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Review on the Outer Space Legislation: Problems and Prospects

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## A B ST R A CT

The relevance of this study is determined by the fact that in addition to the space and belonging of a part of the cosmos to a certain territory, there is also a question of responsibility and expansion of the used space as a sovereign territory. Accordingly, the issue of flights coordination and spacecraft ownership to the country or territory of use is important. We carried out the analysis of legislation on the understanding of the very essence of spacecraft belonging to a certain territory and on interactions between countries in the joint use and management of such apparatuses. We have revealed that this issue affects not only scientific aspects but also economic aspects (because of high costs of these devices) as well as ideological reasons for security and national sovereignty development. It is noted that the world has created a fairly broad reserve for integration of innovations into the overall structure of national economy, and the application of space technology

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will accelerate this growth. At the same time, the legal field regulators fully contribute to the adoption of regulatory and legal acts regarding the creation of an environment for the space industry development. It is shown that each country regulates its space law in accordance with its own tasks of scientific and technological development. It is determined that the space program is the driver of the development and structuring of the entire scientific and technical sector of the country’s economy. It was revealed to be of the greatest interest because of technical possibility of improving and building space technology not only for national use but also at the commission of other states.

## I N T RO D U CT I O N

New types of space relations, which require appropriate legal settlement, arise, develop and are formed in the present conditions of accelerating rate of scientific and technological progress in the sphere of space activities. At the same time, a complex of cosmic-legal relations connected with the exploration and use of outer space and celestial bodies undergoes significant changes. In this regard, it becomes of great importance to seek new possible directions and improve existing methods for solving current cosmic-legal issues to ensure progressive development of international and the national space law.

One of the most complicated and debatable issues of the legal theory and practice of international space law is the legal problem of airspace and outer space delimitation.[[1]](#footnote-1) The term ‘delimitation’ comes from the Latin word *delimitate*, which means delineation, identification of the boundary. At the doctrinal level, contractual definition of the boundary between airspace and outer space is meant by the delimitation.

One cannot agree with the development of the appropriate practice regarding the delimitation in their national space legislation by individual states.[[2]](#footnote-2)

The question of airspace and outer space delimitation, as JM Filho rightly notes, refers to the sphere of interstate relations requiring international legal regulation.[[3]](#footnote-3) It is worth sharing the opinion of Jakhu *et al*., who note that the problem of airspace and outer space delimitation should be solved on the basis of a conditional border established by the consent of the states.[[4]](#footnote-4) Given that outer space is recognized as the international territory, the airspace and outer space delimitation should be solely determined by the norms of the international space law, rather than by the national legislation concerning space activities.[[5]](#footnote-5) The inadmissibility of the states’ independent determination of the relevant borders is also confirmed by the international community’s opposition to the provisions of the famous 1976 Bogotá Declaration on the sovereignty of equatorial states over the geostationary orbit (GSO) sites over their territories,[[6]](#footnote-6) as it violates the fundamental principles of the international space law regarding the freedom and openness of the outer space exploration and use, as well as its non-use.

## M AT E R I A L S A N D M ET H O D S

We used an analytical method that touches upon the aspects of the legislation sources choice and forms of its development to analyze the historical development of the law concerning the outer space in the EU and US-Canada. The method of forecasting and factor analysis is used to characterize the socio-economic activity and efficiency of the space program. The prognostic method is defined in the analysis’ framework of the world community countries’ experience applicability for the position of the space industry development goals.

The objective of the study is comprehensive analysis of scientific and theoretical approaches to the legal problem’s resolution of the airspace and outer space delimitation, as well as the expression of the author’s vision of possible directions for its solution in order to improve the effectiveness of the international and national space law.

## R E S U LTS A N D D I S C U S S I O N

The threat to space security by the proliferation of space debris has worsened to such extent that the ‘Koestler effect’ is already recognized as a ‘sword of Damocles’ for the well-being of space exploration. The question of legal responsibility for harm caused by such garbage comes up more often. It causes at least the following two problems:

1. ‘space debris’ falls within the definition of ‘space object’, for the harm caused by which a legally binding liability mechanism is stipulated in the Convention on International Liability for Damage Caused by Space Objects (1972) (hereinafter referred to as the Liability Convention);
2. how to determine the harm caused by space debris to certain objects in space and the Earth’s environment. Since the answer to the first question will allow us to orient in the approaches to the mechanism of determining the amount of damage and accountability for causing harm by space debris, it seems to be reasonable to focus our research on it.

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4. RS Jakhu, JN Pelton and YOM Nyampong ‘National Space Laws and the Exploitation of Natural Resources from Space’ in *Space Mining and Its Regulation* (Springer International Publishing Cham 2017) 131–44. F Tronchetti ‘Chinese Space Legislation: Current Situation and Possible Way Forward’ in PM Sterns and LI Tennen (eds) *Private Law, Public Law, Metalaw and Public Policy in Space: A Liber Amicorum in Honor of Ernst Fasan* (Springer International Publishing Cham 2016) 81–107. [↑](#footnote-ref-4)
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