

Basic principles of the management of region as the ecological-economic system

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Summary. The article describes basic principles of the management of region. It describes a region as a complex ecological-economic system. Proposed economic mechanisms to manage the ecological-economic systems.

Key words: Ecological-economic system, regional management, environment, economy, management mechanisms.

INTRODUCTION

Ecological-economic system is a complex dynamic system, which is based on the relationship between the material structures created by man and nature. Thus, the Ecological-economic system is a combination of co-operating environmental and economic systems. For a region ecological-economic system is limited to a certain area of the ecosphere in which the natural, social, economic and production processes, associated mutually supportive flows of matter, energy and information. [Gorlova A., 2011]

Ecological-economic system is a complex system and requires management. It should be noted that the ecological-economic system has several differences from the economic system, which is why the mechanisms of economic management systems cannot always be applied to ecological and economic system. These mechanisms do not take into account the features of the system.

Society has realized the need to review existing management mechanisms of ecological-economic systems, evidenced by international environmental programs. Foreign scientists, politicians and companies pay much attention to sustainable development but it's not possible

without a balanced system of environment and economy. The economy must obtain sustainable development in the long run.

In recent years many countries are trying to make an economy more ecological. [Danylyshyn B., 2008]. Society provides benefits of environmental goods more often. Some countries have built so-called "ecological economic regions", specializing in "pure" forms of production. Some Swiss cantons can be considered to be ecological-economic regions. They specialize in producing organic food catering, recreation and financial services.

OBJECTS AND PROBLEMS

Analysis of recent research and publications shows that today many researchers pay much more attention to ecological economics, among them Walter Isard, O. Balatskaya, D. Belishev, J.E. Brydun, Z. Gerasymchuk, W. Gurman, S. Dorohuntsov, B. Danylyshyn [Danylyshyn B., 2008], O. Rumin, S. Ramazanov and others.

Many foreign scholars, such as B. Myeryeyan, F. Samson, F. Tyeutberh, V. Dahl [Dale V.H., Virginia H., English M. R., 1999], M. Alonso [Marta S. Alonso, Irene M. Rubioá., 2008] studied the issue of environmental management

The problems involved in environmental economics: R. Goodland, H. Daly [Daly H.E., 2007], J. Cumberland, R. Costanza [Thomas Prugh, Robert Costanza, Herman E. Daly., 1999], R. Norhaard.

Scholars, involved in study of administration were: V. Bykovsky B.I. Gerasimov, O.V. Korobov. They deal with restructuring of the management of the region. In the study of environmental management and economic systems were involved: N.V. Burkov, D. Novikov, D. Nurmahanbetov, S. K. Ramazanov, A. P. Syromyatnikova, A. Shchepkin. These scientists have made great contribution in development of mechanisms for management of ecological-economic systems at different levels of management.

The aim of the research is to solve the problem of economical growth to the prejudice of ecology by creation of the system of management of region as ecological-economic system.

In recent decades steps were made to counter the dominance of monetary thinking in relation to environmental issues. These steps can be considered as institutionalizing and expanding of the use of environmental impact assessment, increased use of life-cycle analysis in business and other organizations. Overall, standardized environmental management system such as ISO 14000 was created for various organizations.

In the USA environmental assessment projects are used. Thus, state body that receives the project of any organization should thoroughly investigate it and find out how that project will change the environment. The state body should reveal whether exist alternative projects involving less serious consequences for the ecosystem. There are also rules for participation in decision-making.

Generally there is a progress towards the sustainable development of the concept of the eco-efficiency. Argued that the concept makes seven basic requirements for companies:

- reduce material consumption of goods and services;
- reducing energy intensity of goods and services;
- reduce toxic dispersion;
- improving materials processing;
- maximum sustainable use of renewable energy sources;
- extend the durability of products;
- increase the service intensity of goods and services.

The "Greening" of management as a process of ecological and economic optimization of economic growth that will achieve economic security and sustainable development units. Any

region represents a complex dynamic Ecological-economic system, which includes environmental, economic entities, market and the governing body.

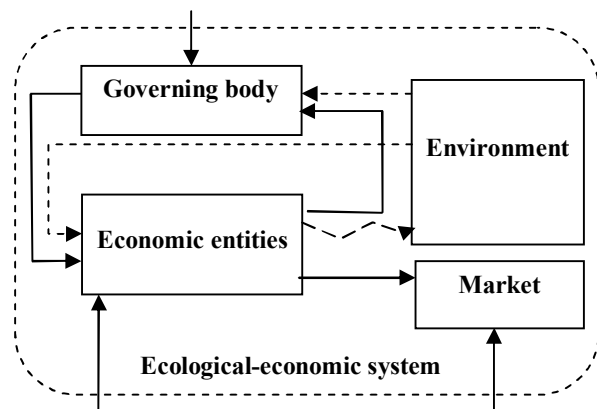


Fig. Graphic representation of Ecological-economic system of the region

Management of Ecological-economic system represents the relationship between two subsystems: subsystem that manages - the subject of management and control subsystem - subject to control. According [Korobov O., Gerasimov B., Bykovsky V., 2002] system that manages is regional governments, and the system that control - economic entities and population. All elements of the system are linked to data communication. Regional governments are informed about the current status of entities and information from the external environment and government. In [Syromyatnikova O., 2011] the entity presented as a system with two levels of subsystems of state and regional management and subsystem of specific users of nature in the face of government enterprises. Together they form the system of management functions performance.

The Ecological-economic system has specific management tasks: at first, the results of the economic actors are multifaceted and they depend on many uncontrollable random factors, and secondly there are substantial conflicts of interests of all stakeholders of the system.

Unfortunately entrepreneurs do not take into account the possible consequences of their business when they take management decisions. It's not just the fault of enterprises, the thing is that they usually do not have enough information to determine the actual amount of ecological and economic losses from the activity. At the same time, the government of the region has enough power and sources of information for environmental regulation of economic processes.

There are four main methods of management: economic, organizational, administrative and social.

Economic management practices based on economic mechanisms of motivation and encouragement of active production (at least - non-productive) activities. The economic management methods used at the country level include: tax system and credit-financial mechanism.

Organizational and administrative methods solve the same task as the economic methods, but in different forms and methods. Organizational and administrative methods have a direct impact on the controlled object with orders, instructions of operating and monitoring of their implementation.

Unlike organizational and administrative, economic management is focused less on administrative influence but on economic incentives and rewards for active and effective operations. Economic methods allow managers to choose different forms and techniques of influence to solve a problem; organizational and administrative suggest the same methods of an unambiguous effect, dictated by the order or instruction. The importance of economic management is increasing sharply in the development of market relations, focused on profits and possibly higher income. Therefore, the focus is on economic management mechanisms.

The use of economic instruments to implement the environmental and economic management of a wide range of possibilities. Economic mechanisms can be considered as any mechanism aimed at changing the behavior of economic agents and reducing environmental costs. Various mechanisms have advantages in different areas and not used elsewhere.

There are economic mechanisms that can be instruments of Ecological-economic management such as:

- Tax system;
- Decision Making Systems
- Environmental Management System

The tax system can force to use natural resources more efficiently. Instead of taxing the income received by workers and enterprises, it will tax the bandwidth stream, preferably in a place where resources are obtained from the biosphere. Such a tax is more efficient use of resources in production and consumption, and relatively easy to control. [Söderbaum P., 2000]

Introduction of the environmental decision-making systems allow individuals who make decisions objectively evaluate projects and alternative measures. Decision Making Systems

should cover all aspects of Ecological-economic system. Prediction that influences only on the part of the system may be worse than the absence of any prediction, because it can lead to irrational decisions. [Jørgensen S. E., Bendoricchio G., 2001] Environmental solutions are often complex and multifaceted, including many different stakeholders with different priorities and goals.

CONCLUSIONS

The environmental management system serves as a tool to improve environmental performance. ISO has developed standards to help organizations comply active approach to environmental issues: standards ISO 14000 series of environmental management that can be implemented in organization of any kind, public or private sector - from companies to administrative and municipal organizations. ISO helps to solve the problem of climate change, establishing emission rates of gases that affect the greenhouse effect, control and emissions trading and measuring the carbon footprint of products. ISO also develops standard documents to facilitate the coordination of business and environmental interests by encouraging the inclusion of environmental characteristics of the design (development) products.

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ОСНОВНЫЕ ПРИНЦИПЫ УПРАВЛЕНИЯ РЕГИОНОМ КАК ЭКОЛОГО- ЭКОНОМИЧЕСКОЙ СИСТЕМОЙ

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Аннотация. В работе описываются основные принципы управления регионом. Регион представлен как сложная эколого-экономическая система. Предложены экономические механизмы управления эколого-экономическими системами.
Ключевые слова: эколого-экономическая система, управление регионом, окружающая среда, экономика, механизмы управления.