

Current Stage of International Cooperation in the Arctic: Search for Answers to the Challenges of Economic Development



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For citation: Lipina S.A., Fadeev A.M., Zaikov K.S., Lipina A.V., Kondratov N.A. Current stage of international cooperation in the Arctic: search for answers to the challenges of economic development. *Economic and Social Changes: Facts, Trends, Forecast*, 2021, vol. 14, no. 4, pp. 251–265. DOI: 10.15838/esc.2021.4.76.15



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Abstract. The transformations in the natural and socio-economic environment occurring in the Far North and the Arctic put forward the problem of regional sustainable development. This makes it necessary to address the task of finding strategic approaches to the management of the nonstandard Arctic region, considering the national interests of many states, including the Russian Federation, which dominates territorially in this region. Taking into account the size of the Arctic space and the extreme conditions of economic management, it seems relevant to comprehend the experience of international cooperation in the Arctic and analyze its use for socio-economic development in the entire Arctic region. The aim of the article is to analyze the current stage of international cooperation so as to find answers to the challenges of socio-economic development of the Arctic region. To achieve the goal, we have analyzed the state policy features of the Arctic states based on strategic planning, thus the northern states are able to adapt to the changing natural, socio-economic and geopolitical conditions. We considered approaches in the implementation of projects to develop mineral deposits on the continental shelf of the Arctic Ocean. With the support of international cooperation we give examples of nature management aimed at harmonization of economic interests of business entities and the need to preserve the environment quality in the Arctic. The scientific novelty consists in the critical analysis of the international cooperation features in the Arctic and its readiness to participate in overcoming the new challenges of the Arctic development. The practical relevance of the study lies in the fact that its findings can be used in the educational process in universities, as well as at the state level by executive and legislative authorities in the development and implementation of state policy in the Arctic zone of the Russian Federation, considering the features of international cooperation.

Key words: the Arctic, development strategies, international cooperation, climate change, sustainable development.

Introduction

For a long time, the Arctic (the Arctic Ocean and the land areas of the Far North, the borders of which are defined by the national documents of the respective states) was considered from a military-strategic position, and only recently it has become a place of attraction for economic and research interests of states both having direct access to the Arctic Ocean and located thousands of kilometers from its coast. One of the reasons for this interest is *new challenges*, i.e. transformations in the natural and socio-economic environment of the Arctic, about the causes and consequences of which not enough is known yet. The relationship between natural and socio-economic changes is also a matter of debate. The global nature and interconnectedness of the challenges in the Arctic determine the leading role in their solution not so much for national governments, but for the efforts of all interested countries and their associations. It is important to note that each Arctic country has its own meaning in the concepts of the Arctic and the Far North. Sweden, Finland and Iceland consider their entire territory as Arctic, although they do not even have access to the Arctic Ocean. In some studies, the Arctic refers to all northern regions where the average July temperature does not exceed 10°C, that is, areas and waters located south of the Arctic Circle including most of the Bering Sea between Russia and Alaska, the Labrador Sea between Canada and Greenland. On land, regions north of the edge of the forest distribution can be considered Arctic. The Fridtjof Nansen Institute and DNV report focuses on the Arctic Ocean and its surrounding areas, where economic activities that affect the state of the ocean waters are carried out. It is said that “the Arctic Council has not established precise geographic boundaries of its mandate. Therefore, there is no clear legal definition of the borders of the Arctic. The situation is particularly murky with regard to the delimitation of Arctic

water boundaries in the Northeast Atlantic. In terms of environmental protection against pollution, the OSPAR Convention, whose subject matter is the Northeast Atlantic region, defines Arctic waters (Region I in the document) as located north of 60° north latitude”¹. Thus, the issue of defining the territory of the Arctic and drawing its southern borders remains debatable.

An example of natural changes in the Arctic region is the increase in air temperature over the previous 30–40 years at a rate several times higher than the global average. The fifth report of the International Panel on Climate Change (IPCC) states: changes in the climate system in industrial times are an undeniable fact. It is highly probable (over 90%) that increasing concentrations of anthropogenic greenhouse gases is responsible for much of the global warming since the mid-20th century [1]. The Arctic Council’s report Arctic Climate Impact Assessment (ACIA) notes that during the 21st century the average global temperature may increase by 2.8°C (currently about 0.4–0.6°C), with a 3.5°C increase in most land areas and a 7°C increase in the Arctic [2]. According to the Russian Federal Service for Hydrometeorology and Environmental Monitoring, an absolute minimum of ice has been registered for 30 years, their area decreased from 7.3 mil. sq. km in 1979 to 5.2 mil. sq. km in 2018 (5.1 mil. sq. km in 2013)².

The relevance of the “climate issue” is also conditioned by the fact that in the Arctic region natural and climatic problems are transformed into political ones. As the Arctic Ocean seas become free

¹ Arctic resource development: risks and responsible management. Available at: <http://pro-arctic.ru/24/09/2012/resources/316> (accessed: December 04, 2020).

² Global climate change. Available at: <https://climate.jpl.nasa.gov/> (accessed: August 12, 2019); *Arctic climate issues 2011: changes in Arctic snow, water, ice and permafrost*. AMAP, SWIPA, 2011. Available at: <http://www.amap.no> (accessed: August 12, 2019).

of ice, access to mineral resources becomes easier, and competition for maritime communications, not yet fully included in the turnover of the world economic process, develops. In an effort to expand their influence on the use of natural resources, the countries of Northern Europe, the United States and Canada have developed plans and strategies for the development of the Far North and national Arctic zones. In order to find an effective response to the new challenges, aware of the size of the Arctic region and the extreme conditions of economic activity, foreign countries are developing international cooperation within both regional formats and bilateral relations.

The history of the development of areas near or north of the Arctic Circle confirms that economic activity here is relatively recent. There are two types of economy in the Arctic: rent-based and transfer-based, as well as models – American, Canadian and Russian – typical for states with a federal structure, characterized by the joint involvement of federal and regional authorities in economic processes, and European, typical for unitary European states, where responsibility for the development of regions lies with the central government [3]. Their organizational and managerial mechanisms are to ensure sustainable development of the northern (Arctic) territories: social and economic development, environmental protection [4]. The models have specific features: the US Arctic economy is characterized by high investment level of developing extractive industries and tourism in the North and intensive expansion of capital to other northern countries; Canada applies unique methods of compromise with indigenous peoples in the North; Norway has developed science-intensive standards of resource development in offshore areas and has strict environmental standards in this area; Russia is accumulating experience in oil and gas production on land in the Far North [5].

Among foreign countries, Canada, Norway, Denmark and the United States play a major role

in Arctic natural resource management. Russia was one of the first to start developing areas north of the Arctic Circle, creating here the most powerful industrial layer among the world's analogues over the past 90 years against a background of high urbanization and sparse population settlement. Commercial use of the Northern Sea Route (NSR) has been underway since 1932. Iceland, Sweden, and Finland position themselves as experts in the development of natural resources and have practical experience and competences of human resources for work in the Far North.

Research methods

The issues concerning strategic planning for the development of Northern and Arctic territories, peculiarities of international cooperation and responses to challenges in the Arctic region are considered in the scientific literature in Russia and abroad. The analysis shows that the selected topic is especially widely covered in Russian publications in the early 2000s. As noted earlier, the countries of Northern Europe and North America are characterized by a high level of socio-economic development, competitive economy, and ability to effectively respond to global challenges and elaborate development strategies for the peripheral northern territories [6; 7]. V.N. Konyshev, A.A. Sergunin have analyzed the specifics of the Arctic strategies of the North American countries, compared them with their Russian analogue, and come to the conclusion about the need to preserve partnership relations between the states in the interests of safe development of the entire Arctic region [8; 9; 10]. Russian publications focus on theoretical analysis of the organization of international cooperation in the Arctic in the political, environmental and ecological [11; 12], intellectual [13], energy [14], military security, and sustainable development fields [15]. Russian authors compare domestic and foreign experience of economic development of the Northern territories [16]. Considering the peculiarities of international

relations in the Arctic, researchers note that they develop in several directions, and it is difficult to identify the prevailing one [17]. Doctor of Sciences (Geography) A.N. Pilyasov analyzes the concept of northern futurology as a special research field, an interdisciplinary platform to consolidate the efforts of specialists in forecasting the development of Northern and Arctic territories of the world, shows the positive role of international cooperation in the economic development of the Arctic [18; 19]. He considers the phenomenon of the Arctic Mediterranean, “just as the Mediterranean in the ancient era was the cradle for new socio-cultural communities, the global influence of which we still feel today”. The prerequisites for the implementation of the new concept of Arctic development put forward in the countries of Northern Europe at the beginning of the 21st century are “the growing availability, the enormous oil and gas potential of the shelf, which is in demand of the leading economies of the world, the significant similarity between the value systems and features of economic behavior of the Arctic natives and the communities of intellectual territories of the world, the global creative class...”. [20].

The Russian International Affairs Council is implementing the project “International Cooperation in the Arctic”. Its participants (universities, the expert international community, and the Institute of World Economy and International Relations of the Russian Academy of Sciences) aim to “work out proposals for the development of international cooperation in the Arctic taking into account the priorities of the Arctic Council, in partnership with research centers of the Arctic region and extra-regional countries”. The project has published reports on the characteristics of international cooperation in the Arctic region. Among their topics are natural resource management, development of marine nature management, interaction between Russia and Arctic countries in the Arctic, Asian countries’

interests in the Arctic, and development of the Roadmap for International Cooperation in the Arctic³.

Foreign publications have examined the development of the Arctic Council [21], climate change, the adaptation to it of natural, socio-economic systems, the transformation of cultural landscapes, the influence of the media on attitudes to climate change issues [22; 23; 24], and the choice of development trends in the Arctic beyond 2050 [25; 26]. Foreign economists and political scientists analyze the interest of extra-regional countries (especially China and Japan) in the Arctic and conclude that it is based on the desire to use mineral resources and maritime routes of the Arctic Ocean, especially the NSR [27; 28]. The relevance have the study of Canada’s experience in ensuring national security in the Far North [29; 30], the relationship between Norway and Russia in the context of maintaining maritime security in the Arctic [31], the application of the World Trade Organization tools for the regulation of shipping in the Arctic [32].

Results and discussion

In the years 2000–2020, Russia, Denmark⁴, Iceland [33], Norway⁵ [34], Finland⁶, Sweden⁷, and the United States of America⁸ and Canada⁹

³ International Cooperation in the Arctic: Project of the Russian International Affairs Council. Available at: <https://russiancouncil.ru/projects/regional/arctic/> (accessed: November 10, 2020).

⁴ Denmark, Greenland and the Faroe Islands: Kingdom of Denmark Strategy for the Arctic. 2011–2020, 58 p.

⁵ The Norwegian Government High North Strategy. Norwegian Ministry of Foreign Affairs, 2017. 76 p.

⁶ Finland’s Strategy for the Arctic Region: Government resolution, dated August 23, 2013. Prime Minister Office, 16/2013. 70 p.

⁷ Sweden’s Strategy for the Arctic region. Government Office of Sweden. Ministry for Foreign Affairs. Department for Eastern Europe and Central Asia. Arctic Secretariat, Stockholm, Sweden, 2011. 52 p.

⁸ National Strategy for the Arctic Region. May 2013. USA, Washington D.C., 13 p.; United States Coast Guard. Arctic Strategy. May 2013. USA, Washington D.C. 48 p.

⁹ Canada’s Northern Strategy. Our North, Our Heritage, Our Future. Government of Canada, Ottawa, 2009. 48 p.

published and later updated (Norway was the first to do this) the strategies for the development of their national northern outlying regions and Arctic zones. The activity of states not only directly bordering the Arctic Ocean, but also lying much to the south of it (China, Japan, Germany, Great Britain, France, Switzerland, the Republic of Korea), and their associations (the communiqué “European Union and the Arctic Region”, 2008 and 2012; the activities of the Arctic Council) is dictated by objective factors: climate change, the shift of business activity to high latitudes due to the reduction of fuel reserves in traditional extraction sites, the desire (with limited own capabilities) to use the transport routes of the Arctic Ocean, attention to the problems of indigenous peoples.

Each Arctic strategy is unique, but all documents have socio-economic, geopolitical (including military-strategic) and geo-environmental aspects. All the northern countries (including Russia) see the Arctic space as a zone of peace and stability. Their strategies proclaim the need to strengthen sovereignty, support “people’s diplomacy” in the Barents region (Norway), and develop interaction on a multilateral basis and with the participation of Russia. The Arctic Council is especially emphasized as having no alternative for formulating policies for the sustainable development of the Arctic.

When organizing economic activities in the Arctic, most countries (including Russia) proceed from the principles of the UN Convention on the Law of the Sea (1982). Its provisions are used for delimitation of water areas of the World Ocean, organization of navigation. At the same time there are discrepancies in the application of the documents. Disputes become more acute where mineral and biological resources are available and strategic maritime routes pass. The United States has not yet ratified the 1982 Convention and claims to act unilaterally in the Arctic, regardless

of borders. Some countries interested in developing transport links between the North European and Asia-Pacific regions are ready to declare the NSR, Russia’s national Arctic transportation route, and the Northwest Passage, much of which runs along the Canadian coast, as international waters.

Foreign strategies emphasize natural resource management in the Far North: the precautionary approach, EIA procedures based on stricter environmental management standards than in the southern regions, environmentally safe use of energy resources consistent with the norms of international law, development of tourism and alternative energy. These points are important because the Nordic countries were at the forefront of the Arctic environmental protection and sustainable development concepts in 1992, the establishment of the Barents Euro-Arctic Council in 1993, the Arctic Council in 1996, and the EU’s Northern Dimension institutions in 1997. These organizations develop and implement policies in the Arctic, concentrating common technological, research and financial resources. Their activities contribute to the successful search for answers to socio-economic, geo-environmental, international-legal, geopolitical challenges of Arctic development.

The strategies justify the need to develop competencies and technologies, expedition activities, academic and research mobility, and filling the portal of the Arctic Information and Statistical Center with relevant content. For this purpose, the northern states cooperate within the framework of the EU programs, the International Association of Arctic Social Sciences, the International Arctic Science Committee, thematic networks of the University of the Arctic, which unite scientists on the problems of studying the Arctic region. The Arctic countries participate in the creation of the Report on the Quality of Human Life, Trends in Socio-Economic Systems, and Scientific Research in the Arctic. R&D underpins

high living standards, a safe and comfortable environment, government and corporate innovation and technological policy, and, as a result, the high competitiveness of the economies of the Nordic countries. Such experience in the formation of innovative economy in the northern regions with the support of scientific research is of interest for the Russian Arctic regions.

In the Danish and Canadian strategies, the imperative is the preservation of state integrity and socio-economic development (including through direct subsidies to the local population) of Greenland and the Far North territories respectively.

The composition of the land territories of the Arctic zone of the Russian Federation is defined by the Presidential Decrees of Russia in 2014 (May 2, 2014, no. 296), expanded by the Decrees of 2017 (June 27, 2017, no. 287) and 2019 (May 13, 2019, no. 220), as well as the Federal law no. 193–FZ, dated July 13, 2020¹⁰. The main documents defining the state policy in the Arctic are the Principles of state policy of the Russian Federation in the Arctic through to 2035¹¹ and the Strategy for development of the Arctic Zone of the Russian Federation and national security for the period through to 2035¹². One of the tasks is to “strengthen good-neighborly relations with the Arctic states on a bilateral basis and within the framework of multilateral regional cooperation formats including the Arctic Council, the coastal Arctic Five and the Barents Euro-Arctic Council, increasing international economic,

scientific, technological, cultural and cross-border cooperation, as well as interaction in the field of global climate change research, environmental protection and effective development of natural resources in compliance with high environmental standards”, in particular, “development and implementation of programs of economic and humanitarian cooperation of the subjects of the Russian Federation, the territories of which belong to the land territories of the Arctic zone, with the regions of the Arctic states”, “development of general principles of implementation in the Arctic zone of investment projects with the participation of foreign capital”, “promoting the importance of the Arctic Economic Council as one of the central forums for the sustainable development of the Arctic”. The importance of international cooperation and the study of experience for the sustainable development of territories in the Arctic zone of Russia is relevant for reasons of particularly harsh (compared to the rest of the Arctic) natural and climatic conditions, spatial extension, and the orientation of the local economy on the central regions of the country.

The Norwegian Arctic strategy is considered the most elaborated of all foreign analogues; it fully promotes the ideas of “presence” and socio-economic growth of northern territories, aimed at the exchange of relevant information with partners, especially with Russia. Comprehensive measures of state support, reliance on R&D, active international cooperation in various forms help to improve profitability, efficiency and safety in the development of hydrocarbon deposits on the continental shelf of the Arctic Ocean, taking into account some of the highest environmental quality standards in the world. In the 1970s, for the purpose of sustainable socio-economic development of the Northern territories, Norway created a coastal infrastructure and began to modernize it; the country carries out scientific forecasting and

¹⁰ On state support for entrepreneurial activity in the Arctic Zone of the Russian Federation: Federal Law no. 193–FZ, dated July 13, 2020. Available at: http://www.consultant.ru/document/cons_doc_LAW_357078/ (accessed: October 15, 2020).

¹¹ Basic principles of Russian Federation state policy in the Arctic through to 2035: Presidential Decree no. 164, dated March 5, 2020. Available at: <http://www.kremlin.ru/acts/bank/45255> (accessed: May 5, 2020).

¹² Strategy for developing the Russian Arctic Zone and ensuring national security through to 2035: Presidential Decree no. 645, dated October 26, 2020. Available at: <http://www.kremlin.ru/acts/bank/45972> (accessed: November 5, 2020).

management of personnel needs, provides tax and customs incentives for environmentally oriented projects, and develops transport, logistics and energy infrastructure at the state level [35]. While Norway has integrated the “northern” component into the country’s oil and gas management system, its closest neighbors, Finland and Sweden, coordinate their actions with the EU in the elaboration of socio-economic development directions for the northern territories within its regional policy and with the financial participation of the European Regional Development Fund, the Social Fund and the Cohesion Fund [36].

One of the factors in the development of Norwegian economic policy in the Arctic is the R&D management system. Thanks to this, it is possible to observe the development of technological and service infrastructure on the principles of cooperation and in the interests of the development of the northern territories [37]. The creation of R&D involves:

- *the state*: the parliament and the governments that determine the direction and amount of funding for research and technology policy of the country;
- *strategic institutions*, among which we can highlight the Norwegian Research Council (NFR), subordinated to the Ministry of Education and Science, acting in integration with state companies to support innovation (“Innovasjon Norge”), business and industry development (“Siva”) in the northern regions;
- *project-executive organizations, including universities*: NFR distributes state, corporate, and public funds on a competitive basis.

The Canadian Arctic Strategy also relies on R&D as a tool for technical, technological and information support of natural resource management. In the interests of innovative development of the northern regions, there is a network of research bases that implement scientific programs in the fields of Arctic shelf exploration,

development of transport infrastructure and navigation, improvement of the quality of life of local communities [38].

Analyzing the foreign experience of the development of northern territories through the prism of international cooperation, we note: one of the tools of regional policy is the internationalization of economic activity. It boils down to two main approaches:

1. The “open door” policy. According to the foreign experience of developing sites located in areas with extreme natural and climatic conditions, it can be argued that almost everywhere in these areas raw material production began within a few decades from the start of exploration. In Norway, in order to develop the largest field discovered in 1984, Snohvit, with natural gas reserves of 10.6 bil. cub. m and about 20 mil. t of hydrocarbons (which is 24 times less than the gas reserves of Shtokman GCF) involved the companies Statoil, PetoroSA, Total EP Norge, Gaz de France [39]. Created alliances include operators with a good reputation, scientific support, technological means and financial resources to work in extreme conditions. “A peculiarity of the organizational structure of the global oil and gas sector is the high role of small companies at the initial and final stages of exploration and development of resource provinces. However, the Russian reality rejects this rather general pattern” [40, p. 112]. The Norwegian experience shows that access of foreign companies to field development can help to solve technological, economic and social problems of peripheral territories. At the same time, receiving technologies and competencies in a ready-made form, “from the outside”, rather than preparing them “from within”, can have a negative impact on their own R&D, contributing to the intellectual and technological degradation of national scientific schools and developers of finished products.

Denmark also adheres to the principles of cooperation, supporting, for example, China's participation in solving the problems of the Arctic. The development of trade between these countries has grown into a partnership, the reduction of the Greenland ice sheet allows Denmark and China to jointly mine rare-earth metals. By becoming an investor in a mining project at the local Isua iron-ore deposit, the Chinese corporation SichanXinueMining is helping to attract new companies (JiangxiZhongrunMining, JiangxiUnionMining) [41].

Geopolitical partnerships in equal measure with internal measures to support economic entities allow leveling the factors of “northern appreciation”. States have legislated and successfully implemented a set of mechanisms and tools to support investment projects, based on the formation of a regulatory framework governing the development of Arctic projects. In Russia in 2020, there was adopted a federal law regulating entrepreneurial activity in the Arctic zone of the Russian Federation¹³. Regulatory measures of the state are aimed at clarification of the resident status, the procedure of acquisition and termination of such status. The law establishes conditions of conclusion (and termination) of the agreement on investment activity, realization of the state and municipal control (supervision), rules of leasing land plots and real estate located on them, privileges on taxation, compensation of a part of expenses on payment of insurance premiums. The law stipulates that in applying the procedure of a free customs zone, the Arctic zone of the Russian Federation is equated with a special economic zone.

In 2011–2013, Russian companies signed agreements providing for 100% financing of exploration by foreign partners, who received 33.3%

¹³ On state support for entrepreneurial activity in the Arctic Zone of the Russian Federation: Federal Law no. 193–FZ, dated July 13, 2020. Available at: http://www.consultant.ru/document/cons_doc_LAW_357078/ (accessed: October 15, 2020).

stakes in joint ventures. Statoil, ENI and Rosneft plan to explore and develop the Fedynsky vault deposits. The agreement provides for the development of natural gas and oil within the boundaries of the Perseevsky plot in the Barents Sea, as well as deposits in the Norwegian waters. Total and Novatek are working to develop the Yuzhno-Tambeyskoye gas condensate field on the Yamal Peninsula. Total plans to participate in the development of the Khvalynsky gas condensate field. In 2012–2013, alliances between Rosneft, BP, Exxon Mobil and General Electric were created for exploration of areas in the Kara Sea with reserves of about 4.9 bil. t of oil and 8.3 trillion cub. m of gas.

Despite the achieved successes, economic and technological cooperation in the Russian Arctic is hampered by sanctions imposed by Western states. Although the consequences of the sanctions policy are of practical interest to many countries, these issues have not yet been sufficiently studied. We should add that before 2014, Norway unilaterally and in violation of the 1920 Svalbard Treaty imposed restrictions on access of Russian companies to the archipelago (the Russian Research Center operates here), use of local aquatic biological resources, and reduced cooperation in the development of hydrocarbon fields.

2. Restrictive policies. The economic development of the Arctic implies intensive use of its resources. Acting in extreme natural and economic conditions, with minimal size of local economies, the Arctic states create conditions for attracting private companies – subcontractors and investments (including foreign ones) to work [39]. However, as far back as the mid-1960s, a well-known northern scientist G.A. Agranat, referring to the Canadian experience of developing natural resources, pointed out that “serious shifts in their development became possible due to the turn in the last two or three decades of economic policy from private “free enterprise” on a market basis to a system in which the state plays a huge role.

Only the state is capable of mastering the North which requires a very broad political and economic approach" [42, p. 82]. Further, "private firms ... may not be able to undertake some of the resource development work to the extent that society needs it". "Private firms take into account only the returns on investments they will make within a few years. On the other hand, the state may consider the benefits of projects decades later" [42, p. 82]. Similar conclusions are drawn with regard to attracting investment for the development of mineral resources in Alaska and Greenland [42, p. 84].

In Russia, the admission of private companies to work on the continental shelf is currently deprived of a legislative basis. In order to fulfill the tasks in the sphere of economic development, the Arctic strategy provides for "the creation and development of a new model for the implementation of economic projects on the continental shelf, providing for the increased participation of private investors in such projects, while the state retains control over their implementation"¹⁴.

Participation of foreign companies in the development of mineral resources is regulated by Federal law no. 58, dated April 29, 2008 which excludes independent activities of foreign companies in subsurface areas of federal significance including those on the continental shelf. Their joint activities with companies in which the state owns at least 50% are allowed (Article 9)¹⁵. In accordance

¹⁴ Strategy of development of the Arctic Zone of the Russian Federation and the provision of national security through to 2035: Presidential decree no. 645, dated October 26, 2020. Available at: <http://www.kremlin.ru/acts/bank/45972> (accessed: November 5, 2020).

¹⁵ On amending certain legislative acts of the Russian federation and declaring invalidated certain provisions of legislative acts of the Russian federation in connection with adoption of the Federal law on the procedure for making foreign investments into economic companies which are of strategic importance for ensuring the country's defense capacity and state security: Federal law no. 58, dated April 29, 2008. Available at: <http://base.garant.ru/> (accessed: April 12, 2019).

with the Federal law "On subsoil" (Article 9)¹⁶, subsoil users on subsoil areas of the continental shelf may be companies with state participation in capital exceeding 50%, with more than five years of experience in developing Russian offshore fields.

A topical area of international cooperation in the Arctic is environmental protection. Its relevance stems from the threats that arise in the Arctic against the backdrop of climate change (degradation of permafrost, land subsidence, the appearance of seeps in the Arctic Ocean seas, coastal abrasion, surface water and soil pollution by runoff and new chemicals), the need to preserve biodiversity, and the continuing demand for hydrocarbon raw materials at the same time. The current period of international cooperation in the Arctic is characterized by a shift from private initiatives to the development of legally binding instruments and the establishment of collective assistance funds to improve operational cooperation and coordination between the parties to the agreements. Exploitation of mineral resources is combined with the adoption of laws and the establishment of indigenous community development assistance funds (particularly in Alaska and Canada). As practice shows, interstate relations in the Arctic in the field of development of extraction and processing of natural resources tend to be bilateral, while multilateral relations are built when solving the problems of harmonization of economic activities in the Arctic and preservation of environmental quality. The Arctic Council has signed agreements on cooperation in aviation and maritime search and rescue in the Arctic (Nuuk, 2011) and on preparedness for responding to oil pollution at sea in the Arctic (Kiruna, 2013).

The development of the Arctic shelf, maintaining a high share of hydrocarbons production in the Arctic in the total world production (over 30%),

¹⁶ "On subsoils": Federal law no. 2395-1, dated February 21, 1992. Available at: <http://base.garant.ru/>. (accessed: May 3, 2019).

care about the environment require the states to use innovative technologies, modernize infrastructure, including ports, adoption and implementation of organizational and managerial (personnel, marketing) decisions, taking into account environmental standards. Coordinated action and respect for national interests can ensure sustainable development throughout the Arctic. The current institutional and legal framework for the Arctic conditions, based on the interaction of governments alone, is often unsuitable, so new levers for socio-economic development must be sought. It seems that public-private and other types of partnerships (“business-universities”, “government-corporations-aborigines”, “corporations-aborigines”, and “military-civilian”) can be the most effective of them. Through partnerships, interested countries can gain access to new models of management and technology both in the field of extraction of minerals and fuels, and in the field of emergency response, development and implementation of environmentally friendly technologies [43].

Modern problems of the Russian Arctic development are associated with the peculiarities of development management of the vast region, as well as the forms of regulation of natural resource extraction, as the resource specialization of the Arctic zone land territories of the Russian Federation is dominant. Despite the fact that at present the strategic management of the Russian Arctic zone development is based on a set of scenario development options, the objectives and goals of sustainable development are not achieved, there is a delay in the implementation of large-scale investment projects (megaprojects).

It seems necessary to improve legislation on subsoil use, to strengthen control over the environmental expertise of each megaproject, and to link it with the tools of territorial development.

Speaking about the problems of the Arctic environment, we should emphasize that the region’s

economic development cannot be implemented without taking into account the foreign policy context. It is necessary to add the environmental component to the existing set of problems of Russia’s Arctic development with an assessment of the scale of environmental pollution and its impact on the ethnogenetic diversity of the Far North. The scenarios of economic development of the northern territories are influenced by the forecasting of risks associated with natural changes. In the Arctic, the mechanisms and prospects of international cooperation make it possible to speak of a successful attempt to form an environmentally responsible model of management. The environmental aspect in the partnership of the Arctic countries will make it possible not only to introduce common environmental requirements into the system of international standards, but also to create comfortable economic conditions for all the countries concerned by soft power.

Analysis of the experience of interaction among the Arctic states shows that Arctic infrastructure is not sufficient to meet the current needs of society, social services, or to help assess threats in the field of Arctic emergencies, the consequences of which may be difficult to predict. One tool that may be of interest, particularly to Russia and the USA, in organizing navigation in the Bering Strait and in connection with the growing potential risks of oil spills, is the Environmental Response Management Application (ERMA)¹⁷. The system was “developed by the National Oceanic and Atmospheric Administration (NOAA) in conjunction with the University of New Hampshire and is used by USA federal agencies to deal with environmental disasters. This creates an operational picture of all available response sites at risk”¹⁸. The platform

¹⁷ Russia and the United States held exercises and a joint workshop on optimizing the response to oil spills in the Bering Sea. Available at: <https://neftegaz.ru/news/ecology/197178> (accessed: October 10, 2020).

¹⁸ *Ibidem*.

collects abiotic and biotic data necessary for effective response to emergencies in the Arctic, including information on ice conditions, locations of ports and other infrastructure, environmentally sensitive areas and key habitats. Through technical means, the platform provides visualization and improves information interaction between emergency responders and regulatory agencies.

In the international practice there is an increase (in comparison with the period of 20–30 years ago) of activity on providing the universal regime of environmental protection. This regime is the general purpose of realization of project researches, interdisciplinary scientific development and observations in Polar Regions of the Earth and assumes improvement of personnel protection and observance of ecological safety, first of all in development of hydrocarbon deposits and their transportation. In support of such projects, international exercises on oil spill search and emergency response are conducted annually.

Conclusion

At present the Arctic countries, as well as the entire global community, are facing the priority goal

of strengthening comprehensive security and strategic stability in the unique Arctic region through the interaction of all interested (non-military) structures. We should note that given the current dynamic processes in the world which influence the technological capabilities of the Arctic development, there is no universal agreement establishing its international legal regime. This approach lies in the plane of international legal relations, is relevant for the Arctic region, and makes it possible to solve the problems arising in the relations between the Arctic countries and move toward sustainable socio-economic development of the world Arctic.

The further direction of the scientific search may be related to the construction of models for the future development of international cooperation in the Arctic region in the interests of efficient nature management and population safety. Studying the experience of the development of foreign areas of the Far North, in particular, and especially Norway as one of the few countries that conduct active economic activities in the Arctic region, can be useful in the development of the Arctic territories of the Russian Federation.

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Received July 27, 2020.