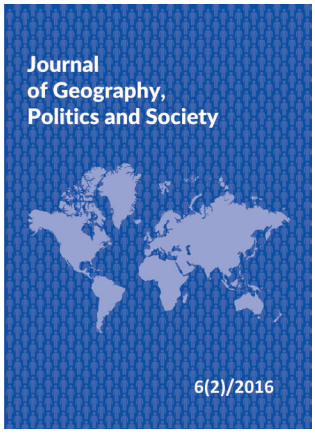

Journal of Geography, Politics and Society

2016, 6(2), 21–31
DOI 10.4467/24512249JG.16.010.5455

DEVELOPMENT OF INTEGRATION IN RATIONAL NATURE MANAGEMENT AND ENVIRONMENTAL PROTECTION IN THE BARENTS EURO-ARCTIC REGION

Galina Nikolaevna Kharitonova (1), Tatyana Evgenievna Alieva (2), Lyudmila Victorovna Ivanova (3)

(1) Luzin Institute for Economic Studies, Kola Science Centre, Russian Academy of Sciences, Fersman 24a, 184209 Apatity, Russia,
e-mail: kharitonova@iep.kolasc.net.ru (corresponding author)
(2) Luzin Institute for Economic Studies, Kola Science Centre, Russian Academy of Sciences, Fersman 24a, 184209 Apatity, Russia,
e-mail: alieva@iep.kolasc.net.ru
(3) Luzin Institute for Economic Studies, Kola Science Centre, Russian Academy of Sciences, Fersman 24a, 184209 Apatity, Russia,
e-mail: ivanova@iep.kolasc.net.ru

Citation
Kharitonova G.N., Alieva T.E., Ivanova L.V., 2016, Development of integration in rational nature management and environmental protection in the Barents Region Euro-Arctic Region, *Journal of Geography, Politics and Society*, 6(2), 21–31.

Abstract
The article analyzes the integration results in the field of rational nature management and environmental protection in the international regional organization - the Barents Euro-Arctic Region (BEAR) for the 22 years of its history in aspects of social, environmental and economic performance in the context of sustainable development of the region and the participating countries. In the historical aspect a description of the prerequisites, qualifying features and actors of the integration process is given. It is proved that the integration regarding environmental issues is the most intense and mutually beneficial. On the basis of strategic analysis of external factors and the environmental situation in the Russian part of the Barents Region the main directions of integration development in the field of nature management and environmental protection are substantiated.

Key words
The Barents Euro-Arctic region, regional integration, preconditions, qualification signs, rational nature management, environmental protection, prospects.

1. Introduction

The history of the Barents Euro-Arctic Region (BEAR) as a public-state formation is already 22 years. BEAR was created on January 11, 1993 in Kirkenes (Norway) at the meeting of foreign ministers of Russia, Denmark, Norway, Finland, Iceland, Sweden and in the presence of representatives of the European Commission as well as observers from the United States, Canada, France, Germany, Japan, Poland and the UK (Pettersen, 2002).

Norwegian Foreign Minister T. Stoltenberg is not by chance called "founding father" of the Barents region, already in his keynote speech at the signing of the Kirkenes Declaration on cooperation in BEAR he made specific proposals that are still relevant for cooperation in the region today. Referring specific opportunities of using rich natural resources in the

region, T. Stoltenberg called cooperation in fisheries and oil and gas development, the most promising. T. Stoltenberg referred environmental situation in the region to the most acute problems of the region. As a concrete step, he proposed creation of national parks on both sides of the Norwegian-Russian border, which together with the Finnish national parks would form a huge nature reserve (Barentsregionen…, 1993).

The main objectives of regional cooperation were set out in the developed in early 1994 Barents program that afterwards was corrected each year. The second Barents program operated until 2013.

Environmental cooperation in the Barents Euro-Arctic region began in 1994 with a meeting between Environment Ministers of the participating countries, as well as Denmark, Iceland and EU in Bodoe (Norway). Representatives from the Netherlands, the United States, the AMAP Secretariat, CAFF (Conservation of Arctic Flora and Fauna), NEFCO (The Nordic Environment Financing Corporation) were present as observers.

Since then ministers meet in a year. The Working Group on the Environment (WGE) was established in 1999 and representatives of the member countries lead the group in turn. Russia leads WGE in 2014–2015 after the Finnish leadership in 2012–2013.

Today, within the conventional boundaries of the Barents region north-western regions of Russia and north-eastern regions of Norway, Sweden and Finland are united. The Barents region includes the following administrative areas: in Russia – Murmansk and Arkhangelsk regions, the Republics of Komi and Karelia and Nenets Autonomous District; in Norway – Finnmark, Troms and Nordland; in Sweden – Norrbotten and Västerbotten; in Finland – Lapland and Oulu provinces. Nenets Autonomous District became a full-fledged region of the Federation, after signing the Agreement with the Arkhangelsk region on execution of all powers of a region of Russia for seven years, starting from 1 January, 2015.

In Russia, Murmansk and Arkhangelsk regions and Republics of Komi and Karelia by the similar climatic conditions and socio-economic indicators are referred to economic region "European North" and to the historical and geographical region "Russian North" and included in the administrative unit – Northwest Federal District.

Norwegian provinces – Finnmark, Troms and Nordland are traditionally (semi-officially) called "Northern Norway" or "Sampi" territory (land of the Saami). Norrbotten is located in the very North of Sweden and is the largest Swedish province. It occupies almost 22% of the total territory of the country; its neighbor is the province of Västerbotten. Lapland is the northernmost and largest area in Finland. Together with the province of Oulu, it is called "Northern Finland".

The total area of BEAR is 1.8 million km^2, and 75% of this area is in Russia. The Russian part of the Barents Euro-Arctic region is slightly smaller than territories of Finland, Norway and Sweden together.

The Barents region forms a single nature area, connecting the northern parts of Europe and Russia. The Barents region is located on the neighboring tectonic structures on Fennoscandia shield, and the Baltic and Russian plates. Ridges are typical for the western parts of the Barents region and are located on the Baltic plate, and plains and hills form a generally mild relief of the eastern territories, which belong to the Russian plate. The region is surrounded by four seas: the Norwegian Sea in the west, Barents, White and Kara Seas – in the north. Pechora and Dvina are the largest rivers; Onega, Ladoga Imandra and Inari are the largest lakes. The provinces of Oulu (Finland) and Norrbotten (Sweden) have access to the Baltic Sea through the Gulf of Bothnia. Climate of the Barents region varies in its different areas, but in general it is wet with cold winters. Most of the region belongs to the continental subarctic or boreal climate zones. The North: Scandinavian mountain chain, the northern part of the Kola Peninsula, Nenets Autonomous District and Novaya Zemlya Archipelago are included in the arctic climate.

Vegetation and ecosystems of the Barents region vary. About half of the Barents region is covered by forests, 24% – tundra, 13.8% – marshes, 7.8% – glaciers, and 5.3% – wetlands. Boreal forests are divided into the southern, middle and northern taiga, and northern parts of the Barents region and territories in high-altitude mountain zones are included in the Arctic zone. In the Murmansk region in the area of Lapland nature reserve, there is the boundary of the northernmost taiga in the world. Boreal-arctic nature is one of the largest reserves of surviving intact natural ecosystems on Earth.

2. Theoretical background

To evaluate the process of regional integration in the field of nature management and environmental protection in BEAR, we relied upon theoretical theses of Russian and foreign researchers of integration processes. At the theoretical level, the problem of regional integration has been studied by many scientists of the world, so today there is a reason to talk about the formed theory of integration, at the same time including a variety of methodological approaches and aspects (Журавская, 1990; Бусыгина, Захаров, 2009).

General theories define integration as a high level of interactions between states, which is expressed in transfer by the participants of the political process of their powers to supranational bodies. This way of interactions between states is natural and reflects the current stage of the world development: the processes of globalization and internationalization. A common point of all theories of integration is the statement that integration is a voluntary association of two or more independent economic entities for mutually beneficial cooperation (Бусыгина, Захаров, 2009).

Among theoretical approaches to description of the integration phenomenon the most developed is so-called „communication approach" elaborated by Karl Deutsch. According to him, a community is considered integrated if it provides "peaceful coexistence of its members". Therefore, an integrated community is called "security community" in which there is a real confidence that its members will not have armed struggles with each other, seeking other ways to solve their contradictions (Deutsch, 1957, 1967, 1968). K. Deutsch also formulated the basic objective of integration:

- Peace-keeping;
- Achieving multilateral purposes;
- Performance of special tasks (for example, in the field of environmental protection in BEAR these objectives are conservation of old-growth forests and protecting the world Ocean);
- Acquisition of a new image and role identity.

The first Barents Program formulated objectives of the created integrated community that directly corresponded to the main integration objectives by K. Deutsch:

- Ensuring peaceful and stable development in the region;
- Reduction of military tension;
- Strengthening existing and establishing new bilateral and multilateral relations in the region;
- Establishing a basis for economic and social development of the region with a special emphasis on active and purposeful management of resources and reduction of the gap in living standards between East and West;
- Reducing environmental threat;
- Health care;
- Maintaining the culture of indigenous peoples of the region (the Sami and the Nenets) and engaging them to participate actively in development of the region;
- Development of science, technology, culture and tourism;
- Inclusion of the Euro-Arctic Region in the network of communication transport routes in Europe and development of regional infrastructure (The Barents Programme, 1994).

From the point of view of K. Deutsch, success of an integrated formation also depends on external circumstances and factors, among which he highlights:

- Interrelations of states;
- Compatibility of shared values and merits;
- Mutual responsibility;
- Some degree of common identity and loyalty.

The generally recognized prerequisites of integration are similar levels of economic development, geographical proximity of integrating countries, common economic and other problems. It should be noted that the level of economic development of foreign member countries of BEAR and the Russian regions differ considerably. The northwestern Russian regions are more industrialized than the northeastern regions of the foreign part of BEAR. During the Soviet period giant enterprises of mining, energy, metallurgy, chemical, pulp and paper, timber, fish processing, defense and space industry, shipbuilding and ship repairing, energy and all of transport types were established in these regions. For example, by the level of economic development Nenets Autonomous District is one of the leaders in Russia, along with Khanty-Mansiysk Autonomous District, Tyumen and Moscow regions, Krasnodar Territory, Republic of Tatarstan and Yamal-Nenets Autonomous District. The share of Republic of Karelia in trout fish-farming is 65–70%, production of iron ore pellets – 26%, wood pulp and cellulose from other fibrous materials – 15% of the whole Russian economy.

Regional integration is an object of general theories and includes mostly interstate unions, whose appearance was caused by civilization, geographic, economic and political factors, and restricted by specific territories.

The key analytical category when analyzing regional integration is the region that Karl Deutsch defined as the area that includes a number of countries, interdependent on a number of directions (Deutsch, 1967).

In our opinion, to describe inter-regional integration and the degree of its development it is advisable to give a description of indications of the minimum and maximum integration association. The theory suggests a lot of such indications, among which most often are used the following:

- By activities;
- By formalization degree;
- By organization strength;
- By the level of control;
- By time;
- By speed and stages of development (Васильева, Данилюк, 2009).

By activities integration is divided into political, economic, socio-cultural, international, environmental, and all of these areas are presented in BEAR. Environmental integration includes statement of the problem and the development of strategies for a variety of purposes, which together determine ways out of both environmental and economic crises.

By formalization degree integrations are divided into formal and informal, the latter characterize forms of interactions and communications between the states carried out without contract between them or specific policy decisions.

Regional integration to BEAR refers to formal integration of mind, since the decision to establish the inter-regional organization was made by the highest authorities of the participating countries. Population of the north-western regions of Russia did not express their will and did not intend to form BEAR. Moreover most of the inhabitants of the Russian regions included in it, did not even know about the decision of the federal government or had no idea of its goals, objectives and benefits. However, for more than twenty years of cooperation in the Barents Euro-Arctic region evolved informal forms of integration also evolved, which is caused by the parallel development of cross-border cooperation, decentralization of state administration and public involvement in integration processes including through social networks.

By levels of controllability interstate associations are divided into three groups: "supersystem", „system" (the level of "policy implementation"), and "mezosystem" (the level of "policy-making") (Peterson, 1995). The first group so far only includes the European Union. BEAR should be ranked at the second level, in which the management is carried out in areas of cooperation. The first group so far only includes the European Union. BEAR should be ranked at the second level, in which the management is carried out in areas of cooperation.

By organization strength there are interstate associations with "soft" and "hard" integration. BEAR is an interstate association with „soft" integration, when member states fully retain their sovereignty, and decisions within the association are only coordinated for solving specific problems. In the history of environmental integration into BEAR these were problems of radioactive contamination, cross-border air pollution, development of the network of protected areas, forest protection, and formation of the environmental management system (Eikeland at al., 2004; Ivanova, 2001; Харитонова, Алиева, 2004).

By the time of integration processes there are short integrations (joint solution to a specific problem), integrations for a certain time (implementing systemic transformations), and integrations for an unlimited time (creating the "sense of community").

Due to the disintegration of the USSR Scandinavian countries reviewed their security policies. In March 1992, the Council of Baltic Sea States (CBSS) united Germany, Denmark, Latvia, Lithuania, Estonia, Poland, the southern provinces of Sweden, Finland and Norway, and the north-western regions of Russia. Bound by close historical, economic, and ethnic-cultural ties, this regional cooperation proclaimed enlargement of EU to the east among the main priorities. The north-eastern dimension, including cooperation of the high north regions of Russia and the northern provinces of Norway, Finland and Sweden put forward an alternative vision of regional development, based on formation of the transnational northern identity (Northernness).

In accordance with the program documents the main task in creation of BEAR is the desire to give it not only functional nature, but also the nature of an identical region, i.e. an area, where population has certain intra-consciousness, opposed to other regions.

In forming the image of general northern identity, the interethnic feeling of integration is one of the main factors in successful functioning of the Barents Euro-Arctic Cooperation and the region as a whole (Hønneland, 1998; Neumann, 1994). The following factors to create the Northern are usually indicated as the main ones:

- Common climatic conditions characterized by harsh climate, vulnerable nature, remoteness from the national centers, low population density. All of this, in terms of the concept of regional development, can identify a common interethnic perspective in formation of an identity on the basis of mutual understanding of the situation of each other, in spite of national boundaries;
- Common historical and trade relations between Norway and the Russian Pomor areas, and the genetic relationship of Finnish and Karelian ethnic groups.

Norway has taken the initiative on creating future cooperation within the Barents Euro-Arctic region and forming the northern identity. For forming the interethnic northern identity considerable time is required, if this idea is supported by all member countries of BEAR. First of all, it refers to population of the Russian North, notable for its own national and ethnic identity, keeping the main cultural achievements of their ancestors and the best features of Russian national spirit and character.

Division of integration into stages of its development makes it possible to reveal patterns, associated with each stage of community formation. The history of integration in BEAR includes 3 stages, differing by

Barents Programs. There were developed two programs for the period 1994–2000 and for 2000–2013, at present a new Barents program has not yet been developed. But in certain areas of cooperation, in particular for environmental direction, Action plans were developed for 2014–2015.

Depending on their rates integration processes can be divided into: dynamic and static that allows measuring the pace of changes occurring in integration. In our opinion, reliable indicators integration processes rates are implementation of concrete projects and allocated funds. By funds allocated for program activities the most dynamic was the initial period from 1994 to 2000. The largest amount of funds was allocated by Norway, Sweden and Finland funded BEAR projects from EU funds. Prior to 2003, Russian regions did not participate in financing of projects in the framework of Barents Program. During the second Barents Program funding from Norway, Finland and Sweden decreased. However, since 2003 Russian regions finance joint projects in the ratio of 50% to 50%.

3. Interpretation

The motive for integration in BEAR for foreign countries is the presence of significant natural resources in its Russian part: from minerals and water biological resources to water resources, the role of which has been increasing under the conditions of the predicted global shortage of fresh water. The Russian part of BEAR has, above all, the huge potential of energy and mineral resources.

Pechora coal basin is the second in Russia's reserve and a major source of raw materials for development of coke chemistry, energy, and in the future for production of methane. On the continental shelf of the adjacent to the Murmansk region Barents Sea, oil and gas resources have been explored, including the unique Shtokman gas condensate field. Nenets Autonomous District is located in the northern part of Timan-Pechora oil and gas province, occupying the 4th place in Russia by its oil reserves. Here are discovered 83 hydrocarbon fields: 71 oil, 6 oil and gas condensate, 1gas and oil, 4 gas condensate, and 1 gas field.

Only on the Kola Peninsula, more than 60 large deposits of various minerals were discovered. Of them the most important for development of the national economy and export attractiveness are copper-nickel, iron, apatite-nepheline ores, ores of rare metals and rare earths.

The deposits explored in Republic of Komi, contain the following shares of total Russian reserves: oil – about 3%, coal – 4.5%, barite – 13%, bauxite – 30%, titanium – about 50%, veined quartz – 80%. In Republic of Komi there is Timan bauxite area with large reserves of aluminum raw materials. Yaregskoye oil-titanium (about 50% of total Russian reserves) and Pizhemskoe titanium deposits contain unique reserves.

In Republic of Karelia there are being developed deposits of high carbonaceous raw materials – shungites (Zazhoginskoye), kyanite ores (Hizovara), nepheline syenites (Elet'ozero) high siliceous quartzites (Metchang-Jarvi). Among the explored deposits of metals the most interesting deposit with complex ores Srednyaya Padma, containing vanadium with associated components – uranium and precious metals. Also, in Republic of Karelia there are about 90 deposits of various non-metallic minerals.

In the Arkhangelsk region JSC "Severalmaz" develops the Europe's largest M. Lomonosov diamond deposit. Total diamond reserves are estimated in 12 billion USD.

On the Russian part of BEAR there are more than half of timber reserves of the European part of Russia and 10% of timber reserves of Russia. 1/4 of Russian wood, more than half of newsprint, and 1/5 of the country's saw-timber is produced here. Major timber reserves are located within the forest zone in the basins of Northern Dvina and Pechora river as well as in Karelia. Currently, up 20% of paper produced in Russia is made of Karelian wood.

Barents and White Seas are rich in aquatic resources. Only the Murmansk region produces about 15% of fish products and provides 16% of total Russian harvest of aquatic organisms.

The intensive use of natural resources within 70 years of the Soviet period has given rise to a number of regional issues of nature management and environmental problems. Especially sharp and large scale are historically accumulated industrial wastes, radioactive wastes from peace nuclear and military facilities, and pollution of the oceans.

However, under the planned economic system there were created major nature protection assets at all large industrial enterprises in the Russian part of BEAR. As a result, emissions of pollutants into the atmosphere only in the Murmansk region decreased by 85%, and discharges of polluted water – by 76% (Доклад…, 2013**)**.

The disintegration of the Soviet Union and the deep crisis of the initial stage of the transformation of the Russian economy to a market system of economy had a negative impact on development of environmental management at enterprises in the region and on protection of the environment. Spending on environmental protection were the first to

reduce, some enterprises even eliminated departments dealt with environmental issues. Only in connection with the introduction in 1994 of paid nature management there appeared a source of funding for rational nature management and environmental protection. However, it was significantly less than state investments for environmental protection, which had been allocated under the planned economy for environmentally hazardous enterprises. But already in 1996 there were eliminated regional environmental funds, which accumulated part of the payments for use of natural resources and environmental taxes, and their resources were accumulated in showing losses regional budgets. As a result, from regional budgets nature protection was financed by the residual principle, that is, basically funds were only enough for maintenance of governing bodies in the field of nature management and environmental protection. Monitoring of environmental quality and public health sharply reduced, construction and modernization of environmental assets as well as reproduction of natural resources stopped (Харитонова, Алиева, 2010).

Understanding of enhancing environmental threats in the north-western regions of Russia was one of the main prerequisites for foreign neighbors to integrate in the field of nature management and environmental protection. In the declaration on the Arctic Environmental Protection Strategy (AEPS), adopted by the Ministers of Environment of the eight Arctic countries on 14 June, 1991 in Rovaniemi ("Rovaniemi process") and in the joint statement of Environment Ministers of the Nordic Countries and Russia on September 3, 1992 it was concluded that the problem of human impact on nature in the Russian part of the region reached its critical phase.

It was acknowledged that the main sources of pollution in the region are located in the Russian Arctic, on the area of mining and processing combines and in the vicinity of mineral deposits. The highest concentration of man-made pollution was noticed near the enterprises of JSC „Norilsk Nickel" in the Murmansk region. The territory of 5,000 km^2 was affected. There was noticed high content of heavy metals in soils and losses of forests. Giant sulfur dioxide emissions (in 1993 – 230 thousand tons) cover an area of 12,000 km^2; they lead to acid rains and reach the seas.

By the pollution degree the Barents Sea was recognized the most „dirty" Arctic sea (its biological productivity decreased five times for the last 30 years). The main source of pollution of the White Sea is river drain, which brings the bulk of contaminants from pulp and paper industry, energy, utilities, vessels of river and sea fleets.

However, the most acute problem was the problem of radionuclide pollution generated by Russian nuclear fleet and the Kola nuclear power plant. The editorial „Reliable neighborhood?" in newspaper "Finnmarken" presented the following data on the problem's scale: 10 thousands nuclear warheads, 180 submarine reactors on nuclear submarines and cruisers of the Northern Fleet, 100 waste reactors are stored near Zapadnaya Litsa in approximately 100 km from the Norwegian border; 150 reactors – on written off nuclear submarines, 20 units of high-level nuclear fuel, stored on ships in Murmansk harbor, as well as the presence of two reactors older than 20 years at the Kola nuclear power plant, which are classified as high-risk reactors.

Therefore, the first section of the Declaration on Cooperation in the Barents Euro-Arctic region became the section on protection of the environment. This decision was based on both the joint declaration of Ministers for the Environment of Nordic countries and Russia, held in Kirkenes on September 3, 1992, and the Convention on Protection of Marine Environment of the North-East Atlantic of September 22, 1992. The most important areas of environmental cooperation were recognized as follows:

- Expansion of environmental and radiation monitoring in the region;
- Improvement of works on operational safety of nuclear facilities;
- Rehabilitation of contaminated territories resulted from the operation of nuclear facilities (The Kirkenes Declaration, 1993).

The choice of these areas was furthered by decisions of the International Conference on protection of polar regions of the planet from radioactivity (August 23–27, 1993, Kirkenes) and Russia's consent to organize of the Russian-Norwegian expedition to Novaya Zemlya (September, 12–25, 1993), accelerated learning the situation around the sunken submarine "Komsomolets" and the "atomic pot" in the Gulf of Ob, improving safety of the Kola nuclear power plant (Фокин, Смирнов, 2012).

A special feature of BEAC is that its activities and projects are focused almost exclusively on the Russian part of the region.

For example, the list of "hot spots" was formed by NEFCO AMAP and approved in 2003 by the Ministers of the Arctic countries. It included 42 environmental problems in the Russian part of the Barents region.

„Hot spots" are limited areas within which man-made sources of pollution have adverse effects on the environment. On these territories environmental pollution exceeds standard levels many times, ecosystems degrade, health deteriorates, biodiversity is lost, and life-support systems are disrupted. WGE

Subgroup on Hot Spot Exclusion is a central driving force and coordinator of the work, and NEFCO conducts pre-feasibility studies to finance modernization projects for elimination of hot spots.

The list includes 10 „hot spots" or priority environmental projects in the Murmansk region. Within the framework of the Working Group on Environment (WGE) of BEAC, the Ministry of Ecology and Natural Resources of the Murmansk region is involved in the „hot spots" project in the Russian part of the Barents Region. Starting from 2011, the procedure on removing objects from the approved list of environmental „hot spots" of the Murmansk region started.

In 2011, according to the Declaration of the Tenth Conference of Environment Ministers of the BEAC (Umeå, Sweden, November 9, 2011) it was decided to exclude from the list the environmental „hot spot" of the Murmansk region "Modernization of equipment for disposal of used fluorescent lamps". The Ministry of Natural Resources and Environment Ministry of Natural Resources of the Murmansk region sent proposals to The Ministry of Natural Resources and Environment Ministry of Natural Resources of RF for exclusion from the list of „hot spots" of two more projects: "Reduction of SO_2 emissions at "Severonikel" combine of JSC "Kolskaya MMC" and "Reduction of emissions into the atmosphere from Apatity heating electric power plant" (Доклад…, 2012) Using the example of the procedure of exclusion of „hot spots" from their list, for the Murmansk region it should be noted that the decision is made at the level of Ministers of the Environment of BEAC, because it is necessary to prove efficiency of the funds allocated for the projects.

From 2003 to 2015 the list of „hot spots" decreased from 42 to 36, which indicates efficiency of the funds allocated by WGE and NEFCO. It should be recognized that elimination of „hot spots" in the Russian part of the Barents Euro-Arctic region for a long time would have been impossible due to lack of funding for environmental activities at Russian enterprises and regional governments.

Priorities of regional international cooperation differ between regions of the Russian part of BEAR, due to their specificities and the degree of urgency of environmental problems. For example, Nenets Autonomous District is actively involved in the project „Management of Marine Resources"; in Republic of Komi there is created a center for environmental training in use of water resources for young people from countries and regions – participants of BEAR; in the Arkhangelsk region a special attention is paid to problems of water pollution and rational use and protection of forest resources.

In the Murmansk region, international cooperation in the framework of BEAR includes the following priority areas:

- Prevention of radioactive contamination of the region;
- Reducing emissions of mining and metallurgical productions;
- Implementation of programs for development of clean productions in the region;
- Prevention of contamination during exploration and extraction of oil and gas on the Barents Sea shelf;
- Sustainable forest management and biodiversity conservation;
- Supply of towns and settlements of the Murmansk region with clean drinking water (Доклад…, 2014).

In order to assess economic, social and environmental efficiency of the integration in the environmental area, we performed an analysis of international cooperation in the Murmansk region within BEAR for the period from 2001 to 2013.

Over the entire period of BEAR existence areas of cooperation did not change regardless of which of the participating countries was chairing WGE. The action plan for each area was developed and implemented by a special WGE working group, which was also responsible for its execution. The most difficult thing was to get financing for environmental projects from NEFCO or EU. Russian participants of the projects started investing in their implementation only since 2003, and some businesses or municipalities still do not have an opportunity to participate in funding projects, for example, for elimination of „hot spots".

The tendency of the recent years is inclusion in cooperation areas of issues coinciding with the environmental policy of Russia. For example, this is "Waste Management – Regional Cooperation" within the program "Clean Production". In the Murmansk region since 2009 the "Pilot project to clean up soil contaminated with oil" has been implemented. As part of the regional target program „Environmental Protection" it was scheduled to develop a project for construction of industrial facilities for rendering harmless, use and disposal of wastes containing oil and oil products on the territory of the Murmansk region.

It should be noted that the working groups of WGE in all areas of environmental integration did not lag behind progressive international trends and promptly added new relevant directions to the action plan. First of all, they include development of regional strategies for adaptation to climate change and development of „green" energy (projects to

install solar panels on lighthouses instead of radioisotope thermoelectric generators, wind power development projects at the frontier post "Ponoy" and tourist camp "Lesnaya") (Состояние…, 2001).

Assessing cost-efficiency of the BEAR projects on elimination of "hot spots" one should recognize that for the Russian side it was high, since Russian enterprises and regional authorities actually did not invest their own money in their implementation. Norway, as the major investor, as well as Finland and Sweden received fewer benefits. The point is that the implemented projects did not solve the problems of anthropogenic pollution of the Murmansk region, that is did not eliminated the danger to its foreign neighbors. Moreover the observed 1.41 times decrease of, for example, emissions of sulfur dioxide into the atmosphere in the region by productions of Kolskaya Mining and Metallurgical Company as compared to 2000 was not achieved as a result of environmental projects of BEAR, but because of the implementation of bilateral agreements and international environmental programs of the company (Статистический сборник…, 2013).

There is no doubt that activities of BEAR contributed to revitalization of environmental management at enterprises of the Murmansk region. First of all, there should be noted the significant contribution of WGE, as well as the EU institutions, which was made for introduction of the system of voluntary environmental management (Харитонова, Алиева, 2004). For example, in Murmansk in 1997 there were set up regional center „Clean Production" and its branch in the town of Zapolyarny, where 276 top managers and chief engineers of enterprises were trained, defended graduation projects, and received international certificates. The project was implemented at the enterprises of Kandalaksha and Kola districts at „Pechenganikel" and „Severonikel" combines, JSC "Apatit", JSC „OLKON", ship repairing factories, Murmansk fishing and commercial ports.

At the second meeting of the Environment Ministers of the Barents Council, held in Rovaniemi in 1995, there was initiated the BEAC Program on „Environmental Management in the Murmansk region" (EMP-Murmansk), with the main objective of improving competence in the regional system of nature protection and environmental management. EMP - Murmansk organized a series of targeted meetings and seminars in the Russian part of the Barents region, including seminars on EIA and ISO 14001 held in Murmansk, Petrozavodsk and Arkhangelsk. It can be stated that thanks to the BEAC program on „Environmental Management" in the Murmansk region elaboration of "Local Agenda 21" was organized in several municipalities of the region.

Cooperation in the field of environmental protection at the BEAC level also presumes development of activities aimed at solving problems of transboundary pollution in the region. The conducted in 1996 environmental survey on the territories of the Murmansk region, Finland and Norway showed no contamination from industrial emissions by mining and metallurgical combines "Pechenganikel" and "Severonikel" to territories of Finland and Norway, with the exception of a narrow border strip (about 5 km) along the border with the province of Finnmark in Norway. This fact made it possible to drop charges against Russian enterprises as the main sources of cross-border transfer of pollutants.

In November 2013 Murmansk hosted the International Conference „Protection of the Arctic from Air Pollution." One of the main issues discussed at the conference was the problem of cross-border and regional air quality management in the Arctic region. The Government of the Murmansk region presented results obtained in the framework of the state contract "Evaluation of the negative impact of cross-border transfer of air pollutants their contribution to pollution of the Murmansk region and border areas". The results of the research showed that, despite the relatively remote location of the Murmansk region from the major foreign countries-polluters and industrialized regions of Russia, it experiences anthropogenic pressures on ecosystems due to cross-border transfer of sulfur and nitrogen (Доклад…, 2014).

The project "Development of a network of protected natural areas in BEAR (BPAN)" (BarentsProtectedAreaNetwork) aimed at preserving the unique nature of the Euro-Arctic region. BEAR is one of the last reservations of untouched by human activities taiga and tundra ecosystems in the world.

Russian protected areas (PAs) in the Barents area larger than European. But if to take their ratio to the countries' squares, then Russia occupies the last place. In Finland, protected areas of the Barents region account for over 23% in Sweden – about 22.5% in Norway – 14%, and in Russia – 11%. On the whole, protected areas occupy 13.2% of the total land part of the Barents region. According to the Strategic Plan for conservation and use of biodiversity and the Convention on Biological Diversity in order to preserve the unique ecosystems, it is necessary by 2020 at least 17% of terrestrial areas and inland waters, and 10% of coastal and sea areas to become protected areas.

The BPAN project involves 13 regions from four countries – Russia, Finland, Sweden and Norway. The main idea of the project is the cross-border approach to conservation of nature, regardless of the state and administrative borders.

An example of implementation of this approach is creation in 2008 of the trilateral transboundary park „Pasvik-Inari". The park "Pasvik-Inari" was established for monitoring and managing the overall biodiversity, developing nature tourism and implementing the „Memorandum of Understanding on the Green Belt of Fennoscandia" on the adjacent specially protected natural territories between Russia, Norway and Finland. Creation of the park is recognized as the most successful project of environmental integration in BEAR.

Besides scientific and environmental activities the nature reserve „Pasvik" is actively engaged in environmental education. It is no exaggeration to say that it is a leader in this activity in the region. Using the means and guidance of the Working Group on Protected Areas and other working groups of WGE today various environmental and youth organizations are involved in environmental education of population.

Social efficiency of environmental education is very high, as in foreign countries of BEAR this activity is significantly better developed than in the Russian regions, especially in the work with schoolchildren and students, and importance of transfer of good practices in this area cannot be overestimated.

Also within BEAR there are implemented numerous research projects in the field of nature management and environmental protection, both bilateral and multilateral. Initiators of the research directions are usually foreign scientific organizations that in their choice are guided not only by progressive tendencies in the science of environmental protection and other environmental sciences, but also by national interests of their countries.

Despite this, scientific cooperation within the framework of BEAR is actively developing and can be considered mutually beneficial. In particular because it is not only the process of information exchange, but also exchange of research methods and development of theoretical propositions of the concepts of „sustainable development" and „ecological modernization" in a specific region of the world.

Overview of just some areas of environmental integration in BEAR shows that the integration process involves authorities, businesses, NGOs and scientific organizations as well as ordinary residents. It can be stated that grants of BEAC and EU institutions are still practically the only source of financing for Russian environmental NGOs. The lowest observed cooperation is between WGE and managers of Russian companies. However, this situation is typical for all member countries of BEAR.

In December 2013 the Ministry of Natural Resources and Ecology of the Murmansk region took part in the meeting of Ministers of the Environment of BEAC in Inari (Finland), where results cooperation on environmental protection in the Barents region were summed up and the way forward was planned.

The main areas of joint activities for 2015 with Russia's chairmanship in WGE remain projects related to elimination of „hot spots" in the Barents Region, implementation of the project „Barents Protected Areas Network» (BPAN) and a number of projects aimed at environmental education. A special attention will be paid to the problems of climate change and implementation of BEAC's Action Plan on Climate Change in the Barents region.

Russia's chairmanship in the WGE coincided with the emergence and strengthening impacts of external factors on the process of environmental integration in BEAR. In our opinion, the most significant of them are the following:

- the economic crisis in the EU and Russia;
- complication of the geopolitical situation in the Arctic due to the launch of the Russian state program on socio-economic revival of the Russian Arctic (Стратегия развития, 2013; Государственная программа…, 2009);
- The deterioration of international relations and sanctions against Russia, joined by Norway, Sweden and Finland;
- A fundamental change in the environmental legislation of Russia (Федеральный закон…, 2014).

Analysis of the impact of external factors on development of the integration process has shown that they are likely to reduce the opportunities for sustained integration development, that is, they can be defined as risks. For example, implementation of progressive innovations in the Russian environmental legislation establishing a transitional period for introduction of best available technologies at all polluting industries may be delayed due to the ban on acquisition of foreign technologies. In this case damage to nature does not require any proof.

In connection with the awareness of threats to development of environmental integration it is important to search for joint solutions. In our opinion, perspective directions of joint activities may be the following:

- development of scientific research of natural resources and the natural environment of the Arctic basing on the approach;
- reorientation of cooperation in the framework of the „Hot Spots" project to help accelerating the transition of Russian companies on sound technologies;
- transfer of experience and introduction of best foreign practices on environmental management of coastal and marine areas.

4. Conclusion

Environmental activities of BEAR throughout the whole period of regional international cooperation should be recognized active and fruitful. Currently the process of environmental integration in BEAR involves representatives of governments of all levels, researchers and experts, NGOs, young people and residents of the regions included in BEAR. In recent years, participation in environmental projects of BEAR became available for practically every inhabitant of the region.

Scientific cooperation on environmental issues in BEAR is interdisciplinary, apart from ecologists and biologists it involves geologists, hydrologists, experts in the field of forestry, water resources and mining, meteorologists, economists, sociologists, political scientists, and many others. It provides a comprehensive approach to solving environmental problems.

For twenty-two years of integration many projects aimed at addressing environmental problems in the Barents region have been carried out. However, the capital-intensive projects that could solve the problems were not implemented, since neither Norway nor the EU could finance such large-scale projects. It by no means diminishes the enormous financial assistance provided to Russia by foreign countries – participants of the BEAR. Only the transition of Russian companies to the best available technologies, which should be carried out by 2022, will fully meet environmental safety in the BEAR. Russian companies should implement technological modernization at their own expense and with a state support. Methodical assistance within the BEAR can play an important role.

Despite the fact that in the course of cooperation the Norwegian side as the main investor of all environmental projects, paid most attention to creation of a framework for addressing specific environmental problems, threatening nature and interests of Norway, the cooperation can be recognized as meeting national interest, not only of Norway but also of Russia.

However, solution of the main objective of the Barents cooperation, which Norway set for itself – creation of transnational northern identity with residents of the Russian North – cannot be achieved under worsening of international tension and sanctions against Russia.

As it is known, one of the main reasons restricting the integration is the aggravation of interstate relations due to ignoring or belittling national interests of other countries. Therefore, at the political level there must be confidence and willingness to compromise, especially with the existing socio-economic disparities between the participating states. This is a prerequisite for integration not to reverse to disintegration.

Continuous expansion of cooperation of WGE with regional organizations, such as the Arctic Council, the Council of the Baltic Sea States, The Baltic Marine Environment Protection Commission – HELCOM and others, should play an important role in raising priority of environmental problems in the region.

References

Barentsregionen: et regionaliseringsprosjekt i det nordligste Europa, 1993, series: Aktuelle utenriksspörsmål, 1/93, Det Kgl.Utenriksdepartement, Oslo.

Deutsch K., 1957, *The Analysis of International Relations*, Prentice-Hall Inc., New York.

Deutsch K., 1968, *Political Community and the North Atlantic Area: International Organization in the Light of Historical Experience*, Princeton Legacy Library, Princeton.

Deutsch K., 1969, *Nationalism and Its Alternatives*, Knopf, New York.

Eikeland S., Eythorsson E., Ivanova L., 2004, From management to mediation: local forestry management and the forestry crisis in post-socialist Russia, *Environmental Management*, 33(3), 285–293.

Hønneland G., 1998, Identity Formation in the Barents Euro-Arctic Region, *Cooperation and Conflict*, 33(3), 277–297.

Ivanova L., 2001, Forestry administration in the Murmansk region: present situation and challenges, [in:] M. Hytönen (ed.), *Social sustainability of forestry in northern Europe: research and education*, TemaNord, Helsinki, 247–251.

Neumann I.B., 1994, A Region-Building Approach to Northern Europe, *Review of International Studies*, 20(1), 53–74.

Peterson J., 1995, Decision-making in the European Union: Towards a framework for analysis, *Journal of European Public Policy*, 2(1), 69–93.

Pettersen O., 2002, *The vision that became reality: the regional Barents Cooperation, 1993–2003*, The Barents Secretariat, Kirkenes.

The Barents Programme 1994, 1994, Barentssekretariatet, Kirkenes [20.05.2014]

The Kirkenes Declaration, 11 January 1993, 1993, http://www.barentsinfo.fi/beac/docs/459_doc_KirkenesDeclaration.pdf [22.05.2014]

Бусыгина И.М., Захаров А. А., 2009, *Общественно-политический лексикон*, Институт международных исследований МГИМО – Университет, Москва.

Васильева Е.Э., Данилюк Е.С., 2009, Теории региональной интеграции: развитие и значение в формировании основ трансграничного сотрудничества, *Веснік БДУ. Сер. 3.*, 3, 72–75, http://www.bsu.by/Cache/pdf/476863.pdf [22.04.2014]

Государственная программа Российской Федерации „Социально-экономическое развитие Арктической зоны

Российской Федерации на период до 2020 года, 2009, http://www.consultant.ru/document [22.05.2014]

Доклад о состоянии и об охране окружающей среды Мурманской области в 2014 году, 2014, Официальное издание Министерства природных ресурсов и экологии Мурманской области, Мурманск, http://mpr.gov-murman.ru/activities [14.02.2015]

Доклад о состоянии и об охране окружающей среды Мурманской области в 2013 году, 2013, Индивидуальный предприниматель Кузнецов Никита Владимирович, Нижний Новгород, http://mpr.gov-murman.ru/activities/00.condition/ [22.05.2014]

Доклад о состоянии и об охране окружающей среды Мурманской области в 2012 году, 2012, Индивидуальный предприниматель Щербаков Максим Леонидович, Мурманск, http://mpr.gov-murman.ru [22.05.2014]

Журавская Е.Г., 1990, *Региональная интеграция в развивающемся мире: немарксистские теории и реальность (на примере АСЕАП)*, Наука, Москва.

Состояние окружающей природной среды Мурманской области на Кольском полуострове в 2000 году, 2001, Доклад Комитета природных ресурсов по Мурманской области, Мурманск, 183–184, http://mpr.gov-murman.ru [22.05.2014]

Статистический сборник «Окружающая среда и природные ресурсы Мурманской области», 2013, Территориальный орган Федеральной службы государственной статистики по Мурманской области, Мурманск, http://mpr.gov-murman.ru [22.05.2014]

Стратегия развития Арктической зоны РФ и обеспечения национальной безопасности на период до 2020 года, 2013, http://www.consultant.ru/document/cons_doc_LAW_142561/ [25.04.2014]

Федеральный закон Российской Федерации от 21 июля 2014 г. N 219-ФЗ „О внесении изменений в Федеральный закон „Об охране окружающей среды" и отдельные законодательные акты Российской Федерации", 2014, http://www.consultant.ru/document [22.05.2014]

Фокин Ю.Е., Смирнов А. И., 2012, *Киркенесская Декларация о сотрудничестве в Баренцевом/Евроарктическом регионе: взгляд из России 20 лет спустя*, Национальный институт исследований глобальной безопасности, Москва.

Харитонова Г.Н., Алиева Т.Е., 2004, Введение системы экологического менеджмента на предприятиях Кольского горнопромышленного комплекса, *Север и рынок: формирование экономического порядка*, 3(14), 123–127.

Харитонова Г.Н., Алиева Т.Е., 2010, Анализ природоохранной деятельности и эффективности государственного экологического управления в период кризиса, *Север и рынок*, 26, 112–119.