

Wild reindeer (*Rangifer tarandus* L.) resources use in the Taimyr peninsula: Aspects of the principle of ecological law

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Abstract

Rapid development of modern industry on the Taimyr peninsula together with global changes of environmental conditions and great anthropogenic pressure have caused observable disruption of some Arctic and sub Arctic tundra ecosystems. These changes have several effects on the animal populations, Wild reindeer (*Rangifer tarandus* L.) in particular, that are the resources of living for the indigenous people of the Taimyr peninsula. Many problems are eliminated by existing environmental, health, housing and civil rights laws, research and educational activities. In future, they should be developed and advanced so that *R. tarandus* resources could be balanced according to the indigenous people demands.

Key words: indigenous people, north ecosystems, environmental laws

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Introduction

No one society, including different racial, ethnic and socio-economic groups, should not bear a disproportionate share of the negative ecological consequences as a result of industrial, municipal and commercial operations or performing a Federal, state, regional programs and policies. This means a positive relationship between environmental and social rights of all society members. At the same time, the principles of environmental policy and biodiversity keeping suggest meaningful involvement of all people regardless of race, color, national origin, or profit to the development, realization and supporting of environmental laws observance, rules and policies of natural resources using. Taimyr population of wild reindeer (*Rangifer tarandus* L.) as a main component of the resources for the indigenous people (Nganasans, Dolgans, Entzes, Evenks) should be focused on as being investigated in some intellectual-legal context. This is a realization of the environmental justice principle in using of wild reindeer (*R. tarandus* L.) resources.

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Material and Methods

As a preprocess within the period of 1984-2002, field work concerning 500 hours of ground and 600 hours of air survey for reindeer have been conducted with the territory cover of the Taimyr peninsula (North-East, Russia). After processing of field data from all over Russia,

Research, Laws and Education are systemized and available to be better prepared to prevent some disruptive processes occurrence in North territories to protect ecosystems and health and welfare of indigenous people of Taimyr peninsula.

Results and Discussion

As the Taimyr region continues to develop its natural resources, human-induced changes will continue to affect the availability and use of habitat by wildlife species in the region. Taimyr population of wild reindeer (*Rangifer tarandus* L.) is one of the most important sources for subsistence as well as recreational hunting, watching. The largest population (about 1 000 000) of wild tundra reindeer in Russia is located in Taimyr region of Central Siberia. Causes for the increase in the Taimyr population over the past few decades are well understood. Possible explanation is that due to remoteness the area, and relative scarcity of settlements, reindeer herding and intensive agriculture have not become as established as in other areas. Thus, excessive harvest or direct extermination of wild reindeer that is typical for other regions of Russia has had only little effect on numbers of reindeer in the Taimyr peninsula. Further possible explanation is that the remoteness of the region and a severity of the climate have discouraged human development in the region. As a result, habitat destruction caused by urbanization, intensive agriculture and forestry, and overgrazing of pasture area by domestic reindeer, is relatively minor in both the winter and summer regions of Taimyr region compared to many other regions of Russia.

In spite of the remoteness of the region, and the general thriftiness (high calf

survival, good individual condition) of Taimyr wild reindeer population, two of the most widely repeated specific examples of the influence of the human industrial development on wild reindeer occurred at Taimyr peninsula.

As one example, wild reindeer migrating in the Yenisei river area during autumn do not have a chance to cross the river near Ust'port due to extended area of open water, ice floes, and pressure ridges caused by ice-breakers used to extend open-water channel from Dudinka-city to the Kara-Sea. This barrier resulted not only in many animals drowning, but also in localized range destruction due to trampling and overuse by animals unable to continue on their migration to the places wintering. The second example is the effect of industrial development on the interruption of the wild reindeer migration. It is caused by construction of two-stripped gas line complex from the Messoyahka gas fields on the west side of the Yenisei river to the Norilsk mining and smelting center on the east side of the river. Another barrier is the construction of a railroad paralleled to the pipeline to Dudinka-city, a port on the Yenisei river and Norilsk. Some aspects of the industrial development should limit local range, because the gas line was laid virtually on the ground, and thus became a physical barrier for a wild reindeer movement. It may also cause direct mortality of animals from collisions

with railroad locomotives, and starvation of calves. Although the retrofitting of the pipeline with crossing structures was attempted, and construction of a fence (more than 80 km in length) was built in order to divert wild reindeer from the Norilsk-Dudinka area and force them to pass around the entire gas line complex, the results were unsatisfactory. In spite of the above measures, a large area of potential winter range was lost.

In order to understand these human-induced alterations, and be better prepared to prevent their occurrence in North territories, the wild reindeer resources use is redefined both as an aspect of ecological equity, equity for animals, living beings and living ecological systems, as well as humans environmental protection, as a basic right of indigenous people to protect their health and welfare. The environmental law, research and education have set out clear goals of eliminating unequal enforcement of environmental, civil rights and public health laws, faulty assumptions in calculating, assessing and managing risks, exclusionary policies and practices that prevent the indigenous people from participating in decision making.

However, in the period from 1996 to 2000, a project was launched (see 4 in the Appendix) and Russian training center of indigenous peoples (CSIPN) was opened, the Centre of assistance to small indigenous peoples of the North for practical training of specialists from the number of aboriginal people in the area of economic development, keeping and development of traditional industries. Since 2001, CSIPN has began to create training programs and internships. As a result of this training there generic and family enterprises were opened, in particular, for products processing and using of wild reindeer (Sulyandziga et Krikunenکو

2004). In the Taimyr Autonomous Area, the Charter (Basic Law) of the Taimyr Autonomous Area provides additional rights for indigenous peoples as assistance in the development of traditional branches of the economy, training of national personnel (see 5 in the Appendix). In the Yamalo-Nenets, Khanty - Mansi and Yamal Nenets Autonomous districts, there is a quota of representation in local Parliament of indigenous people of the North. The representative office gives the opportunity for the participation of indigenous people in the process of funds distribution in programs of social-economic development of the indigenous peoples of these regions (see 6-11 in the Appendix).

Over last decades, several monographs and papers have been published that focused different aspects of *R. tarandus* biology and hunting. Klovkov et Shustrov (1999) analyzed the economy of deer-hunting at the Taimyr peninsula. Similar analysis of reindeer hunting is reported by a report (Malygina 2005). Ecological aspects of reindeer hunting are reported by Safronov (2007). Other authors, e.g. Sulyandziga et al. (2003) overviewed the lifestyle of indigenous people of Siberia and the Far East of the Russian Federation, as well as their demands for food sources including *R. tarandus*. Recently, great attention is devoted to young generation of indigenous people, their relation to reindeer and other natural resources in particular. They are taught to understand the principles of ecological equity using different educational programs. Several text materials are used for that purpose, e.g. among them Malygina (2010a, b), Udzackov (1981) are of great importance since they help to establish a new understanding and exploitation of reindeer herds at the Taimyr peninsula.

Conclusions

Many problems of ecological justice for animals, living beings and living ecological systems as well as humans are eliminated by existing environmental, health, housing and civil rights laws, research and educational activities, which should be developed and advanced in

future. This is a positive relationship between environmental and social rights and a realization of the environmental justice principle in using of wild reindeer (*Rangifer tarandus* L.) resources.

References

- KLOKOV, K. B., SHUSTROV, N. A. (1999): Traditional deer-hunting economy of Taimyr. Under the editorship of academician of the RAAS named by E.E. Syroechsky - M., 124 p. (pp. 22-24).
- MALYGINA, N. V. (2005): Objects of hunting: wild reindeer (*Rangifer tarandus* L.) East Taimyr. - Yekaterinburg: Bank of cultural information, 112 pp.
- MALYGINA, N. V. (2010a): Wild Reindeer (*Rangifer tarandus* L.) of East Taimyr: spatial distribution peculiarities. Proceedings of Irkutsk State University. Series Biology. *Ecology*, 3: 183-190.
- MALYGINA, N. V. (2010b): Arctic territories socio-ecology-economical space learning with a gradual foreign language cover as a module system. Textbook for secondary schools of Far North and High school.
- SAFRONOV, V. M. (2007): Ecology and use of wild reindeer in Republic Sakha.
- SULYANDZIGA, R., KRIKUNENKO, E. (2004): Catalogue for production, goods and services of the small indigenous peoples of North, Siberia and Far East of the Russian Federation-Russia. Issue 1., 115 pp.
- SULYANDZIGA, R.V., KUDRYASHOVA, D. A. and SULYANDZIGA, P. V. (2003): Indigenous people of North, Siberia and the Far East of the Russian Federation. Review of current status. Moscow. 142 p.
- UDZHACKOV, A. (1981): "Yamal Reindeer Herding".

Appendix

(Laws and related materials) – *Titles translated by the authors*

- «Priority directions of science development, technologies and techniques in Russian Federation» approved by the decree of the President of the Russian Federation of July 7, 2011, Issue 899, No. 4. The science about life. Issue 6. Rational using of natural resources.
- «The list of critical technologies in Russian Federation»: 19. Technologies of monitoring and forecasting of a condition of the environment, prevention and elimination of pollution. 21. Technologies of prevention and liquidation of emergency situations of natural and technogenic character.
- Legislation about small indigenous peoples from the North. The ecological doctrine of the Russian Federation. 2001. «Hunting rules in the Russian Federation». Resolution of the RSFSR Ministers Council of 19 December 1978, No. 592.
- The program of development of the Northern reindeer herding up to 2010 (meeting of the Presidium of the Russian Academy of agricultural Sciences, Arkhangelsk, July 28-30, 1999).

- Charter (Basic Law) of the Taimyr Autonomous Area. Laws: «About nomadic tribal community of the indigenous peoples of the North»; «About public associations», «About specially protected natural territories»; «About legal status of indigenous small-numbered people of the North»; «About reindeer breeding»; «About hunting».
- The decree of KhMAD - Yugra Government from 01.07.2008, No.140-p «About list of traditional nature use areas of indigenous numerically small North people with regional importance in the Khanty-Mansiysk Autonomous District - Ugra».
- KhMAD - Yugra Government from 05.10.2009, No. 425-RP «About approval of Model agreement subsoil users with subjects of traditional nature management rights for the land use for the subsoil purpose use within the territories boundaries of the traditional nature using of indigenous numerically small people of the North with regional importance in the Khanty-Mansiysk Autonomous District - Ugra».
- The Government decree of KhMAD - Yugra from 09.04.2009, No. 71-p «About the register of state support recipients from the small-numbered indigenous peoples of the North and organizations, which being busy with traditional economic activities and being engaged in crafts of indigenous people of the North»
- The Law of The Republic Sakha Yakutia from 29.01.2002 3 No. 333-Ii About The State Budget Of The Republic Of Sakha (Yakutia) For The 2002.
- The Law of the Yamalo-Nenets Autonomous District «About reindeer breeding» of 21.10. 1998 by Gosudarstvennaya Duma of Yamal-Nenets Autonomy.
- Methodical recommendations on breeding work for reindeer breeding by Agriculture Research Institute of North Urals Adjacent Territories of the Tyumen region (1981) by Mukhachiov A., Nigmattulin R., Udzackov A. et al. 38 pp.
- Breed standard for the Nenets reindeer breed of 1985 by Udzackov A.
- Recommendations for industrial crossing in the Northern reindeer breeding by Jamal Agricultural Experience Station, Salekhard, 1989 by Udzackov A., Mukhachiov A., 22 pp.
- The concept of development of reindeer breeding in the Yamal-Nenets Autonomous district of 24.09.2002 No. 267 by a Governour of Yamalo-Nenets Autonomous District.