Arctic Indigenous Peoples: Preservation of Traditional Subsistence Activities

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Abstract. The Arctic zone is a unique part of Russia. This is a territory of a specific type of development and plays a strategic role from the point of view of national security and economy. The Arctic zone takes up 52.2% of the territory of the Sakha Republic (Yakutia) and is characterized by distinct extreme conditions of human activities. The most pressing problems include absence of developed transport infrastructure, unsatisfactory state of power supply, decrease in the rate of production of all economic sectors and decline of traditional kinds of subsistence activities. This results in a decrease in the population of the Arctic zone. The population of 13 Arctic districts has decreased 2.2 times since 1990: from 148.2 thousand people in 1990 to 67,714 people as per January 01, 2019.

The article describes traditional subsistence activities of indigenous peoples in the Sakha Republic (Yakutia). The authors analyzed regional regulatory documents dedicated to Arctic indigenous peoples, as well as to their traditional subsistence activities, reviewed the current state of reindeer herding, hunting provision and fishery in the Sakha Republic (Yakutia), identified the key problems, and proposed main ways of correcting them. They used methods of comparative analysis, statistical analysis, and analysis of the corpus juris to resolve these problems. The study is novel in the development of a set of business recommendations aimed at creating conditions for a transit to sustainable development of traditional subsistence activities in the republic.

1. Introduction

In the framework of the Russian state policy, the Arctic region has for centuries been considered as an important resource/economic and strategic territory; the history of development of high-latitude regions of Russia has been an inseparable part of a landmark process of Russian advancement to Eurasia, of formation of the largest country in the world. The President of the Russian Federation has multiple times drew attention to the importance of cultural and spiritual development of Arctic territories and with good reason emphasizing the increasing role and significance of the Arctic zone in terms of economic, technical/process and social development of Russia [12].

It ought to be mentioned that Russian and foreign researchers have been becoming increasingly interested in the cultural heritage of indigenous peoples of the North and their spiritual values. Preservation of the traditional culture is a fundamental foundation of social and cultural identity of small-numbered indigenous peoples of the North, and a necessary source of their distinctiveness; this is deeply rooted in history. Preservation and protection of cultural heritage of these peoples predetermine largely sustainable development of the multinational Russian Federation in whole [8, p. 3].
2. Relevance. Scholarly importance of the issue
The Arctic zone of the Sakha Republic (Yakutia) takes up a rather large territory of the Arctic zone of the Russian Federation; it is characterized by extreme natural and climatic conditions, low population density, high resource intensity, and spot nature of the industrial and economic development. Head of state Vladimir Putin signed Decree No. 220 "On the amendment of Decree No. 296 "On land territories of the Arctic zone of the Russian Federation" dated May 02, 2014" on May 13, 2019 [1]. Before that, five districts were included in the Arctic zone of the Russian Federation. The new decree introduced 8 other districts to the Arctic zone of the Russian Federation: Abyysky, Verkhnekolymsky, Verkhoyansky, Zhigansky, Momsky, Olenyoksky, Srednekolymsky, and Eveno-Bytantaysky districts.

The total area of the Arctic territory in the Sakha Republic (Yakutia) is 1,068.8 thousand sq. km. 13 districts (uluses) of the Arctic zone include 84 settlement-type municipal divisions, including 23 national such divisions, and 119 settlements: 2 towns, 10 urban-type settlements, and 108 villages [9, p. 5].

The key defining competitive advantages of the Arctic zone in Yakutia are as follows:
- the long-distance Northeast Passage (2,519 km) along 5 seashore districts of the republic with active ports;
- a unique transit potential of the territory ensuring the shortest route to the Northeast Passage for the countries of Asia-Pacific;
- significant natural/resource potential of the territory: economically recoverable mineral resources, resources of the unique mammoth fossil fauna, biodiversity of the fauna (hunting resources, fish fauna), high potential of surface water resources;
- high research potential, basic research infrastructure and potential for international cooperation of the Eastern Arctic;
- state policy of support, preservation and development of traditional subsistence activities of small-numbered indigenous peoples of the North (reindeer herding, fishery, hunting);
- stable environmental conditions, comparatively low environmental pressure on the territory, preservation of "intact" natural landscapes over vast areas, designation of half of the territory of the Arctic zone in the Sakha Republic (Yakutia) as the specially protected areas [10, p. 102].

Rights of small-numbered indigenous peoples are protected by three framework federal laws. These are Federal Law 82-ФЗ "On the guarantees of rights of small-numbered indigenous peoples of the Russian Federation" (1999) [2], ФЗ-49 "On the territories of traditional natural resource management by small-numbered indigenous peoples of the North, Siberia and the Far East of the Russian Federation" [3], and 104-ФЗ "On the common principles of organization of communities of small-numbered indigenous peoples of the North, Siberia and the Far East of the Russian Federation" [4]. However, these laws are not supported by by-laws; the federal legislation in this sphere is controversial or imperfect despite covering a wide range of issues.

More than 50 nations live in the territory of the Arctic zone in Yakutia. The largest small-numbered indigenous peoples in Yakutia are Evenks (21 thousand people, 52.6% of the total population of small-numbered indigenous peoples in the republic) and Evens (15 thousand people, 37.7%). The share of Dolgans, the Yukaghir and the Chukchi was insignificant - 9.7% of the total population of small-numbered indigenous peoples in the Sakha Republic (Yakutia).

Small-numbered indigenous peoples of the North in Yakutia also have significant differences in terms place of living, lifestyle, sources of subsistence, nature of relations with the environment. The service-utility lifestyle and method of production are the specific factors determining socioeconomic development of the group of indigenous ethnic groups in the North. A part of the population of these ethnic groups united into kinship communities is engaged in the traditional use of natural resources (reindeer herding, hunting, fishery, and foraging), which is the main source of food products and family income. This group involves the population of distant national settlements on the Arctic shore (tundra) and a part of the rural population of the wooden tundra. They have preserved traditional lifestyle of their respective ethnic cultures.

The other type of community of northern ethnic groups in Yakutia is represented by associated
population. This is indigenous population residing in small settlements with nontraditional city-forming (town-forming) industries. Indigenous ethnic groups take up a small relative share in the total population, are employed at industrial and budgetary organizations and primarily have low classified jobs. The primary source of their subsistence is the salary. Most often, these are people connected by kinship or members of kinship communities adapting to the European lifestyle. They do not fall out of touch with the population involved in traditional natural resource management, take part in fishing and hunting from time to time, own the reindeer kept in herds of kinship communities and communal farms. In the Sakha Republic (Yakutia), this kind of population is concentrated in district centers and large rural settlements in the areas inhabited by small-numbered indigenous peoples of the North.

The members of ethnic groups who live in cities and large settlements moved away from traditional trades and lifestyle, are in civilian service at budgetary institutions, are employed at industrial enterprises, or are entrepreneurs. They are adapted to the dominant culture, often enter into mixed familial-matrimonial relationships with members of other ethnic groups and may not speak their native tongue. This group may be considered assimilated population.

Each of these groups requires an individual approach; it is reasonable to use different economic and regulatory mechanisms to manage and regulate their living activities [9, p. 94].

Reindeer herding. Almost 2/3 of the global population of domestic reindeer are herded in Russia. They are depastured in the territory of more than 3 million square kilometers in tundra, wooden tundra, taiga and mountainous areas. In Russia, reindeer herding is the basis of cultures of numerous indigenous northern peoples with diverse traditions and vast experience of reindeer herding in various landscapes.

There were 156.8 thousand reindeer in farming units of all categories as per January 01, 2018 (92% of the population registered in 2017).

![Figure 1. Reindeer population development in farming units of all categories in the Sakha Republic (Yakutia) (thousand reindeer).](image-url)

Reindeer herding areas of the republic were defined on the basis of natural and climatic conditions: tundra, wooden tundra, mountainous taiga and taiga. The zone-based approach helped to establish standards for domestic reindeer herding and the burden for reindeer herders depending on the local conditions. Most reindeer are kept in mountainous taiga - 46%; in tundra - 35.7%; in taiga - 15.6%.

Currently, there are multiple patterns of reindeer herding developed in areas of compact settlement of small-numbered indigenous peoples of the North in the republic: from smallholdings to production cooperatives. There are 198 reindeer farms and kinship community alliances engaged in reindeer herding in the republic; they employ 1,490 people. Throughout the previous year, reindeer herders registered 38,752 newly-born reindeer fawns. Non-productive loss of reindeer: 34.4 thousand reindeer,
including death loss - 10.7 thousand reindeer, killed by other animals - 11.7 thousand reindeer, other losses - 11.8 thousand reindeer [8, p. 92].

The main factor of achieving positive trends in reindeer herding is the increase in state financial support of reindeer herding. The evaluation of effectiveness of state support of reindeer herding in the Sakha Republic (Yakutia) demonstrated low effectiveness of reindeer herding. This may be due to the fact that the largest relative share in the structure of reindeer herding expenses belongs to labor remuneration (42.5%), insurance premiums (12.3%) and amortization of fixed assets (13.6%). It ought to be mentioned, that the lower the monthly average salary of reindeer herders, the lower the prime cost of products.

The problems hindering the transition of reindeer herding to a qualitatively new level of development are as follows:
- no land surveying. Condition of reindeer pastures must be monitored;
- unsettled land use issues;
- no metrics to evaluate economics of reindeer herding;
- no business policies for managing reindeer herding;
- weak development of acquisition, technology and logistics, and of human resources;
- research into the effect of changes of the indigenous environment of small-numbered peoples and of the sociocultural context [11, p. 116].

**Fishery.** Fishery is based primarily on harvesting of whitefishes, the most significant whereof are broad whitefishes, muksun, nelms, and Arctic ciscoes. Currently, more than 89% of commercial catch is concentrated in Arctic uluses as they are confined to lower reaches of rivers. The largest part of this catch - about 80% - consists of whitefishes, who annually migrate upstream in the summer/autumn to spawn and downstream to estuaries in the winter. When the republic's fishing industry collapsed, the comprehensive system of fishery management was lost, and the new one has not yet developed. The fish are captured by fishing production cooperatives pooling most small-scale farming units and kinship communities of small-numbered indigenous peoples of the North. To strengthen the economy of northern districts and widen the range of employment of the indigenous population, the policy towards the North and the Arctic zone must be reviewed to return to the local processing of a part of the caught fish and create corresponding support facilities [12, p. 365].

**Hunting.** Hunting is one of the top priority kinds of traditional natural resource management of the small-numbered indigenous peoples of the North of Yakutia. The main objects of hunting in the Arctic zone and wild reindeer, sables, Arctic foxes, muskrats, and squirrels. Like in Russia in whole, the state regulation of hunting in the Sakha Republic (Yakutia) is characterized by interdepartmental interaction. Thus, the Ministry of Ecology, Natural Resource Management and Forestry of the Sakha Republic (Yakutia) is responsible for the development of a regulatory/administrative framework, whereas the Department of Hunting and Specially Protected Areas is the hunting regulating agency. The structure of hunting lands is as follows: generally accessible hunting lands - 96,790.1 thousand ha (31.7% of the total area of hunting lands of the Sakha Republic (Yakutia) (SRY)), assigned hunting lands - 131,184 thousand ha (42.9% of the total area of hunting lands of the SRY). The remaining hunting lands belong to the specially protected areas of regional significance. The common Arctic network consists of 66 specially protected areas of federal, republican or local significance with the total area of 594 thousand sq. km [10, p. 106].

The key problems of organizing rational use of hunting resources are as follows:
- imperfect legislation on the compensation of the damage inflicted on hunting resources as a result of business activities of the enterprises affecting the habitat of wild animals.
- slow rate of hunting organization measures on the territorial and internal levels;
- insufficient amount of materials for hunting organization measures degrades the quality of state monitoring of the state of hunting resources and habitats;
- no procedure for enforcing priority rights of small-numbered indigenous peoples regarding the use of hunting resources;
- weak system of business management of hunting.
environmental changes.

To ensure sustainable development of hunting, it is necessary to successfully insist on the timely finalization and consideration by the Federal legislative bodies of the republic's legislative proposals regarding enforcement of rights of small-numbered indigenous peoples to priority in the use of hunting resources; establish strict monitoring of population, reproduction and migration routes of animals, improve organization, economics, transportation and sale of hunting products; develop mechanisms to ensure transparent and just allocation of permits to hunting limited kinds of hunting resources in generally accessible hunting lands; implement operational hunting supervision in assigned hunting lands; amend federal laws to improve techniques of calculating the damage incurred by hunting resources as a result of destruction and dislocation of animal habitats caused by commercial activities, and compensation mechanisms; develop and approve the commercial hunting development plan of the Sakha Republic (Yakutia) in new economic conditions; review the entire system of stockpiling and sales of furs (development of auction marketplace on the republican and district levels) [10, p. 105]

3. Practical significance, propositions, results of implementation, and results of experimental studies

To conclude the analysis of development of traditional subsistence activities of small-numbered indigenous peoples of the North of the Sakha Republic (Yakutia), we ought to note the unique nature of this sphere of life of these peoples. It determines the socioeconomic well-being of the indigenous population being a part of the traditional nomadic and seminomadic culture of aborigines inseparably connected with preservation of the environment and sustainable development of the region. At the same time, traditional trades of peoples of the North are still overcoming consequences of a lingering crisis, which hinder their transformation on the basis of the modern material and technical infrastructure, state-of-the-art technologies, adaptation of various types of hunting and reindeer herding to the current requirements of the market economy, relations of partnership of users of natural resources and the state, industry, representatives of large-scale enterprises.

As for prospects of the republic's development, the major issue is the effect of intense industrial development of these territories on the native habitats of small-numbered indigenous peoples of the North, quality of their life and health.

The experience of industrial development of other parts of the world are not only fit for the Arctic zone, but may instead result not only in violent changes of the environment, but also in the irreparable damage to the quality of life and health of the indigenous population. Industrial and agricultural development of Arctic districts should primarily consider not only harsh climatic conditions, but also regional peculiarities of the environment, as well as the Northerner's lifestyle, subsistence activities and means of development of natural resources [15, p. 110].

The study we conducted demonstrated that there are following models of interaction of industrial companies with indigenous inhabitants in the republic currently:

1. Close interaction with a long-term perspective and coverage of the whole indigenous population. This model is fulfilled through cooperation agreements of companies with the organizations representing interests of indigenous peoples.

2. The local model characterized by interaction of extracting companies with the indigenous population living in the immediate vicinity of production facilities. A company signs a cooperation agreement regarding assistance or financing of a given project with a municipal division.

3. The advance model; it is observed when subsoil users do not practice a full-scale extraction of mineral resources in a given territory, but carry out exploration or construct technical infrastructure.

Unfortunately, these models of interaction do not ensure complete enforcement of rights of small-numbered indigenous peoples.

Therefore, the major problems of the current socioeconomic state of the republic's small-numbered indigenous people of the North include low standard of living, no interest of the youth in traditional subsistence activities and lifestyle, insufficient state support of traditional subsistence activities, widespread alcoholism, failure to take into account interests of the indigenous population in the
process of industrial development of territories. There is a long-felt need in reforming and adapting the mechanism of state support of small-numbered indigenous peoples of the North to changing economic conditions, in defining new approaches to resolving issues and priorities.

It is necessary to speed up consideration and adoption of federal targeted program "Socioeconomic development of small-numbered indigenous peoples of the North until 2025" in the framework of the law "On the guarantees of rights of small-numbered indigenous peoples of the Russian Federation." The Russian law does not regulate the issue of applications regarding creation of a list of places of traditional inhabitation and traditional subsistence activities of small-numbered indigenous peoples in the Russian Federation by public authorities of subjects of the Russian Federation to the Government of the Russian Federation, as well as the procedure for decisions as a result of consideration of such applications; this leads to unsubstantiated restrictions of rights small-numbered indigenous peoples of the Russian Federation due to non-inclusion of the territories inhabited by these peoples to that list. These territories remain outside the scope of the federal legislation regarding protection of native habitats, traditional lifestyle, subsistence activities and trades of small-numbered indigenous peoples in the Russian Federation.

It is necessary to consider the issue of establishing a procedure to approve a list of places of traditional inhabitation and traditional subsistence activities of small-numbered indigenous peoples in the Russian Federation to ensure their rights and legally protected interests.

4. Conclusion
To resolve the aforementioned problems, it is necessary to search for the most effective model of legislative regulation of rights of small-numbered indigenous peoples of the North; development of the community as an organizational/economic form of activity of small-numbered indigenous peoples of the North; improvement of status of traditional subsistence activities by means of state support; organization of activities associated with traditional trades; alcohol sales ban.

It is necessary to employ capabilities and activities of all levels of government (federal, regional and municipal), including financial capacity, to improve quality of life of the population and investment attractiveness of the territory as an obligatory condition of socioeconomic development in the framework of exercise of authority by local governance bodies, as well as of overriding and removal of problems.

Currently, there is a need in developing a mechanism of state support of social infrastructure projects in the North of Russia. We believe that it is necessary to ensure the following in the framework of development of a new mechanism:
- development of an infrastructure development program for natural and climatic conditions of the Arctic zone;
- stimulation of participation of economic entities located in the Arctic zone in the implementation of social infrastructure projects by means of privileges.

Currently, the republic's development is directly linked to the development of the Arctic zone in whole and development of each settlement, however small, in particular. However, to do that, it is necessary to invest in projects in the sphere of comprehensive improvement of territories and overhaul of infrastructure facilities of settlements.

It is important to develop such a roadmap to make the maximum possible effort to build a foundation for the future development of the Arctic zone and thus satisfy interest of all parties: inhabitants of northern regions, authorities of all tiers and investors.

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