IJER © Serials Publications
13(9), 2016: 3729-3745
ISSN: 0972-9380

THE GENESIS OF THE ENVIRONMENTAL SITUATION IN THE EEU MEMBER STATES: IS A SYNERGISTIC EFFECT POSSIBLE?

Elen Arturovna Akopova[1]

Abstract: *The international cooperation of the EEU member states in the sphere of environmental protection and ecological safety is developed within the framework of execution of multilateral conventions and agreements. The author revealed that at the present time on the territory of the EEU member states purposeful and coordinated activities on the environmental protection are conducted and the relevant legal framework is basically formed. The EEU countries have enormous land, forest and water resources, as well as almost all kinds of minerals. Based on the research results, the author has concluded that the environmental and climate policy of the EEU countries remains not effective enough. Despite a number of positive trends of sustainable development, there is a decline in forestry and water potential, remains a problem in the sphere of conservation of biological diversity.The assessment of the environmental situation in the EEU countries shows that the level of air pollution remains high, there is a negative dynamics of greenhouse gas emissions, the amount of accumulated and generated waste is growing every year.*

The author notes that in order to solve these problems the efforts of the EEU member states should be aimed at identifying those areas of shared interests where the development of cooperation in the sphere of environmental protection and ecological safety can provide a synergistic effect.

Keywords: *EEU, environmental protection, ecological safety, sustainable development, natural resources, ecological efficiency, international cooperation.*

1. INTRODUCTION

As part of the ongoing integration processes, the formation of an effective, competitive and environmentally-oriented economic development model providing the greatest effect in the conservation and rational use of the natural environment becomes one of the main tasks of the government control in the territory of the former Soviet Union countries.

The international integration economic association (EEU) formed on the basis of the Customs Union and the Common Economic Space can be a powerful incentive for

[1] Al-Faraby Kazakh National University 71 al-Farabi Ave., Almaty, Republic of Kazakhstan, 050040

closer cooperation between the countries, including on the issues of environmental protection, rational use of natural resources and implementation of the public policy in the sphere of ecology.

It should be noted that the EEU Treaty relatively fully reveals all areas of the association development, but it is focused primarily on trade and economic growth. However, this fundamental document does not reflect the issues of the environmental resources management and mechanisms of international cooperation of the EEU countries in the sphere of conservation of natural resources and reduction of the negative environmental impact (SobranieZakonodatel'stvaRossiiskoiFederatsii [Collection of Legislation of the RF] 2015, No. 38, Item 5215).

At the same time, the issues of ecological safety of both the EEU countries and the international community as a whole are of serious concern. Problems in the ecological system of one region can lead to the destruction of the ecosystem in other regions with high probability, while it is not always possible to determine the causal relationship between the adverse effects on the ecosystem and specific economic activities carried out in the territory of a state (Boklan, 2016).

The EEU member states have a high raw energy potential: they account for about one-fifth of the world's reserves of natural gas and coal, as well as 7% of the world oil reserves (Eurasian Economic Commission, 2015).

On this basis and after having analyzedthe EEU Treaty, it can be concluded that the Union participants have expectations of the hydrocarbon sector, thus causing damage to the "green" economy. In this connection, the environmental issues should not be secondary in relation to the economic development issues. On the contrary, the economic development must be dependent on the environmental protection.

In the conditions of the global environmental crisis and the formation of the international market of environmentally friendly technologies, products and materials,the issues of the introduction of mechanisms for closer cooperation of the EEU member states in addressing environmental issues acquire particular relevance.

The purpose of this article is to conduct a comprehensive study of the environmental situation in the EEU member states, to identify possible ways to improve the environmental protection and ecological safety of the integration association countries.

2. METHODS

The methodological basis of this study includes a comparative analysis of the dynamics of separate environmental indicators, as well as a method of the ranked scoring assessment of the development of regional ecological systems.

As a quantitative measure for the assessment of the environmental situation and the effectiveness of the environmental policy in the EEU member states, the indices included in the group of indicators, which are aimed at the quantitative evaluation of

the countries' policies in the sphere of climate, environmental situation and the environmental policy efficiency, are the most informative for the purposes of this study.

In particular, these indices are as follows:

- International Climate Change Performance Index (CCPI);

This indicator reflects the following aspects of the climate policy of the countries: the volume and trends of growth (or reduction) of greenhouse gas emissions – it gives the main weight in the index; the development of renewable energy and implementation of energy efficiency and emissions reduction policies, a constructive stand of the country in international negotiations, the effectiveness of the policy on forests.

- Environmental Performance Index (EPI).

The EPI index is the result of a joint project of the Yale Center for Environmental Policy and Law, the Columbia University and the World Economic Forum, aimed at achieving the UNO sustainable development goals. The EPI makes it possible not only to form the overall ranking of countries, but also serves as a diagnostic tool for the identification of internal strengths and weaknesses in ensuring the ecological safety (Hsu *et al.*, 2013).

The Environmental Performance Index (EPI) is based on the calculation and aggregation of 19 indicators that reflect the national level of the environmental data. These indicators are grouped into nine categories of problems that cover relevant environmental policy issues, including agriculture, air quality, biodiversity and the environment, climate and energy, forestry, fisheries, an impact on human health, water resources, water supply and sanitation. Each category of problems serves for achieving one of the two main goals – the environmental health and the vitality of the country's ecosystems (Environmental Performance Index, 2016).

The methodology of the index is based on the principle of proximity to the target. At the same time, the result on each indicator is calculated based on the country's position on the scale, the lower limit of which is set by the worst country on this indicator, and the upper limit is set by a desirable goal. The indicators set forth in the international treaties, the recommendations of international organizations or expert opinions are used as a goal. If the state has reached or exceeded the goal, then it gets a hundred points on this indicator.

The information basis includes primary and secondary data of the international organizations, government bodies and scientific cooperation. Primary data include the information collected directly from people or as a result of technological monitoring, including from satellites (for example, when assessing the forest cover and outside air). Secondary data include the national statistical data with due regard to the standards and the quality requirements set by the data collection agents, such as the International Energy Agency (IEA), the Organization for Economic Cooperation and Development (OECD), the UN Statistics Service (Eurostat), theFood and Agriculture Organization of the United Nations (FAO), etc.

2.1. Environmental and legal framework of international cooperation of the EEU member states.

Since the collapse of the Soviet Union and after gaining independence, many states have expressed their commitment to the development and strengthening of the allied relations based on deep historical links, serving the national interests of each of the sovereign states.

The signing of the Agreement on the Establishment of the Commonwealth of Independent States (CIS), the participants of which were Azerbaijan, Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan and Uzbekistan, laid foundation for the process of cooperation.

The issues of cooperation in the sphere of environmental protection in the framework of the CIS were determined at the early stages of its development. The Agreement on Cooperation in the Sphere of Ecology and Environmental Protection, adopted in 1992, stipulated the issues on the development of rules and procedures for bringing to responsibility for the violation of the provisions of this Agreement. Nevertheless, this document did not contain a clear legal basis for such responsibility. Moreover, regulations of many international environmental agreements aimed at addressing global environmental issues, such as climate change, depletion of biodiversity, desertification, etc., were not taken into account.

However, within the CIS a number of documents relating to the issues of the environmental protection and sustainable development have been adopted, as well as a number of new legally binding multilateral agreements concerning the environmental and population health issues have been entered into force.

The participation of the EEU member states in the international conventions on the environmental protection is presented in Table 1.

Table 2 contains a non-exhaustive list of international conventions in the sphere of ecological safety, parties to which are the EEU countries (or at least one EEU country). For example, according to various estimates, the Russian Federation participates in the activities of 33 multilateral conventions and agreements on the environmental protection; the Republic of Belarus is a party to 31 international conventions. The Republic of Kazakhstan signed and ratified over 20 international environmental conventions and agreements, Kyrgyzstan – 12 international environmental conventions and 3 protocols to them.

The above-mentioned international documents forced the member states of the Eurasian integration process to pay a particular attention to the environmental issues and the formation of national systems regulating the environmental protection and ecological safety.

In October 2000 in Astana, the Heads of five states (Russia, Belarus, Kazakhstan, Kyrgyzstan and Tajikistan) signed the Agreement on the Establishment of the Eurasian

Table 1
Participation of the EEU member statesin the international conventions on the environmental protection

International conventions	*Date of ratification/date of entry into force*				
	Armenia	*Belarus*	*Kazakhstan*	*Kyrgyzstan*	*Russia*
United Nations Framework Convention on Climate Change (May 9, 1992, New York)	14.05.1993/ 21.03.1994	11.05.2000/ 09.08.2000	17.05.1995/ 15.08.1995	25.05.2000/ 23.08.2000	28.12.1994/ 28.03.1995
Kyoto Protocol (December 11, 1997, Kyoto, Japan)	25.04.2003/ 16.02.2005	26.08.2005/ 24.11.2005	19.06.2009/ 17.09.2009	13.05.2003/ 16.02.2005	18.11.2004/ 16.02.2005
Vienna Convention for the Protection of the Ozone Layer (March 22, 1985, Vienna)	01.10.1999	23.05.1986/ 22.09.1988	26.08.1998/ –	15.01.2000/ 31.05.2000	18.06.1986
Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) (March 3, 1973, Washington)	23.10.2008/ 21.01.2009	20.12.94/ 08.11.95	20.01.2000/ 19.04.2000	04.06.2007/ 02.09.2007	01.01.1992/ 13.01.1992
Stockholm Convention on Persistent Organic Pollutants (May 22, 2001, Stockholm)	26.11.2003 17.05.2004	03.02.2004/ 17.05.2004	09.11.2007/ 07.02.2008	12.12.2006/ 12.03.2007	17.08.2011/ 15.11.2011
Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal(March 22, 1989, Basel)	01.10.1999/ 30.12.1999	10.12.1999/ 09.03.2000	03.06.2003/ 01.09.2003	13.08.1996/ 11.11.1996	31.01.1995/ 01.05.1995
Convention on Biological Diversity (June 5, 1992, Rio de Janeiro)	14.05.1993/ 29.12.1993	08.09.1993 29.12.1993	6.09.1994/ 27.02.1997	06.08.1996/ 4.11.1996	05.04 1995/ 04.07.1995

Economic Union (EEU), which entered into force on May 30, 2001 after its ratification by all the EEU member states.

The development of the following bilateral agreements between countries has become an important aspectof the formation of the regional environmental policy in the framework of the integration association:

- The Agreement between the Governments of the Russian Federation and the Republic of Belarus on Cooperation in the Sphere of Environmental Protection (framework agreement) dated July 5,1994;
- The Agreement between the Governments of the Republic of Belarus and the Russian Federation on Cooperation in the Sphere of Environmental Protection and Rational Use of Transboundary Water Objects (This document was signed on May 24, 2002 in Minsk and came into force on October 25, 2002)

- The Agreement between the Governments of the Russian Federation and the Republic of Belarus on Cooperation in the Sphere of Fisheries dated March 13, 2002;
- The Agreement between the Governments of the Russian Federation and the Republic of Kazakhstan on Cooperation in the Sphere of Environmental Protection dated December 22, 2004;
- The Agreement between the Governments of the Republic of Kazakhstan and the Kyrgyz Republic on Cooperation in the Sphere of Environmental Protection dated April 8,1997;
- The Agreement between the Ministry of Natural Resources of the Russian Federation and the Ministry of Nature Protection of the Republic of Armenia on Cooperation in the Sphere of Subsoil Use and Water Resources dated December 4, 2002.

The establishment of the Customs Union in 2010 (Russia, Belarus, Kazakhstan entered into the Union), the beginning of the formation of the Common Economic Space in 2012 (Russia, Belarus and Kazakhstan) and the establishment of the Eurasian Economic Commission (Ermolina, 2015) have become an important step in the implementation of the policy in the sphere of environmental management and protection. In January 2011 at the EEU Integration Committee, the Council on Environmental Protection, which consisted of the heads of environmental authorities of the Member States of the Community, was established.

The signing of theAgreement on Cooperation in the Sphere of Environmental Protection of the CIS member states in 2013 has become a progressive step in the development of integration processes in the sphere of environmental protection in the territory of former Soviet republics. Uponthis Agreement, the statesundertake to form the legal framework, develop environmental management regulations and standards, conduct an inventory of natural resources and carry out environmental monitoring (Agreement of the Commonwealth of Independent States, 2013,May 31).

Framework environmental laws have been developed or they have been amended to facilitate the introduction of more effective mechanisms for natural resources management and environmental quality (Alimov, 2016). The CIS countries adopted model laws “On the Rational Use and Protection of Transboundary Waters (Transboundary Water Objects)”, “On Environmental Insurance” and “On Environmental Agro-Industry”, as well as drafts of the “Agreement on Cooperation of the EEU Member States in Environmental Protection” and “Action Plan for the Implementation of the Basic Directions of Cooperation of the EEUMember States in the Sphere of Environmental Protection in the Period of 2014-2015 and Subsequent Years”.

On January 1, 2015, a new organization of the regional economic integration, which has international legal personality, began operating. It was established upon the Treaty

on the Eurasian Economic Union (EEU). The new integration association will give a new impetus not only to economic relations, but also to the development of cooperation in the sphere of environmental protection and rational nature management.

In general, it can be noted that the member states of the integration association conducted purposeful activities on the environmental protection and a relevant ecological legal framework has been mainly formed. Most of the legal provisions deriving from the international environmental agreements have been integrated into the national legislation. Despite specific achievements in this sphere, there are possibilities for further improvement, for example, for strengthening the integration of environmental aspects in the industry-specific legislation and strategic documents.

2.2. The natural potential of the EEU

The EEU member states have enormous land, forest and water resources, as well as almost all kinds of minerals. Separate indicators of natural resources of the EEU countries are presented in Table 2.

The total area of the five EEU member states is more than 20.2 million sq. km (about 15% of the world's land); the forest area is 20.7% of the world reserves. The

Table 2
The natural potential of the EEU

Countries	*Forest area (Food and Agriculture Organization of the United Nations, 2015), sq. km*	*The area of the country, sq. km (The World Bank Group, n.d.)*	*The amount of renewable water resources, total (billion cu m) (Aquastat. The Global Water Information System, n.d.)*	*The total volume of proven oil reserves, bln. tons (BP PLC, 2016)*	*The total volume of proven natural gas reserves, bln. cu m (OPEC, n.d.)*	*The volume of aqua-culture, tons (Fisheries and Aquaculture Department, n.d.)*
Russia	8,149,305	17,098,250	4,525	14.0	49,541	163,600
Kazakhstan	33,090	2,724,902	108.4	3.9	1,918	410
Belarus	86,335	207,600	57.9	0.0	0	10,658
Armenia	3,320	29,740	7.8	0.0	18	13,925
Kyrgyzstan	6,370	199,949	23.62	0.0	0	578
In total for the EEU	8,278,420	20,260,441	4,722.7	17.9	51,477	189,171
The whole world	39,991,336	134,325,435	42,801	239.4	201,967	101,028,679
Share of the EEU countries in global resources, %	20.7%	15.1%	11%	7.5%	25.5%	0.2%

integration association countries have enormous water resources (they account for about 10.4% of the world's renewable freshwater resources), as well as unique ecosystems and biodiversity.

The natural capital of the EEU member states that includes 25.5% of the world's reserves of natural gas, 7.5% of the world's oil reserves, 5.6% of the world's gold reserves (according to the World Gold Council) is crucial for the global economy. On the territory of the EEU countries there are significant deposits of uranium, ores of different metals, rare-earth elements and non-metallic minerals.

Despite a number of positive trends in the sphere of the sustainable development, degradation of natural resources of the EEU countries can be observed. Thus, for the period of 2010-2014 the forest area in the territory of the EEU was reduced to 1,164.8 sq. km (primarily due to the reduction of the forest funds of Russia and Kyrgyzstan). The positive dynamics of this indicator in the Republic of Belarus, where the forest area increased up to 796 sq. km, should be noted (Table 3).

Table 3
Changes in the forest area of the EEU member states in the period of 2010-2014

Forest area	*2010*	*2011*	*2012*	*2013*	*2014*	*Change, +/-*
Russia	8,151,356	8,150,945.8	8,150,536	8,150,125.4	8,149,715	-1,640.8
Belarus	85,340	85,539	85,738	85,937	86,136	796
Kazakhstan	33,090	33,090	33,090	33,090	33,090	0
Kyrgyzstan	6,770	6,690	6,610	6,530	6,450	-320
Forest area of the EEU members states, sq. km	8,276,556	8,276,264.8	8,275,974	8,275,682.4	8,275,391	-1,164.8

The waterresources endowment of the EEU member states is not uniform. The Russian Federation occupies the fifth place in the world in terms of the volume of renewable water resources per capita. The Republic of Armenia is the least endowed with water, but its own water resources cover the needs.

However, the available water potential of the EEU member states (except Belarus) is reduced due to the environmental pollution, destruction of freshwater ecosystems and land-use restructuring. The dynamics of the volume of fresh water in the average per capita in the EEU countries for the period of 2010-2014 is presented in Figure 1.

Taking into account the water resources endowment of the EEU in general, within its member states there are certain regional problems, such as:water supply of the economy and population, the protection of the environment from pollution, the protection and rehabilitation of residential areas.

The mentioned problems are largely due to the uneven distribution of water resources within each country, a significant variation in the volume in various periods and years, as well as a high degree of contamination and degradation accumulated.

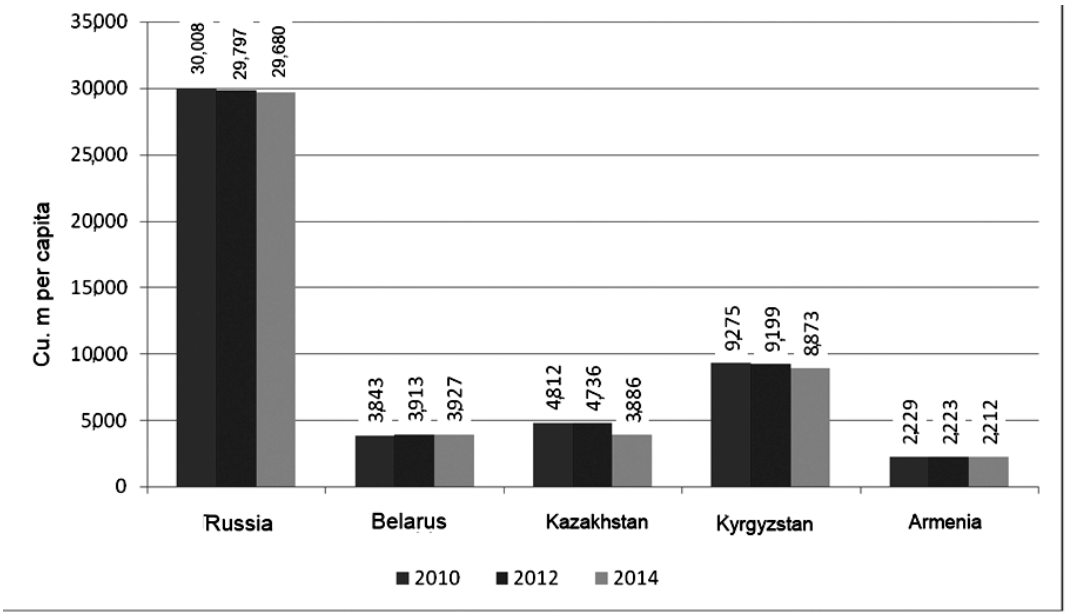

Figure 1: Freshwater resources in the average per capita in the EEU member states for the period of 2010-2014

There remains a problem in the sphere of conservation of biological diversity in the territory of the EEU. There is a worrying tendency to reduce the number of major game species in most of the member states of the integration community.

Due to the high economic interest, many biological resources at the level of a gene, species and ecosystem are currently under the threat of changing, damage or loss. For example, in Belarus the number of foxes decreased by 7% and the number of muskrats decreased by 19.3%. In Russia, the number of squirrels, beavers, otters, weasels, striped weasels,dog foxes, martens, foxes, wolverines, polecats decreased;the number of saigas and black-tailed gazelles decreased to a critical level. The mass death of saigaswas recorded in the Republic of Kazakhstan: in May 2010 there were 11,920 animal units. In May 2011, 441 animal units died, in May 2012 – 926 animal units and in May 2015 – 148,800 animal units died (the National Report on the State of the Environment of the Republic of Kazakhstan for the period of 2011-2014).

2.3. The assessment of the ecological efficiency of the EEU member states

In general, it should be noted that in recent years the EEU member states are engaged in improving the environmental situation. The Russian Federation and the Republic of Belarus show the positive dynamics of reducing emissions of harmful substances into the air.

Table 4
The dynamics of reducing emissions of harmful substances into the air

Countries	*2010*	*2011*	*2012*	*2013*	*2014*	*Growth rate, %*
			SO_2 emissions			
Russia*	4,497.9	4,454.7	4,415.4	4,249.2	4,113.3	91.4%
Kyrgyzstan**	7.9	9.4	5.4	12.6	18.4	232.9%
Kazakhstan	723.6	774.2	769.6	729.2	729.1	100.8%
Belarus***	51.7	44.4	63.7	48.5	50.3	97.3%
Armenia****	26.7	28.8	29.2	31.8	32.1	120.2%
			NO_x emissions (calculated as NO_2), thousand tons per year			
Russia, thousand tons per year	3,656.9	3,561.9	3,356.5	3,333.3	3,288.4	89.9%
Kyrgyzstan,thousand tons per year	2.5	3.0	3.4	3.4	No data available	136.0%
Kazakhstan	215.6	232.7	249.4	250.2	256.5	119.0%
Belarus	63.6	58.7	59.1	62.2	60.3	94.8%
Armenia	1	1.1	1.3	1.5	1.5	150.0%

Source: *The Government Report on the State of the Environment and Environmental Protection in the Russian Federation. ** The National Report on the State of the Environment of the Kyrgyz Republic. *** The State of the Environment in the Republic of Belarus, 2015. **** The National Statistical Service of the Republic of Armenia, 2015.

A significant growth in emissions has been observed in the Republic of Kyrgyzstan for five years; sulfur dioxide emissions have increased by more than two times, while nitrogen oxide emissions have increased by 36%. In the Republic of Armenia, SO_2 emissions increased by 20.2%, in Kazakhstan this indicator remained almost the same as in 2010. Nitrogen oxide emissions have increased by 50% in the Republic of Armenia and by 19% in the Republic of Kazakhstan.

Despite some global progress that has been made to reduce the dependence of the economic growth on the amount of CO_2 emissions and other greenhouse gases, their emissions are still increasing. Since the statistical data on greenhouse gas emissions in the Kyrgyz Republic and the Republic of Armenia are absent, Figure 2 shows the dynamics of greenhouse gas emissions in three EEU member states – Russia, Belarus and Kazakhstan.

According to the statistics of the EEU member states, the volume of waste generated and accumulated is annually increasing; the area of land resources for the waste disposal is increasing. At the same time, the waste reuse system is poorly developed; insufficient attention is paid to the introduction of non-waste and low-waste technologies.

The dynamics of the volume of waste generation, management and disposal in the EEU member states for the period of 2010-2014 is presented in Table 5.

The lowest level of the management and recycling of production waste is observed in the Republic of Armenia. A significant increase in the volumes of waste processing and disposal of in Kazakhstan and Kyrgyzstan should be noted. The level of waste

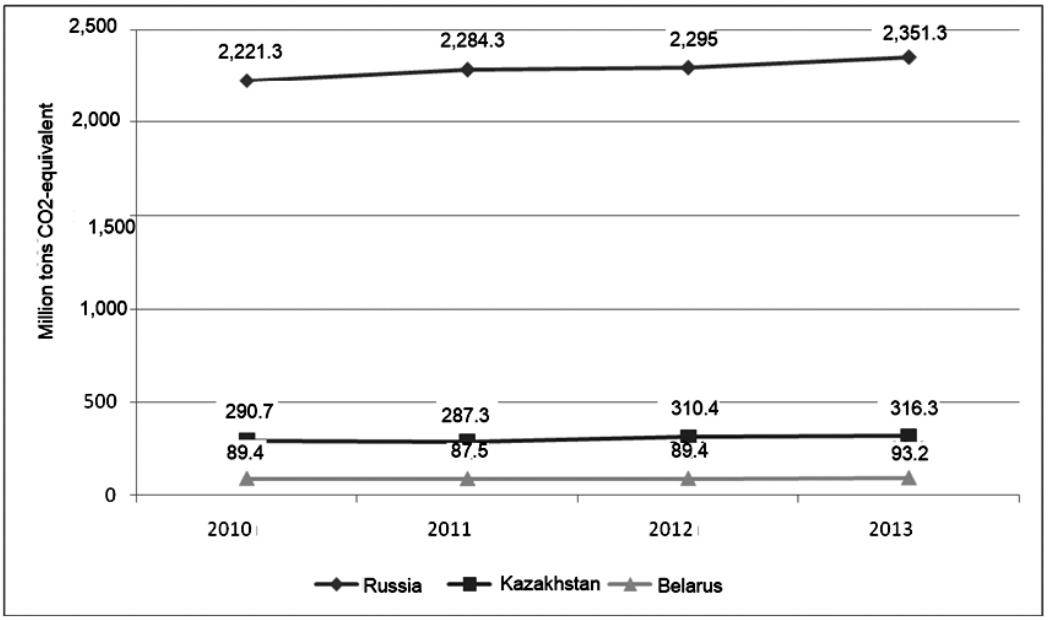

Figure 2: The dynamics of greenhouse gas emissions in three EEU members states in the period of 2010-2013

Table 5
The indicators of waste generation, management and disposal in the EEU member statesfor the period of 2010-2014

Country	*2010*	*2011*	*2012*	*2013*	*2014*
Total volume of waste generation, million tons					
Russia	3,734.7	4,303.3	5,007.9	5,152.8	5,168.3
Kazakhstan	914.1	424.6	359.5	184.2	151.8
Belarus*	43.8	44.3	40.8	40.3	52.5
Armenia	23.3	27.6	39.0	49.3	46.5
Kyrgyzstan**	5.8	10.2	4.9	8.0	10.2
Total volume of waste management and disposal, million tons					
Russia	1,738.1	1,990.7	2,348.1	2,043.6	2,357.2
Kazakhstan	24.0	48.9	99.2	85.9	114.3
Belarus	13.6	12.7	13.1	15.5	16.7
Armenia	0.2	0.1	0.0	0.0	0.0
Kyrgyzstan	0.05	0.06	0.06	3.11	4.95
The level of production waste management, %					
Russia	46.5%	46.3%	46.9%	39.7%	45.6%
Kazakhstan	2.6%	11.5%	27.6%	46.6%	75.3%
Belarus	31.2%	28.6%	32.0%	38.6%	31.7%
Armenia	0.7%	0.5%	0.0%	0.0%	0.0%
Kyrgyzstan	0.9%	0.6%	1.2%	38.9%	48.5%

Source: *The National Statistical Committee of the Republic of Belarus. ** The National Statistical Committee of the Kyrgyz Republic

management in the Russian Federation and the Republic of Belarus varied slightly for the considered period and remained generally stable.

The discharge of contaminated wastewater is one of the essential factors of the anthropogenic load on water ecosystems of the EEU countries. The Republic of Armenia has the highest indicator of the proportion of untreated sewage in the total runoff volume. We should note a positive aspect, which lies inthe decrease in the share of polluted wastewater for the considered period in all EEU countries for five years.

Based on the analysis of the environmental situation in the EEU countries, we can conclude that, in general, the environmental and climate policy remains not effective enough, as evidenced by the assessments of international organizations.

In the climatic rating of the countries Climate Change Performance Index 2015, the Russian Federation ranked 56, while the Republic of Kazakhstan ranked 59 out of 61 countries. The mentioned countries appeared in the group of countries with the worst indicators of climate protection (Burck*et al.*, 2015). Since 2011, these countries are in the "red" zone of the countries with very poor results in the ranking, and the index of the country decreased continuously since the first edition of 2006 (except for 2009).

The success of the climate policy of the Republic of Belarus has been evaluated more positively: the country occupied the 38th place in the ranking. However, it should be noted that in comparison with the previous ranking indicators the country fell from the 29th place, having lost 9 points.

In the ranking of the ecological efficiency (The Environmental Performance Index) the EEU countries show a positive trend and following the results of the Ranking-2016 they are related to the regions with an average level of the environmental

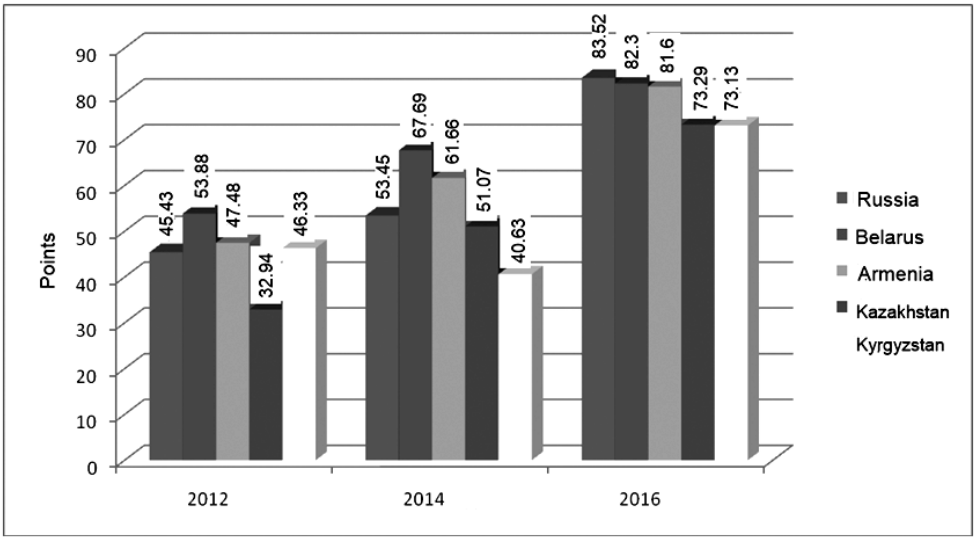

Figure 3: The EEU countries in the ranking of the ecological efficiency (EPI)

development. In the previous EPI rankings,the EEU countries were in the zone of the low level of the environmental development.

The Republic of Belarus, which previously held the leading position among the EEU countries, ceded its position to the Russian Federation following the results of the Ranking-2016. In terms of the ecological efficiency, Kyrgyzstan and Kazakhstan, whichoccupy 71th and 69th places in the ranking respectively, are the most unfavorable EEU countries.

At the same time, it should be noted that for the period of four years all EEU member states significantly improved their positions in the Environmental Performance Index, having reduced their environmental risk indicators, thus improved the situation of wastewater treatment and increased the quality of drinking water.

However, the EEU countries still face the acute environmental problems – those remained from the Soviet times and new ones caused by the up-to-date consumption patterns. Further efforts are also needed to address such problems as biodiversity conservation, improvement of air quality, water resources, ecosystem degradation, waste disposal and elimination of accumulated environmental damage.

Recommendations and suggestions for the improvement of the ecological situation and the strengthening of cooperation between the EEU countries in order to increase a synergetic effect.

The environmental pollution and climate change do not have national borders and their consequences affect the whole of humanity (European Environment Agency, 2015). The EEU countries must work together to solve environmental problems through discussion and ongoing cooperation. The efforts should be aimed at identifying those areas of common interests where the development of cooperation in the sphere of the environmental protection and ecological safety can provide a synergistic effect. It is also necessary to develop, agree and startthe implementation of the cooperation program, through which the ecological efficiency of the efforts to be taken at the national levels will be increased.

In order to achieve a synergetic effect to improve the environmental situation in the EEU countries it is necessary to harmonize and synchronize the legislation on forestry and water(including on transboundary water bodies) economy, land and mineral resources. It is also necessary to develop common environmental standards and requirements in the construction and operation of nuclear power plants, the safety of wheeled vehicles, roads, agricultural products, building materials, etc. Modern and effective mechanisms for the environmental management and protection of natural resources, such as single permits, on the basis of best available techniques (BAT); eco-labeling; and the environmental management and auditing system (EMAS), should be introduced in the environmental legislation.

For the development and implementation of the single environmental policy within the EEU, it is necessary to create the system of collection and exchange of information on the environmental conditions among the EEU member states.

The conservation of biological resources and landscape diversity, protection of water resources, improving air quality, mineral resources sphere, nuclear safety, etc., are promising areas of cooperation within the EEU.

The active development of cooperation in the establishment of biosphere reserves, which will ensure the harmonization of the process of preservation of biological resources with their sustainable use, is one way to solve the problems of biodiversity conservation in transboundary territories. The project of the first transboundary biosphere reserve "Big Altai" presented at the IV World Congress of Biosphere Reserves in March 2015 is an example of such cooperation.

The planned Transboundary Biosphere Reserve will be created in the border area of the Republic of Altai (Ust-Koksinsky District) and in the East Kazakhstan Region on the area of over 1.5 million hectares, where 24.5 thousand people live. It will consist of the RussianKatun Biosphere Reserve and the Kazakhstan Katon-Karagay National Park.

Another project in the framework of the cross-border cooperation could be the creation of the Belarusian-Russian Biosphere Reserve Osveya– KrasnyBor– Sebezh. Two reserves– "Osveysky" and "KrasnyBor" – united in the biosphere reserve to address the issue of the national ecological network of the Republic of Belarus. They constitute a single wetland complex, which consists of a lake, wet forests, transition and raised bogs. The Biosphere Reserve "Osveysky– KrasnyBor" is located on the migration route of birds and is a place of mass nesting. Its territory provides the opportunity to explore and demonstrate approaches to the sustainable development on a regional scale.

Currently, the issue of establishing a national biosphere cross-border reserve on the basis of our new establishment and the National Park of the Russian Federation "Sebezhsky" is negotiated. In the future, the cross-border reserve may enter the European Emerald Ecological Network.

A single integration area also requires a common decision on all "water" issues, namely: water pollution with waste, shallowing of rivers and lakes, water quality deterioration, reduction of fish stocks, etc. Particular attention should be paid to the restoration and strengthening of relations and extension of cooperation of the EEU member states in the management and protection of transboundary waters. For this purpose, the Water Research Centre of the EEU countries was established. Combining the efforts of several countries in such an important global issue, upgrading all water economy on the continent will be an effective step in that direction, to which the activities of the established center will be devoted.

The public-private partnership (PPP) is an effective mechanism for the improvement of the ecological situation in the territory of the EEU. It is necessary to create favorable conditions for the implementation of projects aimed at the formation of a resource-efficient state. The projects related to the creation, renovation or

modernization of water and sewage services, forest infrastructure, development of the waste recycling industry, projects in the sphere of transport and energy are the promising areas of the application of the PPP mechanism in the sphere of environmental protection.

For the purpose of exchanging the experience of legislative regulation of the environmental protection, as well as the search, exchange and implementation of "green technologies" by the EEU countries,it is proposed to consider the possibility of creating a special platform of the public-private partnership. It is a permanent mechanism of interaction of representatives of public authorities, businesses, national and international financial institutions, scientific and public organizations of the EEU countries and international organizations that consider the development of legislation in the sphere of "green economy" and "green growth" as the best practical introduction of "green technologies" at the national level and in the international formats.

In conclusion, it should be noted that the integration and cooperation on the environmental protection must begin with the restoration of relations that existed in the CIS countries. This will allow to use the national mineral resources, infrastructure and production capacities more efficiently and to improve the ecological situation in the EEU countries.

3. CONCLUSION

The study conducted in this article allows to suggest that the greatest positive effect on the environmental situation in the EEU territory will be achieved through a synergetic effect obtained in the implementation of joint environmental protection projects.

When planning ecological networks, it is important to take into account that ecosystems boundaries do not coincide with the state borders. Therefore, for their effective operation it is necessary to take into account a transnational aspect and to promote the international cooperation in the implementation of environmental projects in the transboundary areas.

References

Alimov, A.A. (2016), PerspektivyuchastiyaRossii v mezhdunarodnomsotrudnichestve v sfereokhranyokruzhayushcheysredy v ramkakhrazvitiyaevraziyskoyekonomicheskoyint egratsii [The Prospects of Russia's Participation in the International Cooperation in the Sphere of Environmental Protection in the Framework of the Eurasian Economic Integration. Evraziyskiyyuridicheskiyzhurnal, 1:177-181.

Aquastat. The Global Water Information System.(n.d.). Retrieved November 5, 2016, from http://www.fao.org/nr/water/ aquastat/main/index.stm.

Boklan, D.S. (2016), Vzaimodeystviemezhdunarodnogoekologicheskogoimezhdunarodnogo ekonomicheskogoprava: dis. doktora. yurid. nauk [Interaction of international Environmental and International Economic Law (Doctoral Thesis)]. Moscow: Moscow

State Institute of International Relations (University) of the Ministry of Foreign Affairs of the Russian Federation.

BP PLC. (2016, June). Statistical Review of World Energy. Retrieved November 5, 2016, from http://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/downloads.html.

Burck, J., Hermwille, L., & Bals, C. (2015), The Climate Change Performance Index: Background and Methodology. Germanwatch& Can. Retrieved November 5, 2016, fromhttp://germanwatch.org/en/download/8579.pdf.

Convention on Biological Diversity. (1993).Retrieved November 5, 2016, fromhttps://www.cbd.int/information/parties.html.

Eurasian Economic Commission. (2015), Energetika[Energy Industry]. Retrieved November 5, 2016, fromhttp://www.eurasiancommission.org/ru/Documents/_eec_energy_all_150623.pdf.

Environmental Performance Index. (2016), Global Metrics for the Environment. 2016 Report. Retrieved November 5, 2016, fromhttp://epi.yale.edu/sites/default/files/2016EPI_Full_Report_opt.pdf.

Ermolina, M.A. (2015), MezhdunarodnoesotrudnichestvoRossii v sfereokhranyokruzhayush cheysredyiratsional'nogoprirodopol'zovaniya v kontekste razvitiyaevraziyskoyeko nomicheskoyintegratsii [International Russian Cooperation in the Sphere of Environmental Protection and Rational Use of Natural Resources in the Context of the Development of the Eurasian Economic Integration]. Evraziyskiyyuridicheskiyzhurnal, 5, 304-306.

European Environment Agency. (2015). East ENPI-SEIS Region. Summary Report. Luxembourg: European Union Publishing Bureau.

Fisheries and Aquaculture Department (n.d.). Food and Agriculture Organization of the United Nations. Global Aquaculture Production 1950-2014. Retrieved November 5, 2016, fromhttp://www.fao.org/figis/servlet/TabLandArea?tb_ds=Aquaculture&tb_mode=TABLE&tb_act=SELECT&tb_grp=COUNTRY.

Food and Agriculture Organization of the United Nations. (2015). Global Forest Resources Assessment. Rome. Retrieved November 5, 2016, from http://www.fao.org/3/a-i4808e.pdf.

Hsu, A., Johnson, L., & Lloyd, A. (2013), Measuring Progress: A Practical Guide from the Developers of the Environmental Performance Index. New Haven, CT: Yale Center for Environmental Law and Policy. Retrieved November 5, 2016, from http://epi.yale.edu/files/ycelp_measuring_progress_manual.pdf.

Ministry of Energy of the Republic of Kazakhstan. (2015), National Report on the State of the Environment and Use of Natural Resources for the 2011-2014. Retrieved November 5, 2016, from http://ecodoklad.kz/en/vyvody-i-recomendacii

Ministry of Natural Resources and Environment of the Russian Federation. (2015), Gosudarstvennyydoklad o sostoyaniiiobokhraneokruzhayushcheysredy v Rossiyskoy Federatsii [State Report on the Environmental State and Protection in the Russian Federation]. Retrieved November 5, 2016, from http://www.ecogosdoklad.ru/2014/wwwWater1_14.aspx.

Ministry of Natural Resources and Environmental Protection of the Republic of Belarus, Republican Unitary Enterprise "Belarusian Research Center "Ecology". (2015). Sostoyanie

okruzhayushcheysredyRespublikiBelarus' : Natsional'nyydoklad [Environmental State of the Republic of Belarus: National Report]. Minsk: Belarusian Research Center "Ecology".

National Statistical Service of the Republic of Armenia. (2015). Natural Resources and Environment. Statistical Yearbook of Armenia. Retrieved November 5, 2016, from http://www.armstat.am/file/doc/99493638.pdf.

National Statistical Committee of the Republic of Belarus. (n.d.). Official Statistics: Environment. Retrieved November 5, 2016, from http://www.belstat.gov.by/en/ofitsialnaya-statistika/macroeconomy-and-environment/okruzhayuschaya-sreda/.

National Statistical Committee of the Kyrgyz Republic. (2015). Okruzhayushchayasreda v KyrgyzskoyRespublike 2010-2014. Statisticheskiysbornik [The Environment in the Kyrgyz Republic for the Period of 2010-2014. Statistical Yearbook]. Bishkek: National Statistical Committee of the Kyrgyz Republic.

OPEC. (n.d.). Annual Statistical Bulletin. Retrieved November 5, 2016, fromhttp://asb.opec.org/index.php/data-download.

Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.(n.d.). Retrieved November 5, 2016, from http://www.basel.int/Countries/StatusofRatifications/PartiesSignatories/tabid/4499/Default.aspx

SoglasheniemezhduPravitel'stvomRespubliki Kazakhstan iPravitel'stvomKyrgyzskoy Respubliki o sotrudnichestve v oblastiokhranyokruzhayushcheysredy [Agreement between the Governments of the Republic of Kazakhstan and the Kyrgyz Republic on Cooperation in the Sphere of Environmental Protection]. (1997, April 8). Retrieved November 5, 2016, fromhttp://base.spinform.ru/show_doc.fwx?rgn=8374.

SoglashenieSodruzhestvaNezavisimykhGosudarstv "O sotrudnichestve v oblastiokhra nyokruzhayushcheysredygosudarstv – uchastnikovSodruzhestvaNezavisimykh Gosudarstv" [Agreement of the Commonwealth of Independent States "On Cooperation in the Sphere of Environmental Protection of the CIS Member States"]. (2013, May 31). Retrieved November 5, 2016, from http://www.pravo.gov.ru.

SobranieZakonodatel'stvaRossiiskoiFederatsii [SZ RF] [Collection of Legislation of the RF] 2015, No. 38, Item 5215.

State Environmental Protection and Forestry Agency under the Government of the Kyrgyz Republic. (2015), Natsional'nyydoklad o sostoyaniiokruzhayushcheysredy KyrgyzskoyRespubliki [National Report on the State of the Environment of the Kyrgyz Republic]. Retrieved November 5, 2016, fromhttp://nd.nature.gov.kg/ru/vodnye-resursy/kachestvo-pitevoj-vody.html.

Stockholm Convention. (2001), Retrieved November 5, 2016, fromhttp://chm.pops.int/Countries/StatusofRatifications/PartiesandSignatoires/tabid/4500/Default.aspx.

The World Bank Group. (n.d.). Indicators. Retrieved November 5, 2016, from http://data.worldbank.org/indicator.

United Nations. (1994), Framework Convention on Climate Change. Retrieved November 5, 2016, fromhttps://unfccc.int/parties_and_observers/parties/non_annex_i/items/2833.php.

World Gold Council.(2016). Latest World Official Gold Reserves. Retrieved November 5, 2016, fromhttp://www.gold.org/research/latest-world-official-gold-reserves.