

ENVIRONMENTAL PROTECTION OF THE ARCTIC REGION: EFFECTIVE MECHANISMS OF LEGAL REGULATION

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The legal regulations on environmental issues that arise in the Arctic due to intensive exploitation of its oil and gas resources need to be explored. There are gaps in environmental regulations over the Arctic region both at international and domestic levels. For Russia, at least two basic problems can be seen in the legal norms: the absence of a coherent approach to the Arctic environmental legislation and policy, and the need to develop effective mechanisms of environmental protection in the process of the Arctic development. In recent years, the Arctic states have expanded legislation on the Arctic issues. Currently, the most effective legal instruments targeting the protection of the fragile Arctic environment have been created by the Arctic countries. The introduction of a system of integrated environmental management is the first step that should be taken. Deep scientific research should be the obligatory foundation of any Arctic project. Moreover, much attention should be paid to the analysis of biological diversity preservation schemes. Lastly, special laws are needed in Russia to ensure: the regulation, prevention, and response to pollution by oil and other containments; the protection and rational use of Arctic resources; and the conservation of the Arctic marine areas and natural landmarks. These ideas are based on a comparative analysis of the legal rules contained within the laws of Norway, Canada, and the United States.

Keywords: Arctic; natural resources; environment; international law; Russia; legislation.

Introduction: Problems of Environmental Regulations in the Russian Arctic

The Russian Federation is a party to basic international conventions and agreements regulating the use and protection of the Arctic: the Convention of Biological Diversity, the Convention on Wetlands of International Importance especially as Waterfowl Habitat, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the International Convention for the Regulation of Whaling, and the United Nations Framework Convention on Climate Change.

According to Art. 15(4) of the Constitution of the Russian Federation [hereinafter Constitution], '[t]he universally-recognized norms of international law and international treaties of the Russian Federation shall be a component part of its legal system.'¹ The works of Professor Sergei Marochkin emphasize the fact that this is not an ordinary constitutional norm but one of the fundamentals of the Russian constitutional system. This norm is entrenched in Ch. 1 of the Constitution, which has a special status and may only be changed by way of a special complicated procedure.² Thus, the Constitution establishes the direct application of international obligations in domestic matters without necessitating their incorporation into legislation. This provision is quite radical, and not many countries take this route (the Netherlands and Estonia being a few examples of those who have). This constitutional principle is not only incorporated into laws and regulations, but also in law-enforcement practice.

After the establishment of the Constitution, the provision in Art. 15(4) has been included in practically every code and federal law adopted in the area of environmental protection and natural resource use.³ Courts have developed its content and rely heavily on the elements of international normative systems such as: the resolutions and recommendations of international organizations, international bodies' decisions, model acts, legal positions, and rulings of judicial bodies. Since there are gaps in international norms regulating the Arctic's use, the integration of soft law into domestic legislation is particularly important.

Russian authorities confirm that Arctic territory issues 'can be tackled solely on the basis of international law, the International Convention on the Law of the Sea and in the mechanisms that have in accordance with it been created for determining the borders of states which have a continental shelf . . .'⁴

Two key documents determining the development in the Arctic for the next decade are the Foundations of Russian Federation Policy in the Arctic until 2020 and Beyond (2008) and the Strategy of the Arctic Zone Development and National Security of the Russian Federation for the Period until 2020.⁵ The basic national

¹ Конституция РФ [*Konstitutsiya RF* [Constitution of the Russian Federation]], at <<http://www.constitution.ru/en/10003000-01.htm>> (accessed Mar. 11, 2015).

² See Sergei Marochkin & Rustam Khalafyan, *The Norms of International Soft Law in the Legal System of the Russian Federation*, 6(2) *Journal of Politics and Law* 90 (2013). doi:10.5539/jpl.v6n2p90

³ See Sergei Marochkin, *Place and Role of Norms and Sources of International Law in the Legal System of the Russian Federation: The Doctrinal Exploration and the Legislative Development of the Constitutional Principle*, 3(2) *Beijing Law Review* (2012). doi:10.4236/blr.2012.32005

⁴ *Transcript of Remarks and Replies to Media Questions by Russian Minister of Foreign Affairs Sergey Lavrov Following His Participation in the 14th Session of the ASEAN Regional Forum on Security, Manila, Philippines, August 2, 2007*, The Ministry of Foreign Affairs of Russia (Aug. 3, 2007), <http://www.mid.ru/brp_4.nsf/0/432751A496F921E9C325732C004BE119> (accessed Mar. 11, 2015).

⁵ Foundations of the Russian Federation's State Policy in the Arctic until 2020 and Beyond (approved by the President of the Russian Federation on September 18, 2008, No. Pr-1969), <http://icr.arcticportal.org/index.php?option=com_content&view=article&id=1791%3> (accessed Mar. 11, 2015) [hereinafter Foundations]; Стратегия развития Арктической зоны Российской Федерации и обеспечения национальной безопасности на период до 2020 года [*Strategiya razvitiya Arkticheskoi zony Rossiiskoi*

interests in the Arctic, which are outlined in these acts are to exploit natural resources of Russia's Arctic, to protect its ecosystems, to use the seas as a transportation system, and to ensure that the Arctic remains a zone of peace and cooperation.⁶

The legislation on the Arctic issues has developed rather slowly and there are many short-comings in the environmental protection of prioritized Arctic initiatives. At least two basic problems can be outlined:

1) environmental policy of the Arctic region is now segmented and there is no coherent approach to protecting Arctic environment;

2) there are no effective mechanisms for environmental protection in the process of the Arctic development proposed in current legislation.

The aim of this article is to formulate adequate solutions to these problems based on a comparative analyses of legislation in the Arctic countries.

2. International and National Legal Regime of the Arctic

The legal regime governing the Arctic region is now a vast and complex collection of principles, treaties, conventions and soft law regulating the activities of national governments in their use of Arctic waters in several dimensions ranging from freedom of the Arctic seas, the conservation of fisheries and other marine resources, prohibitions against marine pollution and dumping to regulations that ensure safe shipping, carriage and navigation and efforts to ensure peaceful use of the ocean.⁷ The two main characteristics of the international legal regime are:

1) it is mostly based on non-binding soft law proposing the Arctic states strategies for preventive measures, consistent with the United Nations Convention on the Law of the Sea and regional treaties, regarding the protection of the Arctic's marine environment;⁸

2) there is no international treaty or convention aimed to regulate specific types of industrial activities in the Arctic. They are all created for the regulation of different types of pollution that occur around the globe, but they do not specifically address the effects of such pollution on the fragile Arctic region.

Therefore, the international legal framework gives surrounding states the opportunity to obtain sovereign control over, and regulation of, the activities onshore and in hydrocarbon-rich waters.⁹

Federatsii i obespecheniya natsional'noi bezopasnosti na period do 2020 goda [The Strategy of the Arctic Zone Development and National Security of the Russian Federation and for the Period until 2020]], at <<http://government.ru/news/432/>> (accessed Mar. 11, 2015) [hereinafter Strategy].

⁶ Foundations, *supra* n. 5.

⁷ Christopher C. Joyner, *The Legal Regime for the Arctic Ocean*, 18(2) *J. Transnat'l L. & Pol'y* 243 (2009), available at <http://archive.law.fsu.edu/journals/transnational/vol18_2/joyner.pdf> (accessed Mar. 11, 2015).

⁸ Melissa A. Verhaag, *It Is Not Too Late: The Need for a Comprehensive International Treaty to Protect the Arctic Environment*, 15 *Geo. Int'l Envtl. L. Rev.* 555, 557 (2003).

⁹ See Kristen Rice, *Freezing to Heat the Future: Streamlining the Planning and Monitoring of Arctic Hydrocarbon Development*, 24(2) *Colo. Nat. Resources, Energy & Envtl. L. Rev.* 393 (2013), available at <http://www.colorado.edu/law/sites/default/files/Rice_6713.pdf> (accessed Mar. 11, 2015).

The Arctic states do not express an intention to create a legal regime banning oil and gas development in the Arctic because it is not in their best interest. The states are already heavily invested in Arctic oil and gas development, not the preservation of the region as a scientific sanctuary. For states to disregard those investments in exchange for a ban on development at this point is not feasible.¹⁰

Under these circumstances, the first plausible step for Arctic countries is to implement existing international soft-law into national strategies and legislation, to create effective mechanisms to protect the Arctic environment, and to facilitate the adaptation to the changes in the Arctic region. The Arctic states benefit from abundant resources, so they should carry the most duties and responsibilities for the environmental protection of the Arctic.

The eight Arctic countries have all put forth Arctic strategies. They describe their policy objectives for all areas of the Arctic development, use and protection.

Canada has two main documents outlining its Arctic strategy: Canada's Northern Strategy 'Our North, Our Heritage, Our Future' and Statement on Canada's Arctic Foreign Policy. The latter was released in August 2010 and it establishes four areas where Canada is taking action to advance its interests both domestically and internationally and to help unlock the North's true potential: exercising sovereignty; promoting economic and social development; protecting the environmental heritage; and improving and devolving Northern governance.¹¹

The three parts of the Kingdom of Denmark – Denmark, Greenland and the Faroe Islands – share a number of values and interests, and all have a responsibility to the Arctic region. The Arctic policy of the Kingdom was laid out in August 2011 in Strategy for the Arctic 2011–20. According to the Strategy, the Kingdom will work in close cooperation with their international partners toward a peaceful, secure and safe Arctic with self-sustaining growth and development with respect for the Arctic's fragile climate, environment and nature.¹²

In August 2010, the Prime Minister's Office in Finland published Finland's Strategy for the Arctic Region. The priority areas of Finland's policy in the Arctic are environmental protection, economic activities, transport networks, indigenous peoples, and international cooperation.¹³

Iceland does not have a detailed strategy, but in 2011 its Parliament approved a Parliamentary Resolution on Iceland's Arctic Policy which lists twelve principles (plus commentary) on which Icelandic policy will stand.¹⁴

¹⁰ Rice, *supra* n. 9, at 399.

¹¹ Canada Arctic Foreign Policy, at <http://www.international.gc.ca/arctic-arctique/assets/pdfs/canada_arctic_foreign_policy-eng.pdf> (accessed Mar. 11, 2015).

¹² Denmark, Greenland and the Faroe Islands: Kingdom of Denmark Strategy for the Arctic 2011–20, at <http://ec.europa.eu/enterprise/policies/raw-materials/files/docs/mss-denmark_en.pdf> (accessed Mar. 11, 2015).

¹³ For more details see Finland's Strategy for Arctic Region, at <<http://formin.finland.fi/public/download.aspx?ID=63216&GUID=%7BC92863F7-1188-4975-9CC8-34EA16C26D07%7D>> (accessed Mar. 11, 2015).

¹⁴ Katherine E. Recinos, *A Summary of Environmental Strategies of the Arctic Nations*, <http://www.iasc.info/files/Education%20&%20Outreach/arctic_env_strategies.pdf> (accessed Mar. 11, 2015).

The Norwegian Government's Strategy for the High North, published by the Government of Norway in 2007, sets the overall objective to create sustainable growth and development of the Arctic territories. The priority areas are to 'exercise our [Government] authority in the High North in a credible, consistent and predictable way;' 'to develop knowledge in and about the High North;' 'to be the best steward of the environment and natural resources;' 'to provide a suitable framework for further development of petroleum activities in the Barents Sea;' 'to play a role in safeguarding the livelihoods, traditions and cultures of indigenous peoples;' and to 'develop . . . cooperation in the High North.'¹⁵

The Foundations of Russian Federation Policy in the Arctic until 2020 and Beyond was published in the end of March 2009. The document prioritizes the utilization of the Arctic zone as a national strategic resource base in order to meet the socio-economic objectives associated with national growth.¹⁶

According to Sweden's Strategy for the Arctic Region (adopted in May 2011), Swedish priorities in the Arctic include climate and the environment, economic development, the human dimension (health, climate change and hazardous substances, impact on indigenous cultures and industries, and knowledge transfer).¹⁷

The United States' Arctic policy was originally established in the Arctic Research and Policy Act (ARPA) of 1984, which has since been amended. The Act acknowledges both the importance of the Arctic and the United States' interests there. A framework is set up 'to establish national policy, priorities, and goals and to provide a Federal program plan for basic and applied scientific research with respect to the Arctic, including natural resources and materials, physical, biological and health sciences, and social and behavioral sciences.'¹⁸ To accomplish this, Secs. 103 and 107 founded the Arctic Research Commission and the Interagency Arctic Research Policy Committee (IARPC) respectively. In 2009 the National Security Presidential Directive (NSPD-66) and Homeland Security Presidential Directive (HSPD-25) were released. These documents reaffirm the country's intentions towards the responsible handling of the Arctic environment.¹⁹ In May 2013, the President of the United States signed the National Strategy for the Arctic Region which set forth the United States Government's strategic priorities for the Arctic. The Strategy is built on three lines of effort: 1) the United States security interests; 2) responsible Arctic region stewardship; 3) international cooperation.²⁰

¹⁵ The Norwegian Government's Strategy for the High North 7–9, at <<http://www.regjeringen.no/upload/Ud/Vedlegg/strategien.pdf>> (accessed Mar. 11, 2015).

¹⁶ Foundations, *supra* n. 5; Strategy, *supra* n. 5.

¹⁷ Sweden's Strategy for the Arctic Region, at <<http://www.government.se/content/1/c6/16/78/59/3baa039d.pdf>> (accessed Mar. 11, 2015).

¹⁸ Section 102(b)(1), at <http://www.mmc.gov/legislation/pdf/arp_act.pdf> (accessed Mar. 11, 2015).

¹⁹ Recinos, *supra* n. 14.

²⁰ National Strategy for the Arctic Region, at <http://www.whitehouse.gov/sites/default/files/docs/nat_arctic_strategy.pdf> (accessed Mar. 11, 2015).

3. Comparative Analysis of the Regulation of the Arctic Environment in Russia, Canada, USA and Norway

Russia strives to meet the international requirements to preserve and protect the ecosystems of the Arctic by changing domestic legislation, for example:

- 1) it guarantees the preservation of biological diversity in the Arctic, partially by expanding the protected natural areas;
- 2) it implements measures adapting the Arctic environments to climate change and increased industrial activity;
- 3) it introduces cleanup and pollution prevention measures.

Protecting the Arctic's unique environments is one of the four objectives set forth by the Foundations of Russian Federation Policy in the Arctic until 2020 and Beyond. Russia sums up its environmental objectives for the Arctic as the 'conservation of the Arctic's unique ecosystems.' It wants to safeguard 'the Arctic environment . . . under conditions of increasing economic activity and global climate change.'²¹ To accomplish this, Russia plans to take several 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, including 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.²²

The instruments for implementation of the new environmental policy in Russian Arctic include:

- the development of rules and regulations for natural resource use and environmental protection, including a monitoring system in the Arctic territories;
- the restoration of natural landscapes;
- the utilization of toxic waste abatement;
- the establishment of biochemical safeguards, especially in densely-populated areas.

However, in Sec. VI of the Foundations, which sets forth the stages of realization 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 mechanisms for realization.²³

Domestic environmental laws regulating the environmental protection of the Arctic include the following: Environmental Doctrine of the Russian Federation (2002), Foundations of the State Policy of Environmental Protection of Russia for the Period until 2030, Environmental Protection Law (2002), Wild Animals Law (1995),

²¹ Foundations, *supra* n. 5.

²² *Id.*

²³ *Id.*

Specially Protected Natural Areas Law (1995), Subsoil Use Law (1992), Water Code (2006), Forest Code (2006), Law on Prevention of Emergent Situations of Natural and Anthropogenic Character, and Regulation on Environmental Impact Assessment (1995, 2000). They declare precautionary principles, resource conservation principles and some measures to protect marine areas.

Analysis of Russian legislation shows that it still lacks a comprehensive approach to regulating environmental issues in the Arctic. The rules of environmental protection are not precise enough and sometimes leave much space for legal interpretation. Moreover, they are used as the framework for industrial activities but they do not include standards and restrictions. There is a lack of responsibility measures for environmental harm. More importantly though, none of these regulations were specifically created for the use and protection of the unique Arctic region and could be unable to protect the Arctic's ecosystem from pollution.

Scientific research plays a vital role in protecting the Arctic's marine environment from accidental oil pollution.²⁴ The basic objectives and strategic priorities in the fields of science and technology are the maintenance of a sufficient level of fundamental and applied scientific research and the creation of modern scientific and geo-information bases of management of the Arctic territories.²⁵

Russia has conducted research in the Arctic for decades. It is the only country that uses 'drift stations,' research facilities seasonally deployed on drift ice, and it also has other research stations in its Arctic zone. The first drift station, North Pole-1, was established on May 21, 1937, by the Soviet Union. Russian research has focused on the Arctic seabed, marine life, meteorology, exploration, and natural resources.²⁶ Another instrument for research is a reliable system for navigation known as hydro-meteorological information systems, guaranteeing effective control over economic, military, and ecologic activity in the Arctic. It also assists in predicting catastrophic events and mitigating potential negative impacts by using such tools as the global satellite navigation system GLONASS.²⁷

Neither the Arctic Strategy (the Foundations) nor environmental legislation includes provisions for obligatory research to support arctic projects.

The objective to designate marine protected areas is not found in Russian practices either. Protected lands and marine areas of the Russian Arctic are much smaller than in other Arctic countries (5.2% in Russia compared to 20–50% in other Arctic states).²⁸

²⁴ Sara J. Dresser, *Safeguarding the Arctic from Accidental Oil Pollution: The Need for a Binding, Region-Specific Shipping Regime*, 16 Sw. J. Int'l L. 507, 542 (2010).

²⁵ Foundations, *supra* n. 5.

²⁶ For more information see *North Pole Drifting Stations (1930^s–1980^s)*, Beaufort Gyre Exploration Project, <http://www.whoi.edu/beaufortgyre/history/history_drifting.html> (accessed Mar. 11, 2015).

²⁷ Quirin Schiermeier, *Russia to Boost Arctic Research*, Nature News Blog (Sep. 23, 2010), <http://blogs.nature.com/news/2010/09/russia_to_boost_arctic_research.html> (accessed Mar. 11, 2015).

²⁸ State Programme: Environmental Protection, 2012–2020, at <<http://government.ru/en/docs/7108/>> (accessed Mar. 11, 2015).

Even when international principles and rules are declared in Russian legislation, they unfortunately lack mechanisms for enforcement, partially due to the state's resistance and funding problems.

The main mechanisms for enforcement of the new federal legislation in the Arctic could entail federal programs, regional and municipal programs, and programs through oil and gas companies all aimed at the comprehensive development of the Arctic. Between 1998 and 2013, under the Federal Target Program 'The World Ocean,' three big environmental projects were financed and realized: 'Sustainable Development of the Arctic Resources,' 'Environmental Safety in the Arctic,' and 'Climate Adaptation in the Arctic.'²⁹ This Program evaluated the size of the environmental damage in the Arctic territories of the Russian Federation, developed and tested new technologies for oil spill remediation, and measures to restore the ecosystems of the most acidified bodies of water were suggested.

No other programs have been developed since then. On April 21, 2014, the Federal Government approved the Program 'Social and Economic Development of the Arctic Zone of the Russian Federation for the Period to 2020' which aims to finance several development projects in the Arctic territories of Russia. Among these projects, only three are aimed toward environmental protection: organizing waste management systems, conservation of biodiversity in the climate change period, and environmental damage assessment and prevention. Mostly, these projects do not have effective methods or specific activities to bring them to fruition. The only instrument provided by the Arctic Strategy is the Action Plan, but without industry investments or governmental funding (the Investment Fund, for example), there is no hope for this to be achieved either. Despite this, northern Russian regions make considerable efforts to protect the Arctic environment in the process of its industrial development. For example, the Yamalo-Nenets autonomous region is preparing the Environmental Protection Strategy of the development projects. This Strategy will measure the environmental response to three important projects: the construction of a seaport in Sabetta, the building of a LNG plant, and the construction of the strategic infrastructure project 'The Northern Latitudinal Route.'

One more problematic issue is how insufficient the Russian legislation is in the preventing accidents and other contamination of fragile Arctic waters. Despite the fact that the Federal Law 'On Outer Continental Shelf of the Russian Federation' is enacted in accordance with the universally-recognized norms of international treaties,³⁰ the act contains very few rules regulating environmental protection during

²⁹ Федеральная целевая программа «Мировой океан», подпрограмма «Освоение и использование Арктики» [*Federal'naya tselevaya programma 'Mirovoi okean', podprogramma 'Osvoenie i ispol'zovanie Arktiki'*] [Federal Target Program 'The World Ocean', Sub-Program 'Arctic Development and Use']] (as amended by the Government Decree No. 1135 of December 18, 2012), <http://www.ocean-fcp.ru/subprogramm_8.php> (accessed Mar. 11, 2015).

³⁰ Федеральный закон от 30 ноября 1995 г. № 187-ФЗ «О континентальном шельфе Российской Федерации» // Собрание законодательства РФ. 1995. № 49. Ст. 4694 [*Federal'nyi zakon ot 30 noyabrya 1995 g. No. 187-FZ 'O kontinental'nom shel'fe Rossiiskoi Federatsii'*] // *Sobranie zakonodatel'stva RF. 1995.*

the process of exploration, drilling, and waste disposal on the outer continental shelf. Not until 2012 was the act supplemented by requirements to plan for the prevention and elimination of oil spills.³¹ According to the amendments to the Federal Law 'On Outer Continental Shelf of the Russian Federation,' the responsibility to prepare the Plan for the prevention and elimination of oil spills rests with the operating companies. The Federal Agencies approved the Plan and controlled its realization. As for the regional authorities, under the Russian legislation, they are not vested with any powers of decision making on the outer continental shelf.³² The legislation of Russia regulating oil and gas activities is not concentrated on the Arctic peculiarities and restrictions. There are no provisions that would specify any requirements for operating companies in the Arctic environments.

If analogous acts regulating the arctic issues in other Arctic states are compared, the four most effective mechanisms for the environmental protection of the Arctic territories in the process of industrial development are:

- 1) an integrated management system;
- 2) the preservation of natural areas and marine areas;
- 3) research and monitoring;
- 4) federal, regional and local funding programs for the environmental protection of the Arctic.

Norway has the most comprehensive approach to the environmental protection of the Arctic. While almost every area of Arctic policy has an effect on the environment, Norwegian Government's High North Strategy targets environmental protection and research, regulation of knowledge generation and competence building, cooperation in the north management, utilization of marine resources, petroleum activities, maritime transport, and business development. Part 5 of the Strategy is specifically focused on environmental issues such as climate change and long-range transboundary pollution. Norway intends to be a leading nation in regards to environmental policy and to play a long-term significant role as a steward of the natural and cultural heritage in the High North. They make efforts to monitor the climate, pollutants and the marine environment in the High North. The system of integrated management created by Norwegian legislation could be a positive example for Russia. It includes the regulation of all activities in environmentally fragile areas and plans for actions in emergency cases. For example, in the spring of 2006, the Government presented a white paper on integrated management of the marine environment of the Barents Sea and the sea areas off the Lofoten Islands (Report No. 8 to the Storting (2005–06)). This describes Norway's management plan for the area, which is intended to provide a framework for the sustainable use of natural resources and goods derived from the Barents Sea /

No. 49. St. 4694 [Federal Law No. 187-FZ of November 30, 1995, 'On the Outer Continental Shelf of the Russian Federation,' 1995(49) Legislation Bulletin of the Russian Federation, Item 4694]], Preamble.

³¹ *Id.* Art. 22.

³² *Id.*

Lofoten area, and at the same time maintain the structure, functioning and productivity of the ecosystems of the area. The plan clarifies the overall framework for both existing and new activities in these waters.³³ The Norwegian legislation pays great attention to ecosystem-based management, which is based on regular assessments of trends in the ecosystems in relation to the environmental goals that have been established. This management system is based on effective mechanisms of implementation. The Government introduces a systematic integrated monitoring system that involves surveys of the marine environment, seabirds and pollutants as well as terms for the update of the management plan. The management plan also focuses on preventing acute pollution by maritime transport and petroleum activities. There are certain parts of the management plan area where the environment and natural resources have been identified as particularly valuable and vulnerable. The Government has mandated that activity in these areas requires special caution, but also that precautionary measures must be adapted to the characteristic features of each area such as why the resource is vulnerable and how vulnerable it is.³⁴

Another effective mechanism is building an expertise center. The Government takes steps to build up expertise on climate issues and environmentally hazardous substances in the Arctic at institutions in Tromsø. In particular, their goal is to follow-up the integrated management plan for the Barents Sea / Lofoten area and environmental monitoring in the High North. The Norwegian Polar Institute heads the Management Forum that is to be responsible for the coordination and overall implementation of the scientific aspects of the integrated management plan, and the Institute of Marine Research, including its Tromsø department, will play a key role in this work.³⁵

Norway has already taken steps toward protecting the Arctic environment such as designating the islands of Jan Mayen and Bjørnøya as nature reserves, passing the Nature Diversity Act, establishing ecosystem-based management plans for the Norwegian Sea and the Barents Sea / Lofoten areas, and banning heavy bunker oil usage in certain areas of Svalbard. Norway plans to continue making the environment a priority by using a precautionary approach and 'the principle that cumulative environmental effects must be assessed' when considering development and commercial activities and working within the confines of its environmental legislation.³⁶

Canadian strategies reiterate the country's commitment to protecting its environmental heritage in 'an integrated and comprehensive manner that balances conservation, sustainable use and economic development.'³⁷ One of the most

³³ The Norwegian Government's Strategy for the High North, *supra* n. 15.

³⁴ *Id.*

³⁵ *Id.*

³⁶ Recinos, *supra* n. 14.

³⁷ Canada's Northern Strategy 'Our North, Our Heritage, Our Future,' at <<http://www.northernstrategy.gc.ca/cns/cns.pdf>> (accessed Mar. 11, 2015).

effective mechanisms Canada is focusing on for environmental protection in the Arctic is the conservation of large areas of land in its new national parks. Canada has made significant progress establishing protected areas in over 10% of the North and designating 80 protected areas covering nearly 400,000 square kilometers. These areas include 11 national parks, 6 national wildlife areas and 16 migratory bird sanctuaries that will protect habitats for a wide variety of species.³⁸ These preserves include the East Arm of the Great Slave Lake, the Sahtú Settlement Area, and the Torngat Mountains National Park Reserve. Furthermore, it plans on enlarging the Nahanni National Park reserve and creating three National Wildlife Areas in the Baffin Island region.³⁹

To accomplish their objectives, Canadian legislation has been changing to strengthen protection in the Arctic. In the 1970⁵, Canada enacted the Arctic Waters Pollution Prevention Act [hereinafter AWPPA] to protect its marine environment and take responsibility for enacting and enforcing anti-pollution and shipping safety laws applicable to a larger area of Arctic waters. In August 2009, the application of the AWPPA was extended from 100 to 200 nautical miles. In addition, regulations requiring vessels to report when entering and operating within Canadian Arctic waters have been finalized and enforced since July 1, 2010.⁴⁰

Canada is setting an international example with the Federal Contaminated Sites Action Plan. The government is providing \$ 3.5 billion over 15 years to address federal contaminated sites with the majority of resources directed toward contaminated sites in the North.⁴¹

Protecting the unique and changing environment of the Arctic is the central goal of United States policy. It promotes actions to nurture healthy, sustainable, and resilient ecosystems over an extended period and supports a full range of ecosystem services. The most effective mechanism introduced in the National Strategy for the Arctic Region is natural resource management. It is based on a comprehensive understanding of environmental and cultural sensitivities in the region, and addresses expectations for future infrastructure needs and other development-related trends. This endeavor could promote unity of effort and provide the basis for sensible infrastructure and other resource management decisions in the Arctic. The country emphasizes scientifically informed decision making and integration of economic, environmental, and cultural values. A comprehensive approach also advances coordination among Federal departments and agencies and collaboration with partners engaged in Arctic stewardship activities.⁴²

³⁸ Canada Arctic Foreign Policy, *supra* n. 11.

³⁹ Recinos, *supra* n. 14.

⁴⁰ Canada Arctic Foreign Policy, *supra* n. 11.

⁴¹ *Id.*

⁴² National Strategy for the Arctic Region, *supra* n. 18.

American legislation emphasizes the regulation of development activities on the continental shelf and territorial waters. For example, oil and gas activities on the outer continental shelf are controlled by a patchwork of statutes, regulations, and policies. The Outer Continental Shelf Lands Act [hereinafter OCSLA] is the principal statute governing offshore oil and gas activity in federal waters. It establishes a multiple-stage framework that provides for oil and gas planning, leasing, exploration and development, and production on the outer continental shelf.⁴³ The United States Oil Pollution Act of 1990 [hereinafter OPA] sets forth additional requirements that govern planning and response related to oil spills in marine waters. As federal agencies plan for and decide whether to approve outer continental shelf oil and gas activities, they often debate the requirements of basic environmental legislation. In addition to the aforementioned American legislation, outer continental shelf oil and gas activities may implicate a variety of other federal laws including but not limited to: the Clean Air Act, the Marine Mammal Protection Act, the Coastal Zone Management Act, the Endangered Species Act, and the Magnuson-Stevens Fishery Conservation and Management Act.⁴⁴ Among other things, OCSLA established a national policy with respect to the outer continental shelf. Congress declared that the outer continental shelf 'should be made available for expeditious and orderly development, subject to environmental safeguards, in a manner which is consistent with the maintenance of competition and other national needs.'⁴⁵ At the broadest tier of the OPA, a National Contingency Plan 'provides for efficient, coordinated, and effective action to minimize damage from oil and hazardous substance discharges, including containment, dispersal, and removal of oil and hazardous substances . . .'⁴⁶ The National Contingency Plan is prepared by a multi-agency team, and must establish procedures and standards for responding to worst-case oil spill scenarios.⁴⁷

Below the national level, regional response teams are responsible for planning and coordinating preparedness. Regional response teams include representatives from federal agencies as well as state and local government representatives. These teams facilitate the 'development and coordination of preparedness activities before a response action is taken,' and help coordinate 'assistance and advice' during response actions.⁴⁸ They also develop Regional Contingency Plans, which

⁴³ Andrew Hartsig, *Shortcomings and Solutions: Reforming the Outer Continental Shelf Oil and Gas Framework in the Wake of the Deepwater Horizon Disaster*, 16 *Ocean & Coastal L.J.* 269 (2011).

⁴⁴ See Hartsig, *supra* n. 43.

⁴⁵ 43 U.S.C., § 1332(3) (2006), at <<https://www.law.cornell.edu/uscode/text/43/1332>> (accessed Mar. 11, 2015).

⁴⁶ 33 U.S.C., § 1321(d)(2), at <<https://www.law.cornell.edu/uscode/text/33/1321>> (accessed Mar. 11, 2015).

⁴⁷ See Hartsig, *supra* n. 43, at 269.

⁴⁸ 40 C.F.R., § 300.115(a)(1), at <<http://www.gpo.gov/fdsys/pkg/CFR-2010-title40-vol27/pdf/CFR-2010-title40-vol27-sec300-115.pdf>> (accessed Mar. 11, 2015).

are designed to coordinate timely, effective response by various federal agencies and other organizations. Regional response teams help to provide oversight and consistency for area and facility specific response plans within the region.

The United States' rules on liability for oil spills in the Arctic are also adopted in compliance with international law. The OPA consolidated and broadened existing liability provisions to establish a new liability structure for oil spills. Under the OPA, responsible parties are liable for removal costs and damages associated with the discharge or threat of discharge of oil into navigable waters, shorelines, or the Exclusive Economic Zone. A responsible party is liable for all cleanup costs incurred by both government agencies and private parties. Under the OPA, responsible parties are also liable for a broad range of damages including injury to natural resources, loss of real or personal property, loss of subsistence use of natural resources, lost revenues resulting from destruction of property or natural resource injury, lost profits resulting from property loss or natural resource injury, and costs of providing extra public services during or after spill response. OPA's liability strategy also established caps for cleanup costs and other damages.⁴⁹

Another example of effective liability legislation is Canada. When the Federal Parliament enacted the AWPPA,⁵⁰ it controlled the deposit of waste in the Arctic (north of the 60th parallel) up to 100 nautical miles out to sea, imposed significant sanctions on offenders, and bestowed considerable power on pollution prevention officers. This was done to protect the environment without any accompanying claim to sovereignty, and the act relied on customary international law. Since the adoption of the UN Convention on the Law of the Sea in 1982 and Canada's ratification of it in 2003, however, Canada can now invoke Art. 234 as a legal foundation for its Arctic anti-pollution legislation. Article 234 (often called the 'Arctic Clause,' or the 'Canada Clause') relates to the environmental protection of 'ice-covered areas.' Other Canadian legislation on the environment has also had an impact in the Arctic, including the Canada Shipping Act 2001 and the Marine Liability Act. Through this legislative and regulatory scheme, Canada applies many international maritime law conventions to its Arctic waters such as the International Convention on Civil Liability for Oil Pollution Damage, the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, the International Convention on Oil Pollution Preparedness, Response and Co-operation, the Athens Convention Relating to the Carriage of Passengers and Their Luggage by Sea and the International Convention on Civil Liability for Bunker Oil Pollution Damage.⁵¹

⁴⁹ Hartsig, *supra* n. 43, at 281–284.

⁵⁰ For more information see Arctic Shipping Pollution Prevention Regulations (ASPPR), <<https://www.tc.gc.ca/eng/marinesafety/debs-arctic-acts-regulations-asppr-421.htm>> (accessed Mar. 11, 2014).

⁵¹ Peter G. Pamel & Robert C. Wilkins, *Challenges of Northern Resource Development and Arctic Shipping*, 29(3) *J. Energy & Nat. Resources L.* 343 (2011).

4. Conclusion: Perspectives of Legislation Development on the Russian Arctic

The environmental risks of Arctic hydrocarbon development can never be completely eliminated, but they can be managed by efficient use of the existing regulatory framework.⁵²

There are at least four areas where action can and should be taken by Russia to facilitate a new arctic regime in compliance with international laws and drawing from the experience of the other Arctic states.

First, precautionary measures must be taken in environmental and other legislation related to the Arctic development. The precautionary principle is utilized through certain legal mechanisms which can be regulated in Russian laws.

Expanding the protected natural areas. To achieve this, the Federal Law No. 33-FZ of March 14, 1995, 'On Specially Protected Natural Areas' should be supplemented with the requirement to create national parks and other reserved areas in the Arctic territories. A positive example would be the Canadian policy for conserving Arctic lands. Recent research shows that Russia needs a new system of prospective protected areas which is 376 new areas and the extension of borders in 19 existing areas. The legal responsibility of the state to designate more protected areas in the Arctic region will foster sustained biodiversity in the fragile arctic environment.

Measures of climate change adaptations for the Arctic territories. In the Climate Doctrine of the Russian Federation, adaptation to climate change is regarded as one of the key elements of a future climate policy. However, unlike other countries where adaptation strategies have been developed and implemented for a long time, Russia is only taking the first steps in this direction. Moreover, Russian climate policy is not focusing on the Arctic. Therefore, The Climate Doctrine should be modified with a section describing the necessary measures of climate change adaptation specifically in the Arctic. The adaptation measures can target areas like: public awareness and education, capacity building for the coordination of adaptation, integration of adaptation into development strategies, research, networking, sharing of knowledge, methods, and software tools for adaptation planning. Also, the adaptation measures can be transcribed to forestry, fisheries, agriculture, water resources, transport, tourism and health in the Arctic territories. Certain changes might also be proposed to the related federal laws (Forest Code, Wild Animals Law, Land Code, Water Code, Subsoil Use Law).

Response action related to oil spills and other contaminants as well as emergency and contingency cases. The Russian legislation on subsoil use and the continental shelf should be revised with rules for preparing Arctic Oil Pollution Response plans at federal and regional levels. The federal authorities should be vested with the

⁵² Rice, *supra* n. 9, at 393.

power to plan for and decide whether to approve outer continental shelf oil and gas activities as well as outline the requirements for the industries operating on the continental shelf and in the Arctic waters. The National Arctic Oil Pollution Response plans should be prepared by a multi-agency team and must establish procedures and standards for responding to oil spill emergencies. Regional response plans could coordinate preparedness and response at the regional level and assistance and advice during response actions.

Secondly, the national legislation needs to be developed with an integrative approach in order to consider all the dimensions of Arctic use according to sustainability and precaution principles. Applying international expertise is necessary to implement a system of integrated management for the Arctic territories of Russia. A system of integrated management includes regulations for all activities in environmentally fragile areas and plans for actions in emergency cases. It should be introduced for all levels of public authorities and operating companies. The two key documents determining the development in the Arctic – the Foundations of the Russian Federation Policy in the Arctic until 2020 and Beyond and the Strategy of the Arctic Zone Development and National Security of the Russian Federation for the Period until 2020 – may be supplemented by a patchwork of laws and regulations vesting federal and regional authorities with the power to make and regulate decisions on the outer continental shelf and Arctic waters. Their decisions should be coordinated and harmonized with other stockholders from developing companies, non-governmental organizations, and international organizations. In the framework of an integrated management system, the constructive dialogue with all oil and gas companies working in the Arctic can be further developed thus leading to the implementation of the best available monitoring, prevention and mitigation measures. As international experience shows, an integrated approach leads to a comprehensive understanding of environmental and cultural sensitivities in the region and suggests appropriate action plans.

The third step is to propose a specific act on the protection of the Arctic environment. Since none of the environmental laws existing in Russia now were specifically created for the use and protection of the unique Arctic region, they may be unable to protect the Arctic's ecosystem from pollution in the case of increasing industrial activities or accidental pollution. The specific act may comprise of regulations such as:

- provisions for environmental damage assessment and prevention;
- prevention and response to pollution by oil and other contaminants (POPs, heavy metals, radioactivity);
- protection and rational use of natural resources;
- organizing waste management systems in the Arctic territories;
- responsibility measures and requiring companies to provide scientific research to support Arctic projects;

- responsibility measures for environmental harm;
- specific requirements for companies operating in the Arctic environments.

Specific requirements for companies might include environmental standards for operating in the Arctic. The standards should concern drilling technologies, ice transportation system, waste disposal, and clean up measures. The specific law can target a broad range of damages including injury to natural resources, loss of real or personal property, and loss of subsistence use of natural resources.

Lastly, there should be legal provisions for obligatory scientific research support for every Arctic project. Indeed, scientific research plays a vital role in protecting the Arctic's environment from accidental oil pollution and other contaminants. The effective measure in this realm is the establishment of expertise centers with the focus on climate issues and environmentally hazardous substances in the Arctic. A new center is being constructed now on Bely Island in the Kara Sea off the tip of the Yamal Peninsula. The Norwegian experience of organizing the expertise center could be beneficial to Russia's success. The center can be entrusted with functions for the coordination and overall implementation of scientific aspects in the integrated management of the Russian Arctic. Deep scientific analysis of social, environmental and economic functions of the Arctic territories will ensure safe and favorable living conditions as well as preventing a negative impact from industrial activities on the environment.

To conclude, the main objective of all Arctic states should be to develop and establish a sustainable framework to reduce environmental degradation of the Arctic region from land and marine based activities. For Russia this objective can be met on a systemic basis by making changes in the environmental and related legislations, the adoption of new laws concerning arctic issues in compliance with the obligations of the Russian Federation under international conventions and agreements, and taking into account decisions and programs of the Arctic Council. The main forms of enforcement for the new federal legislation in the Arctic could entail federal programs, regional and municipal programs, and programs through oil and gas companies all aimed at the comprehensive development of the Arctic.

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