

Social Portrait of a Resident of the Arctic in the Conditions of Industrial Development of the Territory (Case Study of Yakutia and Taimyr)*



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Abstract. The way of life of the indigenous and incoming population of the Arctic zone of the Russian Federation requires a detailed study, since it is in these areas that the exploration and extraction of minerals for the purpose of territorial industrial development has been actively carried out in recent decades. The article reveals the social portrait of residents of Russia's Arctic regions, who are immediate participants in the changes taking place in the territories of their residence and associated with the implementation of large-scale mining projects. We conducted the empirical part of the study in 2017–2020 in the Republic of Sakha (Yakutia), where placer gold and diamonds are currently explored and mined, and in the Taimyr Dolgano-Nenets Municipal District of Krasnoyarsk Krai. The object of the study was the economic behavior of local residents of the Arctic regions; the subject was their attitude toward the activities of mining companies. As a result of a sociological survey in the form of questionnaires (cluster sample, 859 people, age selection from 18 years and older), informal conversations with local residents, we gave their socio-demographic characteristics, presented their attitude toward traditional trades and crafts and toward the industrial development of Russia's Arctic regions. The practical significance of the study consists in analyzing modern characteristics of an Arctic resident; this analysis can be of use to various stakeholders involved in the implementation of state programs for the development of Russia's Arctic territories. The study of the problems and needs of indigenous peoples of the Arctic zone of Russia allows avoiding resource conflicts between state structures, industrial companies and the local population.

Key words: social portrait of the population, economic sociology, industrial development of the territory, environment, socio-economic well-being, Arctic region, indigenous peoples, extractive companies.

Introduction

The Executive Order of the President of the Russian Federation “On the national development goals of the Russian Federation through to 2030” (2021) defines directions of the country's breakthrough development, the main of which are related to the increase in its population, as well as the improvement in the standards and quality of life of its citizens. This document outlines the national development goals of the Russian Federation for the future concerning the preservation of the population, ensuring health, promoting human well-being, creating a comfortable and safe living environment, reducing the poverty of Russians, and restoring the disturbed ecological state of the environment¹.

¹ On approval of the State program of the Russian Federation “Socio-economic development of the Arctic zone of the Russian Federation”: Executive Order of the President of the Russian Federation “On National development Goals of the Russian Federation through to 2030”, dated July 21, 2020. Available at: <http://www.kremlin.ru/events/president/news/63728> (accessed: May 31, 2021).

The state program “Socio-economic development of the Arctic zone of the Russian Federation”² (2021) provides for two subprograms: “Creating conditions for attracting private investment and creating new jobs in the Arctic zone of the Russian Federation” and “Creating conditions for sustainable socio-economic development of the Arctic zone of the Russian Federation”. It is important that the state program is aimed at promoting the sustainable development of indigenous small-numbered peoples living in this territory by creating new jobs while improving working conditions, as well as providing support for traditional economic activities, which, ultimately, will have a positive impact on the level and quality of life of the local population.

² On the approval of the State program of the Russian Federation “Socio-economic development of the Arctic Zone of the Russian Federation”: Government Decree of the Russian Federation no. 484, dated March 30, 2021. Available at: <http://publication.pravo.gov.ru/Document/View/0001202104020037> (accessed: May 31, 2021).

The Decree “On the strategy for the development of the Arctic Zone of the Russian Federation and ensuring national security for the period through to 2035” (2020) provides for a set of measures for the socio-economic development of this territory including the implementation of major investment projects for the exploration of mineral deposits and their extraction, as well as the development of transport communications infrastructure and social facilities³. The Arctic territories have significant reserves of such natural resources of the planet as oil, gas, fresh water, and commercial fish species. It is worth noting that the most serious threat to the natural zones of the Arctic regions comes from the extractive industry, specializing in the exploration and extraction of minerals. In addition, global warming has a negative impact on the environment of the Arctic deserts, leading to permafrost thaw.

The population of the Arctic Zone of the Russian Federation is multinational. It is home to both local (indigenous peoples and old-timers) and incoming (migrants) populations. Residents of the Arctic have a minimal impact on the environment, trying to use natural resources economically. For thousands of years the population living in these territories has developed a correct strategy of nature management allowing preservation of their native habitat, biodiversity of the region as well as rational use of renewable natural resources. At present there is an increasing impact on ecosystems and their degradation in the Arctic due to its industrial development, which affects the traditional basic industries of the northern territories (fishing, hunting, reindeer breeding, etc.).

The socio-economic development of the Russian Arctic and the implementation of

investment projects for industrial development on its territory are closely connected with the solution of problems of improving the quality of life of the local population, increasing the life expectancy of citizens, decreasing migration outflows, reducing unemployment and the poverty level, and improving the environment. The implementation of such projects is also aimed at increasing the level of accessibility and quality of services, creating a comfortable living environment in settlements located in remote areas including in places of traditional residence and traditional economic activities of small-numbered peoples. Currently, there are 19 small-numbered peoples in the Arctic zone of Russia, with their heritage sites of historical and cultural value of global significance.

It is obvious that the industrial development of territories in the Arctic, the implementation of projects on the exploration of deposits and extraction of minerals may not only be accompanied by the achievement of certain economic and social results, but also have a negative impact on the environment, the climate system, the environmental conditions of the population [1–6]. Under these conditions, the implementation of investment projects for the industrial development of the Arctic should provide a balanced socio-economic development of this territory, contribute to the protection of the interests and needs of indigenous peoples, and preserve the native environment of their habitat [5]. The intensive use of natural resources forces scientists, politicians, and citizens to look for ways of interaction between the state, business, and the population of the Arctic on issues of sustainable development and environmental protection.

We should take into account that most of the indigenous peoples of the Russian Federation live in the North, Siberia and the Far East. It is in these regions that the development of natural resources, extraction of hydrocarbons, gold, silver, diamonds, platinum, and ferrous and nonferrous metal ores

³ “On the Strategy for the development of the Arctic zone of the Russian Federation and ensuring national security for the period through to 2035”: Presidential Decree of the Russian Federation no. 645, dated October 26, 2020. Available at: <http://www.kremlin.ru/acts/news/64274> (accessed: May 31, 2021).

are taking place. The activity of resource extraction companies in a certain way contributes to the alienation of territories, which has a negative impact on the traditional way of life of the local population [6; 7].

The United Nations Declaration on the Rights of Indigenous Peoples, adopted in 2007, declares the right of these groups to live in dignity, to maintain and develop their own culture, and development in the direction which the people themselves consider most appropriate to their needs and aspirations⁴. In this regard, indigenous peoples must necessarily be involved in decision-making when developing the natural resources on their territories.

It is important to analyze and assess the positive and possible negative changes that occur or may occur in the future in the Arctic region population life during industrial development, as well as to assess the trends of these changes in terms of economic behavior of citizens including the features of perception of the ongoing changes in the gender aspect [8]. This approach involves the study of everyday life of the population, its social attitudes, motivation, financial capacity, and economic behavior [9] which in general allows drawing a social portrait of the Arctic residents under the conditions of industrial development of the territory.

The Arctic vector of development and the resulting social, ecological and economic changes in the Arctic zone of the Russian Federation largely depend on the interaction between extractive companies and indigenous minorities living in this territory [10; 11]. It is especially important to find adequate legal and economic mechanisms to protect the rights and interests of the local population, contributing to their well-being [12; 13].

⁴ The United Nations Declaration on the Rights of Indigenous Peoples was adopted by the General Assembly resolution 61/295, dated 13 September 2007. Available at: https://www.un.org/ru/documents/decl_conv/declarations/indigenous_rights.shtml (accessed: May 31, 2021).

For example, in order to protect the interests and rights of indigenous peoples in the implementation of investment projects for the industrial development of territories, in 2020 the Government of the Russian Federation adopted a regulation on the procedure for compensating losses resulting from damage to the habitat of indigenous minorities caused by economic activities⁵. In accordance with this document, subsoil user companies will compensate for damage caused to Russia's indigenous minorities on the basis of a special agreement. In particular, the Republic of Sakha (Yakutia) has decades of experience in conducting ethnological expert reviews of projects that assess the impact of changes in the habitat of small-numbered peoples and the socio-cultural situation on the development of the ethnos, which makes it possible to determine existing or potential threats of interethnic conflicts in society [14; 15].

The purpose of our work is to draw up a social portrait of an Arctic resident in the conditions of industrial development of the territory. The scientific novelty of the study lies in creating of an original multidimensional characteristic of an Arctic resident of the Russian Federation helping to form an idea of the social characteristics and motivational attitudes of the indigenous population in the area of the planned implementation of large-scale investment projects for the extraction of natural resources. In general, this will help to ensure a balance of interests between the population of the Arctic, state structures, and subsoil user companies.

⁵ "On validation the regulation on the procedure for compensation for losses caused to the indigenous peoples of the Russian Federation, associations of indigenous peoples of the Russian Federation and persons belonging to the indigenous peoples of the Russian Federation, as a result of damage to the original habitat of indigenous small-numbered peoples of the Russian Federation by the economic activities of organizations of all forms of ownership, as well as by natural persons": Government Decree no. 1488, dated September 18, 2020. Available at: <https://www.garant.ru/products/ipo/prime/doc/74563696/> (accessed: May 31, 2021).

Theoretical aspects of the research

Sociologists, politicians, psychologists, medical workers, educators, etc., use personality portraits of various categories of citizens quite extensively in their work. Obviously, without certain characteristics of certain groups of people it is difficult to understand the patterns in their behavior, to predict it in the future for different situations and, accordingly, to develop a strategy for its management. This substantiates the relevance of compiling social portraits for science and practice.

The theoretical basis of compiling social portraits is the concept of social action developed by the German sociologist M. Weber [16]. In his modern theory of social stratification, the key criterion for social definition of a person is not class affiliation, but position in economic space which influences life chances. The status positions of individuals allow grouping them into sets [17], each of which has its own lifestyle, privileges, etc.

In recent years, researchers, related to the studying the integral aspect of the social portrait of the population based on the assessment of the social attitudes index, have been actively developing [18]. In this case, the social portrait is understood as an integrated description of the social essence of an object (a social group), including the characteristics of all its components, as well as social processes and relations associated with it. As a rule, the main social and demographic features of the object, sociocultural, economic and political attitudes, values and preferences are taken into account here. At the same time, imbalances in such socio-demographic indicators can become a cause of economic and environmental disadvantage. Modern challenges to the environment and changes in behavior culture also act as an important dominant in studying the social portrait of the population [19].

It is necessary to take into account that a certain social group is characterized by intra-group economic, ecological and social standards, which are expressed, for example, in material well-being, the

possibility of living in a favorable environment, etc. At the same time, the social portrait of the population does not adequately reflect the issues of the preservation of ethnic groups, traditional culture and everyday life, economic activities of indigenous peoples [20]. The ethnological approach is not fully used in management practice, which complicates, in particular, the implementation of strategic decisions in the Arctic [21].

One of the indicators of the social portrait of society is the population's attitude to life. It reflects the social well-being of citizens and assesses their position related to various changes. This attitude can be expressed in social consolidation – the process of uniting people into groups to address certain issues. The presence of conflicts of interest in the interaction of stakeholders, such as businesses and indigenous peoples, can act as one of the elements of the social portrait of the population, making it possible to identify a certain Arctic vector of social and environmental preferences.

Economic sociology employs a variety of approaches to the study of the social portrait of the population and individual social groups. For example, the Public Opinion Foundation (FOM) used the following criteria in compiling a social portrait of young people (“Generation Y”): life satisfaction, financial situation and income structure, job availability, expectations about the economic development of Russia, loyalty to the authorities, political attitudes, and protest attitudes⁶.

Sociological Institute of the RAS uses a comparative intergenerational approach to study characteristics of Russian youth, on the basis of which they identify their specific qualities and values. The main criteria for compiling such a social portrait are life goals and plans, human and social capital, intergenerational mobility, social activity,

⁶ “Generation Y”: a social portrait of modern youth aged 18-25 according to recent data compiled by the Public Opinion Foundation. Available at: https://bd.fom.ru/report/cat/home_family/molodezh/press_r140410np (accessed: May 31, 2021).

moral and ethical values, leisure time, and personal and family life⁷. Some studies analyze family status, standard of living, work and employment, choice of profession, social well-being, and value orientations as characteristics of the social portrait of young people [22].

Some researchers use an approach based on a comparative analysis of high-income and low-income groups of the population, which allows assessing their consumer attitudes and expectations, as well as highlighting trends that characterize employee behavior, labor mobility, employment and unemployment [23].

Turning to the question concerning the study of the social characteristics of Arctic residents, it is worth noting that indigenous peoples are most often the object of study in articles on medicine, tourism, culture, ensuring social adaptation, etc. The literature review of scientific studies demonstrates that the method of compiling social portraits is actively developing and applied in different situations: the circle of customers of social portraits is increasing year by year.

Over the previous quarter century, there has been a significant increase in the theoretical and applied aspects of sociology, which is reflected in the creation of social portraits in solving problems in various sciences and sectors of the national economy. However, insufficient attention has been paid to studying the social portrait of an Arctic resident, especially in the context of its industrial development. Considering that the population of the Arctic zone of the Russian Federation has centuries-old traditions, the social portrait of its inhabitant acquires special importance for the effective solution of various social, economic and ecological tasks in the northern territories of the country.

⁷ Youth of the new Russia: value priorities. Available at: <https://dogmon.org/molodeje-novoj-rossii-cennostnieprioriteti.html> (accessed: May 31, 2021).

Research methods and methodology

The theoretical basis of the research is the concept of benefit sharing by the interested parties (business, authorities, local population) in the industrial development of the Arctic [24]. The study is based on the results of sociological surveys of the population of the Arctic regions of the Russian Federation, where the projects of industrial development of the territory are implemented.

It is especially important when describing the social portrait of this category to identify the respondents' goals and attitudes toward natural resource extraction projects located in the Arctic, as well as to raise the concerns of the local population. A separate side of the analysis is the category of traditional trades, as it is this type of activity that serves as a source of income, food, and cultural tradition for the residents of the Arctic region. Due to industrial development and, consequently, changes in the environmental situation, people's attitude toward traditional activities is gradually changing.

Surveys of the local population were conducted in 2017–2020 as part of the ethnological examination of projects in the Arctic zone of the Russian Federation, particularly in the Republic of Sakha (Yakutia), as well as in the Taimyrsky Dolgano-Nenetsky municipal district of Krasnoyarsk Krai. The total sample of the study was 859 people. We used a cluster survey, where settlements, located in the area of industrial development projects in the Arctic, were used as clusters. The sample included all legally capable citizens over the age of 18 at the time of the survey, who were present at specially organized meetings with representatives of the scientific expedition. We used a face-to-face questionnaire survey as the research method in which respondents read the questions independently and choose their answer options. If a participant of the survey had difficulties filling out the questionnaire independently (for instance,

Table 1. Sociological research in the framework of the ethnological expertise of projects, 2017–2020

Project, place of implementation, company, year of the survey	Settlement	Number of respondents, people.
Placer gold mining, Suor-Uyalaakh stream, Ust-Yansky ulus, Yakutia, "ADK" LLC, 2017	Ust-Yansk	51
	Ust-Kuyga	40
	Kazachye	18
	Khayyr	20
Geological study of the placer diamond deposit, Polovinnaya River, Anabar National (Dolgano-Evenki) ulus (district), Yakutia, "Arctic Capital" LLC, 2017	Yuryung-Khaya	29
	Saskylakh	101
Placer gold mining, Mokrundya stream, Srednekolymsky district, Yakutia, "ADK" LLC, 2018	Srednekolymsk	101
	Svatay	65
Exploration and mining of placer gold, Artyk river, Momsky district, Yakutia, "Vostok" LLC, 2019	Sasyr	50
	Ust-Nera	62
	Artyk	22
Mining of placer diamonds at the Uchakh-Ytyrbat deposit, Oleneksky Evenki National District, on the Ochous River, Lyaseger-Yuryakh, Anabar National (Dolgan-Evenki) ulus (district), Yakutia, JSC "Anabara Diamonds", 2020	Olenyok	114
	Kharyyalakh	16
Assessment of the consequences of an emergency oil spill at CHP-3, Norilsk, Taimyr Dolgan-Nenets Municipal District, Krasnoyarsk Krai, Arctic Development Project Office, 2020	Dudinka, Norilsk, tribal communities in the Avam tundra	170
Total:		859

correct translation), the questionnaire was filled out together with a representative of the scientific expedition.

The localities included in the study sample are presented in *Table 1*.

The study sample included both women (48% of respondents) and men (52%).

While conducting sociological surveys we have solved a number of tasks. The first of them is related to identifying the attitudes of local residents to socio-economic and ecological problems and developing recommendations for improving the quality of life in the community. The second task is aimed at identifying the most promising areas of the district which it is advisable to develop with the support of the mining company. The third task of the study is to find the relationship between socio-demographic indicators of the population and the perception of socio-economic and ecological problems of the territories where mining will be carried out. The fourth task is related to identifying the attitude of local residents to the economic activities of an extractive company in the territory

of traditional residence. The fifth task is aimed at determining possible formats of compensation for indigenous peoples in case of economic activities on the territory of their residence for the extraction of mineral resources. The last task is to research the needs of local residents which should be taken into account by extractive companies when exploring and extracting minerals.

In addition, sociological surveys assessed the level of awareness of local residents about the activities of subsoil user companies in the area of residence.

Results of the research

Studying and compiling a social portrait of local residents of the Arctic regions is important in the justification and implementation of investment projects for the territories' industrial development. The portrait reveals the behavioral intentions and social attitudes of local residents which must be taken into account when developing recommendations for building effective communication between local residents, company representatives, and the authorities.

Table 2. Socio-demographic characteristics of respondents who participated in the survey

Characteristic	Number of respondents, people (859 people in total)	Percentage of the total number of respondents, %
Distribution by locality		
Distribution by gender		
Men	451	52.5
Women	408	47.5
Distribution by marital status		
Married	552	64.3
Not married	174	20.3
Divorced	62	7.2
Widower/widow	71	8.2
Distribution by number of children		
No children	134	15.6
1 child	158	18.4
2 children	336	39.1
3 or more children	231	26.9
Distribution by age		
18–30 y.o.	215	25.0
31–40 y.o.	268	31.2
41–50 y.o.	169	19.7
51–55 y.o.	58	6.8
56–60 y.o.	61	7.1
Over 61 y.o.	88	10.2
Distribution by type of activity		
Employed	545	63.4
Unemployed	41	4.8
Temporarily unemployed	73	8.5
Retiree	95	11.0
Housewife	29	3.4
Student	41	4.8
Other	35	4.1
Distribution by field of activity		
Public sector employee	62	37.8
Employee of an extractive company	78	7.2
Individual entrepreneur	76	9.1
Hired worker	46	8.8
Hunter	74	5.4
Reindeer herder	75	8.6
Fisherman	123	8.7
Other	62	14.4
Distribution by source of income		
Salary at the main job	502	58.4
Income from traditional economic activities	128	15.0
Pension, benefits	109	12.7
Additional earnings (provision of temporary services)	87	10.1
Other	33	3.8
Distribution by income*		
up to 10,000 rub.	62	9.0
10 000–20 000 rub.	121	17.6
20,000–30,000 rub.	158	22.9
30,000–40,000 rub.	163	23.7
above 40,000 rub.	185	26.9
* The data on income are presented without taking into account the respondents of Norilsk, as no income survey was conducted in this locality.		

To compile a social portrait of the population in conditions of industrial development of the territory, the article proposes to use the following information.

A. Socio-demographic characteristics of indigenous Arctic residents are: age and gender of respondents, nationality, marital status, number of children, level of earnings, types of employment.

Traditionally, the Arctic regions have been inhabited by small indigenous peoples with a certain legal status. When describing the social portrait of an Arctic resident, it is important to understand how its population identifies itself. The results of the survey have showed that the majority of respondents identify themselves as representatives of small indigenous peoples: Evenks, Evens, Yukaghirs, Dolgans (*Tab. 2*).

It is also worth noting that certain groups of respondents specifically indicated that they are residents of the North, while they did not name their nationality, but often attributed: “Born and raised in the North”. This fact is largely explained by the desire of this group of people to receive benefits on an equal basis with indigenous small-numbered peoples. The respondents deliberately called themselves as “residents of the North”, thereby showing their involvement in this territory and their own importance as a local resident.

The economic problems that concern the surveyed residents are presented in *Figure 1*.

In the first place in importance among them is the problem of high food prices, in the second place is the lack of jobs and low income. We should note that the distribution of respondents’ answers regarding the problems is quite even. The geographical location of the uluses where the local population lives and the low level of medical services, as well as the gender and age of the respondents do not critically influence the distribution of answers.

It is worth noting that the indigenous peoples of the Russian Arctic are among the low-income groups of the population, while making a profit from economic activities is not their main goal [25; 26]. The modern model of traditional nature management in these territories is based on commodity exchange and the practice of sharing which is quite in line with the ancestral traditions of benefit sharing and social justice [27].

The most significant social problems (*Fig. 2*) include the outflow of young people, the lack of organized forms of leisure, the loss of people’s connection with their culture and traditions.

The significance of the problem related to the outflow of young people is also confirmed by the analysis of the qualitative characteristics that the respondents left in the questionnaire according to their desire. Thus, for the sake of young people, the older generation is ready to change its ways

Figure 1. Key economic problems of concern to residents of the Arctic, %

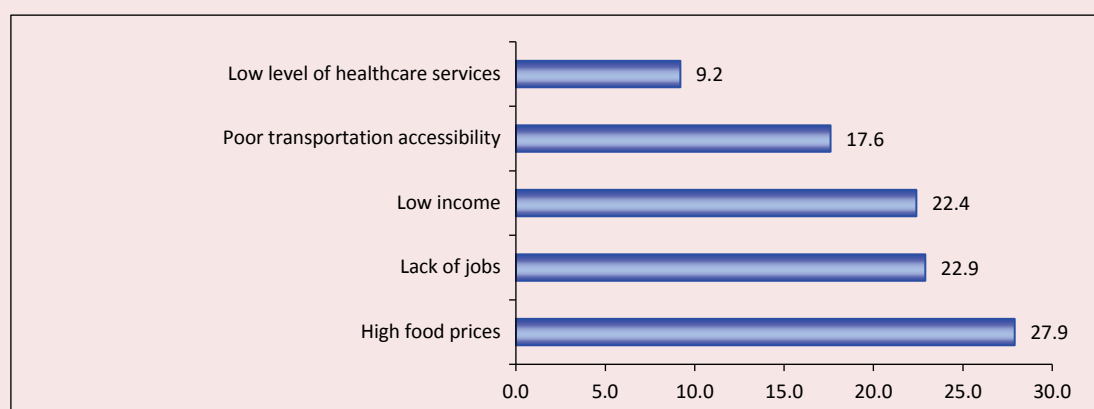
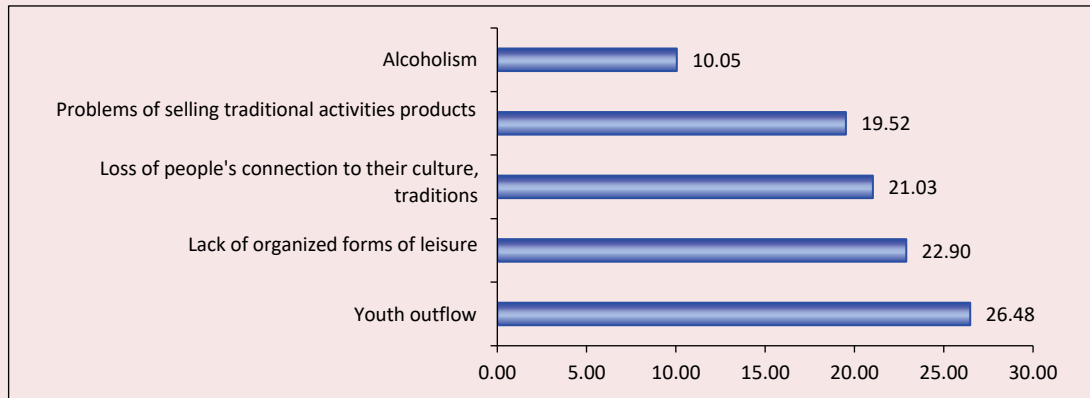


Figure 2. Social problems of concern to the surveyed residents, %



of life which is largely explained by the presence of the desire to leave their land to the younger generation, to continue and develop traditional nature management.

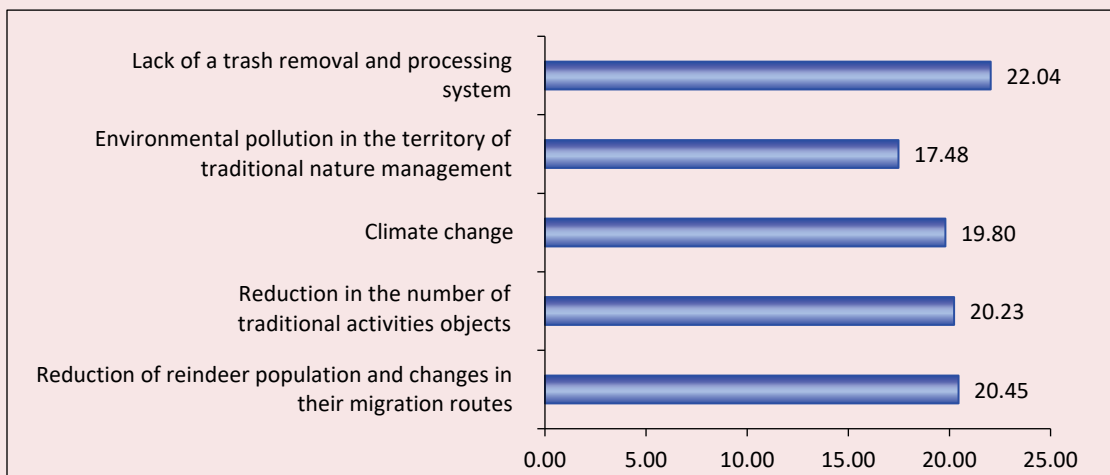
The residents of the Arctic regions surveyed take the assessment of the environmental situation seriously (*Fig. 3*).

The strong connection of indigenous people with the territory where they live enables them to respond flexibly and in a timely manner to the ongoing ecological and, in particular, climate changes. The vast majority of survey participants

understand the ecological problems they face and which of them are associated with the industrial development of the Arctic zone territories of the Russian Federation. Industrial development of territories often has a devastating effect on local ecosystems, which, in turn, contributes to the disappearance of indigenous cultures and sustainable livelihoods, including food resources.

Almost all of the local residents interviewed are objectively aware of the negative impact of the economic activities of resource extraction companies on the environment and the conditions

Figure 3. Environmental problems of concern to the surveyed residents, %



of traditional nature management. The answers of the respondents on the presented environmental problems are distributed fairly evenly. The most urgent problems are the lack of a system for removing and processing waste, a decrease in the number of reindeer and changes in their migration routes, and a reduction in the number of traditional activities.

Another issue of concern to residents is the waste generated by extraction of minerals, as well as disturbed lands, and quarries. Due to their close relationship with land, water, and food resources, indigenous peoples are a particularly vulnerable category of the population during the extraction of minerals. Due to the actions of subsoil user companies the local population does not have access to a number of territories; soil, water, and atmosphere are polluted by the co-products formed during extraction of resources. It is important that such environmental impacts do not become a cause of conflict between the industry, the state and the local population.

We should note that indigenous peoples of the Arctic are the most affected by climate change which also changes the temperature and ice regimes. As a result, access to traditional hunting and fishing grounds is decreasing, which is damaging to cultural practices and, consequently, to the social cohesion of indigenous peoples. Similar studies have been conducted by the Intergovernmental Panel on Climate Change and foreign scientists [28; 29; 30], who indicate that climate policies will not succeed unless the current relationship between the state and indigenous peoples is restructured and transformed.

B. The attitude of local residents to traditional activities.

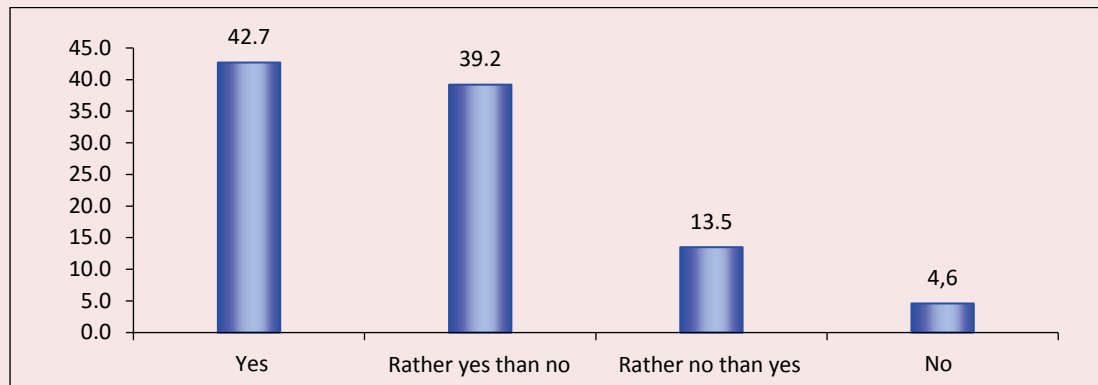
The close connection with the territory of residence remains a constant feature in the identification of indigenous peoples. The traditions of the local population have always been a source of pride for them. The indigenous population of

the Arctic has developed such traditional trades as reindeer herding, fishing, and hunting. Another activity mentioned by respondents during the survey was the collection of mammoth tusks (paleontological remains) which are then used as fabricating material. Mammoth bone is in demand in Russian and foreign bone-carving workshops, non-traditional medicine, so Arctic residents collect it in order to earn money. Many of the respondents pointed out that this work is hard, associated with a risk to life and does not bring a stable income, but the income of respondents in this employment type is significantly higher than in the traditional crafts.

Attitudes toward traditional activities and their assessment by the local population are very different and contradictory. The perception of the value of traditional crafts is influenced by the area of residence. For instance, in some settlements, traditional crafts are a source of food resources and do not bring additional income, while in others, on the contrary, they are considered to be the main source of income.

Residents of the rural locality of Sasyr in the Momsky District of Yakutia note that traditional activities are extremely important to them. Only 14% of the survey participants from this locality indicated that they do not engage in traditional activities either for the purpose of making money or for subsistence. The residents of Srednekolymsk District (Srednekolymsk, Svatay) perceive traditional activities as an extremely unprofitable occupation. Some respondents explain this by the lack of opportunities to sell the products of traditional activities. It is worth noting that the standard of living of this group of respondents is much lower than that of the others, so they are forced to find new ways to generate income. The vast majority of the population of Olenek rural settlement. Olenek and Kharyyalakh villages. Kharyyalakh of the Olenek District of Yakutia treat traditional activities as a source of food.

Figure 4. Readiness to support projects of industrial development of the Arctic, %



C. The attitude of local residents to the industrial development of the territory.

Industrial development projects in the Arctic remain an extremely important topic for the local population. Its vast majority understands that they live in an area rich in resources. In a survey of local residents, up to 70% of respondents in some areas chose such statements. In general, the local population has a positive attitude toward industrial development projects in the Arctic (*Fig. 4*).

The answers were distributed as follows: 39.2% of the respondents express doubt in supporting the activities of the subsoil user company, i.e. they choose the answer “rather yes than no” to the question posed; 13.5% – “rather no than yes”. These survey participants are in the risk zone, as their actual behavior may differ from the attitudes at the time of the survey. In addition, men are more likely to support projects for the industrial development of Arctic territories than women.

The vast majority of respondents understand that industrial development projects in the Arctic are harmful to the environment, but at the same time, this position does not affect the attitudes associated with supporting the activities of companies for the industrial development of these territories. About half of the respondents perceive resource extraction projects as an opportunity to get

a job in their native places and improve the quality of life in the area where they live.

Among the problems in terms of industrial development of territories, the survey participants named the lack of information about the projects being implemented, the lack of well-established communication between the local population and representatives of subsoil user companies. The need for closer communication with company representatives and their obligatory assistance in the socio-economic development of the Arctic territories was noted.

The type of activity of the respondent does not affect the decision to support the activities of industrial development of the territory. Respondents engaged in traditional trades are characterized by the attitude that they are owners of minerals. This explains their reluctance to support industrial development projects in the Arctic.

According to local residents, industrial development projects should aim to allocate fair compensation from the intended activities. The definition of compensation depends on the specific area. Most respondents wish to receive a monthly monetary payment, as well as to have financial support for the socio-economic development of the ulus and settlements in the zone of influence of the project.

Conclusions and discussion

Taking into account the analyzed data we can say that a typical resident of the Arctic has the following socio-demographic characteristics: age from 18 to 40 years old, lives in a large family, estimates his marital status as married, has two children. The education level of the Arctic regions residents is fairly evenly distributed across three main categories: secondary general, secondary special and higher education. For the most part, the typical representative of the Arctic works in the budgetary sphere on a full-time basis, the earnings from the main place of work being his or her main income. The level of earnings strongly depends on the area of residence, but there is a general trend – the level of respondents' income is more than 40 thousand rubles, and it does not always consist of wages only. The survey participants note that their total income includes additional income from traditional activities, temporary services, as well as benefits and pensions.

The local population is actively engaged in traditional activities, they are especially popular among men aged 30 to 50 years. Women very rarely note that they are engaged in traditional activities. Among the younger generation, traditional activities are not particularly popular. On average, the income of the local population from them ranges from 20 to 30 thousand rubles, which is lower than the income from other types of activities. Especially interesting is the fact that respondents engaged in traditional activities often consider themselves unemployed, therefore, ready for other types of activities, willing to be employed. Many people note that traditional activities are additional employment that does not bring income. The vast majority of rural residents also perceive traditional activities as a source of food resources.

On the whole, when characterizing the occupation of traditional activities, it is important to note that the share of the population, engaged in this type of activity, tends to decrease. This

situation is of concern to the local population: some respondents say that the industrial development of the Arctic territory should help sell the products of traditional activities, as well as preserve the traditional culture of indigenous peoples.

The local population of the Arctic is very wary of anything new and has a hard time accepting newcomers. Nevertheless, the respondents open up to the interviewer, talk about their problems, and leave additional comments. From the answers of the respondents it can be understood that, on the one hand, they are waiting for people to come, on the other hand, they are afraid of them. Local residents understand that industrial development projects in the Arctic affect the environment and can harm traditional activities, but at the same time provide an opportunity for socio-economic development of the territories.

The most acute problem for residents of the Arctic regions is related to the outflow of young people. It is its awareness that makes the local population adjust its views for the sake of maintaining a connection with the younger generation. The typical resident of the Arctic is concerned about the following problems: high food prices, lack of jobs, low income, among environmental problems – reduction of the reindeer population and changes in their migration routes, reduction of traditional activities, climate change. It is worth noting that these problems are highlighted by all respondents, regardless of their socio-demographic characteristics.

It should be understood that indigenous peoples are not passive observers in the development of Arctic territories. Indigenous leaders seek to engage in dialogue between government and industry in order to reach agreements that are beneficial to their community⁸.

⁸ The leaders of indigenous peoples and the leadership of the regions make proposals on additional measures to support small indigenous peoples. Available at: <https://news.myseldon.com/ru/news/index/232400824> (accessed: May 31, 2021).

The relationship between subsoil user companies and local communities is crucial, especially during the formative stages of a project's investment idea. Indigenous peoples without industrial development often face serious vulnerabilities associated with the globalization of development. Large-scale industrial projects inevitably have an impact on local people and the environment. Climate change, loss of biodiversity, and the loss of biodiversity force local peoples to adapt to the transforming conditions of their livelihoods in a variety of ways [31]. Arctic natives possess various types of traditional ecological knowledge, which helps them understand and predict environmental changes.

Worldwide, active measures to protect the rights of indigenous minorities are welcomed. Decisions on the industrial development of the Arctic must be based more on the opinion of indigenous peoples, who must be involved in the evaluation and various discussions on resource extraction projects.

It is also advisable to conclude agreements between indigenous peoples and industrial companies, and to monitor the fulfillment of socio-economic and environmental indicators in the future. It is important that the local residents during the industrial development of the Arctic get new

opportunities for labor and educational activities. Taking into account the characteristics of an Arctic resident, obtained in the course of the study, subsoil user enterprises and state structures can avoid claims, conflicts and harmonize interaction when promoting economic interests.

Thus, our study develops the theoretical provisions of economic sociology concerning the economic behavior of the population in the conditions of industrial development of the Arctic. We have developed theoretical approaches to the formation of a social portrait of the Arctic residents on the basis of sociological surveys. The work has established that the peculiarity of the Arctic residents is their economic behavior based on a pragmatic approach and the receipt of benefits. Also, a resident of the Arctic is focused on the preservation of the habitat of the North peoples and the development of traditional activities.

The developed theoretical approaches to the formation of the social portrait of the Arctic residents can be used by state authorities in the implementation of strategies for socio-economic development of the Arctic, justification and implementation of investment projects for the industrial development of the territory.

References

1. Potravnyi I.M., Kalavrii T.Yu., Larin A.S. Analysis of the impact of large-scale projects in the sphere of nature management: ecological and social aspects. *EKO=ECO Journal*, 2013, no. 11, pp. 145–158 (in Russian).
2. Berman M., Schmidt J.I. Economic effects of climate change in Alaska. *Weather, Climate, and Society*, 2019, vol. 11, pp. 245–258.
3. Tysiachniouk M.S., Henry L.A., Tulaeva S.A., Horowitz L.S. Who benefits? How interest-convergence shapes benefit-sharing and indigenous rights to sustainable livelihoods in Russia. *Sustainability*, 2020, vol. 12(21), pp. 1–22. DOI: 10.3390/su12219025
4. Lazhentsev V.N. Public nature of the concepts for economic development in the Northern and Arctic regions of Russia. *Ekonomicheskie i sotsial'nye peremeny: fakty, tendentsii, prognoz = Economic and Social Changes: Facts, Trends, Forecast*, 2016, no. 4 (46), pp. 43–56. DOI: 10.15838/esc.2016.4.46.2 (in Russian).
5. Denisov V.N., Chernogradskii I.M., Potravnyi I.M., Ivanova P.Yu. Directions of the balanced socioeconomic development of the Arctic Zone of Russia (with the example of Yakutia). *Studies on Russian Economic Development*, 2020, vol. 31, no. 4, pp. 404–410. DOI: 10.1134/S107570072004005X
6. Gassiy V., Potravnyi I. The compensation for losses to indigenous peoples due to the Arctic industrial development in benefit sharing paradigm. *Resources*, 2019, no. 8 (2), 71. DOI: 10.3390/resources8020071

7. Novoselov A., Potravny I., Novoselova I., Gassiy V. Sustainable development of the arctic indigenous communities: The approach to projects optimization of mining company. *Sustainability*, 2020, no. 12 (19), 7963. DOI:10.3390/su12197963
8. Potravnaya E., Kim Hye-Jin. Economic behavior of the indigenous peoples in the context of the industrial development of the Russian Arctic: A gender-sensitive approach. *REGION: Regional Studies of Russia, Eastern Europe, and Central Asia*, 2020, no. 9 (2), pp. 101–126.
9. Baisheva S.M. National daily life settlements Yakutia in the context of sociological research. *Arktika i Sever=Arctic and North*, 2014, no. 14, pp. 1–15 (in Russian).
10. Sleptsov A.N. Arctic development vector of North-Eastern Federal University named after M.K. Ammosov. *Vysshee obrazovanie v Rossii=Higher education in Russia*, 2014, no. 5, pp. 115–122 (in Russian).
11. Samsonova I.V., Neustroeva A.B., Pavlova M.B. Relationship issues between the indigenous people of the North and exploration companies of the Sakha Republic (Yakutia). *Sotsiodinamika=Sociodynamics*, 2017, no. 9, pp. 21–37 (in Russian).
12. Tulaeva S., Tysiachniouk M., Henry L., Horowitz L. Globalizing extraction and indigenous rights in the Russian Arctic: The enduring role of the state in natural resource governance. *Resources*, 2019, no. 8 (4), 179. DOI: 10.3390/resources8040179
13. Sleptsov A.N. Legal problems of the quality of life of northerners in the Arctic zone of the Russian Federation. *Arktika XXI vek. Gumanitarnye nauki=Arctic 21st Century. Humanities*, 2013, no. 1, pp. 4–9 (in Russian).
14. Sleptsov A., Petrova A. Ethnological expertise in Yakutia: The local experience of assessing the impact of industrial activities on the northern indigenous peoples. *Resources*. 2019, no. 8, 123. DOI: 10.3390/resources8030123
15. Danilova E.N. Ethnological expertise: modern concepts and approaches. *Ural'skii istoricheskii vestnik=Ural Historical Journal*, 2018, no. 1(58), pp. 127–134. DOI: 10.30759/1728-9718-2018-1(58)-127-134 (in Russian).
16. Brain R.M. The ontology of the questionnaire: Max Weber on measurement and mass investigation. *Studies in History and Philosophy of Science Part A*, 2001, vol. 32, issue 3, pp. 647–684. DOI: 10.1016/S0039-3681(01)00026-7
17. Weber M. Class, status and party. In: C. Belanovskii (Ed.). *Sotsial'naya stratifikatsiya* [Social Stratification]. Issue 1. Moscow: IEF RAS, 1992. Pp. 19–38 (in Russian).
18. P.O. Ermolaeva et al. *Sotsial'nyi portret naseleniya: metodologiya, osnovnye kharakteristiki* [Social portrait of the population: methodology, main characteristic]. Kazan: Artifakt, 2014. 92 p.
19. P.P. Velikii (Ed.). *Ekologicheskii vyzov i kul'tura povedeniya v prirodnoi srede sotsiuma regiona* [Ecological challenge and culture of behavior in the natural environment of the region's society]. Saratov: Saratovskii Istochnik, 2013. 239 p.
20. Loginov V.G., Ignat'eva M.N., Balashenko V.V. Ethno-socio-ecosystem approach to the assessment of the vital activity of the indigenous small-numbered peoples of the North. *Ekonomika regiona=Economy of Region*, 2018, vol. 14, no. 3, pp. 896–913. DOI: 10.17059/2018-3-15 (in Russian).
21. Dettler G.F. Economic behavior of the indigenous peoples of the Russian North: statement of the problem. *Vestnik Chelyabinskogo gosudarstvennogo universiteta=Bulletin of Chelyabinsk State University*, 2019, no. 9(431), pp. 32–42. DOI: 10.24411/1994-2796-2019-10904 (in Russian).
22. Eshpanova D.D., Nysanbaev A.N. A social portrait of young people in today's Kazakhstan. *Sotsiologicheskie issledovaniya=Sociological Studies*, 2004, no. 12(248), pp. 86–95 (in Russian).
23. Makhyanova A.V. Social portrait of population: the comparative analysis of highly-profitable and low-profit groups. *Diskussiya=Discussion*, 2016, no. 9 (72), pp. 61–65 (in Russian).
24. Petrov A.N., Tysiachniouk M.S. Benefit sharing in the Arctic: a systematic view. *Resources*, 2019, no. 8 (3), 155. DOI: 10.3390/resources8030155
25. Vlasova T.K., Volkov S.G. World experience in assessing the viability of agricultural activities in the rapidly changing Arctic. *Ekonomika sel'skogo khozyaistva Rossii=Russian Agricultural Economy*, 2019, no. 10, pp. 98–104. DOI: 10.32651/1910-99 (in Russian).

26. Markova V.N., Alekseeva K.I., Neustroeva L.B., Potravnaya E.V. Analysis and forecast of the poverty rate in the Arctic Zone of the Republic of Sakha (Yakutia). *Studies on Russian Economic Development*, 2021, vol. 32, no. 4, pp. 415–423. DOI: 10.1134/S1075700721040109
27. Kaduk E.V. Market Exchange and share-out practices in the Anabar district of the Sakha Republic (Yakutia). *Etnograficheskoe obozrenie=Ethnographic Review*, 2017, no. 6, pp. 111–127. DOI: 10.13039/100009094 (in Russian).
28. Carpenter K.A., Jampolsky J.A. Indigenous peoples: from energy poverty to energy empowerment. In: Guruswamy L. (Ed.) *Int. Energy Poverty*. Routledge, 2015. Pp. 39–52.
29. McGregor D. Reconciliation, colonization, and climate futures. In: Tuohy C.H., Borwein S., Loewen P.J., Potter A. (Eds.). *Policy Transform. Canada. Is Past Prologue?* University of Toronto Press, 2019.
30. Hoicka C.E., Savic K., Campney A. Reconciliation through renewable energy? A survey of indigenous communities, involvement, and peoples in Canada. *Energy Research & Social Science*, 2021, vol. 74, 101897. DOI: 10.1016/j.erss.2020.101897
31. Yakovleva E.N., Yashalova N.N., Vasil'tsov V.S. Climate security of the Russian Federation: statistics, facts, analysis. *Voprosy statistiki=Issues of Statistics*, 2020, vol. 27, no. 2, pp. 74–84. DOI: 10.34023/2313-6383-2020-27-2-74-84 (in Russian).

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