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For scientists, scientists, students, graduate students, representatives of business and public organizations and higher education institutions and a wide range of readers.

## TRENDS IN INVESTMENT PROVISION OF ENVIRONMENTALLY RESPONSIBLE BUSINESS IN UKRAINE

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In the context of the systemic crisis, the implementation of adaptive measures and mechanisms of interaction between business, the state and society significantly enhance the role of environmentally responsible business (*hereinafter referred to as ERB*) in these processes. Implementation of the European Green Deal and ensuring sustainable development of Ukraine in the context of security risks necessitate a paradigm shift at all levels. Modern management principles are based on the dominance of the ERB to stakeholders to ensure sustainable economic development.

Adequate investment provision is a prerequisite for the development of ERB in the country. The analysis of environmental investment trends in the pre-war period and the determination of its expected trends in the wartime and post-war periods forms the analytical basis for the state policy of stimulating the development of ERB in Ukraine, and therefore is an important element of the management process.

According to statistics, in 2020, the volume of capital investments in environmental protection in Ukraine reached UAH 13,24 billion, which amounted to only 3,15 % of total capital investment in the economy and 0,31 % of GDP. The total expenditures on environmental protection in 2020 amounted to UAH 41,33 billion, an increase of 68,1 % compared to 2015 (Table 1).

In the reporting year, budget expenditures for the protection of natural environment (*hereinafter referred to as NE*) reached UAH 9,06 billion, having increased by 63,8 % compared to the base period, while their share in the total amount of budget expenditures decreased for 2015-2020 from 0,8 to 0,6%, respectively (see Table 1). In 2020, the share of budget expenditures in total costs for the protection of NE amounted to 21,9%, decreasing compared to 2015 by 0,6%. It should be noted that in 2020, for the first time during the researched period, budget expenditures for the protection of the natural environment decreased by 7 % compared to 2020.

In Ukraine, the main investors in environmental protection measures are ERB entities, which provide 91 % of costs for the protection of natural resources. The share of budget funds is 8 %, other sources of financing – 0,9 %. Such a structure indicates a weakening of the degree of state participation in the processes of ecologically responsible production, as an investor and as a regulator.

Table 1

**Dynamic-structural changes in total costs for the protection of NE in Ukraine  
and budget expenditures\***

Indicators	Years				2020 in % to 2015
	2015	2018	2019	2020	
1. Total expenditures on NE protection, UAH million	24591,1	34392	43735,9	41332,2	168,1
<i>in % to GDP</i>	<i>1,24</i>	<i>0,97</i>	<i>1,10</i>	<i>0,98</i>	<i>X</i>
1.1. Capital investments	7675,6	10074	16255,7	13239,6	172,5
<i>in % to total costs</i>	<i>31,2</i>	<i>29,3</i>	<i>37,2</i>	<i>32,0</i>	<i>X</i>
1.2. Current costs	16915,5	24318	27480,2	28092,6	166,1
<i>in % to total costs</i>	<i>68,8</i>	<i>70,7</i>	<i>62,8</i>	<i>68,0</i>	<i>X</i>
2. Budget expenditures for the protection of the NE, UAH million	5529,7	8242,1	9731,1	9056,6	163,8
3. Share of budget expenditures on NE protection in total budget expenditures, %	0,8	0,7	0,7	0,6	X
4. Share of budget expenditures for the protection of NE in the total expenditures on NE, %	22,49	23,96	22,25	21,91	X

\*Calculated according to the data of the State Statistics Service of Ukraine (Official website, 2023).

The structure of capital investments for the protection of natural resources in Ukraine by types of nature protection measures is unstable, it changes every year, reflecting certain priorities of the ERB. In 2020, according to the structure, the largest share of capital investments was directed mainly to the protection of atmospheric air (42,2%), waste management (21,9%), protection and rehabilitation of soil, underground and surface water (19,3%).

Investment support for NE protection has certain sectoral features. In Ukraine, the largest share of environmental investments falls on the processing industry – 29,4% in 2020 (of which 18,8 % is metallurgical production), extractive industry and quarry development – 27,32 % (of which 26,13 % accounts for the extraction of metal ores) and the water supply sector – 24,09 %. The specific weight of the electricity supply sector decreased from 21,6 % in 2019 to 5,7 % in 2020. The shares of other sectors of the national economy are insignificant and reach 0,9 % for agriculture, 1,9% for transport, 0,2% for trade, 2,81% for public administration and defense.

In 2015-2020, there were structural changes in the sectoral structure of total costs for the protection of the natural environment. The most significant of them was the decrease in the share of the electricity supply sector (by 16,3%). Instead, the shares of the extractive and processing industry (by 6,08 and 4,37%, respectively), the water supply sector (by 4,5%), including areas of waste collection, processing and disposal (by 4,53%). In 2020, the share of wholesale and retail trade decreased (by 4,74 %), a slight decrease was also characteristic of agriculture (by 0,48 %).

The periodization and content of trends in investment provision of ERB in Ukraine are shown in Table 2.

Table 2

**Periodization of trends in investment provision of ERB\***

<i>Pre-war period</i>	<i>War period**</i>	<i>Post-war period**</i>
<ol style="list-style-type: none"> <li>1. Reduction in 2015-2020 of the share of capital and aggregate investments for the protection of NE in GDP (to 0,31% and 0,98%, respectively)</li> <li>2. Reduction of the share of budget expenditures for the protection of NE in their total volume (from 0,7 to 0,6%)</li> <li>3. Changes in the structure of costs for the protection of NE by sources of financing in the direction of increasing the share of own funds of enterprises (from 68% to 91%).</li> <li>4. Reduction of the share of eco-investments in capital investments of economic sectors</li> <li>5. Growth in the structure of capital investments for NE protection in the share of atmospheric air protection costs (up to 42,2%) and reduction of radiation safety costs (up to 1,1%)</li> <li>6. Reduction of the share of the electricity supply sector from 22,1% to 5,7% in the sectoral structure of total costs for the protection of NE.</li> <li>7. Low level of state participation as an investor and regulator of nature management processes</li> </ol>	<ol style="list-style-type: none"> <li>1. Strengthening of the trends of the pre-war period in the direction of reducing the volume of environmental investment</li> <li>2. Reduction of the share of state funding in the structure of expenses for the protection of the NE</li> <li>3. Further changes in the type and sectoral structure of investments for the protection of NE in accordance with the priorities of state policy in the wartime period</li> </ol>	<ol style="list-style-type: none"> <li>1. Moderate growth of environmental investment volumes as economic sectors recover</li> <li>2. An increase in the share of other sources of funding (in particular, assistance from international funds) in the structure of costs for the protection of NE</li> <li>3. Structural changes in the composition of capital and current investments in the direction of increasing the share of costs in the field of waste management</li> <li>4. Strengthening the role of the state as an investor and regulator of nature management processes.</li> <li>5. Activation of the «green» transformation of the economy in accordance with the directions of the ERB</li> </ol>

\* Author's development;

\*\*Expected (possible) trends.

An important indicator for evaluating the investment support of ERB is the share of capital investments for the protection of NE in the total capital investments of economic sectors. The performed calculations indicate a tendency to decrease the share of environmental capital investments in the aggregate capital investments of some sectors of the national economy for the period 2015-2020. Thus, in industry, the specific weight of environmental capital investments decreased from 8,2% to 7,6%, in the electricity supply sector – from 21,1% to 3,1%, water supply – from 38,1% to 33%. At the same time, the specific weight of eco-investments has doubled in the processing and mining industry (from 3,9 to 8,1% and from 3,2 to 8,4 %), which is evidence of the priority of financing environmental protection measures and the significant role of ERB in the sustainable development of these sectors economy.

During the war period, it is expected that the trends of the pre-war period in the direction of reducing the volume of environmental investments will increase, therefore, there will be a downward trend in the specific weight of capital and aggregate investments for the protection of natural resources in GDP, the share of state funding in the structure of costs for the protection of the natural environment (Burkynskiy, B., Nikishyna, O., 2022).

In the post-war period, as economic sectors recover, we can expect a moderate increase in the volume of environmental investment, as well as structural changes in the composition of capital and current investments in accordance with the strategic priorities of post-war development, in particular, in the direction of an increase in the share of costs in the field of waste management (taking into account the priority of its development, declared by program documents).

Most likely, the structure of sources of funding for the protection of the NE will change in the direction of increasing the share of other sources of funding, in particular, international aid. Provided that the mobilization model of development with planning of sustainable and spatial development is implemented in the post-war period, the coordinating role of the state as a regulator and investor in the processes of rational nature management will increase. We should also expect the activation of the «green» transformation of the economy, the implementation of the provisions of the European Green Course into domestic practice, the implementation of norms and standards of circular production in accordance with the strategic priorities of the post-war development of Ukraine.

## References

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