

PAPER • OPEN ACCESS

Organization and legal framework for using the Arctic space

To cite this article: D Mokhorov *et al* 2020 *IOP Conf. Ser.: Earth Environ. Sci.* **539** 012008

View the [article online](#) for updates and enhancements.

You may also like

- [Circumpolar Arctic vegetation: a hierarchic review and roadmap toward an internationally consistent approach to survey, archive and classify tundra plot data](#)

D A Walker, F J A Daniëls, I Alsos et al.

- [Changing state of Arctic sea ice across all seasons](#)

Julienne Stroeve and Dirk Notz

- [Identifying multidisciplinary research gaps across Arctic terrestrial gradients](#)

A-M Virkkala, A M Abdi, M Luoto et al.



ECS
The
Electrochemical
Society
Advancing solid state &
electrochemical science & technology

DISCOVER
how sustainability
intersects with
electrochemistry & solid
state science research

Organization and legal framework for using the Arctic space

D Mokhorov, B Kerefova, G Spirin, A Kobicheva

Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russia

bella9631@mail.ru

Abstract. In this paper we consider the history of Arctic exploration. The most important historical aspects of the Arctic region development are analyzed. We used the methods of scientific knowledge, which allow a comprehensive study of the essential aspects of the Arctic development. The important stages of the subarctic region development are investigated. The article highlights the issues of creation and functioning of the Arctic Council. The authors have identified the tasks of Russian legal regulation of the Arctic territories, which consists in the formation of national legislation at the level of other Arctic states, as well as in restoring the balance between legal and “substitute” norms. The scope of international legal regulation in the Arctic zone was also identified and it was established that the most significant influence was gained by the problems associated with the vital activities of the indigenous peoples of the North, nature management and environmental protection in the Arctic zone, as well as the military aspect in the use of the Arctic space.

1. Introduction

The history of Arctic exploration dates back to the 10th century. It was then that the Scandinavians discovered an island known to us as Greenland. In the process of fishing, Russian sailors from the 12th century inhabited the islands of Vaigach, Kolguev, Novaya Zemlya. The most active Arctic lands were mastered by Russian researchers from the 16th to the 18th centuries. Starting from the International Geophysical Year (1957–58) and up to today, numerous international expeditions and research stations from the Russian Federation, the United States of America, Canada, Norway, Sweden and other countries have been actively operating in the Arctic zone. The central body regulating shelf order is the Arctic Council, whose activities are aimed at promoting cooperation and interaction between the Arctic countries. The entire territory of the Arctic is divided into five sectors of responsibility between Russia, the United States of America, Norway, Canada and Denmark, while the exact borders remain blurred. Since the Arctic is a zone of economic interests of many countries, the purpose of this study is to determine the area of Arctic possessions between responsible countries.

2. Methodology

In this scientific work as the main special research methods were used: empirical, theoretical, subject-analytical. In the framework of using empirical methods, various sources of information were studied, and the analysis of the obtained information was carried out. Applying the theoretical research method, the most common general theoretical methods were used: analysis, comparison. Using the subject-analytical research method, relations between responsible countries were studied on issues of mutual interest.

3. Main Body



Content from this work may be used under the terms of the [Creative Commons Attribution 3.0 licence](https://creativecommons.org/licenses/by/3.0/). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

The history of Arctic exploration dates back to the 10th century. It was then that the Scandinavians discovered an island known to us as Greenland. In the process of fishing, Russian sailors from the 12th century inhabited the islands of Vaigach, Kolguev, Novaya Zemlya. Sailors from Western Europe from the end of the XVI century tried to pass America and Eurasia through the North-West and North-East passages. At the same time, Willem Barents, a navigator from Holland, discovered the Svalbard archipelago. The Taimyr Peninsula was explored in the 17th century by Russian Pomors, sailing along the northern coast of Siberia. The famous Russian researcher Semen Ivanovich Dezhnev in 1648 discovered the strait between America and Asia. The participants of the Russian Great Northern Expedition, from 1732 to 1743, explored and reflected on the map most of the northern coast of Asia. And thanks to the initiative of M.V. Lomonosov for the first time the expedition was equipped in the central part of the Arctic under the leadership of V.Ya. Chichagova [1].

Already in the Soviet years (1930–1932), researchers N.N. Urvantsev and G.A. Ushakov marked on the map the Severnaya Zemlya archipelago. Under the leadership of O.Yu. Schmidt in 1932, the expedition on the icebreaker "Alexander Sibiryakov" passed the Northern Sea Route in one navigation, laying the foundation for its development. In 1937, in the area of the North Pole, under the leadership of I.D. Papanin, the first drifting station of the Soviet Union, the North Pole, was located. By 1980, 30 Soviet North Pole stations were successfully operating in the Arctic basin. After the end of World War II, the authorities of Canada and the United States of America in intensive mode resumed oceanographic research in the Beaufort and Chukchi seas. In particular, they made several voyages along the coasts of Greenland, Canada, the islands of Ellesmere and Jan Mayen.

Since the International Geophysical Year (1957–58) and up to today, numerous international expeditions and research stations from the USSR (Russian Federation), the United States of America, Canada, Norway, Sweden and other countries have been actively operating in the Arctic zone. In the 1990s, non-Arctic countries — Great Britain, Germany, Japan, China, and others — joined Arctic research.

To date, the Arctic Council is the central regulator of offshore order. It was officially established in 1996 and on September 19 of the same year, the Declaration on the establishment of the Arctic Council was adopted. The goals for the implementation of which the Council is being created, its composition, permanent participants, the status of observers - countries that are not Arctic regions, the principles on which the forum is based, are stated in the Declaration. The Arctic Council includes the countries of the Arctic region: Russian Federation; Kingdom of Denmark; Kingdom of Norway; Kingdom of Sweden; Iceland; Canada; United States of America; Republic of Finland. These states make up the Big Arctic Eight.

The purpose of the Arctic Council organization is to promote cooperation and interaction between the Arctic countries, as well as the original peoples and other inhabitants of the Arctic regions, environmental protection and the development of a unique region of the planet.

The main theses of the Arctic Council work were spelled out in 1996 in the Declaration on the establishment of the Arctic Council, and include ensuring the well-being of residents of the Arctic; implementation of the ideas of sustainable development of the Arctic region; protection of the biological complex of the Arctic [2].

Each meeting of the Arctic Council takes place in the form of an Arctic forum. It is such format of the Council's activity that makes it possible to openly discuss urgent problems and find solutions by the integrated efforts of all parties involved. The forum allows participants to work on the basis of mutual respect and understanding, in order to achieve common interests. In turn, within the framework of working groups, the Council's activities are scientific and research in nature, during which experts from various fields conduct research and monitoring, as well as draw up recommendations based on the results obtained.

It should be noted that the Forum also includes cooperation with regular participants who are representatives of the indigenous peoples of the Arctic regions. Officially, they are registered as members of the Arctic Council, these include: the Russian Association of Indigenous Minorities of the North,

Siberia and the Far East; Arctic Council of Atabask; Inuit Circumpolar Council; Aleut International Association; International Council of Gvichins; Sami Union.

The role of regular participants is primarily to disclose and support the interests of the indigenous peoples of the Arctic regions, to preserve their traditional way of life, increase the level of social and economic development and education, as well as to broadly discuss and make decisions on issues of the forum.

It should be noted that since the Arctic Council is not a commercial organization, it does not have a program budget. All programs of the organization that are being implemented are funded by the Arctic states, and, if necessary, by other countries. Documents and resolutions created and adopted by the Arctic Council are advisory in nature. Therefore, their implementation depends on the desire and ability of the participating countries and member countries. It must be emphasized that the Declaration on the Establishment of the Arctic Council as a separate paragraph indicates that the Arctic Council does not deal with military security issues. Thus, the Arctic Council is an exclusively peaceful organization whose activities are aimed at building, and not at destruction [3].

The entire territory of the Arctic is divided into five sectors of responsibility between Russia, the United States of America, Norway, Canada and Denmark. The exact borders of the Arctic have not yet been determined, and the sectoral principle is gradually giving way to delimiting the territorial affiliation of its sections [4].

The territory of the Russian Federation is 17 125 191 km². The Arctic accounts for 20% of the entire country. The area of Arctic possessions between the responsible countries is as follows: Russia - 5.842 million km², Canada - 1.430 million km², Norway - 0.746 million km², Denmark - 0.732 million km², United States - 0.126 million km².

The Arctic is a zone of economic interests of many countries. This is primarily due to the colossal deposits of various minerals. Numerous deposits of oil, nickel, gas, copper, uranium and other natural resources are located on the ice open spaces of the Arctic.

Today, a quarter of the world's natural gas and a tenth of oil are produced in the Arctic region. Moreover, almost all-natural gas and 80% of oil fields are located in the North of the Russian Federation.

Outside the Arctic Circle, more than 400 surface deposits of oil and gas were discovered. Currently, 60 of them are actively operating, a fourth of the fields are under development. Over two-thirds of all developed deposits are located in Western Siberia. Thanks to this, the Khanty-Mansiysk Autonomous district is recognized as a key oil and gas region of the country and is included in the list of the largest oil producing regions in the world. It owns 57% of the country's entire oil, and more than 500 oil and gas and oil fields are discovered in the district, with reserves of about 20 billion tons [5].

Thus, the Russian sector of the Arctic accounts for 43% of all oil reserves and 91% of all gas reserves. Also, the Arctic sector of our country accounts for 43 large hydrocarbon deposits out of 61.

Estimation of oil reserves located in the American part of the Arctic, the equivalent of 15 million barrels, and gas reserves - more than 2 trillion m³. At the same time, 20% of oil is produced at the field near the settlement of Pradkho Bay. The Canadian Arctic sector has 49 gas and oil fields in the Mackenzie River Delta, and about 15 fields on individual Arctic islands. Moreover, the largest gas deposits are located off the coast of Siberia and Alaska.

In the Far North of the Russian Federation, mining of various minerals is developed: nickel, gold, uranium, copper, coal. Deposits of valuable metals: gold, nickel, silver, zinc, molybdenum are concentrated in the lands of Siberia. The largest deposits of gypsum, coal and diamonds are also located there. About 25% of all diamonds in the world are mined in the Republic of Sakha. In addition, iron, palladium, tin, cobalt, platinum, apatites, titanium, mica, and precious stones are mined in the Russian Arctic sector. The vast majority of these minerals are localized on the Kola Peninsula. The development of deposits and the extraction of deposits on the peninsula is considered the least difficult, since the topsoil destroyed by glaciers does not impede the extraction of minerals.

In addition, in the Arctic zone of the Russian Federation there are mines for the extraction of nickel, copper, uranium, phosphorus and tin. The Norilsk Nickel Plant is on the list of the largest nickel mining and processing plants [6].

The Arctic is also rich in biological resources. The estuarine sections of large rivers of North America and Eurasia are located within the Arctic zone, as well as a fifth of the world's fresh water reserves are concentrated in it. The vast expanses of the Arctic lands are inhabited by rare representatives of various species of flora and fauna. During the breeding season, more than a million migratory birds are sent to the Arctic. The Arctic Ocean is inhabited by hundreds of species of marine mammals. The largest populations of cod, pollock and salmon spawn in the Arctic seas. Hundreds of herds of cloven-hoofed mammals move on the tundra, on which the well-being of the northern peoples depends.

Ermolina M.A. emphasizes the undoubted importance of the Arctic ecosystem in her writings, arguing that: "From a political and economic point of view, the Arctic should be considered as a region with a specific composition and unique in its properties flora and fauna" [7].

In the Arctic region there are territories of 8 states - Russia, Canada, the United States of America, Norway, Denmark, Iceland, Sweden and Finland. The first five countries are considered subarctic, since their territories are directly adjacent to the Arctic. The Arctic states, due to their geographical location and historical factors, are traditionally repelled by their special, priority rights when using the Arctic spaces [8].

This approach was enshrined in sectoral theory, according to which each subarctic state is endowed with special rights in its polar sector - a triangle, the coast of the corresponding state is considered the basis of the triangle, and the sides are lines passing along the meridians to the North Pole.

The legal regime of the Arctic marine areas, including those permanently covered with ice, is regulated by the norms of international maritime law relating to marine spaces (open sea, inland sea waters, exclusive economic zone, territorial sea, continental shelf) [9].

The most important transport routes in the Arctic are the Northern Sea Route (Russia, Norway) and the Northwest Passage (United States of America, Canada). The Northern Sea Route is an alternative and shortest waterway between Northern Europe and the Asia-Pacific region. Article 14 of Federal Law No. 155-FZ "On Inland Sea Waters, the Territorial Sea and the Adjacent Zone of the Russian Federation" stipulates that "Sailing along the routes of the Northern Sea Route, including navigation in the Straits of Vilkitsky, Shokalsky, Dmitry Laptev, Sannikov, is carried out in accordance with the federal laws of the Russian Federation, international treaties of the Russian Federation and the rules for navigation along the Northern Sea Route, approved by the Government of the Russian Federation and published in Notices to Mariners" [10].

Due to the incredible vulnerability of the Arctic nature, large-scale mining and other activities in this region can lead to negative environmental consequences. Therefore, the interest of the Arctic countries in protecting the environment is reflected in the 1982 United Nations Convention on the Law of the Sea. Article 234 "Ice-covered areas" of the Convention is directly related to the Arctic zone. In this aspect, the provision on the law of coastal states deserves attention: "to adopt and enforce non-discriminatory laws and rules to prevent, reduce and control pollution of the marine environment from ships in ice-covered areas within the exclusive economic zone ..." [11].

The legal regulation specificity of the development of the Russian Federation Arctic zone, in contrast to the regulation of other macro-regions of the country, lies in the fact that in some cases it is directly affected by the norms of international law [12].

In the Russian Federation, legal regulation of the Arctic zone development continues to take shape according to the industry principle, according to which acts of constitutional, civil, administrative, environmental, land and other branches of law are in force [13].

Thus, each industry contains its own subject of regulation, approaches and methods of influencing social relations. The drawback of the industry principle in this aspect is that it does not allow to implement the program-targeted management method for the development of the country's largest northern region with the greatest efficiency.

It should be noted that the national legislation of each country is aimed, first of all, at solving the internal problems of society and the state. Despite this, the legislation of the Russian Federation is similar in content to the laws of other Arctic countries.

In the Arctic states, as well as in the Russian Federation, program documents are being implemented that determine the goals of the Arctic policy. These include Canada's Northern Strategy 2009; Sweden's 2011 Arctic Strategy; National Strategy for the Arctic Region of the United States of America 2013; Finland's Arctic Strategy 2013 and others.

As in our country, the listed countries are dominated by a sectoral approach; there are no system-forming laws defining the foundations of legal regulation.

Despite this, the law holds a leading position in the Arctic states. Foreign countries seek to use it as the main legal regulator. This confirms the increase in the number of targeted legislative acts on the Arctic, and their unification. The international legal status of the Arctic, which today is not the subject of international conventions and regional international treaties, also helps to strengthen the role of law in every Arctic state.

The subsequent development and improvement of the Arctic legislation must be implemented in close interconnection of the international legal and national legal components [14].

4. Conclusion

The uniqueness of this study lies in the fact that a detailed analysis of the legislative framework of the Russian Federation and the Arctic states was carried out. This allows us to conclude that in the next decade, national legal regulation will prevail. This position is explained by the following factors [15]:

Firstly, an increase in the scope of international legal regulation in the Arctic zone provokes the development of hidden threats to the national interests of the Russian Federation. The most important are threats to ensure military, economic and environmental security.

Secondly, most of the Arctic states recognize that it is not timely to conclude regional agreements on the establishment of the legal regime of sea spaces and the borders of sovereign rights in the Arctic Ocean.

Thirdly, early approbation in normative acts of those legal decisions that will be proposed by the Russian Federation for implementation at the universal and regional international legal levels is required. The indicated action will make it possible to overcome the established practice of legislative economy in the implementation of legal regulation of the Arctic zone.

Fourthly, the primary tasks of Russian legal regulation of the Arctic territories are the formation of national legislation at the level of other Arctic states, as well as restoring the balance between legal and "substitute" norms. Since at present many important issues are regulated by local norms, and not by the state, the need to restore the role of federal laws is steadily increasing. This will correct the situation when local acts replace the main legislation.

Fifthly, non-legal factors will become more influential in the development of Arctic law, since not only legislative norms, but also the whole range of regulation will be involved in solving future problems. Consequently, law enforcement practice is being improved in the direction of expanding the operation of international legal and national legal regulators. In addition, the legislative and enforcement role of the constituent entities of the Russian Federation will increase. All kinds of legal mechanisms of self-government and self-organization of the communities of the North indigenous peoples, professional associations in the Arctic will become widespread.

As the vice-president of the Russian Academy of Sciences T. Ya. Khabrieva notes: "The institutional basis of legal regulation of the Arctic will also change. The tasks of improving the activities of the Russian state in the Arctic are unattainable without optimizing the interaction of the Federation, its constituent entities and municipalities, including through the use of flexible mechanisms for the transfer of powers through decrees of the President, resolutions of the Government of the Russian Federation, and not just laws and agreements. We can assume the creation of a specialized federal ministry for Arctic affairs" [16], [17].

There are various areas of domestic regulation in the Arctic. Currently, the most significant influence has been acquired by problems associated with the vital activities of the indigenous peoples of the North, nature management and environmental protection in the Arctic zone, as well as the military aspect in the use of the Arctic space.

References

- [1] Kotlyakov V M Arctic. Great Russian Encyclopedia Information portal "Great Russian Encyclopedia" Available from: <https://bigenc.ru/geography/text/3452274> [Accessed 20 January 2020]
- [2] On the establishment of the Arctic Council: Declaration of 09/19/1996 1997 Current international law p 723
- [3] Arctic Council. The official website of the Working Group "Development of the Arctic and the Northern Sea Route" of the Expert Council under the Government of the Russian Federation Available from: <https://the-future-of-the-arctic.org/> [Accessed 20 January 2020]
- [4] Shamakhov V A 2015 Features of the modern international legal regime of the Arctic *Russian Arctic - Theory of Law: Almanac II* 79-84
- [5] Arctic Resources Available from: <https://www.nordregio.org/maps/resources-in-the-arctic-2019/> [Accessed 20 January 2020]
- [6] Natural resources. The Arctic Information Portal Available from: <https://ru.arctic.ru> [Accessed 20 January 2020]
- [7] Ermolina M A, Kosyak A U 2018 Arctic tourism: development prospects and politics *SPbPU Science Week Materials of the scientific conference with international participation* 261-264
- [8] Kotlyakov V M Arctic Available from: <https://bigenc.ru/geography/text/3452274> [Accessed 20 January 2020]
- [9] Kholkina Yu A, Kripakova A In 2016 Problems of international legal regulation in the Arctic *Young scientist* **13** 603-606
- [10] Meeting of the Russian Federation legislation dated 03.08.1998 N 31 Law 3833
- [11] Meeting of the Russian Federation legislation dated 01.12.1997 N 48 Law 5493
- [12] Khabrieva T Ya 2016 Social and legal development is a key factor in the humanitarian development of the Arctic region *The Russian Arctic is a territory of law: an almanac III* 15-28
- [13] Snetkov V N, Ponomarenko A V, Semenova K A 2019 Specific features of domestic and international legal regulation of environmental management in the Arctic *IOP Conf. Series: Earth Environ.* Available from: <https://doi.org/10.1088/1755-1315/302/1/012030> [Accessed 20 January 2020]
- [14] Kobylkin D N 2015 The Arctic - not to conquer, but to inhabit. Sustainable development of the Arctic zone of Russia on the example of the Yamalo-Nenets Autonomous Okrug *Russian Arctic - theory of law: almanac II*.
- [15] Khabrieva T Ya 2015 Arctic law - an integrated approach to solving the problems of the development of the Arctic *The Russian Arctic - the theory of law: an almanac II*
- [16] Demidov V P, Mokhorova A Yu, Mokhorov D A 2019 Legal support of environmental protection in the Arctic region *IOP Conference Series: Earth and Environmental Science* Available from: <https://iopscience.iop.org/article/10.1088/1755-1315/302/1/012154> [Accessed 20 January 2020]
- [17] Antipov S K, Bocharov A A, Kobicheva A and Krasnozhenova E E 2019 Assessment of Region Economic Development on the Basis of Neural Network Model *IOP Conference Series: Earth and Environmental Science* Available from: <https://iopscience.iop.org/article/10.1088/1755-1315/302/1/012094> [Accessed 20 January 2020]