

Holubka S. M.

*Doctor of Economic Sciences, Associate Professor,
Higher Educational Institution «University of Banking»
Ukraine; e-mail: holubkas@ukr.net*

Shtuler I. Y.

*Doctor of Economic Sciences, Associate Professor,
Higher Educational Institution "National Academy of Management"
Ukraine; e-mail: shkirka2002@ukr.net*

Білокурський Р. Р.

*Candidate of Economic Sciences, Associate Professor,
Higher Educational Institution Chernivtsi National University named after Y. Fedkovich
Ukraine; e-mail: r.biloskurskyu@chnu.edu.ua*

FINANCING ACTIONS OF ENVIRONMENTAL AND ECONOMIC DEVELOPMENT IN UKRAINE

Abstract. The article provides a comprehensive analysis of the financing actions of ecological and economic development in Ukraine with the identification of the main disadvantages and perspective ways of improvement. The differences between financing environmental protection measures and actions of ecological and economic development are found out. Environmental measures greatly involve expenditure of a forced, restrictive nature. Instead, financing actions of environmental and economic development aims at stimulating environmental investment and innovation, which in the long term, usually long-term, can provide them with profits and competitive advantages. The dynamics, directions of expenses on protection and rational use of natural resources in Ukraine are analyzed in the focus of the ratio of current expenditures and capital investments. It was revealed that the main part of expenses was spent on the treatment of reverse water and waste management, on radiation safety, air protection and climate change. A very low share in the structure of the expenses for protection and the rational use of natural resources for the financing of scientific research works of the directions of environmental protection was revealed. The analysis of the dynamics of expenditures on protection and rational use of natural resources for the period of 2006–2016 showed an increase of 3.7 times in terms of current expenditures and a 6.1 times increase in the volume of capital investments in environmental protection. The analysis of the structural trend in the ratio of current costs and capital investments confirmed the reduction of the former, but still prevail over capital investment. The volume of investments in capital reinnovation of the main means of environmental protection was investigated, which showed a reduction of the share of investments at the expense of own funds of enterprises, organizations and institutions. The branch structure of expenditures on protection and rational use of natural resources in Ukraine with a special attention to resource-intensive types of economic activity is disclosed. Excessive differentiation of the capital investments share in the context of various spheres of management was identified. The possibility of financial resources mobilizing due to the targeted support of those areas that are less monopolized, more flexible and innovative and characterized by a positive tendency of capital investment growth for protection and rational use of natural resources is substantiated.

Keywords: environmental protection measures, ecological and economic development, rational use of natural resources, capital investments, environmental investments.

JEL Classification: E22, O13, Q56

Formulas: 0; fig.: 5, tabl.: 1, bibl.: 9

Голубка С. М.

*д.е.н., професор кафедри фінансів і страхування,
ДВНЗ «Університет банківської справи», Україна; e-mail: holubkas@ukr.net*

Штулер І. Ю.

*д.е.н., доцент,
ВНЗ «Національна академія управління», Україна; e-mail: shkirka2002@ukr.net*

Білокурський Р. Р.
к.е.н., доцент,
Чернівецький національний університет імені Ю. Федьковича,
Україна; e-mail: r.biloskurskyu@chnu.edu.ua

ФІНАНСУВАННЯ ЗАХОДІВ ЕКОЛОГО–ЕКОНОМІЧНОГО РОЗВИТКУ В УКРАЇНІ

Анотація. У статті здійснено комплексний аналіз фінансування заходів еколого–економічного розвитку в Україні з виявленням основних недоліків та перспективних напрямів удосконалення.

Досліджено обсяги інвестицій у капітальний ремонт основних засобів природоохоронного призначення, що засвідчило скорочення частки інвестувань за рахунок власних коштів підприємств, організацій, установ. Розкрито галузеву структуру витрат на охорону та раціональне використання природних ресурсів в Україні з особливою увагою на ресурсомісткі види економічної діяльності. Обґрунтовано реальність мобілізації фінансових ресурсів за рахунок цільової підтримки тих сфер, які є менш монополізованими, більш гнучкими й інноваційними та для яких характерна позитивна тенденція зростання капітальних інвестицій на охорону та раціональне використання природних ресурсів

Ключові слова: природоохоронні заходи, еколого–економічний розвиток, раціональне використання природних ресурсів, капітальні інвестиції, екологічні інвестиції.

Формул: 0; рис.: 5, табл.: 1, бібл.: 9

Голубка С. М.
д.э.н., профессор кафедры финансов и страхования
ДВНЗ «Университет банковского дела», Украина; e-mail: holubkas@ukr.net

Штулер И. Ю.
д.э.н., доцент,
ВУЗ «Национальная академия управления»,
Украина; e-mail: shkirka2002@ukr.net

Билокурский Г. Г.
к.э.н., доцент,
Черновицкий национальный университет имени Юрия Федьковича,
Украина; e-mail: r.biloskurskyu@chnu.edu.ua

ФИНАНСИРОВАНИЕ МЕРОПРИЯТИЙ ЭКОЛОГО–ЭКОНОМИЧЕСКОГО РАЗВИТИЯ В УКРАИНЕ

Аннотация. В статье осуществлен комплексный анализ финансирования мероприятий эколого–экономического развития в Украине с выявлением основных недостатков и перспективных направлений совершенствования.

Исследованы объемы инвестиций в капитальный ремонт основных средств природоохранного назначения, показало сокращение доли инвестирований за счет собственных средств предприятий, организаций, учреждений. Раскрыто отраслевую структуру расходов на охрану и рациональное использование природных ресурсов в Украине с особым вниманием на ресурсоемкие виды экономической деятельности. Обоснованно реальность мобилизации финансовых ресурсов за счет целевой поддержки тех сфер, которые являются менее монополизованными, более гибкими и инновационными и для которых характерна положительная тенденция роста капитальных инвестиций на охрану и рациональное использование природных ресурсов.

Ключевые слова: природоохранные мероприятия, эколого–экономическое развитие, рациональное использование природных ресурсов, капитальные инвестиции, экологические инвестиции.

Формул: 0; рис.: 5, табл.: 1, библи.: 9

Introduction. A comprehensive analysis of Ukraine's ecological and economic development requires consideration of funding indicators for the respective measures. Financial resources, in spite of various discussions, are the basis for implementation of managerial decisions. Although the effectiveness of its use depends directly on the existing institutional, infrastructural and technical support, it is impossible to create a catalytic effect on the balancing of environmental and economic processes, and the formation of interest in the business environment for conservation enterprise without financial resources. The current legislation regulates the financing subject of environmental measures. It is the State Budget of Ukraine, local budgets, funds of enterprises, institutions and organizations, environmental funds, voluntary contributions and other funds [7]. A very important point is the environmental priority of financing. The objective of ecological and economic development expands the institutional capacity in terms of financing, increasing the need for attracting funds from business entities.

The urgency of the chosen topic of the study is necessitated by the need of a constant monitoring of the situation in the sphere of financing measures, usually of environmental protection nature, with the justification of their importance in the context of stimulating the country's ecological and economic development.

Analysis of research and problem statement. The information basis of the study was the data of official statistics, as well as the studies of Ukrainian scientists on various issues of financial support in the environmental sphere – M. Bets, S. Vorobiov [6], V. Golyan [4], Y. Grebenyuk, G. Ilnitska–Gykavchuk, S. Kniaz, A. Korotun [9], O. Makar, S. Polkovnichenko, O. Selezneva [8], I. Synyakevich, A. Terebukh, L. Khalanchuk [9], A. Shevchenko [6], N. Yavorska, V. Yatsun and others.

The purpose of the paper is to provide a comprehensive analysis of the financing of environmental and economic development activities in Ukraine with the identification of major disadvantages and prospects for improvement. The tasks are:

- to find out the differences between the financing of environmental protection and ecological and economic development measures;
- to analyze dynamics, directions of expenses on protection and rational use of natural resources in Ukraine in the focus of the ratio of current expenditures and capital investments;
- to analyze the sectoral structure of expenses for protection and rational use of natural resources in Ukraine with a special attention to resource-intensive types of economic activity.

Research results. In the context of financing environmental and economic development actions, it is necessary to distinguish environmental actions and measures that are oriented towards ecological and economic development. This means that environmental measures to a greater extent involve expenditure of a forced, restrictive nature. Instead, funding for environmental and economic development should target subjects to stimulate environmental investment and innovation, which in the long run (usually long-term) can provide them with profits and competitive advantages (Table 1). Now in Ukraine, under the conditions of an unformed ecological economy, the predominance of funding for environmental measures remains. With a constant shortage of budgets of different levels, such "forcedness" institutionalizes the perception of these activities as an additional burden. It formalizes the financing process itself, demotivates business entities and government structures to form an effective system of resource support for environmental and economic development.

Let us consider the situation regarding the amount of financing of various measures of ecological and economic development in Ukraine, including the environmental protection nature in more detail.

In fig. 1 the structure of the cost of protection and rational use of natural resources in the areas of environmental protection in comparison with 2014 and 2016 is reflected. We can see that the main part of expenses is spent on treatment of return waters and waste management – 27.6% and 27.5% respectively in 2016 as well as on the cost of radiation safety (21.7%), atmospheric air protection and climate change (13.1%). It can be argued that the highest level of expenses on return water treatment and waste treatment costs is due to the social significance of the corresponding effects of the use of environmental resources. In case of neglect, the ecological situation will be catastrophic. For example, the forced discharge of wastewater treatment is due to the fact that most of the wastewater in Ukraine are characterized by a high level of chemical and biological pollution,

and the main sources of environmental pollution are the factories of the food industry and processing of agricultural products. The vast majority of such wastewater is discharged uncleaned in natural reservoirs, into fields of filtration or into sewage system, creating a tangible ecological burden on the environment [9]. Given this practice, the cost of cleaning back water is at least partially compelled.

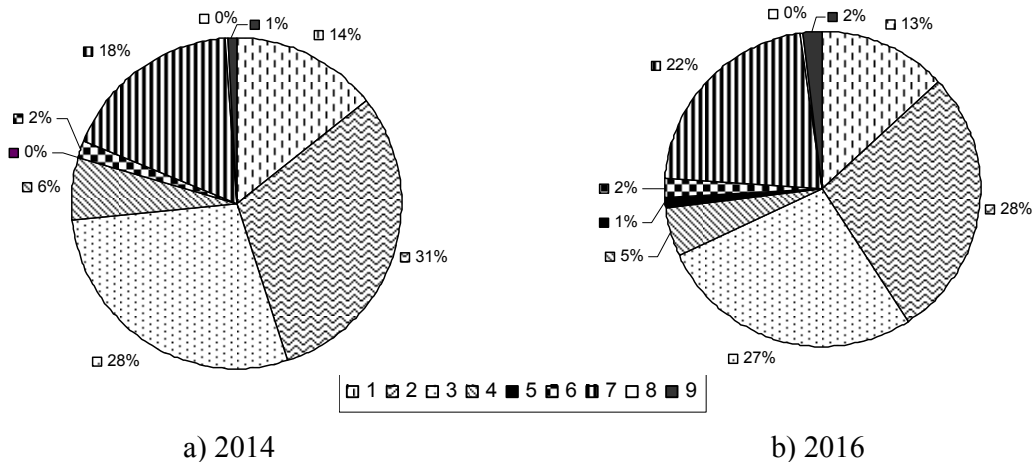
Table 1

Differences between the financing of environmental protection actions and measures of ecological and economic development

| Environmental protection actions | Ecological and economic development measures |
|--|---|
| <i>The basic implementation principle</i> | |
| Restrictions on the use of nature (the superiority of environmental interests over economic ones) | Stimulating of environmental investments and innovations (balancing environmental and economic interests) |
| <i>The basic financing principle</i> | |
| Expendable, usually with funds from the state budget and international funds | Focusing on the long-term commercial prospect, involving, as a rule, funds of business entities (including large international companies) and international funds |
| <i>Effective financing conditions</i> | |
| High level of democracy, civilian control over the targeted use of budget resources, resources of international funds | High level of business environment development, investment attractiveness |
| <i>The main problems of effective financing in Ukraine</i> | |
| Selective and insufficient financing under the conditions of a constant budget deficit and, as yet, underdeveloped practice of attracting funds from international funds with the help of public organizations, local governments, etc.. | So far, the underdeveloped practice and the lack of a sufficient number of positive experiences of environmental investment and innovation in an unstable environment, a low level of environmental culture of society and business |
| <i>The nearest prospects of financing in Ukraine</i> | |
| Mobilization of budget resources of the united territorial communities and their close cooperation with international funds, with the attraction of foreign investments | Stimulating of environmental investments and innovation through the identification of priority areas of environmental business ("locomotives") |

Source: authoring

We draw attention to the very low share in the structure of expenses on protection and rational use of natural resources of financing research actions of nature protection. This is a clear example of the current futility of the environmental protection sphere, without qualitative scientific substantiation of the possibilities of ecological and economic development, the transformation of the expendable impetus of measures on long-term profitability and strategic advantages. On the one hand, the reason for this is the crisis of domestic science in the difficult conditions of material and technical and financial support. On the other hand, cooperation between research institutions, state authorities and businesses is very necessary today in order to revive the potential of producing ecological innovations.

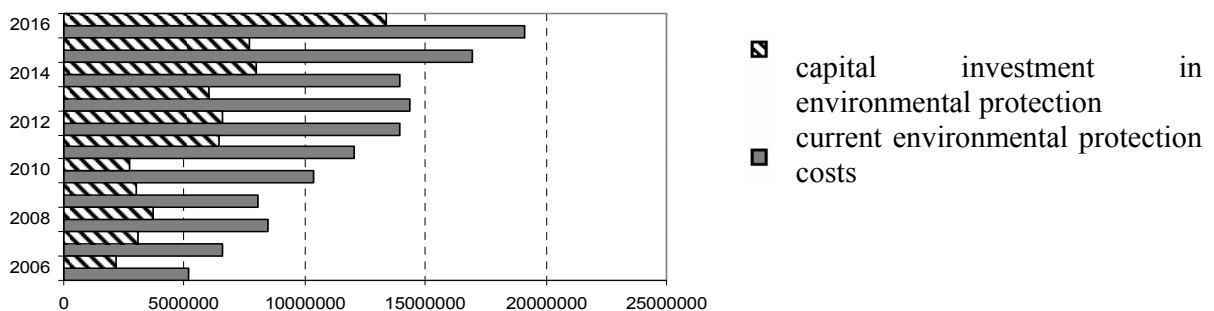


Notes. 1 – atmospheric air protection and climate change issues; 2 – purification of return water; 3 – waste management; 4 – protection and rehabilitation of soil, underground and surface waters; 5 – reduction of noise and vibrational influence; 6 – conservation of biodiversity and habitats; 7 – radiation safety; 8 – research works of environmental protection; 9 – other areas of environmental protection activity

Fig. 1. Structure of expenditures on protection and rational use of natural resources by directions, 2014, 2016,%
Source: Made by the author according to the data [1]

If analyze the dynamics of expenditures on protection and rational use of natural resources, then during the period of 2006–2016 there was an increase by 3.7 times in terms of current expenditures and by 6.1 times in terms of volume of capital investment in environmental protection (Fig. 2). The greatest increase in current expenditures was observed for the protection and rehabilitation of soil, underground and surface water (7.8 times), waste management (5.1 times), and capital investments – waste management (6.5 times), atmospheric air and climate change problems (3.3 times).

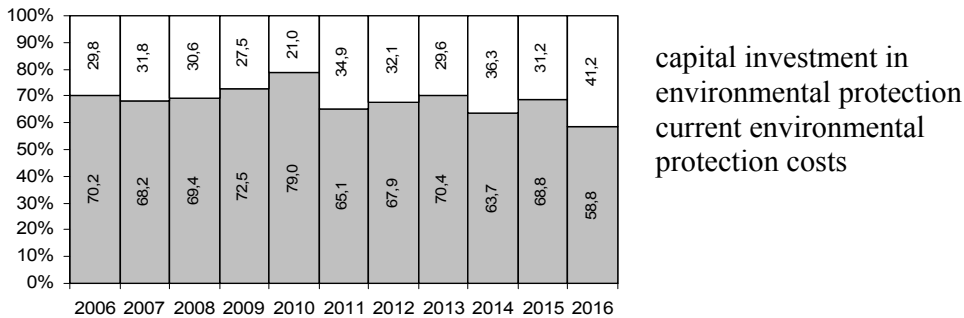
It should be noted that current expenses include environmental protection costs related to the operation and maintenance of environmental protection means; means for remuneration of workers and specialists engaged in environmental actions; expenses for the purchase of materials and raw materials necessary for carrying out special constructive, ameliorative, reclamative and other works; ensuring the operation of treatment plants and other environmental equipment; fuel and electricity costs; the cost of purchasing wearable tools, inventory, etc. In turn, capital investments or investments in fixed assets are aimed at construction and reconstruction of environmental protection objects; the purchase of equipment for the implementation of environmental measures and the cost of major repairs of environmental protection equipment [8, p. 175].



Notes. 2014–15 years – data without occupied territories
Fig. 2. Costs of protection and rational use of natural resources in Ukraine, 2006–2016, ths. UAH
Source: Made by the author according to the data [1]

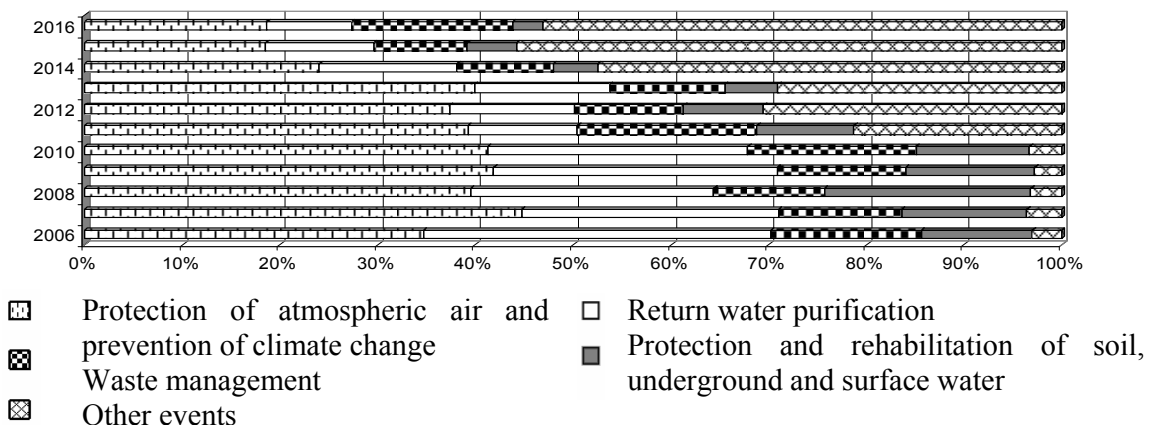
A structural tendency from the analyzed indicator of the cost of protection and rational use of natural resources in terms of current expenditures and capital investments is very significant. In 2013 current expenditures amounted to an average of 70.3% of the total expenditures, in 2016 their share decreased to 58.8% (Fig. 3). This means that the share of capital investment in environmental

protection is gradually increasing, which reflects the qualitative aspect of investment and it is a positive trend. It is important that in the field of environmental protection activity capital investments are growing steadily. Against this backdrop, it is important to ensure a gradual transformation of environmental protection investments into investments aimed at ecological and economic development and the establishment of an ecological economy.



Notes. 2014–16 years – data without occupied territories
 Fig. 3. Structure of expenditures on protection and rational use of natural resources in Ukraine in terms of current expenditures and capital investments, 2006–2016,%
 * Source: Made by the author according to the data [1]

If return water treatment, waste management, radiation safety expenditures, atmospheric air protection and climate change are dominated in the structure of total expenses for the protection and rational use of natural resources in the areas of environmental protection costs, then the structure of capital investments is somewhat different. Here, the costs of atmospheric air and waste management are dominated, with a clear tendency to reduce the share of the first target – in 2006 – 34.8%, and in 2016 – only 18.7%. Capital investment for the treatment of return water was significantly reduced from 35.5% in 2006 to 8.7% in 2016 (Fig. 4). This tendency is extremely negative. According to specialists, water supply and sewage systems in Ukraine are characterized by a high level of operation, which increases the capital intensity of provision of water services and is reflected accordingly in the size of tariffs for consumed water. Reducing the quality of reverse water purification leads to an increase in the level of surface water contamination, which increases the risk of rapid emerge of various kinds of diseases. Instead, there are no effective instruments in the state environmental policy that would stimulate the attraction of capital investments precisely in the treatment of return water [4]. So, this direction of environmental investment is very promising. On the other hand, its crisis situation requires real budget financing, which demands public pressure, including territorial communities, for specialized state institutions of a higher level.



Notes. 2014–16 years – data without occupied territories
 Fig. 4. Structure of capital investments for environmental protection in the areas of environmental protection measures in Ukraine, 2006–2016,%
 Source: Made by the author according to the data [5]

The share of capital investment financing for the purpose of protection and rehabilitation of soil, underground and surface waters remains a poor one. Given the dominant agricultural specialization of the Ukrainian economy and the prospects for the development of ecological agricultural production, this tendency is dissonant with the potential of land use.

Given the high degree of depreciation of fixed assets in Ukraine, it is important to analyze the volume of investments in capital reinnovations of the main means of environmental protection. Over the past 5 years, they have become cyclical, meaning 2015 levels actually reflect the level of 2010. Negative trend lays in something else. The share of investments at the expense of enterprises, organizations and institutions' own funds is decreasing – in 2010 it amounted to 82.5%, in 2014 – 89.5% (maximum value) and in 2015 only to 72.3%. The content of ecological and economic development consists in motivating business entities in environmental investments and innovations. The current situation is evidence that the business environment is in difficult conditions, determined by the instability of the macroeconomic and political situation. Therefore, the growth of volumes of capital investments of business entities for the purpose of reinnovation of fixed assets should be an actual direction in the system of measures of ecological and economic development, which can be achieved through increased confidence between the authorities and business. The main emphasis should be placed on domestic investment. Therefore, entities should be motivated to such costs, taking into account the long-term development prospects that the state should guarantee.

The sectoral expenditure structure for protection and rational use of natural resources reveals the ecological orientation of various types of economic activity and points to the prospects for improvement of the situation. By analyzing such a structure by 2015, attention is drawn to the fact that among the expenses on protection and rational use of natural resources there are no capital investments in such types of economic activities as fish farming and construction. The highest share of capital investment was found to supply electricity, gas, steam and air-conditioning (81.7%), industrial processing (28.1%), transport, warehousing, postal and courier activities (19.2%), water supply, sewage, waste management (10.4%), extractive industry and the development of quarries (10.4%), agriculture, hunting (9.6%). For the remaining spheres, the indicator is very scarce (Figure 5). In any case, industrial sectors of economic activity play a strong role in the field of ecological and economic development. Therefore, it is necessary to pay special attention to them, with the specification of the importance of capital investments.

The cost structure in the mining industry shows that most of them account for the extraction of metal ores and the development of quarries (93.1% of total expenditures in the extractive industry). The share of the remaining species is scanty: mining of stones and brown coal – 3.8%, extraction of other minerals – 1.8%, and the extraction of crude oil and natural gas – 1.3%. Such an imbalance indicates the absence of an integrated approach to the development of extractive industry, either in terms of sustainable development, or at least balancing environmental and economic interests.

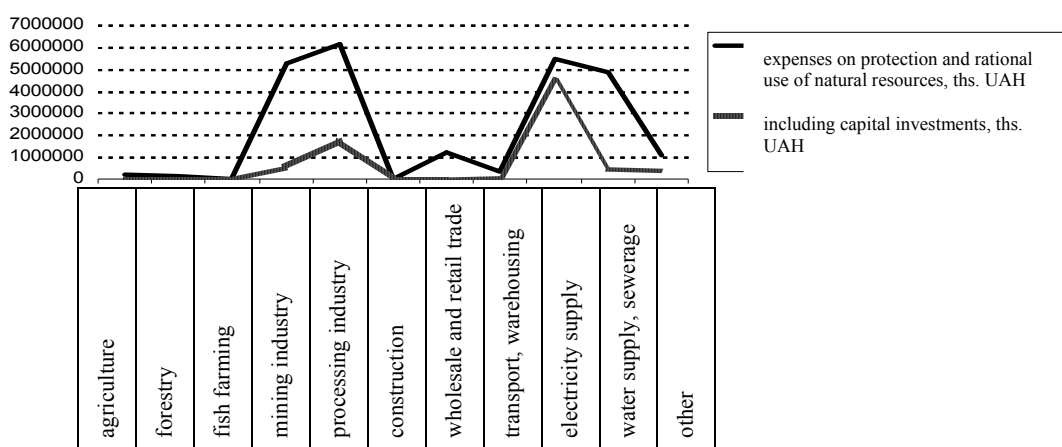


Fig. 5. Costs of protection and rational use of natural resources in terms of major types of economic activity in Ukraine, 2015, ths. UAH

Source: Made by the author according to the data [3, p. 225–227]

As for the share of capital investments in the structure of extractive industry costs, it reaches 10.8% for the extraction of metal ores and the development of quarries, and for the rest it varies within 1.3–3.8%. The extraction of stone and brown coal requires extra attention. Ukraine's coal industry is particularly vulnerable to hybrid warfare.

As is known, the main share of total resources of coal – about 92.4% – is located in the Donetsk coal basin, and –the Lviv–Volyn Basin accounts for about 2.5% of the total coal resources [2]. A stagnant factor in the development of the coal industry on the ecological and economic basis remains the preservation of the public sector. The share of state–owned enterprises in the production of Ukrainian ordinary coal was about 28%, that is, about 72% of Ukrainian coal was produced by private, leased or transmitted companies, with a share of about 40% of the total number of mines; all non–state enterprises of the sector are profitable (they do not receive state subsidies), the level of utilization of production capacities on them averages more than 90%, labor productivity at coal production is 2–3 times higher, and wages are 20–25% higher than at state mines [6; 2]. The low level of spending on the protection and rational use of natural resources in the field of coal and lignite mining is a vivid example, as the types of economic activity of Ukraine, which are controlled by large business–oligarchic groups, are oriented towards private interests. Under such conditions, talking about the reality of environmental and economic development is extremely difficult. Therefore, such problem areas in the first stages should be "avoided" in terms of radical reforms. Greater attention should be paid to areas where stakeholders are interested in rational resource use and are focused on obtaining a competitive product in the international market.

If elaborate on the structure of spending on the protection and rational use of natural resources in Ukraine's processing industry, then the situation is as follows. The main share of expenses, namely 58.1%, is attributable to metallurgical production. There are also such spheres as production of coke and refined products (13.4%), manufacture of chemicals and chemical products (12.4%), paper and paper products (3.5%), food products (3.3%) , production of other non–metallic mineral products (2.9%). Cost indicators for the protection and rational use of natural resources for many types of economic activity in the processing industry of Ukraine are very small. Given their resource intensity and their inclusion in the group of environmentally hazardous industries, this situation indicates the need to reorient the structure of the expenses of business entities from the expectations of long–term environmental investments with the use of resource–saving technologies. To achieve this, the primary condition is the demonopolization of the market. The possibility to do this is very small. Therefore, it is necessary to begin with reforms for those types of economic activity of the industrial processing industry, which are the most innovation–oriented and for which the share of capital investments is the highest. As of 2015, these are such activities as metallurgical production (39.9% in the structure of expenses accounted for capital investments), food production (35.7%), production of other non–metallic mineral products (29.9%), machinery production and equipment, not listed among other groups (22.0%), manufacture of finished metal products, except machinery and equipment (21.3%). Strategically important are activities such as the manufacture of basic pharmaceuticals, the manufacture of computers, electronic and optical products, and the production of electrical equipment. For these spheres, the share of capital investment in the structure of the cost of protection and the rational use of natural resources is currently insufficient. However, their development occurs in new market conditions with the presence of a large proportion of business entities of small and medium business, which operate on the basis of self–employment. This increases their sensitivity to regulatory influences and interest in maintaining fair business conditions. Focusing on the long–term goals of ecological and economic development will allow mobilizing their financial resources with an increase in the cost index of capital and current expenditures on protection and rational use of natural resources. For the newest technological areas, one of the important areas is the work on the recycling of waste products, which requires the creation of various types of interinstitutional associations (for example, environmental clusters).

At the conclusion of the analysis of the sectoral structure of expenses for the protection and rational use of natural resources, let us turn to the type of economic activity "water supply; sewage, waste management ". It is clear that this sphere has particular importance in the context of ecological and economic development. At the moment, the analysis of its costs focuses more on environmental protection measures, which requires the formation of a new concept of management with motivation for environmental investments and innovations.

According to official statistics of 2015, the main part of expenses was spent on the collection, treatment and supply of water (66.1%), as well as the collection, treatment and disposal of waste, and the

restoration of materials (24.7%). At the same time, the largest share of capital investments in the structure of expenses is also revealed for the mentioned spheres – 13,3% and 5,3% respectively.

Conclusions. Consequently, the analysis made suggests that for every sphere of nature use there are many problems regarding the effectiveness of the use of financial resources. Before discussing the possibilities of attracting additional finances, the question of the effectiveness of using available with the prospect of mobilization should be raised. The goals of ecological and economic development are long-term in reach, which requires significant financial costs. In order to form a favorable investment environment, motivate business entities for environmental innovations, a sectoral approach should be applied in Ukraine. This means choosing the kind of economic activity, the business environment of which is the most flexible, mobile, without obvious signs of monopolization, where there is a higher level of capital investment and other positive trends are revealed. Stimulation of environmental investments in these areas can serve as a locomotive for qualitative changes in the field of nature management and strategic orientation of Ukraine on the principles of ecological and economic development with the prospect of the establishment of an ecological economy. Substantiation of priority areas of ecological and economic development from the standpoint of environmental entrepreneurship will be the subject of further authors' research.

Література

1. Витрати на охорону та раціональне використання природних ресурсів за напрямками природоохоронних витрат у 2016 році [Електронний ресурс] // Державна служба статистики України. – Режим доступу: http://www.ukrstat.gov.ua/operativ/operativ2015/ns_rik/ns_rik_reg/vorvp_u/vorvp_u_16.htm.
2. Бобро, Д. Г. Вугільна промисловість України в умовах гібридної війни. Аналітична записка [Електронний ресурс] / Д. Г. Бобро // Національний інститут стратегічних досліджень. – Режим доступу: <http://www.niss.gov.ua/articles/1890>.
3. Довкілля України за 2015 рік [Текст] : статистичний збірник / Державна служба статистики України. – Київ, 2016. – 242 с.
4. Голян, В. Інвестиції у водоочистку зменшуються: чи уникне Україна водного колапсу? [Електронний ресурс] / Василь Голян // Інтерв'ю, репортажи и аналитика политических событий и новостей Украины. – Режим доступу: <http://ukraine.web2ua.com/investiciji-u-vodoochistku-zmenshujutsja-chi-unikne-ukrajina-vodnogo-kolapsu-9937>.
5. Капітальні інвестиції на охорону навколишнього природного середовища за напрямками природоохоронних заходів: [Електронний ресурс] // Державна служба статистики України. – Режим доступу: http://www.ukrstat.gov.ua/operativ/operativ2016/ns_rik/ns_rik_reg/onps_u/kionps_u.htm.
6. Шевченко, А. В. Пріоритети та важелі модернізації вугільної галузі в Україні. Аналітична записка [Електронний ресурс] / А. В. Шевченко, С. Л. Воробійов // Національний інститут стратегічних досліджень. – Режим доступу: <http://www.niss.gov.ua/articles/1495>.
7. Про охорону навколишнього природного середовища [Електронний ресурс] : закон України від 25.06.1991 року № 1264–XII. – Режим доступу: <http://zakon3.rada.gov.ua/laws/show/1264-12>.
8. Селезньова, О. В. Особливості аналізу взаємозв'язку капітальних інвестицій та поточних витрат на природоохоронні заходи [Текст] / О. В. Селезньова // Вісник ДДМА. – 2015. – № 2 (35). – С. 175–179.
9. Халанчук, Л. В. Оптиміальний вибір методів очищення стічних та поверхневих вод [Електронний ресурс] / Л. В. Халанчук, А. О. Коротун; Донбаська державна машинобудівна академія. – Режим доступу: www.dgma.donetsk.ua/docs/konf/2017/mkonf2017/...mat...Халанчук-Коротун.pdf.

Стаття надійшла до редакції 03.10.2017

© Голубка С. М., Штулер І. Ю.,
Білокурський Р. Р.

References

1. *Vytraty na okhoronu ta ratsionalne vykorystannia pryrodnykh resursiv za napriamamy pryrodookhoronnykh vytrat u 2016 rotsi.* Available at: http://www.ukrstat.gov.ua/operativ/operativ2015/ns_rik/ns_rik_reg/vorvp_u/vorvp_u_16.htm
2. Bobro, D. H. *Vuhilna promyslovist Ukrainy v umovakh hibrydnoi viiny. Analitychna zapyska.* Available at: <http://www.niss.gov.ua/articles/1890/>
3. *Dovkillia Ukrainy za 2015 rik.* (2016). Kyiv.
4. Holian, V. *Investytsii u vodoochystku zmeshuiutsia: chy unykne Ukraina vodnogo kolapsu?.* Available at: <http://ukraine.web2ua.com/investiciji-u-vodoochistku-zmenshujutsja-chi-unikne-ukrajina-vodnogo-kolapsu-9937/>
5. *Kapitalni investytsii na okhoronu navkolyshnnoho pryrodnoho seredovishcha za napriamamy pryrodookhoronnykh zakhodiv.* Available at: http://www.ukrstat.gov.ua/operativ/operativ2016/ns_rik/ns_rik_reg/onps_u/kionps_u.htm
6. Shevchenko, A. V. *Priorytety ta vazheli modernizatsiyi vuhilnoi haluzi v Ukraini. Analitychna zapyska.* Available at: <http://www.niss.gov.ua/articles/1495/>
7. *Zakon Ukrainy.* (1991, June). *Pro okhoronu navkolyshnnoho pryrodnoho seredovishcha* Available at: <http://zakon3.rada.gov.ua/laws/show/1264-12>
8. Seleznova, O. V. (2015). *Osoblyvosti analizu vzayemozv'язku kapitalnykh investytsii ita potochnykh vytrat na pryrodookhoronni zakhody. Visnyk DDMA,* 2(35), 175–179.
9. Khalanchuk, L. V. & Korotun, A. O. *Optymalnyi vybir metodiv ochyshchennia stichnykh ta poverkhnevnykh vod.* Available at: www.dgma.donetsk.ua/docs/konf/2017/mkonf2017/...mat...Khalanchuk-Korotun.pdf

Received 03.10.2017

© Holubka S., Shtuler I., Belosurskii R.