha, a researcher at the University of Manchester, comments on the issue of “space debris,” stating: “It should be observed that „*space debris*” is synonymous with the term „*orbital debris*”, along with a number of colloquial phrases such as „*space trash*”; „*space garbage*”; „*space refuse*”; and most commonly „*space junk*”. However many expressions there are, „orbital debris is a popular [*rather than legal*] term”” (Chaddha, 2011). A similar observation is made in Article I, Chapter 9 of the 1995 Interagency Report on Orbital Debris, prepared by the Executive Office of the President of the United States (National Science, 1995, p. 45), which notes that “(l)egal sources that are potentially relevant to orbital debris do not use the term *orbital debris*.” It is also worth adding that none of the five international space law treaties use the terms “*space debris*” or “*orbital debris*.”

Considering the points mentioned above, as well as the use of various new terms that lack precise legal definitions recognized by international treaties – but are nonetheless employed in the practical work of the IADC and other space-related organizations, including those within the United Nations – it is worthwhile to cite the opinion of Russian scholar M. Yuzbashyan. In her article, “The U.S. Space Resource Exploration and Utilization Act of 2015 and International Space Law,” she addresses the issue of “a space resource(s)” of the United States.¹² Yuzbashyan notes: “At the international legal level, no consensus has been reached <...> on the definitions of ‘outer space’ and ‘celestial body’ and, moreover, international space law does not provide definitions for concepts found in the national legislation of the USA. Therefore, the definitions¹³ contained in the U.S. Act of 2015 cannot be evaluated for their compliance with international law” (Yuzbashyan, 2017, pp. 71-86).

¹¹ The United States spearheaded the international examination of the “space debris” issue. The Inter-Agency Space Debris Coordination Committee (IADC) was established as a result of their proactive and deliberate efforts.

¹² The rationale behind the author’s choice of this particular phrasing will be addressed later.

¹³ Clearly, the author is referring to terms such as “asteroid resource” and “space resource,” which are defined in Title IV of the U.S. Commercial Space Launch Competitiveness Act of November 25, 2015, No. 114-90 (also known as the “Space Resource Exploration and Utilization Act of 2015” under Section 401). URL: <https://www.govinfo.gov/content/pkg/PLAW-114publ90/html/PLAW-114publ90.htm> (Accessed: 12.04.2024). By virtue of this legislation, these terms acquire specific meanings within U.S. national law – meanings that are entirely inconsistent with the terminology used in international space law treaties.

This observation is equally applicable to the term “space debris” and its equivalents, which are widely used in international space-related discourse, as international space law lacks clear and unambiguous provisions defining or classifying defunct space objects or their component parts as “space debris.”

Regarding the translation of the word “*debris*” into Russian, an Oxford English dictionary defines it as “pieces of wood, metal, building materials, etc. that are left after something has been destroyed.”¹⁴ According to the *Multitran* online dictionary, “debris” is primarily translated into Russian as «обломки» or «осколки», meaning “remnants.” Although the same dictionary also lists “garbage” as a possible translation, this usage is not of primary significance.¹⁵

UN General Assembly Resolution 62/217 of December 12, 2007, titled “Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space”¹⁶ (COPUOS Guidelines), defines space debris for the purposes of the document as “all man-made objects, including fragments and elements thereof, in Earth orbit or re-entering the atmosphere, that are non-functional.”^{17, 18}

The writing, titled *Monitoring tehnogennogo zasoreniya okolozemnogo prostranstva i preduprezhdenie ob opasnykh situatsiyah, sozdavaemykh kosmicheskimi musorom* (*Monitoring of man-made contamination of near-Earth space and warning about dangerous situations created by space debris*) (Monitoring, 2015, p. 17), authored by experts from TsNIImash, the leading research institute of Roscosmos State Corporation, and published eight years after the adoption of the above-mentioned UN General Assembly Resolution, “space debris” is defined as “a negative residual product of space activities <...> representing a population of useless human-made space objects occupying near-Earth space.”

However, this definition does not clarify what exactly constitutes a “useless human-made space object” in near-Earth orbit. Following its logic, for instance, it would seemingly exclude items like the tool bag accidentally dropped by American astronauts J. Moghbeli and L. O'Hara last year during repairs on the International Space Station's solar panels.¹⁹

¹⁴ Oxford Learner's Dictionary. URL: <https://www.oxfordlearnersdictionaries.com/definition/english/debris> (Accessed: 12.04.2024).

¹⁵ Multitran online dictionary. URL: <https://www.multitran.com/m.exe?l1=1&l2=2&s=debris&l2=2> (Accessed: 12.04.2024).

¹⁶ UN: Conventions and Agreements. URL: https://www.un.org/ru/documents/decl_conv/conventions/space_debris.shtml (in Russian, Accessed: 12.04.2024).

¹⁷ In this document, the phrase “component parts” found in international space law treaties is substituted with “fragments and elements.”

¹⁸ UNOOSA. URL: https://www.unoosa.org/pdf/publications/st_space_49E.pdf (Accessed: 12.04.2024).

¹⁹ *Sumka s instrumentami uletela ot astronautov v otkrytyi kosmos* [Astronauts Lose Tool Bag to Outer Space]. RosBusiness-Consulting. URL: <https://www.rbc.ru/rbcfreenews/6550718b9a7947f862b6815f> (Accessed: 12.04.2024).

Articles VII and VIII²⁰ of the Outer Space Treaty refer to objects launched into outer space and their component parts. Similarly, Article I(d) of the 1972 Convention on International Liability for Damage Caused by Space Objects (Liability Convention)²¹ and Article I(b) of the 1975 Convention on Registration of Objects Launched into Outer Space (Registration Convention)²² define these objects as “space objects.” The wording in these two Conventions is identical, stating that “(t)he term ‘space object’ includes component parts of a space object as well as its launch vehicle and parts thereof.” In contrast, the COPUOS Guidelines replace the internationally recognized space law term “space object” with the phrase “man-made object,” which lacks a legal definition and, therefore, legal precision. Additionally, the phrase “component parts,” used in the international space law treaties, is replaced by “fragments and elements” in the COPUOS Guidelines.

According to the provisions of the three international space law treaties²³ and common understanding, the defining characteristics of “space objects” mentioned therein are, first, that they are launched from Earth into outer space, and second, that they are functional at the time of launch. In contrast, the COPUOS Guidelines refer to “man-made objects, including fragments and elements thereof, in Earth orbit or re-entering the atmosphere, that are non-functional.” This new approach by COPUOS effectively includes all non-functional man-made objects in outer space²⁴ – lacking clear legal definitions – as well as their “fragments and elements,” which could be interpreted as space objects and their component parts. Consequently, these objects fall under the scope of this terminology, which was endorsed by the UN General Assembly through a legally non-binding resolution.

According to Section 2(c) of the above-mentioned Space Policy Directive-3, *National Space Traffic Management Policy*, “(o)rbital debris, or space debris, shall mean any human-made space object orbiting Earth that no longer serves any useful purpose.”²⁵ In the introduction to Chapter I of the 1995 interagency report on “space debris,” prepared by the Executive Office of the President of the United States (National

²⁰ There is a minor discrepancy in the second sentence of Article VIII across the Russian, English, and French versions of the Treaty. The Russian version uses the phrase “космический объект”, meaning “space object” (URL: https://www.un.org/ru/documents/decl_conv/conventions/outer_space_governing.shtml, Accessed: 12.04.2024), whereas the English (URL: <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html>, Accessed: 12.04.2024) and French (URL: https://www.unoosa.org/pdf/gares/ARES_21_2222F.pdf, Accessed: 12.04.2024) versions use the term “object” and “objet,” respectively.

²¹ UN: The Convention on International Liability for Damage Caused by Space Objects, dated March 29, 1972. URL: https://www.un.org/ru/documents/decl_conv/conventions/damage.shtml (in Russian, Accessed: 12.04.2024).

²² UN: The Convention on Registration of Objects Launched into Outer Space, dated January 14, 1975. URL: https://www.un.org/ru/documents/decl_conv/conventions/objects_registration.shtm (Accessed: 12.04.2024).

²³ Article VIII of the Outer Space Treaty, Article I of the Liability Convention of 1972, and Article I of the Registration Convention of 1975.

²⁴ The rapid advancement of space technologies may prompt reconsideration of the status of a space object previously classified as “space debris” due to non-functionality (per the COPUOS Guidelines), particularly after it has been refueled in outer space.

²⁵ The White House. Presidential Memoranda: Space Policy Directive-3, National Space Traffic Management Policy.

Science, 1995, p. 3), man-made “space debris” is referred to as “orbital debris.” Section I of the same Chapter identifies three types of orbital debris, stating: “Three types of orbital debris are of concern.

(1) Objects larger than 10 cm in diameter which are commonly referred to as large objects. These large objects are routinely detected, tracked, and cataloged.

(2) Objects between 1 and 10 cm in diameter which are commonly referred to as risk objects. Risk objects cannot be tracked and cataloged. Depending on their relative impact velocities, risk objects can cause catastrophic damage.

(3) Objects smaller than 1 cm in diameter are most commonly referred to as small debris or in some sizes microdebris.” (National Science, 1995, p. 3)

The above excerpts from various documents and studies illustrate differing approaches and interpretations of related concepts. For example, Russian researchers describe space debris as “a negative residual product of space activities <...> representing a population of useless <...> space objects” (Monitoring, 2015, p. 17), while COPUOS highlights the non-functionality of “man-made objects, including fragments and elements thereof.” Meanwhile, U.S. authorities categorize “orbital debris” into three types based on the size of its constituent components, aligning with the Oxford dictionary’s above-mentioned definition of “debris” as “remnants.”

The use of the term “debris” to mean garbage, and remnants, and objects necessitates a clear distinction between “garbage” and “component parts of garbage.” These examples underscore the need for an “internationally agreed legal definition of “space debris”;²⁶ along with the “development of universally recognized definitions of fundamental terms related to man-caused debris to support the drafting of various legal instruments.”²⁷

The key to understanding the method used to reclassify a space object that was functional at launch from Earth, along with its component parts, as “space debris” in near-Earth space lies in the use of the word “man-made” before the word “object” in the COPUOS terminology, as well as the inclusion of the words “fragments and elements,” which lack formal definitions and are not used in the international space law treaties. These terms are assigned the attribute of non-functionality while in orbit or during atmospheric re-entry. At the same time, the secondary meaning of “debris” (i.e., “garbage”) – rather than its primary meaning (i.e., “remnants”) – is used for this reclassification. From a common-sense perspective, the authors of this wording seem to have overlooked that an intact, undamaged object cannot logically be classified as “remnants.”

²⁶ Statement by the Delegation of Belarus at the 60th session of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space in Vienna, 2023 (agenda item 7: “Space debris”). URL: https://www.unoosa.org/documents/pdf/copuos/stsc/2023/Statements/9_AM/7_Belarus_9_Feb_AM.pdf (in Russian, Accessed: 12.04.2024).

²⁷ Statement by the delegation of the Russian Federation at the 61st session of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space in Vienna, 2022 (agenda item 11: “General exchange of information and views on legal mechanisms relating to space debris mitigation and remediation measures, taking into account the work of the Scientific and Technical Subcommittee”). URL: https://www.unoosa.org/documents/pdf/copuos/lsc/2022/Statements/1AprPM/11_Russian_Federation_1_April_PM.pdf (in Russian, Accessed: 12.04.2024).

According to the COPUOS Guidelines, a space object is classified as debris once it is deemed non-functional. However, the Guidelines do not specify who has the authority to determine or declare whether a “man-made object, including fragments and elements thereof” is functional or non-functional.

4. Provisions in international treaties, the UN General Assembly resolution, and the IADC document defining “space debris” and its constituent elements

Three international space law treaties contain provisions most directly relevant to addressing man-caused pollution in near-Earth outer space. Specifically, Articles VII and VIII of the Outer Space Treaty recognize that an object launched into outer space consists of component parts. Additionally, Article I(d) of the Liability Convention and Article I(b) of the Registration Convention define the term “space object” to include “component parts of a space object as well as its launch vehicle and parts thereof.” While these two Conventions define “space object,” they do not provide definitions for the terms that follow, such as “component parts of a space object” or “launch vehicle and parts thereof.” These terms are crucial because, from a structural perspective, the component parts are indispensable for both launching a space object into near-Earth space and ensuring its effective operation in orbit.

Furthermore, Article VIII of the Outer Space Treaty states that “(o)wnership of objects launched into outer space <...> and of their component parts <...> is not affected by their presence in outer space or on a celestial body or by their return to the Earth.” This provision not only affirms the inviolability of ownership over a space object and its component parts but also serves to legally safeguard their safe operation.

From the perspective of international treaty law, it is illogical and potentially problematic to assume that ownership of a non-functional space object held by a State remains *unaffected* (under international space law), while simultaneously allowing anyone to dispose of or use the object’s component parts at their discretion, based solely on that State’s national legislation and legally non-binding UN resolutions.

In the author’s opinion, the lack of an internationally recognized definition – within the five existing international space law treaties – for the component (structural) parts of a space object²⁸ launched from Earth (and, in the future, space objects created by humans in outer space) provides sufficient basis to regard any initially functional integral components of the space object as its component parts, irrespective of their current functional status.

²⁸ See Article 31 of the 1969 Vienna Convention on the Law of Treaties, which governs the interpretation of the terms of treaties but does not address the meanings of individual words and phrases used within them. URL: https://www.un.org/ru/documents/decl_conv/conventions/law_treaties.shtml (in Russian, Accessed: 12.04.2024).

In the absence of internationally recognized definitions for the component parts of a space object, as well as clear procedures or guidance on the applicability of existing international space law norms to these parts, the provision in Article VIII of the Outer Space Treaty – that ownership of space objects and their component parts is unaffected – remains inviolable. It is well established that the rights of use, possession, and disposal constitute the core elements of ownership. Among these, the right of disposal is particularly important with regard to a “non-functioning” space object (launched from Earth and located in outer space) and its component parts.

Without a treaty-based international legal framework to determine the functionality or non-functionality of a space object and its component parts, the authority to declare a space object or its component parts as “space debris” inherently belongs to the State of registry or the launching State. Likewise, in exercising the right of disposal, ownership of a non-functional object and its component parts may be transferred by the owner to another party.

Information about the owner of a space object and its component parts, who holds the right to dispose of the object, can be accessed through the national registries established under Article II of the Registration Convention. Any denial of this disposal right, on grounds unsupported by international law, would constitute an interference with ownership rights and a violation of Article VIII of the Outer Space Treaty. In the author’s view, the current realities of space traffic – especially the increasing congestion in near-Earth space – make it necessary to establish an international catalog encompassing not only space objects but also their component parts.

In 1977, American scientist D. Kessler published research assessing orbital pollution and highlighting the risk of cascading self-propagation of “space debris” caused by collisions between its fragments or objects (Kljushnikov, 2021, pp. 32-43). This work prompted the international space community to first bring the issue into active discussion and subsequently seek practical solutions.²⁹ As part of these efforts, the IADC was established and has since been dedicated to continuously improving its Space Debris Mitigation Guidelines.

According to the National Aeronautics and Space Administration (NASA) website, the IADC Guidelines were adopted “in 2002 and slightly revised in 2007 and 2020.”³⁰ However, both the IADC Guidelines and other materials produced by this scientific forum are regarded as scientific and technical information rather than binding regulations. This is because the IADC is not an international organization but an

²⁹ Golovanev I.N. *Problema tekhnogennogo zasoreniya okolozemnogo kosmicheskogo prostranstva i osnovnye napravleniya ee resheniya* (Challenges of Human-Caused Pollution in Near-Earth Space and Key Approaches to Its Resolution). Center for Political and Military Research, 2015. URL: <http://eurasian-defence.ru/?q=node/34149> (in Russian, Accessed: 12.04.2024).

³⁰ NASA Orbital Debris Program Office. URL: <https://orbitaldebris.jsc.nasa.gov/reference-documents/> (Accessed: 12.04.2024). The latest version is available at: <https://orbitaldebris.jsc.nasa.gov/library/IADC-Space-Debris-Guidelines-Revision-2.pdf> (Accessed: 12.04.2024).

international coordination committee, a kind of “interest group.” Consequently, these documents, recorded on tangible media, “do not establish any obligations or legal requirements” for the legal entities participating in IADC’s work, though they may provide a scientific, but not legal, foundation for efforts to address “space debris.”

Building upon and considering the provisions of the IADC Guidelines, COPUOS formulated its own set of guidelines, which were endorsed by the UN General Assembly in paragraph 26 of resolution 62/217 dated 22 December 2007.³¹ The resolution emphasized that these guidelines “reflect the existing practices as developed by a number of national and international organizations” and “are not legally binding under international law,” while inviting Member States to implement them through relevant national mechanisms.

5. The U.S. approach to the issue of ‘orbital debris’

In this context, the future U.S. Orbital Sustainability Act, or the ORBITS Act, is of particular interest. The bill was considered in Senate hearings on October 31, 2023, and is currently pending passage by the House of Representatives and presentation to the U.S. President for signature.³² This proposed legislation serves as a notable example of how individual States implement the COPUOS Guidelines “through relevant national mechanisms.”

In the bill, the term commonly used by the IADC both in its name and practices – “space debris” – is replaced with “orbital debris.” According to the definition provided in Section 3 (6), “orbital debris” means “any human-made space object orbiting Earth that: (A) no longer serves an intended purpose; and (B) (i) has reached the end of its mission; or (ii) is incapable of safe maneuver or operation.”

It is important to note that this definition closely resembles the one provided for “space debris” in the Space Debris Mitigation Guidelines of IADC³³ and COPUOS³⁴. However, while the IADC and COPUOS Guidelines specifically refer to *man-made objects* along with their fragments and elements, the U.S. bill’s definition of orbital debris encompasses *any human-made space objects*. This broader wording allows U.S. law to apply not only to “man-made objects, including fragments and elements thereof” (as described in the IADC and COPUOS Guidelines) but also to “space objects and their component parts” (as referenced in the above-mentioned international space law treaties) orbiting the Earth.

³¹ Paragraph 26 of UN General Assembly Resolution 62/217 dated 22 December 2007. URL: https://www.unoosa.org/pdf/gares/ARES_62_217E.pdf (Accessed: 12.04.2024). UN: Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space. URL: https://www.un.org/ru/documents/decl_conv/conventions/space_debris.shtml (in Russian, Accessed: 12.04.2024).

³² ORBITS Act of 2023. S. 447. URL: <https://www.congress.gov/bill/118th-congress/senate-bill/447/text?s=1&r=43> (Accessed: 12.04.2024).

³³ IADC Space Debris Mitigation Guidelines, paragraph 3.1. URL: <https://orbitaldebris.jsc.nasa.gov/library/IADC-Space-Debris-Guidelines-Revision-2.pdf> (Accessed: 12.04.2024).

³⁴ UN: Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space. URL: https://www.un.org/ru/documents/decl_conv/conventions/space_debris.shtml (in Russian, Accessed: 12.04.2024).

At the same time, there are notable differences between the term “space object” as defined in the international space law treaties and the usage of the same term in the U.S. bill. While the Outer Space Treaty and the Registration and Liability Conventions refer to functional “space objects launched into outer space”, including their component parts, the U.S. bill defines a distinct category: “any human-made space objects” orbiting Earth and exhibiting certain criteria of non-functionality as established by U.S. law.

According to Chapter 1 of the above-mentioned interagency report on “space debris,” prepared by the Executive Office of the President of the United States in 1995, the term “orbital debris” generally refers only to tangible, man-made physical objects, that differ from natural meteoroids (Interagency report, 1995, p. 3). In light of this definition, the case of feces expelled from spacecraft³⁵ appears somewhat anecdotal, as such material does not become orbital debris merely because it was launched from Earth and constitutes “remnants,”³⁶ but rather because it is classified as a “human-made space object” under U.S. law and is not considered a meteoroid.

The distinctions between the international space law term “space object” and the phrase “any human-made space object” as used in U.S. law could be explored in greater detail by philologists, considering the points discussed above. From a legal perspective, however, the language employed in the U.S. bill creates ambiguity, particularly because the proposed legislation is designed to apply beyond U.S. territorial jurisdiction, necessitating the highest degree of terminological precision.

Once the ORBITS Act is enacted, the U.S. Supreme Court may be called upon to clarify the meaning of the phrase “space object” as it appears in U.S. law, especially in relation to the identical term used in international space law treaties. In addressing this issue, the Court will need to consider that the U.S. Act defines a “space object” as any human-made object in space that, under U.S. national law, is deemed non-functional or incapable of maneuvering. This is notwithstanding the fact that ownership of any “space object and its component parts” remains, by virtue of international space law, unaffected, even if these objects are no longer usable, though they may still pose a threat to the safety of functional space objects launched from Earth.

Based on the available information, U.S. lawyers, when drafting space-related laws and regulations, appear to take into account Article 2 (2) of the 1969 Vienna Convention on the Law of Treaties,³⁷ which permits the terms of treaties to be given different meanings “in the internal law of any State.” This provision creates broad opportunities

³⁵ See: *Dazhe v kosmose pylyshcha: kakoi musor kruzhit v vakuume* [Even in Space, Dust Abounds: What Kinds of Debris Are Circling the Vacuum?]. URL: <https://habr.com/ru/companies/ruvds/articles/784182/> (in Russian, Accessed: 12.04.2024).

³⁶ Oxford Learner's Dictionary. URL: <https://www.oxfordlearnersdictionaries.com/definition/english/debris> (Accessed: 12.04.2024).

³⁷ The United States is not a party to this Convention, which further enables its arbitrary interpretation and application of treaty terms and language. See: United Nations Treaty Collection. Multilateral Treaties Deposited with the Secretary-General. Chapter XXIII. Law of Treaties. Vienna Convention on the Law of Treaties. Vienna, 23 May 1969. URL: https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXIII-1&chapter=23&Temp=mtdsg3&clang=_en (Accessed: 12.04.2024).

not only to reinterpret terms but also to modify words or phrases from international space law, enabling the introduction of novel concepts into national legislation governing space activities. U.S. globalists seek to leverage this legal flexibility to transform space into a domain characterized by an unsettled legal regime, motivated by ambitions to exploit the natural resources of celestial bodies (Patrushev, 2023, pp. 2-9).

This instance of using an international space law term in U.S. national legislation – employing the same wording but without defining it and assigning it a meaning different from that in international space law – exemplifies how U.S. lawyers ‘dilute’ the norms and provisions of international space law³⁸ through their selective implementation in domestic law, subsequently influencing the international lexicon (Vylegzhanin, Yuzbashyan, 2024).

A striking example of how U.S. terminology has been introduced into the international lexicon is the phrase “space resources,” which is used in the LSC’s practices but lacks an international legal definition, leaving its precise meaning under international space law unclear (Yuzbashyan, 2017, pp. 71-86). This term notably appears in the U.S. Commercial Space Launch Competitiveness Act, No. 114-90, dated November 25, 2015,³⁹ where the phrase “*space resource*” is used in the singular form in the name of Title IV, Chapter 513, as well as in Sections 51301 and 51303. In Section 51301, the phrase initially appears without a formal legal definition and subsequently is assigned a distinctly “American” definition (Vylegzhanin, Yuzbashyan, Alekseev, 2023, pp. 14-15).

The use of this phrase or term in the plural form in Section 51302 of the Act clearly demonstrates flawed legal drafting and raises doubts about the appropriateness of adopting this U.S. national concept within international space-related practices.

“Discussions on potential legal frameworks for the exploration, development, and utilization of space resources began in 2017 within the UN Committee on the Peaceful Uses of Outer Space. In 2021, a Working Group on Space Resources⁴⁰ was established to conduct more detailed deliberations, including the formulation of a set of initial recommended principles in this area” (Gugunskij, Chernyh, 2023). It was not until 2023 that several delegations voiced their opinions regarding the definition and meaning that should be attributed to the phrase “space resource(s).”⁴¹

³⁸ See: *Putin nazval ugrozoi erozii mezhdunarodnogo prava* [Putin called the erosion of international law a threat], October 14, 2017. – *Izvestia*. URL: <https://iz.ru/658621/2017-10-14/putin-nazval-ugrozoi-erozii-mezhdunarodnogo-prava> (Accessed: 12.04.2024).

³⁹ U.S. Commercial Space Launch Competitiveness Act. URL: <https://www.govinfo.gov/content/pkg/PLAW-114publ90/html/PLAW-114publ90.htm> (Accessed: 12.04.2024).

⁴⁰ Working Paper on the Establishment of a Working Group on Space Resources (emphasis added) submitted by Austria, Belgium, Czech Republic, Finland, Germany, Greece, Slovakia and Spain on May 27, 2021. URL: https://www.unoosa.org/documents/pdf/copuos/lsc/space-resources/Non-paper-on-the-Establishment-of-a-Working-Group-on-Space-Resources-at-COPUOS_LSC-27-05-2021.pdf (Accessed: 12.04.2024).

⁴¹ Input to the Working Group on Legal Aspects of *Space Resource* (emphasis added) Activities on Scope and Topics to be addressed at the International Conference to be held in 2024. URL: https://www.unoosa.org/oosa/oosadoc/data/documents/2023/aac.1052023crp/aac.1052023crp.7_0.html (Accessed: 12.04.2024); Contributions from: Algeria, Australia, Brazil, Cuba, Ecuador, Russian Federation, Slovak Republic, and Türkiye. URL: https://www.unoosa.org/res/oosadoc/data/documents/2023/aac.1052023crp/aac.1052023crp.7_0_html/AC105_2003_CRP07E.pdf (Accessed: 12.04.2024).

At the same time, some international law experts, when addressing issues related to natural resource activities beyond state territorial jurisdiction (in space), rely on the terminology established by international conventions and agreements, even when citing national laws concerning so-called space resources (Berkman, Vylegzhanin, Modjui, Juzbashjan, 2018, p. 23).

Another innovation of this nature is introduced by U.S. lawmakers in the Orbital Sustainability Act. According to Section 3 (5) of the proposed U.S. law, U.S. commercial entities and their international partners, potentially including additional partner states, are expected to lead efforts to “remediate” or “clean up” outer space. The proposed law aims to “establish a demonstration program for the active remediation of orbital debris⁴² and to require the development of uniform orbital debris standard practices in order to support a safe and sustainable orbital environment, and for other purposes”. Furthermore, under Section 7 (4) of the Act, the demonstration program, by agreement with partner countries, may be extended to include “orbital debris that is under their respective jurisdictions”.

With this provision, U.S. legislators are introducing a new concept not only into their own national legislation but also aiming to incorporate it into international customary space law. Through national law, they grant partner states jurisdiction over “their orbital debris”, a term that, as noted earlier, lacks definition in international space law. This legislative approach attempts to establish legal relationships in near-Earth outer space that lie outside existing international space law norms. In contrast, Article VIII of the Outer Space Treaty governs different legal relations, stating that “(a) State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such (space) object, and over any personnel thereof, while in outer space,” but it does not recognize jurisdiction over this newly coined term (‘their orbital debris’), which remains undefined in international space law.

In light of this legislative innovation, it is pertinent to reference the analysis by Russian scholar O.A. Zharkova, published in the journal *Izvestija vysshih uchebnykh zavedenij. Pravovedenie* (News of higher educational institutions. Legal studies) (Zharkova, 1996, pp. 89–93): “Prominent Soviet and Russian legal scholars, including B.M. Klimenko, Yu.G. Barsegov, and S.V. Molodtsov, emphasize not only the distinction between the concepts of ‘sovereignty’ and ‘jurisdiction’ but also highlight that jurisdiction – while an aspect of sovereignty within a State’s territorial boundaries –

⁴² There is no precise equivalent in Russian for the term “remediation” as used in the U.S. bill. According to an Oxford English Dictionary (URL: <https://www.oxfordlearnersdictionaries.com/definition/english/remediation?q=remediation>, Accessed: 12.04.2024), “remediation” is defined as the “process of improving something or correcting something that is wrong, especially changing or stopping damage to the environment.” Since the English version of the Outer Space Treaty uses the word “contamination” to refer to pollution, it would be reasonable to use the Russian term «очищение», meaning “cleaning”, to describe the process of cleaning up near-Earth space. Therefore, in this article, the author will use “cleaning” (in quotation marks) as the translation of “remediation” when citing English-language sources.

⁴³ UN: The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, dated January 27, 1967.

takes on an independent meaning beyond that territory (termed *zonal jurisdiction*). Although the State's core authority (jurisdiction) encompasses legislative, judicial, and administrative powers, their scope and legal basis differ: they either derive from the State's sovereignty or are established (or recognized) through international law."

In this context, it is important to emphasize that a State's jurisdiction over "space debris" should ideally be grounded in international law rather than in U.S. national legislation or the domestic laws of any other country. A State Party to the Outer Space Treaty exercises jurisdiction and control over a space object and its personnel strictly based on international space law norms – specifically those that affirm that "ownership of objects launched into outer space <...> and of their component parts" remains unaffected.

The provisions of the yet-to-be-approved ORBITS Act define "active debris remediation" (or "cleaning") as "the deliberate process of facilitating the de-orbit, repurposing, or other disposal⁴⁴ of orbital debris, which may include moving orbital debris to a safe position, using an object or technique that is external or internal to the orbital debris." This definition draws attention to the notably ambiguous phrase "other disposal of orbital debris," which was absent from the earlier version of the bill⁴⁵ and now requires legal clarification from U.S. legislators.

A webpage on the European Space Agency (ESA) website, titled *Active debris removal*,⁴⁶ highlights that "(i)t is necessary to introduce a programme of (*outer space*) remediation measures as well: active (*space*) debris removal, in order to reduce the number of large and massive (mostly physically intact) objects." In other words, ESA considers active debris removal to be a key component of the broader "cleaning" of outer space. Consequently, ESA differentiates between the overall "cleaning," or "remediation," of outer space and the specific removal of large, massive objects from it.

While the yet-to-be-approved U.S. Act defines space debris remediation as the removal of "space objects" not clearly defined under American law, the European Space Agency interprets "remediation" or "cleaning" as the active removal of "large and massive (mostly physically intact) objects." Considering the relevant provisions of international space law, only unidentifiable component parts of space objects – those whose ownership by any State cannot be established – as well as small human-made "micro-debris," may be subject to active disposal/removal or remediation/cleaning without the need for permits. Determining the national ownership of such debris under current conditions is an extremely challenging and generally impractical task.

⁴⁴ In contrast to the commonly used term 'removal,' the proposed Act instead uses 'disposal,' a less common alternative.

⁴⁵ See Section 3 of the relevant bill: 117th Congress 2D Session S. 4814. URL: <https://www.congress.gov/117/bills/s4814/BILLS-117s4814es.pdf> (Accessed: 12.04.2024).

⁴⁶ ESA: Active debris removal. URL: https://www.esa.int/Space_Safety/Space_Debris/Active_debris_removal (Accessed: 12.04.2024).

According to the provisions of Article VIII of the Outer Space Treaty, it can be concluded that any active removal of non-functional space objects or their component parts by a State – or by individuals or legal entities under its jurisdiction – who are not authorized to dispose of such objects or their component parts is only permitted with the consent of the State of registry, which must confirm that the object or its parts qualify as “space debris.”

Based on the information and considerations outlined above, it can be concluded that active “cleaning” of “space debris” may be understood as the removal of two categories of debris: 1) small, unidentifiable space debris; and 2) large and massive space debris. Regarding the second category, the term “active debris removal” (ADR), commonly used in international space practice, can be considered an integral part of the active “cleaning” of outer space – provided that the objects involved are identified space objects and their component parts, and their removal is conducted with the permission or consent of their owners.

Returning to the confusion surrounding the terminology of “space debris” and its disposal/removal, it is important to highlight the discrepancies in paragraph 11 of the Russian and English versions of the agenda for the LSC’s 62nd session, held last year in Vienna. The Russian text literally reads as “General exchange of information and views on legal mechanisms related to the adoption of measures to reduce the contamination and pollution of outer space <...>,”⁴⁷ whereas the English version states: “General exchange of information and views on legal mechanisms relating to space debris mitigation and remediation measures <...>.”⁴⁸

It is important to note that the establishment of IADC was initiated by the United States, a pioneer in addressing the challenges of “space debris” with the most advanced regulatory framework on the issue. Both the negotiations that led to the establishment of this international body and the discussions held during its meetings, as well as the publication of related materials, have been and continue to be in English. This should be taken into account when analyzing the terminology and provisions contained in the documents produced by the IADC.

The statement by the IADC Steering Group from December 2022, which can likely be seen as the starting point for introducing the term “remediation” into the international space vocabulary, indicates that the “(r)emediation of the near-Earth space environment involves the direct removal of space debris, also known as active debris removal or ADR.”⁴⁹

⁴⁷ UN: Report of the Legal Subcommittee on its sixty-second session, held in Vienna from 20 to 31 March 2023. Agenda item 11. URL: https://www.unoosa.org/res/oosadoc/data/documents/2023/aac_105/aac_1051285_0_html/AC105_1285R.pdf (in Russian, Accessed: 12.04.2024).

⁴⁸ UN: Report of the Legal Subcommittee on its sixty-second session, held in Vienna from 20 to 31 March 2023. URL: https://www.unoosa.org/res/oosadoc/data/documents/2023/aac_105/aac_1051285_0_html/AC105_1285E.pdf (Accessed: 12.04.2024).

⁴⁹ IADC Statement on Active Debris Removal, Upload 22/12/12. URL: https://iadc-home.org/documents_public/view/id/200#u (Accessed: 12.04.2024).

When using this term, it is important to consider that definitions of “remediation” vary across English dictionaries. For example, the Cambridge Dictionary defines it as “the process of removing dangerous or poisonous substances from the environment, or limiting the effect that they have on it,”⁵⁰ while the Oxford Dictionary describes it as “the process of improving something or correcting something that is wrong, especially changing or stopping damage to the environment.”⁵¹ In both cases, the question remains: which environment – terrestrial or extraterrestrial – is being referred to by the term?

The ambiguity in the definitions of the English term “remediation” is reflected in item 11 of the agenda for the LSC’s 62nd session. In this paragraph, the term is translated differently across languages: in Russian as “уменьшение засоренности космического пространства” (literally translated as “reducing the contamination of outer space”), in Arabic as “appropriate remedial measures,”⁵² in Chinese as “measures to eliminate space debris,”⁵³ in Spanish as “space debris removal,”⁵⁴ and in French as “space rehabilitation.”⁵⁵

The use of space is a common heritage of humanity, and ensuring its continued accessibility for research and utilization requires the cooperation of all States engaged in space activities. To achieve these goals, it is crucial to avoid the confusion of the Tower of Babel and instead strive for a shared understanding through the language of international law. All States participating in COPUOS should ascribe the same meanings to the words and phrases used, fostering a unified approach to the challenges at hand and enabling the development of appropriate solutions. This is particularly vital given the significant changes in the near-Earth space environment, especially those related to the deployment of large constellations of small satellites.

6. Conclusions

The remediation of near-Earth outer space has become an urgent necessity, demanding the development of a theoretical foundation addressing the international legal aspects of actively removing accumulated debris. This foundation should then be incorporated into the international legal framework governing space exploration. The author suggests that the Russian term “очищение” could be used to describe

⁵⁰ Cambridge Dictionary. URL: <https://dictionary.cambridge.org/dictionary/english/remediation> (Accessed: 12.04.2024).

⁵¹ Oxford Learner’s Dictionaries. URL: <https://www.oxfordlearnersdictionaries.com/definition/english/remediation?q=remediation> (Accessed: 12.04.2024).

⁵² UNOOSA. URL: https://www.unoosa.org/res/oosadoc/data/documents/2023/aac_105c_2l/aac_105c_2l_323_0_html/A.C.105_C2_L323A.pdf (Accessed: 12.04.2024).

⁵³ UNOOSA. URL: https://www.unoosa.org/res/oosadoc/data/documents/2023/aac_105c_2l/aac_105c_2l_323_0_html/A.C.105_C2_L323C.pdf (Accessed: 12.04.2024).

⁵⁴ UNOOSA. URL: https://www.unoosa.org/res/oosadoc/data/documents/2023/aac_105c_2l/aac_105c_2l_323_0_html/A.C.105_C2_L323S.pdf (Accessed: 12.04.2024).

⁵⁵ UNOOSA. URL: https://www.unoosa.org/res/oosadoc/data/documents/2023/aac_105c_2l/aac_105c_2l_323_0_html/A.C.105_C2_L323F.pdf (Accessed: 12.04.2024).

this process, serving as an antonym to “contamination” as referenced in Article IX of the Outer Space Treaty. In English, the word “cleaning” might be appropriate for this purpose.⁵⁶

The issue at hand is particularly significant because its resolution requires the development of a legally binding international treaty. Without such a treaty, the global space community will lack uniform rules governing traffic in near-Earth space, which could lead to serious negative consequences.

In conclusion, given that the problem of “space debris” is, in the author’s view, an essential aspect of ensuring safe access to outer space and, by extension, safe space traffic, it is fitting to cite a statement from the Russian representative at the 2023 LSC session. He noted that, according to the International Academy of Astronautics (IAA Report, 2006, p. 10), “space traffic management means the set of technical and regulatory provisions for promoting safe access into outer space, operations in outer space and return from outer space to Earth free from physical or radio-frequency interference.”

In light of the above, it is worth noting that no country in the world relies on non-binding documents as official traffic rules. Therefore, there is hope that a comprehensive international treaty will be established to regulate “space traffic management.”⁵⁷

P. S. The 63rd session of the LSC took place in Vienna from April 15 to 26, 2024. During the discussion of agenda item 12, “General exchange of views on the legal aspects of space traffic management,” the representative of the Netherlands stated: “The development of a regulatory framework for STM is indispensable, and must be achieved on an international level. In our view, the ultimate goal would be a legally binding framework, just as traffic rules on earth are legally binding. To further the development of STM, the Kingdom of the Netherlands supports the proposal by Germany for the establishment of a study group to study perspectives on Space Traffic Management within the Sub-Committee. The Challenges are such that a new approach is warranted.”⁵⁸

Several viewpoints on this matter are presented in paragraphs 16, 17, 19, and 20 of Addendum X (“General exchange of views on the legal aspects of space traffic management”⁵⁹) to the LSC’s draft report, which, due to technical reasons, was not approved at the LSC’s most recent session (according to current procedures, LSC’s reports are then to be approved by a resolution of the UN General Assembly).

⁵⁶ Veniaminov S.S. Special English-Russian and Russian-English Dictionary on Space Surveillance and Orbital Debris. Moscow, 2018. URL: <http://www.iki.rssi.ru/books/2018veniaminov.pdf>, p. 301 (Accessed: 12.04.2024).

⁵⁷ Statement by the Russian Federation delegation at the LSC’s 62nd session in Vienna, 2023 (Agenda item 13: “General exchange of views on legal aspects of space traffic management”). URL: https://www.unoosa.org/documents/pdf/copuos/lsc/2023/Statements/22_AM/13_Russian_Federation_22_Mar_AM.pdf (Accessed: 12.04.2024).

⁵⁸ Statement by the Kingdom of the Netherlands delegation at the LSC’s 63rd session in Vienna, 2024 (Agenda item 12: “General exchange of views on the legal aspects of space traffic management”). URL: https://www.unoosa.org/documents/pdf/copuos/lsc/2024/Statements/12_Netherlands_updated.pdf (Accessed: May 2, 2024).

⁵⁹ Draft report, General exchange of views on the legal aspects of space traffic management. URL: https://www.unoosa.org/res/oosadoc/data/documents/2024/aac_105c_2l/aac_105c_2l_329add_10_0_html/AC105_C2_L329Add10E.pdf (Accessed: May 4, 2024).

“On May 23–24 of this year, under the Russian Federation’s BRICS chairmanship, Roscosmos State Corporation, in cooperation with the Russian Ministry of Foreign Affairs, will host a meeting of the heads of space agencies from the BRICS member states in Russia’s capital.”⁶⁰ (Russian Federation, 2024) The author suggests that the topic of space traffic management would be a timely and relevant addition to the agenda of this meeting.

It appears that the proposals put forward by Russia at last year’s LSC session and endorsed by the delegations of Germany and the Netherlands, to establish a study group on the prospects for space traffic management, may gain understanding and support from the invited countries – most of which are members of the Group of 77 and China, currently comprising over 130 States. Given the uncertainty surrounding the LSC’s report, these countries could take the opportunity to announce and back the initiative proposed by Germany and the Kingdom of the Netherlands at the upcoming COPUOS session.

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The author declares the absence of conflicts of interest.

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⁶⁰ Statement by the Russian Federation delegation at the LSC’s 63rd session in Vienna, 2024 (Agenda item 4: “General exchange of views”). URL: https://www.unoosa.org/documents/pdf/copuos/lsc/2024/Statements/4_RussianFederation.pdf (Accessed: May 4, 2024).

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