

【研究ノート】

Social Consequences of Post-Soviet Transformation of Natural Resources Utilization in Chukotka Autonomous Okrug, Russia

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1 Introduction

This paper is to investigate social conditions of Chukotka Autonomous Okrug of Russian Federation in the transition era after the Soviet collapse in 1991. Spatial transformation of Russian economy in the post-Soviet period, including the changing pattern of natural resources utilization in eastern regions, have been analyzed in many studies by Russian and other scientists (Minakir 2002, 2006; Privalovskaia 2002; Kliuev 2004; Khantashkeeva and Murota 2004; Sheingauz 2005 and others). Social problems of economic transformation of the same regions have been investigated also by Russian scientists (Dumova 2001; Baklanov 2001; Zubarevich 2003; Privalovskaia and Volkova 2004; Zaionchkovskaia 2005; Motrich 2006 and others).

Such studies are concerned with the general situation of the Russian East, not focused on some particular localities. But we think that local area studies are also

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important for us to deeply understand the regional features of social consequences of spatial transformation of natural resources utilization in the far north-east of Russia. From this viewpoint, we chose Chukotka Autonomous Oblast (simply Chukotka, hereafter) for our specific study area, and conducted field research trip there in August-September 2007. The reason why we did so was in that Chukotka is geographically and politically isolated from other more populated regions of Russia and that no much information is easily available for academic studies unless one directly visits there. We then visited the capital city of Anadyr, Iul'tinskii raion and Anadyrskii raion, and collected the statistical data as much as possible.

The composition of this paper is as follows. Section 2 is devoted to present a brief overview of Chukotka including its history. Section 3 shows the social consequences of the post-Soviet transformation of natural resources utilization in Chukotka based on statistical analysis. Section 4 delineates the five settlement patterns which characterize the social consequences of post-Soviet transformation of Chukotka. Conclusion is drawn at the end of the paper as Section 5.

2 Chukotka Autonomous Okrug: general overview, brief history and development in the Soviet time

Chukotka occupies the northeastern-most part of Russian Federation, and its northeastern margin faces Alaska (the United States) across the Bering Strait (Photo 1). Its eastern coast is washed by the Bering Sea (a north western section of the Pacific Ocean), and its northern coast by the Chukchi Sea and the East Siberian Sea, which are parts of the Arctic Ocean. Chukotka borders Republic of Sakha (Yakutia) in the west, Magadan Oblast in the southwest, and Kamchatka Krai in the south. It has an area of 737,700 km² (almost twice of that of Japan) and population of 50,532 as of February 2, 2006. Its capital city is Anadyr.

Chukotka consists of the following nine local administrative units (the name in the

bracket is the administrative center of each unit): capital city of Anadyr (Anadyr), Anadyrskii raion (Ugolnye Kopi), Beringovskii raion (Beringovsky), Bilibinskii raion (Bilibino), Chaunskii raion (Pevek), Chukotskii raion (Lavrentia), Iul'tinskii raion (Egvekinot), Providenskii raion (Provideniya), Shmidtovskii raion (Mys Schmidta).

Chukotka is the land of tundra vastly stretching over the permafrost subsoil. About a half of its land locates above the Arctic Circle. The climate is very severe with long winter and short summer. In terms of geology, Chukotka covers the northern flank of the Okhotsk-Chukotka volcanic belt so that it has large deposits of gold, silver, mercury and other metals. There are several hot springs there due to such a geological condition.

Chukotka has been the land of Chukchi, Yukaghir, Koryak, Keren, Even, and Inuit for a long period of time. Russians and other Europeans started exploring the region only from the 17th century. Fur trade with indigenous peoples was their main interest. From 1799-1867, not only Chukotka but also all of Russia's northern territories including Alaska were controlled by a state policy corporation named the Russian-American Company organized by Grigory I. Shelikov (1747-1795) and headed by Alexander A. Baranov (1746-1819). Alexander the Second sold Alaska to the United States for 7.2 million dollars in 1867. The region corresponding to the present-day Chukotka was forming its own administrative body as a part of the Russian Empire in the period from the ending years of the 19th century to the early years of the 20th century.

The next few years after the October Revolution of 1917, anti-revolutionary groups were influential in the region, and the Admiral Kolchak's administration was set up in Anadyr. The fights between the Kolchak's forces and the supporters of the revolution continued until 1923, when the last remnants of the formers were driven out from the region. By 1931, Chukotka (as a part of Kamchatka Region at that time) was fully integrated into the Soviet system, with community centers

throughout the region and a District Council under the communist party control.

During the difficult years of the Second World War, Chukotka supplied a great amount of metal and other raw materials to the military industry of the Soviet Union. Human contribution was also enormous. After the war ended, mining continued to be the key industry of Chukotka. In 1946, Iul'tin became the site of a huge tin and tungsten mining complex, largely built by convicts, who also constructed the road from Iul'tin to the Kresta Bay. The concentration camps continued to exist until the mid-1950s. But after they ended, many former prisoners stayed on in Chukotka mainly because of high salary to compensate for hard life in the cold region. In 1958, the first commercially significant gold deposits were mined on the Ichuve'em River. That was the birth of gold mining economy in Chukotka, a key industry there now.

By the early 1950s, collectivization of reindeer herding and sea hunting was completed. Economic reorganization in the Soviet Union in 1957 brought a new era of industrial development to Chukotka. The 1960s was the decade of building most of gold and mineral mines, power stations, electricity network, towns, factories and roads – as well as the port of Anadyr (Strogoff et al., 2006). The production of venison, fish and fur peaked, to be followed by a long decline. Anadyr became a city in 1965. Then the population of Chukotka reached 100,000. The Soviet Constitution of 1977 gave Chukotka Native District a kind of autonomy. Industrial expansion has been continuously seen through the 1970s and 1980s. In 1989, the population peaked at 160,000 followed by sharp decline in the 1990s after the Soviet collapse. In June 1992, the region's history reached a memorial stage: Chukotka Autonomous Okrug – which had for many years been under the jurisdiction of the Magadan Oblast – became an independent member of the Russian Federation.

Chukotka now has large reserves of oil, natural gas, coal, gold, silver, tin, and tungsten, and others, but much of the rural population live on subsistence reindeer

herding, walrus and whale hunting, and fishing. The urban population is employed in mining, administration, construction, cultural work, education, medicine, fish processing and others.

3 Population and natural resources development in post-Soviet period: statistical analyses

Given this much of general information of Chukotka, we now proceed to quantitative analyses of Chukotka economy.

The official statistics show a sharp decline in the amounts of natural resources production during the period of 1990-1998 [Table 1], and economic recovery in 1999-2006 [Table 2].

Trend of natural resources production which occurred in Chukotka Autonomous Okrug portrays the situation existing in the whole Russia as well as in the East Siberia and Far East macro regions (Litvinenko 2008). However, compared with other regions, in Chukotka there was sharper decline in the amounts of natural resources production during the period of 1990-1998, and higher growth of excavation of coal and catch of fish in 1999-2006.

In 1990-2006 the total population of Chukotka Autonomous Okrug declined more than threefold (from 158,056 in 1990 to 50,484 in 2006) mainly due to mass migration outflow of the Russian population and other than indigenous peoples [Figure 1, Table 3].

Rate of decrease in number of people (68 %) in Chukotka was the highest one in Russian Federation. More than 70% of decrease was due to the shrinking population in Bilibinskii, Iul'tinskii, Chaunski, and Shmidtovskii raions [Table 3].

At the same time, indigenous population during the intercensal period of 1989-2002 grew by 5.1% and amounted to 16 thousands at the moment of the 2002 census [Figure 1]. While the share of Russian, Ukrainian, and Tatar and others excluding the indigenous peoples in total population has decreased, the share of Chukchi, Inuits, Evens increased [Table 4].

The official statistics show a sharp decrease in number of employees in post-Soviet period in studied region [Table 5]. One can see the most significant decrease (about 91%) in number of employees in excavation of mineral resources such as gold, tin, tungsten and others.

Given this much of information available from official statistics, the main goal of our research trip was to find out what types of transformation happened in the post-Soviet time in space at local levels associated with the above-stated changes

Table 1 Trend of natural resources production in Chukotka Autonomous Okrug, 1990-1998

	Production		Change in production volume, 1990-1998	Rate of increase in production volume , 1990-1998, %
	1990	1998		
Electricity output, billion kWh	1.2	0.6	- 0.6	- 50
Excavation of coal, thousand tons	1,222	333	- 889	- 73
Excavation of gold, kg	17,000	6,000	- 11,000	- 65
Catch of fish, thousand tons	5.1	1	- 4.1	- 80

Source: Authors' calculation using the Data of Territorial Body of Federal Service for State Statistics in Chukotka Autonomous Okrug.

Table 2 Trend of natural resources production in Chukotka Autonomous Okrug, 1999-2006

	Production		Change in production volume, 1999-2006	Rate of increase in production volume , 1999-2006, %
	1999	2006		
Electricity output, billion kWh	0.6	0.5	- 0.1	- 17
Excavation of coal, thousand tons	304	547	243	80
Excavation of gold, kg	4,700	5,100	400	8.5
Catch of fish, thousand tons	2.9	46.5	43.6	1,500

Source: Authors' calculation using the Data of Territorial Body of Federal Service for State Statistics in Chukotka Autonomous Okrug.

Table 3 Shrinking Population of Chukotka Autonomous Okrug, 1990-2006

Territory	Population (number of people)		Change in number of people, 1990-2006	Rate of increase in number of people, 1990-2006, %
	January 1,1990	January 1,2006		
Chukotka Autonomous Okrug	158,056	50,484	- 107,572	- 68
Anadyr	17,509	11,551	- 5,958	- 34
Anadyrskii raion	23,496	6,935	- 16,561	- 70
Beringovskii raion	9,113	2,690	- 6,423	- 70
Bilibinskii raion	27,956	8,215	- 19,741	- 71
Iul' tinskii raion	15,521	3,951	- 11,570	- 75
Providenskii raion	10,019	4,423	- 5,596	- 56
Chaunskii raion	31,348	5,886	- 25,462	- 81
Chukotskii raion	6,954	4,610	- 2,344	- 34
Shmidtovskii raion	16,140	2,223	- 13,917	- 86

Source: Authors' calculation using the Data of Territorial Body of Federal Service for State Statistics in Chukotka Autonomous Okrug.

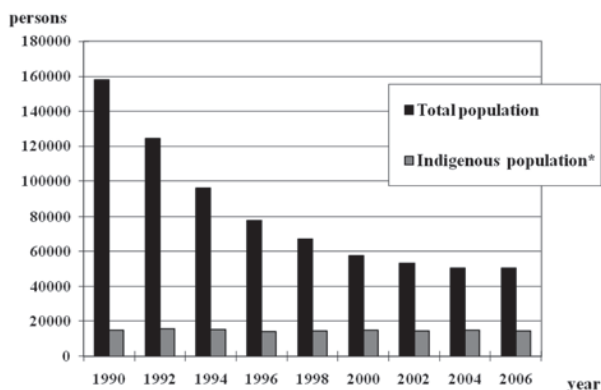


Figure 1 Trend of Population of Chukotka Autonomous Okrug, 1990-2006

*Note: Data of indigenous people living in rural areas only.

Source: Authors' calculation using the Data of Territorial Body of Federal Service for State Statistics in Chukotka Autonomous Okrug.

Table 4 Ethnicity in Chukotka Autonomous Okrug

Ethnicity	Number of people		2002 as % to 1989	Ethnic breakdown, %	
	1989	2002		1989	2002
Russian	108,298	27,918	25.8	66.1	51.9
Chukchi	11,914	12,622	105.9	7.3	23.5
Ukrainian	27,600	4,960	18.0	16.8	9.2
Inuit	1,452	1,534	105.6	0.9	2.9
Evens	1,336	1,407	105.3	0.8	2.6
Tatar	2,276	534	23.5	1.4	1.0
Belorussian	3,045	517	17.0	1.9	1.0
Other	7,994	3,133	39.2	4.8	5.7
People who did not mention their ethnicity	19	1,199	63.1	0	2.2
Total population	163,934	53,824	32.8	100	100

Source: Motrich 2006

in volumes of natural resources production, shrinking population and decrease in number of employees.

4 Social consequences of natural resources utilization: a study based on the field trip of 2007

Our 2007 expeditionary research in Chukotka revealed that severe slump in excavation of gold and other than fuel mineral resources was corresponded in space to mass closedown and liquidation of production units¹⁾ that had to do with the mining of gold, tin, tungsten and other elements. Those units proved unprofitable in new market economy conditions and for the reason of harsh natural-and-climatic conditions, due to being remote and peripheral socio-economically, lack of proper transport infrastructure as well as weak cross-border cooperation with nearby Alaska. The largest ore mining and processing enterprises – Pevekskii

1) In this context production units mean enterprises, companies and firms whose activities are based on utilization of natural resources.

Table 5 Chang in number of employees in Chukotka Autonomous Okrug, 1992-2006

	Number of employees		Change in number of employees, 1992-2006	Rate of increase in number of employees, 1992-2006, %
	1992	2006		
Total number of employees	58,429	30,345	- 28,084	- 48
In which :				
Agriculture, hunting, forestry	5,364	1,995	- 3,369	- 63
Fishing and fish-breeding	n.a	441	n.d	n.a
Excavation of mineral resources	13,470	1,729	- 11,741	- 87
Including excavation of fuel mineral resources	2,039	757	- 1,282	- 63
Including excavation of mineral resources with exception of fuel ones	11,431	972	- 10,459	- 91

Source: Authors' calculation using the Data of Territorial Body of Federal Service for State Statistics in Chukotka Autonomous Okrug.

in Chaunskii raion and Iul'tinskii in Iul'tinskii raion – were stopped in the 1990s. Sharp decline in excavation of coal in the 1990s was corresponded in space, at micro level, to decreased physical volumes of production at mines excavating above mentioned fuel mineral resource due to the decline in domestic demand.

Growing physical production volumes of the enterprises, companies and firms utilizing mineral and fishing resources and emergence of new production units mainly starting from the late 1990s, was statistically portrayed in the burgeoning volumes of natural resources production in the studied region in the period of 1999-2006 [Table 2].

Mass emigration of the Russian population other than indigenous peoples, and decrease in the number of employees in excavation of mineral resources had been

mainly the consequences of mass closedown and liquidation of production units that utilized natural resources as well as disbandment of military units following the arrival of new geopolitical conditions and Russia's new military doctrine and closing down of enterprises and institutions that were servicing the above spheres.

Spatial transformation of natural resources utilization caused the differentiation of population settling. Currently, five types of human settlements can be observed in our studied region. The first type is the Soviet-period settlements, inhabited largely by indigenous population, whose numbers have not changed. An example of this is Amguema Village in Iul'tinskii raion (Photo 2). Its population decreased by 21% in 1990-2006, but it is much less than in other settlements of the raion with essentially Russian population (Table 6).

The second type is the Soviet-period settlements, considerably depopulated and mainly enjoying the status of a raion or orkug center, inhabited mostly by Russian population. For example, in period of 1990-2006 the population of Anadyr (Table 3, Photo 3), the capital city of Chukotka Autonomous Okrug, and Egvekinot (Table 6, Photo 4), the center of Iul'tinskii raion, decreased by 34% and 54%, respectively.

Considerably depopulated settlements, with essentially Russian population, where there co-exist abandoned and preserved residential neighborhoods forms the third type. Ugolnye Kopi 'Coal Mines' settlement, where in the abandoned part there used to live military personnel until military base was closed, is an example of this type (Photo 5).

The fourth type is the depopulated, demolished, abundant human settlements that used to be inhabited by non-indigenous population employed at the enterprises that used natural resources or by servicemen. our on-site analysis in Iul'tinskii raion of Chukotka showed that during the post-Soviet period due to the closing

Table 6 Shrinking Population of Iul'tinskii raion, Chukotka Autonomous Okrug, 1990-2006

Territory	Number of people		Change in number of people, 1990-2006	Rate of increase in number of people, 1990-2006, %
	01.01.1990	01.01.2006		
Total number of people	15,240	3,951	- 11,289	- 74
Including urban population	10,446	2,421	- 8,025	- 77
Including rural population	4,794	1,530	- 3,264	- 68
Including population of settlements:				
Iul' tin	5,125	0	- 5,125	- 100
Vostochnyi	482	0	- 482	- 100
Svetlyi	85	0	- 85	- 100
Amguema	729	574	- 155	- 21
Egvekinot	5,321	2,462	0	- 54

Source: *The Data of Archive and Administration of Iul' tinskii raion, Chukotka Autonomous Okrug.*

down of the Iul'tinskii Mining and Dressing Plant and its servicing enterprises in 1994, Iul'tin Township (Photo 6) and the settlements Svetlyi, Geologicheskii, and Vostochnyi were demolished. By cartographic method, we revealed fourteen demolished human settlements in Bilibinskii raion, six - Chaunskii, four - Iul'tinskii, three - Anadyrskii, two - Shmidtovskii, an one in Providenskii raion.

The opening of new enterprises in post-Soviet time based on natural resources utilization and mainly related to placer gold mining (Photo 7) leads to the emergence of temporary workers' settlements, migrant workers' residences. Such settlements consist of the sixth type in our classification. Somewhere, temporary workers' settlements are set up side by side with abandoned settlements as it is impossible to rehabilitate the latter. Apparently, the number of such settlements will increase as a result of new natural resources utilization projects.

After 2000 when R.A. Abramovich became the Governor, substantial financial

resources were spent for the development of infrastructure and social sphere, repair of the dwelling stock, and in the indigenous villages – for complete replacement of the dwelling stock with new houses of Canadian design, and construction of new social infrastructure assets. One can see in space the followings: greatly many abandoned settlements on the one hand, and preserved settlements with new or renovated buildings on the other.

5 Conclusion

By and large, social consequences of spatial transformation of natural resources utilization in Chukotka is similar to the general situation existing in eastern regions of Russian Federation. Namely, shrinkage of socio-economic space and its further fragmentation have been seen in Chukotka in the post-Soviet period. Nevertheless, there were more number of closedown enterprises based on natural resources utilization and, consequently, much more abandoned settlements than in other regions of Russia.

However, due to the activity of R.A. Abramovich as the Governor, most of the preserved settlements have put on a refreshed look, unlike the majority of the other regions of East Siberia and the Far East which we had studied (Murota and Litvinenko 2008). Unlike the regions with Russian population, there may be observed differences in spatial transformation between settlements dominated by indigenous population (these dwellers have been preserved) and Russian population (such settlements have been either demolished or preserved and considerably depopulated if enjoyed the status of administrative centers). Our finding of five, distinct settlement patterns may be a useful tool for one to further investigate the present and future of social development in Chukotka.

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【References】

- Baklanov, P. Ia., (2001) *Dal'nevostochnyi region Rossii: problemy i predposylki ustoichivogo razvitiia*, Vladivostok: Izd-vo Dal'nauka. (in Russian)
- Dumova, I. I., (2001) *Mekhanizmy prirodopol'zovaniia*, Novosibirsk: Izd-vo Gumanitarnye tekhnologii. (in Russian)
- Khantashkeeva, T., and T. Murota, (2004) "Post Soviet Transition of Russian Far East: Its Economic/Environmental Diversity in International Perspectives," *Doshisha University World Wide Business Review*, Vol. 5, Special Issue.
- Kliuev, N.N., (2004) "Ekologo-khoziaistvennaia transformatsiia postsovetsskoi Rossii i ee regionov," *Izvestiia Rossiiskoi Akademii nauk, seriia geograficheskaiia*, 1, pp. 37-45.
- Litvinenko, T., (2008) "Types of spatial transformation of natural resources utilization and their socioecological consequences: a field study on regions of Eastern Russia," *Natural resources business, population and environment in Eastern Russia: their present and future in relation to Japan*, Proceedings of the Japanese-Russian seminar, March 29, 2008, *Doshisha University World Wide Business Review*, Vol. 10, No. 1, pp. 295-306.
- Minakir, P. A., otv. red., (2002) *Prostranstvennye transformatsii v rossiiskoi ekonomike*, Moscow: Izd-vo Ekonomika. (in Russian)
- Minakir, P. A., (2006) *Ekonomika regionov, Dal'nii Vostok*, Moscow: Izd-vo Ekonomika. (in Russian)

- Motrich, E.L., (2006) *Naselenie Dal'nego Vostoka Rossii*, Vladivostok-Khabarovsk: Izd-vo DVO RAN. (in Russian)
- Murota, T., and T. Litvinenko, eds., (2008) *Natural resources business, population and environment in Eastern Russia: their present and future in relation to Japan*, Proceedings of the Japanese-Russian seminar, March 29, 2008, *Doshisha University World Wide Business Review*, Vol. 10, No. 1, pp. 269-339.
- Privalovskaia, G. A., (2002) "Resursopol'zovanie v sovremennom ekonomicheskom prostranstve Rossii," *Izvestiia Rossiiskoi Akademii nauk, seriia geograficheskaiia*, 2, pp. 5-14. (in Russian)
- Privalovskaia, G. A., and I.N. Volkova, (2004) "Vliianie resursopol'zovaniia na sotsial'no-ekonomicheskoe razvitie syr'evikh raionov," *Izvestiia Rossiiskoi Akademii nauk, seriia geograficheskaiia*, 6, pp. 5-16. (in Russian)
- Sheingauz, A. S., otv. red., (2005) "Prirodopol'zovanie Dal'nego Vostoka Rossii i Severo-Vostochnoi Azii: potentsial integratsii i ustoiчивogo razvitiia," Vladivostok- Khabarovsk: Izd-vo DVO RAN. (in Russian)
- Statistic Data of Chukotka Autonomous Okrug*, (2007) Anadyr, Territorial Body of Federal Service for State Statistics in Chukotka Autonomous Okrug (Electronic version in Russian).
- Strogoff, M., P-C. Brochet, and D. Auzias, (2006) *Petit Fute Guidebook: Chukotka*, Moscow: Avant-Garde Publishers.
- Zaionchkovskaia Zh., "Migratsii i demograficheskoe budushchee Sibiri i Dal'nego Vostoka," in *Rossiiia i ee regiony v XX veke: territoriiia, naselenie, migratsii*, ed. Pavel Polian and OI'ga Gleser, (Moscow: Izd-vo OGI, 2005), pp. 479-491. (in Russian)
- Zubarevich, N.V., (2003) "Sotsial'noe razvitie regionov Rossii: problemy i tendentsii perekhodnogo perioda," Moscow: Izd-vo RSS. (in Russian)

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Photo 1 The nearest island of Alaska viewed from Chukotka (Credit: Alexander Kutskiy).



Photo 2 A completely new housing complex of Amguema Village, Iul'tinskii raion (T. M. 2007).



Photo 3 Anadyr – the capital city of Chukotka Autonomous Okrug (T. L. 2007).



Photo 4 Egvekinot – a town facing the Kresta Bay, the center of Iul'tinskii raion (T. M. 2007).



Photo 5 Half dead and half alive town of Ugolnye Kopi, after military base was closed, Anadyrskii raion (T. L. 2007).



Photo 6 Abandoned settlement of Iul'tin due to the closing down of the Iul'tinskii Mining and Dressing Plant in 1994, Iul'tinskii raion (Credit: Egvekinot Museum).



Photo 7 An aerial view of the new business district of Valunistyi placer gold mining, Anadyrskii raion (Credit: Sergei Zelenskii).

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Abstract

Tamara V. LITVINENKO and Takeshi MUROTA, *Social Consequences of Post-Soviet Transformation of Natural Resources Utilization in Chukotka Autonomous Okrug, Russia*

Chukotka Autonomous Okrug is the Russian region known throughout the world for Roman Abramovich, one of the richest businessmen in Europe, who was the governor of the region until recently (until July 3, 2008). This paper aims to show the current social conditions in Chukotka mainly on the basis of our field research trip to the region in August-September 2007. Chukotka, the northeastern-most region of Russia, faced a severe economic slump and significant depopulation during the 1990s after the Soviet collapse in 1991. In contrast to the gloomy past of the region, during our field trip, we found that the economy of Chukotka is now experiencing a revival fostered by new kinds of economic activities, resulting in an improvement in the living conditions of the indigenous people.

Keywords: Chukotka, Roman Abramovich, population decrease, economic recovery, indigenous people