

Natural resource potential and sustainable development of the regional system

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Abstract. One of the key characteristics of the level of development of a region is the effectiveness of involving the totality of all types of natural resources located on the territory of a subject of the state in the economic turnover and other types of activities of society. The article examines the importance of the totality of natural resources involved in the economic turnover for the stable and progressive development of the territorial unit of the state. The role of research of environmental components used in the course of production to create social material and spiritual benefits in the process of increasing the well-being of the population of the region through the renewal and improvement of the economic sector of the economy is shown.

1 Introduction

Qualitative, quantitative compositions, the importance of environmental components used in production, significantly affect the distribution of the means of production and people who activate these means, and, therefore, and the economic potential of the region [1].

The more diverse the world of available objects of animate and inanimate nature, which can be used to meet the needs of people, the wider are the opportunities for socio-economic development of the territory. Therefore, the most important task is to study the specifics of the natural resources of the area in order to determine the possibilities of using it in human economic activity, which will equip the regional economy with effective tools to increase its competitiveness. In addition, it will make it possible to effectively manage natural resources, as well as stabilize and replenish them.

The basic signs of objects and forces of nature, used by people to maintain their existence, are two factors: a) natural (features of the origin of the resource); b) economic (specificity of the use of the resource in the national economy).

The assignment of a resource to the elements of nature includes it in one of the groups: minerals (minerals of the earth's crust: fuel and energy, metal-ore, non-metallic); a set of agro-climatic conditions affecting the volume of agricultural products received; reserves of fertile land that can be used as means of production in agriculture and forestry; reserves of surface and underground fresh water; plants with direct or indirect economic value; hunting and game animals.

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2 Natural Resource Potential of The Regions

Recently, alternative resources have become of great interest, for example, practically inexhaustible, absolutely environmentally friendly energy of the sun, wind, which is especially relevant compared to depletion of oil and gas reserves.

Modern scientists call the property of reserves to be spent and renewed an important indicator of the components of the natural environment used by man in the production of material and spiritual benefits, which must certainly be taken into account when forming the economic strategy of the region.

From an economic point of view, the degree of their use in the economic complex of the region is considered a fundamental feature of the wealth of nature. According to this criterion, objects, systems of living and inanimate nature are classified as follows: a) used in material production, primarily in industry (fuel, wood, and metals), as well as in agriculture (soil, water for irrigation, animals, and plants); b) directly consumed (water for drinking, plants for food, green spaces for leisure) [2, p. 78].

It is necessary to take into account such indicators as total reserves, quality, and composition, properties of the resource, and conditions of occurrence, operation, and permissible production volumes. These characteristics play a decisive role in the formation of economic specialization and territorial organization of the region. It is necessary to find a reasonable balance in market conditions between the pursuit of maximum benefit from the use of natural resources and their rational use, through a clear identification of groups of targeted and multi-purpose use.

The first group includes unevenly distributed natural resources concentrated in individual deposits, for example, iron ore. The second group includes those riches that are present everywhere, but have different qualities and properties. These are land, water, energy, and fuel reserves.

For the competent management of the natural resource potential of the region, it is important to understand the specifics of the indivisible (water, atmospheric air) and divisible (land, subsoil, plants, and animals) bodies and the forces of nature used by humans to satisfy their vital needs. Water and air are dynamic, capable of moving over great distances. Land, subsoil, plants, and animals are objects of management in strictly assigned territories.

In addition to the economic state of the natural base, a business entity must certainly take into account the prospects for its development, real and potential problems. The focus here is on environmental protection. Due to an insufficiently developed legislative framework, moral, technical obsolescence of equipment, and mining methods the functioning of the majority of mining plants and processing plants is carried out without due attention to this issue [6, p. 239].

Because of fires and unreasonable activities of people, the natural reserves of forests are rapidly decreasing; desertification of vast territories is taking place. The complex use of mineral raw materials plays a negative role. Supervision over hunting for animals and catching fish is ineffective.

Due to the slow development of technologies, replacement of obsolete equipment, improper disposal and storage of waste, and accumulation in various medical institutions of radiation protection equipment created with the use of depleted uranium, radiation contamination of land, water, and air occurs in the nuclear industry.

To overcome the aforementioned crisis phenomena, a special program should be developed in the region, including, for example, the production of biological fertilizers, the creation of special biotechnologies for the conservation of soil, biological preparations for the cultivation of disease-resistant cereals; introduction of genomic technologies for certification of breeding works; waste disposal through microbiological conversion;

development of special feed additives and biological medicinal products for farm animals; and renewal of equipment and technologies at mining, processing plants, nuclear energy enterprises.

The consequence of the high provision of the region with the environmental components necessary for the production aimed at meeting the material needs of the society is a regular increase in production volumes, export of raw materials, which causes a decrease in the rate of market development due to minimal competition and, accordingly, a weakening of the economic sphere [4, p. 50].

The regions with quite high natural resource potential of which are characterized by: a) low quality of functioning of state and public structures related to the significant unearned income of a certain part of the population; b) unsatisfactory level of technological provision of production; c) a constantly increasing negative relationship between the stable backwardness of production sectors, the structure of assets of which consists mostly of the fixed assets, as well as those producing high-tech products, from the export of raw materials abroad. If such a trend can be traced in the regional economy, it would be advisable to develop a special strategy aimed at minimizing the dependence of the primary economic sector on selling natural resources abroad.

Using the possibilities of natural rent, the territories where significant natural objects used by humans to maintain their existence are located, can significantly intensify innovation processes, having previously created high-quality legal and organizational mechanisms for managing the economy, and eliminating or minimizing the negative impact of the following factors: general economic situation in the country; the geographical location of the region; the standard of living of the population; the degree of foreign economic interaction with other regions and foreign countries; and expectations of society.

It is necessary to restrain the growth rates of the extractive industries in favour of intensifying the production of products with a high share of added value, for example, in-depth processing of natural raw materials. In order to create a closed production chain, starting with the extraction of components of the natural environment, and finishing with their deep processing into an innovative product, associations with new tasks and opportunities on the basis of existing plants and factories should be set up.

3 Discussions

In the process of locating production facilities in the region, the following should be taken into account: their remoteness from sources of fuel, energy, raw materials, and places of sale of products; the most profitable types of natural resources; the possibility of division of labour during the placement of productive forces (advantages and economic benefits), as well as counteraction to extreme conditions (harsh climate, low population density, significant territorial isolation of industrial complexes, and poor development of transport infrastructure) [5, p. 240].

Irrational use of regional natural resource reserves is unacceptable. It is important to organize high-quality administrative management of the processes of extraction, processing, and sale of raw materials: to create conditions for the inexhaustible use of natural resources; to update regularly the material and technical base of high-tech and science-intensive industries and processing industry; to improve state mechanisms for regulating the extraction of natural resources by market methods; to maintain the stability of the mineral resource base necessary to meet the needs of the integral territory.

A large economic effect can be provided by reserving natural resources for their preservation and further increase, by redistributing reserve finances to non-raw materials production, and by identifying alternative resource sources. This, in turn, will make it

possible to further reduce the dependence of the region on a certain type of set of objects of animate or inanimate nature, necessary to meet human needs.

It is also possible to reduce the dependence of the region's economy on the raw materials sector by increasing the rate of development of non-economic spheres of society, by investing significant funds in the field of scientific and technical research, and by improving the well-being of the population [2, p. 22].

4 Conclusion

Thus, in the process of studying the influence of natural resource potential on the stable development of the region, it is necessary:

1. To formulate clearly the interrelated tasks of the formation and development of a set of objects, systems of animate and inanimate nature, necessary for the implementation of social production in order to meet the material needs of the population.
2. To form a unified theoretical approach to the economic assessment of the natural resources used in the economy of the region.
3. To create a system of indicators for evaluating the totality of systems, objects of animate and inanimate nature, necessary for the creation of goods, services, and spiritual values.
4. To develop technologies for preventing conflicts in the field of environmental management based on the optimal location of enterprises for the extraction and processing of natural resources, and the expedient distribution of labour.
5. Prepare a cycle of investment-based socio-economic projects aimed at systematizing and improving the components of the natural environment used by people to meet their material and cultural needs.

The solution of the above tasks will ensure the stable development of the economy based on the achievements of scientific and technological progress: a) introducing new devices for the automation of technological processes; b) investing in the development and release of new types of products; c) applying new methods of organizing production and managing it; d) systematically transforming and improving political, legal, and socio-economic forms of social contacts.

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