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SUSTAINABILITY REPORTING AS A TOOL FOR ATTRACTING INVESTMENTS FOR THE GREEN RECONSTRUCTION OF UKRAINE’S AGROBUSINESS

Abstract. Introduction. Global trends in the decarbonization of production and the development of the green economy prove that the principles of sustainable development have become a key reference point for making management decisions. Ukrainian agribusiness suffered huge losses due to military actions, so significant funds are needed for its reconstruction. To attract foreign investments, agricultural enterprises must prove their commitment to sustainable development goals by disclosing relevant information in the reporting. Purpose. The article aims to substantiate the practicality of preparing and publishing the Report on Sustainable Development as a tool for attracting investments for the green reconstruction of Ukraine’s agricultural sector and to reveal its information content. Methods. The paper uses an abstract-logical method to substantiate the benefits of reporting on sustainable development by agricultural enterprises. Based on the application of methods of analysis and synthesis, induction and deduction, and logical generalization, the content (indicators) of the Report on Sustainable Development and Investments was revealed. Using the analogy method made it possible to strengthen the justification of the importance of sustainability reporting in Ukraine based on the EU countries’ experience and the agribusiness need for foreign investments. Results. The paper systematizes the indicators of the Report on Sustainable Development and Investments in the agricultural sector and reveals some aspects of the normative regulation of sustainability reporting. An analysis of the factors of agricultural production was carried out, the disclosure of which in the Report on Sustainable Development will increase the agricultural enterprise’s investment attractiveness and testify to its desire to be more open (accountable) to society. Conclusion. Sustainability reporting can be a tool for an agribusiness to better understand its impact on the environment and risks and manage them more effectively, successfully use new opportunities and solve specific challenges to become a leader in sustainable development. The Report on Sustainable Development and Investments in the agricultural sector ensures greater transparency of the enterprise’s activities. It demonstrates to interested parties and the public its commitment to the principles of sustainable development, which increases the chances of successfully attracting external financing – foreign investments.

Keywords: sustainability reporting, ESGI-report, evaluation of the enterprise’s activity, foreign investments, green reconstruction of the economy, Ukraine’s agribusiness.

Problem statement. An assessment of the scale of destruction caused by Russian military aggression indicates that the post-war reconstruction of Ukraine's agricultural sector will depend primarily on the volume of foreign investment. Today, the government is already working with financial donors and European partners to develop a strategy for post-war economic recovery, including the green reconstruction of the agricultural sector. As evidenced by
previous studies [1; 6; 7], global trends in the production decarbonization and development of the green economy prove that the principles of sustainable development have become a key reference point for making investment decisions. European investments are expected to be aligned with EU climate and environmental policies and standards based on the principles of sustainable development. In this regard, to receive funds for reconstruction, Ukrainian agricultural enterprises must implement policies and practices of sustainable development in their activities and disclose information about them in reporting.

Thus, the issue of introducing sustainable development reporting into the management practice of agricultural enterprises in Ukraine determines the priority areas of research for scientists. The author hopes that this paper will supplement previous studies and form the theoretical and applied principles of sustainability reporting, revealing its decisive role in attracting external investments for the green reconstruction of the Ukrainian agricultural sector.

Analysis of recent research and publications shows that most previous studies [2; 8; 9; 12; 13] are focused on the investigation of standardisation, preparation and publication of non-financial reporting, the data of which reveal the enterprise strategy of sustainable development. However, non-financial reporting covers a much wider range of indicators of the enterprise’s activity than sustainable development indicators. Therefore, the focus of such research is quite versatile.

According to S. Yumita, T. Taufik and Y. Yousnaini, sustainability reporting allows companies to report on environmental and social indicators, and therefore, it is not just a collection of different reports; it is a method of summarising and improving a company’s commitment to the doctrine of sustainable development in a way that can be demonstrated to both internal and external stakeholders [7]. It proves that the decisions of stakeholders, particularly investors, will primarily be based on the analysis of the indicators of such reporting.

Analysing international regulatory acts in non-financial reporting, L.G. Lovinska revealed the main trends in improving companies’ reporting on their contribution to achieving the Sustainable Development Goals at the global level. Having evaluated the reporting of 12 foreign metallurgical companies, the researcher found that the variety of types of non-financial reporting leads to a decrease in its effectiveness in performing the most important function – disclosure of relevant non-financial information about achieving the Sustainable Development Goals [9].

In our opinion, the solution to this problem is the development of unified reporting forms for each industry because the comprehensive unification of reporting forms on sustainable development without considering the industry specifics negates the advantages of such reporting.

S.Ya. Korol, S.M. Semenova and M.A. Courbet analysed trends and outlined the prospects for introducing corporate reporting in Ukraine, its compliance with European practice and the declared desire for sustainable development. The researchers found that, given the unpreparedness of business managers and the difficulty of introducing such reporting, there is a need to develop and implement in Ukraine state programs to support and stimulate the social responsibility of business to transparency, in particular those entities that report on their contribution to sustainable development [8].

Agreeing with scientists’ conclusions, we consider it necessary to motivate agricultural enterprises to report on sustainable development by revealing the advantages of such an approach in attracting additional financing. In this regard, the article aims to substantiate the practicality of preparing and publishing the Report on Sustainable Development as a tool for attracting investments for the green reconstruction of Ukraine’s agricultural sector and to reveal its information content.

Methods. The paper uses an abstract-logical method to substantiate the benefits of reporting on sustainable development by agricultural enterprises. Based on the application of methods of analysis and synthesis, induction and deduction, and logical generalization, the content (indicators) of the Report on Sustainable Development were revealed. Using the analogy method made it possible to strengthen the justification of the importance of sustainability reporting in Ukraine based on the EU countries’ experience and the agribusiness need for foreign investments.

Presentation of the main research material. The concept of sustainable development (ESG-concept – environment, social, and governance) is designed to help business entities create their long-term value. The disclosure of non-financial information about such value in sustainability reporting aims to attract long-term investments in the preservation of human capital, the development of trusting relations with society, and the development of transparent corporate governance. When preparing sustainability reporting, Ukrainian agribusiness companies rely on:

– The UN Global Compact [17]. The UN Global Compact Network Ukraine annually holds the Partnership for Sustainable Development contest. The most outstanding projects implemented to meet sustainable development goals and in partnership with business, government and society are honoured with awards;

– Global Reporting Initiative (GRI) standards [5]. The Standards are designed as an easy-to-use modular set, delivering an inclusive picture of an organization’s material topics, related impacts, and how they are managed;

– Directive 2014/95/EU of the European Parliament and the Council on the disclosure of non-financial information [3]. The European Union (EU) Directive on Non-Financial Reporting (2014/95/EU) requires companies to include non-financial statements in their annual reports or a separate filing from 2018 onwards, including information on environmental protection, social responsibility and treatment of employees, respect for human rights, anti-corruption and bribery, and diversity on company boards. This directive applies to public-interest companies with over 500 employers in the EU, constituting approximately 6,000 companies and groups (listed companies, banks, insurance companies, and other public-interest entities). It recommends using international standards such as the UN Global Compact, OECD Guidelines, ISO 2600, or Global Reporting Initiative (GRI). This directive amends the accounting directive 2013/34/EU;

– Recommendations on ESG reporting and corporate governance practices of stock exchanges. In September 2015, when the Sustainable Stock Exchanges Initiative launched its Model Guidance for exchanges, less than 10% of stock exchanges worldwide were guiding reporting environmental, social and governance (ESG) information for their market. This gap in guidance on ESG reporting leads to incomplete corporate information, creating a
challenge for investors seeking a comprehensive view of a company’s material issues [4].

Applying these legal acts and initiatives makes it possible to reveal information about a business’s environmental, human and social capital.

Disclosure of information about environmental capital can be considered appropriate if indicators of the impact of agricultural activity on the environment, compliance with environmental requirements and efforts to reduce land, water, and air pollution are highlighted.

Thanks to introducing innovative technologies, enterprises have gained new opportunities for sustainable development by saving natural resources and reducing environmental damage. In particular, increasing energy efficiency is inextricably linked to introducing technologies to reduce greenhouse gas emissions (carbon dioxide, methane) and the transition to producing electricity and heat from biomass (grain waste, husks). First of all, it applies to the most energy-intensive segments: drying and cleaning of grain, heat treatment of raw materials, and cooling of oil, milk, and meat.

An important area of energy management is the gradual transition to operating low-carbon agricultural machinery (in particular, John Deere, CNH Industrial) running on biomethane and biodiesel. In addition, GPS trackers and remote fuel monitoring systems significantly reduce fuel consumption.

In times of climatic change and periodic droughts in Ukraine, increasing water use efficiency and building facilities for biological, physical, and chemical wastewater treatment are of great importance. The withdrawal of underground and surface water (for irrigation, technical and domestic needs) should be carried out only after obtaining permits for special water use from the State Agency of Water Resources of Ukraine and its territorial subdivisions. It is important to prevent the flow of pollutants into reservoirs by accurately applying fertilizers and pesticides to the soil, building and constantly monitoring the condition of protective buffer zones of water bodies, and collecting rainwater. Reducing water consumption is achieved through modern pumping and distribution equipment, a dry method of manure removal, and dry cooling systems.

The key performance indicators are reducing the amount of waste its reuse or transfer to providers of waste disposal services licensed by the Ministry of Environmental Protection and Natural Resources of Ukraine. In particular, the harvest residues can be mulched or used as fodder (together with cake) or for the production of steam; straw can be used for livestock bedding; manure is subjected to natural composting in piles; pesticide packages are disposed of; sunflower seed husks are used as fuel; ash – for the production of fertilizers.

Minimization of the negative impact on biodiversity is achieved through precision agriculture technologies, remote sensing, NDVI (Normalized Difference Vegetation Index) data collection from satellites, and data synchronization in GIS programs (geo-information systems). Tablets with the Mobile Agronomist application make the risk assessment and decision-making process more efficient. The use of biodestructors (bacteria and fungi) contributes to the maintenance of soil biodiversity. Reduced tillage, cover crops, and perennial crops preserve microbial ecosystems in soil, crop residues, and plant biomass. In addition, introducing pesticides by sprayers with a positioning control system, excluding genetically modified seeds, and monitoring soil nutrients prevent soil quality deterioration.

One of the key indicators of environmental efficiency is obtaining permits for emissions into the atmosphere, water intake and discharge of wastewater into water bodies.

Equally essential indicators to be disclosed in sustainability reporting are approaches to identifying, assessing and managing climate-related physical and regulatory risks. Assessment of climatic patterns with the help of meteorological stations and satellites makes it possible to make strategic decisions regarding the geographical location of crops. Over the next 10 years, the boundaries of natural zones (woodland, forest-steppe, steppe) will gradually shift to the northwest, and forecasting extreme weather conditions will avoid a decrease in productivity.

The regulatory risk should include an increase in the price of electricity, fertilizers and an increase in the tax on greenhouse gas emissions in the EU and Ukraine (by boilers, machinery, farms and fertilizers, from burning biomass, during transportation (including by sea), during business trips). Thus, it is expected that the environmental tax for CO2 emissions in Ukraine (currently 30 UAH/t) will be increased to the EU level (65.4 EUR/t in 2030), and industry prices for electricity will rise from 80 to 300 EUR/MW-h. The cost of fertilizers will consider the EU quota for CO2 emissions (306.1 EUR/t in 2030). In this regard, it is important to disclose in the reporting of sustainable development measures to reduce CO2 emissions: reduction of tillage (85% reduction), cultivation of cover crops (31% reduction), use of nitrification inhibitors (10% reduction), differentiated mineral feeding, modernization of equipment, installation of dust filters [6].

Human resources management is based on the principle of human capital development. The primary indicator of sustainable development reporting in human capital is data on the number of employees and the payroll:

- Basic salary, bonuses, pension payments, material assistance, health insurance and life insurance;
- Free food, transport and sports events;
- Bonuses.

During the period of martial law, information on the preservation of financial support for those mobilized to the Armed Forces of Ukraine or the Territorial Defense, the provision of equipment, medicines and ammunition to military units (body armour, thermal imagers, quadcopters), material assistance to the families of deceased workers, the evacuation of workers, the provision of shelter and food for internally displaced persons, assistance at the birth of a child.

An integral value of a business entity is training, advanced training and certification of its employees. In particular, training in tactical medicine, hygiene and interchangeability are important in martial law conditions.

Injuries and deaths at work can be prevented by studying labour protection rules and installing monitors and surveillance cameras.

Following the principles of the UN Global Compact also means providing equal employment opportunities for women and persons with disabilities, not using forced or child labour, exercising the right to participate in trade unions and concluding collective agreements.

Regarding social capital, sustainability reporting should disclose information on combating shadow turnover, fraud and theft. First of all, these are inspections of counterparties on the subject of registration of land use rights, existence of contracts for the sale of products and services, and non-compliance with the risk criteria of VAT payers.
Prevention of corruption risks involves levelling the possibilities of receiving undue benefits, conflict of interests, and working for other companies.

Disclosing information about measures to prevent gender-based and domestic violence is important, too.

Maximizing positive social impact is only possible with the support of local communities and society. Investments can be directed to infrastructure (repairs of roads, bridges, street lighting, water pipes, bus stops); education (maintenance of schools, kindergartens, playgrounds); targeted charity (to low-income families, orphanages, homes for older adults, seriously ill); sports and culture (construction of libraries, sports fields, cultural centres, supply of equipment for sports halls, sponsorship of sports and cultural events); health care (maintenance of rural health care facilities, purchase of medical equipment).

The socially responsible business also trains students of various specialities directly at the production site and provides consultations to partners on developing technological maps, agronomy, and productivity improvement.

Interaction with suppliers is one of the key aspects of the sustainable development strategy to reduce greenhouse gas emissions (in the EU by 61% by 2030) throughout the supply chain (from fertilizers and machinery to finished products) [6]. In this part, counterparties are subject to verification for compliance with ethics, fair business practices, human rights, occupational health and safety, environmental protection, and environmental and social criteria.

Another equally important aspect is the management of product quality and safety issues according to ISO 9001:2015 "Quality management systems", ISO 22000:2018 "Food safety management systems", ISO 14001:2015 "Environmental management systems", and ISO 45001:2018 "Occupational health and safety management" standards. Quality and safety control is achieved due to independent audits of compliance with HACCP (Hazard analysis critical control points) principles, which aim to eliminate biological, chemical and physical hazards throughout the production chain. Adherence to HACCP principles involves the following procedures:

1) risk analysis;
2) determination of critical control points (CCP);
3) establishment of critical limits;
4) monitoring;
5) corrective actions;
6) inspections;
7) record keeping and documentation.

Table 1 summarizes the indicators of sustainability reporting, the disclosure of which will ensure an increase in the investment attractiveness of agricultural business entities in Ukraine.

Today, the Report on Sustainable Development is a benchmark in calculating non-financial reporting indicators formed by the requirements of the GRI system [5]. The main elements of GRI reporting are characteristics of the enterprise (description of the enterprise and its strategy), information on management approaches, and the level of efficiency of the enterprise's economic, environmental and social activities.

In the context of sustainability reporting, it is also worth mentioning Integrated Reporting (IR), which involves a

## Sustainability reporting indicators

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<th>Type of capital</th>
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| Ecological capital | – Energy management (production of electricity and thermal energy from biomass, low-carbon gas technology on biogas and biodiesel, GPS-monitoring systems);  
– Water and wastewater management (permits for special use, technologies for precise application of fertilizers and pesticides, water buffer zones, rainwater collection and wastewater treatment systems, systems for precise water distribution and dry cooling, dry method of manure removal);  
– Waste management (waste reuse technologies (for feed, fertilizer, fuel, bedding), transfer to specialized enterprises for disposal);  
– Biodiversity management (precision farming systems, remote sensing, GIS systems, tablets, biodestructors, reduced tillage, perennial crops, control of seed quality and soil nutrition, precise application of pesticides);  
– Monitoring of the impact on the environment and compliance with environmental requirements (permits for emissions into the atmosphere, for water intake, for the use of subsoil);  
– Climate actions (data from meteorological stations and GIS solutions, changes in the cost of electricity and taxation of greenhouse gases, assessment of the reduction of CO₂ emissions (stationary sources, machinery, fertilizers and ships), implementation of measures to reduce CO₂ emissions (nitrification inhibitors, differentiated mineral fertilization, modernization appliances, dust filters)); |
| Human capital | – Employment (salary, pension payments, financial assistance (including upon the birth of a child), bonuses, insurance, housing, food, transport, monetary support for the military, provision of equipment to military units, assistance to the families of the dead, evacuation);  
– Training and career growth (training, continuous professional development and certification, installation of surveillance cameras);  
– Human rights, diversity and inclusion (non-discrimination of women and disabled people, prohibition of forced and child labour);  
– Freedom of association and collective bargaining |
| Social capital | – Anti-corruption and compliance (methods of checking counterparties to prevent shadow turnover, illegal tax optimization, systems for preventing employee theft and fraud);  
– Support of local communities and society as a whole (investments in infrastructure, education, sports, culture, health care, agricultural consulting);  
– Interaction with suppliers (verification of compliance with ethical standards, human rights, occupational hygiene, environmental and social standards);  
– Product quality and customer safety (compliance with ISO standards and HACCP principles) |

Source: summarized by the author based on [3; 5; 16]
combination of financial and non-financial indicators of the enterprise's activity. As a rule, an integrated report contains eight interrelated sections: an overview of the organization and the external environment, management, business model, opportunities and risks of the enterprise, strategy and resource allocation, labour productivity, development strategy, and the basis of preparation and presentation of non-financial reporting.

The enterprise can disclose certain aspects of climate change or social risks in the Report on Corporate Social Responsibility (CSR Report), which is drawn up in an arbitrary format according to the enterprise's structure.

Quantitative indicators of the CSR Report may include the share of the economic entity in the product markets (goods, works, services), the increase in the number of jobs, the dynamics of stock activity (increase in the quotation ratio, increase in profitability and the level of dividend income of shares), the efficiency of innovation and investment activity.

Qualitative indicators of CSR Report can be:

- the image, business reputation (goodwill) of the enterprise, on which its popularity, prestige, and stability depend;
- social activity of the enterprise due to its participation in overcoming the consequences of Russian armed aggression against Ukraine (maintenance of earnings for mobilized workers, assistance with resettlement from places of active hostilities and occupied territories, material assistance to family members of participants in hostilities, material support of military formations (vehicles, fuel, body armour, military uniforms and helmets, thermal imagers, quadcopters, means of communication), assistance to communities (repair of roads and lighting));
- environmental protection activities of the enterprise, which are implemented through the implementation of ecologically clean productions, combating pollution of the natural environment.

Starting from the period ended on December 31, 2018, for those business entities that are required to publish financial statements (large and medium-sized enterprises), the Law of Ukraine "On Accounting and Financial Reporting" [18] requires the preparation of a Management Report, which is part of the financial statements of enterprises. Based on methodical recommendations for preparing a management report [10], the indicators of this report combine elements of integrated reporting and sustainable development.

Therefore, according to the Corporate Sustainability Reporting Directive (CSRD) [16], the Report on Sustainable Development is considered part of the management report. This means that its indicators play an essential role in making management decisions, particularly investment ones.

That is why, on the basis of the new European Sustainability Reporting Standards (ESRS), approved by the European Commission in July 2023 [15], we have started the development of the Sustainable Reporting Platform [14]. The platform will be used by agricultural enterprises of Ukraine to prepare the Report on Sustainable Development and Investments in the agricultural sector of the economy. Such a Report will include not only unified forms for displaying indicators of sustainable development, but also questionnaires for a detailed survey of enterprises for the preparation of notes for such a Report. This work is being carried out until May 2025 as part of the MSCA4Ukraine project. The MSCA4Ukraine is the Programme of the European Commission funded under the EU’s Marie Sklodowska Curie Actions [11].

We also defined the main principles of the Report on Sustainable Development and Investments in the agricultural sector of the economy:

1. The information must contain relevant data for internal and external users;
2. Information must be specific and complete;
3. Information should be clear, balanced and understandable in the form of tables, graphs and charts;
4. Information must be consistent over a long period of time;
5. Information should be comparable among enterprises of the industry in the region of activity within the sector;
6. Information disclosure must be reliable, objective and verifiable on the basis of an audit trail;
7. Information must be provided on a timely basis to influence decisions promptly.

Conclusions. The study results show that the Report on Sustainable Development and Investments in the agricultural sector (ESGI-report) can become a tool for agribusiness to better understand its impact on the environment and risks and manage them more effectively, successfully use new opportunities and solve specific problems to become a leader in sustainable development. The ESGI-report will provide greater transparency of an enterprise's operations and demonstrate its commitment to sustainable development principles to stakeholders and the public.

The ESGI-report will provide greater transparency of the company's activities and demonstrate to stakeholders and the public its commitment to the principles of sustainable development.

Considering the growing trends in developing the green economy in the EU countries, the publication of the Report on Sustainable Development by Ukrainian enterprises is a prerequisite for the post-war recovery of Ukraine's economy. Information about the ecological, human and social capital of Ukrainian agribusiness will attract foreign investments for demining de-occupied territories, rebuilding production capacities and restoring rural infrastructure.

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