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## ДОСЛІДЖЕННЯ ПРОЦЕСУ РОЗВИТКУ ВІТЧИЗНЯНОГО ПІДПРИЄМНИЦТВА

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### АКТУАЛЬНИЙ СТАН ЕКОЛОГІЧНОГО МЕНЕДЖМЕНТУ ПІДПРИЄМСТВ СІЛЬСЬКОГОСПОДАРСЬКОЇ СФЕРИ (НА ПРИКЛАДІ ТОВ «КЕРНЕЛ- ТРЕЙД»)

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**Анотація.** Стаття присвячена аналізу сучасного стану екологічного менеджменту підприємств сільськогосподарської сфери (на прикладі ТОВ «Кернел-Трейд»). У статті проаналізовано показники розвитку окремих видів економічної діяльності з метою визначення місця сільського господарства в економіці України. Використавши статистичні дані, проведено оцінку впливу діяльності підприємств сільського господарства на стан навколишнього природного середовища (обсяги використання мінеральних та органічних добрив, вапнування ґрунтів, гіпсування ґрунтів, оброблення ґрунтів пестицидами тощо). Проведено оцінку обсягів інвестицій та поточних витрат у сфері охорони навколишнього середовища сільськогосподарських підприємств України. Розглянуто ТОВ «Кернел-Трейд» як один з найсильніших гравців на ринку агропромислової сфери, а також досліджено його основні фінансові показники (прибуток, ЕВІДТА, соціальні виплати, валовий дохід, чистий борг), його внесок у досягнення цілей сталого розвитку ООН (а саме внесок до цілей сталого розвитку 6 – чиста вода та задовільні санітарні умови, 7 – доступна та чиста енергія, 12 – відповідальне виробництво та споживання, 15 – захист та відновлення екосистем на землі та 17 – партнерство задля сталого розвитку) та цикл управління екологічними аспектами у сфері охорони навколишнього середовища. На основі аналізу статистичної інформації з річного звіту компанії, порівняно обсяги викидів CO<sub>2</sub> за різними видами діяльності. За допомогою SWOT-аналізу узагальнено особливості сучасного стану екологічного менеджменту підприємства. Наукова новизна і теоретичне значення результатів статті полягає в розвитку теоретико-методичних положень щодо удосконалення управління конкурентоспроможністю підприємства за рахунок

впровадження ініціатив екологічного менеджменту. На сьогоднішній день тема екології є надзвичайно актуальною, оскільки отримання членства ЄС потребує не тільки економічних та політичних змін, а й насамперед змін у сталому розвитку країни в цілому. Саме через призму сільського господарства автори статті підкреслили необхідність змін у підході до управління підприємствами на засадах екологічності в Україні.

**Ключові слова:** екологічний менеджмент, сільське господарство, зелена економіка, викиди CO<sub>2</sub>, цілі сталого розвитку.

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**THE CURRENT STATE OF ENVIRONMENTAL MANAGEMENT  
OF ENTERPRISES IN THE AGRICULTURAL SECTOR (ON THE EXAMPLE  
OF “KERNEL-TRADE” LLC)**

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**Abstract.** The article is devoted to the analysis of the current state of environmental management of agricultural enterprises (on the example of “Kernel-Trade” LLC). The article analyzes the indicators of development of certain types of economic activity in order to determine the place of agriculture in the economy of Ukraine. Using statistical data, the author assesses the impact of agricultural enterprises on the environment (the use of mineral and organic fertilizers, liming of soils, soil gypsumization, soil treatment with pesticides, etc.) The author assesses the volume of investments and current expenditures in the field of environmental protection of agricultural enterprises in Ukraine. “Kernel-Trade” LLC is considered as one of the strongest players in the agro-industrial market, and its main financial indicators (profit, EBIDTA, social payments, gross income, net debt), its contribution to the achievement of the UN Sustainable Development Goals (namely, contribution to Sustainable Development Goal 6 – clean water and satisfactory sanitation 7 – affordable and clean energy, 12 – responsible production and consumption, 15 – protection and restoration of terrestrial ecosystems, and 17 – partnership for sustainable development) and the environmental management cycle in the field of environmental protection. Based on the analysis of statistical information from the company’s annual report, the volume of CO<sub>2</sub> emissions by different types of activities was compared. Using the SWOT analysis, the features of the current state of environmental management of the enterprise are summarized. The scientific novelty and theoretical significance of the article’s results lies in the development of theoretical and methodical provisions for improving the management of enterprise

competitiveness through the implementation of environmental management initiatives. Today, the topic of ecology is extremely relevant, since obtaining EU membership requires not only economic and political changes, but also, above all, changes in the sustainable development of the country as a whole. It is through the prism of agriculture that the authors of the article emphasized the need for changes in the approach to enterprise management on the basis of environmental sustainability in Ukraine.

**Key words:** environmental management, agriculture, clean-tech economy, CO<sub>2</sub> emissions, sustainable development goals.

**Introduction.** The concept of sustainable, balanced business is gaining popularity in the global market as a response to consumer demands for not only a quality product, but also knowing that it is natural and made from environmentally-friendly materials. In the context of fierce competition, this trend is one of the best competitive advantages that businesses can provide for their products. These changes in society have led to the emergence of new scientific-economic concepts and terms. Fifty years ago, the best plan for industrial development was to increase the number of factories and adopt more technological and technogenic production of goods. Currently, the most important vector for business development worldwide is following the principles of environmental management, which allows for profits to be made without harming the environment and society.

The theoretical, methodical and applied aspects of environmental management have long been in the focus of many scholars. In particular, the problems of environmental management have been studied by Afanasieva M., Bekh V., Gobela V., Dombrovska S., Fagioli F., Hasugian H., Lame M., Martusewicz J., Malyuk O.S., Tocci N.B., Weatherly D. and others. Their scientific achievements are aimed at studying the issues of state environmental policy and audit, implementation of green business principles, formation of an effective environmental management system and its legal regulation. Recent studies have focused on the nature and components of environmental management, the impact of environmental management on the competitiveness of Ukrainian enterprises, information support for environmental management, and the need to implement environmental management in the practical activities of Ukrainian enterprises. However, despite the large number of studies, the issues related to the specifics of implementing environmental management initiatives at agricultural enterprises remain insufficiently reflected.

**Setting objectives.** The aim of the research is to analyze the current state and prospects for the development of environmental management at agricultural enterprises of Ukraine as a prerequisite for sustainable development. The subject of the study is theoretical provisions and applied aspects of the implementation of environmental management in the activities of “Kernel-Trade” LLC to ensure its competitiveness. In the course of the research, general scientific and special methods of cognition were used: structural and logical – to build the general structure of the study; system and process approaches, the method of synthesis – to reveal the essence of environmental management; statistical and economic research methods (induction, deduction, analysis, synthesis) – to analyze and evaluate the patterns and trends of environmental management of Kernel-Trade LLC; methods of quantitative and qualitative analysis – to analyze the environmental consequences of agricultural enterprises.

**Results.** For a qualified analysis of the state of environmental management in Ukraine, it is worth referring to the theoretical materials database, which can further be supplemented with statistical materials. We propose to examine in more detail the modern concept of development and start by defining the term “environmental management” (table 1).

**Definitions of environmental management**

<b>Author</b>	<b>Environmental management is</b>
Afanasyeva M. A. [1]	managing the exploitation of natural resources at the enterprise without disturbing the ecological balance, the environment, as well as the health and life of people
Beh V. P. and others [2]	protection, preservation and use of natural elements of the environment for effective business conduct and maintenance of ecological well-being
Gobela V. V. [3]	implementation of effective management solutions in order to minimize the negative impact of enterprise activities on the environment and increase the level of environmental safety of such processes as production and consumption of finished products
Dombrovska S. M. and others [4]	a management system aimed at maximally reducing the level of man-made load while maintaining optimal rates of economic efficiency
Malyuk O. S. [5]	a management system that includes organizational structure, responsibility, planning, experience, methods, resources and processes for the implementation of environmental policy and its analysis
Dentch M. [6]	the key dominant of sustainable development and at the same time the highest priority of industrial activity and entrepreneurship
Lame M., Marcantonio R. [7]	a component of general management that ensures regulation of relations between the environment and society
Tocci N. [8]	development of methods, directions and tools for achieving balance between ecological, social and economic components of society
Weatherly D., Sheehan N. [9]	management method in organizations of all types, which aims to protect the environment and/or reduce the consequences of their activities on the ecosystem
The authors of the article	a management system that emphasizes efforts to maximize the efficiency of natural resource management (their proper use or conservation) to reduce the effects of business (production) on the environment in order to preserve the global ecosystem

After analyzing the literature on the research topic, the author proposes their own interpretation of the concept of “environmental management” as a management system that emphasizes efforts to maximize the efficiency of managing natural resources (through proper use or conservation) to reduce the impact of business on the environment and preserve the global ecosystem.

Let’s move on to the main principles of environmental management, which also vary depending on the scientist who deals with this issue and their professional field. Therefore, we have summarized the principles as follows:

- work with caution, minimizing harmful impact on the environment;
- exchange scientific and technical knowledge for the development of science;
- each state has the sovereign right to use its own environmental resources, taking into account the consequences for the entire world;
- implementation of ecological innovations in the production process and environmental management economic tools into the enterprise management process;

- the right of humans to live in harmony with nature, to have a healthy and productive life;
- achieving the UN’s sustainable development goals for environmental protection;
- responsibility for the environmental consequences of decisions made by management (polluters must pay for their crimes).

Environmental management is a system of management that emphasizes efforts to maximize the efficiency of natural resource management (proper use or preservation) to reduce the impact of businesses on the environment in order to preserve the global ecosystem. The main principles of environmental management include working with caution to minimize the harmful impact on the environment, exchanging scientific and technical knowledge for the development of science, allowing each country to use its own environmental resources while considering the consequences for the entire world, implementing ecological innovations in the production process and economic instruments of environmental management, the right of humans to live in harmony with nature for a healthy and productive life, achieving the United Nations’ sustainable development goals regarding environmental protection, and accountability for the environmental consequences of decisions made by management.

The main reason for implementing environmental management is the inconsistency of industrial production with the natural system. The natural system has a closed cycle, such as the food chain, which starts with plants and ends with them as dead remains decompose in the soil and nourish the plants, which are then eaten by herbivorous animals. However, modern industry does not have such a closed effect, and thus, natural resources cannot be replenished by nature as intended.

Agriculture is a key sector for the existence of any state, as about 80% of the consumption fund is formed by agricultural production. For Ukraine, this sector is also considered historically important, as agriculture has always allowed people to survive, if not thrive. Today, this is Ukraine’s main connection to the world market. In 2020, Ukraine ranked second in total grain exports after the United States, and only “Kernel-Trade” LLC accounted for 15% of the world’s sunflower oil exports. Fertile land combined with the hard work of Ukrainians provides Ukraine with great opportunities for agricultural potential.

Modern agriculture is considered a highly competitive industry, as it involves about 16,000 independent enterprises that produce similar goods. This situation in the market promotes healthy competition and prevents monopolization in the agricultural sector, which stimulates development in other sectors of the economy.

From Fig. 1, it can be seen that the construction sector employs the smallest number of people, with an average of around 600000, while the wholesale and retail trade employs the largest number of workers. However, according to the available data, there is a trend towards a decrease in the number of employed population in all types of economic activity, which is a consequence of the crisis caused by the coronavirus in 2020, which affected not only Ukraine, but the whole world.

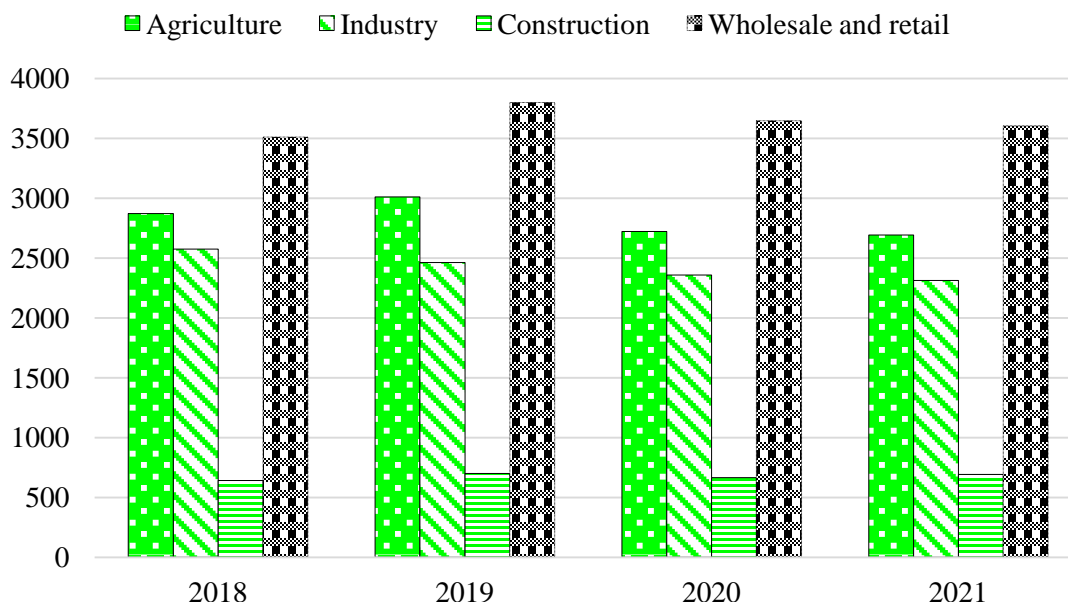


Fig. 1. Number of employed population by types of economic activity, thousands of people (compiled by the authors based on data [10])

- Automation of agriculture. Scientific and technological progress has made labor-intensive processes easier, which has led to an increase in labor productivity. For example, 50 years ago, a dairy maid was a popular profession in villages, but now even in remote corners of the country, you can find farms that milk cows with automated robots.
- Separation of the food and light industries. The division of industries has caused a statistical decrease in the employed population, transforming into the agro-industrial complex of the country.
- Economic infeasibility of agriculture within the country. If you look more closely at the statistics, you will see that the largest companies export products abroad.
- Increase in the level of urbanization of the population. Young people leave villages in search of a better life and more opportunities in cities, which leads to the decline of small farms [11].

However, in the author's opinion, all these factors speak to the improvement of the economic situation in Ukraine, since by reducing the trend of development of the agricultural sector, our country gets rid of the reputation of a "raw materials" country that supplies only raw materials, and not finished products.

According to Fig. 2, it is evident that the agricultural sector indeed has the lowest wages for employees, with the amount being 7166 hryvnia in 2018, compared to 9633 hryvnia in the industrial sector. At that time, it was nearly three times the minimum wage, which was 3723 hryvnia in 2018.

We also suggest comparing the shares of gross value added from these same types of economic activity over a decade – 2011 and 2021. Fig. 3 provides an illustrative comparison of the increase in the share of gross value added to the Ukrainian economy over 10 years. In 2011, this indicator was 8.4% of total economic activity, and in 2021, it already makes up 12.4%, which is the highest growth rate. Interestingly, the industrial sector's indicator has slightly decreased over these years, although it still occupies the first place.



Fig. 2. Average monthly nominal wages of permanent employees by types of economic activity, in hryvnia (compiled by the authors based on data from [10])

Thus, agricultural activity is not the leading but a sufficiently profitable type of economic activity that is going through its stage of automation, labor crises, and sustainable development. It would be reasonable to consider this sphere in detail: what exactly is grown on our lands, which positions are considered profitable, and how agriculture affects the environment of Ukraine.

One of the negative impacts of agriculture on the environment is the plowing of land. In developed countries, this indicator does not exceed 36% – in France, 18.5% – in the UK, and 10% in the USA, while Ukraine has 68.5% of plowed land [11]. The main reason is the intensive agricultural use of land, which affects the decrease in soil fertility (destruction of structure, over-farming, dust storms) and their oxygen content. On such soil, the harvest is weak and economically unprofitable, so farmers temporarily solve these problems by adding fertilizers to the soil. Let's consider the statistics of the use of different types of fertilizers in Ukraine on Fig. 4.



Fig. 3. Gross value added by types of economic activity as a percentage (compiled by the authors based on data from [10])

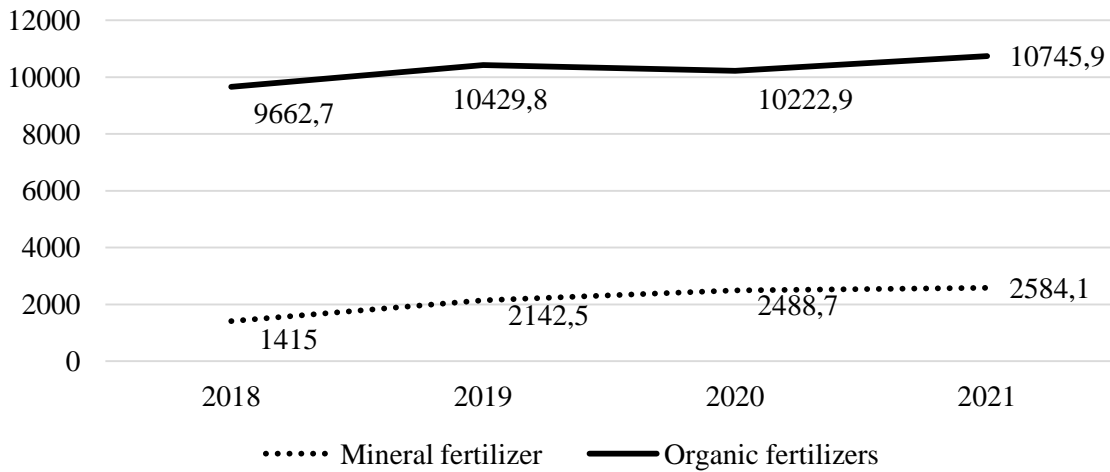


Fig. 4. Application of mineral and organic fertilizers per crop, thousands of tons (compiled by the authors based on data [13])

From Fig. 4, it can be seen that in the agricultural sector, organic fertilizers are more commonly used than mineral fertilizers. Furthermore, in 2021, the proportion of fertilized land using mineral fertilizers was 92% (compared to 70% in 2010), while organic fertilizers accounted for 5.7% (compared to 2.2% in 2010), so even in terms of cultivated land area, mineral fertilizers are more commonly used.

Mineral fertilizers include nitrogen (1,769.9 thousand tons), phosphorus (450.8 thousand tons), and potassium (363.4 thousand tons) fertilizers, with nitrogen fertilizers being the most popular among businesses and farms in Ukraine.

Other negative impacts of agriculture on Ukraine’s soils include processes such as liming, gypsum application, and pesticide use. All of these actions aim to improve soil conditions – liming and gypsum application aim to reduce soil acidity to a neutral level, and pesticides can combat harmful organisms. However, excessive amounts of these actions year after year can deplete the soil, making it at least too hard and at most dangerous for human activity.

Fig. 5 provides statistics on liming, gypsum application, and pesticide treatment of Ukrainian soils. If the first two indicators are presented in hectares, the amount of pesticide use is presented in hundreds of hectares, indicating their excessive use.

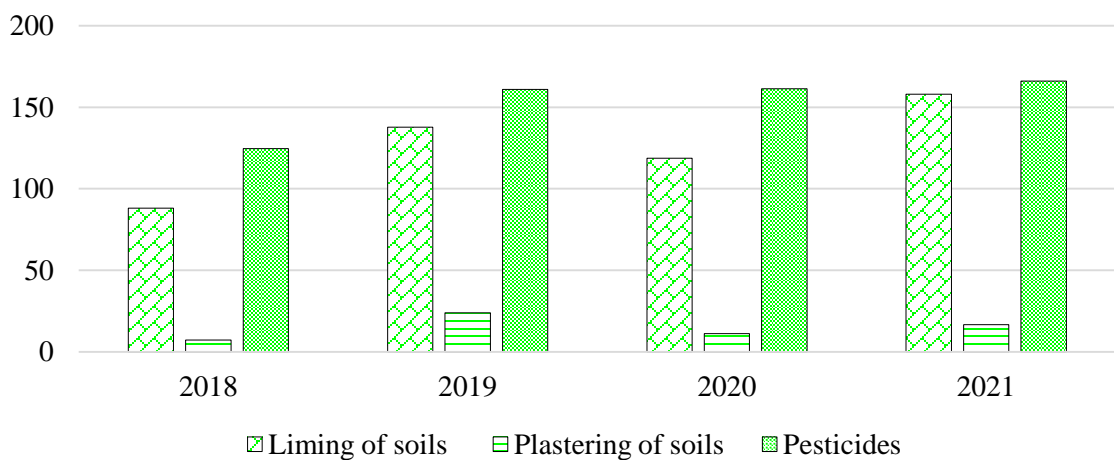


Fig. 5. Lime treatment of soils (ha), gypsum treatment of soils (ha), and pesticide application (hundreds of ha) (compiled by the authors based on data [13])



The total area of land in Ukraine treated with pesticides is 16600.1 thousand ha, which is 91.5% of the total sown area. The most polluted regions are considered to be Kharkiv (1116.3 thousand ha), Odessa (1095.8 thousand ha), Poltava (1082.3 thousand ha), Zaporizhia (1060.9 thousand ha), and Dnipropetrovsk (1057.8 thousand ha) oblasts. The least pesticide-polluted region is Zakarpattia oblast, which covers only 27.7 thousand ha.

It is worth considering the internal and external financing of the enterprise as a possible reason for the reduction of emissions in the agricultural sector in recent years. Firstly, the amount of capital investments in the environmental sector could be decisive in the fight to reduce damage from the enterprise.

Fig. 6 shows information on the volume of capital investments in environmental measures of the enterprise, and for agriculture, these figures are not encouraging. This result tells us about the lack of interest of owners of agricultural enterprises to invest money in environmental activities, as they either do not have the means to do so or do not want to.

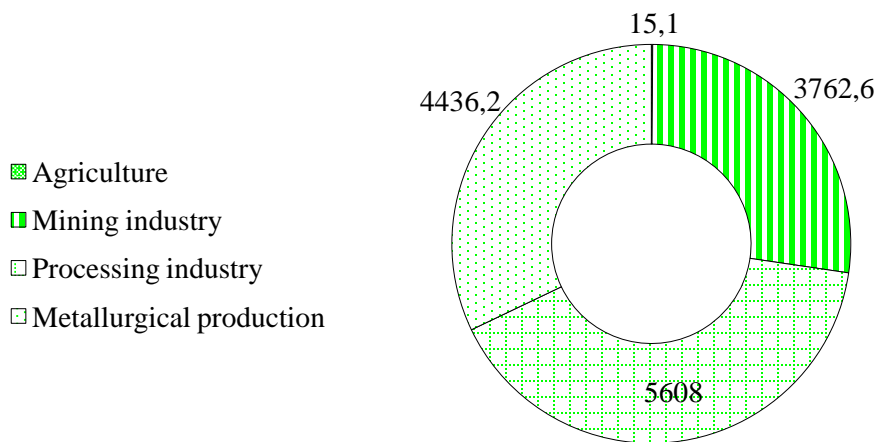


Fig. 6. Volume of capital investments in environmental protection by types of economic activity, million UAH (compiled by the authors based on data from [14])

As we can see, the agricultural sector is not very popular as a target for capital investments, as only 15 million UAH was spent on the entire sector, which is tens of times less than the volume of similar investments in other types of economic activity such as metallurgy, processing, and mining industries.

Fig. 7 shows the shares of each sector of agricultural economic activity. The most is spent on environmental protection in forestry, while the fisheries sector receives only 1 million UAH for all necessary measures. Agriculture and hunting account for 14%.

Thus, analyzing all the statistical information presented above, it can be concluded that the agricultural sector has the potential to increase its economic benefit, but faces certain problems on its way, such as lack of funding, insufficient number of government projects, slow pace of automation, and acceleration of urbanization processes.

“Kernel-Trade” LLC is one of the largest enterprises in the agro-industrial sector of Ukraine, which exports sunflower oil and grain crops to more than 80 countries around the world [15]. The most famous activity is considered to be the production and export of oil, but the logistics of grains and their sales occupy the largest share of the company’s profits. “Kernel-Trade” LLC is also engaged in farming in 13 regions of Ukraine, which brings the smallest, but still profitable income among all sectors.

As can be seen from Table 2, the main part of the profit, as well as the largest share of EBIDTA, is generated by the sale of grain by “Kernel-Trade” LLC. Among the indicators

that increased in 2022 are social expenses (including environmental initiatives) and gross income, along with net debt. Therefore, we propose to calculate a financial indicator, Debt/EBITDA, based on the data for this and previous years [16].

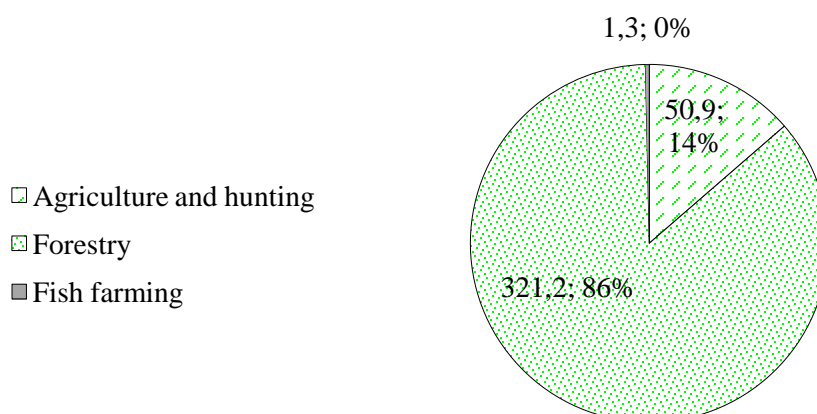


Fig. 7. Current expenditures on environmental protection by types of economic activity, million UAH (compiled by the authors based on data from [14])

Table 2

Key financial indicators of “Kernel-Trade” LLC, 2022 (compiled by the authors based on data from [16])

Indicator	Amount, million dollars USA	Changes relative to 2021
Profit, of which:	5332	-5%
– Oil production	1681	-4%
– Sale of grain	4535	-7%
– Farming	635	-3%
EBIDTA, of them	526	-73%
– Oil production	70	n/a
– Sale of grain	237	34%
– Farming	219	52%
Social costs	26.3	+6.7%
Net debt	285	+78%
Gross income	906	+28%
Debt/EBITDA	0.542	-3%

In the report on its activities for 2022 [16], “Kernel-Trade” LLC describes the areas of the UN’s global sustainable development goals to which the company has contributed over the year.

For example, indicators of energy management, waste management quality, water use, and contribution to Ukraine’s biodiversity are related to goals 6 (clean water and sanitation), 7 (affordable and clean energy), 12 (responsible production and consumption), 15 (protection and restoration of ecosystems on land), and 17 (partnerships for the goals).

Thus, based on the data in Table 3, the percentage of processed waste reaches 89%, and out of the total amount of water used, 74.3% was redirected to other processes and did not become emissions.

Table 3

**Contribution of “Kernel-Trade” LLC to achieving the United Nations Sustainable Development Goals (compiled by the authors based on data [17])**

Contribution to environmental Wednesday according to sustainable development goals No. 6, 7, 12, 15 and 17	Indicator	Digital indicators
	Energy management	6,881.4 TJ of electricity was consumed 57.3% – energy intensity of grain drying
	Use of water	3,354.7 ml of water was used 864.4 ml of water became emissions
	Waste management	59,263.6 tons - the total amount of waste 52,827.8 t - processed waste
	Management of biodiversity	Award of the UN Global Compact “Partnership for Sustainable Development” for cooperation with beekeepers and monetary contribution to pollination programs

In general, it is possible to generalize the environmental management of “Kernel-Trade” LLC into three processes:

- identification and classification of environmental problems of the enterprise;
- the process of developing and implementing appropriate measures to minimize and eliminate environmental problems;
- monitoring and control of further possible environmental risks (analysis and assessment of the state of the environment due to the impact of the enterprise’s activities) [17].

For an objective analysis, it is also worth considering the digital values of environmental aspects in all three areas of activity of “Kernel-Trade” LLC, which are presented in the report for 2022 (fig. 8).

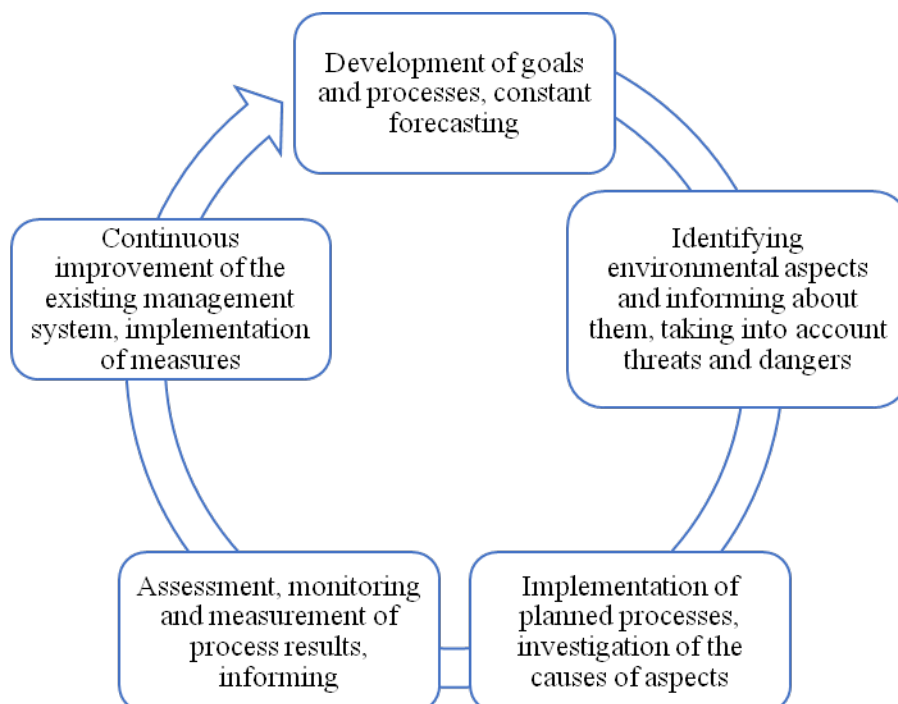


Fig. 8. The cycle of environmental management in the field of environmental protection of “Kernel-Trade” LLC (compiled by the authors based on [17] data)

The most environmentally friendly sphere per thousand tons of production is, surprisingly, oil production, as much less harmful substances are released into the atmosphere during all processes compared to the transportation of grain around the world (if only the amount of fuel used is taken into account – it is surprising that grain transportation is not the most polluting area of activity).

It is worthwhile to compare the amount of CO<sub>2</sub> emissions across all business sectors. As seen from Fig. 9, the agricultural sector has the highest share of CO<sub>2</sub> emissions per 1000 tons of production. Most likely, the greenhouse effect caused by the planting and processing of a large amount of grain crops is the reason for this. It is unknown how much pesticides “Kernel-Trade” LLC uses, but this is the most harmful impact of agriculture on the environment. Additionally, the cultivation of sunflowers and corn has a negative effect on some soils, which become exhausted over time due to the uniformity of crops.

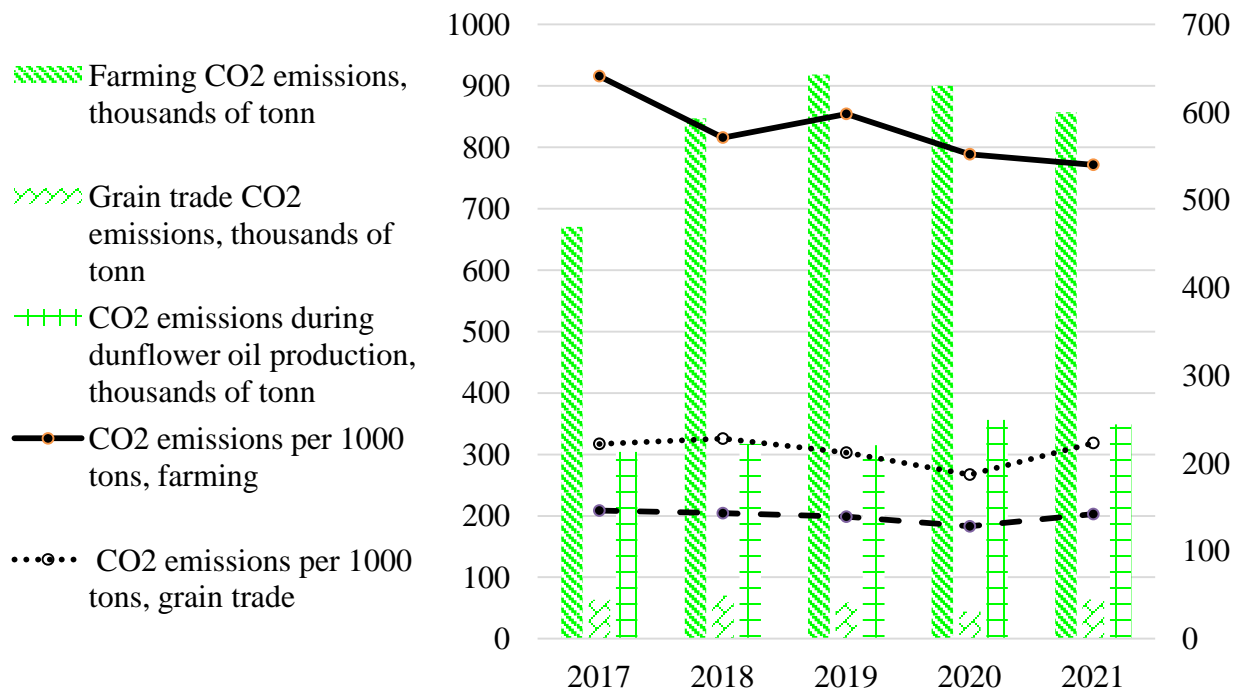


Fig. 9. Comparison of CO<sub>2</sub> emissions across different business sectors of “Kernel-Trade” LLC (compiled by the authors based on data [18])

Overall, considering that the sale of grain crops brings the highest profit, all business sectors of “Kernel-Trade” LLC are balanced in terms of environmental impact. Furthermore, taking into account that joint projects with the EBRD focus on the CO<sub>2</sub> emissions of the category 3 emissions, the negative impact on the environment will be reduced over time.

We propose to evaluate the state of environmental management of “Kernel-Trade” LLC in a SWOT matrix for an objective assessment of the company’s internal and external environment. If we summarize all the ideas presented in Table 4, we can conclude that the environmental management of “Kernel-Trade” LLC has many strengths and even more opportunities.

In turbulent 2022, the company decided to establish a sustainable development committee and included neutralizing the negative impact of the war on the ecological state of Ukraine in its goals. Therefore, the company plans to continue to grow and develop, and

even all the mentioned weaknesses and threats can be neutralized with quality management of financial, labor, and investment resources.

Table 4

**SWOT matrix of the environmental managements of “Kernel-Trade” LLC**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>– Availability of a clear environmental plan (strategies for one year and 5 years)</li> <li>– Availability of information about sustainable development on the company’s official website</li> <li>– Sufficient financial resources for program implementation</li> <li>– Good indicator of waste processing</li> <li>– Well-studied consumer needs in the market</li> <li>– Flexible management system</li> </ul>	<ul style="list-style-type: none"> <li>– High level of emissions</li> <li>– Delisting of shares from Warsaw Stock Exchange</li> <li>– Lack of relevant documentation on the site</li> <li>– A large area of land, it is difficult to monitor the proper implementation of plans</li> <li>– Insufficient awareness of personnel in the process of global environmental management</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>– Positive reputation worldwide (eco-image)</li> <li>– Awards from international organizations</li> <li>– Funding for projects abroad</li> <li>– Equipment modernization</li> <li>– Entry into new markets, expansion of old ones</li> <li>– Collaboration with global companies</li> </ul>	<ul style="list-style-type: none"> <li>– Decrease in income in the near term</li> <li>– Not enough contribution to environmental protection (the ecological impact of war cannot be compensated by waste processing)</li> <li>– Reconstruction of the entire management structure of the enterprise</li> <li>– Strengthening the positions of competitors in this area</li> <li>– High cost of resources and their processing</li> </ul>

**Conclusions.** The state of environmental management in agricultural enterprises is quite good, especially in large companies, as they can afford to create separate committees for environmental sustainability, allocate funds for social payments, and participate in various partnership programs with international organizations. However, despite all the positive aspects, there are areas for improvement – companies should share more transparent documentation with consumers, more detailed plans for sustainable development projects, and receive more collaborations with foreign firms in this field, as the experience of foreign companies will help compare situations and identify growth points for our enterprises. From a theoretical perspective, we conducted work on classifying definitions of the concept of “environmental management”, and from a practical standpoint, we analyzed the environmental management of “Kernel-Trade” LLC, which helps identify problems in the entire agriculture sector of Ukraine as a whole. For further research directions, it is worth considering environmental management in more polluted sectors, such as industry or wholesale and retail trade, and also delving into the legal framework of environmental aspects of Ukrainian legislation.

1. Афанасьєва М. А. Удосконалення механізму контролю діяльності в управлінні сталим розвитком підприємства : монографія ; Нац. техн. ун-т «Харків. політехн. Ін-т». Харків : Основа, 2020. 310 с.
2. Управління сталим розвитком : підручник для магістрів з управління та адміністрування ; за заг. ред. В. П. Бєха, М. В. Туленкова ; Мін-во освіти і науки України, Нац. пед. ун-т імені М. П. Драгоманова, Центр наукових досліджень проблем управління сталим розвитком. Київ : Каравела, 2018. 538 с.

3. Гобела В. В. Економіко-безпекова екологізація : теорія і практика : монографія. Львів : ЛьвДУВС, 2021. 244 с.
4. Домбровська С. М., Коврегін В. В., Помаза-Пономаренко А. Л., Коленов О. М. Державне управління у сфері безпеки соціально-еколого-економічних систем : монографія. Харків : НУЦЗУ, 2017. 244 с.
5. Малюк О. С., Кирилюк В. С. Формування екологозбалансованої інвестиційної стратегії підприємства : монографія. Суми : Університетська книга, 2018. 156 с.
6. Dentch M. The ISO 14001:2015 Implementation Handbook : Using the Process Approach to Build an Environmental Management System. ASQ Quality Press, 2016. 132 p.
7. Lame M., Marcantonio R. Environmental Management. Cambridge University Press, 2022. 348 p.
8. Tocci N. A Green and Global Europe. Polity, 2022. 240 p.
9. Weatherly D., Sheehan N. Cambridge IGCSE. Environmental Management : Student Book. Collins Cambridge IGCSE, 2017. 288 p.
10. Статистичний збірник «Сільське господарство України за 2021 рік», Держстат України.
11. Менисенко М. П. Сучасний стан та перспективи розвитку сільського господарства України. *Агросвіт*, 2019. №12. С. 15–21.
12. Про розмір мінімальної заробітної платні, Сайт Мінфіну. URL : <https://index.minfin.com.ua/ua/labour/salary/min/> (дата звернення 20.04.2023).
13. Статистичний збірник «Довкілля України, 2021 рік», Держстат України.
14. Економічна статистика Сільського, лісового та рибного господарства. URL : <https://www.ukrstat.gov.ua/> (дата звернення 22.04.2023).
15. Сайт підприємства Кернел. URL : <https://www.kernel.ua/ua/> (дата звернення 20.04.2023).
16. Річний звіт діяльності підприємства ТОВ «Кернел-Трейд», 2021. URL : [tps://www.kernel.ua/wp-content/uploads/2021/10/FY2021\\_Kernel\\_Annual\\_Report.pdf](https://www.kernel.ua/wp-content/uploads/2021/10/FY2021_Kernel_Annual_Report.pdf) (дата звернення 20.04.2023).
17. Політика з охорони навколишнього середовища ТОВ «Кернел-Трейд». URL : [https://www.kernel.ua/wp-content/uploads/2020/08/Politika-z-ohoroni-navkolishnogo-seredovishha\\_UKR\\_08.20.pdf](https://www.kernel.ua/wp-content/uploads/2020/08/Politika-z-ohoroni-navkolishnogo-seredovishha_UKR_08.20.pdf) (дата звернення 23.04.2023).
18. Про підхід до сталого розвитку ТОВ «Кернел-Трейд». URL : <https://www.kernel.ua/ua/about/strategy/> (дата звернення 23.04.2023).

#### References

1. Afanaseva, M.A. *Improving the mechanism of activity control in the management of sustainable development of the enterprise*. Kharkiv, 2020.
2. Bekha, V.P., and M.V. Tulenkova. *Management of sustainable development*. Kyiv, 2018.
3. Goleba, V.V. *Economic and security ecologisation: theory and practice*. Lviv, 2021. .
4. Dombrovska, S.M., Kovrehin, V.V., Pomaza-Ponomarenko, A.L., and O.M. Kolenko. *Public administration in the field of security of socio-ecological and economic systems*. Kharkiv, 2017.
5. Maliuk, O.S., and V.S.Kyryliuk. *Developing an environmentally balanced investment strategy for an enterprise*. Sumy, 2018.
6. Dentch, M. *The ISO 14001:2015 Implementation Handbook : Using the Process Approach to Build an Environmental Management System*. ASQ Quality Press, 2016.
7. Lame, M., and R. Marcantonio. *Environmental Management*. Cambridge University Press, 2022.
8. Tocci N. *A Green and Global Europe*. Polity, 2022.
9. Weatherly, D., and N. Sheehan. *Cambridge IGCSE. Environmental Management : Student Book*. Collins Cambridge IGCSE, 2017.
10. *Statistical collection "Agriculture of Ukraine, 2021"*. State Statistics Service of Ukraine [ukrstat.gov.ua/druk/publicat/kat\\_u/publ17\\_u.htm](http://ukrstat.gov.ua/druk/publicat/kat_u/publ17_u.htm). Accessed April 20, 2023.
11. Menysenko, M.P. "Current state and prospects for the development of Ukrainian agriculture." *Agrosvit*, 12, 2019, pp. 15–21.
12. "On the size of the minimum wage." Website of the Ministry of Finance [index.minfin.com.ua/ua/labour/salary/min/](http://index.minfin.com.ua/ua/labour/salary/min/). Accessed April 20, 2023.
13. *Statistical collection "Environment of Ukraine, 2021"*. State Statistics Service of Ukraine, [ukrstat.gov.ua/druk/publicat/kat\\_u/publnav\\_ser\\_u.htm](http://ukrstat.gov.ua/druk/publicat/kat_u/publnav_ser_u.htm). Accessed April 20, 2023.
14. "Economic statistics of agriculture, forestry and fisheries." State Statistics Service of Ukraine, [www.ukrstat.gov.ua/](http://www.ukrstat.gov.ua/). Accessed April 22, 2023.
15. Website of "Kernel-Trade" LLC, [www.kernel.ua/ua/](http://www.kernel.ua/ua/). Accessed April 20, 2023.
16. "Annual report on the company's activities of "Kernel-Trade" LLC, 2021." Website of "Kernel-Trade" LLC, [www.kernel.ua/wp-content/uploads/2021/10/FY2021\\_Kernel\\_Annual\\_Report.pdf](http://www.kernel.ua/wp-content/uploads/2021/10/FY2021_Kernel_Annual_Report.pdf). Accessed April 20, 2023.

17. "Environmental protection policy of "Kernel-Trade" LLC." Website of "Kernel-Trade" LLC, [www.kernel.ua/wp-content/uploads/2020/08/Politika-z-ohoroni-navkolishnogo-seredovishha\\_UKR\\_08.20.pdf](http://www.kernel.ua/wp-content/uploads/2020/08/Politika-z-ohoroni-navkolishnogo-seredovishha_UKR_08.20.pdf). Accessed April 23, 2023.
18. "On the approach to sustainable development of "Kernel-Trade" LLC." Website of "Kernel-Trade" LLC, [www.kernel.ua/ua/about/strategy/](http://www.kernel.ua/ua/about/strategy/). Accessed April 23, 2023.

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## **ПРОБЛЕМИ ВІТЧИЗНЯНИХ ЕКСПОРТЕРІВ В УМОВАХ ВОЄННОГО ЧАСУ**

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**Анотація.** Метою статті є дослідження прикладних проблем вітчизняних експортерів в умовах воєнного часу. У дослідженні використано наукові методи індукції та дедукції, аналізу та синтезу, порівняння, аналітичний і структурно-логічний. Результати дослідження показали, що російська військова агресія викликала низку проблем українських експортерів в різних секторах економіки, більше того, поставила цілі галузі на межу виживання. Проведено детальне аналізування динаміки і структури експорту за основними секторами економіки. Визначено основні загрози, з якими вони стикнулися у цей нелегкий для всієї нашої держави час. Сформульовано висновок, щодо потреби у інноваційній модернізації післявоєнної економіки України, як підґрунтя економічного розвитку. Головними завданнями якої стане структурна перебудова української економіки та розвиток високотехнологічних експортно-орієнтованих галузей промисловості. При цьому зусилля держави повинні бути зосереджені на визначенні можливостей переорієнтації зусиль підприємців на інноваційну діяльність, подолання технологічного відставання від розвинених країн. У протилежному випадку перебування української економіки на периферії світових інформаційних і фінансових процесів спричинить «вимивання» національного багатства через механізм нееквівалентного обміну, втрату власних джерел економічного зростання у довгостроковій перспективі. Наукова новизна дослідження полягає у використанні комплексного підходу до обґрунтування шляхів покращення експортної політики України у післявоєнний час, впровадження яких дозволить українським товаровиробникам зайняти чільне місце у міжнародному поділі праці. Пріоритетними напрямками покращення експортної політики України у післявоєнний час є: розвиток інноваційної діяльності; послідовна перебудова товарної структури експорту й імпорту шляхом наближення її до структурних співвідношень, властивим країнам з ринковою економікою, а саме скорочення частки сировинних товарів на користь високотехнологічних; підвищення конкурентоспроможності продукції завдяки використанню новітніх маркетингових засобів.

**Ключові слова:** проблеми, експортери, експорт, галузі, вплив, структура, динаміка, війна.

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## **PROBLEMS OF DOMESTIC EXPORTERS IN WARTIME CONDITIONS**