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## **On the Issue of Regional Policy in the Sphere of Ecological Safety (Based on the Documents Concerning the Republic of Kalmykia)**

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### **Abstract**

The regional government should provide ecological safety in order to ensure stable social and economic development of the country. The article outlines theoretical approach and recommendations on practice concerning ecological issues, investigates state policy aiming to preserve nature and analyses sources of threat to ecological safety in the region. The modern paradigm of the country's and region's development is characterized by the combination of ecological and economic policy. The ecological policy providing measures for efficient use of natural resources, their protection and restoration is implemented in the economic strategy of highly developed countries and encourages stable social and economic development of the country and the region. Some researchers assert that Russia's most regions do not possess sufficient resources necessary to implement structural shifts which can eliminate the main threats to ecological safety. The Republic of Kalmykia can be included into this list. It is rich in natural resources but they are not restored due to the lack of regulation for efficient consumption. The main concerns of the republic are water supply, desertification, and pollution of atmosphere, waste disposal, and protection of wildlife and environment, preservation of hunting ground, forest management. The republic generates no electricity so it is delivered by neighboring regions. The republic should use the renewable ways of producing energy which can contribute to the energy and ecological safety and can attract new investment funds. There is an urgent need for stricter state regulation to ensure socioeconomic development and ecological safety in Kalmykia.

**Keywords:** Efficient use of nature, Regional economy, Ecological policy, Protection of wildlife, Natural resources, Economic development, Authorities, Public administration, Ecological and economic balance, the Nature conservancy.

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## **Introduction**

Recently modern strategy of development has started to combine ecological and economic policies. Highly developed countries have made significant progress in ecological policy involving efficient use of natural resources, their protection and restoration.

Many years scientists have focused on issues concerning ecological safety of the country and its regions. Russian scientists S.N. Bobylev (2010), M.M. Brinchuk (2013), Y.D. Vishnyakov & I.V. Gurlev (2017), V.V. Kutsenko et al. (2013), A.I. Orlov (2012) and others have researched the issue and their scholarly writings became the theoretical and methodological basis of this article.

It should be noted that development of methodical bases of formation and realization of regional policy in the field of ensuring ecological safety is the integral condition of achievement of sustainable social and economic development of the country and its regions. The purpose of this article is justification of theoretical approaches and practical recommendations on improvement of regional policy in the sphere of ensuring ecological safety. The goal can be achieved by carrying out the investigation of state policy in the sphere of ecological safety and the analysis of its contemporary threats. The researchers used legislation documents and normative guidelines, federal and regional programs, state statistics data and online sources.

Today the problem of the formation of favorable environment and rational nature management are one of the most important global problems in modern society. The urgency of this problem is important for the current global environmental crisis, increasing threats and challenges to the environment.

The implementation of the state system of nature management and environmental protection in the subject of Russia is one of the elements of the above-mentioned problems, because environmental protection is primarily a problem of regional nature, the solution of which depends on the activities of the bodies closest to nature in direct contact with her most fully owns the information about her condition (Aliev, 2012; Alekseeva, 2009).

The implementation of government environmental policy in the Republic of Kalmykia presents some difficulties, although in the Republic there are no large sources of pollution, the environmental situation in the region remains today very difficult, there are problems of pollution of major environmental components, such objects as water, air, soil, etc. Rational use of objects of nature and effective environmental protection will allow the Republic to emerge from the current economic and ecological crisis, thereby providing the population with quality state of the environment. Researchers used legislation documents and normative guidelines, federal and regional programs, state statistics data and online sources.

The system approach of investigating ecological issues of national security became the methodological basis of the research. The authors believe that the dialectic concept of development as well as different methods like comparative, standard, system and statistical ones are able to assess the evolution and contemporary relationship between the society and nature. This approach is complex but it tries to interconnect global aspects and regional features.

### **The basis of state regulation in the sphere of efficient use of nature**

Public administration like any activity is the end result. The result of this activity is the system of making management decisions at the state level, which provides direct or indirect communication aimed at reduction and prevention of environmental destruction, generates models of action directed against unauthorized use of natural resources.

The Constitution of the Russian Federation guarantees nature conservation and norms regulating the quality of environment in the country. The Constitution claims that everyone has the right for favorable environment; everyone is obliged to conserve nature and the environment, to take care of natural resources which promote sustainable development, life and activity of citizens of the Russian Federation.<sup>5</sup>

The development of foreign experience of state management in the sphere of environment protection and natural resources was carried out through the formation within the public authorities, specialized units to perform environmental functions. Since the 70s of 21<sup>st</sup> century in the international practice of control, a change has occurred in the direction of the formation of separate and specialized government agencies. This trend is associated with the development of legislation, with the result that public authorities in foreign countries represented are mainly of two types: deliberative (advising) and administrative Executive. Today specialized state bodies in the sphere of environmental management are represented in almost all countries of the world. So, to the tasks of the consultative (Advisory) bodies are: informing about the state of the environment, the introduction of forecasting and monitoring of environmental impacts within development and implementation of various development projects including the linking the interests of different economic entities with the interests of special agencies of the state apparatus.

Considering the laws of various countries, we can conclude that the main Executive and administrative state authorities in the field of environment protection and natural resources in many countries are specialized ministries, services and agencies, as well as their committees. The task of the authorities is the organization of the environmental policy through the development and monitoring of various environmental programs, the organization of the development of common environmental standards, control over the organization of scientific, methodological, financial and technical assistance of state authorities and local self-government, ensuring implementation of the conditions of the legislation in the fields of environment and international cooperation.

Russia has adopted some normative legislation acts concerning the sphere of nature conservation and sustainable environment, spread of ecological awareness. The list of acts should involve the Federal Law #7 'On Environmental Protection' outlines legal basis of State policy in the sphere of environmental protection promoting socioeconomic development, favorable environment, biological diversity and natural resources in order to satisfy the needs of current and future generations, law enforcement in the environmental protection and ensuring environmental safety.<sup>6</sup>

The Decree of the President of the Russian Federation emphasizes the efficient use of nature as one of the priority directions for the development of science and technology in the Russian Federation. Resource-saving and environmentally friendly production, food and agricultural processing as well as safe technology for mining are included in the list of technologies with important socioeconomic significance for the country's defense and state security.<sup>7</sup>

The most important document in the field of efficient nature management is the federal target program "Research and development in the priority areas of development of the scientific and technological complex of Russia for the period of 2014-2020." It defines activities aimed at conducting investigations and creating a scientific and technical basis for efficient nature management.

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<sup>5</sup> Constitution of the Russian Federation. December 12, 1993 (date of access: 14.04.2017).

<sup>6</sup> Federal Law from 10.01.2002 N7-FL "On Environment Protection" (date of access: 14.04.2017).

<sup>7</sup> Decree of the President of the Russian Federation from 07.07.2011 N899 "On Approval Priority Directions in the Development of Science and Technology in the Russian Federation and a List of Important Technology" (date of access: 15.04.2017).

The Concept of long-run social and economic development of the Russian Federation for the period of 2020 determines the environmental safety of the economy and human ecology as the strategic guidelines for long-term social and economic development.

The National Security Strategy of the Russian Federation 2020 proclaimed the following strategic objectives of ensuring environmental safety and rational nature management of our country: to preserve the natural environment and ensure its protection; to avoid environmental consequences of economic activity when economic activity increases and the global climate changes.<sup>8</sup>

The government of the Russian Federation believes that principles of ecological safety are strategic goals at of state policy in the field of ecology which determine the preservation of natural systems, maintenance of their integrity and life-supporting functions for sustainable development of society, increasing the quality of life, improving public health and demographic situation, and ensuring the country's environmental security. In general, the implementation of the principles of the environmental doctrine of the Russian Federation, environmental programs, improving the efficiency of public administration in the sphere of nature are also aimed at ensuring the ecological security of the country and its regions.

There are motivations and legal restrictions in the sphere of nature use. A good example is Chapter 26 of the Criminal Code that claims responsibility for environmental offenses like violation of environmental regulations in the process of performing some works, the pollution of water and air, land deterioration, violation of rules of protection and use of mineral resources, destruction or damage to forests.

The issue of saving resources in the country has great significance but scientists should also investigate this problem in regions.

The Strategy of Social and Economic Development of the Southern Federal District 2020 outlined the innovative and qualitatively new approach to solving the problems of efficient nature management and ecology by reducing the negative consequences of economic, tourist, scientific and other activities on the environment, fulfilling significant measures in the field of environmentally sound development of industrial and agricultural production, tourism, urban development, disposal of industrial waste, use and protection of water supply, protection of land and forest resources.<sup>9</sup>

### **The main issues of efficient use of natural resources on the regional level**

Specific features of ensuring environmental safety in the regions of the Russian Federation directly depend on the main threats to regional environmental security.

From the point of view of development of economic activity in the regions of the southern Federal District it is possible to notice a strong gradation. This gradation associated primarily with the territorial formation of the County. The specified district has been formed, on the one hand of the largest industrial regions with their characteristic negative effects in the field of ecology, but on the other hand, from an agrarian republics and edges, with traditional and fundamentally other environmental problems. As a result, the gap in the reduction of the main indicators of pollution is among other districts of Federal significance.

The Republic of Kalmykia is one of the most extreme regions for living and doing business in the Russia's regions due to the geographic location in the arid and semiarid zones of the north-western Caspian

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<sup>8</sup> Decree of the President of the Russian Federation from 12.05.2009 N537 "On Strategy of National Security of the Russian Federation towards 2020" (date of access: 15.04.2017).

<sup>9</sup> Order of the Government of the Russian Federation from 05.09.2011 N1538 "On Approval of Strategy for Socio-economic Development of the Southern Federal Region towards 2020" (date of access: 16.04.2017).

region. The Republic of Kalmykia has many problems in the sphere of environmental protection such as the problems of water supply, desertification, pollution of atmosphere, waste disposal, protection of wildlife and environment, preservation of hunting ground, forest management. The territory of Kalmykia is rich in natural resources which are public property. The use of some natural resources (oil, gas, etc.) is limited but their deposits are large and cannot be restored because it requires special methods for regulating efficient consumption. There are four specially protected natural areas in the Republic of Kalmykia that have regional and federal significance.

There are legal norms regulating activities in the field of nature preservation and sustainable environment in the Republic of Kalmykia outlined in the Laws of the Republic of Kalmykia "On Wildlife" (26.12.2011 № 321-IV-L) and "On the regulation of forest relations in the Republic of Kalmykia" (21.12.2007 No. 407-III-L).

Moreover, Kalmykia has adopted the republican target program "The Development of Water Protection Complex in Kalmykia for 2013-2014" which guarantees the sustainable development of the social and economic development of the Republic of Kalmykia, restoring water supply, ensuring the security of the population and economic facilities of the Republic of Kalmykia against floods and other negative impacts of water. The Government of the Republic approved the State Program of the Republic of Kalmykia "Environmental Protection for 2013-2020" in order to solve the problems of ensuring environmental safety and efficient nature management.

The Ministry of Natural Resources and Environmental Protection of the Republic of Kalmykia fulfills state functions in the sphere of environment protection of a constituent entity of the Russian Federation on the territory of Kalmykia. Functional powers of this Ministry can be divided into following groups:

- Control and supervision within the scope of their authority in the sphere of protection wildlife and its habitat, protection of forests, protection of environmental components, subsurface resources containing common mineral deposits, and subsoil areas of local importance;
- The organization of protection and reproduction of wildlife and their habitat;
- Preservation, protection and reproduction of forests;
- The protection of environmental components (air, water, waste management) within the limits of their authority;
- Participation according to the regulation in the implementation of state monitoring of wildlife, forests, water reservoirs, current state of the components of the environment. Maintenance of state cadasters and registers;
- implementation of the state system of licensing for the use of subsoil plots, its management is regulated by the Republic of Kalmykia;
- Rationing and licensing;
- Participation in the development of the system of environmental education, enlightenment and training of the population of the Republic of Kalmykia, which is an effective tool in addressing such socially important tasks as investigation of the historical, cultural and natural heritage of the region.

Nowadays the Republic has an unstable environment which should attract special attention from the authorities of all levels. The consequences of accidents, repair work at the enterprises of the republic and steppe fires lead to the air pollution. The main threats for the environment are gas and oil production enterprises, fuel and energy complex, heat power engineering and motor transport. According to the 2015 data of the regional branch of the Federal State Statistics Service for the Republic of Kalmykia the

real mass of pollutant emissions into the air in the territory of the Republic of Kalmykia equaled 46,389 tons, including 3,416 tons (8.3%) from stationary sources, motor transport – 42.533 tons (91,7%).<sup>10</sup>

The share of emissions of the agricultural Republic of Adygeya and Kalmykia are not significant, accounting for 1.8% of the total pollution. But while the share of air emissions in these republics have on the automobile (mobile) source of pollution, which in 2015 was 90%, respectively. This aspect is not only associated with a trend of steady increase of road transport, but also poor fuel quality and noncompliance of vehicles with the environmental norms and standards.

According to this indicator, as the waste in the ranking of the districts of the Russian Federation southern Federal district is on the 3rd place. In this regard, the problem of waste management in all regions of the SFD becomes paramount. The causes of waste are varied and depend on individual economic characteristics of the regions. So, the main objects of pollution in the agricultural republics are landfills, prohibited and unsuitable plant fertilizers. Recently there appeared more important environmental problems, namely location, disposal of production and consumption waste on the territory of the republic. According to the Ministry of Natural Resources and Environmental Protection of the Republic of Kalmykia 89,464 tons of registered production and consumption wastes were generated and located in illegal dumps in 2015.<sup>11</sup>

But the amount of waste that is stored on illegal landfills is difficult to measure. The main sources of production and consumption waste are enterprises of gas-oil exploration, food and processing complexes, industrial and road construction, housing and communal services. The lack of sufficient number of waste disposal facilities, the municipal system which is responsible for collecting, processing, neutralizing and dumping waste prevents the involvement of this waste in processing. The government adopted and approved the republican target program “Comprehensive system of waste and secondary material resources management in the Republic of Kalmykia for 2013-2020”, its financing covers 2310.8 million ruble.<sup>12</sup>

Moreover, considerable economic activities in the agro-industrial complex and uncontrolled increase in the number of livestock have deteriorated agricultural lands and led to desertification of large areas. The processes of desertification, secondary salinization and flooding have caused land degradation and reduction of wildlife diversity. The eastern part of the republic is characterized by extreme natural and climatic conditions and therefore is most prone to desertification. The research shows that desertification involves 83% of the territory of the Republic of Kalmykia. The republic has implemented the General scheme to combat desertification which contributed to prevent sand moving on an area of 350,000 hectares.<sup>13</sup>

A major concern in the region is the quality of drinking water. The territory of the republic has a low supply of water and therefore the issue of providing drinking water is vital. Let's consider some data: the annual demand for water is about 800 million cubic meters and only 50 million cubic meters come from

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<sup>10</sup> Report on Ecological Situation in the Republic of Kalmykia in 2016 // Official site of the Ministry of Natural Resources and Environmental protection of the republic of Kalmykia [online] Available from: <http://www.kalmpriroda.ru/> (date of access: 16.04.2017).

<sup>11</sup> Regional branch of the Federal State Statistics Service for the Republic of Kalmykia [online] Available from: <http://www.statrk.ru/> (date of access: 16.04.2017).

<sup>12</sup> “Complex System of Management of Waste and Secondary Material Resources of the Republic of Kalmykia for the period of 2013-2010” (approved by the Order of the government of the republic of Kalmykia from June 28, 2012 #229) (date of access: 18.04.2017).

<sup>13</sup> Report on Ecological Situation in the Republic of Kalmykia in 2016 // Official site of the Ministry of Natural Resources and Environmental protection of the Republic of Kalmykia [online] Available from: <http://www.kalmpriroda.ru/> (date of access: 18.04.2017).

water sources; average water consumption per rural resident is 42 liters a day but hygienic norms require 125-160 liters a day, in some areas average water consumption is 7.5-10 liters a day.<sup>14</sup> In addition, drinking water used by the population doesn't meet hygienic norms in its chemical composition. There is a low share of rural people having supply of high quality drinking water, as for urban people they don't have access to high quality drinking water (Table 1). Quality of water in sources does not allow to use it for drink and economic needs without preliminary cleaning with use of special technologies. The majority of the population is forced to buy drinking water imported from neighboring regions.

**Table 1.** Data on supply of drinking water in different residential areas<sup>15</sup>

Name of index	Years		
	2013	2014	2015
Share of people who have supply of high quality drinking water in towns, %	0	0	0
Share of people who have supply of high quality drinking water in rural areas, %	9	16,1	13,4
Share of people who have supply of high quality drinking water which is brought by vehicles in towns, %	0	0	0
Share of people who have supply of high quality drinking water which is brought by vehicles in rural areas\ %	0	8	9

The territory of the Republic of Kalmykia is the habitat of a large number of species of animals and plants, most of them are enrolled in the Red Book of the Russian Federation. Recently, there has been a significant saiga antelope decline, which inhabits the north-western Caspian region of Kalmykia. The decline in population was caused by a number of factors: drought and cold winters, wild fire in steppe, increased poaching and an increased number of wolves. These factors did huge damage to the saiga population. The experts estimate a significant decrease in the number of saiga antelope population on the territory of the Republic of Kalmykia: there were 270 thousand animals in 1997, 14-16 thousand animals in the 2000s, and over 8 thousand animals in 2015. It is essential that Decree of the Government of the Republic of Kalmykia in 2015 enrolled the saiga antelope in the Red Book of the Republic of Kalmykia.

Moreover, the Ministry of Natural Resources of the Republic of Kalmykia declared natural area "Tulip Steppe" as a nature monument of regional significance in 2016. The Decree of the Government of the Republic of Kalmykia in 2016 established a state nature reserve of regional importance "Tatal-Barunsky" to preserve and restore the nesting population of the steppe eagle and other rare species of animals and plants.

The territory of the Republic of Kalmykia lacks original tree and shrub vegetation, with the exception of the floodplain sediments on the Volga River. The State Forest Register in 2016 estimated the total area of the forests of the republic 55.3 thousand hectares, including area covered in forest of 16.0 thousand

<sup>14</sup> On Water Supply in the Republic of Kalmykia // Official site of the Federal Service on Customers' Rights Protection and Human Well-being Surveillance in the republic of Kalmykia [Online] Available from: [http://08.rospotrebnadzor.ru/rss\\_all/-/asset\\_publisher/Kq6J/content/](http://08.rospotrebnadzor.ru/rss_all/-/asset_publisher/Kq6J/content/) (date of access: 19.04.2017).

<sup>15</sup> Ibid.

hectares. The forests of the arid territory of Kalmykia play an important role in climate-regulation and protect soil against wind erosion. Their importance is especially great for semi-desert and desert territories because their ecology is very fragile; therefore, the main tasks of forest management in the republic are: to reduce the area of land without forest, to fix mobile sands, to plant vegetation on damaged pastures, to grow plants preventing water and wind erosion and plants that can improve the environment.

One more major concern in the republic is the high cost of electricity, which hampers the development of industry and social sphere. A megawatt of electricity in the republic costs 2.5 times more than in neighboring regions. It causes high production costs and reduces the competitiveness.<sup>16</sup> These factors have a negative effect on the development of the economy of the Republic of Kalmykia.

Nowadays, natural gas is the main fuel for the generation power and central heating in the Republic of Kalmykia. But the climate of the region is favorable for the construction of generating facilities using renewable energy sources, in particular, wind power. Thus, experts have measured the technical wind energy potential of the republic and estimated that it equals to 170 thousand megawatt and the annual output can be 590 billion kilowatt.<sup>17</sup>

The Government of the Republic has decided to develop the electric power system of the Republic of Kalmykia and determined measures for providing the region with affordable electricity. The measures include the approval of the Program for the long-term development of the electric power industry of the Republic of Kalmykia for the period of 2017-2021; its aims are efficient development of the republic's electric power industry reducing the electricity deficit by increasing its own generation of electric power based on the use of renewable energy sources.

The Republic doesn't have big electricity consumers because it specializes on agriculture. Nowadays, agricultural production is actively using modern technologies that consume a lot of electricity. So there is an urgent need in reliable power supply of agricultural enterprises, high quality of electric power and its economical and efficient use.

The generation of electricity by wind power is essential for remote villages because they are scattered on the big territory of the republic. It is due to the small number of people, low density of settlement of the territory, a large length of networks and the lack of big electricity consumers. The territory of the republic has a total area of 75.9 thousand square kilometers which is covered by 265 settlements. 44% of the population of the republic is urban dwellers so there are 400 square kilometers per one rural resident of the republic. It results in the big length of electric networks which is many times longer than in other regions.<sup>18</sup>

In general, the use of renewable energy sources will enable the Republic of Kalmykia to diversify electricity supply, to stop purchasing expensive energy resources from neighboring regions. It will be possible to achieve these goals in the framework of reforming the housing and communal services, agricultural development and the implementation of important national projects. The use of renewable

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<sup>16</sup> Report on Ecological Situation in the Republic of Kalmykia in 2016 // Official site of the Ministry of Natural Resources and Environmental protection of the republic of Kalmykia [online] Available from: <http://www.kalmpriroda.ru/> (date of access: 20.04.2017).

<sup>17</sup> Official site of the Ministry of Housing, Utilities and Energy of the Republic of Kalmykia [Online] Available from: <http://mtr-rk.kalmregion.ru/> (date of access: 29.04.2017).

<sup>18</sup> Report on Ecological Situation in the Republic of Kalmykia in 2016 // Official site of the Ministry of Natural Resources and Environmental protection of the Republic of Kalmykia [online] Available from: <http://www.kalmpriroda.ru/> (date of access: 24.04.2017).

electricity sources on the territory of the republic can make a significant contribution to solving issues of ensuring energy and environmental security in the republic.

### **The main conclusion and offers**

There are threats to environmental safety on the territory of the Republic of Kalmykia which have a negative effect on the social and economic development of the territory and the authorities pursue a policy in the sphere of environmental protection and environmental development. It is an urgent necessity to increase government spending on environmental protection. There is a need to finance the implementation of new measures for environmental protection. However, since 2014, there has been a decline in the amount of expenditure in the republic (Table 2) which is a consequence of economic crisis. Moreover, ensuring regional environmental security should become a priority of regional economic policy based on the interaction of authorities of all levels, business and the community.

**Table 2.** Expenditure on environment protection in the Republic of Kalmykia in the period of 2013-2016, in thousands of rubles<sup>19</sup>

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Expenditure on environment protection from budget funds of all levels	147682.2	179397.5	123862.9	121703.4

The state's participation in environmental protection helps to solve part of the problems related to the conservation and effective use of the nature in regions. It can motivate business sector in the form of public-private partnership to implement socially significant environmental programs and projects. Special attention should be attracted to the tasks of efficient use of natural resources on a scientific basis applying modern methods of management and new technology.

Despite the efforts of the government to encourage the efficient use of natural resources and to ensure environmental security at the regional level, the republic of Kalmykia has not solved the problems due to the nature of economic activity and the level of its socio-economic development. Moreover, the state allows solving only part of the problems related to the preservation and effective use of the nature of the regions, so the regions should discover other mechanisms for solving the problem.

To a large degree, ensuring regional environmental security should firstly be a priority of regional economic policy, and secondly, it should be based on the interaction of authorities at all levels, business and the community.

In terms of improving the state of environmental policy in Russia made a certain number of regulatory legal acts on regulation of relations in the field of nature conservation and the environment, as well as based on the development of ecological culture. In this context, a special role is research component in the field of environmental management. It is an indisputable fact that the scientific discoveries and inventions have a significant impact on increasing productivity, improving the quality of products and

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<sup>19</sup> Report on Ecological Situation in the Republic of Kalmykia in 2016 // Official site of the Ministry of Natural Resources and Environmental protection of the Republic of Kalmykia [online] Available from: <http://www.kalmpriroda.ru/> (date of access: 20.04.2017).

services, nature conservation and sustainable environment, determining the competitiveness of enterprises, industries, regions and the country as a whole.

In accordance with modern trends of development of society it becomes apparent that without the use of intellectual resources, active use of advanced achievements of science, engineering and technology is impossible to achieve dynamic economic growth, ensure environmental safety, realize the sustainable development of regional ecological-economic system.

The above confirms the fact that the modern University stands for, on the one hand, as an entity, possesses material resources, which make investments in their own development and defining the vector of development, on the other is the institution able to develop intangible assets in the process of its functioning. The level of usage, as well as the creation of conditions for development of intellectual potential largely depends on the efficient functioning and development of the region and the country as a whole. This calls for the necessity to use the potential of the University in socially important regional issues, participation of universities in the development and implementation of specific projects aimed at socio-economic development of regions, ensuring of environmental security (Hall, 1997; Howland & Becker, 2002; Hoff, 2009; Budovskaya, 2016; Diaghilev & Slinko, 2016; Babkin, 2017).

This concept is reflected in the policy of the Ministry of education and science of the Russian Federation. So, the Ministry of education developed the Program of creation in Russia of a network of support universities. Under this project, the pooling of human, financial and scientific resources of regional universities will create a certain number of strong regional universities that could attract gifted students and to prepare the necessary number of specialists at the place of activity of major employers and in accordance with the needs of the regional labor market. In general, the creation of support universities focused on economic and social development of the regions. The implementation of this project will contribute to a concentration of intellectual potential in the regions and formation of scientific-educational complex, aimed at socio-economic development of regions of Russia.

Regional University plays an important role in providing scientific, technical and socio-economic development of the region, is the center of the formation and expansion of scientific, educational, industrial and innovative potential of the region. The functioning of the regional universities, primarily aimed at providing the regional enterprises and organizations in various industries, government staff qualifications for implementation of programs of higher and additional education relevant to a specific region, to conduct basic and applied research, important for the region.

The creation of core multidisciplinary regional universities will contribute to the concentration of the intellectual potential in the regions and formation of scientific-educational complex, aimed at socio-economic development of regions of Russia (Mikhailov & Vladimirov, 2015; Nagornov & Perfilieva, 2010; Kuldashv, 2013; Lebedeva & Mikhailov; 2011; Pahomova et al., 2017; Popov & Radchenko, 2013).

One of the Central places in the conversion process and optimization of regional systems of education, science and training, additional education is the creation of scientific and educational clusters, combining the resources of institutions of education, science and basic associations, enterprises in the face of employers. The long-term goal of this cooperation is the creation of innovative scientific-educational structure – the cluster is able to provide the staffing needs of potential employers and make a significant impact on the socio-economic development of the region by combining educational and research activity of universities with the real needs of the region one of the Central places in the conversion process and optimization of regional systems of education, science and training, additional education is the creation of scientific and educational clusters, combining the resources of institutions of education, science and basic associations, enterprises in the face of employers. The long-term goal of this cooperation is the creation of innovative scientific-educational structure – the cluster is able to provide the staffing needs of potential

employers and make a significant impact on the socio-economic development of the region by combining educational and research activity of universities with the real needs of the region (Nagornov & Perfilieva, 2010; Mantaeva, Slobodchikova, & Andreeva, 2012; Matveeva, 2010; Mukhlynina & Vinogradova, 2017).

The number of institutions-participants of the scientific-educational cluster the primary role of institutions of higher education, because today is the growing importance of universities as important elements of development in the implementation of the human capital of the region, there is a system integrating functions of the University into a coherent national-regional education system, as reflected in the number of documents of the Bologna process. D. Bell, John and Galbraith, M. Castells, the authors of the concepts of information society suggest that higher education will become the defining humanitarian-social Institute, therefore, will be to lead a nation, to create the most effective system of continuous education, that is education for life (Andreev & Andreev, 2012; Medyanik, 2013; Mikhailov & Vladimirskiy, 2015; Husiev, 2010).

So increasing scientific knowledge becomes indispensable for ensuring the life of society, its spiritual and physical health, and the implementation in practice of scientific and technological achievements is an important source of sustainable development of the country. The share of new knowledge embodied in technologies, equipment, qualifications of personnel, organization of production in developed countries, according to experts, accounts for up to 30% of GDP growth.

Due to the fact that on the territory of the Republic of Kalmykia there are threats to environmental security that have a negative impact on the socio-economic development of the territory as a whole, and government policies in the field of environmental protection and environmental development. However, despite the large number of effective steps for the rational use of natural resources, there is a problem of environmental security at the regional level, taking into account features of economic activities and level of socio-economic development of Kalmykia Republic, very far from a solution.

Because the state's involvement in environmental activities allows solving only part of problems related to the maintenance and effective use of natural potential of regions, today it is necessary to look for other mechanisms to solve the problem. Special attention should be paid to the fact that at the present stage of the problem of rational use of natural resources must be addressed in a scientific manner using the latest methods of management and modern technical capabilities.

Thus, the Central role in the development of the region is the University. This is a professional education, retraining and advanced training, scientific activity, cultural, and moral development. Meanwhile, at the current stage of the regional universities are in a situation where they must not only provide quality education, conduct scientific research, but also to attract resources for the implementation of the main activities. Modernization of higher education in Russia creates a situation in which regional universities did not become neither the Federal nor the national research will need to develop innovative, ceasing to be a University only for students. Regional University needs to change. It needs to work more actively with the local community, attract resources for the accomplishment of its mission.

Scientific, educational, innovative potential of higher education, high technology, subject to effective implementation gives the opportunity to move resources from one growth to another, from production machines to the production of ideas. Practice shows that it contributes to the greatest degree to improve the quality of life, its duration and preservation of the environment. In turn, the implementation of the regional policy should be aimed at strengthening the contribution of science and education to sustainable development, enhancement of socio-economic indicators through the effective use of intellectual potential of the University on the basis of the complementarity of the state, science and business in realization of socially significant projects and programs, in particular, in the process of improving regional ecological-economic system (Knaub, 2015; Korobitsyn, 2016; Kruglov & Calvert, 2015).

The republic should take the following steps for improving the state environmental policy:

- Investigation of problems of nature management involving scientific research institutions;
- Analysis of the activities of public authorities in the environmental sphere, assessing the effectiveness of government bodies, keeping their positive experience and correcting shortcomings;
- Interregional interaction through the development and signing of agreements with neighboring regions;
- Establishment of the public-private partnership in order to implement socially significant projects aimed at maintaining natural balance;
- Motivation of interaction on different levels in the process of formation and implementation of regional, state, international and public policies for environmental protection.

Nowadays, special concern is the task of efficient use of natural resources on scientific basis using new methods of management and modern technology, new design projects at the implementation stage.

The practical significance of the research gives an objective and critical approach to assessing the current policy in the sphere of ensuring environmental safety of the state and its separate regions. Recommendations proposed in the study can be used to formulate a regional policy of environmental safety. The implementation of the above-mentioned measures will provide the conservation of the nature, ensure environmental safety and improve the quality of life of the population of the Republic of Kalmykia.

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#### **References**

Alekseeva, L. V. (2009). Organizational and economic mechanism of rational use of land resources in the regional system of environmental management: (on materials of Stavropol territory). Dissertation in Ekon. Sciences. Stavropol GOS. Agrar. University. Stavropol.

Aliev, Z. T. (2012). The Influence of environmental aspects on the policy of socio-economic development of the States. Bulletin of Russian state humanitarian University, 7, 226-232.

Andreev, S. L. & Andreev, P. K. (2012). Educational clusters: problems of development. Competitiveness of territories. Materials XV all-Russian forum of young scientists with international participation in the III Eurasian economic youth forum "Dialogue of civilizations – the Way forward" (Ekaterinburg, 17-18 May 2012), (pp. 5-7). Ekaterinburg: Publishing house of the Ural state economic University.

Babkin, A. V. (ed.) (2017). Economics and management in conditions of nonlinear dynamics. St. Petersburg: Publishing house of Polytechnic Institute.

Bobylev, S. N.; Averchenkov, A. A.; Solovyeva, S. V. & Kiryushin, P. A. (2010). Energy efficiency and steady development. Moscow: Institute of steady development / Center of ecological policy in Russia.

Brinchuk, M. M. (2013). Principles of Ecological Law. Moscow: Yurlitinform.

Budovskaya, O. V. (2016). Environmental policy as a sub-regional policy on the example of Astrakhan region. Caspian region: politics, economy, culture, 1(46), 46-52.

Diaghilev, E. A. & Slinko, A. E. (2016). The concept of sustainable development as a response to environmental and social problems. In collection: Actual problems of professional education: purposes, tasks and prospects of development. Collection of scientific articles on materials of 14th all-Russian correspondence scientific-practical conference, 130-136.

Hall, B. L. & Clover, D. E. (1997). The future begins today - nature as teacher in environmental adult popular education. Futures, 29(8), 737-747.

Hoff, H. (2009). Global water resources and their management. Current Opinion in Environmental Sustainability, 1(2), 141-147.

Howland, D. & Becker, M. L. (2002). Globe-the science behind launching an international environmental education program. Journal of Science Education and Technology, 11(3), 199-210.

Husiev, I. K. (2010). Small hydropower to supply power to remote areas on the example of mountain regions of the Republic of North Ossetia-Alania. Energy security and energy efficiency, 1, 17-21.

Knaub, R. V. (2015). Scientific and methodological support power ecological and economic security from emergencies of different origins for sustainable development of the region. Sustainable economic development of regions by L. Shlossman (pp. 59-79). Vienna.

Korobitsyn, B. A. (2016). The sustainability of regions URFO to economic shocks and crises: demographic and health and environmental aspects. Economy of region, 12(3), 790-801.

Kruglov, V. V. & Calvert, V. V. (2015). On the state environmental policy of the Russian Federation. Electronic application to the Russian legal magazine, 1(27), 26-29.

Kuldashev, A. T. (2013). Theoretical-methodological challenges of managing global environmental policy. Questions of humanitarian Sciences, 3, 60-62.

Kutsenko, V. V., Tschovrebov, E. S., Sidorenko, S. N., Tserenova, M. P., & Kirichuk, A. A. (2013). Problems of Providing Ecological Safety of the Region. Bulletin of the RUDN University. Series: Ecology and the Safety of Vital Activities, 2, 75-82.

Lebedeva, T. P. & Mikhailov, O. V. (2011). Public administration in foreign countries: the experience of administrative reforms. Moscow: Publishing house of Moscow University.

Mantaeva, E. I.; Slobodchikova, I. V. & Andreeva, S. N. (2012). Ecological Component of Socioeconomic Development of the Region. Bulletin of Samara State Economics University, 1(87), 47-50.

Matveeva E. V. (2010). Urgent environmental problems in the policy of modern states // Bulletin of the Povolzhskaya Academy of state service. – 2010. – Vol. 4. – pp. 40-47.

Medyanik, N. (2013). Contradictions of the development of nature-economic systems of regions of the South of Russia. Collection of scientific papers, 3(39), 84-89.

Mikhailov, N. N. & Vladimirskiy, B. M. (2015). Formation of educational policy of the University and its realization in modern conditions. *Higher education in Russia*, 5, 20-26.

Mukhlynina, M. M. & Vinogradova, E. B. (2017). State policy in the field of environmental development of the Russian Federation and analysis of the competence of the entities implementing the policy. *Security business*, 2, 38-42.

Nagornov, V. A. & Perfilieva, O. V. (2010). Evaluation of the role of universities in regional development: building sustainable partnerships for communication. *Bulletin of international organizations: education, science, new economy*, 4, 60-86.

Orlov, A. I. (2012). *Problems of Management of Ecological Safety. Results of Research and Teaching for 20 years*. Saarbrücken: Palmarium Academic Publishing.

Pahomova, N. V.; Richter, K. K.; Zhigalov, M. V. & Malova, A. S. (2017). Managing energy efficiency in the context of the new climate policy. *Economy of region*, 13(1), 183-195.

Popov, N. I. & Radchenko, Y. S. (2013). Organization of environmental protection and state management of natural resources in the Russian Federation. *Issues of state and municipal management*, 4, 75-98.

Vishnyakov, Y. D. & Gurlev, I. V. (2017). Urgent Aspects of Providing Ecological Safety. *Online Journal Naukovedenie*, 8(2), 1-8. URL: <http://naukovedenie.ru/PDF/74EVN216.pdf> (date of access: 10.04.2017).