

SUSTAINABLE DEVELOPMENT OF THE NORTHERN REGIONS: ECONOMIC AND ECOLOGICAL ASPECTS

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ABSTRACT

Provision of ecological conditions of population make a priority in development of high-tech, manufacturing and infrastructure industries in terms of sustainability and minimal impact of the environment. Reducing the specific weight of processing industries in the economy; a radical increase in the efficiency on economical use of natural resources lead to sharp decline in the consumption of natural resources and amounts of pollution per unit of end result; thus reducing an environmental pollution.

But the potential of the Northern territories in terms of the rational use of natural resources, including renewable energy sources and employment of innovative environmental technologies has not been used to the full.

Recently the focus in research of sustainable development has been made on the so called “green economy”. This model of economic development fully considers the value of natural capital and ecological services, involving ecological sustainability, social justice, the development of local industries.

The article analyses opportunities and constrains of sustainable development of the Northern territories. Economic and environmental problems of sustainable development are identified; the principles ensuring the improvement of life quality in the Northern regions are formulated.

The authors present a set of tasks to carry out sustainable development of the Northern regions, aimed at efficient use of resources, access to innovative path of development and growth of high technology sector of the economy.

To conclude, the main problem in the green economy is imperfect markets enable to provide commercial incentives for “green” development.

The solution is in active participation of the state and society in the transition to a “green” model and sustainable development.

Keywords: Sustainable development, regional development, economic and environmental factors, improving the quality of life.

INTRODUCTION

Increased competition for all types of resources has made a global trend in the present time, consequently, ensuring the presence of the Russian Federation in the Northern areas of the country is critical to the national security. High quality of living in the Northern cities, demanding a specially designed set of (particularly economic) policies at the local level and improving the effectiveness of environmental management instruments play an important role in maintaining and attracting a skilled labor force to the areas with harsh and adverse climate. In the world practice, the instruments of municipal policy enhancing quality of life are, as a rule, developed under the concept of sustainable development.

The main principle of sustainable development is the equivalence of economic, social and environmental approaches to solving of development problems. Social economic policy of the Russian Federation is in the focus of the authorities at all levels, but the environmental and economic aspects are somehow neglected, especially at the local level.

Of special importance is ecological and economic aspect of the municipal policy in the Northern territories of the Russian Federation, where ecosystems are particularly vulnerable, and characterized by a long recovery period and extreme climatic conditions negatively affect the health of the population.

The development of the North relies on the use of the resource potential of the territories, thus, resulting in a substantial share of the mining companies, having a considerable and multifactorial negative impact on the natural environment, the health of the population and the region's economic development, while environmental degradation reduces the investment attractiveness of the North territories. Consequently, the focus of the policy formation for sustainable urban development in the North should be on ecological and economic aspects. Unfortunately, the Northern regions of the Russian Federation lack the holistic approach to policy-making for sustainable development at the local level with the appropriate set of tools to implement it.

METHODS AND MATERIALS

Nowadays, export and raw model of development is predominant for the Northern territories. This model has the significant risks and does not provide a high quality of life.

The comparative analysis of the regional data has highlighted the following specific features of the natural resource development in the Siberian Federal district:

- slower than the average all Russia figures economic growth rates per capita, alongside with the excess negative impact on the environment;
- the lack of a significant positive impact on the development of the Northern regions of such important growth factors as geographic location and availability of critical natural resources;
- significant interregional differentiation by main indicators of economic development and the negative impact on the environment, most evident in terms of the distribution of environmental burden (per capita) between regions.

To identify the level of sustainability of the regional social economic system a number of indicators of the ratio of regional resource requirements and parameters of security in

the region with the necessary resource base are to be analyzed. The following indicators are highlighted:

- meeting the financing needs of the region;
- meeting the needs of the region in the labor force;
- the average ratio of fixed assets by industry;
- meeting the needs of the region in food products at the expense of own resources;
- meeting the needs of the region in consumer goods;
- meeting the needs of the region in energy (at the expense of own sources);
- meeting the needs of the region in mineral resources at the expense of own resources).

The analysis of these indicators will provide an opportunity to establish targets for the program to the regional development.

Sustainable development of the region implies cost-effective, socially-oriented and ecologically allowable development of regional socio-economic system. The principles of management for the regional sustainable development are to be organized in accordance with the degree of localized decisions (Figure 1).

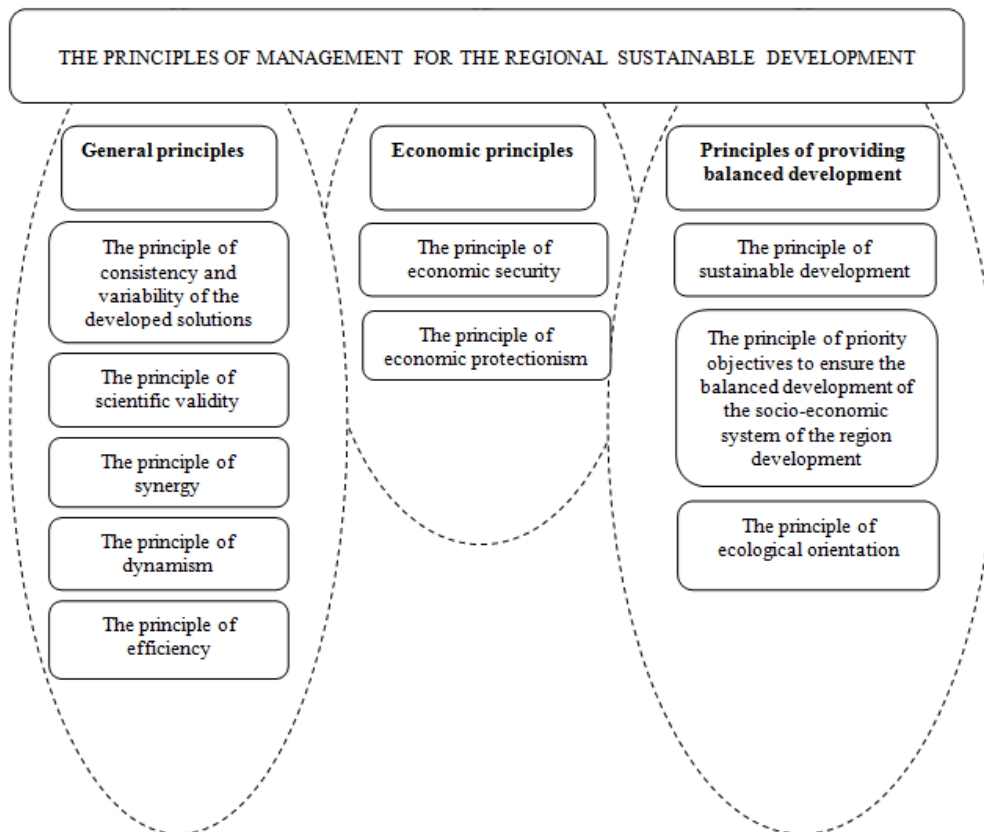


Figure 1 – The principles of management for the regional sustainable development

General principles are systemic in nature and are to be taken at the stage of preparation and making of each and all management decisions. This group includes the following principles:

- the principle of consistency and variability of the developed solutions requiring compliance with the requirements of the systemic approach in the regional management;
- the principle of scientific validity, requiring the use of modern scientific methods, models and management approaches on the stage of the preparation and making decisions;
- the principle of synergy, according to which every decision is to be considered in conjunction with other decisions and control actions to account for any possible synergistic effect and its consequences;
- the principle of dynamism, providing the flexibility and adaptability of the control system to the dynamics of the socio-economic system of the region and its macroeconomic environment;
- the principle of efficiency, assuming the positive results of the control action, both for the subject and object of management[1].

With regard to managerial decisions made for the economic sphere, the following additional principles are to be applied:

- the principle of economic security, including compliance with security requirements (economic, investment, production, budget, etc.) when making managerial decisions and implementing management actions;
- the principle of economic protectionism in relation to the implementation of priority for the economic system of measures aimed at ensuring its sustainability through the creation of special conditions (economic regimes)[2].

A special group makes the principles of directly providing balanced development:

- the principle of sustainable development, including the balance of the objectives of current and future development and resource saving;
- the principle of priority objectives to ensure the balanced development of the socio-economic system of the region. It means creating a clear hierarchy of the objectives of regional development, strictly following the system of the selected priorities;
- the principle of ecological orientation means the compulsory assessment and minimizing adverse environmental effects associated with implementation of management decisions and the support of measures aimed at improving the ecological functioning of an economic system[3].

When conducting a comprehensive assessment of socio-economic development of the region the following basic principles are to be applied:

- complex assessment considering all critical components of the level of socio-economic development indicators of constituent entities of the Russian Federation;

- systematic assessment, considering interconnections of basic indicators and characteristics of regional development[4];
- the accuracy of the source data when the basic indicators of regional development are selected;
- compliance of the system of indicators with the annual objectives of the analysis and forecasting of economic and social development of the regions[5];
- maximum informative value of the assessment results of the levels of regional development providing the ability to make the best decisions at the Federal and regional levels of government[6];
- the combination of general economic indicators with indicators reflecting the efficiency of activity of state power bodies of the subjects of the Russian Federation in addressing economic and social problems.

RESULTS

Based on the above considerations the following economic principles of transition to sustainable development in the Northern regions have been identified:

- consistency and coherence in achieving development goals;
- strive for selecting and implementing solutions for improving energy efficiency of life support systems and the city economy;
- the priority of preserving of the natural environment when planning and conducting economic activities;
- achieving the consensus in making decisions in the sphere of development and participation in activities to achieve your goals.

To ensure the sustainable development the regional policy is to be based on the following key areas: economic, including investment, innovation, industrial and cluster policies and tools for their implementation; social and environmental policies. The ecological value of the decisions made at the local level in terms of the formation and implementation of sustainable development policies for the Northern region on the main directions of ecological economic development policies, including waste management; provision of landscaping; the conservation of natural ecosystems and biodiversity; environmental education, advocacy, community involvement, universities, research centers and local business to address development challenges[6].

The conducted analysis allows noting the following positive impact of economic regulation in the field of environmental protection:

- contribute to the accumulation of financial resources for implementation of environmental investments or the budget;
- improve the efficiency of government intervention, promote innovation, increase the volume of private investment, etc.;
- have a positive impact on the regional competitiveness;
- contribute to the implementation of the principles “polluter pays” and “user pays”;
- internalize environmental costs;

- allow the subjects natural resources to make their own decisions about what is more profitable: to implement environmental protection measures or to make payments for negative impact on the environment;
- assist businesses and consumers in making long-term decisions, as through the application of economic instruments it becomes possible to implement environmentally friendly and economically attractive activity;
- make the key tools to environmentally sustainable development.

Krasnoyarsk Krai is a typical resource area, mainly aimed at resource export to the foreign markets. Unique conditions, developed due to the perspectives of the Universiade 2019, create a special investment climate, which, together with exceptional natural and climatic characteristics, allows making a breakthrough in the economic development of the region.

To maintain and rise the competitiveness of the economy of Krasnoyarsk Krai identifying and support of priority industries, agriculture, tourist and recreational complex on the basis of comprehensive modernization of economic entities is to be carried out considering current scientific and technical, innovative and industrial potential of the region and its geopolitical position as well as place of economy of the Krasnoyarsk region in the global economic system.

Among the main directions of modernization we recommend changing the regional economy: addressing the sectoral, specialized, trade, import, export, spatial and dimensional distortions.

CONCLUSION

Considering the above made analysis of the specifics of development the following areas are to be in focus when building the socio-economic and environmental policies of the constituent entities of the Russian Federation:

- diversification of the regional economy and transferring from a predominantly raw orientation of the Siberian regional development. The focus is to be on the support of agricultural production, due to rising domestic demand for organic agricultural products and the relative stability of this industry to the effects of the crisis phenomena in the economy;
- comprehensive assessment of costs arising from negative impacts on the environment and depletion of natural capital and benefits to society from the implementation of investment projects. Alongside with traditional indicators of the level of economic development, it is advisable to use indicators of the quality of economic growth (ecological intensity, eco-efficiency etc);
- improvement of economic mechanism of nature development that implements the “polluter pays” principle and the development (including international experience) management tools that allow effective use of natural capital in a timely manner to solve the most pressing problems in the sphere of nature and environmental protection.

Achieving of sustainable regional development is possible only under condition of optimization of the regional economy structure and to enhancing the specialization of the regional economy on the basis of the identified growth poles. Changes in the

sectoral structure of the regional economy are related to the elimination of disparities in development of individual industries and the gradual transformation of the sectoral structure of the regional economy to the cluster type of economy.

The development of clusters as networks of independent manufacturing and service firms, creators of innovative technologies and other innovations, linking market institutions cooperating with each other within a single value chain is characterized as a realistic way to increase the competitiveness of the regional economic base.

Changes in the commodity structure of the regional economy means its rationalization, primarily in terms of strengthening the innovative nature of production, development of socio-oriented industries, as well as rising the competitiveness of products on foreign and domestic markets. Improvement of export-import economic structure of the region is based on the development and implementation of measures aimed at increasing the share of export of innovative products, to improve export structure in favor of high-tech high-quality products, reducing the share of imported raw materials, equipment having competitive domestic substitutes.

The aim was to improve approaches to the design and location of the existing facilities in accordance with the overall functional organization of the region, with the development of special economic zones as well as agglomeration processes, strengthening the role of small and medium-sized industrial enterprises in meeting the needs of the region in products and services.

The concept of sustainable development, as has been shown by the years of experience, has been evolving, reflecting new phenomena and processes taking place in the society. Regulation of economic-environmental relations is to be adaptable to the changes taking place, consistently, flexibly and optimally shaping a model of sustainable development encompassing all the interconnected components of a modern economic system.

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