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Formation of the Arctic Ethno-Economic Cluster as a Condition for Sustainable (Ecological and Ethno-Preserving) Development of the Region (On the Example of the Arctic Territories of the Krasnoyarsk Krai)

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Abstract. The paper considers the issues of ethno-demographic development and settlement of small-numbered indigenous peoples of the Arctic zone of the Russian Federation in the period between the 2002 and 2020 population censuses. The article analyzes the current state and development of the ethno-economic areas of the Arctic zone of the Krasnoyarsk Krai, assesses the potential for the development of traditional economic activity of indigenous peoples and identifies hindering factors. It is shown that the key mechanism for achieving the goals of sustainable development of traditional economic activities in the Arctic region is an active balanced cluster approach adapted to the specifics of ethno-economic habitats of indigenous minorities of the Arctic. The prerequisites and prospects for creating an ethno-economic cluster in the Arctic zone of Krasnoyarsk Krai are assessed. Promising areas of investment development of socio-economic potential and cooperative relations of traditional economic activities of indigenous minorities are identified. The results of the cluster formation will be increase in the degree of processing and in the output of traditional economic activities, increase in employment and improvement of the standard of living of indigenous small-numbered peoples, transformation of traditional economic activity into a full-fledged sector of the economy of the Arctic zone of the Krasnoyarsk Krai.

Keywords: *Arctic zone, indigenous peoples, ethno-economic area, traditional economic activity, ethno-economic cluster*

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Introduction

The Arctic territories of Russia are historical places of traditional residence of small indigenous peoples of the North, Siberia and the Far East (SIPN).

Preservation of the cultural, historical and ethnographic identity of these peoples and formation of a sector of traditional economic activities create additional opportunities for sustainable socio-economic development of the Arctic region.

The traditional economy of indigenous peoples is a set of economic activities, historically developed on a certain territory and evolutionarily adapted to local resource conditions, aimed at ecological, rational use of fauna and other reproducible natural resources through methods and forms passed on from generation to generation [1, Gladun E., Nysten-Haarala S., Tulaeva S., pp. 2–4; 2, Datta R., Hurlbert M.A., Marion W., p. 556].

The significance of the traditional economic activities of SIPN for the sustainable development of the Arctic is determined by the following circumstances.

On the one hand, traditional economy can be considered as a commodity sector of the economy, historically developed in territories with harsh natural and climatic conditions and limited opportunities for economic diversification, which provides employment (self-employment) and income for the majority of the population of remote northern villages, supplies market with in-demand products and contributes to food security in the Arctic regions.

On the other hand, being a way of life for indigenous peoples, traditional economic activity performs an ethnic-preserving function, contributes to the preservation of language and culture, and supports the ethno-social and ethno-demographic stability of these peoples.

Traditional economic activity, focused on the rational use of renewable natural resources, based on traditional values, providing self-employment and living conditions for indigenous peoples, is one of the aspects of the inclusive and sustainable development of the Arctic territories; it also plays a decisive role in preserving northern natural complexes for future generations [3, Brock T., Reed M.G., Stewart K.J.; 4, Meadows J., Annandale M., Ota L.].

Peculiarities of modern settlement of indigenous peoples in the Arctic zone of the Russian Federation

The Russian Federation is one of the largest multinational states in the world, formed on a federal basis. According to the All-Russian Population Census of 2020, representatives of 194 ethnic communities live in Russia: 145 groups and 49 subgroups¹. 47 of them are small indigenous peoples of the Russian Federation (SIP) — special population groups (up to 50 thousand people)

¹ In accordance with the methodological explanations of Rosstat for volume 5 of the Results of the All-Russian Population Census 2020 “National composition and language proficiency”, the national composition takes into account the grouping categories formed by the Institute of Ethnology and Anthropology named after N.N. Miklouho-Maclay of the Russian Academy of Sciences (IEA RAS) and agreed upon by the FANA of Russia, Rosstat, the Administration of the President of the Russian Federation, the Government of the Russian Federation (minutes of the meeting dated October 25, 2022 No. P-18). Rosstat. Methodological explanations for volume 5 “National composition and language proficiency”. URL: https://rosstat.gov.ru/storage/mediabank/Tom5_Metodolog_VPN-2020.docx (accessed 25 June 2023).

living in the territories of the traditional settlement of their ancestors, preserving their traditional way of life, economy and crafts². The total number of small indigenous peoples of the Russian Federation (according to the All-Russian Population Census of 2020) was 315.2 thousand people, of whom 306.3 thousand people (97.2%) lived in the territories of primary residence³.

A special place among the indigenous peoples of the Russian Federation belongs to the indigenous peoples of the Arctic, who have accumulated a wealth of experience of survival in extreme climatic conditions and have preserved their unity and harmony with nature, which is reflected in the nature of their traditional environmental management and culture.

Despite the large number of legislative and strategic documents on the development of the Arctic adopted in the Russian Federation in recent years, there is no unified and generally accepted definition of the boundaries of the Arctic zone of the Russian Federation (AZRF) and the indigenous peoples living on its territory. There are two interpretations:

- “basic” (in accordance with the “Fundamentals of the state policy of the Russian Federation in the Arctic until 2035”, approved by Decree of the President of the Russian Federation dated March 5, 2020 No. 164, Decree of the President of the Russian Federation dated May 2, 2014 No. 196 “On the land territories of the Arctic zone of the Russian Federation” (as amended by Decrees No. 287 dated June 27, 2017, No. 220 dated May 13, 2019, No. 164 dated March 5, 2020));
- “extended” (in accordance with Federal Law No. FZ-193 dated July 13, 2020 “On state support for entrepreneurship in the Arctic zone of the Russian Federation”).

The difference between them is significant, especially in terms of the boundaries at the level of constituent entities of the Russian Federation. These differences affect the interests of four Arctic subjects of the Russian Federation — the republics of Karelia and Komi, the Arkhangelsk Oblast and the Krasnoyarsk Krai (Table 1).

Table 1
Territorial structure of the Arctic zone of the Russian Federation according to the “basic” and “extended” interpretations

Regions	Territorial composition of the Arctic zone of the Russian Federation according to	
	“basic” interpretation (Decree of the President of the Russian Federation No. 164 dated March 5, 2020 “Fundamentals of the state policy of the Russian Federa-	“extended” interpretation (Federal Law No. FZ-193 dated July 13, 2020 “On state support for entrepreneurship in the Arctic zone of the Russian Federation”)

² The unified list of indigenous peoples of the Russian Federation, approved by Decree of the Government of the Russian Federation of March 24, 2000 No. 255 (as amended on December 18, 2021), includes 40 peoples of the North, Siberia and the Far East (approved by Decree of the Government of the Russian Federation of April 17, 2006 No. 536-r “On approval of the list of indigenous peoples of the North, Siberia and the Far East of the Russian Federation” (as amended on December 26, 2011); 7 peoples of other regions of Russia (mainly living in Karachay-Cherkessia, Udmurtia, Leningrad, Chelyabinsk, Pskov oblasts and Krasnodar Krai).

³ Rosstat. Results of the 2020 All-Russian Population Census. Volume 5 “National composition and language proficiency”. Table 17. Population of indigenous peoples of the Russian Federation. URL: https://rosstat.gov.ru/storage/mediabank/Tom5_tab17_VPN-2020.xlsx (accessed 25 June 2023).

	tion in the Arctic until 2035”, Decree of the President of the Russian Federation No. 196 dated May 2, 2014 “On the land territories of the Arctic zone of the Russian Federation”)	
1. Murmansk Oblast	all municipal districts	all municipal districts
2. Nenets Autonomous Okrug	all municipal districts	all municipal districts
3. Chukotka Autonomous Okrug	all municipal districts	all municipal districts
4. Yamalo-Nenets Autonomous Okrug	all municipal districts	all municipal districts
5. Republic of Karelia	3 municipal districts	6 municipal districts
6. Komi Republic	1 municipal district	4 municipal districts
7. Republic of Sakha (Yakutia)	13 municipal districts	13 municipal districts
8. Krasnoyarsk Krai	3 municipal districts	3 municipal districts fully and 1 municipal district partially
9. Arkhangelsk Oblast (excluding Nenets Autonomous Okrug)	7 municipal districts	9 municipal districts
10. Lands and islands located in the Arctic Ocean (Resolution of the Presidium of the Central Executive Committee of the USSR dated on April 15, 1926 “On declaring lands and islands located in the Arctic Ocean as the territory of the USSR” and other legal acts of the USSR)	All lands and islands located in the Arctic Ocean that have been discovered or may be discovered in the future, which did not constitute the territory of any foreign states recognized by the government of the USSR by the time of the publication of the Decree of the Central Executive Committee of the USSR dated on April 15, 1926	No data
11. Marine area	Internal sea waters, territorial sea, exclusive economic zone and continental shelf of the Russian Federation	Areas of the continental shelf of the Russian Federation for which state support measures are applied

The ambiguity (inconsistency, variability) of approaches to identifying the boundaries of the Arctic zone of the Russian Federation according to climatic, geographic, economic, management and other criteria has been repeatedly pointed out in the scientific literature [5, Zhukov M.A.; 6, Lukin Yu.F.; 7, Zhukov M.A., Krainov V.N., Telesnina V.M.; 8, Lukin Yu.F.]. In some cases, the official boundaries include areas that do not meet the Arctic criteria (for example, the southern part of the Turukhanskiy region) [9, Zhukov M.A., Krainov V.N., Popov D.A.].

Currently, 108.5 thousand representatives of 19 small-numbered indigenous peoples (35.4% of the total number of small-numbered indigenous peoples of the Russian Federation, accounted for by their areas of predominant residence) live in the Arctic zone of the Russian Federation, which in the “expanded interpretation” includes, fully or partially, the territories of 9 constituent entities of the Russian Federation (Fig. 1–2).

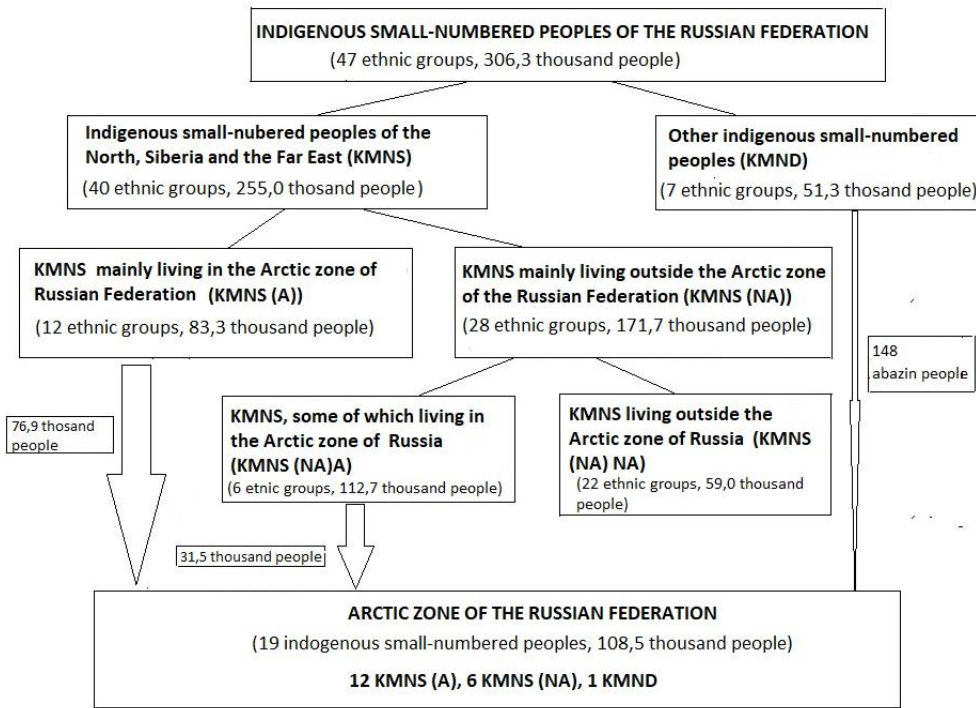


Fig. 1. Distribution of indigenous peoples of the Russian Federation by areas of predominant residence (calculated on the basis of data from the 2020 All-Russian Population Census⁴).

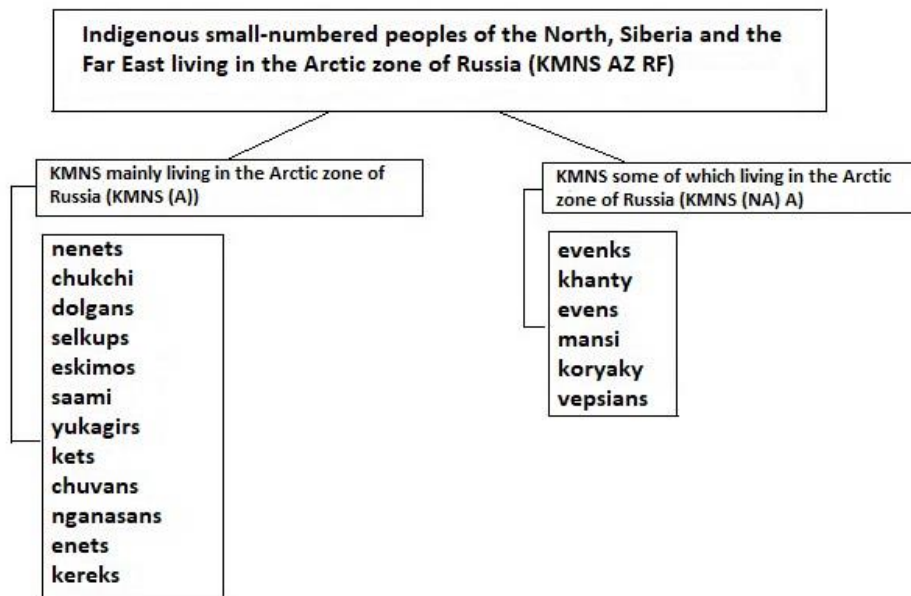


Fig. 2. Composition of small indigenous peoples of the North living in the Arctic zone of the Russian Federation.

More than 98% of indigenous peoples of the Russian Arctic live in 5 Arctic regions:

- Yamalo-Nenets Autonomous Okrug — 48,277 people;
- AZ of the Republic of Sakha (Yakutia) — 20,787 people;
- Chukotka Autonomous Okrug — 17,000 people;
- AZ of the Krasnoyarsk Krai — 13,647 people;

⁴ Rosstat. Results of the 2020 All-Russian Population Census. Volume 5 “National composition and language proficiency”. Table 17. Population of indigenous peoples of the Russian Federation. URL: https://rosstat.gov.ru/storage/mediabank/Tom5_tab17_VPN-2020.xlsx (accessed 25 June 2023).

- Nenets Autonomous Okrug — 6,722 people.

The remaining four Arctic regions of the Russian Federation (Murmansk Oblast, the Arctic zones of the Republics of Karelia and Komi, the Arkhangelsk Oblast without the Nenets Autonomous Okrug) account for less than 2% of the indigenous minorities of the Russian Arctic.

The largest indigenous small ethnic groups (85% of the total number of indigenous peoples of the Russian Arctic) are:

- Nenets — 47,070 people;
- Chukchi — 13,844 people;
- Evenks — 11,805 people;
- Khanty — 10,051 people;
- Evens — 9,382 people.

The share of indigenous minorities, predominantly living in the Russian Arctic (SIPN (A)), currently accounts for 70.9% of the total number of indigenous minorities in the Russian Arctic; the share of indigenous minorities partially residing in the Russian Arctic (SIPN (NA) A) is 29.0% (Table 2). The share of other small peoples partially living in the Russian Arctic (Abazins of the Yamalo-Nenets Autonomous Okrug (148 people)) is insignificant (less than 1%).

Table 2

“Arctic” and “non-Arctic” peoples in the total number of SIPN of the Russian Arctic

Indigenous small-numbered peoples of the North, Siberia and the Far East living in the AZRF	Total number in the Russian Federation, people	including residents of		Share of indigenous ethnos living in the AZRF, % of the total number in the Russian Federation	Share of indigenous ethnos living outside the AZRF, % of the total number in the Russian Federation
		AZRF	other regions (northern territories, SFD and FEFD regions)		
Arctic SIPN (SIPN (A)), total	83 336	76 874	6 462	92.25	7.75
including					
Nenets	48 985	47 070	1 915	96.09	3.91
Chukchi	15 638	13 844	1 794	88.53	11.47
Dolgans	8 032	7 360	672	91.63	8.37
Selkups	3 412	2 319	1 093	67.97	32.03
Eskimos	1 487	1 460	27	98.18	1.82
Saami	1 370	1 370	0	100.00	0.00
Yukagirs	1 739	1 266	473	72.80	27.20
Kets	1 028	590	438	57.39	42.61
Chuvans	776	743	33	95.75	4.25
Nganasans	667	651	16	97.60	2.40
Enets	196	195	1	99.49	0.51
Kereks	6	6	0	100.00	0.00
Non-Arctic SIPN AZRF (SIPN (NA) A), total	112 745	31 495	81 250	27.93	72.07
including					
Evenks	38 740	11 805	26 935	30.47	69.53
Khanty	31 006	10 051	20 955	32.42	67.58
Evens	19 522	9 382	10 140	48.06	51.94
Mansi	11 983	117	11 866	0.98	99.02
Koryaks	7 214	54	7 160	0.75	99.25
Vepsians	4 280	86	4 194	2.01	97.99

The division of indigenous peoples of the Russian Arctic into “Arctic” and “non-Arctic” is quite conditional and may vary with changes in the borders of the Arctic zone. Some SIPN classified as “Arctic” in Table 2 (Selkups, Yukagirs, Kets) have a fairly high concentration of residence outside the Arctic zone (25–45% of their total population). This is largely due to the “border” area of their traditional residence, which combines “Arctic” and “northern” features of economic and life-supporting activities. Given that the borders of the Arctic do not always allow the identification of strictly scientifically justified territories, the attribution of indigenous small-numbered ethnic groups living there may also be conditional.

Between the 2002 and 2020 All-Russian Censuses, 4 peoples had positive population growth (more than 10%); 6 peoples — relatively small changes (from -10% to +10%); 4 peoples had a significant decrease in numbers (by more than 10%). The Vepsians, Mansi, Koryaks, and Kereks were not taken into account (due to their small numbers on the territory of the Russian Arctic) (Table 3).

Table 3

*Change in the number of SIPN in the Russian Arctic in 2020 compared to 2002
(according to population census data)*

Extended reproduction (4 peoples)	Ordinary reproduction (6 peoples)	Constricted reproduction (4 peoples)
Nenets (+8579 people, +22.3%) Evens (+1648 people, +21.3%) Khanty (+1251 people, +14.2%) Yukagirs (+279 people, +28.3%)	Evenks (+778 people, +7.1%) Chukchi (+724 people, +5.5%) Dolgans (+622 people, +9.2%) Selkups (+161 people, +7.5%) Eskimos (-74 people, -4.8%) Enets (-14 people, -6.7%)	Saami (-399 people, -22.6%) Kets (-255 people, -30.2%) Nganasans (-152 people, -18.9%) Chuvans (-208 people, -21.9%)
Total: +11 775 people, +20.3%	Total: +2 197 people, +6.3%	Total: -1 014 people, -23.2%
Total population according to the Russian census 2020: 69789 people	Total population according to the Russian census 2020: 36983 people	Total population according to the Russian census 2020: 3354 people

In general, during the period under review (2002–2020), positive changes in the number of SIP of the Russian Arctic prevailed, with an increase of 12,960 people (+13.6%). Positive population growth was due to a relatively high birth rate and a relatively low mortality rate.

More than half of the total increase in the population of SIPN of the Russian Arctic (66.2%) was provided by representatives of one ethnic group — the Nenets.

The number of some peoples (Eskimos, Enets, Saami, Kets, Nganasans, Chuvans) has decreased, which is explained both by the general negative demographic dynamics in the Arctic regions of the AZRF, and by the low economic attractiveness of traditional activities in the current conditions and current legislation, taking into account the prospects for their development.

The migration factor also has a significant impact: highly mobile (nomadic and semi-nomadic) ethnic groups can easily change their place of residence depending on the favorable conditions for their activities in different territories.

Thus, the main limiting factor in the ethno-demographic development of indigenous minorities in the Russian Arctic is the crisis state of traditional economic activities.

In this regard, the dynamics of the number of indigenous peoples in various regions of the Russian Arctic is of interest (Table 4).

Table 4

Changes in the number of indigenous peoples in the Arctic regions — constituent entities of the Russian Federation ⁵

Arctic regions of the AZRF	Number of SIPN, people		Population growth for 2002–2020, %
	2002	2020	
Regions with relatively favorable conditions of traditional economic activities (TEA)			
Yamalo-Nenets AO	37 320	48 277	+29.4
AZ of the Republic of Sakha (Yakutia)	16 556	20 787	+25.6
Regions with relatively satisfactory TEA conditions			
Chukotka AO	16 757	17 000	+1.5
Regions with relatively unsatisfactory TEA conditions			
AZ of the Krasnoyarsk Krai	14 181	13 647	-3.8
Nenets AO	7 754	6 722	-13.3
Murmansk Oblast	1 932	1 482	-23.3

With a certain degree of confidence (with reservations about the conditionality of such a conclusion ⁶) it can be stated that the Arctic regions with high growth rates in the number of indigenous minorities have more favorable conditions for their traditional economic activities, and vice versa.

In the Russian Federation and its regions, a fairly comprehensive legal framework has been created in the field of protecting the rights and traditional way of life of the small peoples of the North, Siberia and the Far East. Issues in the field of protecting the rights of national minorities are comprehensively regulated by the Federal Law “On guarantees of the rights of indigenous minorities of the Russian Federation” dated April 30, 1999 No. 82-FZ (as amended on July 13, 2020).

At the federal level, there are also federal laws “On the general principles of organizing communities of indigenous peoples of the North, Siberia and the Far East of the Russian Federation” dated July 20, 2000 No. 104-FZ (2000) (as amended on October 20, 2022), “On the territories of traditional environmental management of indigenous peoples of the North, Siberia and the Far East of the Russian Federation” (2001); the Concept of sustainable development of indigenous peoples of the North, Siberia and the Far East of the Russian Federation (Order of the Government of the Russian Federation dated February 4, 2009 No. 132-r) and the Federal program of state support for traditional economic activities of indigenous peoples of the Russian Federation carried out in the Arctic zone of the Russian Federation (Order of the Government of the Russian Federation dated April 15, 2021 No. 978-r) were approved. In addition, the constituent entities of the Russian Federation independently resolve the problems of ethnic minorities living in their territories.

⁵ Regions with a population of indigenous minorities of more than 1000 people are shown.

⁶ The economic attractiveness of TEA in the region may decrease not only if the conditions for its implementation deteriorate, but also if alternative, more competitive and attractive types of employment appear, for example, in the industrial, social and service sectors of the economy.

At the same time, an analysis of existing experience shows that the rights of small indigenous peoples engaged in traditional economic activities are not always clearly and specifically defined in current legislation.

In particular, the issues of securing the right of ownership of ancestral lands, preferential granting of indigenous minorities the right to use hunting and fishing grounds, the use of allocated quotas for wildlife and aquatic biological resources for children and elderly relatives, compensation for damage to traditional economic activities as a result of industrial development of territories, and granting the status of small businesses to indigenous communities are not sufficiently disclosed⁷.

Ethno-economic potential of the Arctic zone of the Krasnoyarsk Krai

The territory of the Arctic zone of the Krasnoyarsk Krai is the place of traditional residence and traditional economic activities of small indigenous peoples — Dolgans, Nenets, Evenks, Kets, Nganasans, Selkups, Entsya, Evens. 86–87% of indigenous minorities of the Krasnoyarsk Krai live within the Arctic zone (Table 5).

Table 5

Territorial distribution of the indigenous minorities of Krasnoyarsk Krai (territories of predominant residence)

Territories of Krasnoyarsk Krai	Number of SIP, people		As a % of the total number of SIP	
	2002 Census	2020 Census	2002 Census	2020 Census
Norilsk Municipal District	327	350	2.0	2.2
Taimyrskiy Dolgano-Nenets Municipal District	9 864	10 155	59.8	64.5
Turukhansk Municipal District	1 336	952	8.1	6.1
10 rural settlements of the Evenki Municipal District	2 654	2 190	16.1	13.9
Arctic zone of the Krasnoyarsk Krai — total	14 181	13 647	86.0	86.7
Other territories of the Krasnoyarsk Krai	2 228	1 981	14.0	13.3
Krasnoyarsk Krai as a whole	16 409	15 628	100.0	100.0

About 93–95% of the total area of the Arctic zone of the Krasnoyarsk Krai belongs to the zones of traditional environmental management and economic activity of SIPN.

The existing structure of settlement of indigenous peoples and its dynamics are explained by historical and geographical reasons, the duration and stages of development of the territory, as

⁷ Annual reports of the Commissioner for the Rights of Indigenous Minorities of the Krasnoyarsk Krai “On the realization of the constitutional rights and freedoms of indigenous minorities in the territory of the Krasnoyarsk Krai”. URL: <https://www.ombudsmankk.ru/about/report/> (accessed 25 June 2023).

well as the features of the modern transformation of the ethno-economic areas formed in the region [10, Klokov K.B.]⁸.

Currently, four ethno-economic areas of traditional economic activity can be distinguished in the Arctic zone of the Krasnoyarsk Krai (Table 6).

Table 6

Ethno-economic areas of traditional economic activities in the Arctic zone of Krasnoyarsk Krai

Ethno-economic area	Core ethnos (co-ethnos)	Geographical and territorial boundaries; base settlements	Main types of traditional nature use	Way of life
1. Yenisei Nenets	Nenets (Enets)	Lower reaches of Yenisei and its tributaries (Taimyrskiy Dolgano-Nenetskiy District) Base settlements: Nosok, Tukhard, Karaul, Ust-Port, Vrontsovo, Baikalovsk, Potapovo	1. Tundra and forest-tundra large herd reindeer husbandry 2. Semi-nomadic fishing and reindeer herding 3. Semi-nomadic fishing and hunting	nomadic/sedentary
2. Taimyr Dolgano-Nganasan	Dolgans and Nganasans	Central part of the Taimyr Peninsula, Khatanga River basin in the Eastern part of the Taimyr Peninsula (Taimyr Dolgano-Nenets District) Base settlements: Kresty, Novaya, Kheta, Zhdaniha, Katyryk, Novorybnaya, Syndassko, Popigai, Volochanka, Levinskie Peski, Ust-Avam, Khantai Lake	1. Tundra nomadic reindeer husbandry (in combination with furbearer and fishery) 2. Forest-tundra nomadic farming combined with wild reindeer hunting 3. Hunting-fishing economy 4. Fishing	sedentary
3. Ilimpi Evenki	Evenks (Essei Yakuts ⁹)	Base settlements of the Arctic part of the Evenki District: Yesey, Chirinda, Ekonda, Yukta, Nidym, Tutonchani, Kislokan, Uchami, Surinda	1. Taiga reindeer herding 2. Hunting 3. Fishing	sedentary
4. Turukhan Kets-Selkups	Kets and Selkups	Local habitats in the Turukhanskiy District Base settlements: Kellog, Surgutikha, Maduika, Farkovo	1. Hunting 2. Fishing	sedentary

The potential for the development of traditional activities (TA) and traditional way of life (TWL) of each ethno-economic area is determined by a set of base settlements, the criteria for identifying which are the following indicators (Fig. 3):

⁸ Ethno-economic area — a geographically isolated area of environmental management of ethnic groups or individual ethno-territorial groups of the indigenous population [10, Klokov K.B.].

⁹ Note: * Essei Yakuts have been leading a lifestyle separated from the main mass of the Yakut ethnos for more than 300 years. Compact living, absence of assimilation processes, high rates of native language proficiency, well-formed ideas about the differentiating and consolidating factors of ethnic identity allow classifying this group as the indigenous peoples of the North [11, Bakhtin S.A.].

- the size of ethnic group relevant for the given area (at least 50 people);
- the share of small indigenous peoples (SIP) in the total population of the settlement (at least 50%);
- the share of the core ethnos (at least 15%) [12, Koptseva N.P., Shishatskiy N.G., Bryukhanova E.A.].

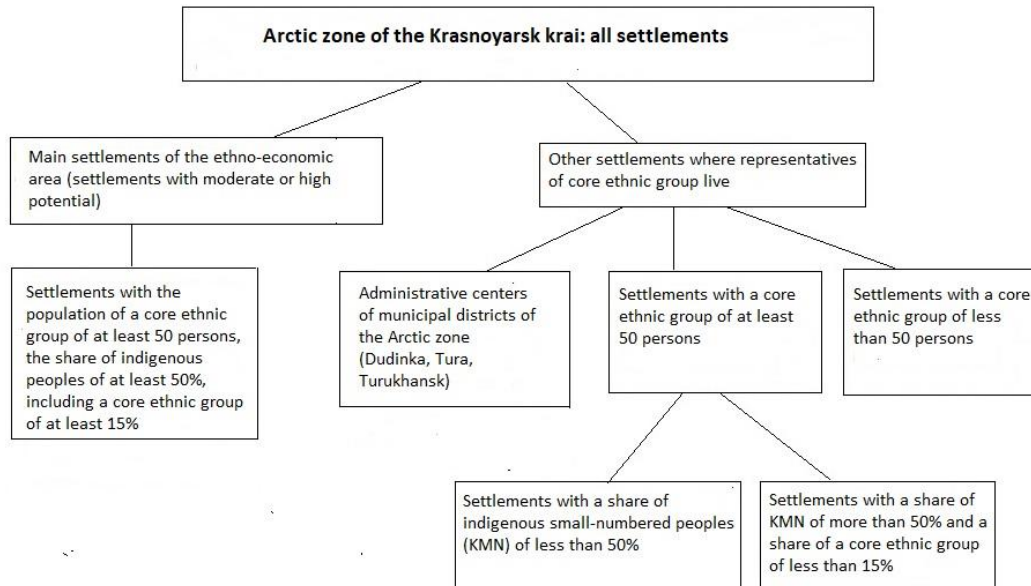


Fig. 3. Scheme for identifying the base settlements of the ethno-economic area (the core ethnic group is a small indigenous people that has a dominant position in the ethno-economic area under consideration).

“The obtained classification groups of settlements and their transformation in the period under review allow us to draw conclusions about the trends in the development and sustainability of TA and TWL in certain areas. For example, an increase in the share and growth in the number of base settlements may indicate positive trends in the preservation of the traditional way of life and traditional activities. Opposite processes — a decrease in the number of base settlements and the dispersion of an ethnic group throughout the territory with the loss of KMN intra-ethnic ties and traditional activities — are signs of its instability and gradual destruction” [12, Koptseva N.P., Shishatskiy N.G., Bryukhanova E.A.].

Prerequisites and prospects for the formation of the Arctic ethno-economic cluster on the basis of the Ilimpi Evenki area

There are more than 100 traditional farms operating on the territory of the Ilimpi Evenki ethno-economic area (Fig. 4).

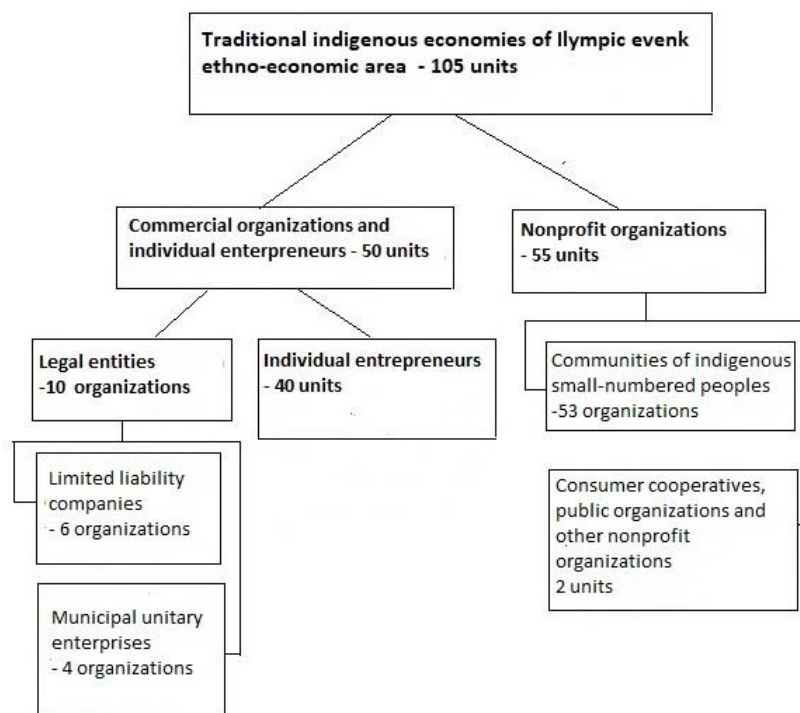


Fig. 4. Organizational and legal structure of traditional economies of the Ilimpi ethno-economic area (at the beginning of 2023).

The resource potential of traditional economies of the Ilimpi area is characterized by the following features:

- the forage base for domestic reindeer husbandry makes it possible to increase the number of reindeer to 7–11 thousand heads (potentially up to 60 thousand heads);
- the area of hunting grounds is more than 40 million hectares. The main hunting resources are: hoofed animals (primarily wild reindeer); fur animals (primarily sable); game birds;
- the unique genotype of the Evenki aboriginal huskies has been preserved, which can serve as a basis for their breeding and distribution for professional hunting;
- fishing potential allows catching more than 300 tons of fish per year;
- the territory of the Ilimpi Evenki ethno-economic cluster is rich in non-timber forest resources, the annual available volume of harvesting mushrooms is over 70 thousand tons, berries — over 60 thousand tons;
- tourist and recreational potential creates opportunities for the development of fishing, hunting, sports (mainly water rafting), ethnographic (creation of ethnographic centers), environmental (part of the Putoranskiy State Nature Reserve is located on the territory) and event (festival “Evenki Dawns”; “Day of the Indigenous Peoples of the World”; “Day of the Aborigines”) tourism.

The availability of a resource base and stable demand for many types of products, including on world markets, create the necessary prerequisites for increasing the marketability and profitability of the traditional economy of indigenous peoples. The following problems hinder the trans-

formation of traditional farming into a full-fledged commercial industry in the Arctic zone of the Krasnoyarsk Krai:

- difficulties with the sale of products due to the remoteness of the zones of traditional environmental management and traditional farming of indigenous peoples from the main markets, high transport costs and the lack of a well-established system of product sales;
- lack of modern slaughterhouses and refrigeration equipment, which prevents the comprehensive use of harvested raw materials and significantly reduces the quality of meat and fish products;
- low degree of product processing and almost complete absence of modern technologies for primary and deep processing.

Increasing the economic importance and strengthening the role of traditional economies of the area is possible through the transition to a cluster model of production organization — a highly organized system of traditional natural resource management entities located on the territory of the Ilimpi Evenki area, connected by effective cooperative relations in the field of procurement, processing and sale of traditional products and services of economic activities of indigenous peoples (Fig. 5).

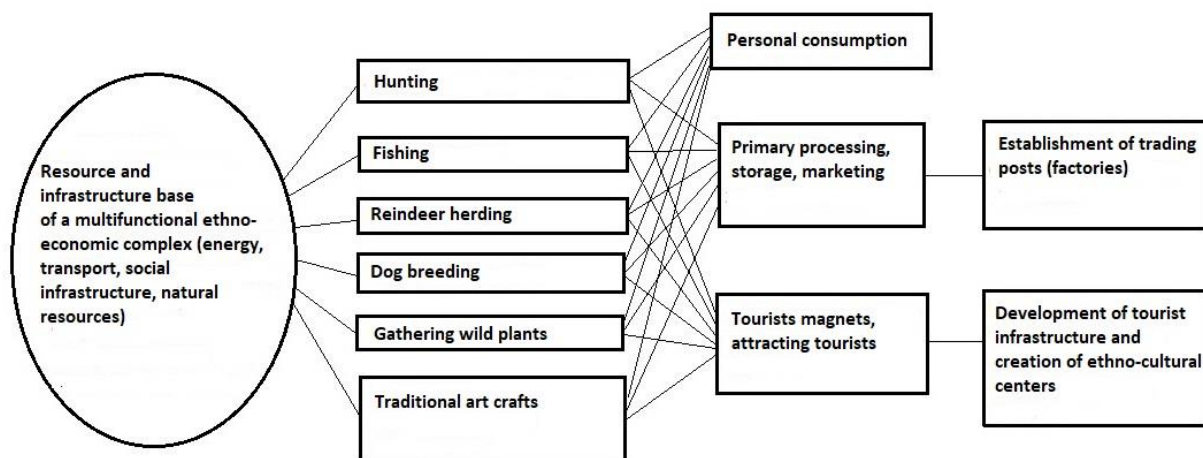


Fig. 5. Structural diagram of the Ilimpi Evenki ethno-economic cluster.

The goal of forming an ethno-economic cluster is the development of traditional activities on a new technological basis, the development of cooperative ties between them and the use of progressive methods of promoting and selling products.

Cluster formation is based on the implementation of a portfolio of investment cluster projects, combining the resources of cluster participants and ensuring synergy effects. The portfolio includes two types of projects:

1) specialized projects focused on the development of the traditional economy of the indigenous peoples:

- increasing the total population size of the herd through the creation of reindeer farms based on the technology of the hedge system of domestic reindeer breeding;
 - creation of a three-level system for procurement and processing of products of traditional activities “hunting and fur trade”, “fishing”, “gathering and procurement of wild plants”: 1) a network of procurement points as close as possible to the hunting and procurement sites where sorting and primary processing of products will be carried out; 2) mini-processing facilities for deeper processing of products and logistics centers in large settlements of the Evenki municipal district, which have constant transport links with the regional center; 3) deep processing facilities for the creation of unique products with high added value (Krasnoyarsk)).
 - formation of the necessary tourist infrastructure and creation of new tourist routes;
- 2) cooperation projects aimed at ensuring interaction between participants, creating a common infrastructure of the cluster, a system for promoting and selling products of traditional activities of indigenous minorities.

The main actors of the ethno-economic cluster are:

- state and municipal authorities that provide support for the development of traditional economic activities of indigenous minorities (act as founders of the cluster);
- regional association of indigenous communities, ensuring compliance of the goals and directions of development of the cluster with the interests of the northern ethnic groups of the region (one of the founders of the cluster);
- cluster center that ensures interaction between cluster participants, promotion of the cluster in the domestic and foreign markets, formation and implementation of cluster projects and initiatives; created in the organizational and legal form of an autonomous non-profit organization, the founders of which are the administration of the municipal district, the Ministry of Agriculture and Trade of the Krasnoyarsk Krai , Agency for the Development of Northern Territories and Support of Indigenous Peoples of the Krasnoyarsk Krai, Indigenous Minority Communities of the Krasnoyarsk Krai;
- traditional economies — members of the cluster, performing the main core functions of the cluster as a production and ethnic-preserving complex (they are also part of the supreme governing body of the cluster — the General Meeting of Participants);
- cluster partner organizations that are not part of the cluster, but provide necessary resource and service support for the cluster’s core activities and interact with the cluster on a contractual basis.

The cluster’s partner organizations are educational and scientific institutions, trade and logistics, transport and energy organizations.

The most important financial resource for the implementation of investment cluster projects should be extra-budgetary funds, which will be attracted on the principles of public-private

partnership, ESG and fair interaction of industrial corporations conducting their production activities in the Arctic zone of the Krasnoyarsk Krai with indigenous peoples.

The implementation of a cluster model of organization and sustainable functioning of a traditional economy will improve the well-being of indigenous peoples leading a traditional way of life and make traditional economic activity a full-fledged sector of the economy of the Arctic zone of the Krasnoyarsk Krai.

Conclusion

The traditional economic activity of small indigenous peoples plays an important role in the sustainable development of the Arctic territories, since, on the one hand, it fulfils an ethnic-preserving function and provides the necessary living conditions for settling in the Arctic zone of the Russian Federation, on the other hand, it helps to mitigate the negative socio-economic consequences of single-industry raw material development of the Arctic regions, acting as a branch of diversification of their economy.

The Arctic zone of Krasnoyarsk Krai has a significant resource potential for traditional environmental management, development of Arctic tourism and creative industries. The formation of a sustainable development model on the basis of historically established ethno-economic areas of traditional nature management can provide in the new conditions not only effective employment, high standard of living and quality of life of small indigenous peoples of the Arctic, but also make a significant contribution to the balanced development of the region's economy as a whole [1, Gladun E., Nysten-Haarala S., Tulaeva S.; 16, Sangha K.K., Duvert A., Ricky A., Russell-Smith J.].

In order to increase the economic importance of the traditional economy of indigenous peoples in the Arctic, it is necessary to search for and develop cluster models that combine unique knowledge and experience of traditional activities with modern farming methods and product processing technologies. Such models should use effective state support, relying on a solid scientific base, training and education of the necessary personnel, formation of necessary infrastructure for the development of traditional economic activities, and the use of modern methods of promotion and sale of products of the cluster.

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