

Resource Estimation Indicators of the Chechen Republic

Bekmurzaeva R.Kh.

Grozny State Oil Technical University
n.a. Acad. M.D. Millionshchikov
Grozny, Russia
raya.bek@mail.ru

Dzhandarova L.Kh.

Grozny State Oil Technical University
n.a. Acad. M.D. Millionshchikov
Grozny, Russia
luiza2275@rambler.ru

Ortsukhaeva Z.Sh.

Grozny State Oil Technical University
n.a. Acad. M.D. Millionshchikov
Grozny, Russia
ortsukhaeva@yandex.ru

Magomadova L.I.

Grozny State Oil Technical University
n.a. Acad. M.D. Millionshchikov
Grozny, Russia
dekanat_gpf@mail.ru

Abstract – This article discusses the concepts of environmental management, analyzing the processes of extraction, pricing and the use of limited natural resources, as well as the role that limited natural resources play in the economic development of society. The formation and development of systems in each region is facilitated by the economic specialization of the region, which at the first stages is formed exclusively on its natural resource potential. So, for the formation of the modern region, the Chechen Republic and its separate territorial entities are characterized by the following features: - intensive involvement in the economic turnover of their own natural resources contributed to the formation and development of mono-specialized centers, the development of these centers led to the involvement of natural resources in them - oil production; - the formation and disposal of waste products (waste from local resources, closing the processes of vertical and horizontal movement); - changes in the quantitative and qualitative balances of the main resources involved in the production of products. As a result, centers and anthropogenic corridors connecting them, with characteristic parameters of ecosystems and economic objects, population distribution, were formed. The implementation of the rational resource supply mechanism in the context of trade and economic restrictions is based on the understanding of the main category of natural resources as non-benchmarks of wealth created by man, used depending on the need within the production and non-production spheres. From a scientific and applied point of view, this group of resources in our country is widely represented, and they carry a high use value and therefore are often the subject of market relations. Natural resources should be subdivided, if possible, into: replenishable; irreplaceable; natural and climatic.

Keywords – *natural resource; environmental management; sustainable development; social; natural and manmade; economic.*

I. INTRODUCTION

A number of studies conducted in recent years (both theoretical and empirical) indicate that the abundance of natural resources leads to a decrease in long-term economic growth rates. To this can be added the historical evidence of the economic lag of the countries rich in natural resources in comparison with

countries that did not possess such resources. There are other theories explaining the impact of the abundance of natural resources on economic growth, for example, the rent-oriented behavior of economic agents in countries rich in natural resources, which stimulates corruption and impedes the development of political and economic institutions, high volatility of world prices for natural resources, etc.

Based on the reproduction and scientific analysis of the experience of ecological and economic interests of the market of the Chechen Republic, the following tasks are considered:

- analysis of the state and use of ecological and economic resources of the Chechen Republic;
- to define the economic policy in the Chechen Republic as a component of the resource supply of the region.

In the prevailing post-crisis conditions in the Czech Republic, it is necessary to implement a set of measures aimed at developing the productive potential of the region, using natural resource, demographic, socio-economic potential and specific advantages.

II. PROBLEM STATEMENT

The general problems of economics and sustainable development are devoted to the work of the following leading authors, such as: Abaev A., Abalkin L., Azikova S., Baklanov P., Baranov S., Beketov N., Belokrylova O., Galachieva S [1-4, 9]. The research is based on scientific the framework of resources, the basis of theoretical and methodological support, formed on the basis of these works.

III. RESEARCH QUESTIONS

The scientific article "Assessment of indicators of resource availability in the Chechen Republic" was compiled on the basis of a study of materials from Chechenstat, which presents data on the socio-ecological-economic activity of the region.

IV. PURPOSE OF THE STUDY

The goal of the environmental and economic assessment is to identify not the abstract, but the empirically enriched essence of the regional policy of resource provision of growth in the region with a level that is not high enough for an innovation and investment jump. But at the same time, due to the evolution of management methods and the rationalization of the use of ecological and economic resources that occupy fairly high positions.

V. RESEARCH METHODS

The resource support of the ecological and economic relations of the commodity market of the Chechen Republic was formed in the process of a long evolution of its most important aspects. The first were involved in the historical sequence of natural-climatic and labor resources, since at a certain stage of development it was the use of the latter that gave a person a certain range of abilities. However, it should be noted that it was with the development of labor resources that trade and economic relations received a significant stimulus for development [1]. Then the society began to master intellectual-information resources, developing science and participating in the dissemination of the knowledge gained about the methods of the required impact on resources. The creation of certain material benefits led to the development of all types of previous resources and became a new stage of development [2].

The most important aspect of the resource support of economic relations, in particular the regional market, is the problem of the evolution of regional management methods and the rationalization of the use of resources [3].

The natural-manmade environment is a new formation, which is a combination of elements of natural and manmade character, performing certain socio-economic functions. In this context, the regional investment policy demonstrates the formation of targets, which determine the focus of investments and the formulation of investment conclusions. In the context of market interconnections, in particular, the Chechen Republic, it concentrates in ensuring targeted strategic development of the region and its economic entities in the mode of incremental reproduction, increasing the share of individual and external investments, and in addition to these shareholder funds in their regional volume.

VI. FINDINGS

The Republic is the largest oil and gas production center in southern Russia. Total oil production from the end of the XIX century is 377.4 thousand tons. Residual recoverable reserves – 31 901 million tons. The reserves of gas condensate – 0.2 million tons, dissolved gas – 13.663 billion cubic meters, free gas – 4.271 billion cubic meters. At this time, 26 fields are in operation in the republic [12].

To analyze the use of natural resources, we consider the production index by the type of activity "Mining and quarrying" and the volume of products shipped.

The production index by type of activity "Mining" in April 2018 compared to the corresponding period of the previous year amounted to 87.1%. (Fig. 1). The volume of products shipped, work performed (services) in the extraction of minerals in January - April 2018 compared with January - April 2017 decreased by 7.6%. (Fig. 2).

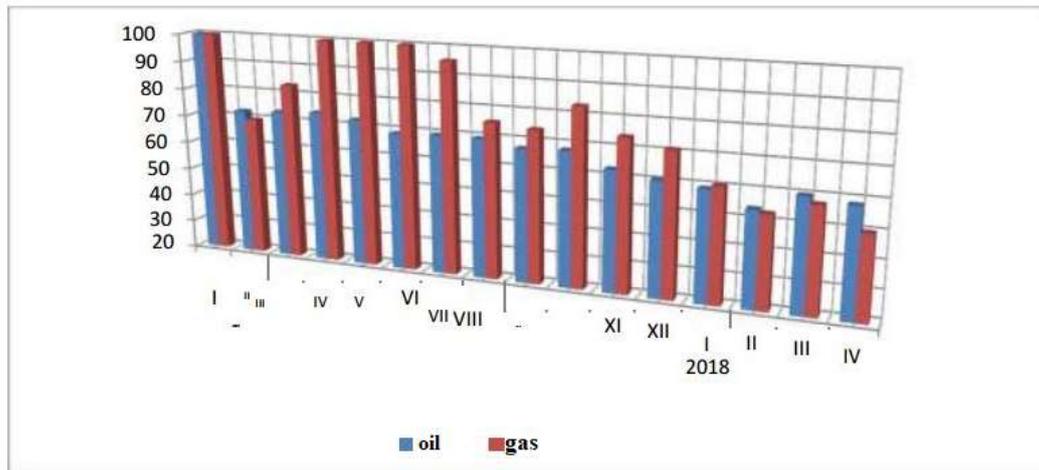


Fig. 1. The dynamics of mining in 2017-2018 in% by December 2016 [12]

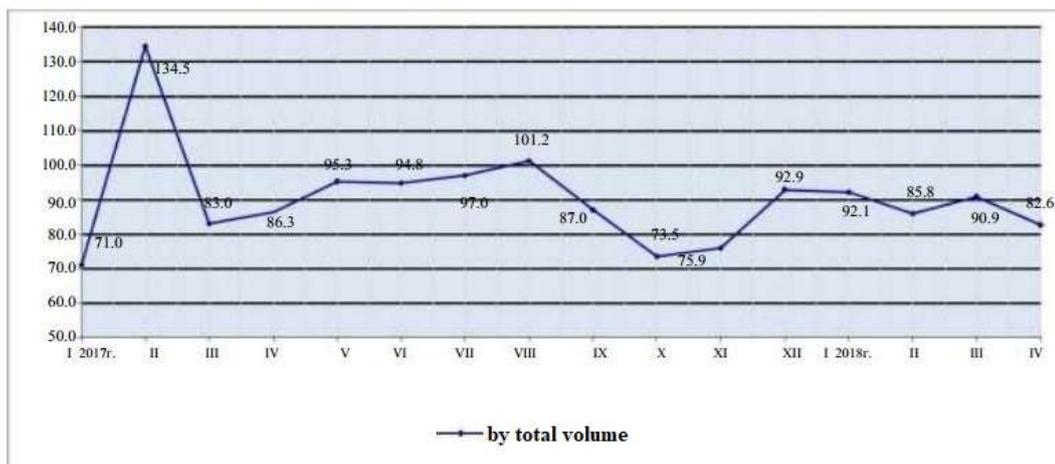


Fig. 2. Dynamics of mining in percent of the monthly average value of 2016 [12]

Thus, in order to preserve the possibility of using natural productive forces, it is objectively necessary to direct a certain part of social productive forces to regulate the rate of their transformation into social productive forces, i.e. on protection and reproduction of resources. This can be very convincingly shown by the example of the main stages of nature management.

At the first stages of human development, natural resources and objects were used according to the principle of their direct availability. Costs and efforts to preserve and reproduce them due to the insignificant scale and pace of their involvement in the management process were not required, and qualitative differences within homogeneous resources were used without special difficulties. Later, the transfer of natural productive forces from the category of inaccessible to accessible took place due to the improvement of social productive forces, i.e. with the cost of their implementation of accessibility for economic use. The richer and more diverse the natural productive forces were, the faster the social productive forces developed [4].

“Significant differences and discrepancies in the scale of development of society and the biosphere led to the exhaustion of the most limited natural resources (quantitative and qualitative balances) and to attracting even greater social productive forces to ensure accessibility of natural resources due to the need to involve the worst in the economy [5].

The ecological limit for the use of natural productive forces has led to the objective need to preserve the ecological balance in order to further utilize the natural and development of social productive forces. Today it is obvious that the social productive forces rational use of natural productive forces will increase as the effect of using directly available, (previously) free powers of nature increases [13].

The economic assessment of natural resources includes the scientific substantiation of natural resources, as well as a combination of economic and environmental interests of society to rationalize their use. Until now, rational nature management was understood only in the economic sense of the word. However, now more and more often the ecological

beginning is included in the concept of rational nature management, i.e. using the natural environment not only to meet the economic needs of society, but also as a means of environmental protection. In the ecological and economic analysis of the natural resource base, it is necessary to take into account such features as the limited nature of natural resources, as well as the non-limitless abilities of nature to purify and self-regulate.

The creation and implementation of integrated environmental management projects, in contrast to projects of a different orientation, imply an analysis and justification of the forecast state of the environmental situation as a result of the execution of program tasks in accordance with certain characteristics that determine this situation.

The program is closely connected with the definition of the results of its implementation and due to the large interrelation of the elements and stages of the program with all its components - with the setting of goals, their specification, resource and other support. Since the prediction of the environmental situation is associated with the socio-ecological-economic and technical forecast, it is legitimate to speak of the socio-ecological-economic forecast as a process involving interdependent peer-to-peer elements of a single whole [5]. This kind of forecast is the prediction of the results not of isolated components (social, economic, environmental), but of their interdependence, totality, balance, proportionality. “In this regard, when developing targeted integrated programs for environmental improvement in local economic complexes of the region, the content of the forecast should be presented by the following blocks:

- 1) forecast of development and distribution of productive forces in urban areas, in cities. This forecast, answering the question of what will happen in the sectoral structure, the dynamics of industries, spheres, elements of production and social infrastructures, predetermines the structure and dynamics of interconnections in the local system “socio-economic situation - natural environment” with further

specification of the quantitative and qualitative indicators of the balance of ecosystems;

2) demographic and social forecasts are designed to identify the features of the relationship and interdependence of the most important components (population dynamics, population structure with the accompanying dynamics of needs and the dynamics of the production process aimed at meeting the needs);

3) a forecast of the impact of these interdependent components of the process of development and distribution of productive forces on the natural complex of urbanized territories, taking into account adjacent regions in the process of nature management.

The sequence of operations in the monitoring process can be represented as follows:

- evaluation of the natural resource potential of urbanized areas, taking into account the adjacent areas;
- evaluation of the balance of resource provision of the regional economy;
- evaluation of the fluctuations in the quality characteristics of resource provision as a result of anthropogenic influence
- assessment of events oriented to exit from a crisis situation;
- forecast of the characteristics of the qualitative position of the resource supply of the region's economy.

For the successful organization of the program of continuous environmental education (CEE), it is necessary to coordinate the activities of all state, non-state and public educational structures in the process of working on the program, as well as all activities within the CEE; financing the program for the creation and implementation of CEEs; preferential taxation of projects of urban, regional value in the framework of the CEE; providing wide access to reliable environmental information.

For the implementation of the approved strategy, ensuring consistency in solving environmental problems in general and achieving sustainable environmental and economic development, the following areas of scientific support are envisaged:

- certification, specification of species and sources of impact on the ecosystem and its components, population;
- location of impacts, identification and justification of priority measures to reduce the harmful effects on the ecosystem and population;
- improvement of methods and means of environmental management, quality of habitat;
- development and implementation of high-performance environmental technologies;
- investigation of the dynamics of the qualitative state of the most important elements of an ecosystem by regions, zones, individual objects and the mapping of the

ecological situation and the sustainability of ecosystems;

- creation of unified and analytical laboratories for several zones, groups of enterprises of regional and urban importance;
- system observation for the analysis of the state of the ecosystem, the formation and accumulation of a bank of environmental information, a database;
- development of research on the problems of economic and organizational relations in the field of environmental management.

The main sources of financing for development programs are the funds of enterprises – nature users, budgets of the city, region; funds allocated from the federal budget for individual targeted programs; resources of targeted budgetary environmental funds of the regions; loans attracted by nature users; funds formed under international cooperation and assistance agreements; environmental insurance fund (for the future), a special fund for the implementation of the program.

In this case, the extensive formation of environmental protection entrepreneurship is taken into account, in relation to the reserve of monetary support of measures. This presentation initially only refers to the activity on the application of residues, the introduction of new technologies, technical means, the offer of services in the field of environmental management.

In order to implement a sustainable development strategy, an agreement should be reached on a cumulative strategy that the economy of a certain territory must follow, in order to ensure that future generations can meet their own urgent needs along with those existing in the current period. Sustained progress implies the use of proportionate characteristics of natural resources by all parties and is conditional on possible development [6, 7].

Practical implementation of the concept of sustainable development is an extremely difficult task. Structural restructuring is particularly difficult in crisis regions, among which more than half of Russia's regions are included. Such a complex activity involves significant changes in the transition economy. The development of integrated sustainable environmental management can be considered the first direction in the formation of the strategic foundations of sustainable ecological and economic development. The organization of an effective regional system of environmental management ensures optimal reproduction, rationally balanced use and protection of all natural resources in the region to improve the quality of life of people, to realize the rights of current and future generations to natural resources, favorable natural environment, and to create a base for sustainable development society and green economy (Galachiva, 2009).

Subsequent studies allow to systematize the main strategies for sustainable development (Table 1).

The second direction is the formation of an environmentally sound mechanism for environmental management. The mechanism of management of regional environmental management is one of the components in solving the problem

of ensuring environmentally safe and sustainable (balanced) development of the territory. It should be borne in mind that man manages not so much the ecology and natural systems as his actions included in the natural systems of the region. It is through human activity that it is necessary to manage such a complex system as regional environmental management. A gradual transition from centralized sectoral environmental management to a territorial system is necessary, taking into account the goals and objectives of building a sustainable society that preserves the long-term potential of natural resources for future generations.

TABLE I. STRATEGY AND MEASURES OF TRANSITION TO SUSTAINABLE DEVELOPMENT

Strategy	Changes in production and livelihoods
"Light Green" (environmental industrialism)	Improvement of modern enterprises and technologies with the goals of energy and resource saving, reduction of harmful emissions, full collection and disposal of waste. Tightening consumption in developing countries to the level of developed.
"Medium green" (sustainable development, as described in the decisions of the UN Conference on Environment and Development, Rio de Janeiro, 1992)	Transition to new waste-free technologies, renewable energy sources, etc. Reforestation, deserted land. Reducing the rate of population growth and production. Expansion of international economic integration, "fair" payment for resources. Exclusion of production and consumption patterns that do not contribute to sustainable development.
"Dark Green" (socio-ecological post-industrialism)	Reducing the population and reducing production growth to a size that does not threaten the sustainability of the biosphere. The rejection of the Western model of a unified world, the preservation of the ethnocultural diversity of environmental management. Achievement of regional self-sufficiency in food and everyday items. In industrial technologies, the same changes as in the "medium green" variant, in agriculture - the introduction of organic technologies

The third direction of the implementation of the concept of sustainable development is the identification of a system of indicators and indicators of the sustainable environmental and economic development of the region. The starting point in the formation of a system of indicators and indicators of the sustainable development of society and the economy is the limitation of excessive consumption of resources and the achievement of the ecological and economic security of the region. It is necessary to provide clear criteria to determine the degree of effectiveness of the current level of development of the region and the degree of efficiency of the dynamics of the sustainable environmental and economic development of the region. Consequently, indicators and indicators of sustainable environmental and economic development of the region should not only correspond to effective international indicators of sustainable development, but also serve as levers to improve the efficiency of environmental and economic development of the region (Dzandarova, 2015).

The proposed system is based on the allocation of problems that determine the socio-economic and natural development of the territory, such as anthropogenic pressure. According to T.A. Akimova, the nature-intensiveness of production is understood as a quantitative assessment of the specific anthropogenic impact of production on the environment and the totality of recipients, i.e. the level of seizure of local natural resources plus the level of environmental pollution by industrial waste, related to the volume of production.

The researchers elaborated on the elements of the recommended scheme of the natural-ecological framework of the specially protected areas (reserves, national and natural parks, forests and other objects with a strict protection regime), paying particular attention to the characteristics of the functional zones of the frame: natural-geographical windows, transit corridors, buffer zones, conservation zones, zones of ecological stabilization and zones of restoration of disturbed landscapes. The first three functional zones of IEC are distinguished mainly by the natural factor. They can be considered generally accepted, as they stand out in all known grids of the considered natural framework of the territory in other regions [6].

Revealing the problem of resource provision of economic relations of the commodity market of the region, it is necessary to pay attention to the assessment of indicators of resource provision of the economy of the region, as the environmental Foundation of its development.

The objective need for scientific commentary on Russia's comparative economic advantages is contained in our country's ability to demonstrate not only energy independence, but also sufficient conditions for the natural resource base for their effective use, creating the basis for extensive economic development. It is the provision of production assets, the availability of production facilities and research, technical and technological support that create conditions for the development of competitive advantages.

The diversification of qualitative and quantitative indicators for measuring the effectiveness of the development of programs and the introduction into operation of innovative mechanisms on the economy is rather difficult, as regards the fundamental content of the concept of the effectiveness of implementing certain projects. In our opinion, it is necessary to develop innovative scientific theoretical and methodological support of production and distribution processes in the regional economy in order to activate the regional competitive potential (Dzandarova, 2015).

As part of assessing indicators of resource availability of the regional economy, in order to justify the category "ecological foundation of regional development", we use the idea of ensuring regional competitiveness of the commodity market with the help of a natural framework based on environmental activities. The characteristics of the "natural framework of the region" and "the natural resource potential of the region", since the natural framework is nothing but a spatial combination of natural resources and conditions, their relationship with economic activities. In the context of intensified development of the regional economy, the process of optimizing not only the natural framework is objective, since a person cannot but use

natural productive forces, but given the limited assimilation potential of an ecosystem, it is necessary to measure the needs with the capabilities of regional economic activities. The purpose of assessing the indicators of the resource supply of the regional economy is the discovery of the functions, values, data of the natural complex, its components to explain measures to ensure the regional competitiveness of the commodity market [10, 14].

In accordance with this, the scientific article examined the empirical base of the socio-economic system of the region, built on the basis of environmental requirements and parameters of the predicted values of resource consumption, improved on the principles of self-sufficiency. As part of the study of the economic foundation for regional development, new features of the ecological framework were proposed - the renewability of individual components and the restoration of the economic complex itself based on the relationship between the consumption of natural resources and the maintenance of the natural balance, which will provide future generations with the opportunity to fulfill their actual needs along with those currently available [7].

VII. CONCLUSION

At each stage of the analysis of indicators of resource availability of the regional economy, given the ecological foundation for further development, one or another component of the socio-economic system has the ability to shallow, exhaust, or destabilize, transforming into another, for example, technogenic, state that production and using certain resources, it is more legitimate to talk about the resource supply of the regional economy. The natural-manmade environment is a kind of integration of the natural and manmade areas that performs certain socio-economic functions.

Acknowledgments

The authors thank the Head of the Administration and the Government Izrailov A.M. and the Head of Chechenstat Digaev R.D. for the opportunity to review and study the material: "Report of the Regional office of the Federal State Statistics Service of the Chechen Republic – Grozny, 2018".

References

- [1] A.L. Abaev, "Regional Level of Innovation Policy", *Regional Economy: Theory and Practice*, no. 21 (78), pp. 51–60, 2008.
- [2] L.I. Abalkin, "Reflections on long-term strategy, science and democracy", *Economic issues*, no. 12, pp. 4–19, 2006.
- [3] S.G. Azikova, O.L. Taran, *Structure-forming factors of sustainable development of the regional economy*. Nalchik: Poligrafservis i T, 2004, 180 p.
- [4] P.Ya. Baklanov, *Territorial economic structures in regional administration*. Moscow: Nauka, 2007, 239 p.
- [5] R.Kh. Bekmurzaeva, "Formation of regional import substitution programs based on the potential of infrastructure resources and development conditions", *RSUE Bulletin (RINH)*, no. 3 (51), 2015.
- [6] R.Kh. Bekmurzaeva, L.Kh. Dzhandarova, "Realization of the rational resource supply mechanism in the context of trade and economic restrictions", *Logistics in the portfolio of resources for import-substituting industrialization: anti-crisis growth and development strategies in the context of sanctions restrictions XI South Russian Logistics Forum*. Rostov: RSUE (RINH), 2015, pp. 246–249.
- [7] R.Kh. Bekmurzaeva, "Optimization of the reproductive potential of the regional economy based on minimizing the invasion of the ecosystem", *Green Logistics: the concept of minimizing the burden on the environment and preserving the planet for future generations (XII South Russia Logistics Forum)*. Rostov: IPK RSUE (RINH), 2016.
- [8] V.I. Vidyapina, *Regional Economy. Main course*. Moscow: INFRA-M, 2008, 666 p.
- [9] S.V. Galachieva, A.Kh. Sabanchiev, "Features of the Regional Economy Development Strategy", *Journal Current Issues in Economic Science*, no. 7, 2009.
- [10] L.Kh. Dzhandarova, "Development of the system of resource provision of the regional economy", *The Bulletin of RSUE (RINH)*, no. 3 (47), 2014.
- [11] M.L. Alibasov, "Regional Aspects of the Chechen Republic's Transition to Sustainable Development", *Diss. of Candidate of Economic Sciences*. Moscow, Moscow State University, 2008, 132 p.
- [12] *Report of the Regional Office of the Federal State Statistics Service of the Chechen Republic*. Grozny, 2018, 134 p.
- [13] V.N. Leksin, A.N. Shvetsov (2009). *State and regions: theory and practice of state regulation of territorial development*. Moscow: The Book house "LIBROCOM", 2009, 25 p.
- [14] L.Kh. Dzhandarova, *Realization of the mechanism of regional resources in the conditions of trade and economic restrictions*, 2015. Retrieved from: [http://old.rsue.ru/doc/vestnik/3\(51\)2015](http://old.rsue.ru/doc/vestnik/3(51)2015)