

Sustainable Development of the Russian Arctic Zone: Challenges & Opportunities

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This paper attempts to consider a fundamental problem of ensuring sustainable development of the Arctic zone of the Russian Federation in the context of expanding economic activity. In August 2017, the new edition of the Russian state program on the Arctic's socio-economic development was released. At present, this is the main document regarding the development of the Arctic territories of Russia. The main idea of this document and the future law "On the Arctic Zone of the Russian Federation" is to create support zones, which will be complex projects of social and economic development of the Arctic territories where the Northern Sea Route will become the main navigable artery and the central project. According to the state program, one of the main tasks of the support zones is the use of best practices for creating favorable living conditions for the residents. This paper will examine the Russian Arctic's challenges and opportunities regarding sustainable development, including an analysis of the recent Russian plans in relation to the territorial development.

Introduction

The 1992 Summit in Rio de Janeiro, following the Brundtland Commission, recognized the so-called sustainable development "that meets the needs of the present, without compromising the ability of future generations to meet their own needs" (WCED, 1987). Since then, the concept of sustainable development has acquired global significance. It is a fundamental problem of our time. This concept is indeed applicable to such an essential region as the Arctic. Since its foundation in 1996, the Arctic Council has aimed to integrate sustainable development to the main areas of its activities. The forum unites the efforts of the eight member states to solve the challenges of the Arctic region to improve the economic, social and environmental well-being of the ecosystems and peoples living in the area. Therefore, the sustainable development of the Arctic is a global objective and requires the establishment of international cooperation.

Finland's Chairmanship platform in the Arctic Council states that "the human dimension of the Arctic Council's work covers such areas as health, water, energy, infrastructure, and Indigenous

cultures and languages, and thus contributes to the implementation of the Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda. Finland proposes to explore how the SDGs can be further used in strengthening the economic and social progress and cultural self-expression of Arctic communities” (High North News, 2017). Meanwhile, the current global warming has economic consequences which could be beneficial for the Arctic states. A recent launch of industrial development in the Arctic shows the growing interest toward transport and energy opportunities in the region. Economic indicators are increasing, however the growth of industry could lead to a high degree of negative impacts on the environment and residents.

The concept of the Russian Federation’s transition to sustainable development was released in 1996. Since the 2000s, there has not been a single document approved by Russia in the title of which there was a reference to “sustainable development.” It is especially interesting because Russia has declared a new stage of Arctic development. The new edition of the state program of 2014 “Socio-economic development of the Arctic zone of the Russian Federation for the period until 2025”¹ (State Program) was published in August 2017. The updated State Program outlines the country’s major plans for the Arctic territories, and sets out complex projects for the social and economic development of the region.

Economic Development of the Russian Arctic

The Arctic has always been a reserve of natural resources for Russia. Since the 1930s, during the Second World War and then the Cold War, in connection with the international situation, the country’s economy began to need natural resources badly. So in the 1920’s and 1930’s in the USSR, a program of government events was organized to study and develop the so-called Far North. The Soviet Union was eager to discover the resources of the rich Arctic quickly. There were issued orders for the construction of mines, power plants and factories near the Arctic deposits. Soviet development of the Arctic was intensive, large-scaled and based on free labor. In 1931, the first oil field in the Russian Arctic, Chibyskoye, was discovered in the Komi Republic. In 1932, the Main Directorate of the Northern Sea Route (Glavsevmorput) was created by the Council of People’s Commissars of the USSR. The new directorate was entrusted with the economic development of the Arctic and navigation on the Northern Sea Route (NSR), as well as the organization of geological work, and exploration of minerals in the Arctic. The first head of the Glavsevmorput, Otto Schmidt, was appointed a polar explorer, who in the same year made passage on the NSR on the icebreaker “Sibiryakov” for the first time in one navigation, of 65 days. In 1937 the first flight over the North Pole was made, and the first drifting scientific station “North Pole” was settled. In total, 31 drifting stations were organized in the USSR, and they functioned until 1991. The program relaunched in 2003. In the 1930s Arctic seaports (Igarka (1931), Tiksi (1933), Dixon (1934), Dudinka (1935)), cities and new settlements were constructed. The USSR used prisoners of the Gulag as free labor. Thus, the prisoners built such Arctic cities as Dudinka, Vorkuta, Inta, Pechora as well as such industrial enterprises as the Norilsk Mining and Metallurgical Combine in 1935 and the Kapitalnaya mine in Vorkuta in 1937 and so on. In the second half of the 20th century, the most abundant hydrocarbon deposits were found. In the 1960’s and 1970’s they were discovered on the coastal territory—Urengoy (1966), Yamburg (1969), Bovanenkovo (1971), etc., in the 1980s hydrocarbons were found on the Arctic shelf—Shtokmanovskoe (1988), Prirazlomnoye (1989), etc. As a result, during the period from

the 1920s to the 1980s, the Soviet Arctic has become a circumpolar region with the most significant number of cities in the world.

Today, the Arctic region is one of the priority directions of Russia's internal policy, including social and economic development as well as international cooperation. However, the legal status of the Russian Arctic zone and its borders are not yet defined precisely. The framework law on the Arctic zone in the USSR and then in the Russian Federation was not released despite attempts to accept it. Today legal relations in the Russian Arctic are regulated by more than 500 documents (Ministry for the Development of the Russian Far East, 2017, October 10). A draft law "On the Arctic Zone of the Russian Federation" has been in progress for five years, and its consideration is continuously postponed. However, it may be submitted to the government in 2018.

Today, Russia's Arctic strategy is determined by three documents: Fundamentals of the State Policy of the Russian Federation in the Arctic for the period up to 2020 and beyond (2008); The Strategy of the Arctic zone of the Russian Federation development and national security system for the period till 2020 (2013); The new edition of 2017 of the state program of "Socio-economic Development of the Arctic Zone of the Russian Federation for the period till 2025" (2014).

In Russia, the concept of "sustainable development" is interpreted differently. There is no comprehensive understanding of all aspects of sustainable development. For example, in the State Program on the Arctic, the word "sustainable" is used 16 times on 140 pages of text. Five times the phrase "sustainable development" is used in different contexts: "sustainable development of the nuclear weapons complex," "sustainable development of indigenous peoples," "sustainable development of related industries," "sustainable development goals and human well-being," "sustainable development of regional ecosystems." Thus, the State Program on the Arctic does not define what is meant by the term "sustainable development." The authors of the State Program either did not set the task of articulating the principles of "sustainable development" or there is no clear understanding of what "sustainable development" is. At the same time, the authors consider this term to be applicable in completely different contexts. However, in the Russian terminology the closest term to "sustainable development" is usually the term "socio-economic development."

The main idea of the State Program is a creation of so-called support zones – comprehensive social and economic development projects aimed at achieving strategic interests and ensuring national security. There are eight support zones identified based on the existing administrative-territorial division of the Russian Arctic zone (Government of the Russian Federation, 2017, August 31). It is interesting that Russian regions work out these support zones, not federal authorities. Articles of the State Program about the support zones will be included in the future law "On the Arctic zone of the Russian Federation." As of now the State Program can be considered as the primary document reflecting Russian plans in the Arctic zone.

Here are the different zones and possible economic development as planned by the State Program:

Kola support zone: the mining industry (more than 60 large deposits of various types of mineral raw materials, including apatite, nepheline, kyanite ore, nickel, copper), fishing, tourism, the

central logistics hub to supply the entire western part of the Russian Arctic (ports Murmansk, Kandalaksha, Vitino, railway), the Northern Fleet;

Arkhangelsk support zone: timber industry, shipbuilding, fishing, diamond mining complex, natural resources (lead, zinc, silver), railway, it is planned to create a port complex in Bezymyannaya Bay;

Nenets support zone: hydrocarbon production (Timan-Pechora oil and gas province), construction of the Northern Latitudinal Railway, the Naryan-Mar-Usinsk road, railway transport corridors (Belkomur, Barentskomur, Sosnogorsk-Indiga), development of ports in Amderma and Indiga, reconstruction of Naryan-Mar airport;

Vorkuta support zone (Komi Republic): coal mining industry, construction of the Vorkuta-Ust-Kara railway, the Pechora-Vorkuta road which will connect the Komi Republic with the Nenets Autonomous District, construction of the Northern Latitudinal Railway, tourism;

Yamal-Nenetsky support zone: formation of the oil and gas chemical cluster will provide more than one third of the country's gas production (the Yamal Peninsula and Gydan, the shelf areas of the Kara Sea, the Ob and Taz Bay), construction of the Obskaya-Bovanenkovo railway, the Yamal-Ukhta-Europe gas main, a plant for the production of liquefied gas at the South-Tambeyskoye gas field;

Taymyr-Turukhanskaya support zone (Krasnoyarsk region): Norilsk industrial region (nickel, copper, platinum, cobalt), Dudinka Port, in 10–20 years will be coal and hydrocarbons, a coal terminal in the port of Dixon, road construction, modernization of the port Dixon, construction of the Tanalau offshore oil terminal;

Chukotka support zone: mining industry (gold, tin, tungsten, coal, copper, mercury, hydrocarbons), construction of the federal road Kolyma-Anadyr which will provide year-round communication with other regions of the Russian Far East;

North-Yakutian support zone: It must be emphasized that the North-Yakutian support zone is chosen as a pilot project according to the State Program. So far, there is no information on the launch of the project, possibly due to the lack of a law “On the Arctic Zone of the Russian Federation.” The first project of the North-Yakutian support zone is the reconstruction of the seaport infrastructure of the NSR in the village of Tiksi, which will ensure the safe entry into the port of sea-going ships with a draft of up to 10 meters (now only 5 meters), to bring the volume of cargo processing to 300,000 tons per year (Ministry for the Development of the Russian Far East, 2017, December 7). Yakutia can be a “bridge” between Asia and the Arctic. One of the main tasks will be the development of the eastern sector of the NSR, including within the framework of the China-Yakutsk-Tiksi-Europe Transport Corridor Project. It will cut the way from Asia to Europe, reducing the risk of falling into a complicated ice situation, which often exists at the exit from the Bering Strait to the Arctic Ocean. Logistics, according to this transport corridor, are as follows: the goods are delivered by rail from Harbin to Yakutsk, then they stow a cargo to river vessels and go to the port of Tiksi, then they stow the cargo to sea vessels and deliver them to European ports. The second project is a construction of a high-tech Zhataisk Shipyard, which is estimated at 5.75 billion rubles, while 4.1 billion rubles will come from the federal budget as part of the State Program. There will be the modernization of the fleet and construction of ships in Yakutia which will provide cargo transportation by inland waterways. It

will create about 1,300 new jobs (*ibid.*). Also, the following projects are planned: infrastructure development projects – reconstruction of airports, construction of roads, modernization of diesel power stations; projects of industrial development of the deposits of gold, diamonds, tin, coal, antimony, tungsten, indium, etc. It is said about investment projects for the development of the Upper-Munsky ore field, the placer deposit of the river Tirekhtyakh, about the geological study and development of the Western Anabar section, the Tomtor deposit of rare earth metals. Besides, in Yakutia, there are 80% of the world stock of mammoth tusks and the Popigaysky deposit of impact diamonds. The North-Yakutian support zone's strategy is not completed yet. It will still change. At least, the Yakutian government is planning such.

Thus, industrial development is the cornerstone of Russia's Arctic strategy. The primary task of creating the support zones is the exploitation of mineral resources. According to the State Program, “almost two thirds of all projects are directly related to the development of the mineral resource base” (Government of the Russian Federation, 2017, August 31). Mineral raw centers with their infrastructure will be developed within the support zones. The most significant projects are the seaport of Sabetta on the Kara Sea in the Yamal-Nenets Autonomous District, which already began operating in December 2017, and is expected to become the most significant logistics hub of the NSR. One of the essential parts of this hub must be the Northern Latitudinal Railway (707 km), which will connect for the first time the Trans-Siberian Railway with the Northern Sea Route. It should be noted that this is a project of Soviet designers of Stalin's time. The completion of the railway construction launched in May 2018 is planned by 2022. The project also has a social significance: about 300,000 new jobs can be created in the Arctic and the Urals. Another important project in Sabetta is the Yamal liquefied natural gas (Yamal-LNG) plant which opened in December 2017.

The Northern Sea Route will become the most significant project. It should unite all the subjects of the Russian Federation that participate in the development of the Arctic because “the formation and functioning of the support zones are planned to be carried out in close connection with the Northern Sea Route” (*ibid.*). By 2021, Russia plans to build three new nuclear icebreakers of Project 22220. The main icebreaker “Arctic” will float out in 2019, “Siberia” in 2020, and “Ural” in 2021. Russia does not limit the passage of foreign ships on the NSR, but starting in 2017 the right to transport hydrocarbons remains exclusively for Russian vessels (Government of the Russian Federation, 2017, December 26). As Vladimir Putin said in the message from the President to the Federal Assembly of the Russian Federation, by 2025 the cargo traffic on the Northern Sea Route should grow by ten times – up to 80 million tons per year (Ministry for the Development of the Russian Far East, 2018, March 1). In March 2017, the government was instructed to work out the issues of creating a separate institution who will be responsible for the integrated development of the Northern Sea Route and Arctic territories, including the development of infrastructure and all the services required. At the moment, there is no special ministry responsible for the Development of the North and the Arctic in Russia. The leadership over Arctic issues at different times has been exercised by the Ministry of Economic Development and the Ministry of Natural Resources and Environment. However, the creation of a new ministry would require much effort and money, therefore it is uncertain when this will happen. Last year, it was announced that a decision has been made to entrust the Arctic to the Rosatom Corporation, whose structure includes Atomflot with its icebreakers. Rosatom might soon gain control over the development of the NSR and the coastal areas of the Arctic.

Moreover, a separate section of the State Program on the Arctic prescribes plans for the development of the Russian Far East, which includes two Arctic regions – Yakutia and Chukotka. This combination is not accidental. After the presidential elections in 2018, Yuri Trutnev was appointed as Deputy Prime Minister of Russia responsible for both regions development—the Russian Far East and the Arctic. He was previously responsible for the development only of the Far East. In September 2018, Trutnev also headed the State Commission for Arctic Development. In connection with his appointment, we can assume that not only the Far East but also the Arctic will become a megaproject of Russia.

The State Program emphasized that public-private partnership must be a relevant tool for implementing the social and economic development of the Russian Arctic zone. The mechanism of public-private partnership was used in such megaprojects as the APEC meeting 2012 in Vladivostok, the Olympic Games 2014 in Sochi, and the FIFA World Cup Russia 2018; now the same development tool is being introduced for the development of the Russian Far East with the Arctic. The Far East is a priority, and the Arctic has an applied significance. The Ministry of Economy of the Russian Federation does not single out the Arctic in a separate macro-region in the draft of the Strategy of Spatial Development of the Russian Federation for the period until 2025. In this strategy, the Arctic zone of the Russian Federation is distributed among four macroregions - the North, North-West, West-Siberia and Far East. However, in the development of the Far East, the situation is unusual, because Russia is oriented towards foreign investors, primarily Asian ones. Russia's "Turn to the East"² (from 2013) as well as Western sanctions³ (since 2014) predetermined the development of Russia's international cooperation with the countries of Northeast Asia – China, Japan and South Korea. In turn, the interest of Asian countries in the NSR is enormous. Their main attention is paid to the development of the transit possibilities of the Arctic. In this case, the Far East can become an outpost of Russia's Arctic strategy in relations with Northeast Asia. To develop the Far East, Russia should take in consideration the wishes of these countries. Western sanctions on Russia have become an obstacle to possible investment projects, including the Arctic. At the same time, a possibility of cooperation with Russia remains, in the case of interest from the Western partners. Strong examples of this can be the participation of the French Total in the Yamal-LNG project or gold mining in Chukotka by the Canadian company Kinross Gold. Russia is open to collaborating with any potential partner, but the problem lies in excessive bureaucracy and the lack of a unified mechanism. The idea for a "one-window" mechanism is proposed to solve these issues.

Environmental Damage

Of course, there is a constant alarm about the environment in connection with the socio-economic development of the Arctic. The State Program occasionally mentions environmental problems. The list of tasks of the State Program declares that it is necessary to strengthen the coordination of activities of state authorities to "preserve and protect the Arctic environment, eliminate the environmental consequences of economic activity; improve environmental monitoring of the Arctic zone of the Russian Federation" (Government of the Russian Federation, 2014: 34). The basic principles and mechanisms for the implementation of the State Program are based on "maximum environmental conservation (application of the environmental standards and technologies)" (ibid: 35). In 2021-2023 in the list of main activities of the State Program, the construction of an environmental fleet is planned to ensure federal-state

environmental supervision in the seas and on the continental shelf in the Arctic zone of the Russian Federation (*ibid*: 104). However, in the State Program, there are no precise methods for combating environmental risks. At the same time, references to the other state program of “Environmental Protection for 2012–2020” were made. This document includes two subprograms convenient to the Arctic zone: “Hydrometeorology and Environmental monitoring” and the project “Clean Country,” which provides measures to eliminate the accumulated environmental damage. Russia has recognized an accumulated environmental damage (industrial waste, nuclear waste, etc.) as a main environmental problem of the Arctic.

In the twentieth century, priorities of the Soviet policy on the Arctic were industrialization and development of the military-industrial complex. Consequences of the industrialization and the active use of the NSR have become detrimental to the environment. In the 1990s after the collapse of the USSR, the Arctic was hit by an economic crisis: the polar explorers began to leave the Arctic, leaving the infrastructure and waste behind (buildings, cars, unused fuel, spare parts, and building materials). Substantial multi-kilometer dumps originated around scientific stations, military units, settlements, ports. According to some estimates, in the coastal zone of the Arctic Ocean, there are up to 4 million tons of industrial and construction debris, as well as from 4 to 12 million steel barrels (Sokolov, 2013: 18). Also, the nuclear tests conducted at that time on the Novaya Zemlya Archipelago, and flooded nuclear submarines have had a negative impact on the ecology.

The problem of assessing and eliminating the accumulated environmental damage is present in the Arctic Strategy of Russia. Since 2010, as a result of the ex-Prime Minister’s indication, a cleaning of the Russian Arctic territories was launched. That year Vladimir Putin became aware of a massive amount of debris from rusted steel barrels with fuel during his visit to Franz Josef Land Archipelago, and he said that it was necessary to organize a “general cleaning” in the Arctic (Rossiyskaya Gazeta, 2010). The Ministry of Natural Resources and Environment of Russia together with the Council for the Study of Productive Forces has developed a draft program for eliminating sources of negative impacts on the contaminated areas of the islands for 2012–2020. According to the survey prepared by the Council for the Study of Productive Forces in 2011–2012, the total clean-up of Franz Josef Land alone will require about 8.5 billion rubles. Practical work on garbage disposal began in 2012 and went on in the summertime each year on the polar islands of the Barents Sea and the Arctic territories.

The Franz Josef Land is a pilot region of the “general cleaning” in the Russian Arctic – 44% of the accumulated damage has already been cleaned up (Lenta.ru, 2017). The Russian Geographical Society joined the cleaning of the Arctic in 2010. They have launched the “Arctic clean-up program” on the islands of the Franz Josef Land, Spitsbergen, Wrangel, and the Novosibirsk Islands. There is a national project “Clean Country,” which is reflected in the State Program on the Arctic. According to this project, the accumulated environmental damage will be eliminated in the Franz Josef Land Archipelago, oil pollution in the Kuznetsov water protection zone (Arkhangelsk region), and the tailing dumps of the Kular gold-extracting factory of the Ust-Yansky municipal district in Yakutia. In 2014, the military joined in cleaning up the Arctic. They exported collected garbage from the islands using the Northern and Pacific fleets, as well as other vessels that usually carry out deliveries of goods to the northern territories. Also, in Russia, there is a general federal target program in 2014–2025 “Elimination of accumulated

environmental damage”; of 218.7 billion rubles in funding, 22 billion rubles are allocated to the Arctic (Government of the Russian Federation, 2014).

However, this is not enough. It is impossible to cope with this large-scale task without the help of the international community. Russia is attracting volunteers and military personnel for cleaning up the Arctic because of a lack of funds for hiring workers. In addition to the financing problem, there are two more challenges related to the methods of cleaning. Many issues on the elimination of garbage are not legally regulated. In particular, the procedure for determining environmental damage has not been established. Moreover, the vulnerable Arctic ecosystem is disturbed during the collecting of debris. Therefore, there is a need to act more gently in particularly sensitive places.

Russia most fully addresses issues of environmental protection in the Arctic in its strategic documents (Fundamentals of the State Policy of the Russian Federation in the Arctic for the period up to 2020 and Beyond; The Strategy of the Arctic zone of the Russian Federation development and national security system for the period till 2020). Unfortunately, the Russian environmental legislation does not explicitly mention the Arctic zone. On one hand, mechanisms stipulated by the environmental legislation – federal laws “On Environmental Protection” (2002), “On Ecological Expertise” (1995), “On Specially Protected Natural Territories” (1995) – are potentially applicable to the protection of Arctic ecosystems. On the other hand, none of these documents takes into account the specifics of the natural and climatic conditions of the area and do not establish specific environmental requirements for economic activities in the Arctic zone. The same is in the federal laws “On the Continental Shelf of the Russian Federation” (1995) and “On Subsoil” (1992), where there is not a single norm devoted explicitly to the Arctic zone.

Gaps in the legal regulation on the protection of the Arctic environment in Russian legislation are one of the main topics of discussion. There are two points of view. Some believe that fundamental federal law is needed, the subject of legal regulation of which would be the protection of the environment of the Arctic zone of the Russian Federation (Gladun, 2015: 135). Others believe that the environmental protection mechanisms of the Arctic zone of the Russian Federation do not require the adoption of a particular law, it is mostly necessary to amend the already existing legislation to ensure their implementation (TASS, 2018).

One additional challenge is the lack of eco-friendly technologies or green technologies that are needed in the Arctic. The article 12 (6) in the Executive Order on the Russian Federation Economic Security Strategy until 2030 was released in 2017, and was almost unnoticed. This article states that the development of “green technologies” is one of the main challenges and poses threats to the economic security of the country (Government of the Russian Federation, 2017, May 13). So, Russia is not yet ready to use green technologies in the development of the territories. However, it contradicts Russia’s new guidelines, which were defined in the “May decrees” of Vladimir Putin in 2018. On May 7, 2018, a second “May decree” was published, defining a work plan for Putin’s fourth presidential term. The full title of the document is “On national goals and strategic development objectives of the Russian Federation for the period until 2024”. “May decrees” is the name of a series of decrees signed by Vladimir Putin. The first “May Decrees” were signed on May 7, 2012, on the day when the President of the Russian Federation assumed office, and contained 218 instructions in 11 decrees to the Government of

the Russian Federation for implementation during 2012-2020. “May decrees” mostly repeat the theses of Putin’s election promises. And ecology is identified as one of the national projects in “May decrees” for a six-year period until 2024. Among the goals of this project are: efficient handling and disposal of waste, reducing the level of atmospheric air pollution in industrial centers, improving the quality of drinking water for residents, and conservation of biological diversity. It is also planned to create 24 protected areas with an area of 5 million hectares (Government of the Russian Federation, 2018, May 7). But it will be in the future. To this day the Code of Administrative Offenses of the Russian Federation and the Criminal Code of the Russian Federation do not include special rules on liability for environmental pollution by economic and other activities in the Arctic zone despite the fact that the Russian Arctic Strategy stresses the need to increase the responsibility of enterprises that use natural resources in the Arctic.

Residents of the Russian Arctic

In connection with the plans for the development of the Arctic region, there is a need for specialized personnel to implement large-scale investment projects in the Russian Far North. Today, one of the most pressing challenges is the outflow of the Arctic population. The share of Russia’s population living in the Arctic zone is small - 1.6% (Fauzer, Lytkina & Smirnov, 2017: 22). The structure of the population of Russian Arctic territories includes groups of Indigenous small-numbered peoples of the North, medium-sized peoples such as the Yakut and Komi, settlers of the period of Soviet industrial development (20–80s of the 20th century), the descendants of the discoverers, and old Russian settlers. Also, rotation workers, scientists on expeditions and military personnel live there on a temporary basis. The population of the Russian Arctic is continually decreasing. In 1989 there were 3.3 million people; in 2016 - 2.3 million people (ibid). Cities with a population of more than 100 thousand inhabitants in different years include: Arkhangelsk, Murmansk, Severodvinsk, Norilsk, NovyUrengoy, Noyabrsk, and Vorkuta. The most urbanized regions of the Russian Arctic are the Murmansk Region and the Yamal-Nenets Autonomous District.

Small-numbered Indigenous peoples are native residents of the Russian Arctic. The peoples who have fewer than 50,000 individuals are named small-numbered Indigenous people in Russia. There are 40 such Indigenous peoples in Russia; according to the last census of 2010, they comprise only 257,900 people (Census, 2010). In the Russian Arctic, there are 19 small-numbered Indigenous peoples (Nenets, Chukchi, Khanty, Eveny, Evenki, Selkup, Sami, Eskimos, Dolgans, Chuvans, Chum, Nganasans, Yukagirs, Ents, Mansi, Veps, Koryaks, Itelmen, Kereks). The number of them is 82,500 people (Tishkov, 2016: 9–10).

In Russia, there are many Indigenous peoples’ issues, which challenge their traditional way of life. Among the main issues that can be noted: a low level and low quality of life; alcoholism; high mortality; unemployment and poverty; and a large number of Indigenous people who migrate to cities, and are assimilated. There are imperfections in legal and organizational mechanisms that would need to be addressed to ensure the development of self-government of Indigenous peoples. Some Indigenous communities are not legal entities. Therefore, they cannot count on financial and social support from the state. Since the 1990s, a new problem has been noticed: the reduction in the number of reindeer in personal and collective ownership. Reindeer

herding is considered to be the main branch of the traditional economy of the Indigenous peoples of Russia's Northern regions. The Northeast of Russia was the largest region of domestic reindeer breeding in the world. The most telling example is Chukotka because this region formed the basis of reindeer herding. For decades in the 20th century in the Chukotka Autonomous Region, the number of reindeer stably remained at the level of half a million heads, which could be considered "normal" for this region. Since 1991, the reduction of reindeer husbandry, caused by socio-economic reforms, began. The number of domestic reindeers in Chukotka decreased by five times so that in 2002, the total number of reindeer was 94,600 thousand heads. In many farms, reindeer herding was lost entirely. In 2015, the total number of reindeer was 185,000 heads. However, it continued to decrease again. In 2017, their number has decreased to 155,000 heads (EastRussia, 2017). There is a need to create conditions for the restoration of reindeer husbandry, livestock, and fisheries as the basis for social and economic security of the population, and the development of a traditional way of life.

Moreover, relations between reindeer-herding communities and extractive companies have become urgent. Sometimes the Indigenous communities have no place for their reindeer because of the lack of pasture which is occupied by the extraction of minerals in the traditional territories of nature use of the small-numbered Indigenous people. In this case, the procedure of ethnological expertise can be especially interesting. In 2010, the Republic of Sakha (Yakutia) released a law "On Ethnological Expertise in Traditional Living and Traditional Economic Activities of the Indigenous Peoples of the North of the Republic of Sakha (Yakutia)." There is no such law in any of the subjects of the Russian Federation, but such practice exists in the Yamal-Nenets autonomous okrugs, Khanty-Mansiysk autonomous okrugs and the Sakhalin region. Ethnological expertise in Yakutia must be carried out without fail. However, despite this condition, extractive companies continue to ignore the law of the Sakha Republic, citing the absence of federal law. At present, the process of discussing a federal draft law on ethnological expertise is underway; in March 2018 the first readings were held. Indigenous peoples have the right to enjoy benefits throughout the whole territory of Russia not only on their own territories where they live. The number of inhabitants in the settlements of Indigenous peoples is small. Such settlements in Russia are called "compact places of residence", and their maintenance is costly for the state budget. The discussion on keeping such settlements in the North is growing. There is even an offer to move people from one "compact place of residence" to another bigger one regional center to reduce the number of such small settlements and to consolidate into the bigger groups of population in the enlarge settlements in the Russian Arctic.

Among the challenges, the lack of human resources (rotation workers or residents) and a low level of living conditions in the Russian Arctic can be noted. The advantage of the rotation workers is the possibility to assemble a professional team in a short time. Also, the rotation workers are cheaper than settling new residents in the Arctic who would require a broad infrastructure for living. However, in the Russian Arctic, it would be optimal to involve the residents and develop their human potential, taking advantage of the infrastructure that has remained since the time of Soviet development. Russia has some unique residents having the experience of living in the Far North. Also, it needs to be emphasized that the survival experience of middle-numbered native peoples, such as the Yakut and Komi, is of particular value for the sustainable development of the Arctic region. For hundreds of years, they have been living in harsh northern conditions, and their numbers are increasing. So, in Yakutia in

1917 the Yakut had 224,960 people, growing to 365,236 people according to the 1989 census (Dyakonov, 1993), and up to 466,492 people in 2010 (Census, 2010).

Therefore, to involve the residents of the Arctic zone in the new socio-economic development, there needs to be tools to prepare them for such development and lead them to get the qualification for the professions that are in demand. Along with the labor resources for the development of natural resources (oil, gas, mineral resources), there is a need for professionals who can build buildings and roads in the Far North, work in energy, transport, health, education, and commerce. In 2017, the ex-Chairman of the State Commission for Arctic Development Dmitry Rogozin said that it was planned to develop a federal target program for training personnel to work in the Arctic. Besides, the conditions for attracting labor resources to the Arctic will be proposed in the future law “On the Arctic Zone of the Russian Federation.”

However, the reality is that the residents often cannot find a job, and unemployment is growing. One of the most urgent is the problem of poverty in the northern settlements. For example, in Yakutia, where there will be implemented a pilot project of the North-Yakutian support zone, the unemployment rate in the Arctic regions exceeds the average republican figure, and in some areas, it reaches 37% (Kondratyeva, 2014: 24). It so happens that the northern residents are mainly engaged in the public sphere: health care, education, social services, state and municipal management. The sphere of business, where the northerners could find a job, is not developed. Therefore, in the absence of a sufficient number of vacancies in many northern settlements, a significant proportion of people of working age are unemployed. Also, there is a problem within the framework of the “center-periphery” model, which leads to an increase in hidden unemployment and the emergence of a class of “newly unemployed” in the cities (Gavrilyeva, 2016: 26). In modern Russia, the concepts of “center” and “periphery” have become truly common. There are differences in the levels of the economic and social life of the population of large cities and citizens living in the rest of the country (more than 80% of all Russians) who often feel themselves to be on the outskirts of the “centers” of political, financial, cultural and other activities. Firstly, there is the difference of interests and political decisions of the “center” from the pressing problems of the “periphery”; secondly, there is the belief of the “periphery” that it is impossible to influence “central” interests and decisions. These phenomena are also manifested in the sphere of state administration, where the “center” means the federal bodies of legislative, executive and judicial power, and the “periphery” is the corresponding bodies of the subjects of the Russian Federation (Leksin, 2013: 60). An additional point to emphasize is that such a vertical executive power structure makes it difficult to attract foreign investment in the Russian Federation.

Attracting new residents to the Arctic is one of the challenges of the State Program. Since Soviet times there have been special programs, for example, northern surcharges (incomes) in the salaries of residents, which are considered the primary tool for attracting the population. However, under the current legislation, the northern surcharges for newcomers is accumulated in full only after five years of professional experience in the Far North. There is an opinion that it is necessary to revise this rule and to give the northern surcharges entirely immediately after the person has moved to the Arctic.

Besides, since the 1990s the northern surcharges are now not so high than they were under the USSR. Therefore, if in Soviet times the salary of a northerner was ten times higher than the

national average: now it is impossible. Today the air tickets are more expensive. It was suggested that the Russian government revise the northern surcharges exclusively in the direction of increasing them. So, in 2018 it was announced that salaries would rise in the Arctic regions of the country. In addition, the attractiveness of work and living in the Arctic zone needs to increase. For example, the development of the Northern Sea Route is essential not only for industry, but for residents too. During the Soviet period, regular supplies of so-called northern deliveries made through the Northern Sea Route, are impossible to fill today. The old port system of the NSR does not allow the use of infrastructure for these purposes. Almost annually the deadlines for the importation of essential goods, fuel, and food are broken. However, in the light of the future social and economic development of the Arctic zone of the Russian Federation, there is hope for restoring the northern infrastructure and creating an attractive image of the region.

Conclusion

The primary challenge for both social and economic development of Russia's Arctic zone is an outflow of residents since the 1990s. Russia has set the task of keeping and attracting residents to the Arctic. There are discussions on this topic. Scientific research on human capital and human potential are in progress. It is necessary to increase the attractiveness of the region despite its harsh climatic conditions. Tools of attraction are an improvement of the living standards of the residents (an increase of salaries, benefits, compensations, and so on), and the creation of a comfortable infrastructure for housing and communications, which is impossible without socio-economic development. Therefore, in the State Program, the first object is the improvement of the quality of human life. It appears that Russia figures the development of social infrastructure is closely linked to the creation of industrial facilities. Russia needs to pay attention to the social dimension of sustainable development of its Arctic zone because those northern residents are the guarantor of its national security. Their presence in the Arctic zone provides Russia with its ability to exercise control over these vast territories. Also, more than 2 million residents of the Russian Arctic have a unique experience of survival in a severe climate.

At the same time, environmental security is a pressing issue. Russia recognizes the accumulated environmental damage as a critical problem. Since 2012, the "general cleaning" of the Arctic territories from the debris of the Soviet legacy has been taking place. The fact that Russia's economy sank into a deep depression in the 1990s is one more reason behind the pollution, besides Soviet industrial development. The accumulated environmental damage in the Russian Arctic is not only a result of industrial activity, but also of human activity abandoned by residents after their massive outflow from the Arctic in 1990s. In recent years, the President and the government are monitoring that project. Russia continues to clean up the Arctic, but it is not enough. There is a lack of funds to do it rapidly. We can assume that Russia could associate with the international environmental community to find some solutions to this problem.

Russia has an apparent imbalance preferring economic development, rather than sustainable development as yet. It is very unfortunate that the environmental dimension of sustainable development remains in the shadow of statements about socio-economic development. There are concerns about environmental security arising from a new stage in the socio-economic development of Russia's Arctic zone. Fears arise in particular from the pre-existing experience of large-scale Soviet development of the Arctic. So, it is necessary to establish a special regime for

nature management, environmental protection, and pollution monitoring in the Arctic zone of the Russian Federation. However, Russia has an opportunity to engage in the process of developing a concept of sustainable development for the Arctic through the Arctic Council. The Sustainable Development Working Group proposes to consider the Arctic zone as an indicator of environmental conditions which gives a signal to the rest of the world about the impact of global processes (Kharlampyeva, 2010: 214). Environmental aspects should be central to the sustainable development of the Arctic. Current environmental issues exist in all circumpolar countries. Therefore, it is necessary to establish deeper international environmental cooperation. Indeed creating an effective system of sustainable development is possible only with the participation of all eight Arctic states (Young, 1998; Dodin, 2005).

Meanwhile, the Northern Sea Route is the primary goal of the socio-economic development of the Arctic zone of the Russian Federation. First, the NSR will develop as a transport and logistics sector between Asia and Europe. Second, it will act as a service sector in the framework of major energy projects. Russia undertakes to restore its infrastructure on the NSR because it has the longest coastline in the Arctic Ocean. The melting of the Arctic ice cap opens opportunities for Russia regarding the development of the Northern Sea Route. Opening access to the Arctic sea routes may allow Russia to develop as a maritime power. Merchant ships can begin to navigate, accompanied by icebreakers, through the Arctic, including across the North Pole. However, it is necessary to develop international cooperation to build all the logistics, as well as provide opportunities for rapid emergency response, and support commercial activity. In particular, Russia cannot implement its politics in the Arctic region without cooperation with other member states of the Arctic Council. The Arctic challenges are the shared responsibility between the circumpolar states. On the one hand, Russia's State Program notes the importance of international cooperation within the organizations which are mandated to address Arctic issues. On the other, it is already clear that a special place in Russia's international cooperation in the Arctic region will be occupied by the countries of North-East Asia. In particular there are great hopes associated with China. But it's clear that the Arctic is a region of international cooperation for Russia.

Acknowledgments

This work was supported by the Russian Foundation for Basic Research, Grant No 17-02-00619, the research project "Comparative analysis of the sources of incomes and the problem of poverty in traditional communities of northern regions of Russia, the USA, and Canada."

Notes

1. In the new edition of 2017, the term of implementation has changed from 2020 to 2025.
2. Since 2013, the current state of Russia's economic and foreign policy development has been characterized by a strategy called "Turn to the East." The APEC summit held in Vladivostok in 2012 laid the basis of this strategy. Its goal is to expand Russia's political and economic influence in the Asian-Pacific region. In 2013, Vladimir Putin in a message

to the Federal Assembly announced the rise of Siberia and the Far East as “a national priority for the XXI century.” From then Russia has begun to strengthen its diplomatic cooperation with Northeast Asian countries.

3. Western sanctions (anti-Russian sanctions) are restrictive measures taken by the EU, the United States, and their satellite countries against Russia due to the Ukrainian crisis of 2014. The main types of sanctions are bans on entry for individuals and on the conduct of economic activities for companies.

References

- Census. (2010). All-Russian Population Census. Russia. Retrieved (06.10.18) from, http://www.perepis-2010.ru/results_of_the_census/results-inform.php.
- Dodin D.A. (2005). Sustainable Development of the Arctic: problems and perspectives. St. Petersburg, 283.
- Dyakonov N. (1993). Libra demography. *Ilin*. 1. Retrieved (06.10.18) from, <http://ilin-yakutsk.narod.ru/1993-94/12.htm>.
- EastRussia. (2017, April 11). Sow like a state. Retrieved (18.09.18) from, <https://www.eastrussia.ru/material/poseyat-po-gosudarstvennomu/>.
- Fauzer V.V., Lytkina T.S., Smirnov A.V. (2017). Differentiation of Arctic territories on the degree of the education and economic governance. *Arktika: ekologiya i ekonomika*. 4 (28), 18-31. Retrieved (06.10.18) from, [http://arctica-ac.ru/docs/4\(28\)_2017_Arctic/018_031%20%20Arctic%204_2017.pdf](http://arctica-ac.ru/docs/4(28)_2017_Arctic/018_031%20%20Arctic%204_2017.pdf).
- Gavrilyeva T.N. (2016). The structure of employment in the settlements of the Republic of Sakha (Yakutia) by Fisher Clark typology. *Arktika. XXI vek. Gumanitarny nauki*. 1 (7), 18–27.
- Gladun E.F. (2015). Environmental Regulations of the Arctic in the Period of its Industrial Development: Analysis of the Legislation of the Arctic States. *Bulletin of Tyumen State University. Social, Economic, and Law Research*. Vol. 1. 3, 132-142. Retrieved (18.09.18) from, <https://vestnik.utmn.ru/sociology/vypuski/2016-tom-2/1/212972/>.
- Government of the Russian Federation. (2014). *Federal Targeted Program "Elimination of accumulated environmental damage" for 2014–2025*. Moscow, Russia.
- Government of the Russian Federation. (2017, August 31). *The state program of Socio-economic development of the Arctic zone of the Russian Federation for the period till 2025 (2014)*. Moscow, Russia. Retrieved (06.10.18) from, <http://static.government.ru/media/files/GGu3GTtv8bvV8gZxSEAS1R7XmzloK6ar.pdf>.
- Government of the Russian Federation. (2017, December 26). *The Federal Law of the Russian Federation No 460 On Amendments to the Code of Merchant Marine Navigation of the Russian Federation and the Recognition of Certain Provisions of Legislative Acts of the Russian Federation*.

- Moscow, Russia. Retrieved (06.10.18) from, <http://static.kremlin.ru/media/acts/files/0001201712290076.pdf>.
- Government of the Russian Federation. (2017, May 13). *Executive Order On the Russian Federation Economic Security Strategy until 2030*. Moscow, Russia. Retrieved (06.10.18) from, <http://static.kremlin.ru/media/acts/files/0001201705150001.pdf>.
- Government of the Russian Federation. (2018, May 7). *Decree On national goals and strategic tasks of the development of the Russian Federation for the period until 2024*. Moscow, Russia. Retrieved (06.10.18) from, <http://static.kremlin.ru/media/acts/files/0001201805070038.pdf>.
- High North News. (2017). *Op-Ed: The Arctic and Sustainable Development Goals*. Retrieved (06.10.18) from, <http://www.highnorthnews.com/op-ed-the-arctic-and-sustainable-development-goals/>.
- Kharlampyeva N.K., Lagutina M.L. (2010). International Cooperation in the Arctic: Environmental and Political Aspect. *Society. Environment. Development*. 3, 212-217. Retrieved (18.09.18) from, <https://cyberleninka.ru/article/n/mezhdunarodnoe-sotrudnichestvo-v-arktike-ekologo-politicheskiy-aspekt>.
- Kondratyeva V. I., Semenova E.N. (2014). Arctic: perspectives of sustainable development. *Ekonomika Vostoka Rossii*. 1, 22–28. Retrieved (06.10.18) from, <https://elibrary.ru/item.asp?id=25300585&>.
- Leksin V.N. (2013). “Center” and “periphery” in public administration: channels of interaction. *Questions of state and municipal government*. 4, 59-74. Retrieved (18.09.18) from, <https://cyberleninka.ru/article/v/tsentri-periferiya-v-gosudarstvennom-upravlenii-kanaly-vzaimovlianiya>.
- Lenta.ru. (2017, August 2). *To clean up the Arctic from garbage in 2017 will allocate 1.69 billion rubles*. Retrieved (06.10.18) from, <https://lenta.ru/news/2017/08/02/savethearctic/>.
- Ministry for the Development of the Russian Far East. (2017, December 7). *Yakutia presented a project of creating the North-Yakutian support zone in the Arctic*. Retrieved (06.10.18) from, https://minvr.ru/press-center/news/11055/?sphrase_id=293317.
- Ministry for the Development of the Russian Far East. (2017, October 10). *Opinion: need to release a law on the Arctic*. Retrieved (06.10.18) from, https://minvr.ru/press-center/news/8754/?sphrase_id=312642.
- Ministry for the Development of the Russian Far East. (2018, March 1). *Vladimir Putin: The Northern Sea Route Should Become the Key to the Development of the Far East*. Retrieved (06.10.18) from, <https://minvr.ru/press-center/news/13141/>.
- Rossiyskaya Gazeta. (2010, September 24). *On the purity of*. Retrieved (06.10.18) from, <https://rg.ru/2010/09/24/arctica.html>.
- Sokolov Y.I. (2013). Arctic: to the problem of accumulated environmental damage. *Arktika: ekologiya i ekonomika*. 2 (10), 18-27. Retrieved (06.10.18) from, [http://www.ibrae.ac.ru/docs/2\(10\)/018_027_ARKTIKA_2.pdf](http://www.ibrae.ac.ru/docs/2(10)/018_027_ARKTIKA_2.pdf).

- TASS. (2018, February 21). Experts believe that the preservation of the Arctic ecology requires amendments to the legislation of the Russian Federation. Retrieved (18.09.18) from, <https://tass.ru/v-strane/4975777>.
- Tishkov V.A., ed. (2016). The Russian Arctic: Indigenous peoples and industrial development. Moscow, Saint-Petersburg. 272. Retrieved (06.10.18) from, http://static.iea.ras.ru/books/Ros_arctica.pdf.
- WCED. (1987). *World Commission on Environment and Development: Our Common Future* (Report Brundtland Commission). Retrieved (06.10.18) from, <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>.
- Young O.R. (1998, December). Creating an Arctic Sustainable Development Strategy. First Stefansson Memorial Lecture. Akureyri, Iceland. 1-24.