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#### ABSTRACT

In this article the transformation of living environment of the indigenous folks of the Russian north under the process of techno genesis, determined by the oil and gas extraction, is observed. As a main experimental polygon the Khanty-Mansiysk Autonomous Okrug - Yugra that is a subject of Russian Federation and northern Yamal-Nenets Autonomous Okrug in the Tyumen Region was chosen. The oil and gas zoning from the Kara Sea on the north to the state frontiers with Kazakhstan on the south is presented. 16 oil and gas bearing zones that differ from each other by geological and geographical conditions of resource extraction are of special importance. The destructive influence of oil and gas extraction objects is observed on the territory of natural resources that is important for indigenous people in Khanty-Mansiysk Autonomous Okrug - Yugra. The observation of different government documents accepted on local and the RF level and oriented to stabilize the land matters, are presented. The ways of compensations from the resource users to the indigenous folks are justified.

KEYWORDS Folks of the North, West Siberia, natural resources, gas-oil extraction, tribal lands, compensation cost, state and municipal government ARTICLE HISTORY Received 29 August 2016 Revised 23 October 2016 Accepted 16 November 2016

## Introduction

LOOK

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The northern territory of Russia has long been the native place for indigenous folks of the north, whose main «treasures» have always been natural resources such as herbs, berries, mushrooms, wild animals, fish etc. The oil and gas discovery has dramatically changed the long-term use of natural resources of the locals, e.g. the deer farming, hunting and fishery industry, foraging; its negative effect could also be seen in the environment. Mostly these processes could be observed in North-West Siberia – the Middle Ob and Nadym-Pur interfluve. It played an important role in social-ecological and social-economic spheres (Velikopolskiy & Perepletkin, 2002; Chistobaev, 1998; Solodovnikov, 2011, 2016). The anthropogenic factor influenced all spheres of life of the locals

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including their resources use and migration. Some protective measures were taken into consideration to prevent the destruction of natural resources management of the indigenous folks of the North. The analysis of these measures, suggestions on their improvement are presented here by the authors of this article.

## Main information about the region

The territory observed in this article officially belongs to the Tyumen Region (found in 1944). Its total area is 1435,2 thousand km2, or 8,5 % of Russia's overall territory. The Tyumen Region is the third largest subject of the Russian Federation after the Sakha Republic (Yakutia) and the Krasnoyarsk region. Only 19 countries from the UN's 193 exceed it by the size; there are no such countries in Europe. There are two subjects in the Tyumen Region that have the autonomous status – Khanty-Mansiysk autonomous district – Ugra (KhMAD) and Yamal-Nenets Autonomous Okrug (YNAO). They have got such status from the year 1993, but officially are included in the Tyumen Region. On its' territory 38 municipal districts, 29 cities and 28 urban type settlements are located; the population of the region is 3,6 mln. people. Having only the 2,4% of the country's population, the region provides the half of the income of the Russian Federation.

The Tyumen Region stretches from the shores of the Arctic Ocean on the north to the steppes of Kazakhstan on the south at the distance of 2100 km; from the Ural Mountains on the west to the Krasnoyarsk District on the east at the distance of 1400 km. The landscape is presented by plains with some elevations. In western part of the region from the north to the south stretched the Ural Mountains (less than 2000 m.). The climate on the north is extremely continental, influenced by the cold air from the Arctic Ocean. The average annual temperature almost everywhere in the region is low: from +1 m -11,2 c; in January -.18 C -27,6 C, July -.18 C -.15,5 C. The warm period is about 51-140 days, while the stable cold period is about 140-223 days. Some years the temperature could fall to -50 C; it is only in the south during July there are no freezing days. Average annual precipitation is about 300-700 mm.

The Tyumen Region is rich in different natural resources including oil and gas. There are 800 fields with total amounts of 60 billion tons in oil equivalent. Almost all the supplies are located in the northern part of the region and on the shelf of the Kara Sea (Fig. 1). In the territories adjacent to the Ural Mountains the greater amounts of coal, different metals, non-metallic raw materials, different construction materials and agronomic resources are located on the plain part.

As to the national composition, the first place take Russians (73,3%), Tatar are on the second place (7,5%), Ukraines are on the third (4,9%). The proportion of the indigenous folks (Khanty, Mansi, Nenets, Selkup) is very small -2,3% (The results, 2015).

## Features of life of the indigenous folks of the North

Before oil and gas extraction on the territory of the Tyumen Region has become common, traditional resource management – deer farming, fishing and foraging had made up the most important sphere of life of the locals. Thus, such folks as Khanty, Mansy, Nenets, Selkup and Russian long-time residents were

involved in these traditional ways of the resource use. All of these ethnic groups compose the greater stratum of population involved in traditional activities. All of them have their own inimitable language, lifestyle and cultural traditions, bearing the impression of their history.

The construction and the exploitation of oil and gas objects influenced the agricultural activities of the locals (Chistobaev & Solodovnikov, 2005; Chistobaev, 2002). In many districts agriculture was replaced by oil and gas extraction and the forestry management industries. For example, hydrocarbons in KhMAD are extracted in all 9 districts, in YNAD – in 5 of 7 (Solodovnikov, 2007; Solodovnikov & Chistobaev, 2010).

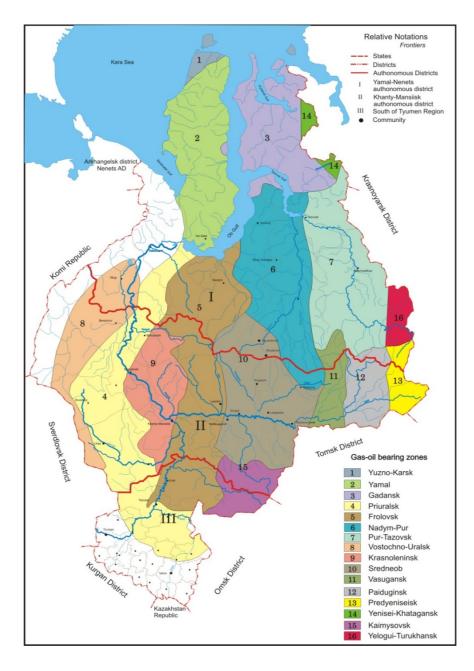


Figure 1. Oil and gas zoning of the Tyumen Region Source: (Solodovnikov, 2015).

In the southern part of the Tyumen Region the indigenous folks inhabit only Uvatsky District, where oil is also extracted.

For the locals this influence on their way of life turned out to be destructive. The development of the industrial sphere could not help in solving this problem as it had been suggested (Klokov, 2011). The borrowed methods of protecting the ethnicities that theoretically seemed to be productive are still far from being effective. The western ideas do not take into account historical long-term relationship of the Russians with the local folks. As a result, the concept of industrial development that takes into account cultural specificities and protects the natural ways of resources use now is the most actual (Ivanov & Nikitin, 1990).

The extraction of raw materials is always followed by the construction of different anthropogenic objects that influence the system of settlement and the way the natural resources have always been used in the North. The influence depends on physiographic factors, settlement conditions, state policy concerning Northern territories, municipal and regional development.

In modern Russia main oil and gas extraction districts are located on the territories inhabited by the indigenous folks of the North - Siberia and the Far East. In West Siberia the number of such districts inhabited by locals is about 50%, and as to urban zones - this number falls to 0,1-0,4 %. Only in few municipal districts the number of the locals fluctuates from 5,8 to 10,4% (table 1).

middle Ob						
Municipal	Mansy	Nenets	Selkup	Khanty	Total	
Corporation	people	people	people	people	people	% of all
						population
Urban districts						
Kogalym	18	10	-	148	176	0,3
Langepas	22	2	-	98	122	0,3
Megyon	23	4	-	138	165	0,3
Nefteugansk	72	25	-	286	383	0,3
Nizhnevartovsk	156	49	1	754	960	0,4
Pokachi	-	2	-	73	75	0,4
Pyt-Yakh	4	1	2	40	47	0,1
Surgut	256	47	-	632	935	0,3
Municipal districts						
Beloyarsk district	192	213	-	2 435	2 840	9,5
Nefteugansk	12	2	-	423	437	1,0
Niznevartovsk	49	280	8	1 934	2 271	6,4
Oktuabrsk district	489	24	-	1 354	1 867	5,8
Surgut district	56	62	3	2 896	3 017	2,7
Khanty-Mansisk district	173	44	3	1 787	2 007	10,4

Table 1. The population of the indigenous folks of the North in municipal districts in the Middle Ob

Source: based on (The result of all - Russian population census, 2013).

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The most widely-spread indigenous folk is Khanty (almost 85%), they live in all municipal districts of the Middle Ob and all cities located there. Their lives depend on natural resources (as lives of other folks like Komi, Nenets, Selkup etc. do), but the resources have not been evaluated yet.

The importance of protecting the tribal lands was the sharp question for scientists even during the previous century. Tanfiliev G.I. said in 1911 «Samoyed is a wanderer because tundra gives no other chance to live, so this is the most cultural lifestyle» (Semenova & Chistobaev, 2015).

Decades later the scientists of Saint-Petersburg State University, basing on the works of L.N. Gumilev (1989; 1993) devoted to the ethnicities, stated that northern folks are not just a «relict», but the «feeding landscape». when each ethnicity makes their way to adapt, creating the whole «picture» (Ivanov & Gromova, 1991). The main link of ethnic cenosis (biogenic cenosis, where the ethnos is observed) is: dominating types of herbs a fauna, or domesticated ethnic population. Thus the change of the landscape leads to the assimilation or to the ethnic divergence, if the ethnos can develop a way to adapt (Chistobaev et al., 1994).

During the Soviet period the stimulation of natural resources use of indigenous folks of the north was provided by the political, social and economical mechanisms. The limiting factors were just the small amount of the resources (fish, wild animals, ecological capacity of the herding grounds) or the small amounts of local people (Klokov, 2012). Because of the pressure of the administrative mechanisms of planned economy in many herding grounds the population of the deer in some communities has grown more than it's needed for the local ethnic groups. After the transition from the planned economy to the market economy the administrative pressure has weakened, but the influence of the economic mechanism has grown (Klokov & Khrushev, 2004; Klokov, Khrushev & Bocharnikova, 2012). Due to this fact the population of the locals has decreased (Klokov & Khrushev, 2004; Klokov, Khrushev & Stupin, 2008), and as it would be presented down here, there are no positive perspectives of the development of the natural resources use.

# State and municipal regulation of life style of the indigenous folks of the North

The fact that Russia has chosen the course towards the market economy has influenced all the spheres of social life, including the way of managing of the North territories. The government tried to balance between the interests of oil companies and the locals because of the close bonds of the economy with the oil sphere. The first documented law was the presidential decree of the President of the RF from 22.04.1992 No 397: «The urgent measures to protect the places of inhabitance and the natural activities of the indigenous folks of the North». Later the federal laws from 30.04.1999 No 82 FL «On Guaranties of the Rights of Indigenous Numerically-Small Peoples Rights in the Russian Federation» and from 07.05.2001 No 49 FL «On Territories of Traditional Use of Natural Resources of Indigenous Numerically-Small Peoples of the North, Siberia and Far East of the Russian Federation» were signed. Now any representative of the indigenous folks have lawfully a right for getting a compensation for the harm from any business activity of oil companies. The legislative process has also influenced the Tyumen Region, including KhMAD and YNAD. Particularly the decisions of the government of KhMAD from 27.02.1992 No 69 «The infiltrating of the status of tribal lands», from 05.10.1992 No 231 «The enforcing of tribal lands», from 06.03.1995 No 21 «The provision of tribal lands»; the indigenous folks got the lands with a new status – tribal lands. It heralded the era of productive cooperation between oil companies and the locals, determining the order of business activities on tribal lands. It was stated that the tribal lands – the natural complexes (forests, rivers, lakes, swamps, grasslands etc.) could belong to the individual people, families or tribes.

The business activities were stated in the law of KhMAD-Ugra from 3.05.2000 № 26-oz «The regulation of land matters in KhMAD-Ugra». In 2002 the government of KhMAD stated that under the laws of «The territories of traditional resources use» from 10.04.2002 № 192-p and from 28.12.2006 № 145-oz «Territories of traditional resources use of KhMAD-Ugra» all tribal lands are now the territories of traditional resources use (TRU) of regional significance. Under the federal law from 07.05.2001 № 49 FL «The territories of natural resources use of the North, Siberia, and Far East of Russian Federation» the TRUs are the especially protected territories. But the regime of TRUs is still not regulated. Under the law of KhMAD the TRUs could not be purchased or inherited.

More than 475 TRUs are located on the territory of KhMAD-Ugra, where by the 01.01.2015 lived more than 4 thousand people. They occupy more than 20% of all districts' space but in some places – about 50% (Table. 2, Fig. 2). 65% of resource users have their activities on the territories of TRUs. The greatest use of TRUs is seen in Nefteyugansky District (81,3%) and Surgut district (68,2%), but their part always changes. In 2012-2014 this number increased in Nefteugansky District by 8,4% and decreased in Surgut District by 11,4%. This is all because of the detachment of new licensed sites or the ones returned by municipalities. The greatest amount of TRUs are «occupied» by JSC «Surgutneftegaz» company – 119 where live 1,5 thousand people; TRUs occupy more than 40% of all square of all licensed sites.

Table 2. Territories of traditional resources use of indigenous folks of the North in Middle Ob

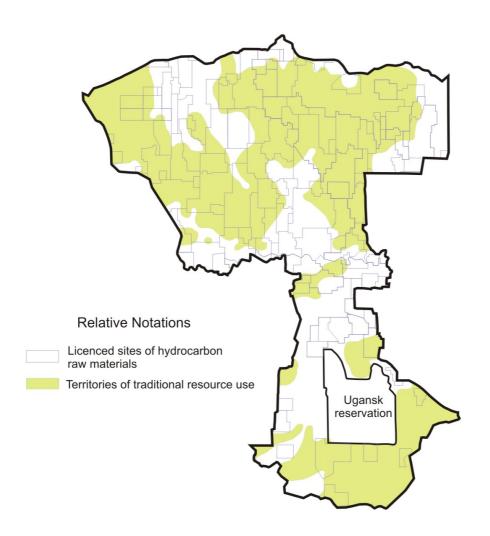
District		Number		Square,	Part of NUA from		
	NUA	Families	People	hectares	the whole territory of the district, %		
Belovarsk	34	87	306	1 246 827	29,93		
Nefteugansk	33	68	279	1 217 140	49,14		
Nizhnevartovsk	133	258	1 135	2 854 370	24,22		
Oktyabrsk	54	57	201	362 121	14,31		
Surgut	107	684	1 909	457 304	43,32		
Khanty-Mansiysk	54	69	294	1 056 455	22,81		

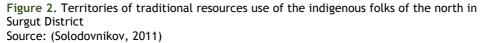
Source: based on (The subsurface resources management in Khanty-Mansiysk Autonomous Okrug - Ugra in 2014, 2014).

Compensations for the indigenous folks of the North

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According to the federal and regional law all resource users should sign the agreements with the leaders of TRUs (tribes) for compensation payments. There are 3 types of these agreements nowadays: a) Long-term agreements between the directors of the companies and the chiefs of the tribes (gas-oil extraction and logistics); b) Short-term agreements like geological exploration etc.; c) Free-term agreements with different stated terms and agreements.





The system of compensation measures has been showing its efficiency since 1992. Oil companies maintain the economic agreements with the representatives of TRUs. As the part of compensation measures houses and the elements of social infrastructure are built, camping grounds are connected to the electricity lines or new generators, money is paid and education and health services are provided; the greater amount of money is spent due to these measures. In 20122014 about 1.1 billion rouble was spent. The topmost payment was made by OC «LUKOIL» (table 3).

Table 2. The amount of money paid by the users of subsurface resources to the indigenous folks of the north

Lleor	of	cubcurfa		int in 2014	Dayman	* ~	mmounts	
Okrug -	Ugra ir	n 2014. (2	.014).					
Source:	based	on (The	subsurface	resources	management	ın	Khanty-Mansiysk	Autonomous

User of subsurface	Ammount in 2014.			Payment ammounts				
resources	NUA	People	in	Total,	Per person, thous. rub.			
		economic		mln rub.	2012 y.	2013	2014 y.	
		agreements				у.		
JSC «OC LUKOIL»	50	1 54		483,1	140,5	140,8	184,1	
JSC «Surgutneftegaz»	119	1 528		287,5	77,2	85,2	64,4	
JSC «OC Rosneft»	39	492		127,0	113,7	143,0	108,5	
JSC «OC Slavneft»	49	282		84,4	145,6	125,9	106,9	
JSC «Gazprom»	13	179		56,1	84,4	123,9	47,2	
JSC «OC RussNeft»	20	458		48,4	56,7	67,6	40,9	
JSC «AOC Bashneft»	6	23		12,2	46,4	204,7	27,9	
Independent subsurface	18	176		40,6	65,9	101,4	60,0	
resources users								

The Department of Culture of KhMAD-Ugra controls the compensation processes. Thanks to the federal and state laws, the indigenous folks are at liberty to defend their rights in courts.

The government of KhMAD-Ugra also provides the necessary help creating special programs. According to the statement of the government of KhMAD-Ugra from  $03.10.2013 \text{ N}_{2} 398\text{-p}$  «The state program of KhMAD-Ugra «Social and economic development of the indigenous folks of the north of Khanty-Mansiysk Autonomous District in 2014-2020», extra amount of money would be spent on the development of the locals.

During the last years the indigenous folks of the north offered some changes in models of the agreements between them and the resource users. They suppose that the damage and compensation accounts should be controlled more accurately and take some factors into account. They preferred the way offered by Ministry of Regional development of RF from 09.12.2009 No565 «Methods of losses accounting inflicted by the resource users to the indigenous folks because of the agricultural or business activities», but this method was abolished by this ministry.

One of the most effective ways could become the Pigu tax for harming the environment. This tax is created in oil industry for polluting the environment and irrational use of natural resources, but on the North the compensation for use of tribal lands to the indigenous folks also takes place. This aspect is not the topic of this article, so it's not considered here, so all the concerned could get more information in these sources (Solodovnikov & Chistobaev, 2005; Chistobaev & Solodovnikov, 2005; Solodovnikov & Chistobaev, 2011).

Resource users try to solve the problems as fast as they can. Sometimes they invite concerned parties. For example, on March the 1st, 2010, on the base of «SurgutNIPIneft» Institute the conference «Intersectional cooperation of the indigenous folks of the North in modern economic conditions» took place; the

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conference was organized by social organization «Spasenye Ugri» and JSC «Surgutneftegaz». It was agreed that the legal framework should be adapted to the needs of the indigenous folks of the North. It is also necessary to make partnership agreements between resource users and the locals to help them develop. The representatives of oil companies agreed that creation of communities will be helpful in signing the agreements, as it is quite complicated to do so with the representative of each tribe.

The authors of this article adhere to the same position as this measure has no practical use for the indigenous folks of the North.

### Conclusion

Due to the signing of documents of the regional and federal scale in oil and gas extraction regions of West Siberia, the agreement between oil and gas extraction and the natural resources use could become possible. This became possible due to the integration of different international methods and standards into projects. The innovative measures are actively implemented on the territory of the Tyumen Region and other northern parts of the RF; it played an important role in preventing of the destruction of tribal lands. Despite that fact, the problem of balancing between the interests of oil corporations and the interests of the locals is yet unavailable to solve. The authors suppose that oil companies should create communities of the indigenous folks to lead to make it possible to come to an understanding.

### **Disclosure statement**

No potential conflict of interest was reported by the authors.

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## References

Chistobaev, A.I. (2002). The ethnologists racing their time (Devoted to 90<sup>th</sup> anniversary of Gumilev L.N. and to the 50<sup>th</sup> anniversary of Ivanov K.P.). St.Petersburg: SRI of chemistry SPbSU

- Chistobaev, A.I., Khrushev, S.A., Gromova, U.V. & Gumilev, L.N. (1994). Ethnics of Russian North. *Vestnik SPbGU*, 7, 40–45.
- Chistobaev A.I. & Solodovnikov, A. (2005). The characterization of the influence of projection objects on the environment: the development paradigm. *Vestnik SPbGU*, 7, 47-55.
- Velikopolskiy, S.D. & Perepletkin, Yu.I. (2002). *The generation of Victor Muravlenko*. Tyumen: Edd. Yu. Mandriki.
- Gumilev, L.N. (1989). Ethnogenesis and the Earth biosphere. Leningrad: Edd. of LSU.
- Gumilev, L.N. (1993). Ethnosphere; the history of people and nature. Moscow: Progress.
- Ivanov, K.P. & Gromova, Yu.V. (1991). Ethnogeographic research of subpassionaryity of the indegenous folks of the North. Geography and activity. Leningrad: Edd. house of RGS.
- Chistobaev, A.I. (1998). The problems of ethnic geography. St.Petersberg: SPbSU.

- Ivanov, K.P. & Nikitin, V.S. (1990). The ethnogeographic balance concept of the indigenous folks of the North. Geography and modern condition. Leningrad: Ed. of Leningrad university.
- Klokov, K.B. (2012). The cooperation of the ethnic fields in geographical space of Russian North: The development of the theory of ethnic fields by Gumilev L.N. *Vestnik of SPbSU. Special edition to the 100 anniversary of Gumilev*, 40-50.
- Klokov, K.B. (2011). The works of the deer herder in the conditions of the Russian North. Geographic space of Russia. St.Petersburg: BBM.
- Klokov, K.B. & Khrushev, S.A. (2004). Deer herding territories of the indigenous folks of the Russian North: information-analytical collection. St.Petersburg: BBM.
- Klokov, K.B., Khrushev, S.A. & Bocharnikova, A.V. (2012). Ethnoecological research of the industrial influence on the natural resource use of indigenous folks of the North: theory and methodology. *Edd. house of RGS*, *3*, 30-36.
- Klokov, K.B., Khrushev, S.A. & Stupin, Yu.A. (2008). The influence of exogenic and endogenic factors on the demographic state of the indigenous folks of the North. The theory of Gumilev L.N and the modern time. Based on the scientific conference of 2-3 October 2007 materials. St.Petersburg: BBM, 96-116.
- Semenova, Z.A. & Chistobaev, A.I. (2015). Medical geography and health of the population: Monography. St.Petersburg: Publ. house «Evropeisky dom».
- Solodovnikov, A.Yu. (2011). Surgut district at the early XXI century: population, geography, economy. St.Petersburg: Edd. house «BBM».
- Solodovnikov, A.Yu. (2016). The foundation and development of gas-oil industry in Uvat district. Gornye Vedomosti, 2, 172-183.
- Solodovnikov, A.Yu. (2015). The modern condition of gas-oil base in Tyumen region. Vestnik of TSU, Ecology and resource management, 2(2), 50–61.
- Solodovnikov, A.Yu. & Chistobaev A.I. (2005). The characterization of the influence of projection objects on the environment. *Edd. RGS*, 137, 1–11.
- Solodovnikov, A.Yu. & Chistobaev, A.I. (2010). The influence of gas-oil extraction on social and ecological environment of Northern Ob. St.Petersburg: VVM.
- Solodovnikov, A.Yu. (2007). The agricultural activities as the factor of environmental influence in gas-oil extraction regions (*Doctoral dissertation*). St.Petersburg.
- The biography of the great deed: Tyumen Geology: Years. People. Encounters (1953-2003). (2003). Ekaterinburg: Midd Urals edd. house.
- The result of all Russian population census. 2010. (2013). The nationalities of Tyumen region. Khanty-Mansiisk autonomous district – Ugra. Yamal-Nenets autonomous district. The territorial body of federal agency of state statistics in Tyumen region. Statistical collection in 10 parts. Part. 3. T. 2.
- The results of All-Russian population census 2002. (2005). The nationalities of Tyumen region. Territorial organ of statistics in Tyumen region. Stat. collection in XI volumes. Vol. III Tyumen.
- The subsurface resources management in Khanty-Mansiysk Autonomous Okrug Ugra in 2014. (2014). Ekaterinburg: «IzdatNaukaServis».