Anatoly D. Zelepugin, Andrey V. Belousov

Socio-economic aspects of the rational use of natural resources

KEYWORDS

- social production;
- antagonistic influence;
- economic and ecological subsystems;
- economic interest;
- market mechanism;
- state regulation

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ABSTRACT

Introduction. The socio-economic development of states is largely determined by the degree of rational use of natural resources. The current stage of development objectively requires effective scientific and practical approaches to solving the problems of harmonizing the economy and human-nature interaction.

The purpose of the research is to analyze the socio-economic aspects of the rational use of natural resources.

Materials and methods. A theoretical analysis of research materials (publications in periodicals, conference and analytical proceedings) was used.

Results. Economic interest, with the help of which the harmonization of the economic and ecological subsystems is carried out, is the driving factor in the economic system development. At the same time, state regulation is the main element in the market mechanism system, which ensures the combination of personal and public interests in the social production system.

Conclusion. Currently, the development of the ecological system is inseparable from the economic one. This implies a unified ecological and economic system with ecological and economic complexes as the subsystems.

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INTRODUCTION

The socio-economic development of states is largely determined by the degree of rationality of the use of natural resources located in a given territory. To this day, humankind is focused on ensuring its well-being at the expense of and with the help of natural resources.

The experience of the mature economies of the world has demonstrated the significant potential of market-based methods for managing natural resources, but the problem has not been solved yet. For example, in modern conditions, the final product output is 2% of the process weight. In each individual case, it is necessary to consider the situation, that is, the composition and structure of the region's natural resources, the economic potential of the territory, the reproductive structure, as well as the state of the system of socio-economic relations.

The inherent characteristic of today is that the economic mechanism of territorial management should be built so that each level of production, structural formations of the region, each type of attracted resources, and their combination ensure the sustainability of the territorial organization development.

Currently, there is no comprehensive agreed mechanism for the implementation of existing opportunities. This is especially true for the problem of a more complete accounting of the economic and environmental component in the theory and practice of the development of the region.

The current stage of development objectively requires effective scientific and practical approaches to solving the problems of harmonizing the economy and human-nature interaction. These circumstances determine the relevance of the topic of the article.

The purpose of the research is to analyze the socio-economic aspects of the rational use of natural resources.

SOURCE ANALYSIS

The protection and rational use of natural resources and the environment presuppose the preservation of the productivity of nature and the possibilities for its expanded use [1].

Forest natural resources are classified as renewable biological resources. Wood is the main product obtained from the use of forests. However, apart from wood, a variety of non-wood (side) resources can be obtained from forests: berries, forest mushrooms, nuts, fruits, medicinal herbs, etc.

As noted by Koryakina et al. [2], the procurement and processing of wild food resources are promising areas for the rational use of natural resources in the Far East.

According to Amir [3], the traditional assumption that society only benefits from the destruction of renewable resources is erroneous. Despite the fact that their internal rate of renewal is higher, however, it is lower than the rate of social preferences. The author proves that deforestation is never socially optimal.

It is worth noting that the rate and volume of human use of natural resources are increasing exponentially.

As rightly noted by Kiselyov et al. [4], deforestation and the construction of dams on rivers could negatively affect climate change on Earth in the future. As a result, humanity faces the problem of survival on Earth, associated with the need for rational use of natural resources and their timely reproduction as a key factor in its economic development.

Luneva [5] reveals that rational use of natural resources can be considered simultaneously as one of the goals and as a principle of natural resource branches of law, and the right of rational use of natural resources – as a system of legal norms within the relevant branches of law.

Moreover, the author [6] proposes a distinction between the rational and sustainable use of natural resources in land law. The proposed distinction makes it possible to overcome the legal uncertainty in bringing to administrative responsibility and in the forced termination of rights to land plots for failure to comply with mandatory measures to improve land.

The authors [7] studied the experience of legal regulation of economic mechanisms for ensuring the rational use of natural resources in the countries of the European Union, the United States of America, Great Britain, Canada, and other foreign countries, in particular: the expediency of introducing the tax incentives for economic activities of the entities using advanced technologies that promote the reduction of the negative impact on the environment was defined; the expediency of using an extensive taxation system, i.e. by stepping up the introduction of direct taxes paid directly by users of natural resources, was substantiated; the possibility of including payments for obtaining the relevant special permits (licenses), which are issued not only for the use of natural resources but also for activities related to environmental pollution, was defined.

MATERIALS AND METHODS

The research materials include the data from publications of the periodicals Problems in Economics, Journal of Bioeconomics, Ecological Law, Lex Russica, Baltic Journal of Economic Studies, European Journal of Law and Economics, Environmental and Resource Economics, Review of Agricultural, Food and Environmental Studies, Society & Natural Resources, Journal of Chinese, Governance and others, as well as conference proceedings (E3S Web of Conferences), educational publications and analytical materials.

RESULTS

The production process is considered by modern economic science as a process of human-nature interaction. Natural resources are actively used in modern production as the main component of nature.

If one considers the entire existing world, all its socio-economic formations from the standpoint of the natural and the artificial, then social production is an artificial part of it. However, this does not mean that the artificial can exist in isolation from the natural [8].

Obviously, "natural" and "artificial" parts in the world must be balanced, like everything else in any system. Their mutual influence should not be antagonistic. The implication is that social production, as a significant part of the artificial, should not have a destructive effect on the natural. Otherwise, the "natural-artificial" system will resist destruction to some extent, which is characteristic of any systems. However, systems can also collapse, because they have such a feature among other things.

Considering the social system from this point of view, one can conditionally represent it as consisting of two main parts – an ecological subsystem and an economic subsystem. The ecological subsystem will be represented by the nature surrounding humans and by humans themselves, with their intellectual, spiritual, physical qualities. The economic subsystem will include production itself, exchange, consumption, and a complex of scientific and technical support for production [9]. The main problem of the development of the social production system will be the harmonization of these subsystems. The ecological subsystem for its stable state requires as little human intervention as possible. The development of the economic subsystem, on the contrary, requires intensive production activity, which ultimately is always associated with nature, that is, with the removal of its components from the natural environment, and therefore, the imbalance of the ecological system.

To prevent this contradiction in the development of these subsystems from becoming antagonistic, it is necessary to determine the driving factor in the development of the economic system. In the authors' opinion, such is the economic interest, since it contains the goal of the economic system development in a concentrated form [10; 11]. The establishment of the basis for the development of the economic system makes it possible to focus the study of the problem of harmonizing the ecological and economic subsystems of social production on economic interests.

Most countries of the world achieve economic interest using market methods. The market, as a part of the economic system, is an artificial system, and the main problem of any artificial system is the problem of regulation.

In the market system, humans play two roles – a role of a participant, an element of the market system, and a role of an exogenous factor, its regulator. The state, as a public establishment, as a system, will strive to use subjects as elements of its system, i.e. like "cogs" and "gears", and this is a completely normal process for the system. At the same time, business entities, as individuals, tend to have independent goals. That is, there is a problem of the "private" and the "public", the problem of the unity and struggle of opposites of the social and biological human essence. There are two market regulators that will be in opposition to each other. After all, the interests of an individual subject rarely fit into the "Procrustean bed" of state interest [12]. Therefore, the essence of the problem will be in what case and in what quantitative ratio to apply one or another factor of regulation of the market system.

It is known that the market self-regulation mechanism often fails to cope with undesirable phenomena in the economy. In the scientific literature [6], it is said in this regard: "Sometimes market mechanisms not only do not eliminate but, on the contrary, are capable of aggravating undesirable phenomena in the economy." Therefore, this mechanism is defective. A complete mechanism, i.e. a system, according to the provisions of the theory of systems, clearly performs the functions assigned to it. Hence, it can be concluded that some element is missing for the present mechanism of the system's functioning. This element is the state regulation, because it is it that provides (by functional purpose) the combination of personal and public interest in the state system.

Thus, state regulation must be considered one of the main elements of the market. This is an important principled provision, especially in the problem of harmonizing the economic and ecological systems. It is necessary to revise the criteria for assessing the profit from certain economic activities. In economics, production results are characterized by many indicators. The gross national product (GNP) and its modification – the gross domestic product (GDP) at the macro level, as well as profit at the micro level, are the main ones. However, despite the difference in the scale of production and indicators that characterize it, the results of both macro- and microeconomics depend on the optimal use of production factors [13; 14].

At the same time, the use of production factors in a market economy based on private benefits is different at the micro and macro levels. At the micro level, that is, at the level of enterprises, producers of products and services calculate the economic efficiency of only those factors of production that they directly control. The production costs include the costs of materials, energy resources, labor costs, services, etc., that is, only those costs that the producer has incurred within the framework of the enterprise. However, very often the actual costs of production factors in many enterprises are much higher than what they are believed to be. When producing a certain product, an enterprise cares little how much and what kind of emissions it produces into the atmosphere, whether the soil cover is disturbed and to what extent, whether the workers of this enterprise are provided with medical care, etc., but after all, harmful emissions, lack of medical care affect people's health reducing their labor potential. That is, the labor costs in the production of products in this case will include not only those that were counted at this enterprise as part of the cost price, but also indirect ones, which caused a decrease in the total labor potential not only at this enterprise but also outside it. The same situation will be, for example, at a logging enterprise, which, as a rule, does not care much about the growing young forest growth. However, powerful technology often destroys not only young forest vegetation but also the weak soil cover of the forest, which takes 20 years or more years to restore in the northern regions of Russia [15].

The profit should be estimated taking into account the losses to the environment, the compensation of which is associated with material costs, often very significant. However, these costs are not taken into account, and, moreover, they are not even provided for when calculating profits, and the procedure for redistributing funds from polluting enterprises to restore the disturbed ecological balance in each specific case is not determined. Thus, the expenses of an enterprise as a part of the cost of its products, as a rule, do not take into

account all kinds of additional costs. However, in accordance with the law of conservation of energy, these costs are manifested. They will be accumulated on the macro level, that is, they will determine the GDP, reducing it. The proposed logical dependence of the results of production on its factors fits well into the previously defined target functions of public and private economic interest. Obviously, the profit received by enterprises will not objectively show the efficiency of their production [16]. It will always be higher than it really is.

The comparison of the production efficiency of an individual enterprise within the country and the production efficiency of the country as a whole, as micro and macro levels, can be continued further by comparing a single country and the world system of countries as a whole. In this case, the country will act as the micro level and the entire world system of countries will act as the macro level. It is likely that in this case, too, the receipt of the country's GNP may not correspond to the costs of production factors, if part of the costs when using them is a burden on other countries. Likewise, the efficiency of their production will be distorted. It will be overestimated, since this country did not consider additional production costs, hidden production costs, which can be called external in relation to this country. Only internal production costs were taken into account, which took place directly during the creation of the GNP of a given country [17].

The market system of relations, in which agricultural land turns into a production factor, requires a new approach to its economic content as a means of production. The influence of capital can also be negative for soil fertility. To prevent this from happening, there must be not only public control but also an economic mechanism for preserving soil fertility. In the authors' opinion, the introduction of depreciation charges on agricultural land may be one of its elements. Indeed, the cost of agricultural products currently does not include the costs of maintaining soil fertility [18–20]. However, they exist actually! Therefore, they should be included in the cost of agricultural products along with the item "Costs for the maintenance of equipment" and others.

CONCLUSIONS

1. Currently, the development of the ecological system is inseparable from the economic one. This implies a unified ecological and economic system, in which ecological and economic complexes are the subsystems.
2. The ecological-economic system normally develops with two components: a) economic interest, b) state (public) regulation. Ignoring any of these factors, especially both, leads to the destruction of this system.
3. It is required to change the methodological and methodological approaches to determining the economic efficiency of production, taking into account its impact on the natural environment.

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INFORMATION ABOUT THE AUTHORS

1. **Anatoly D. Zelepugin** (Russia, Voronezh) – Doctor of Economics, Professor. Department of Philosophy, Economics and Social and Humanitarian Disciplines. Voronezh State Pedagogical University. ORCID ID: 0000-0002-8821-2416.
2. **Andrey V. Belousov** (Russia, Voronezh) – Doctor of Economics, Professor. Department of Philosophy, Economics and Social and Humanitarian Disciplines. Voronezh State Pedagogical University.

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