

**Oleksandr Shubalyi**

Dr. Sc. (Economics), Professor, Lutsk National Technical University, Lutsk, Ukraine, shubalyi@ukr.net  
ORCID ID: <https://orcid.org/0000-0002-9131-1896>

**Mykola Korolenko**

SESE "The Academy of Financial Management", Kyiv, Ukraine, n\_korolenko@ukr.net

**Petro Kosinskyi**

Lutsk National Technical University, Lutsk, Ukraine

**IMPROVEMENT OF FORMS AND METHODS OF FINANCIAL-ECONOMIC STIMULATION IN THE FIELD OF NATURAL RESOURCES**

**Abstract.** *The article discusses the importance of activating the process of Ukrainian economic integration with the EU countries by ecological and economic development parameters. The main purpose of the study is to justify the directions of improvement of the forms and methods of financial and economic stimulation in the natural-resource sphere. It is revealed that the available forms and methods of financial-economic stimulation in the field of natural resources in Ukraine are characterized by the low level of efficiency. The important step in the enhancement of the ecological condition of our country will be the active implementing and realization of the ideas of the "green economy" concept. The development of market relations in Ukraine requires the improvement of state and increased influence on the market methods of stimulation of rational environmental use. The authors suggest new forms and methods by which it is possible to increase the efficiency of financial-economic stimulation in the natural-resource sphere of Ukraine due to the development of: private-public partnership; innovative, corporate and international entrepreneurship; decentralization of territorial development; environmental leasing; cooperatives of ecologically oriented industries; capitalization of natural resources; commercialization of scientific research in the environmental field; monopolization of domestic scientific and technological eco-developments in the domestic market, etc. The implementation of these proposals will allow creating the effective system of financial-economic incentives in the natural-resource sphere of the market-type by keeping the general control by the state institutions and strengthening the independent public control. The key role is given to the development of stimulation of public-private partnerships in the natural-resource sphere, which will not only attract additional "green investments" but also set the base for enhancing Ukraine's environmental, economic, and energy security.*

**Keywords:** forms and methods of stimulation, natural-resource sphere, environmental use, "green economy", financial-economic stimulation, environment.

**JEL classification:** O13, Q50, Q58.

**Шубалий О. М.**

доктор економічних наук, професор, завідувач кафедри економіки Луцького національного технічного університету, Луцьк, Україна, shubalyi@ukr.net  
ORCID ID: 0000-0002-9131-1896

**Короленко М. В.**

аспірант ДННУ "Академія фінансового управління", Київ, Україна, n\_korolenko@ukr.net

**Косінський П. М.**

аспірант Луцького національного технічного університету, Луцьк, Україна

**УДОСКОНАЛЕННЯ ФОРМ І МЕТОДІВ  
ФІНАНСОВО-ЕКОНОМІЧНОГО СТИМУЛЮВАННЯ  
В ПРИРОДНО-РЕСУРСНІЙ СФЕРІ**

© Шубалий О. М., Короленко М. В., Косінський П. М., 2019

**Анотація.** Розглянуто важливість активізації процесу економічної інтеграції України з країнами Європейського Союзу за параметрами еколого-економічного розвитку. Виявлено, що застосовувані в нашій країні форми та методи фінансово-економічного стимулювання в природно-ресурсній сфері характеризуються низьким рівнем ефективності. Важливим кроком у поліпшенні екологічного стану стане активне впровадження ідей концепції “зеленої економіки”. Запропоновано нові форми та методи, за допомогою яких можна підвищити ефективність фінансово-економічного стимулювання в природно-ресурсній сфері України через розвиток: публічно-приватного партнерства; інноваційного, спільного, міжнародного підприємництва; децентралізації територіального розвитку; екологічного лізингу; кооперації екологічно орієнтованих виробництв; капіталізації природних ресурсів; комерціалізації наукових досліджень в екологічній сфері; монополізації вітчизняних науково-технічних екорозробок на внутрішньому ринку тощо. Ключову роль відведено стимулюванню розвитку державно-приватного партнерства у природно-ресурсній сфері, що дасть змогу не тільки залучити додаткові “зелені інвестиції”, а й закласти базу для посилення екологічної, економічної та енергетичної безпеки України.

**Ключові слова:** форми і методи стимулювання, природно-ресурсна сфера, природокористування, “зелена економіка”, фінансово-економічне стимулювання, навколишнє природне середовище.

**Рис. 2. Табл. 1. Літ. 37.**

**Шубальї А. М.**

доктор економічних наук, професор, завідує кафедрою економіки  
Луцького національного технічного університету, Луцьк, Україна

**Короленко Н. В.**

аспірант ГУНУ “Академія фінансового управління”, Київ, Україна

**Косинський П. Н.**

аспірант Луцького національного технічного університету, Луцьк, Україна

## **СОВЕРШЕНСТВОВАНИЕ ФОРМ И МЕТОДОВ ФИНАНСОВО-ЭКОНОМИЧЕСКОГО СТИМУЛИРОВАНИЯ В ПРИРОДНО-РЕСУРСНОЙ СФЕРЕ**

**Аннотация.** Рассмотрена важность активизации процесса экономической интеграции Украины со странами Европейского Союза по параметрам эколого-экономического развития. Выявлено, что применяемые в нашей стране формы и методы финансово-экономического стимулирования в природно-ресурсной сфере характеризуются низким уровнем эффективности. Важным шагом в улучшении экологического состояния станет активное внедрение идей концепции “зеленой экономики”. Предложены новые формы и методы, с помощью которых можно повысить эффективность финансово-экономического стимулирования в природно-ресурсной сфере Украины через развитие: публично-частного партнерства; инновационного, совместного, международного предпринимательства; децентрализации территориального развития; экологического лизинга; кооперации экологически ориентированных производств; капитализации природных ресурсов; коммерциализации научных исследований в экологической сфере; монополизации отечественных научно-технических разработок на внутреннем рынке и т. п. Ключевая роль отведена стимулированию развития государственно-частного партнерства в природно-ресурсной сфере, что позволит не только привлечь дополнительные “зеленые инвестиции”, но и заложить базу для усиления экологической, экономической и энергетической безопасности Украины.

**Ключевые слова:** формы и методы стимулирования, природно-ресурсная сфера, природопользование, “зеленая экономика”, финансово-экономическое стимулирование, окружающая среда.

Despite the process activation of economic integration of Ukraine with the countries of the European Union, according to the parameters of ecological and economic development, our country mostly does not follow to its obligations. The implementation of European legislation in the protection sphere, restoration, saving and rational use of natural resources into national legislation did not actually increase the level of environmental responsibility of industrial enterprises and citizens to the environment. The lack of effective forms, methods, models, mechanisms and instruments of financial-economic stimulation in the natural-resource sphere in our country can cause great damage to the environment, in some cases even irreparable (climate changes due to “greenhouse” effect, natural disasters that will lead to biodiversity destruction: extinction (destruction) of certain species of animals and plants, etc.). Therefore, it is necessary to create such a system of relationships between users of natural resources and the environment, in which nature users can maximally meet their needs for natural resources consumption, and prevent the emergence of negative environmental impacts.

Studies that confirm the notability and importance of the natural environment for the national economics and meet public needs, which emphasize the need of saving, protection, reproduction and rational use of natural resources, which are reflected in the works of foreign authors [1–8]. They reveal the theoretical foundations of environmental protection, strategic principles of environmental security policy, as well as are shown the features of economic forms of stimulation in the natural-resource sphere.

Domestic scientists [9–18] carried out researches of the general condition of the Ukrainian natural-resource sphere and ways of its saving, were considered the issues of development stimulation of alternative energy sources, was analyzed the legal and fiscal forms of stimulation in the natural-resource sphere, etc.

The purpose of the article is to justify the directions of improvement the forms and methods of financial-economic stimulation in the natural-resource sphere, which will contribute to the sustainable development of the national economics, will ensure the rational use of natural resources and extension of the natural-resource potential, will increase the level of environmental responsibility of economic entities, will guarantee the environmental protection of the state, etc. In this regard, the objectives of the article consist in: analyze of the current forms and methods of financial-economic stimulation in the natural-resource sphere, which are applied in domestic and European countries; the choice of effective forms and methods of stimulation in the natural-resource sphere, which are the most suitable for our country at this stage of ecological and economic development.

The key role in the development of any state is played by the natural-resource sphere, because most of the productions in the base chain of value formation contain a particular natural resource or their totality. Therefore, the natural-resource sphere and the processes efficiency, which are happening in it, will influence on the trajectory of economic development of the whole country, as well as on the individual economic entities, types of economic activity, regions, as well as the well-being of the population and self-sufficiency of territorial communities.

According to Dombrovska S. M., Kovrehin V. V., Latyshava O. V. and others [12; 14] in Ukraine, ecological problems and environmental deterioration have

been exacerbated over the last decades; as a result it is included to the list as one of the most polluted countries.

Forms and methods, that stimulate the intensive use of natural resources, should be used to solve these problems, and also to carry out preventive environmental measures that will prevent negative impacts on the environment.

The greatest influence on the direction of ecological and economic stimulation in the natural-resource sphere has the state, because it can directly affect both citizens and business entities. However, the effectiveness of incentives in the natural-resource sphere will depend on the state's chosen methods and instruments.

At the beginning, it is important to characterize the methods and instruments of economic stimulation in the natural-resource sphere, which are used in the domestic economics, to determine the forms of its manifestation.

Analyzing the opinion of some researchers [19–23], we conclude that in our country it is possible to highlight the budgetary, regulatory-legal and planned and targeted forms of state stimulation in the natural-resource sphere (Fig. 1).

However, in Ukraine the financial-economic stimulation in the natural-resource sphere in these forms is not effective. First of all, it is because of outdated methods and instruments of stimulation that have lost the ability to influence effectively on the processes of sustainable use, restoration and saving of natural resources, etc.

The lack of the budget division system does not allow financing the necessary environmental protection measures fully and making efficient ecological investments of industrial enterprises.

Terebukh A. A., Ilnytska-Hykavchuk H. Ya., Makar O. P. [13] note that, in spite of the state budget of Ukraine is the significant investor of environmental programs, mainly environmental measures are carried out at the expense of enterprises' own funds, and the share of financing environmental projects from the state budget is gradually decreasing.

Under the current conditions, we consider such trends in our country are negative. As the rational use of nature, the development of environmental production involves the implementation of innovations in the natural resource and recycling spheres, which are characterized by a high degree of environmental and economic efficiency, and therefore require significant investment. However, it is difficult for enterprises, especially small ones, to implement the relevant environmental innovations independently without proper state financial assistance and a highly developed regulatory and legal framework in the field of environmental policy and environment protection.

According to Faichuk O. V. [24], the key problem of the financial support of innovative projects in Ukraine is the imperfection of the domestic legislation. The scientist believes that this impedes the activation of the process of financing innovative projects and the formation of innovative infrastructure.

We agree with Polishchuk V. H. [25], in the view of the fact that there is practically absent the environmental tax stimulation in Ukraine.

The environmental tax is calculated only based on the rates of pollutant emissions into the environment [26].

Thus, the environmental tax looks like a fine for pollution of the natural-resource sphere. It encourages the industrial enterprises to use environmentally

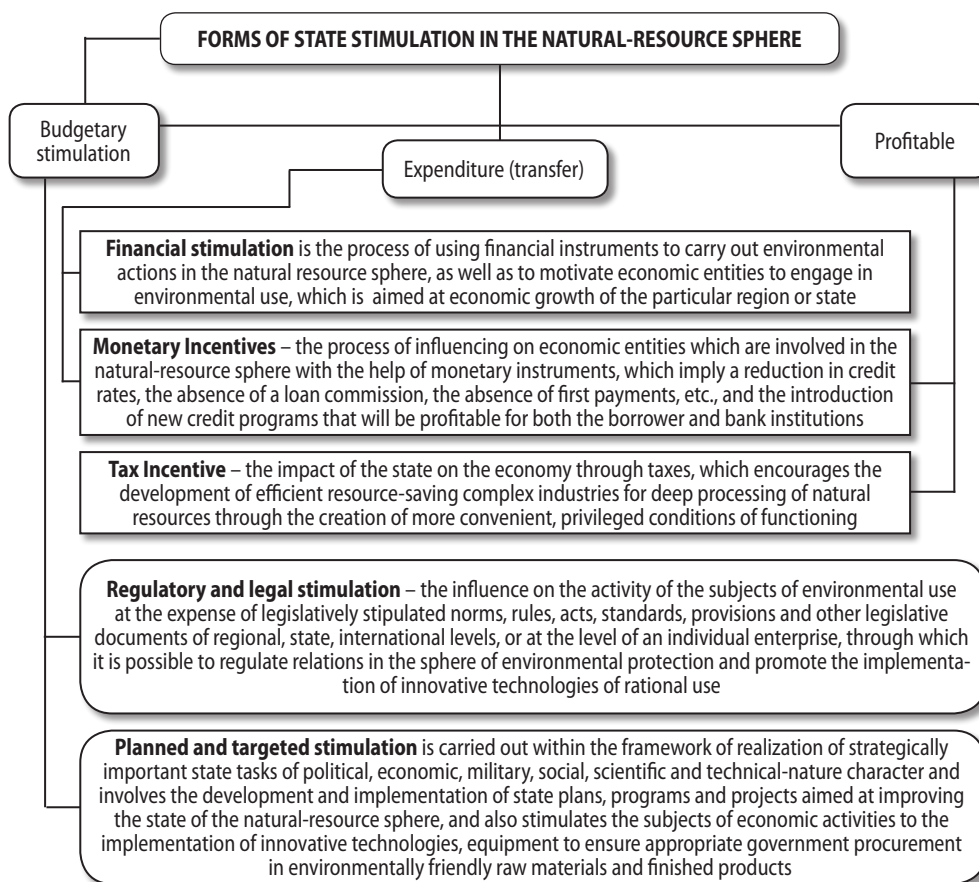


Fig. 1. Forms of state stimulation in the natural-resource sphere

It is based on: Holian, V. A., Shubalyi, O. M., & Vasylyk, N. M. (2012). *Mechanisms for stimulating the development of forest resources*. Lutsk: PVD "Tverdnyia" [in Ukrainian]; Batishcheva, S. (2011). Classification of financial incentives for socio-economic development. *Bulletin of the National Academy of Public Administration*, 2, 152–160 [in Ukrainian]; Kovtun, O. I. (2006). *State regulation of economy*. Lviv: Novyi svit – 2000 [in Ukrainian]; Sych, O. A. (2003). *Tax stimulation of business development* (Master's thesis). Lviv: Lvivskiyi natsionalnyi universytet imeni I. Franka [in Ukrainian]; Medvediev, Yu. B. (2003). *Financial stimulation of economic development in a transformational economy* (Master's thesis). Kyiv: Kyivskiyi natsionalnyi universytet imeni T. Shevchenka [in Ukrainian].

friendly technologies and equipment, and promotes the development of non-waste industries. However, in order to significantly improve the condition of the natural resources sphere in our country, it is necessary to involve new instruments of ecological and economic stimulation and update the existing ones.

Due to modern conditions, according to Karlin M. I. [27], it is advisable to use financial incentives instead of environmental fines, for those enterprises that reduce pollutant emissions, to apply new instruments of fiscal stimulation for the development of the ecological and economic sphere. According to the scientist, this will increase the level of corporate social responsibility of business for the environment.

There are the sufficient number of regular and legal acts that stimulate citizens and economic entities to take measures to protect and improve the ecological condition of the environment in our country. However, the vast majorities of them do not meet current requirements and therefore need to be revised and improved.

The improvement of normative legal norms is urgent and requires appropriate operative actions in the legislative sphere.

It should be remembered that poor quality of the legislative and regulatory framework, lack of the required regulations, regular amendments to the Tax Code will lead to further growth of the shadow economics and tax losses to the budget [28].

Planned and targeted stimulation involves the combination of the state interests, economic entities, citizens for the purpose of solving problematic environmental and economic issues in the natural-resource sphere and is introduced within the framework of realization of strategically important state tasks of political, economic, military, social, scientific and technical nature, etc.

Taking into account that European countries in the 70-80's of the twentieth century had been done great damage to the environment due to the intensive use of nature, may be it is worth to use the experience of these countries in order to find and choose ways of solving the emerging environmental problems, as well as to choose forms and methods of environmental and economic stimulation in the natural-resource sphere.

An important step in improving the ecological condition has become the implementation and realization of the idea of the "green economy" by European states.

The "green economics" is defined as a system of economic activity for the production, distribution and consumption of goods, which improves the well-being of the population of the state and regions, without causing environmental damage to future generations and at the same time reducing the risk of scarcity of natural resources [6].

The concept of "green economics" has become one of the most important elements of the European countries development strategy, which stimulates more efficient use of natural resources, produces environmentally friendly competitive goods and services and promote enlargement of the green production sector [29]. This concept is aimed, first of all, at socio-ecological development, which also ensures the financial and economic interests of the state [18].

The results of the implementation of this concept were shocking – the countries that conducted their economic activities on its basis were successful not only in solving the existing environmental problems, but also were able to create conditions for growth of natural resource potential, provided sustainable economic development.

The implementation of the principles of a new ecologically oriented concept of "green economics" into the national economics by the European countries, has led to the emergence of new forms and methods of economic stimulation of the ecological development in the natural-resource sphere.

EU policy places great emphasis on showing concern for the harmonization of the economic, environmental and social spheres [7]. This is demonstrated by the dynamic development of environmental law, the creation of special action programs on environmental protection [3].

In the process of realization the tasks within the concept of the "green economics", European countries use in combination the state-market forms of

stimulation, based on which an effective instruments of economic stimulation, which is predominantly coercive, have been formed. At the same time, state incentives are mainly directed at business entities, and market incentives to consumers of natural resources and its products.

The promotion of the ecological and economic development of the natural resource field in European countries is carried out mainly in the form of public-private partnership. In this form, as a rule, the state acts as the customer, and private enterprises are contractors of environmental projects. The state encourages the entities to develop themselves ecologic, mainly by investing enormous financial investments in improving the environmental condition of the environment and raising environmental norms and standards, updating environmental law instruments. The result of such cooperation is the development of eco-friendly businesses, environmental infrastructure, innovative R&D activities, meeting state and public needs for environmentally friendly products and services, increasing the size of state budgets, etc.

The development of public-private partnerships in European countries has led to the emergence and development of so-called innovative partnerships, which implies a significant reduction in the consumption of natural resources for the production of a unit of finished products in order to significantly reduce production costs.

The development of the Innovation Partnership was influenced by the Innovation Partnership Action Plan developed in 2010 by the European Commission to reduce the consumption of raw materials. The purpose of this plan was to create a coherent financing program for activities under Framework Program 8 (FR 8) [2].

In the application of these forms, European countries have achieved particular success in the field of energy saving and the development of alternative renewable energy sources, in the construction and agricultural sectors, which not only reduced the use and consumption of natural resources, but also reduced the negative impact on the environment.

Based on the analysis of foreign sources [5; 30] it is possible to distinguish the legislative documents which, in our opinion, play the most important role in ensuring the sustainable ecological and economic development of European states. These are Directive 2004/35/EU "About environmental responsibility of prevention and elimination of the damage to environment", "Europe-flagship Resource Initiative", "The Waste Framework Directive or the 7th EU environmental action program" (FR 7).

The characteristic feature of modern European legislation in the field of environmental protection is that it, through the methods of "rigid" regulation, compels the subjects of nature management to take measures in reducing the amount of household and industrial waste and preventing of their negative impact. Thus, it encourages industrial enterprises not only to use resource-efficient and environmentally friendly technologies, but also to carry out in-depth processing of natural resources at all stages of production, thus developing waste-free production with a closed cycle of processing.

Also, financial-economic stimulation in the natural-resource sphere is manifested in a cooperative form. The most cooperatives are formed in the agro-industrial and energy spheres. We believe that the cooperation in the energy sector and the development of so-called energy cooperatives deserve special attention. According to some researchers [31], the purpose of such cooperatives is, as a rule,

the implementation of various local projects and laws (“About renewable energy sources” and the concepts of “Energy turn”) in the field of renewable energy, and the reasons for the emergence were the refusal of the large energy companies to develop heat and electricity in rural areas.

As a consequence, energy cooperatives increase their quota of production at the energy market, which significantly reduces the harmful effects of thermal and nuclear power stations on the environment, whereby the members of these cooperatives receive, in addition to profits, compensation for the bioenergy production.

Taking into account the above information, it can be argued that financial-economic stimulation in the natural-resource sphere both in our country and in European countries is aimed at increasing the “green economics” sector. After all, the results of ecological and economic development in the EU countries and Ukraine in the future will depend on the level of adherence to the principles of “green economy”, finding the optimal combination of forms and methods of financial-economic stimulation in the natural resource sphere in general (Table).

As Table shows, new forms and methods of economic stimulation in the natural-resource sphere should be used to implement the “green economics” principles in

Table

**The comparison of the results of financial-economic stimulation in the natural-resource sphere in the EU countries and Ukraine, depending on the forms and methods which are used for it**

Direction of stimulation	The results of stimulation	
	Ukraine	EU countries
Development and implementation of rational environmental use technologies, RES development	Cost savings on the natural resources: reducing the cost of production and consumption of natural resources	Increasing the level of socio-ecological-economic development; ensuring of sustainability
Production of ecological raw materials, goods (products) and services	Meeting, first of all, the needs of external consumer markets	Meeting the consumer needs of the domestic market
Reduction of industrial waste	Low level of waste reuse; the existence of unauthorized landfills	Development of non-waste productions, setting limits on waste of industrial enterprises
Realization of the preventive environmental protection measures	Environmental use protection measures are mostly coercive (in the form of environmental fines, taxes)	Environmental measures have encouraging character (subsidies, benefits, financial transfers, etc.)
Development of innovative activities in the direction of improving the overall condition of ecology	Investing mainly in the purchase of foreign environmentally friendly equipment	Investment in the development of our own innovative environmental projects, technologies, equipment production

It was made by the authors.



Ukraine. The development of market relations in Ukraine requires the improvement of state and strengthening of influence of market methods of stimulation in environmental use.

Based on this information, we can propose new forms and methods by which we can increase the efficiency of financial-economic stimulation in the natural-resource sphere of our country (Fig. 2).

Public-private partnership in the natural-resource field is a promising direction for sustainable development in general and spatial organization of environmental management in particular, which will help to expand the sources of investment attractiveness of our country [32].

The stimulation of the development of innovative enterprises will facilitate the construction of scientific centers (technoparks, technopoles, business incubators) that will be engaged in scientific developments in the field of rational use of natural resources and energy conservation.

Decentralization of territorial development will help to study it better and solve the environmental problems of a particular region, promote more rational allocation of funds for environmental measures within the regions, and enhance the effectiveness of regional environmental and economic development programs.

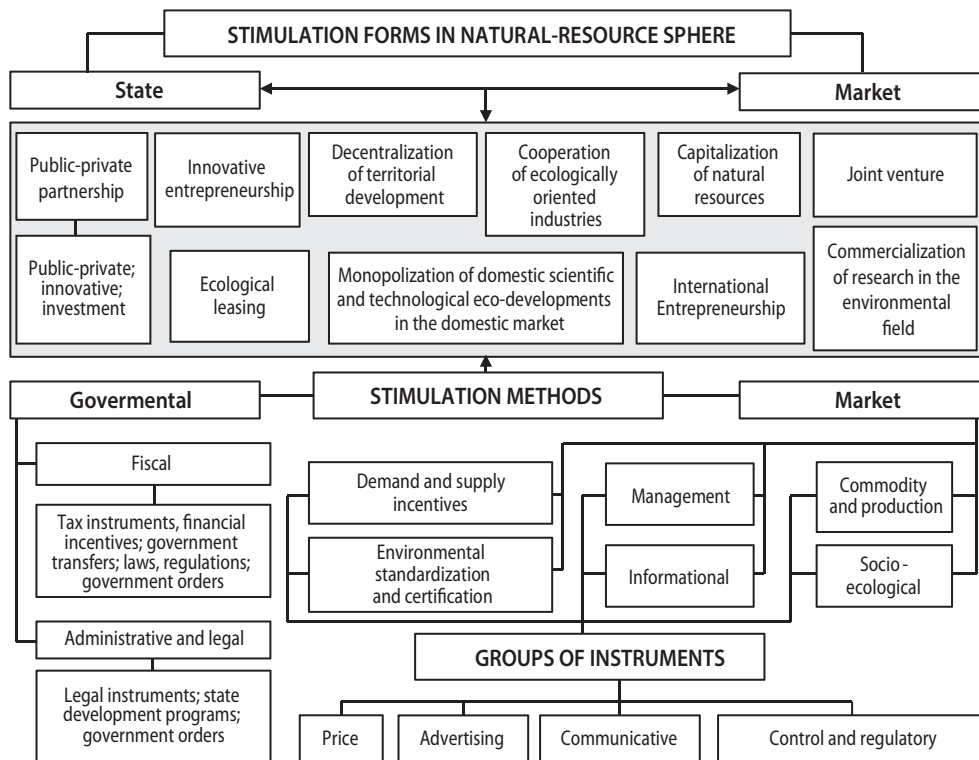


Fig. 2. New forms and methods of increasing the efficiency of financial-economic stimulation in the natural-resource sphere of Ukraine

It was made by the authors.

According to Boronos V. M. and Shkodkina Yu. M. [33], through environmental leasing, it will be possible to attract financial investment on equipment, technologies, movables and immovables that will eliminate or reduce the environmental impact of human activity.

The cooperation will help to strengthen the relationship between production enterprises and consumers, the development of small businesses, streamline environmental management processes, enhance environmental responsibility of business, and enhance environmental security. Capitalization of natural resources will lead to an increase in their value, which will force environmental users to increase their efficiency.

Iefymenko T. I. et al. [34] substantiated the need for the implementation of European legislation on the regulation of the national market for financial instruments, as well as the creation of preconditions for the functioning of a single institutional investment space while simultaneously creating a system of financial and economic incentives in Ukraine.

According to some scientists [10; 35–37], in modern conditions of ménage, the economic provision of rational nature management can be realized only if natural resources will be included in the processes of the real economics, which are based on the so-called financial-economic relations.

In our opinion, the promotion of joint and international entrepreneurship in the field of environmental management will facilitate the trade development of environmental technologies, equipment and goods.

The commercialization of scientific researches that are carried out in the field of rational environmental management, improvement of the environment will occur on the basis of transformation of the results of intellectual activity in the natural-resource and recycling spheres.

The monopolization of domestic scientific and technological eco-developments at the internal market will ensure the competitiveness of innovative environmental developments in the external and internal markets, facilitate their dissemination and commercialization, which will lead to replenishment of local and state budgets with financial revenues.

According to these forms, it is necessary to improve the state methods of stimulation in the natural-resource sphere, to make them more stringent and adapt to modern conditions. In conjunction with government methods, market incentives should be actively used.

Therefore, the lack of the effective forms, methods, models, mechanisms and instruments of financial-economic stimulation in the natural-resource sphere in our country can cause the significant damage to the environment.

The unsatisfactory environmental condition of the environment in Ukraine requires the use of new, more effective forms and methods of economic stimulation in the natural-resource sphere.

In European countries, the state-market forms of stimulation are used in combination, on the basis of which an effective economic incentive tool has been developed, which is predominantly compulsory. At the same time, state stimulation is mainly directed at business entities, and market incentives to consumers of the natural resources and its products.

Thus, in our country it is proposed to carry out financial-economic stimulation in the sphere of natural resources in the form of: private-public partnership; innovative, joint and international entrepreneurship; decentralization of territorial development; environmental leasing; cooperatives of ecologically oriented industries; capitalization of natural resources; commercialization of scientific researches in the environmental sphere; monopolization of domestic scientific and technological eco-developments in the domestic market, etc.

According to these forms, effective methods of state incentive, which would be market-oriented, should be used.

Along with government, it is necessary to apply market methods of financial-economic stimulation in the natural-resource sphere. Among the market methods can be distinguished the following:

- methods of market stimulation of supply and demand based on the implementation of environmentally-friendly innovations to meet consumer needs of environmental users;
- ecological standardization and certification – improvement of ecological condition by raising ecological standards of production, recycling and consumer spheres; consumption of quality harmless products for the human body;
- management – development of the system of effective management in the natural resource field; formation of an effective ecological and economic management mechanism in the natural resource field; developing a quality management system for environmentally-friendly industries, etc.;
- informational – the providing for dissemination of information on the state of the environment, its changes, the results of environmental management, the need for the implementation of environmentally-friendly industries;
- commodity and production – are the use of tools that can reduce production costs by implementation new resource-saving technologies, contribute to the deepening and expansion of stages of industrial processing and the emergence of new environmentally friendly goods and services;
- socio-ecological – aimed at eliminating and preventing environmental and environmental problems arising in the production and operation of products, strengthening the environmental responsibility of economic entities for causing damage to the environment, etc.

According to these market methods, it is advisable to use price, advertising, communication and regulatory stimulations.

The implementation of the above proposals will significantly improve the system of financial-economic incentives in the natural resource sphere by incorporating the principles of “green economy”, reorientation to the predominant use of market forms and methods of financial-economic stimulation, but maintaining overall control of the development of environmental management by government institutions and strengthening independent public security. After all, in the period of continuing transformation processes in our country, thanks to the development of public-private partnership in the field of natural resources, it is possible to attract not only additional “green investments”, but also to lay the basis for enhancing the ecological, economic and energy security of the whole country.

## References

1. Rzeńca, A. (2015). Biodiversity As An Ecological Safety Condition. The European Dimension. *Comparative Economic Research*, 18 (1), 97–117. Retrieved from <https://doi.org/10.1515/cer-2015-0006>.
2. Uzunow, E., Kukielska, D. (2012). Some elements of European strategy for sustainable resources concerning to rock mineral resources. *Mining Science*, 134, 295–300.
3. Burchard-Dziubińska, M. (2014). Implementation of green economy as an European Union's answer development difficulties. *Folia oeconomica*, 3 (303), 135–150.
4. Żylicz, T. (2017). Wartość ekonomiczna przyrody. *Zarządzanie Publiczne*, 39 (1), 114–124.
5. Erechemla, A. (2013). Początki wspólnotowego prawa ochrony środowiska. *Studia Prawno-Ekonomiczne*, 89, 49–78.
6. Drobniak, A., Janiszek, M., & Plac, K. (2016). Zielona gospodarka i zielona infrastruktura jako mechanizmy wzmacniania gospodarczo-środowiskowego wymiaru prężności miejskiej. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, 443, 57–69.
7. Woźniak, M. (2016). Zasoby naturalne obszarów wiejskich jako determinanty ich rozwoju ekonomicznego. *Zeszyty Naukowe Szkoły Głównej Gospodarstwa Wiejskiego w Warszawie. Problemy Rolnictwa Światowego*, Vol. 16, Iss. 3, 371–381.
8. Fletcher, R., Dressler, W. H., Anderson, Z. R., & Buscher, B. (2019). Natural capital must be defended: green growth as neoliberal biopolitics. *The Journal of Peasant Studies*, Vol. 46, Iss. 5, 1068–1095. Retrieved from <https://doi.org/10.1080/03066150.2018.1428953>.
9. Khvesyk, M. A., Obykhod, H. O. (2019). Natural resource of Ukraine: state and methods of conservation. *Bulletin of the National Academy of Sciences of Ukraine*, 7, 36–44 [in Ukrainian].
10. Bystriakov I., Pylypiv V., & Lutsiv O. (2013). Capitalization of natural resources: mechanisms of investment in sustainable development. *Economist*, 10, 38–41 [in Ukrainian].
11. Sakal, O. V. (2017). Instruments of financial and economic regulation of nature use in conditions of deepening of institutional transformations. *Economy and Society*, 13, 930–937 [in Ukrainian].
12. Dombrowska, S. M., Kovrehin, V. V., Pomaza-Ponomarenko, A. L., & Koliennov, O. M. (2017). *Public administration in the field of security of socio-ecological and economic systems*. Kharkiv: NUTsZU [in Ukrainian].
13. Terebukh, A. A., Ilnytska-Hykavchuk, H. Ya, & Makar, O. P. (2015). Financing of environmental measures in Ukraine. *Herald of Khmelnytskyi national university*, No. 5, Vol. 1, 108–111 [in Ukrainian].
14. Latysheva, O. V., Kasianiuk, S. V., & Kasianiuk, O. S. (2018). Analysis of effectiveness of introduction of nature protection measures of regional development of Ukraine. *Economic Herald of the Donbass*, 2 (52), 72–78 [in Ukrainian].
15. Ponomarenko, O. O., Shyfrina, N. I. (2014). Problems of the financial regulation of the economy of Ukraine in a volatile market environment and ways to solve them. *The bulletin of transport and industry economics*, 48, 50–54 [in Ukrainian].
16. Kurok, O. O. (2016). State regulation of economy in the market. *University economic bulletin*, 31/1, 164–170 [in Ukrainian].
17. Marchuk, Yu. M. (2018). Financial and economic mechanism of nature management: institutional foundations of investment activities. *Economy and the state*, 12, 35–40 [in Ukrainian].
18. Shubalyi, O. M., Korolenko, M. V., & Kosinskyi, P. M. (2019). Economic stimulation of in-depth recycling of biomass in the region in the context of the implementation of the “green economics” concept. *RFI Scientific Papers*, 2, 110–124 [in Ukrainian].

19. Holian, V. A., Shubalyi, O. M., & Vasylyk, N. M. (2012). *Mechanisms for stimulating the development of forest resources*. Lutsk: PVD "Tverdnyia" [in Ukrainian].
20. Batishcheva, S. (2011). Classification of financial incentives for socio-economic development. *Bulletin of the National Academy of Public Administration*, 2, 152–160 [in Ukrainian].
21. Kovtun, O. I. (2006). *State regulation of economy*. Lviv: Novyi svit – 2000 [in Ukrainian].
22. Sych, O. A. (2003). *Tax stimulation of business development* (Master's thesis). Lviv: Lvivskiy natsionalnyi universytet imeni I. Franka [in Ukrainian].
23. Medvediev, Yu. B. (2003). *Financial stimulation of economic development in a transformational economy* (Master's thesis). Kyiv: Kyivskiy natsionalnyi universytet imeni T. Shevchenka [in Ukrainian].
24. Faichuk, O. V. (2013). A key problem of financial support for innovative projects is the imperfection of domestic legislation. *Economics. Finances. Law*, 2, 21–24 [in Ukrainian].
25. Polishchuk, V. H. (2010). Prospects for tax incentives for sustainable development of Ukrainian regions. *Economy and the state*, 4, 59–61 [in Ukrainian].
26. Verkhovna Rada of Ukraine. (2010). *Tax Code of Ukraine* (Act No. 2755-VI, December 2). Retrieved from <https://zakon.rada.gov.ua/laws/show/2755-17> [in Ukrainian].
27. Karlin, M. I. (2017). Forms of financial stimulation of ecologic responsibility of business, territorial communities and citizens. *Demography and Social Economy*, 3 (31), 89–99 [in Ukrainian].
28. Filo, M. (2013). Directions of fiscal institutions improvement as a mean of promoting economic growth in the state. *Economist*, 7, 22–25 [in Ukrainian].
29. Kulyk, P., Gąsiorek-Kowalewicz, A. (2018). Development of the Green Economy on the Example of the Visegrad Group. *Problems of World Agriculture*, 18 (2), 193–206 [in Polish].
30. The European Parliament, The Council of the European Union. (2004). *Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage*. Retrieved from <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:143:0056:0075:en:PDF>.
31. Shpykuliak, O. H., Ivanchenko, V. O. (2018). Experience of Germany in development of energy cooperatives: perspectives for Ukraine. *The Economy of Agro-Industrial Complex*, 8, 92–101 [in Ukrainian].
32. Tretiak, N., Shashula, L. (2019, January 22). *Public-private partnerships in the use of natural resources*. Retrieved from <http://ecos.kiev.ua/news/view/739> [in Ukrainian].
33. Boronos, V. M., Shkodkina, Yu. M. (2010). Environmental leasing: meaning, structure, directions of development. *Bulletin of Sumy National University. Series: Economics*, No. 1, Vol. 2, 115–119 [in Ukrainian].
34. Iefymenko, T. I. (Ed.). (2017). *Public finances of Ukraine: development and change management (economic security issues)*. Kyiv: DNNU "Akademiia finansovoho upravlinnia" [in Ukrainian].
35. Holian, V. A., Petrukha, S. V., & Roshkevych, V. F. (2018). State regulation of institutional changes in the forest sector of Ukraine: theoretical and methodological context. *Economy and the state*, 11, 8–14 [in Ukrainian].
36. Gasanov, S. S., Petrukha, S. V. (2014). Theoretical essence of state support for agriculture in the state regulation system of agrarian sector. *Economist*, 7, 16–17 [in Ukrainian].
37. Petrukha, S. V. (2018). *State anti-crisis regulation of the agricultural sector of the economy of Ukraine*. Drohobych: Kolo [in Ukrainian].

#### Список використаних джерел

1. Rzeńca A. Biodiversity As An Ecological Safety Condition. The European Dimension. *Comparative Economic Research*. 2015. Vol. 18 (1). P. 97–117. URL: <https://doi.org/10.1515/cer-2015-0006>.

2. *Uzunow E., Kukielska D.* Some elements of European strategy for sustainable resources concerning to rock mineral resources. *Mining Science*. 2012. Vol. 134. P. 295–300.
3. *Burchard-Dziubińska M.* Implementation of green economy as an European Union's answer development difficulties. *Folia oeconomica*. 2014. No. 3 (303). P. 135–150.
4. *Żylicz T.* Wartość ekonomiczna przyrody. *Zarządzanie Publiczne*. 2017. Nr. 39 (1). P. 114–124.
5. *Erechemla A.* Początki wspólnotowego prawa ochrony środowiska. *Studia Prawno-Ekonomiczne*. 2013. Iss. 89. P. 49–78.
6. *Drobniak A., Janiszek M., Plac K.* Zielona gospodarka i zielona infrastruktura jako mechanizmy wzmacniania gospodarczo-środowiskowego wymiaru prężności miejskiej. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*. 2016. Iss. 443. P. 57–69.
7. *Woźniak M.* Zasoby naturalne obszarów wiejskich jako determinanty ich rozwoju ekonomicznego. *Zeszyty Naukowe Szkoły Głównej Gospodarstwa Wiejskiego w Warszawie. Problemy Rolnictwa Światowego*. 2016. T. 16, zeszyt 3. P. 371–381.
8. Natural capital must be defended: green growth as neoliberal biopolitics / R. Fletcher, W. H. Dressler, Z. R. Anderson, B. Buscher. *The Journal of Peasant Studies*. 2019. Vol. 46, Iss. 5. P. 1068–1095. URL: <https://doi.org/10.1080/03066150.2018.1428953>.
9. *Хвесик М. А., Обиход Г. О.* Природно-ресурсна сфера України: стан та шляхи збереження. *Вісник НАН України*. 2019. № 7. С. 36–44.
10. *Бистряков І., Пилипів В., Луців О.* Капіталізація природних ресурсів: механізм залучення інвестицій у сталий розвиток. *Економіст*. 2013. № 10. С. 38–41.
11. *Сакаль О. В.* Інструменти фінансово-економічного регулювання природокористування в умовах поглиблення інституціональних трансформацій. *Економіка і суспільство*. 2017. № 13. С. 930–937.
12. Державне управління у сфері безпеки соціально-еколого-економічних систем : монографія / С. М. Домбровська, В. В. Коврегін, А. Л. Помаза-Пономаренко, О. М. Коленов. Харків : НУЦЗУ, 2017. 244 с.
13. *Теребух А. А., Льницька-Гикавчук Г. Я., Макар О. П.* Фінансування природоохоронних заходів в Україні. *Вісник Хмельницького національного університету*. 2015. № 5, т. 1. С. 108–111.
14. *Латишева О. В., Касьянюк С. В., Касьянюк О. С.* Аналіз результативності впровадження природоохоронних заходів регіонального розвитку України. *Економічний вісник Донбасу*. 2018. № 2 (52). С. 72–78.
15. *Пономаренко О. О., Шифріна Н. І.* Проблеми фінансового регулювання економіки України в умовах нестабільного ринкового середовища та шляхи їх вирішення. *Вісник економіки транспорту і промисловості*. 2014. № 48. С. 50–54.
16. *Курок О. О.* Державне регулювання економіки в ринкових умовах. *Економічний вісник університету*. 2016. № 31/1. С. 164–170.
17. *Марчук Ю. М.* Фінансово-економічний механізм природокористування: інституціональні засади інвестиційної діяльності. *Економіка та держава*. 2018. № 12. С. 35–40.
18. *Шубалий О. М., Короленко М. В., Косінський П. М.* Економічне стимулювання поглибленої переробки біомаси в регіоні в контексті впровадження концепції “зеленої економіки”. *Наукові праці НДФІ*. 2019. Вип. 2. С. 110–124.
19. *Голян В. А., Шубалий О. М., Василик Н. М.* Механізми стимулювання розвитку лісоресурсної сфери : монографія. Луцьк : ПВД “Твердиня”, 2012. 376 с.
20. *Батищева С.* Класифікація фінансових стимулів соціально-економічного розвитку. *Вісник Національної академії державного управління*. 2011. Вип. 2. С. 152–160.
21. *Ковтун О. І.* Державне регулювання економіки : навч. посіб. Львів : Новий світ – 2000, 2006. 432 с.
22. *Сич О. А.* Податкове стимулювання розвитку підприємництва : автореф. дис. ... канд. екон. наук : 08.02.03 ; Львів. нац. ун-т ім. І. Франка. Львів, 2003. 20 с.

23. *Медведев Ю. Б.* Фінансове стимулювання економічного розвитку в трансформаційній економіці : автореф. дис. ... канд. екон. наук : 08.01.01 ; Київ нац. ун-т ім. Т. Шевченка. Київ, 2003. 20 с.
24. *Файчук О. В.* Ключова проблема фінансової підтримки інноваційних проектів – недосконалість вітчизняного законодавства. *Економіка. Фінанси. Право.* 2013. № 2. С. 21–24.
25. *Поліщук В. Г.* Перспективи податкового стимулювання сталого розвитку регіонів України. *Економіка та держава.* 2010. № 4. С. 59–61.
26. Податковий кодекс України від 02.12.2010 № 2755-VI. URL: <https://zakon.rada.gov.ua/laws/show/2755-17>.
27. *Карлін М. І.* Форми фінансового стимулювання екологічної відповідальності бізнесу, територіальних громад і громадян. *Демографія та соціальна економіка.* 2017. № 3 (31). С. 89–99.
28. *Фільо М.* Напрями вдосконалення діяльності фіскальних інститутів як засіб сприяння економічному зростанню в державі. *Економіст.* 2013. № 7. С. 22–25.
29. *Kułyk P., Gąsiorek-Kowalewicz A.* Development of the Green Economy on the Example of the Visegrad Group (in Polish). *Problems of World Agriculture.* 2018. 18 (2), P. 193–206.
30. Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage. URL: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:143:0056:0075:en:PDF>.
31. *Шпикуляк О. Г., Іванченко В. О.* Досвід Німеччини у розвитку енергетичних кооперативів: перспективи для України. *Економіка АПК.* 2018. № 8. С. 92–101.
32. *Третяк Н., Шашула А.* Публічно-приватне партнерство в сфері використання природних ресурсів / Державна установа “Інститут економіки природокористування та сталого розвитку Національної академії наук України”. 2019. 22 січ. URL: <http://ecos.kiev.ua/news/view/739>.
33. *Борнос В. М., Шкодкін Ю. М.* Екологічний лізинг: сутність, структура, напрямки розвитку. *Вісник СумДУ. Серія Економіка.* 2010. № 1, т. 2. С. 115–119.
34. Державні фінанси України: розвиток та управління змінами (проблеми економічної безпеки) / за ред. Т. І. Єфименко ; ДННУ “Акад. фін. управління”. Київ, 2017. 496 с.
35. *Голян В. А., Петруха С. В., Рошкевич В. Ф.* Державне регулювання інституціональних змін у лісовому секторі економіки України: теоретико-методологічний контекст. *Економіка та держава.* 2018. № 11. С. 8–14.
36. *Гасанов С. С., Петруха С. В.* Теоретична сутність державної підтримки сільськогосподарства в системі державного регулювання аграрного сектору. *Економіст.* 2014. № 7. С. 16–17.
37. *Петруха С. В.* Державне антикризове регулювання аграрного сектору економіки України : монографія / Ін-т економіко-правових досліджень НАН України. Дрогобич : Коло, 2018. 522 с.