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## System problems and directions of municipal development of the Russian Arctic\*

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**Abstract.** The subject of the study is the municipalities of the Arctic, their specifics of functioning and development in comparison with the southern regions of the Arctic states. The purpose of the work was to identify problem areas of regional development that affects the socio-economic situation of the Arctic municipalities, prospects, and directions of their development. The theoretical and methodological basis consisted of the works of Russian and foreign scientists on regulating and stimulating the socio-economic development of the territories and municipalities of the Arctic. The study grounds on an integrated approach to the functioning and development of municipalities in the specific conditions of the Arctic, as well as general and specific factors for the growth in the Russian Arctic, considering international research. An analysis of the leading indicators of the socio-economic situation of the Arctic territories showed several common problems for the development of municipalities. The main forces of state regulation should be aimed at solving the issues of human development, social and transport infrastructure and require the approval and state support of the Arctic territories. Government policies to minimize negative processes and factors for the municipalities of the Russian Arctic should base on international experience. Authorities and management can use the results of the study for the development of fiscal, tax, investment policy, programs, and plans for the socio-economic development of the Arctic territories.

**Keywords:** *the Arctic zone, municipalities, socio-economic development, investment activity.*

### Introduction

The social and economic development of municipalities, i.e., the primary management link attracted increased attention from all Arctic states and in all spheres of activity — political, economic, social, and environmental. Various scientists have developed a significant methodological base that contributes to assessing socio-economic development of individual territories [1, Skufina T., Baranov S., Samarina V.; 2, Voronina E.P., p. 60–69], investment climate, attractiveness for the population and business [3, Saak A., Kolchina O., p. 53–54], the level and quality of life of the population [4, Vylegzhanina A.O., pp. 78–88; 5, Korczak E.A.], infrastructure development both at the level of municipalities [6, Bukhval'd E.M., Voroshilov N.V., pp. 54–69], and at the level of regions.

The study of the Arctic as a special object of legislative regulation and management, as well as the specific conditions of functioning of this macro-region, are in the scientific writings of A. Pilyasov [7, Pilyasov A.N., Kuleshov V.V., Seliverstov V.E., pp. 10–22], A. Chistobayev [8, Chistobayev A.I., Malinin P.Yu., pp. 122–128]; M. Blunden [9, Blunden M., p. 127], etc.

However, the social and economic development of municipalities is mostly considered in isolation from its territorial affiliation. So, in the present study, the analysis of factors and issues related

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to the functioning of towns is discussed within the specific conditions of Arctic territories to identify cardinal directions of their further development.

All countries, a part of which is in the Arctic, i.e., Russia, Canada, Denmark (Greenland), Norway, USA (Alaska), Sweden, Finland, and Iceland face several common problems of municipalities. These are difficult climatic conditions and increasing costs; inaccessibility and remoteness of towns from economic centers; mono-profile nature of the economy; increased level of population migration; high energy intensity and cost of electricity; lower level of social services and unfavorable ecological situation [10, Mikhailov K.L., pp. 442–446; 11, Greaves W., pp. 660–671; 12, Litovskiy V.]. These factors are the main reasons for low attractiveness of municipalities for investors, labor, economic activity, and entrepreneurship.

Formation and development of municipalities of Russia [13, Emelyanova E.E., pp. 79–83; 14, Emelyanova E.E., pp. 103–117], and prevailing trends of the international policy of the Arctic states in relation to negative processes typical for the Arctic region allow to establish common and particular ground for socio-economic development of municipalities that provide direct impact on authorities. It is human development; economic diversification and fiscal policy of the state.

The Arctic Zone of the Russian Federation (AZRF) includes all municipalities of the Murmansk Oblast, Nenets, Chukotka and Yamalo-Nenets Autonomous Okrugs — the entities of the Russian Federation, which are a part of the Arctic zone, as well as some municipalities of the Arkhangelsk Oblast, the Komi Republic, Karelia, the Republic of Sakha (Yakutia), and the Krasnoyarsk Krai — the subjects of the Russian Federation, partially included in the Arctic Zone of the Russian Federation<sup>1</sup>.

The issue of human resources is relevant for almost all municipalities of the ASRF and foreign countries. Indicator of the territory, directly characterizing development and its prospects, is population density [4, Vylegzhanina A.O., pp. 78–88]. The population density in the Russian Arctic is the lowest in the country and ranges from 0.1 people /km<sup>2</sup> in the Chukotskiy OA to 5.2 in the Murmansk Oblast, with an average of 8.6 in the country. For the past 15 years, the largest “emptiness” occurred in the Nenets Autonomous Okrug, where the population density decreased by 33%, the Komi Republic, the Murmansk Oblast (-25%) and the Arkhangelsk Oblast (-17%). At the same time, the average population density in the country increased by 2.3%, and it indicates a redistribution of the population within the country. The population of the Arctic territories of Russia (Fig. 1) decreased by 151 thousand people or 10.9% for the past 15 years, and over the past year — by 6.5 thousand people.<sup>2</sup>

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<sup>1</sup> Ukaz Prezidenta RF ot 2 maya 2014 g. №296 “O suhoputnyh territoriyah Arkticheskoy zony Rossijskoj Federacii” [Decree of the President of the Russian Federation, May 2, 2014 No 296 “On land territories of the Arctic zone of the Russian Federation”]. Sobranie zakonodatel'stva Rossijskoj Federacii, 2014. No 18. Art. 2136. [In Russian]; Ukaz Prezidenta RF ot 27 iyunya 2017 g. №287 “O vnesenii izmenenij v Ukaz Prezidenta RF ot 2 maya 2014 g. №296 “O suhoputnyh territoriyah Arkticheskoy zony Rossijskoj Federacii” [Decree of the President of the Russian Federation of 27 June 2017 №287 “On Amendments to the Decree of the President of the Russian Federation dated May 2, 2014 №296 “On Land Territories of the Arctic Zone of the Russian Federation”] [In Russian].

<sup>2</sup> Ocenka chislennosti postoyannogo naseleniya suhoputnyh territorij Arkticheskoy zony Rossijskoj Federacii [Estimation of the permanent population of land areas of the Arctic zone of the Russian Federation] Demograficheskij ezhegodnik Rossii. 2017. Statistics. Rosstat. M., 2017. [In Russian]

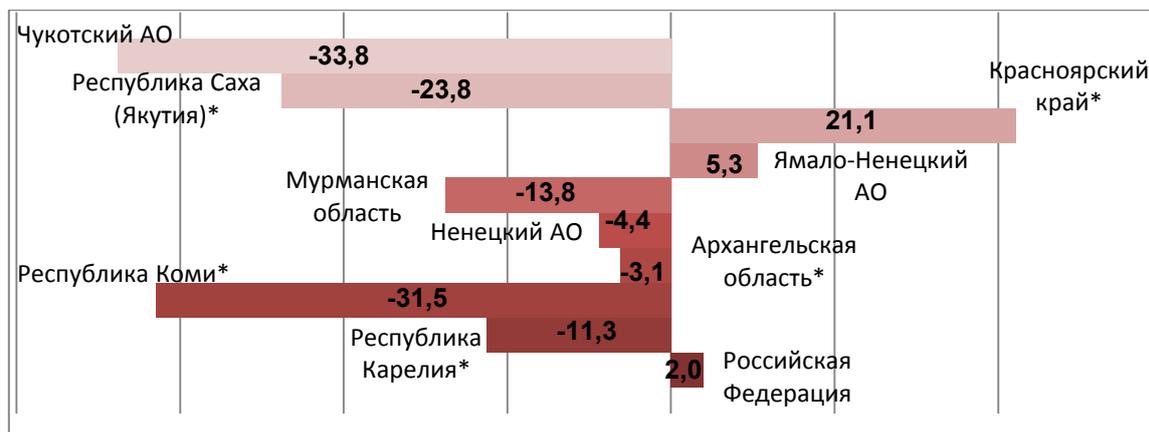


Figure 1. Population change in the municipalities of the ASRF 2002—2017, %<sup>3</sup>.

In addition to the difficult demographic situation in the Arctic, the issue of gender and age composition revealed. Previously, there was a lower proportion of the population of older working-age compared to the national average, especially in territories fully classified as AZRF (9.9% vs. 20.5% of the country's average)<sup>4</sup>. It is due to existing resettlement programs, and a higher proportion of the working population (when people moved to the North because of the so-called “long ruble”). The outflow of people of working age has increased, and the picture is smoother compared to the national indicators.

This may indicate, on the one hand, that people do not want to move to other territories of the country after a certain age, and, on the other hand, that the older population does not have such opportunities. In any case, these categories of citizens should enjoy a suitable social infrastructure and the necessary level for qualitative provision of social services per citizen (availability of doctors, access to health care, etc.).

At the same time, over the past decades in the areas of Russia, fully or partially referred to the Arctic zone, the decrease in the share of the working population in Arctic towns amounted to an average of 13%: 67.2% in 2005 and 58.2% in 2017<sup>5</sup> and almost equal to the national level. The situation is aggravated by the increased rate of migration (Table 1). Among the territories of the Russian Federation, most areas of the Arctic occupy the first places in the level of outflow of population. Only the Krasnoyarsk Krai has minimal positive dynamics.

<sup>3</sup> Demograficheskij ezhegodnik Rossii [Demographic yearbook of Russia]. 2002: Statistics/Goskomstat of Russia. M., 2002. 397 p. [In Russian]; Demograficheskij ezhegodnik Rossii [Demographic Yearbook of Russia]. 2017: Statistics/Goskomstat of Russia M., 2017. [In Russian]; Baza dannyh pokazatelej municipal'nyh obrazovanij [Database of indicators of municipalities]. Federal'naya sluzhba gosudarstvennoj statistiki. URL: [http://www.gks.ru/free\\_doc/new\\_site/bd\\_munst/munst.htm](http://www.gks.ru/free_doc/new_site/bd_munst/munst.htm) (Accessed: 23 July 2018). [In Russian]

<sup>4</sup> Regiony Rossii [Territories of Russia]. Socialno-ekonomicheskie pokazateli [Socio-economic indicators]. 2018: Statistics/Rosstat. M., 2018. 1162 p. [In Russian]

<sup>5</sup> Ibid.

Table 1

*The migration growth rate of the territories,  
fully or partially attributed to the ASRF (per 10 000 people) <sup>6</sup>*

Territories of the ASRF	2002	2012	2017
Russian Federation	5	21	14
<i>All territory is a part of the ASRF</i>			
Murmansk Oblast	-84	-101	-46
Nenets Autonomous Okrug	111	12	-53
Yamalo-Nenets Autonomous Okrug	16	-21	-45
Chukotskiy Autonomous Okrug	-205	-66	-132
<i>A part of the territory included in the AZRF</i>			
Republic of Karelia	25	-15	-31
Komi Republic	-59	-122	-112
Arkhangelsk Oblast	-33	-88	-70
Krasnoyarskiy Krai	-16	13	3
Republic of Sakha (Yakutia)	-59	-87	-48

The main reasons for the migration from the Russian Arctic municipalities are related to:

- the discrepancy of the comfort of living and compensatory costs to the population of Arctic cities. At present, the income of the population living in extreme climatic conditions is almost the same in most territories of central Russia, and the cost of social support is much higher than the all-Russian one. Reducing the difference in income between the Arctic and non-Arctic territories causes the outflow of population. The greatest outflow occurs when the difference with non-Arctic subjects of the Russian Federation is especially not obvious (e.g., the Murmansk Oblast) [15, Larchenko, pp. 69—75];
- low level of socially relevant health and education services. In remote small Arctic settlements, the level and availability of social services are much lower due to the distance and the small number of settlements. From the perspective of the current reforms of health and education (especially higher education), a significant reduction and consolidation of social security facilities are observed together with the possibility of receiving it in administrative centers of territories of the Russian Federation;
- depletion of natural resources and changing market conditions, leading to the economic and social decline of towns due to their mono — profile economy and focus on the resource extraction.

In the forecast period, the population outflow from areas with unfavorable working and living conditions will increase due to changes in pension legislation and the increase in retirement periods. The life expectancy in the North and the Arctic is lower than the national average, and in some territories — the lowest (Chukotka Autonomous Okrug — 66.1 years)<sup>7</sup>. In combination with the above factors, the population outflow to the better areas of the country may increase significantly. Even though, in the Arctic, the mortality rate in working-age decreases at a similar rate, as in the country, this figure exceeds the national one by 15–20%<sup>8</sup>.

<sup>6</sup> Ibid.

<sup>7</sup> Demograficheskiy prognoz do 2035 goda [Demographic forecast until 2035]. Federal State Statistics Service. Official website. URL: [http://www.gks.ru/wps/wcm/connect/rosstat\\_main/rosstat/ru/statistics/population/demography/](http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/demography/) # (Accessed: 04 December 2018). [In Russian]

<sup>8</sup> Regiony Rossii [Territories of Russia]. Social'no-ekonomicheskie pokazateli [Socio-economic indicators]. 2018: Statistics/Rosstat. M., 2018. 1162 p. [In Russian]

The human capital issue is recognized one of the most important in the development of the Arctic in all Arctic countries and directly affects the economic, investment, infrastructure and social development of towns [16, Petrov A.N., pp. 203–220; 17, Markin V.V., pp. 75–88]. Therefore, the efforts of the state should first and foremost be directed at its solution. Considering the international management experience of the Arctic towns, in Russia, it is necessary to create a comfortable living environment using the most practical knowledge of such countries as Norway and Canada. Their Arctic policy is aimed at creating a favorable environment for the local population, which allowed to improve living standards significantly and not only reduce migration outflow but also successfully attract labor resources from other regions due to state investments in the social sphere<sup>9,10</sup>.

In the Russian Arctic, investment expenditures in the social sphere (education, health, culture, and sports) (Table 2) of the four territories of the Arctic — the Murmansk Oblast and the Arkhangelsk Oblast, the Komi Republic and Karelia — is not compensated due to rising costs, and even below the average values for the country by 1.5 times or more.

*Table 2*  
*Investments in fixed assets in the leading sectors of the economy and in the social sphere in 2017 in the AZRF territories, thous. rub/person.*<sup>11</sup>

AZRF territories	Total investments	Mining	Production	Social sphere
<b>Russian Federation</b>	<b>108.7</b>	<b>19.9</b>	<b>13.7</b>	<b>4.2</b>
<i>All territory is a part of the ASRF</i>				
Nenets Autonomous Okrug	3232.6	2247.8	0.2	16.7
Murmansk Oblast	146.5	30.2	15.1	3.0
Yamalo-Nenets Autonomous Okrug	2014.3	1554.3	100.4	8.8
Chukotskiy Autonomous Okrug	237.3	121.7	0.2	9.8
<i>A part of the territory is included in the AZRF</i>				
Republic of Karelia	66.7	8.0	18.8	2.6
Komi Republic	152.9	83.9	7.9	2.5
Arkhangelsk Oblast	92.7	1.5	18.4	2.7
Krasnoyarskiy Krai	147.6	44.6	28.1	7.8
Republic of Sakha (Yakutia)	399.3	168.2	5.5	8.6

Increased social costs in the Nenets Autonomous Okrug, the Chukotskiy Autonomous Okrug and the Yamalo-Nenets Autonomous Okrug and the Republic of Sakha (Yakutia) are connected, firstly, with the harshest living conditions and a considerable length of territories, which leads to the need for additional costs for the maintenance of fixed assets of buildings and structures. Secondly, it has to do with the social responsibility programs in this area. Large corporations are involved in the local community in terms of public-private and municipal-private partnership

<sup>9</sup> Fedoseev L. The comfortable urban environment in the Arctic opens doors for innovations — experts. URL: <http://tass.com/economy/983475> (Accessed: 03 May 2019). [In Russian]

<sup>10</sup> Simmins G. Urban and Regional Planning. 2015. URL: <https://www.thecanadianencyclopedia.ca/en/article/urban-and-regional-planning> (Accessed: 03 May 2019).

<sup>11</sup> Calculated by the author. Source: Regiony Rossii [Territories of Russia]. Social'no-ekonomicheskie pokazateli [Socio-economic indicators]. 2018: Statistics/Rosstat. M., 2018. 1162 p. [In Russian]

using investments in the development of the social sphere by analogy with foreign companies operating in the territories of indigenous peoples [18, Tysiachniouk M.S., pp. 29–34].

Oil-producing territories can invest in the development of individual industries and towns. E.g., the Murmansk Oblast, the Arkhangelsk Oblast, and the Republic of Karelia almost always need the participation of the state in expensive and large investment projects because the level of investment flows in these entities is significantly different from the other Arctic territories (Table 3). The volume of investments is comparable to the all-Russian level (and in parts of the territories and below), which is insufficient due to the increasing costs factors for the construction and operation of infrastructure and increased depreciation of fixed assets in extreme conditions of the Far North.

Table 3

*Distribution of investments in fixed assets in the territories of the Russian Federation by forms of ownership in 2017, thous. rub. /person<sup>12</sup>*

AZRF territories	Total	Russian			Foreign	Joint
		State	Municipal	Private		
<b>Russian Federation</b>	<b>108.7</b>	<b>12.8</b>	<b>2.1</b>	<b>54.9</b>	<b>7.0</b>	<b>9.4</b>
<i>All territory is a part of the ASRF</i>						
Nenets Autonomous Okrug	3232.6	68.8	5.9	2116.2	25.8	216.5
Murmansk Oblast	146.5	64.2	2.2	62.8	1.1	3.9
Yamalo-Nenets Autonomous Okrug	2014.3	22.4	5.3	510.2	14.1	932.6
Chukotskiy Autonomous Okrug	237.3	46.3	4.6	46.6	28.0	47.2
<i>A part of the territory included in the AZRF</i>						
Republic of Karelia	66.7	9.1	1.3	42.0	2.9	3.3
Komi Republic	152.9	5.1	2.0	119.1	2.7	10.2
Arkhangelsk Oblast	92.7	19.9	1.4	42.9	5.3	6.2
Krasnoyarskiy Krai	147.6	11.7	1.5	55.1	17.5	23.6
Republic of Sakha (Yakutia)	399.3	14.4	9.6	238.1	6.7	48.3

Investment participation of the state is most noticeable only in those areas with joint corporate or foreign projects. A significant part of them goes to the development of extractive industries. The social and infrastructure necessary for human capital and small business development is not adequately funded to address these problems. These are Nenets, Yamalo-Nenets, and Chukotskiy Autonomous Okrug. In other territories of the Arctic, the level of participation of the state and municipality is higher in the territories fully assigned to the ASRF. Most likely, this is due to the need to compensate for the rising costs of both the federal and local levels and the municipal authorities.

As for the structure of investments, the pace and volume of housing construction in the Arctic are almost everywhere the lowest in the country. So, the level of investment there is extremely low. Equal volumes of financing with the average Russian values are only in the Nenets Autonomous Okrug, the Krasnoyarsk Krai and the Republic of Sakha (Yakutia). But this is mainly

<sup>12</sup> Calculated by the author. Source: Regiony Rossii [Territories of Russia]. Social'no-ekonomicheskie pokazateli [Socio-economic indicators]. 2018: Statistics/Rosstat. M., 2018. 1162 p. [In Russian]

due to the priority state programs to settle out of dilapidated and emergency housing. Its proportion in these territories is the largest in the country. Investments in infrastructure and transport projects are mainly in the oil and gas and Far Eastern territories, and in the Western Arctic (Murmansk, Arkhangelsk, Republic of Karelia and Komi) are much lower. At the same time, in the territories fully included in the Arctic zone, investments in non-residential buildings, constructions modernization, equipping of lands are much higher as well as investments in the fixed assets of equipment and vehicles.

Infrastructure, incl. social one and transport is a determining factor both for human and economic development, leading to the progress of entrepreneurship and creating a favorable investment climate. Despite the obvious importance of the ASRF for Russia, the socio-economic situation there remains quite difficult [19, Kartamysheva N.S., pp. 333–337]. Infrastructure and transport accessibility in foreign countries is the main way to increase investment flows. It allows wide use of Arctic territories for tourism, attracting a significant number of tourists and the development of small business associated with near-tourist services [20, Veijola S., pp. 63–81].

Compared with other Arctic countries, the tourism opportunities of the AZRF are not fully used due to transport and logistics underdevelopment and the lack of necessary tourist infrastructure. E.g., in Norway, the flow of tourists to the Svalbard archipelago is about 60 thous people a year, while in the national park “Russian Arctic”, incl. the territory of Franz Josef Land, — it is 1,225 people<sup>13</sup>. It has an impact on the development of small businesses in Arctic towns and great importance for mono-profile municipalities, allows to diversify the economy and makes it possible to create new jobs.

Active economic diversification through the creation of territories of advanced socio-economic development (TASED) in towns with the mono-profile structure of the economy and other municipalities have been implemented by the Government of the Russian Federation since 2014.<sup>14</sup> Support and preferences are provided for the residents of the TASED. Currently, there are about 100 preferential territories in Russia. 10 of them are on the territory partly included in the Arctic zone of the Russian Federation. 2 TASED are on the territory fully included in the AZRF — “Kirovsk” and “Chukotka”<sup>15</sup>. Now, in TASEDs, the indicators of additional jobs and investments are small. It indicates the insufficient effectiveness of the stimulation investment activity since the creation of the TASEDs does not guarantee the economic revival and inflow of investments. In ad-

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<sup>13</sup> Skoriy R.P. Perspektivy razvitiya Arkticheskogo turizma [Prospects for the development of Arctic tourism]. URL: <https://rusunion.com/perspektivy-razvitija-arkticheskogo-turizma/> (Accessed: 28 July 2018). [In Russian]

<sup>14</sup> Federal'nyj zakon ot 29.12.2014 № 473-FZ “O territoriyah operezhayushchego social'no-ekonomicheskogo razvitiya v Rossijskoj Federacii”. [Federal Law of 29.12.2014 № 473-FZ “On territories of advanced socio-economic development in the Russian Federation”]. [In Russian]

<sup>15</sup> Reestr rezidentov territorij operezhayushchego social'no-ekonomicheskogo razvitiya, sozdannyh na territorii mono-profil'nyh municipal'nyh obrazovaniy. [Register of residents of territories of advanced social and economic development created in mono-profile municipalities]. Ministry of Economic Development of the Russian Federation. Official website. URL: <http://economy.gov.ru/minec/activity/sections/econReg/monitoringmonocity/2016160505> (Accessed: 06 March 2019). [In Russian]

dition, the legislation establishes some restrictive measures for TASED's residents (creation of at least 20 jobs, newly registered separate units, the necessary amount of investments, etc.). The restrictions are tough enough for small and medium-sized business<sup>16</sup>.

Due to transport infrastructure and favorable business conditions provided by the state, the increasing costs of extreme climatic conditions do not have a significant impact on foreign small business development in the Arctic. In the Russian Arctic, challenging weather conditions limit the development of small businesses. It is accompanied by poor transport accessibility, high energy consumption, long distances, high compensation costs and benefits for workers in the Far North (travel costs compensations every two years, so-called district coefficients and allowances). Budgetary institutions and large enterprises operating in the Arctic do not consider the compensation issue so acute, but for small business, it is a question of "survival"<sup>17</sup>. Therefore, the focus moved to small and medium-sized businesses in the Arctic. Transport accessibility of the Arctic territories should be a priority of federal and local authorities.

At the governmental level and in international forums, the promotion of small entrepreneurship has gained increased attention by creating an enabling environment for business through the federal and local programs to support entrepreneurship, "tax holidays", exemption from inspections, etc. In addition, in recent years, the Government has subsidized small agricultural enterprises and farms due to counter — sanctions policy for food products. These measures led to the growth of small enterprises, especially in the agricultural sector, e.g., in the Far East of the country. However, the figure shows (Fig. 2) that in the Arctic, both the number of small enterprises and the growth rate of small businesses significantly lag behind the average Russian indicators, especially in the subjects of the Russian Federation, fully recognized the Arctic zone, and in some of them (Chukotskiy and Nenets Autonomous Okrug), they remain at the low level.

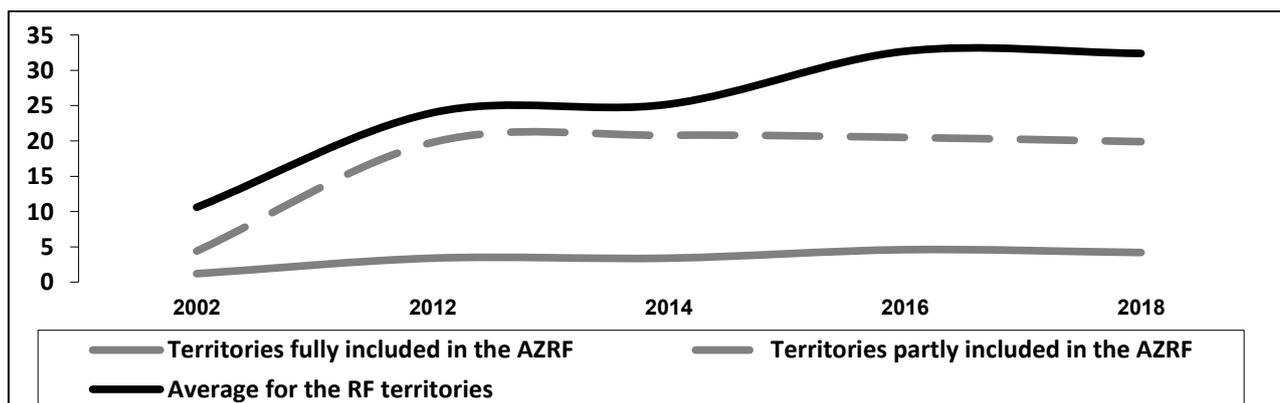


Figure 2. The number of small and medium enterprises in the regions of AZRF, thous<sup>18</sup>

<sup>16</sup> The territory of advanced socio-economic development "Kirovsk". URL: <http://invest.welcomekirovsk.ru/> (Accessed: 14 March 2019).

<sup>17</sup> Pilyasov A.N. Arkticheskoe predprinimatel'stvo: nechto isklyuchitel'noe. [Arctic entrepreneurship: something exceptional]. Go Arctic. URL: <https://goarctic.ru/work/arkticheskoe-predprinimatel'stvo-nechto-isklyuchitel'noe/> (Accessed: 29 July 2018). [In Russian]

<sup>18</sup> Maloe predprinimatel'stvo v Rossii. 2003. [Small business in Russia. 2003] Statistics/Goskomstat of Russia. M., 2003. 109 p. [In Russian]; Maloe i srednee predprinimatel'stvo v Rossii. 2013. [Small and medium entrepreneurship in Russia. 2013]. Statistics/Rosstat. M., 2013. 124 p. [In Russian]; Edinyj reestr sub"ektov malogo i srednego predprini-

Meanwhile, small enterprises and their investments play an important role for municipalities. In territories with developed entrepreneurship (e.g., the Republic of Tatarstan and Nizhny Novgorod), investments of small enterprises amount to 15-18 billion rubles per year. In 2016, the average for the country was 9.4 billion rubles.<sup>19</sup> In Arctic towns, small business is a minor component in investment activity, because, firstly, it is poorly developed, secondly, in most municipalities of the ASRF, significant investors are large mining companies, and, thirdly, the need to compensate for the increased costs of activities reduces the volume of free financial resources.

A competent fiscal policy is necessary for the development of entrepreneurship in the Arctic zone and all territories in addition to state support. In all the Arctic states, almost all municipalities belonging to the Arctic zone get subsidies. However, the volume of subsidies per person varies significantly from country to country (Figure 3). The most significant amount of inter-budgetary transfers falls on the Arctic territories of Canada and Iceland (25 and 10 thous. USD per person, respectively). In Russia, this figure is the lowest, i.e., about 350 USD per person. At the same time, a significant amount of transfers falls on Chukotka and Yamalo-Nenets Autonomous Okrug. In other territories, it is less — about 90 USD per person.

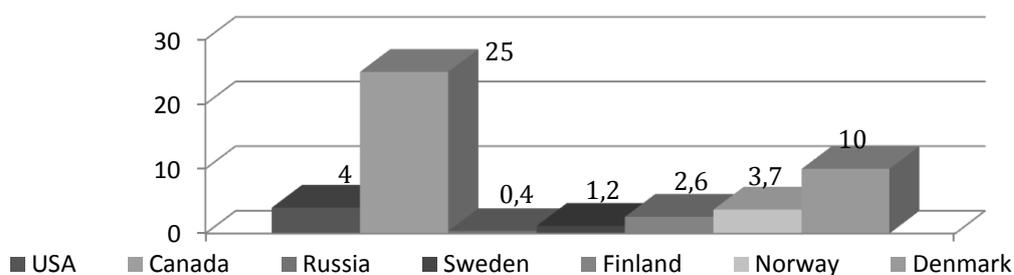


Figure 3. The size of inter-budgetary transfers per person in the Arctic territories in 2016, thous USD/person<sup>20</sup>

The higher level of transfers per capita in Chukotskiy Autonomous Okrug and Yamalo-Nenets Autonomous Okrug in comparison with other territories is explained by the harshest living conditions and the lowest density population in quite large areas. It leads to the necessity of significant expenses for maintaining stable functioning of housing, energy, transport, and “northern delivery.” E.g., in Chukotskiy AO, it is due to the inflated costs of air delivery of fuel, building materials, machinery, and food. The absence of railways and a unified system of road communication

matel'stva. [Unified Register of Small and Medium Enterprises]. Federal Tax Service. URL: <https://rmsp.nalog.ru/statistics.html> (Accessed: 30 April 2019). [In Russian]

<sup>19</sup> Maloe i srednee predprinimatel'stvo v Rossii. 2017. [Small and medium entrepreneurship in Russia. 2017]. Statistics/Rosstat. M., 2017. 78 p. [In Russian]

<sup>20</sup> Calculated by the author. Source: Demograficheskiy ezhegodnik Rossii. 2017. [Demographic Yearbook of Russia. 2017]: Statistics/Goskomstat of Russia M., 2017 [In Russian]; Mezhhbyudzhetye transfery sub"ektam RF. [Inter-budgetary transfers to subjects of the Russian Federation]. Federal Treasury. URL: <http://datamarts.roskazna.ru/razdely/rashody/mezhhbyudzhetye-transfery/mezhhbyudzhetye-transfery-subjektam-rf/?paramPeriod=2016> (Accessed: 01 August 2018). [In Russian]; Verbinenko E.A., Badylevich R.V. Finansovoe regulirovanie razvitiya Arkticheskikh territorij v zarubezhnyh stranah. [Financial regulation of Arctic territories development in foreign countries]. Fundamental'nye issledovaniya, 2017. No 4-1. pp. 126-132. URL: <http://fundamental-research.ru/ru/article/view?id=41447> (Accessed: 09 July 2018). [In Russian]

makes aircrafts the only year-round transport [21, Kopin R.V., pp. 3–7]. Also, subsidies for energy tariffs and socially significant food products are relevant [22, Kalinova A.A., pp. 23–29].

The Arctic territories of Russia received only 5% of all inter-budgetary transfers in 2012-2014. At the same time, there has been a clear downward trend in recent years. Thus, in 2017, the volume of transfers to the territories that are entirely part of the Arctic zone decreased to 0.7%, which clearly does not correspond to the level of financing in foreign countries and runs counter to the overall strategic goals and trends in the development of the Arctic territories.

Previous studies of the budgetary provision of the AZRF municipalities indicated a high degree of subsidization and decrease in tax revenues [23, Skufiina T.P., p. 214], which leads to limiting the capacity of municipal authorities to influence their social and economic development and reducing the investment activity of town administrations. The taxation system in Russia, centralization of power and accumulation of funds at the federal level put the Arctic territories and municipalities in a rigid dependence on decisions of higher authorities. Weak income sources of the municipal budget do not allow to solve problematic issues of the Arctic territories independently.

### *Conclusion*

The results of the study, i.e., defining the problems and directions for the development of the Russian Arctic, make it is possible to say that the socio-economic development of Arctic municipalities with precise specifics of functioning, typical both for Russia and for most foreign Arctic towns, depends on the state solution of development issues, human potential, social and transport infrastructure, small businesses and exceptional support to the Arctic.

To deal with the identified demographic threats, to attract human capital and to reduce migration outflow from the Russian Arctic, it is necessary to develop a set of measures aimed at the quality urban environment, developed transport, and social infrastructure, incl. its modernization; ensuring accessibility and improving the quality of health care; the development of education and vocational training; new jobs and employment (especially in monoprofile settlements), as well as the growth of incomes of the Arctic population and the amendment of pension legislation to maintain previously existing retirement benefits.

The development of social and production infrastructure is possible only with the participation of public investments and large business due to high capital intensity in the Arctic conditions and rising costs. By analogy with foreign countries, specific social responsibility for the development of territories means a public-private and municipal-private partnership, which will give impetus to a network of business structures.

The slow entrepreneurship development and the lag in the volume of investment participation of small businesses in the economy of Arctic cities in comparison with the average Russian level are due to the underdeveloped logistics and infrastructure and additional expenses caused by payments and guarantees established by the Russian legislation for the residents of Far North. Therefore, the development of small and medium-sized business in the municipalities of the Rus-

sian Arctic requires additional support from the state through the improvement of labor legislation and various preferences for the Arctic employees in terms of compensation of travel costs to the place of vacation, district allowances and coefficients for small business.

Also, in Russian tax and budget legislation, it is necessary to reconsider the issues of financial security and autonomy of municipal authorities by means of changes in inter-budgetary regulation and fiscal policy. It is necessary to develop, change and amend the tax legislation by increasing the share of local taxes, which will strengthen the financial and economic base of the local budgets, especially in the Arctic areas with their high cost of living, fixed assets, production and social infrastructure that confirm the need to expand the list of local budget revenues.

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### *References*

1. Skufina T., Baranov S., Samarina V. Differentiation of Socio-Economical Environment as Factors of Regional Development (The Case Study of Murmansk Region, Russia). *Advanced Science Letters*, 2018, vol. 24, no. 9, pp. 6329–6331. DOI 10.1166/asl.2018.13045
2. Voronina E.P. Formirovanie opornyh zon razvitija Arkticheskoy zony Rossijskoj Federacii i obespechenie ih funkcionirovaniya: primenenie GAP-analiza [Formation of reference zones of development of the Arctic zone of the Russian Federation and ensuring their functioning: application of GAP-analysis]. *Regionalistika* [Regionalism], 2017, vol. 4, no.6, pp. 60–69.
3. Saak A., Kolchina O. Ocenka investicionnoj privlekatel'nosti municipal'nogo obrazovanija [Evaluation of the investment attractiveness of the municipality]. *Municipal'naja vlast'*, 2006, no. 4, pp. 53–64.
4. Vylegzhanina A.O. Nekotorye social'no-ekonomicheskie problemy razvitija Arkticheskikh territorij [Some socio-economic problems of development of the Arctic territories]. *Problemy prognozirovaniya*, 2017, vol. 161, no. 2, pp. 78–88.
5. Korchak E.A. *Arkticheskaja zona Rossii: social'nyj portret regionov* [Arctic zone of Russia: social portrait of regions], Apatity Publ., 2017, 101 p. (In Russ.)
6. Bukhval'd E.M., Voroshilov N.V. Current issues in the development of municipal entities and in reforming the institution of local self-government. *Economic and Social Changes: Facts, Trends, Forecast*, 2018, vol. 11, no. 1, pp. 132–147.
7. Pilyasov A.N., Kuleshov V.V., Seliverstov V.E. Arctic policy in an ERA of global Instability: Experience and lessons for Russia. *Regional Research of Russia*, 2015, vol. 5, no. 1, pp. 10–22.
8. Chistobaev A.I., Malinin P.Ju. Arkticheskaja zona Rossijskoj Federacii kak osobyj ob'ekt gosudarstvennogo upravlenija [The Arctic zone of the Russian Federation as a special object of public administration]. *Regional'nye issledovanija* [Regional studies], 2016, vol. 52, no. 2, pp.122–128.
9. Blunden M. The New Problem of Arctic Stability. *Survival*, 2009, vol. 51, no. 5, pp. 127.
10. Mikhailov K.L. Social and environmental aspects of development of the stockman field and risks in the local population's perception. *Regional Research of Russia*, 2013, vol. 4, pp. 442–446.
11. Greaves W. Securing sustainability: the case for critical environmental security in the Arctic. *Polar Record*, 2016, vol. 52 (6), pp.660–671 DOI 10.1017/S0032247416000218
12. Litovskiy V. Problem of Development and Development of Polar and Arctic Territories: the Ural Aspect. *The Arctic: Ecology and Economy*, 2012, no. 3 (7).

13. Emel'janova E.E. Vlijanie regional'nyh osobennostej Severa na celi, zadachi i vozmozhnosti realizacii municipal'noj investicionnoj politiki [The influence of the regional characteristics of the North on the goals, challenges and opportunities for the implementation of municipal investment policy]. *Nauka i biznes: puti razvitija* [Science and business: ways of development], 2014, vol. 35, no. 5, pp.79–83.
14. Emel'janova E.E. Ocenka effektivnosti politiki i perspektivnye napravlenija investicionnogo razvitija v municipalitetah Severa i Arktiki [Evaluation of policy effectiveness and promising directions of investment development in the municipalities of the North and the Arctic]. *"EKO" ["ECO"]*, 2018, no. 6, pp. 103–117. DOI 10.30680/ESO0131-7652-2018-6-103-117
15. Larchenko L.V., Kolesnikov R.A. Differenciaciya social'no-ekonomicheskogo razvitiya arkticheskikh regionov Rossii [Differentiation of socio-economic development of the Arctic regions of Russia]. *Innovacii* [Innovations], 2017, no. 10 (298), pp. 69–75.
16. Petrov A.N. Human Capital and Sustainable Development in the Arctic: Towards Intellectual and Empirical Framing. *Northern Sustainability: Understanding and Addressing Change in the Circumpolar World*, 2017, pp. 203–220. DOI 10.1007/978-3-319-46150-2\_16
17. Markin V.V., Silin A.N. Human and social potential of neo-industrial development of the Arctic: Sociological analysis, modeling, and regulation. *Economic and Social Changes: Facts, Trends, Forecast*, 2017, vol. 10, no. 6, pp. 75–88.
18. Tysiachniouk M.S., Petrov A.N. Benefit sharing in the Arctic energy sector: Perspectives on corporate policies and practices in Northern Russian and Alaska. *Energy Research and Social Science*, 2018, vol. 39, pp. 29–34.
19. Kartamysheva N.S., Biekenova A.S. Arktika i razvitie arkticheskoy zony [Arctic and development of the Arctic zone]. *Molodoj uchenyj* [Young scientist], 2015, no. 13, pp. 333–337.
20. Veijola S., Strauss-Mazzullo H. Tourism at the crossroads of contesting paradigms of Arctic development. *The Global Arctic Handbook*, 2018, pp.63–81.
21. Kopin R.V. Vstuplenie gubernatora — predsedatelya pravitel'stva CHukotskogo Avtonomnogo okruga [Introduction of the Governor — Chairman of the government of the Chukotka Autonomous Okrug]. *Analiticheskij vestnik: Sovremennoe sostoyanie i perspektivy social'no-ekonomicheskogo razvitiya CHukotskogo avtonomnogo okruga*, 2017, no. 28 (684), pp. 3–7.
22. Kalinova A.A. Social'no-ekonomicheskoe razvitie CHukotskogo avtonomnogo okruga v 2011–2016 godah [Socio-economic development of the Chukotka Autonomous Okrug in 2011–2016]. *Analiticheskij vestnik: Sovremennoe sostoyanie i perspektivy social'no-ekonomicheskogo razvitiya CHukotskogo avtonomnogo okruga*, 2017, no. 28 (684), pp. 23–29.
23. *Osnovnye aspekty ekonomicheskogo razvitiya i upravleniya Arkticheskoy zony Rossijskoj Federacii* [Main aspects of economic development and management of the Arctic zone of the Russian Federation]. Ed. by T.P. Skuf'ina, N.A. Serova. Moscow: «Nauchnyj konsul'tant» Publ., 2018, 214 p. (In Russ.)