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## **JOINT IISL/IAF SESSION**

### LEGAL FRAMEWORK FOR COOPERATIVE SPACE ACTIVITIES

#### **Co-Chairs:**

Mark Sundahl  
Elina Morozova

#### **Rapporteur:**

Merve Erdem



# International Cooperation as the Main Focus of the Modernized Russian Space Industry

*Olga A. Volynskaya\**

## **Abstract**

This year the world celebrates the 60th anniversary of the Space Age and 50 years of the Outer Space Treaty. International cooperation has been a crucial factor in the development of the world space community since the very first steps of space exploration and remains one of the most challenging conditions for its success today and in future. Owing to a long-standing tradition, international cooperation has always been at the core of the then Soviet and the modern Russian space policy and law. This article presents an analysis of the modern Russian legislation and key political documents in the area of space activities with a focus on international cooperation. Special attention is given to the recent changes in the national political and regulatory regime resulting from an ongoing fundamental reform of the Russian space industry in response to the main international initiatives (safety and long-term sustainability of space activities, non-placement of weapons in outer space, space debris mitigation, etc.) and new global trends of space activities (prospects of extraterrestrial resource mining, space traffic management, global space governance and others).

## **I. Introduction**

International cooperation is one of strategic tasks of the State Space Corporation “Roscosmos” (ROSCOSMOS) and organizations of the Russian rocket-and-space industry. Practically all directions of space activities are developing through international cooperation, including the creation of launch vehicles and spacecraft, commercial launches in the interests of foreign customers, joint fundamental space research, participation in the ISS program, promotion of the GLONASS system abroad, and others. With the new trends towards commercialization of the Russian space industry and enhancing its competitiveness in the world space market, international cooperation is viewed as a powerful instrument to ensure participation of

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\* Russian Foreign Trade Academy, Russian Federation, o.a.volynskaya@gmail.com.

Russia in the main international space projects and initiatives, which means at the same time contribution and access to the cutting-edge technologies derived from space activities.

## II. Political and Regulatory Dimensions of International Space Cooperation

According to the Keystones of State Policy of the Russian Federation in the Area of Space Activities for the Period till 2030 and Beyond,<sup>1</sup> namely its Section III clause 7, among the basic principles of the respective policy is strict compliance with international obligations of the Russian Federation in the area of space activities, and generally recognized principles and provisions of international law. This principle is rooted in the 1993 Constitution of the Russian Federation<sup>2</sup> which declares in its Article 15 clause 4 that

“The commonly recognized principles and norms of international law and treaties of the Russian Federation are a component part of its legal system. If a treaty of the Russian Federation sets forth rules other than prescribed by national law, the rules of the treaty shall apply”,

which is a direct confirmation of primacy of international law over national law as one of the legal cornerstones in Russia.

This constitutional principle is fully applicable to international space law as a branch of general international law, therefore space law principles and provisions proclaimed by the 1967 Outer Space Treaty (OST)<sup>3</sup> and other space treaties to which Russia is a party,<sup>4</sup> have a predominant legal force in respect of Russian space legislation. Thus, the principle of promoting

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1 Keystones of State Policy of the Russian Federation in the Area of Space Activities for the Period till 2030 and Beyond, approved by the President of the Russian Federation No. Pr-906 on 19 April 2013.

2 Constitution of the Russian Federation, adopted by a national referendum on 12 December 1993, *Sobraniye Zakonodatel'stva Rossiyskoi Federatsii (Official Gazette of the Russian Federation)*, 4 August 2014, No. 31, clause 4398.

3 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, UNGA Resolution 2222 (XXI), annex, adopted on 19 December 1966, opened for signature on 27 January 1967, entered into force on 10 October 1967.

4 Convention on International Liability for Damage Caused by Space Objects, UNGA Resolution 2777 (XXVI), annex, adopted on 29 November 1971, opened for signature on 29 March 1972, entered into force on 1 September 1972; Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, UNGA Resolution 2345 (XXII), annex, adopted on 19 December 1967, opened for signature on 22 April 1968, entered into force on 3 December 1968; Convention on Registration of Objects Launched into Outer Space, UNGA Resolution 3235 (XXIX), annex, adopted on 12 November 1974, opened for signature on 14 January 1975, entered into force on 15 September 1976.

international cooperation and understanding in the peaceful exploration and use of outer space (Preamble, Articles III, X and XI of the OST), alongside with all the other fundamentals of space law, are applicable to national space operations. The 1993 Law of the Russian Federation on Space Activities<sup>5</sup> confirms this conclusion by stating in its Article 1 that

“The area of space activities is regulated in accordance with the Constitution of the Russian Federation, generally recognized principles and provisions of international law and international agreements of the Russian Federation, the present Law, other federal laws and other regulatory acts of the Russian Federation”.

It is interesting to note that the notion of space activities established by the 1993 Law on Space Activities includes international cooperation of the Russian Federation in the area of exploration and exploitation of outer space.<sup>6</sup>

Further, the Law on Space Activities states that the development and widening of international cooperation of the Russian Federation in the interests of further integration of Russia into a system of global economic relations and provision for international security is a top priority of space activities.<sup>7</sup> This formula is further developed in the abovementioned Keystones, which declare that the establishment of strong international connections in the interests of joint scientific research and exploitation of outer space, development and use of spacecraft, technologies, works and services, performance of manned spaceflight to planets and other celestial bodies of the Solar system is among the main aims and priorities of the Russian space policy paving the way for Russia to become one of the leading players in the world space market.<sup>8</sup>

### III. Institutional Framework

The Russian Constitution in its Article 71(k) states that space activities fall within the exclusive competence of the Russian Federation. Overall management of space activities is exercised by the President, whereas the implementation of state policy in the area of space activities is the responsibility of the Government.<sup>9</sup>

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5 Law of the Russian Federation on Space Activities, 20 August 1993, N 5663-I (as amended), *Russian Gazette*, No. 186, 6 October 1993.

6 Article 2 clause 2 of the 1993 Law on Space Activities.

7 Article 3 *ibid.*

8 Section IV of the 2013 Keystones of State Policy of the Russian Federation in the Area of Space Activities, *supra* note 1.

9 Article 5 of the 1993 Law on Space Activities.

The Law on Space Activities establishes specific competence of an executive authority responsible for space activities. Since 13 July 2015, State Space Corporation “Roscosmos” has been acting in this capacity. As Article 6 of the Law on Space Activities reads, ROSCOSMOS exercises management of space activities in the interests of science, technology and different branches of the economy, organises work on the creation of scientific and social-economic spacecraft and jointly with the federal executive authority on defence – of dual-use spacecraft in the framework of the Federal Space Program and other federal programs in the area of space activities. For these purposes ROSCOSMOS enjoys a wide range of powers detailed in the 2015 Federal Law on State Space Corporation “Roscosmos”.<sup>10</sup>

According to Article 1 of this Federal Law, ROSCOSMOS is the authorised governing body in the field of exploration, exploitation and use of outer space having the powers to perform on behalf of the Russian Federation public administration and management of space activities in accordance with the 1993 Law on Space Activities, as well as to provide legal regulation in this area. Since the moment of liquidation of the Federal Space Agency on 1 January 2016,<sup>11</sup> ROSCOSMOS as a non-profit legal entity has assumed the Agency’s rights and obligations, including those in the framework of international space cooperation programs.<sup>12</sup>

A separate Article 13 of the Federal Law on State Space Corporation “Roscosmos” describes the powers and functions of ROSCOSMOS on international cooperation in the field of exploration and use of outer space. In particular, ROSCOSMOS is authorized within its competence, *inter alia*, to:

- provide for the implementation of obligations and fulfilment of rights of the Russian Federation stemming from international agreements of Russia;
- conclude international interagency agreements on space activities;
- develop and implement state policy on space activities, in particular international aspects thereof;
- represent the interests of the Russian Federation in international organizations and specialized international fora;
- cooperate with foreign government authorities and organizations;

10 Federal Law on State Space Corporation “Roscosmos”, 13 July 2015, No. 215-FZ, *Russian Gazette*, No. 154, 16 July 2015.

11 Decree of the President of the Russian Federation on Liquidation of the Federal Space Agency, No. 666, 28 December 2015, *Sobraniye Zakonodatel’sтва Rossiyskoi Federatsii (Official Gazette of the Russian Federation)*, No. 1 (Part II), 4 January 2016, Art. 203.

12 Article 6 clause 5 of the 2015 Federal Law on State Space Corporation “Roscosmos”.

- contribute to the establishment of favorable international conditions for the implementation of state policy on space activities;
- perform analysis of the current state and trends of development of international political, legal and technical regulation in the field of space activities;
- develop and promote at the international level proposals corresponding to the interests, goals and objectives of the Russian space policy.

#### **IV. Space Cooperation Mechanisms**

The Russian Federation actively uses different multilateral and bilateral mechanisms for cooperation in space activities.

An outstanding example of multilateral cooperation with the participation of Russia is the design, operation and use of the International Space Station (ISS). Since 2009, the ISS international crew has increased to six members. The Russian Federation, while developing its segment of the ISS, conducting a variety of scientific and technical experiments and fulfilling its international obligations, also provides the ISS with transportation and technical services using manned Soyuz vehicles and Progress cargo vehicles, and ensures that arrangements for safety of ISS crews in case of emergency are in place.<sup>13</sup>

#### **United Nations**

In the framework of the United Nations, Russia is active in the space-related work of the UN General Assembly, its First and Fourth Committees, Conference on Disarmament, United Nations Institute for Disarmament Research (UNIDIR), United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS), its Scientific and Technical Subcommittee and Legal Subcommittee.

The long-term sustainability of space activities (LTS) is a topic of primary importance on the agenda of the UN COPUOS and of a special interest for Russia. The aim of the work on LTS is to formulate non-legally binding guidelines for space activities of all participants, including states, international organizations, national non-governmental organizations, as well as private sector enterprises, in order to ensure the long-term sustainability of space activities and provide equitable access for all countries to outer space and its resources.<sup>14</sup> Since 2008, the Russian delegation has submitted 12 detailed draft guidelines raising the most acute problems, *inter alia*: enhancement of the practice of registration of space objects, monitoring objects and events in outer space, use of small satellites, application of the

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13 UN Doc. A/AC.105/C.2/2014/CRP.23 of 19 March 2014, p. 3.

14 UN Doc. A/66/20 of 20 June 2011, A/AC.105/L.286 of 29 April 2013.

right of self-defence in outer space, etc., and proposing specific solutions to them. The Russian participation in the process played a significant role in the shaping of the concept of LTS.

Within the LTS process, Russia initiated the creation under the auspices of the United Nations of an international centre (platform) for the exchange of information on objects and events in outer space, which could become a universal instrument of information exchange between states and international organizations interested in safety of space operations and the long-term sustainability of space activities. This initiative aims to counter unilateral actions by some states targeted at monopolizing the channels for dissemination of data on objects and events in outer space.

As to the Legal Subcommittee of the UN COPUOS, its agenda includes the following important topics, *inter alia*:<sup>15</sup>

- status and application of the five United Nations treaties on outer space;
- non-legally binding United Nations instruments on outer space;
- activities of international intergovernmental and non-governmental organizations relating to space law;
- legal mechanisms relating to space debris mitigation measures;
- legal aspects of space traffic management;
- application of international law to small-satellite activities;
- potential legal models for activities in exploration, exploitation and utilization of space resources;
- international mechanisms for cooperation in the peaceful exploration and use of outer space.

The Russian Federation has repeatedly expressed concern about the efforts by some states to impose their unilateral interpretation of the fundamental principles of space law on other participants of space activities, in particular on the issue of prospective mining of space resources. The unequivocal position of Russia is that the interpretation of universally recognized norms of international space law in relation to space resources must be authentic and responsible, undertaken jointly by States Parties to the OST within the framework of broad and comprehensive international cooperation. In this respect, the Legal Subcommittee of the UN COPUOS is the only international cooperation forum capable of and ready to respond quickly to new challenges, to provide the best expert assessment and to offer real practical solutions to the most acute problems of modern space activities from the perspective of international space law.<sup>16</sup>

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<sup>15</sup> UN Doc. A/AC.105/1122 of 1 June 2017.

<sup>16</sup> Statement by the Russian Federation on the follow-up of the Symposium organized by the International Institute of Space Law and the European Centre for Space Law

Russia consistently promotes the idea of a comprehensive United Nations convention on outer space. Such an instrument would eliminate the existing contradictions and fill the lacunae in the current international legal regulation on space activities, would allow to consider all aspects of space exploration and use of space technologies within a single, holistic document, and would take into account the interests of all participants of space activities.

### **Multilateral Space Cooperation Fora**

Within the framework of BRICS, the Russian Federation promotes the establishment of a united remote sensing satellite constellation in the interests of all BRICS countries, in particular to address challenges related to research on global climate change, disaster management, environmental protection, prevention of food shortage and water resources scarcity, and to ensure sustainable socio-economic development of BRICS member states.

Cooperation of Russia within the Commonwealth of Independent States (CIS) is stipulated by a number of factors, one of the most important being the unity of technological space-related standards. A multi-layer regulatory framework of space activities by CIS countries includes a basic Agreement on joint activities for the exploration and use of outer space,<sup>17</sup> as well as separate agreements on the maintenance and use of space infrastructure, implementation of space programs, financing of joint space activities, and other matters. One of the major areas of common interest for all CIS states is manned space launch from the Baikonur launch site.

In August 2013, ROSCOSMOS joined the International Charter on Space and Major Disasters which provides for the coordination of Earth observation and the exchange of data and information in the event of natural or manmade disasters. Considering the opportunities and scope for development of the Russian Earth remote sensing satellite array, membership of the Charter will, first, make it possible to obtain remote sensing data pertaining to Russian territory, in the event of a disaster or emergency, from a significant number of foreign space agencies and operators of remote sensing facilities and, second, strengthen the authority and prestige of the Russian Federation as a space power through the provision of Russian remote sensing data concerning the territories of States facing the consequences of a disaster or emergency.<sup>18</sup>

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on the topic “Legal models for exploration, exploitation and utilization of space resources 50 years after the adoption of the Outer Space Treaty”, 56<sup>th</sup> session of the Legal Subcommittee of the UN COPUOS, Vienna, 28 March 2017.

17 Agreement on joint activities for the exploration and use of outer space (done in Minsk on 30 December 1991).

18 UN Doc. A/AC.105/C.2/2014/CRP.23 of 19 March 2014, p. 3.

### **Bilateral Space Cooperation of Russia in the Area of Space Activities**

At present, Russia is cooperating within the framework of intergovernmental agreements on peaceful exploration and use of outer space with the following countries and unions of states: Germany, France, Italy, Spain, Sweden, Belgium, Bulgaria, Hungary, the European Union, Kazakhstan, USA, Brazil, Argentina, Cuba, Nicaragua, Chile, China, India, Republic of Korea, Indonesia, Vietnam, Australia, South Africa.<sup>19</sup>

ROSCOSMOS is finalizing intergovernmental agreements with Mexico, Peru, Venezuela, Saudi Arabia, Israel, Malaysia, Mongolia, Japan, Angola, Algeria. Negotiations on prospective bilateral agreements on space activities are ongoing with the UK, Canada, Ireland, Ecuador, Guatemala, Egypt, Morocco and Nigeria.

### **Capacity-Building and Outreach**

According to clause 5(a) of the 2013 Keystones on of State Policy of the Russian Federation in the Area of Space Activities, the development of space science, and space education accordingly, is one of the principal interests of the Russian policy in the field of space activities. Due to cooperation between the Russian Academy of Sciences, its various institutions and centers (such as the Keldysh Institute of Applied Mathematics, the Vavilov Institute for the History of Science and Technology, etc.) and ROSCOSMOS with its specialized enterprises, space activities are high on the agenda of the Russian scientific community. The Tsiolkovsky Russian Academy of Cosmonautics is also actively promoting the development of space science in the country.

When it comes to education, the role of the leading Russian technical universities, such as the Moscow Aviation Institute (MAI), the Bauman Moscow State Technical University, the Lomonosov Moscow State University, shall be underlined. Many outstanding experts and pioneers in space technology graduated from these universities. The Bauman University was *alma mater* for Sergei Korolev, founding father of the Soviet cosmonautics (graduated in 1930); Vladimir Barmin, Soviet scientist, expert in space mechanics and engineering (1966), and others. MAI is proud to have had among its students Academician Mikhail Yangel, Soviet designer of rocket complexes (1937); Academician Mikhail Reshetnev, one of the leaders of Soviet cosmonautics who contributed significantly to the development of satellite communications and navigation systems (1950); Wang Yongzhi, chief designer of China's manned spaceflight program (1961);<sup>20</sup> many

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19 ROSCOSMOS, Intergovernmental Agreements and Commissions for Economic and Scientific-Technical Cooperation, online at <https://www.roscosmos.ru/22887/> (in Russian), last accessed 19 December 2017.

20 See MAI Graduates at [www.mai.ru/common/history/alumni](http://www.mai.ru/common/history/alumni), last accessed 19 December 2017.

Soviet/Russian cosmonauts and one NASA astronaut, 22 of which have travelled to space 47 times having worked in outer space for over 16 years total.<sup>21</sup>

In 2017, a new Space Research Faculty was established in the Moscow State University<sup>22</sup> with the aim to focus on target space education for the purposes of the Russian space industry. The Moscow State Institute (University) of International Relations (MGIMO) and the Peoples' Friendship University of Russia (RUDN) have been famous for promoting the teaching of space law. In 2015, ROSCOSMOS launched a Corporate Academy within its institutional framework, whose primary task is to provide comprehensive knowledge on strategic management of space activities to the top officials of ROSCOSMOS and its enterprises in order to form an efficient team able to lead the Russian space industry to a new level.<sup>23</sup>

Since 2015, two workshops have been organized in Russia co-hosted by the Russian Government and the United Nations: in 2015 – the United Nations/Russian Federation Workshop on the Applications of Global Navigation Satellite Systems (held in Krasnoyarsk), and in 2017 – the United Nations/Russian Federation Workshop on Human Capacity-Building in Space Science and Technology for Sustainable Social and Economic Development (in Samara). The third UN Workshop – this time dedicated to space law – is scheduled for 2018 to be held in Moscow.

## 5. Conclusions

The Russian Federation continues to promote its values and interests through a variety of international cooperation mechanisms in the area of space activities. The firm position of Russia is that it is the whole international community to consider all current issues related to exploration and use of space, and to elaborate solutions for the needs and in the interests of all states. The UN COPUOS is a unique multilateral forum to provide for wide international representation and appropriate political and expert level for such decisions.

Following the established practice, states, international organizations and regimes annually present at the UN COPUOS the results of their activities, which are included in the final reports of the Committee and play an important role in achieving a common understanding of current problems and prospects of different areas of space activities. At the same time, it is

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21 See MAI Graduates – Pilots-Cosmonauts, online at [www.mai.ru/common/history/alumni/cosmonauts.php](http://www.mai.ru/common/history/alumni/cosmonauts.php), last accessed 19 December 2017.

22 See Space Research Faculty (in Russian), online at [www.msu.ru/info/struct/dep/cosmos.php](http://www.msu.ru/info/struct/dep/cosmos.php), last accessed 19 December 2017.

23 ROSCOSMOS: The Corporate Academy is launched (in Russian), 2 November 2015, online at [www.roscosmos.ru/21802](http://www.roscosmos.ru/21802), last accessed 19 December 2017.

essential that all states members of the UN COPUOS implement at the domestic level all recommendations and regulations, in particular, on space debris mitigation, national registration of space objects, enhancement of safety of space operations, etc., so that active political positions by states were supported by their practical actions. On its part, Russia continues to be actively involved in the deliberations on the most acute problems of space activities, and regularly provide its reports on how the recommendations and guidelines developed at the UN level are being observed and implemented in the national space activities.

Russia has proved its leadership role in developing space activities at the regional and interregional levels, the CIS and BRICS being the best examples. As the leading spacefaring nation with colossal experience and powerful space potential, the Russian Federation is meant to be a unifying center of interaction between the neighboring states, to stimulate discussions and decision-making on key issues of joint exploration and use of outer space in the interests of all partners.

Capacity-building and outreach activities also remain one of the top priorities for the Russian Government and ROSCOSMOS making space attractive and accessible to the young generation of future space travelers, scientists, engineers, lawyers, as well as to the general public.