

# Specificities of United States Law Impact on the Legal and Regulatory Framework for the Global Space Market

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*Development of relations in the new sphere of human activity, first among individual States and then among other subjects of space activities (international organizations, legal entities and individuals), requires developing international space law and national space legislation and further improving both public international law and private international law. Specificity of the process of developing the law on relations between the subjects of the global market for space services and technologies is that the first legal mechanisms of these relations have been introduced by the national legal institutions of one country, the United States. Using the comparative method, the article analyses the legal and regulatory framework for space activities in foreign countries with regard to the standardization of their contemporary space activities. The study makes a conclusion that the domestic U.S. policy on supporting the commercialization and privatization of outer space activities is purposefully accompanied by specific foreign policy activities along with the adoption of governmental regulations on individual areas of outer space activities.*

*Keywords: space activities, global space, law, space commercial activities, space market, policy, United States*

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## Introduction

The integration processes in the international community demonstrate a general trend towards closer and more cooperative international law subjects and an increase in the number of industries in which interrelated international and domestic law are applied frequently. Not only the scope of international law in domestic law extends due to the exclusiveness of international law itself, but also a formative domestic law impact on international law grows and domestic law is applied by international organizations (Denisov, 1992: 16).

The study of the sources and historical features of the establishment of mechanisms for the international legal and regulatory framework for the global market for space services and technologies (global space market) requires awareness that an international law branch dealing with the issues of this market has been founded almost simultaneously with the provision of the first services of the market. The need for practical space activities and the space race between the two space-faring nations (USSR and USA) accelerated the first steps in developing international space law.

Space activities, universal in the scope of application and global in the scope of outcomes, have, from the very outset, closely interrelated the external, primarily political, interests of States and domestic ones: issues related to the use of space technology to solve global problems of mankind and domestic economic problems of individual countries; problems of international security (non-proliferation of missile technologies, the need to introduce the latest means of verification of disarmament, etc.) and the need to reduce budgetary funding and to increase the commercialization of space activities; prospects for a global information space, opportunities for equitable access to this space by various countries (obtaining practical benefits from the introduction of information technologies) and problems of national security, including the information sovereignty of States, etc.

Development of relations in the new sphere of human activity, first among individual States and then among other subjects of space activities (international organizations, legal entities and individuals), requires developing international space law and national space legislation, and further improving both public international law and private international law. Specificity of the process of developing the law regulating relations between the subjects of the global space market is that the first legal mechanisms of these relations have been introduced by the national legal institutions of one country, the United States. Since the late 1950s of the twentieth century, United States Government agencies have already been active in shaping the public space policy, considering the need for the legal and regulatory framework for this “delicate sphere” of human relations, particularly with regard to aspects of the exploration and use of outer space such as the responsibility of the State for the consequences of those activities (and thus the need for the State regulatory framework), compulsory insurance of space activities (due to the high risks of their realisation), promotion of commercialization (the greater private sector involvement) and increasing internationalization (beyond national boundaries) of those activities. As a result, most of the United States legal instruments in the field of the practical use of space technology have international implications, which is logical, given several points:

First, during the years of the active formation of international space law (60-70s), only two States (USSR and USA) were capable of providing space services to international clients, but the USA offered these services mainly on the market (commercial) basis.

Second, since the beginning of space activities in the United States, the relations between the space actors (both domestic and foreign) have been governed by national space law, which is developed and is more comprehensive than that of other States worldwide (it is enough to recall important effects (for the global space market) of regulatory mechanisms such as licensing, quotas, insurance, intellectual property protection, etc.).

Third, the USA monopoly on the global space market, especially in the most significant segments of the world space market, such as satellite construction, satellite radio- and telecommunications, commercial space launches, etc., in the early years of the space era.

Fourth, the global space market is controlled by the USA through international organizations such as the International Telecommunications Satellite Organization (Intelsat), the World Trade Organization (WTO), etc.

Fifth, the active participation of USA lawyers in the development of international space law, including in the United Nations.

Sixth, purposeful U.S. initiation of informal relationships. Introduction of informal but quite effective legal regulators of the global space market – the Guiding Principles of the Missile Technology Control Regime (MTCR), which address one of the most important issues of space activities, that is, the problem of non-proliferation of missile technologies.

Seventh, the United States actively forms special regulators for the global space market (services quota, anti-dumping price regulation, export licensing, etc.) through bilateral agreements on cooperation with other States in the provision of commercial space services.

In our opinion, this has not only led to a significant impact of the American legal system on the process of law-making in international space law but has also actively contributed to the establishment of market relations among the subjects of the global space market, as well as to the introduction of legal regulators this market that are internationally recognized.

## **Genesis of USA Space Law**

The United States of America is a recognized leader in the legal support of space activities. The space legislation of this country is “older” than the corresponding branch of international law. The chronology of the adoption of the main U.S. space laws proves this:

July 29, 1958 – the USA Congress adopted the National Aeronautics and Space Act (Denisov, 1992: 16). The Act provides for the basic principles of United States state policy on space activities, which, according to this Act, should be devoted to peaceful purposes for the benefit of all mankind. The Act defines the system and legal status of the agencies responsible for the exploration and use of outer space. An important feature of the Act is its comprehensiveness in regulating a wide range of legal relations arising from space activities. The scope of the Act extends not only to outer space but also to the Earth’s atmosphere (“... the act deals with a flight within and outside the earth’s atmosphere...” (National, 1958)).

The Communications Satellite Act of 1962 (Communications, 1962), for the first time in United States jurisprudence, provided for access to space activities by private firms and corporations. Moreover, it was the first legislative step in the State regulatory framework of these activities and the beginning of forming provisions and principles of market relations in the commercial use of space technology. In the Section “Declaration of Policy and Purpose,”

the Act provides that the United States establishes a global commercial communications satellite system (Communications, 1962). Then it enounces that “in order to facilitate this development and to provide for the widest possible participation by private enterprise, United States participation in the global system shall be in the form of a private corporation, subject to appropriate governmental regulation” (Communications, 1962). According to the Act, authorized users shall have non-discriminatory access to the system; that maximum competition is maintained in the provision of equipment and services utilized by the system; the corporation’s activities shall be consistent with the U.S. antitrust laws. The Act established the American Communications Satellite Corporation (COMSAT), which became a co-founder of the global market for space services (satellite communications).

In 1966 the United States Communications Act (1934) was updated to extend the Act to the satellite communications industry, to provide for the conditions for granting a license for that activity and the requirements for a licensee.

The USA National Science and Technology Policy, Organization and Priorities Act of 1976 includes, among its purposes and priorities, advancing in the exploration and peaceful uses of outer space and establishes a system of procedures to ensure that those priorities are met.

In 1978, the USA Communications Satellite Act was amended to designate the private USA company COMSAT as the United States representative to the International Maritime Satellite Organization (INMARSAT).

In 1981, amendments to the USA Crimes and Criminal Procedure Title extended the Act to any vehicle used or designed for flight in space and on the registry of the United States pursuant to the 1975 Convention on Registration. This Act has established, for the first time in the practice of domestic regulation of space activities, the special criminal jurisdiction of a State over unlawful acts on a space vehicle while that it is in flight.

In 1984, amendments and additions to the United States Aeronautics and Space Research Act removed restrictions and in effect, established a regime of maximum favourability for the commercialization of space activities in the United States.

The U.S. Commercial Space Launch Act, enacted in 1984, has the primary purpose of encouraging private sector participation in commercial space launches (Communications, 1962). The Act enshrines the American concept of commercialization of space activities. According to Section 2, “The Congress finds and declares that – the peaceful uses of outer space continue to be of value and to offer benefits to all mankind; private applications of space technology have achieved a significant level of commercial and economic activity, and offer the potential for growth in the future, particularly in the United States; new and innovative equipment and services are being sought, created, and offered by entrepreneurs in telecommunications, information technology; the private sector in the United States has the capability of developing and providing private satellite launching and associated services that would complement the structures now available from the United States Government; the development of commercial launch vehicles would enable the United States to retain its competitive position internationally, thereby contributing to their national interest and economic well-being; provision of launch services by the private sector is consistent with the national security interests and foreign policy interests of the United States and would be facilitated by regulatory guidelines that are applied in thus sector; the United States should encourage private sector launches and, only to the extent necessary, regulate compliance with international obligations of the United States and to protect the public health and safety, safety of property, and national security interests and foreign policy interests of the United States” (Commercial, 1984).

For these purposes, the Act provided for the special agencies designated to overseeing and coordinating commercial launches, issuing licenses and permits for these activities. According to the Act, functions of these agencies include protection of the public health and safety, safety of property, and national security interests and foreign policy interests of the United States. The regulatory process is carried out through a licensing system. The Act establishes the licensing for commercial launches and the operation of launch sites in the United States, and for launches by United States citizens and entities from international space and from the territory of a foreign State.

The Land Remote-Sensing Commercialization Act of 1984 (Land, 1984) aims to ensure proper involvement of the private sector in land remote sensing and minimize the amount of further Federal investment necessary to land remote sensing provided maintaining the United States worldwide leadership in space activities. The Act remains committed to the further commercialization of space activities. However, it states that “full commercialization of the Landsat program cannot be achieved within the foreseeable future, and thus should not serve as the near-term goal of national policy on land remote sensing; however, commercialization of land remote sensing should remain a long-term goal of United States policy” (Nehoda & Shemshuchenko, 1999).

In 1988, amendments and additions to the United States Commercial Space Launch Act were mainly related to liability insurance. Under the amendments, the licensee is required to obtain insurance liability or demonstrate financial responsibility in an amount sufficient to compensate for the damage, to the greatest extent possible, to third persons. The damage is broadly understood to include death, injury, or property damage resulting from licensed launch activities. The monetary amount of such maximum possible loss is determined by the Ministry of Transport after consultation with other agencies. However, this amount should not exceed \$500 million for third-party liability or the maximum available on the world market at a reasonable cost. It is also necessary to insure liability (\$100 million) for U.S. Government. The State assumes the role of guarantor in respect of damage caused to third parties in excess of the amount of maximum possible loss-based insurance, but up to \$1.5 billion. However, the government does not indemnify a licensee’s wilful misconduct (Financial, 1998)

In 1990, the United States space bill amended the United States Code regarding patent law to extend national intellectual property law to space objects registered in the United States (Status, 1996).

The United States Commercial Space Act (1998) essentially complements the body of national legislation on one of the most important issues of modern space activities (commercialization) by provisions, which introduce appropriate legal regulators in areas of space activities not yet covered: satellite navigation, the programme for the construction and operation of the International Space Station, the use of reusable space vehicles (shuttles), etc. In our opinion, these additions to national legislation also contribute to solving the problems of regulating relations in the new areas of the world space market.

The U.S. leadership has recognized the achievement of a breakthrough in space activities as a necessary condition for the country to emerge from a protracted crisis (Luzin, 2012). Therefore, in October 2017, the President of the United States mandated the re-establishment of the National Space Council Advisory Group (for the first time since 1993) to promote coordination and cooperation in space activities (National, 2019). This group brings together a wide range of experts who are committed to restoring American leadership in space. Thus, the change in United States space policy and the adoption of legal and regulatory instruments to

ensure reform have enabled the space sector and the entire national economy to be out of the protracted crisis (Soroka, 2019).

The new United States doctrine has been accompanied by new legislation. This is particularly true of the United States space programmes. On 20 December 2019, President Donald Trump signed the “National Defense Authorization Act for Fiscal Year 2020” (National, 2020), to which the United States Space Force officially established and approved the start-up costs of Artemis program (Soroka, 2021).

Among other initiatives, several presidential space directives issued by the current Administration called on the Federal Government to establish a space management system under the Department of Commerce. They are designed to create a commercial climate for the management of an increasingly congested environment (Earth-orbiting objects as well as orbital debris). That is, the American government plans to be a leader in the exploration of outer space, but at minimal cost to the State budget by involving the public and the private sector. The new United States doctrine on space programs emphasizes public-private partnerships (Soroka, 2019).

### **Development of national space law**

Two stages can be distinguished in the development of national space law. The first was related to the beginning of the “space-age”: the adoption of the Declaration of Principles by the United Nations General Assembly in the early 1960s and the adoption of the Outer Space Treaty. It was then that a number of States, particularly those that had begun to explore outer space, had adopted general or specific laws on the issue. The second phase started (for most space-faring nations) in the 1980s. It involves the commercialization of space activities and the participation of private firms and corporations. In these circumstances, States had an objective need to regulate the space activities of private entities, to determine their rights and obligations, relations with the State, etc. In this regard, many countries have enacted relevant laws.

An analysis of world national legislation shows that most of them have space laws. However, their scope and content differ. Some countries have only a few ratifications of the international treaties on outer space (most of them), while others have more or less developed space legislation systems (Australia, Brazil, Japan, USA, ESA member countries, South Africa, Russian Federation, Ukraine). Generally, the latter distinguish the term “space activities” and the term “activities related to the exploration and use of outer space.”

While space activities are governed both by the principles and rules of general international law and by the principles and rules of international space law, as well as by national legislation, the activities related to the exploration and use of outer space remain largely within the scope of the laws of the country concerned or of private international law. However, it is a nearly general principle of national space law that States are directly responsible for the consequences of space activities. According to Article VI of the Outer Space Treaty, which is generally recognised, States Parties shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty.

The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorisation and continuing supervision by the appropriate State Party to the Treaty. When activities are carried on in outer space by an international organization, responsibility for compliance with this Treaty shall be borne both by the international organization

and by the States participating in it and by other countries. The licensing and insurance of space activities are under the focus of the space legislation of these countries.

The increase in various types of space activities in different countries has a direct impact on the status and nature of the respective national legal systems. Since the 1980s, this process has been closely linked to the commercial component of space activities. Due to this, the national legislation of foreign countries has broadened the range of regulations governing the licensing, insurance of space activities, certification and registration of objects of these activities, commercial aspects of remote sensing of the Earth from space and television broadcasting via artificial Earth satellites, etc. These aspects of foreign experience should be taken into account in improving Ukraine's space legislation.

In addition to the purely internal processes of improving national mechanisms for regulating the activities of States on the global market for space services, an adequate process in multilateral and bilateral international relations occurs. This has inspired the introduction to legal relations at the global space market of specific regulatory mechanisms, such as control of the non-proliferation of missile technologies; licensing of individual space activities or specific types of space services and technologies; compulsory liability insurance for the consequences of space activities; commercialization of space activities; protection of the intellectual property of developers, RSE manufacturers and suppliers; quotas of space services by foreign suppliers; anti-dumping actions regarding space services and technologies; government support for foreign investment.

## Conclusions

A specific feature of the process of developing the law regulating relations between subjects of the global space market is that the first legal mechanisms of this relationship have been introduced by the national legal institutions of one country, the United States. As a result, most United States legal acts in the field of the practical use of space technology have had an international impact.

The domestic U.S. policy on supporting the commercialization and privatization of outer space activities is purposefully accompanied by specific foreign policy activities. Along with the adoption of governmental regulations on individual areas of outer space activities (licensing and compulsory insurance of space activities), others are being introduced. For example, the conclusion of international agreements on commercial launches, the anti-dumping regulation of space services, the protection of the intellectual property of space technology developers and constructors, by limiting market access of foreign service providers (as space service quotas), etc.

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