



BRILL

Legal Measures for Efficient Environmental Regulations of Oil and Gas Industry in Western Siberia

*Elena Gladun and Gennady Chebotarev**

Abstract

Most of Russia's oil and gas resources are located in Western Siberia, which is an environmentally fragile area, a home for indigenous peoples, and one of the world's greatest land-based sinks for carbon dioxide emissions. Russian oil and gas development over the last fifty years has had significant environmental impacts on Western Siberia and may also have affected the world environment by adding to global warming. The Tyumen Region is one of the biggest administrative regions in the area. 60 per cent of Russia's oil reserves and 80 per cent of Russia's gas reserves are located in the northern territories of the Tyumen Region, much on its continental shelf. The legislation governing environmental protection on the federal and regional level lacks clear-cut rules and measures that can safeguard one of the world's most valuable environmental areas. Another negative impact of oil and gas development is the disturbance to indigenous peoples who have populated the northern Siberian territories for thousands of years. Today, protection of their territories and traditional way of life in the areas of industrial development is insufficient. The authors analyse the Russian environmental regulations of oil and gas, outline main shortcomings and formulate some legal measures that should be incorporated into federal legislation and legislation of the Tyumen Region.

Keywords

Western Siberia – oil and gas industry – environmental legislation

* Elena Gladun: Public and Finance Law Department, Tyumen State University, Russia. Email: efgladun@yandex.ru. Gennady Chebotarev: President, Tyumen State University, Russia.

1 Introduction

Most environmental problems are global in nature – the result of actions taken and endorsed at a national level can have global ramifications. Many ecosystems that are managed under national jurisdictions have immeasurable global benefits and their destruction can lead to negative impacts in regions far removed from the source.

While global public goods that lie within national boundaries continue to fall under the jurisdiction of the state, it is likely that decisions will be made on the basis of national interests rather than global concerns.¹ For example, hydrocarbon resources discovered in the northern regions of Russia have made these territories attractive to the industry. It's obvious that human activity there is increasing and is projected to increase further in coming years.

The exploration and exploitation of oil and gas reserves result in benefits and wealth for some countries; but at the same time, they produce many direct and cumulative impacts on ecosystems and cultures all along the route from source to market.² The ecosystems of the northern parts of Western Siberia are now changing due to intensive industrial development in the waters and onshore and also because of climate change.

The Russian Federation acknowledges the significance of the northern regions and its impact on the global environment. As President Vladimir Putin once noted, otherwise “global advantages may turn into global headaches”.³ With the increase of hydrocarbon production, new sources of contamination will eventually appear and there will be a real threat to fragile northern environments.⁴ Thus, environmental protection holds a vital place in regulating

1 Hannah Stoddart, Kirsty Schneeberger, Felix Dodds, Andrew Shaw, Milena Bottero, Jack Cornforth and Robert White (2011). *A Pocket Guide to Sustainable Development Governance*. Commonwealth Secretariat Stakeholder Forum, 7–8, www.stakeholderforum.org; www.the-commonwealth.org (accessed April 3, 2015).

2 Timo Kumpula, Bruce C. Forbes and Florian Stammmler (2010) “Remote Sensing and Local Knowledge of Hydrocarbon Exploitation: The Case of Bovanenkovo, Yamal Peninsula, West Siberia, Russia” *Arctic* 63: 165–78; Bruce C. Forbes (2004) “Impacts of Energy Development in Polar Regions” in *Encyclopedia of Energy* edited by C.J. Cleveland. San Diego: Academic Press, 93–105; G. Fondahl and A.A. Sirina (2006) “Rights and Risks: Evenki Concerns Regarding the Proposed Eastern Siberia – Pacific Ocean pipeline” *Sibirica* 5: 115–138.6; F. Stammmler and E. Wilson (2006) “Dialogue for Development: An Exploration of Relations between Oil and Gas Companies, Communities and the State” *Sibirica* 5: 1–42.

3 Russia in the Arctic: Opportunities and Peculiarities of International Cooperation. http://russiancouncil.ru/en/inner/?id_4=2782#top (accessed March 2, 2015).

4 *Ibid.*

human activities in the northern regions and it should become an intrinsic part of any industrial project.

In this realm, the first objective of this paper is to show the most visible impacts of oil and gas development in Western Siberia on that region's environment. Our second objective is to analyse the Russian legislation regulating the environmental issues arising from the industrial activities in Western Siberia and to outline its main shortcomings and insufficiencies in mitigation of impacts. At least two basic problems can be laid out:

- (1) federal environmental legislation, as well as the corresponding legislation of the northern regions of Russia, are rather fragmentary and there is no coherent approach to protecting the environment of Western Siberia in the period of its intensive oil and gas development; and
- (2) there are no effective mechanisms for environmental protection of Western Siberia, for example, its climate, ecosystems, territories of traditional lifestyle and occupations and of the northern indigenous peoples.

This paper aims to formulate some legal measures that could be effective if incorporated into federal legislation and legislation of the Tyumen Region, the most significant region of hydrocarbon production in Russia.

2 The History of Oil and Gas Development in Western Siberia

Most of Russia's oil and gas reserves are in the northern areas, such as Western Siberia. The Western Siberian oil and gas province (OGP) is the largest hydrocarbon resource deposit in Russia if not in the entire world. Almost all parts of OGP are rich in resources, but the distribution of specific resources is irregular.⁵ Most oil resources are located in the southern and central parts of the OGP (the Tyumen Region and the Khanty-Mansisk Autonomous Okrug), with the exception of some prospective oil fields on the coast and offshore. Discoveries and development of gas resources prevail in the northern parts of the OGP (the Yamalo-Nenets Autonomous Okrug), where huge gas fields are located within the Arctic Circle.⁶

The discovery of oil and gas in Western Siberia validated the predictions of the legendary Soviet scientist, Ivan Gubkin. As early as the mid-1930s, the

5 Assessment 2007: Oil and Gas Activities in the Arctic – Effects and Potential Effects. Arctic Monitoring and Assessment Programme (AMAP), Oslo, 2010, 2_143.

6 Ibid.

visionary geologist had predicted that the region sat on enormous hydrocarbon resources. The first commercial gas blowout in Western Siberia was obtained in Beryezovo in September 1953. It gave impetus to the development of exploration in the north of the Tyumen Region. Discoveries of new larger fields in 1965 in Yamal Peninsula made it one of the richest gas provinces. In 1970, the largest pool of valuable oil was discovered in the Siberian Far North. These discoveries are landmarks in development of a powerful gas and oil sector in the region.⁷

The period from 1971 through to 1992 is sometimes called a 'heroic period' of exploration of the northern part of the West Siberian OGP. In 1971, the unique Bovanenkovo oil, gas, and condensate field was discovered. In addition, it was found that the Urengoy, Medvezhie, and Yamburg fields were enormous. In this period, the annual volume of deep drilling reached 935–956 thousand meters. Also, the annual growth of oil and gas reserves in the Yamalo-Nenets Autonomous Okrug was the largest in the country.

At the present time 60 per cent of Russia's proven oil reserves and 80 per cent of Russia's gas reserves are located in the northern territories of the Tyumen Region, much on the continental shelf. The Western Siberian OGP is predicted to remain the main gas supplier for national and foreign consumers in the Russian Federation at least until 2030.⁸ Hydrocarbon development in the northern areas of Western Siberia requires enormous amounts of new infrastructure, including pipelines, expanded road and rail networks, and residential facilities. For example, current activity in the Yamalo-Nenets Autonomous Okrug is very high. In the last few years, it has become one of the most attractive investment regions in Russia.⁹ Since 2012 the Yamalo-Nenets Autonomous Okrug there have been developed important economic projects: the world's largest deposit of oil, gas and condensate – Bovanenkovskoye – was commissioned, and construction of both a new seaport and a liquid natural gas plant (Yamal LNG) was begun. Ice-breaking tankers for shipping the gas are also due to be constructed.¹⁰

7 Yamal: at the Edge of Milleniums, Illustrated Essay on the Region's History from Prehistoric Times. Salekhard: ARTVID, Saint Petersburg: Russkaya Collectia, 2000, 654 p.

8 Assessment 2007, *supra* note 5 at 2_146.

9 *Ibid.*, at 2_143.

10 Yamal Oil and Gas. Conference Materials, Salekhard, Russia, 20–21 May 2015, www.yamaloilandgas.com/en/yamal-invest/ (accessed April 23, 2015).

3 Some Impacts of Western Siberia Development on the Environment

The discoveries of oil and gas have turned Western Siberia into the main area of hydrocarbon production in Russia. And at the same time a great number of environmental problems have been generated.

All stages of oil and gas industry have a wide range of impacts on practically all components of natural ecosystems – air, landscapes, soil, surface and ground water, flora and fauna. Even deep studies of ecosystems transformation cannot give a holistic understanding of resource loss, and the long-term effects of nature disturbances.¹¹ When the biggest oil and gas fields were discovered and commissioned in Western Siberia in the early 1970s, local environmental impacts transferred to the regional level. Later, in the 1980s, oil and gas pollution in the Tyumen Region became a serious threat to the environment.¹² Oil and gas development during the ‘golden’ period (1980s–1990s) led to the pollution of West Siberian Plain and the Kara Sea basin and had the global effect.¹³

This paper focuses on three distinctive problems of Western Siberia: climate change, regional environmental impacts, and alterations in the traditional life-style and occupations of the northern indigenous peoples.

3.1 *Climate Change in the Northern Territories of Western Siberia*

Climate change is the most prominent environmental issue on the global agenda today. Certain northern regions have experienced more significant and rapid warming than others in recent decades.¹⁴ Western Siberia is a region of global importance due to the massive amounts of carbon stored in the soil system and due to its large biodiversity. The recent increase in temperatures could potentially alter the climate of the region and consequently affect its ecosystem services and natural resources.¹⁵

11 Andrey Soromotin (2007) “Industrial Transformation of Natural Ecosystems in Taiga Zone in the Process of Oil And Gas (Example of the Tuymen Region)” Sc.D. diss., Tyumen State University, 3.

12 Ibid., at 12.

13 Ibid., at 71.

14 Bruce C. Forbes, Florian Stammer, Timo Kumpulac, Nina Meschytybd, Anu Pajunena and Elina Kaarlejärvia (2009) “High Resilience in the Yamal-Nenets Social-Ecological System, West Siberian Arctic, Russia” *PNAS* 106: 22041. Also available at www.pnas.org/content/106/52/22041.full.pdf (accessed March 30, 2015).

15 Degefie Degefie, Eliza Fleischer, Otto Klemm, Andrey Tolstikov and Andrey Soromotin (2014) “Climate Extremes in South Western Siberia: Past and Future” *Stochastic Environmental Research and Risk Assessment* 28: 2161–2173.

Studies in Western Siberia indicate an increase of the average temperature of the vegetation period by more than 1°C over the last 15 years, coupled with a prolonged growing season. An increase in winter precipitation was also observed, along with strong and prevalent springtime warming.¹⁶ Another study by Russian researchers revealed a decrease of the duration of the cold season over most of the Western Siberia territories by 1–3 days per decade.¹⁷ A corresponding increase of the growing season length by 2–4 days per decade was reported in the same study.

Scientists forecast strong and lasting warming of the climate in the Russian North, which would be a significant challenge to Russia. As a positive impact, the Northern Sea Route will be open for navigation the whole year, turning into the Eurasian marine transport corridor. As a result, the Arctic region of Western Siberia will gradually gain strategic importance.¹⁸ As the negative impact, climate extremes will be largely manifested by disasters such as floods, drought, heat waves, or fire. The changes in intensity and frequency of climate extremes are becoming the main threat for the region.

Thus, specific and rather precise recommendations are needed for agriculture and the oil and gas industry that can be used to develop climate change adaptation strategies.

3.2 *Regional Environmental Problems of the Northern Territories*

Intensive development of oil and gas fields resulted in colossal environmental problems in Western Siberia. According to the data collected by the Ministry of Natural Resources and Ecology of Russia, in the period of 2010–2012, the oil industry was responsible for 8.6 per cent and the refining industry for 3.9 per cent of the total amount of pollutants emitted into the atmosphere.¹⁹ Pipeline accidents, oil leakage and water pollution disturbed or destroyed flora and fauna on the vast territories.

Future oil and gas activities can also bring numerous environment impacts associated with every stage of hydrocarbon development of both on- and

16 Kurt E. Frey and Laurence C. Smith (2003) "Recent Temperature and Precipitation Increases in West Siberia and their Association with the Arctic Oscillation" *Polar Res* 22: 287–300.

17 Tamara M. Shulgina, Elena Yu Genina and Evgeny Gordov (2011) "Dynamics of climatic Characteristics Influencing Vegetation in Siberia" *Environ Res Lett* 6: 045210.

18 Alexi Chesnokov and Olga Khilal (2009) "Exploration of the Arctic Shelf is a Global Task" *Oil&GasEURASIA* 10: 16–22.

19 State report "On the State Environmental Protection of the Russian Federation in 2010". February 8, 2012. <http://www.mnr.gov.ru/regulatory/detail.php?ID=128153> (accessed April 11, 2015).

offshore operations. The most pressing issues include, but are not limited to, the following:

- sound pollution and disturbance affecting marine life (in particular marine mammals) during offshore seismic operations;
- pollution from oil spills, especially in, and under ice and ice-infested waters;
- destruction of species and their habitats, including species essential for indigenous peoples; and
- additional disturbance and destruction of sea ice and corresponding ice habitats.²⁰

An example of a potentially polluting discharge is the disposal of drilling fluids and drilling muds. These contain toxic agents, anti-corrosion fluids and oils, and are commonly disposed of in waste pits, dumps or storage areas close to drilling rigs. Many storage places are located in water protection areas. Often storage areas are used to dispose of such substances as waste oil, waste chemicals and materials used to repair wells. Many storage areas built in the past have not been hydro-isolated, allowing ground and rain water to percolate through the waste. Research conducted by Tyumen State University proved that chemical agents migrate from storage places into groundwater. Products of partial decomposition, which are present in storage places, are sometimes much more toxic and carcinogenic than the oil and waste itself.²¹

As a result specific standards should be set to prevent chemical pollution as well as sound pollution, soil pollution and air pollution in the ecologically fragile northern areas.

3.3 *Some Impacts of Western Siberian Development on Indigenous Peoples*

Environmental problems are closely connected with the problem of indigenous peoples of the North. There are four main groups of indigenous peoples living in Western Siberia: the Khanty, Mansy, Nenets and Selkup.²² Their traditional

20 Arild Moe (2013) "The Future of Arctic Oil and Gas Development – Russian and Norwegian Perspectives" in *The Arctic in World Affairs – A North Pacific Dialogue on the Future of the Arctic* edited by Oran R. Young, Jong Deog Kim and Yoon Hyung Kim. Seoul: Korea Maritime Institute/East-West Center, 169–176.

21 West Siberia Oil Industry Environmental and Social Profile Final Report, June 2001, <http://www.greenpeace.nl/Global/nederland/report/2001/5/west-siberia-oil-industry-envi.pdf> (accessed April 11, 2015).

22 Results of the National Population Census of 2010 in relation to demographic and socio-economic characteristics of the various nationalities. Available at http://www.gks.ru/free_doc/new_site/perepis2010/croc/results2.html (accessed March 30, 2015).

livelihood was conducted over a large, dispersed area along the Ob River and its tributaries in a semi-nomadic way. Reindeer herding is of greatest importance in the area. Reindeer pastures cover almost 50 million hectares for the largest herd of domestic reindeer, which counts over 600,000 head. Near the pastures are hunting areas of great economic significance, with wild fowl, waterfowl, fur-bearing animals, elk and wild deer.²³ For the northern indigenous peoples reindeer herding is not just the economic sector; it shapes their world outlook and lifestyle.

Since the beginning of industrial exploitation of the North of Western Siberia and the creation of the largest oil and gas industry, the life of the northern indigenous peoples has changed greatly.²⁴ For example, the numbers of reindeer in Yamal decreased by 30 per cent at the beginning of the twenty first century, though the herd is still the largest in Russia.²⁵

Oil and gas operations can have serious direct negative impact on indigenous peoples and their societies, including increased settler population on their lands, displacement of indigenous peoples, large infrastructure projects, decreased local flora and fauna, contamination of water, soil and air, and degradation of valuable lands. This often leads to an increased risk of health problems among the indigenous peoples affected, and to loss of, or damage to, hunting grounds, fisheries, biodiversity, medical plants and spiritual sites, among others.²⁶

An even bigger problem is the denial of aboriginal rights to land, and of access to natural resources. Indigenous peoples of the North who traditionally used their lands for agriculture and reindeer herding have to resettle and look for new occupations. Thus their ties to the environment are broken, weakening their cultural identity.

It is extremely important to preserve the indigenous populations throughout the oil and gas development period. These populations constitute the historical stable populations of the region, prior to, during and also after periods of resource extraction. And as this is their homeland, indigenous peoples are more likely to stay on after a major industrial project.²⁷

23 Yamal: at the Edge of Milleniums, *supra* note 7, at 302.

24 Tyumen North: the History of Development. Way to Siberia. On-line project, 2008, <http://www.ikz.ru/siberianway/engl/oilandgas.html> (accessed March 30, 2015).

25 Yamal: at the Edge of Milleniums, *supra* note 7, at 304.

26 Rune S. Fjellheim and John B. Henriksen (2006) "Oil and Gas Exploitation on Arctic Indigenous Peoples' Territories", Gáldu Resource Centre for the Rights of Indigenous Peoples. *Guovdageaidnu/Kautokeino*: 4: 28.

27 *Ibid.*, at 12.

A very important objective of the state is to sustain traditional lifestyle and occupations of indigenous peoples in the territories of intensive hydrocarbon production and to recover their lands and other ecosystems after the production is over.

4 Federal Environmental Legislation Regulating Oil and Gas Development in Western Siberia

The Tyumen Region is one of the biggest administrative regions in Western Siberia and one of the largest in Russia. The Region occupies a large part of the West Siberian Plain. The Tyumen Region stretches for 2,100 km from north to south and 1,400 km from west to east. The northernmost point of the Tyumen Region is located on the Yamal Peninsula. It is Skuratov Cape 73° 30' N; the westernmost point is situated in Severnaya Sosva River head (58° 50' E), the easternmost is located in the Nizhneartovsk district by the Vah River head (86° 00'), and the southernmost is in Sladkovsk district, on the border with Kazakhstan (55° 10' N).²⁸

There are two large administrative areas located in the North of the Tyumen Region: the Khanty-Mansiysk Autonomous Okrug, and the Yamalo-Nenets Autonomous Okrug.²⁹ All three are separate subjects of the Russian Federation. Because of two other equal subjects within its territory, the Tyumen Region is called a “complicated subject of the Russian Federation”³⁰ which means not only the complicated administrative and legislative structure, and joint infrastructure, but also problematic processes of cooperation and managing of common territories.

The first tripartite cooperation agreement between the Tyumen Region, the Khanty-Mansiysk Autonomous Okrug and the Yamalo-Nenets Autonomous Okrug was concluded in 2004³¹ and two years ago it was extended to 2020.³² The cooperation agreement includes an extensive set of joint projects and

28 Information Portal on Tourism in Russia, Welcome to Russia! Federal Agency for Tourism <http://en.welcome2russia.ru/russia/?id=2524>.

29 Jens Kai Perret (2014) *Knowledge as a Driver of Regional Growth in the Russian Federation* Berlin: Springer, 9.

30 Interview with the Governor of Tyumen region, Sergey Sobianin, taken by I.A. Neftegaz. Ru. 19 October 2001, <http://neftgaz.ru/analisis/view/8023> (accessed April 3, 2015).

31 Agreement between the Public Authorities of the Tyumen Region, the Khanty-Mansiysk Autonomous Okrug – Yugra and Yamalo-Nenets Autonomous Okrug, signed July 9, 2004.

32 Agreement between the Public Authorities of the Tyumen Region, the Khanty-Mansiysk Autonomous Okrug – Yugra and Yamalo-Nenets Autonomous Okrug, signed July 4, 2013.

programs, some of which involve joint funding, housing and other projects with high social and economic significance.

According to Article 72 of the Constitution of the Russian Federation the issues of nature use, protection of the environment and ensuring environmental safety are the joint jurisdiction of the Russian Federation and the subjects of the Russian Federation.³³ This means that environmental regulations over all industrial and development projects are adopted and implemented on both federal and regional levels. The laws and other legislative acts of the subjects of the Russian Federation may not contradict the federal laws (Article 76).³⁴

The Russian Constitution also provides guarantees of environmental quality in its Article 42. These include the right to a favourable environment, reliable information on its state, and to compensation for damage inflicted upon one's health or property as a result of violating environmental legislation. Under Article 58 everyone is obliged to preserve nature and the environment, and carefully treat natural wealth. These constitutional provisions are disclosed in detail in environmental legislation.³⁵ Environmental laws and regulations now address most of the priority environmental issues. Government agencies responsible for environmental policy, regulation, and compliance act at both federal and regional levels, but the environmental policy implementation is increasingly centralised. During the last years, traditional legal instruments, for example, environmental quality standards, permitting, and environmental liability, have been set and elaborated, and also some novel measures (such as industry rating, environmental management systems and corporate reporting) have been adopted or further promoted.³⁶

The Law "On Environmental Protection", passed in 2002, is the basis for the entire system of environmental legislation. It covers general issues of resource use and environmental protection, regulates sources of negative impacts on the environment and human health. This law also sets the powers and functions of the federal, regional, and local authorities over environmental issues.³⁷ The essential drawback of the law is that it does not take into account the peculiarities and specific conditions of the northern territories, nor does it establish

33 Constitution of the Russian Federation. 2014. SZ RF 31: 4398. Also available online at: <http://www.constitution.ru/en/10003000-04.htm> (accessed February 9, 2015).

34 Ibid.

35 Ibid.

36 Environmental Policy and Regulation in Russia: Implementation Challenge. OECD, 2006: p. 6. Also available online at: www.oecd.org/env/outreach/38118149.pdf (accessed March 11, 2015).

37 Federal Law "On Environmental Protection", 2002, No. 7-FZ. SZ RF, 2002. (2): 133.

specific environmental requirements for economic activities in the North. In particular, the law does not include any rules governing human impact on the northern ecosystems and does not establish precise requirements of oil and gas development in the North.³⁸

Another deficiency of the law is its declarative provisions, for example the right to reliable information about the state of the environment is not provided properly.³⁹ There are neither federal nor regional laws elaborating the sources, procedures and guarantees of information about the environment.

Another example of this declarative approach is Article 73 of the Law "On Environmental Protection" which states the necessity to provide special environmental education for the top managers of companies and organisations as well as for the experts in the field of environmental protection and environmental safety. It says: "the top-managers, specialists responsible for decision-making in business and other activities that have or may have negative impact on the environment, must be trained in the field of environmental protection and environmental safety. The requirements for such training should be set in special laws".⁴⁰ Currently there are no such laws on the federal level and some laws that had been adopted in the regions are no longer in force.⁴¹

Environmental impact assessment plays an important role in ensuring the environmental safety of oil and gas development. The Federal Law "On Environmental Impact Assessment" aims to implement the constitutional rights to a favourable environment through the prevention of negative environmental impacts from economic and other activities.⁴² This law requires environmental impact assessments for all major industrial projects. Unfortunately, this law does not specifically apply to the projects planned in the northern territories, and as a result certain activities have negative impacts on the ecosystems, which are more sensitive. The negative impacts will definitely increase in future, hence the northern territories require additional environmental regulation.

38 Ibid.

39 Ibid. Article 11.

40 Ibid.

41 Law of the Tyumen Region "On Environmental Education and Training", 2004, No. 205. In: *Tyumen Region Today* 33 (2004). This law was abolished in 2005.

42 Federal Law "On Environmental Impact Assessment", 1995, No. 174-FZ. SZ RF 1995. (48): 4556.

The scope of 'resource' laws of the Russian Federation (including the Land Code,⁴³ the Forest Code,⁴⁴ the Water Code,⁴⁵ the Subsoil Use Law,⁴⁶ and the Law "On the Continental Shelf of the Russian Federation")⁴⁷ is the use and protection of certain natural resources (lands, water objects, wildlife, forestry, the continental shelf, and mineral resources) during the process of oil and gas development. The acts include rules for development and production, rules for allocation of the usage rights, rules on responsibility, requirements for users of resources, an enforcement system, procedures for permitting and licensing, and the powers of federal, regional and local authorities. Unfortunately, these laws set only minimum environmental requirements.

For example, the Water Code, which was adopted in 2006 after many debates, has become one of the most controversial pieces of environmental legislation in Russia. Generally, it introduces management approaches to water objects, to a big extent replacing administrative instruments of water use and regulation with civil ones. Most requirements of the Water Code are rather declarative and therefore there is a greater need for developing the secondary legislation. There are no special provisions for protecting the northern waters from impacts of hydrocarbon industry, for example.⁴⁸

There are two main climate policy documents in Russia: the Climate Change Doctrine published in 2009 and the Climate Action Plan passed in 2011.⁴⁹ The main objectives of the Doctrine are to harmonise domestic climate-related legislation with international standards, improve climate monitoring, stimulate the adoption of stronger environmental standards as well as energy-efficiency and energy-saving measures, and encourage the use of alternative energy sources including renewables.⁵⁰ The documents provide a broad range of measures, with those specifically relevant to industrial energy efficiency: increased measurement of energy consumption for all industrial consumers; key performance indicators and benchmarks for energy efficiency; cross-sectoral

43 Land Code of the Russian Federation, 2001, No. 136-FZ. SZ RF 2001 (44): 4147.

44 Forest Code of the Russian Federation, 2006, No. 200-FZ. SZ RF 2006 (50): 5278.

45 Water Code of the Russian Federation, 2006, No. 74-FZ. SZ RF 2006 (23): 2381.

46 Law "On Subsoil Use", 1992, No. 2395-1. SZ RF 1995 (10): 823.

47 Federal Law "On the Continental Shelf of the Russian Federation", 1995, No. 187-FZ. SZ RF 1995 (49): 4694.

48 Water Code of the Russian Federation, 2006, No. 74-FZ. SZ RF 2006 (23): 2381.

49 Governmental Order "On Climate Doctrine of the Russian Federation", 2009, No. 861-pn. SZ RF 2009 (51): 6305.

50 Maria Sharmina, Kevin Anderson and Alice Bows-Larkin (2013) "Climate Change Regional Review: Russia" *WIREs Clim Change* doi: 10.1002/wcc.236.

strategies to limit greenhouse gas emissions; measures to modernise technologies and equipment for the production of basic chemicals.

However, neither the Doctrine nor the Plan contains quantitative or definitive climate change targets. Although the Doctrine acknowledges that “a major part of the Russian Federation is within the geographic area affected by maximum climatic changes, in terms of both observations and predictions”, little has been done to put the suggested policies in place.⁵¹ The Climate Change Doctrine was not implemented at regional or sectoral levels in the northern territories and no amendments have been made to the basic environmental laws concerning the climate targets. The other drawback is that the documents do not focus on the northern climate, though as research outlines, the distinct feature of Russia’s climate is permafrost. It extends over almost 70% of the country’s land area, with the frost penetration in some areas reaching as deep as 1,300 m. Permafrost evolution has a major bearing on both climate formation and socio-economic performance in Russia. The maintenance of existing infrastructure and new construction projects depends on the state of the frozen ground, particularly, in the northern parts of Western Siberia.⁵²

There also exists ‘northern-oriented’ legislation in Russia. In 2008 two key documents determining the development in the Arctic for the next decade were adopted: the *Foundations of Russian Federation Policy in the Arctic until 2020 and Beyond* (hereafter Foundations) and the *Strategy of the Arctic Zone Development and National Security of the Russian Federation for the Period until 2020* (hereafter Strategy).⁵³ They describe the basic national interests in the Arctic, which are: to exploit natural resources, to protect Arctic ecosystems, to use the seas as a transportation system, and to ensure that the Arctic remains a zone of peace and cooperation.⁵⁴

The Foundations document sums up its environmental objectives for the Arctic as the “conservation of the Arctic’s unique ecosystems, safeguard . . . the Arctic environment . . . under conditions of increasing economic activity and global climate change. . .”.⁵⁵ To accomplish this, Russia plans to take several

51 Ibid.

52 Ibid.

53 The Foundations of the Russian Federation Policy in the Arctic until 2020 and Beyond (approved by the President of the Russian Federation, 2008, No. Pr-1969), The Strategy of the Arctic Zone Development and National Security of the Russian Federation and for the Period until 2020. Available at <http://www.government.ru> (accessed May 10, 2014).

54 Russia’s Arctic Policy to 2020 and Beyond. Available at http://icr.arcticportal.org/index.php?option=com_content&view=article&id=1791%253 (accessed May 13, 2014).

55 The Foundations of Russian Federation Policy in the Arctic until 2020 and Beyond, supra n. 15.

steps. The first is to introduce environmental management and monitoring programs. The second is to focus on the “restoration of natural landscapes” and the responsible disposal of toxic wastes and chemicals. The third is to “... ensure the preservation of the biological diversity of the Arctic flora and fauna through the expansion of the network of protected natural and aquatic environments”. And the fourth is to make sure that nuclear powered vessels are retired and disposed of after reaching a certain age.⁵⁶

However, in section VI of Foundations, which introduces the stages of realisation of the Russian policy in the Arctic, there is no mention of any environmental targets. In light of this, it is clear that the implementation of the new environmental policy in Russian Arctic lacks the mechanisms for realisation.⁵⁷

The Foundations and the Strategy have become the benchmark for the development of specific legal provisions concerning the use and protection of the environment in the Arctic. At the same time, the goals can be achieved by setting effective legal measures in the current legislation. However the provisions of the Arctic Strategy have not been incorporated into either the environmental laws or the resource laws.

The *Strategy of Social and Economic Development of Siberia* was adopted in 2010 under the Federal Government Order and it lays out several measures aimed at a significant strengthening of the innovative character of the economy in Western Siberia.⁵⁸ A part of this Strategy is devoted to environmental objectives, among which the document outlined: improving the quality of the natural environment and ecological conditions of human life; formation of an environmentally safe and comfortable places of work and leisure; organisation of environmentally friendly production; reducing the impact on the environment from all anthropogenic sources; improving the system of environmental standards, environmental monitoring, environmental impact assessment; development of environmental goods and services; regulating of environmental auditing, environmental certification, environmental insurance; formation of the requirements for the development of technologies; preservation and protection of the natural environment (conservation of natural ecosystems, landscapes, clean water sources, increased bio-productivity, reduced species diversity); solution to the problems of wastes (recycling and disposal). Generally, the Strategy provides a broad range of measures; all of them are very vague and none are specifically relevant to environmental problems of the

56 Ibid.

57 Ibid.

58 Order of the Government of the Russian Federation “On approval of the Strategy of Socio-Economic Development of Siberia until 2020”, 2010, No. 1120-p. SZ RF 2010 (33): 4444.

northern territories of Western Siberia, which should be decided in the nearest future. Moreover, these environmental objectives are not provided with definite measures in the environmental legislation.

Conducting oil and gas development and production in the Tyumen Region obviously raises questions of deep environmental protection of the region. This is dictated not only by the unique natural climatic conditions there, but also by the economic importance of the resources and colossal environmental burden on the region.

5 Environmental Legislation of Two Administrative Regions of Western Siberia

Generally speaking, the environmental legislation is rather deficient in the Tyumen Region and its constituent subjects.

The basic Law “On Environmental Protection in the Tyumen Region” describes the powers of regional authorities in the environmental protection sphere. Also in its scope there are targeted environmental programs, protection of endangered species, and monitoring activities in the Tyumen Region.⁵⁹ The Law “On Regulation Water Use in the Tyumen Region”⁶⁰ is a mere enumeration of the powers of the regional authorities, which is a replication from the Water Code of the Russian Federation. Both laws are very broad and do not set any special requirements for the oil and gas industry. In this way they fail to protect ecosystems (waters, soils, subsoil, flora and fauna) from immense impacts.

The environmental laws of the Yamalo-Nenets Autonomous Okrug are, similar to the Tyumen Region, very abstract and cover very few environmental issues. The Law “On Environmental Protection in the Yamalo-Nenets Autonomous Okrug” distributes the powers between the regional and municipal authorities, regulates economic initiatives on environmental projects, and sets some rules on environmental monitoring, environmental supervision and preservation of endangered species. The Law “On Subsoil Use in Yamalo-Nenets Autonomous Okrug”⁶¹ aims to regulate the use of common minerals

59 Law of the Tyumen Region “On Environmental Protection in the Tyumen Region”, 2004, No. 302. *Vestnik Tyumenskoy Oblastnoy Dumy* 15 (1), 2004.

60 Law of the Tyumen Region “On Water Use in the Tyumen Region”, 2006, No. 523. *Vestnik Tyumenskoy Oblastnoy Dumy* 11, 2006.

61 Law of the Yamalo-Nenets Autonomous Okrug “On Subsoil Use in the Yamalo-Nenets Autonomous Okrug”, 2012, No. 56-ZAO. *Krasnyi Sever* 52, 2012.

under regional jurisdiction. No article in the law deals with environmental protection of the subsoil and minerals.

The primary responsibility for protecting the environment, especially in Western Siberia where industrial development is intensive, rests with regional governments. Their essential jobs are to realise rules proposed by the central government in the certain conditions and to facilitate environmentally friendly activities in the North. Current legal regulations of the subjects are unable to address main environmental goals due to some factors:

- (1) The key state functions in environmental protection are in the scope of federal jurisdiction. Under Article 5 of the Federal Law “On Environmental Protection” such measures as environmental quality standards, permits, environmental liability, objects of environmental impact assessment, environmental information, and environmental protection of the continental shelf can be set only through the federal legislation. When the regional authorities decide to formulate necessary rules over these issues their laws come into contradiction with the federal legislation. For example, Article 6 of the Law “On Environmental Protection in Yamalo-Nenets Autonomous Region”⁶² sets environmental standards and these norms conflict with the federal legislation because Article 19 of the Federal Law “On Environmental Protection” states: “standards are prescribed only in the Federal Governments orders”, and according to Article 5 of the same law, standards setting is the power of the Federal Government.
- (2) The scope of regional powers in the environmental sphere is very limited. According to the federal legislation they can have legal initiatives on such matters as monitoring, preservation of endangered species and targeted programs.
- (3) The regional authorities have very little expertise in providing effective environmental measures as one of their main tasks for the last decades has been to increase oil and gas production but not to protect the natural environment. As they have recently faced immense environmental problems, the regions of Western Siberia must make an effort to ensure effective and sustainable natural resource utilisation and environmental protection; serious work has to be started to create a legislative basis for dealing with environmental impacts.⁶³

62 Law of the Yamalo-Nenets Autonomous Okrug “On Environmental Protection in the Yamalo-Nenets Autonomous Okrug”, 2008, No. 53-ZAO. *Krasnyi Sever* 129 (74–75), 2008.

63 Sergei Kharyuchi (2005) “Legislative Regulation on Yamal’s Natural Resources” *Indigenous Peoples’ World – Living Arctic*. 17: 119.

6 Legislation on Indigenous Issues

The Yamal Peninsula is home to 10,000 indigenous Nenets, half of whom still practice reindeer herding as a nomadic way of life.⁶⁴ It is important to note that in spite of rapidly intensifying industrial, socio-economic and environmental pressures in recent decades, the region continues to experience a growing number of Nenets households and growing numbers of herded reindeer.⁶⁵

Indigenous peoples in Russia have gained constitutional and legislative support. The Russian Constitution guarantees the rights of indigenous peoples “in accordance with generally recognised principles and norms of international law”,⁶⁶ and shares the responsibility between federal and regional governments for “the protection of traditional living habitat and of traditional way of life of small ethnic communities”.⁶⁷ Under Article 72 of the Constitution, the Federal Government has responsibility and jurisdiction to regulate and protect the rights of indigenous peoples, and the subjects of the Russian Federation must bring their laws into conformity with federal legal framework.

The *Concept for the Sustainable Development of Indigenous Peoples of the North, Siberia and the Far East of the Russian Federation* (hereafter Concept) is the key document determining the main principles of Russian national policy towards indigenous peoples of the North.⁶⁸ The main objective of the Concept is to strengthen social and economic potential, to protect the traditional environment, traditional lifestyle and cultural values of indigenous peoples, with government support as well as through mobilisation of the internal resources of the peoples themselves. Participation of indigenous peoples and their representatives and associations in making decisions when natural resources are explored and used in traditional habitat and the areas of traditional economic activities is one of its objectives. Unfortunately, the Concept doesn't suggest legal mechanisms to implement these objectives.

64 Forbes et al., *supra* note 14.

65 Timo Kumpula, Bruce C. Forbes, Florian Stammler and Nina Meschytyb (2012) “Dynamics of a Coupled System: Multi-Resolution Remote Sensing in Assessing Social-Ecological Responses During 25 Years of Gas Field Development in Arctic Russia”. *Remote Sensing* 4: doi:10.3390/rs4041046.

66 Constitution of the Russian Federation, *supra* note 33, art. 69.

67 *Ibid.*, art. 72.

68 Order of the Government of the Russian Federation “On the Concept for the Sustainable Development of Indigenous Peoples of the North, Siberia and the Far East of the Russian Federation”, 2009, No. 7. SZ RF 2009 (7): 876.

Federal legislation on indigenous peoples consists of the Federal Law “On Guarantees of Rights of Indigenous Peoples in the Russian Federation”,⁶⁹ the Federal Law “On Territories of Traditional Resource Use”,⁷⁰ and some rules and regulations in the specific laws such as the Land Code, the Water Code, the Forestry Code.

In 2009, the Russian Government passed the special lists – the List of Traditional Habitats and Areas of Traditional Occupations of Indigenous Peoples of the Russian Federation, as well as the List of Types of Traditional Occupations of Indigenous Peoples of the Russian Federation.⁷¹ Such lists were set to resolve the problem of confirmation of ethnicity by indigenous peoples of the North in order to receive priority rights to use land, forest, water and other resources. According to these lists specially protected areas can be created where any “non-traditional” activities are restricted or prohibited. Unfortunately, by 2015 no such areas have been settled.

Nevertheless, the regional governments in Western Siberia take great effort to establish long-term political stability and personal continuity, alongside social programs for indigenous peoples. The example of Yamalo-Nenets Autonomous Area shows a certain progress of regulations guaranteeing indigenous interests in hydrocarbon development. The Statute of Yamalo-Nenets Autonomous Area⁷² declares the rights of indigenous peoples, guarantees their right to traditional lifestyle and occupations, language and culture, the right to participate in the work of regional authorities and local governments according to their national traditions and customs. Public authorities are obliged to take into account the indigenous peoples’ opinion when dealing with issues that affect their interests.⁷³

Several laws are related to the problems of land use, traditional nature management, and conservation of natural resources on the lands of indigenous peoples. These are:

69 Federal Law “On Guarantees of Rights of Indigenous Peoples in the Russian Federation”, 1999, No. 82-FZ. SZ RF 18: 2208.

70 Federal Law “On Territories of Traditional Resource Use”, 2001, No. 49-FZ. SZ RF 2001 (20): 1972.

71 Governmental Order, 2009, No. 631-p. SZ RF 2009 (20): 2493.

72 Charter of the Yamalo-Nenets Autonomous Area, 1998, No. 56-ZAO. Krasnyi Sever 2008 (44/1) 22.

73 *Ibid.*, at art. 12.

- (1) The Law “On Specially Preserved Areas of the Yamalo-Nenets Autonomous Okrug”,⁷⁴ which regulates the organisation, preservation, and utilisation of specially preserved natural areas of particular scientific, cultural, aesthetic, or recreational value, and guarantees protection of the legal rights and interests of the northern indigenous peoples, as well as preservation and development of their traditional lifestyle and occupations.
- (2) The Law “On Protection of the Natural Habitat and Traditional Lifestyle of the Northern Indigenous Peoples in Yamalo-Nenets Autonomous Region”⁷⁵ targets preservation of traditional territories and occupations of indigenous peoples, supports traditional way of life, and provides facilities and conditions for revival of indigenous culture. Article 8 of the law regulates participation of indigenous peoples in protection of territories through their representatives. The protection instruments are implemented jointly by state authorities, local government bodies, companies, and are aimed at economic, social, environmental, organisational, legal and other objectives in order to preserve territories which indigenous peoples.
- (3) The Law “On Reindeer Herding”⁷⁶ determines legislative, economic, environmental and social fundamentals of reindeer husbandry as one of the most important livelihoods of indigenous peoples.
- (4) The Law “On State Support to Indigenous Peoples, to their Communities and the Northern Organizations Involved in Traditional Occupations in the Territory of Yamalo-Nenets Autonomous Area”⁷⁷ requires that in cases where industrial development takes place on the territory of indigenous peoples, the public authorities must inform indigenous peoples about it and organise consultations with their representatives and communities; also public authorities provide for making legal agreements between indigenous peoples and industrial companies, especially those

74 Law of the Yamalo-Nenets Autonomous Okrug “On Specially Preserved Areas of the Yamalo-Nenets Autonomous Okrug”, 2004, No. 69-ZAO. *Krasnyi Sever* 58, 2004.

75 Law of the Yamalo-Nenets Autonomous Okrug “On Protection of the Natural Habitat and Traditional Lifestyle of the Northern Indigenous Peoples in Yamalo-Nenets Autonomous Region”, 2006, No. 49-ZAO. *Krasnyi Sever* 119/1, 2006.

76 Law of the Yamalo-Nenets Autonomous Okrug “On Reindeer Herding”, 1998, No. 46-ZAO. *Vedomosty Gosudarstvennoi Dumy Yamalo-Nenets Autonomous Okrug*, October 8, 1998.

77 Law of the Yamalo-Nenets Autonomous Okrug “On State Support to Indigenous Peoples, to their Communities and the Northern Organizations Involved in Traditional Occupations in the Territory of Yamalo-Nenets Autonomous Area. 2005, No. 114-ZAO. *Vedomosti Gosudarstvennoi Dumy Yamalo-Nenets Autonomous Okrug* 11/2, December, 2005.

which develop mineral and energy resources.⁷⁸ The law also grants indigenous communities the right to participate in development of special regional programs and in control over their execution.⁷⁹

Implementing the legal norms, the regional authorities create good conditions for oil and gas companies to work closely with indigenous peoples in discussion of special requirements and conditions of the industrial projects.

One example of the involvement of indigenous peoples in decision-making is the project “Yamal LNG”, implemented by Russia’s largest independent gas producer – Novatek. The Yamal LNG project is based in the estuary of the Ob River, which is ice-bound nine months of the year. The project ensures production and marketing of the Russian Arctic’s vast natural gas reserves and has involved the construction of a major new maritime route for transporting liquefied natural gas to Europe and Asia.⁸⁰ Since it was launched, the Yamal LNG project has made efforts to respect the traditional way of life of indigenous peoples. A strategic environmental assessment was carried out, together with an exploratory study of the various stakeholders involved. An accurate map of the local environment was done, and a detailed analysis of the site’s social and economic context was provided. Based on these results, the first phase of the community commitment program was initiated. Its purpose is to mitigate the impact of the Yamal LNG project. A regional support program for the Nenets peoples was developed and a €76 million action plan deployed. It includes:

- measures to prevent soil and water pollution, together with compensation contracts in the event of any damage caused to the region’s ecosystem and fragile natural resources;
- cooperation agreements with local authorities focusing on cultural issues and measures to protect sacred landscapes and places of worship;
- the construction of logistical infrastructure, housing, educational and medical centers;
- the supply of equipment, machines, fuel and food; and
- close cooperation with NGOs and local indigenous associations.⁸¹

78 Ibid., at art. 5.

79 Ibid., at art. 7.

80 TOTAL Official Web-site <http://www.total.com/en/energies-expertise/oil-gas/exploration-production/projects-achievements/lng/yamal-lng?%FFbw=kludge1%FF#sthash.grh1aUE5.dpuf> (accessed February 9, 2015).

81 Yamal LNG Project will consider the consent of indigenous people of Yamal. *Region89.RF*, 2012: <http://www.r89.ru/novosti/1423.php> (accessed August 2, 2014).

Thus, the regional authorities and industrial companies of the Yamalo-Nenets Autonomous Okrug, for example, use all existing legal instruments to protect rights of indigenous peoples. However, opportunities available to them in this regard are quite limited by federal legislation. At the federal level, on the contrary, there is very little initiative to protect the northern indigenous peoples when their territories are projected for oil and gas development.

7 Conclusion

This analysis of the Russian federal and regional legislation has pointed us to the conclusion that in the Russian Federation a certain legal framework exists for regulation of environmental protection but it hardly can satisfy the demand to protect the fragile environment of Western Siberia that is intensively exploited today.

In this regard, we can distinguish a number of factors that impede the realisation of the objectives set. First, there is no basic federal law specifically relevant to use and protection of the northern environment. The documents focusing on regulation of economic development of the northern territories do not account for the climatic conditions of the North and do not establish special environmental requirements for industrial activities there. Secondly, the lack of effective protection of the environment is originally due to weaknesses in the environmental regulatory legal acts. Thirdly, the possibilities of the regions regulating environmental protection on their territories are rather limited by the federal legislation. Lastly, there is a lack of unified and coherent environmental regulations for Western Siberia.

The most effective way to regulate environmental issues of oil and gas development is within the framework of the *Environmental Strategy of Western Siberia in the Period up to 2030* which can be adopted on the federal level by analogy with the *Strategy of Social and Economic Development of Siberia*. The proposed Strategy can consider the environmental and economic peculiarities of the Tyumen Region, the Khanty-Mansiysk and Yamalo-Nenets Autonomous Okrugs and will be focused on the most critical ecological problems of their territories. The Strategy should provide comprehensive approach to the use and protection of the environment of Western Siberia during its development as well as incorporate explicit legal measures.

The adoption of the Strategy should be followed by relevant changes to the federal laws (Subsoil Use Law, Law "On Environmental Impact Assessment", "On Environmental Protection", the Water Code). For example, the Federal Law "On Environmental Protection" could include a chapter "Requirements

for oil and gas industry performed in the northern territories of the Russian Federation”. Another proposed change to the same law is to increase the legal and administrative capabilities of regional authorities and to vest in them broader powers to manage environmental issues in their territories. Additionally, Article 11 of the Federal Law “On Environmental Impact Assessment” should be amended with the list of objects of the impact assessment at the federal level, which have an impact on the north environment.

Having extended powers, the Western Siberian regions – the Tyumen Region, the Khanty-Mansiysk and Yamalo-Nenets Autonomous Okrugs – might be able to improve their environmental laws which are rather insufficient and to make considerable changes specifically targeting to the present and future needs of environmental protection.

The major deficiency of the environmental legislation is that it lacks the comprehensive system of legal measures through which the northern environment is protected during oil and gas development.

There are several measures related to significant environmental problems of the Western Siberia which must be resolved in the nearest future.

- (1) Legal measures for climate change adaptation can be the following:
 - set key performance indicators and benchmarks for energy efficiency and specific energy consumption for oil and gas sector;
 - set key performance indicators for GHG emissions from oil and gas industry;
 - increase scientific and other knowledge about climate change through such instruments as personnel training, environmental information;
 - carry relevant impact assessments of oil and gas projects focusing on climate impacts; and
 - introduce economic mechanisms to support oil and gas companies using mitigation measures.
- (2) Legal measures for mitigation of environmental impacts can be the following:
 - establish stringent environmental standards for water pollution, noise pollution and disturbance affecting northern fauna and marine life, especially during the offshore operations;
 - introduce compulsory environmental certification and environmental auditing for operating oil and gas companies;
 - prohibit unfounded disturbance of the territories and destruction of sea ice and ice habitats;
 - set strict liability measures for oil spills, especially in ice-covered waters;

- develop a system of waste disposal specially relevant to toxic wastes and chemicals;
 - use oil and gas development technologies compatible with agriculture activities and reindeer husbandry;
 - define the content and the scope of environmental information, the procedure of its provision to the public authorities, operating companies, indigenous peoples and those who is interested in it; and
 - specify requirements for environmental training of the personnel and top managers of oil and gas companies.
- (3) Legal measures for protecting traditional lifestyle and occupations of indigenous peoples of Western Siberia can be the following:
- create specially protected areas of traditional habitats and traditional occupations of indigenous peoples under the Governmental Order No. 631-p. The industrial activities on these territories will be much limited or even restricted if they threaten the way of life of indigenous peoples;
 - implement instruments available for indigenous peoples to give their consent for oil and gas activities on their traditional territories;
 - involve indigenous peoples or their representatives in the management of their territories and in joint decision-making; and
 - impose responsibilities on oil and gas companies to consult and cooperate with indigenous peoples before and during oil and gas development on their territories.

Though it is not possible to avoid completely physical disturbances in areas where hydrocarbon activities are conducted, to protect the environment of Western Siberia through legal instruments is the priority task of the Russian Federation and its subjects today.