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SUSTAINABILITY REPORTING STANDARDIZATION
AS A PREREQUISITE FOR GREEN POST-WAR
RECONSTRUCTION OF THE AGRICULTURAL SECTOR

Summary. The article is devoted to the study of standardization of sustainable development reporting in the context of granting Ukraine the status of a candidate for membership in the European Union and crisis phenomena related to Russian military aggression against Ukraine. It has been established that the implementation of Directives, Regulations, EU standards in the field of non-financial reporting determines the need for the formation of domestic legislation based on the principles of green transition and digital transformation. It was justified that the Report on Sustainable Development (Environmental, Social, Governance) and Investments (ESGI Report) should become one of the tools for attracting investments, loans, and insurance products in the post-war reconstruction of Ukraine's agricultural sector, taking into account global efforts aimed at preventing negative climate change and global warming.

Keywords: ESGI report; Sustainability Reporting Platform; standardization; green investments; low-carbon technologies; social responsibility; GRI, TCFD, CDP initiatives; standards S1, S2, SASB, ESRS; Directive on corporate sustainability reporting (CSRD).

Анотація. Стаття присвячена дослідженню міжнародного досвіду стандартизації нефінансової звітності та імплементації Директив, Регламентів, стандартів Європейського Союзу у сфері звітності сталого розвитку. Встановлено, що країни, які взяли на себе зобов’язання боротьби з глобальним потеплінням, впроваджують міжнародні та європейські стандарти нефінансової звітності та затверджують їх для застосування суб’єктами суспільного інтересу, емітентами цінних паперів. Україна, як кандидат на членство в ЄС, все більше залежить від цих процесів. Проте, сьогодні першочерговим завданням вітчизняної економіки є подолання кризових явищ, пов’язаних з військовою російською агресією. Для цього вони потребують інформації, щоб гарантувати собі мінімізацію своїх ризиків, які можуть виникнути при залученні їх у процеси відновлення економіки України на принципах сталого розвитку. Щоб відповісти на готовність такої допомоги, Україні необхідно впроваджувати реформи, зокрема, і у сфері обліку та звітності. Обґрунтовано, що Звіт зі сталого розвитку та інвестицій (Report on sustainable development (Environmental, Social, Governance) and Investments, – ESGI Report) повинен стати одним із інструментів для залучення інвестицій, кредитів, страхових продуктів у післявоєнну відбудову аграрного сектору, з урахуванням глобальних зусиль, спрямованих на запобігання негативним кліматичним змінам і глобальному потеплінню. Рекомендовано поступове впровадження ESGI-звіту з метою залучення зелених інвестицій, банківських і страхових продуктів; отримання зворотного зв’язку від суб’єктів агросектору за результатами підготовки і оприлюднення нефінансової інформації; популяризацію технологій сталого розвитку та інструментів ви-
Problem statement. The transition of public consciousness to sustainable agricultural activity principles (activity aimed not so much at obtaining economic profit as at environmental management and social responsibility) is the driving force behind the transformation of the forms of reporting of agricultural entities. Banking institutions, insurance companies, investors, and society need more financial information about the activities of enterprises in the agrarian sector. Stakeholders need to know how the company's activities affect the environment and climate, whether the company respects human rights, and how effective the risk assessment and management system is. Therefore, the number of enterprises that, along with financial statements, will prepare and publish a report on sustainable development will continue to grow in the coming years. Instead, those business entities that pay more attention to these issues today have a competitive advantage in the market of goods and services, increasing their investment attractiveness.

However, non-financial reporting is not widespread enough among Ukrainian agricultural business entities. Only a few Ukrainian companies prepare sustainable development reports (no more than 10% of all enterprises). In contrast, according to the published data of Fortune International magazine "The Fortune Global 500", the number of socially responsible companies in the rating is about 80%. Therefore, the publication of information on sustainable development is not only an integral condition for increasing the competitiveness of Ukrainian economic entities in the markets of financial resources but also an effective tool for attracting foreign investment in the post-war reconstruction of Ukraine's agricultural sector. The standardization for such reports reflecting the efforts of businesses to combat corruption, its social responsibility and reputation is an issue that requires in-depth scientific and methodical justification and legal support.

Literature review shows that studies in economics, which discussed the need to build a new business model based on responsibility for activities to local and global communities, appeared in the 1950s and 1960s in the United States. The first scientific work was G. Bowen's monograph "Social Responsibility of a Businessman" [28], emphasising the need to reconcile entrepreneurs' resolutions and social values.

Schaltegger et al.'s article [10] is devoted to the problem of the exit of managerial corporate sustainable development beyond the boundaries of the organization to the meso- and macro-level in order to contribute to the sustainable development of supply chains, markets, society, and the natural environment. In another publication, S. Shaltegger and R. L. Burritt justify the position that financial accounting does not reveal the level of corporate impact on the environment. Therefore, environmental accounting appeared and modified conventional management accounting [11].

Ukrainian researchers emphasise that the reporting content should be standardised to international requirements for the sake of accuracy of the economic analysis of the state of the enterprise and improvement of the efficiency of management decisions [19; 20]. K. Bezverkhyi, N. Poddubna, and O. Moshkovska emphasise the importance of developing tools for measuring non-financial indicators and standardising sustainability reporting to compare enterprises [17].

According to V. F. Holov, users' information needs are much broader than the topics disclosed in financial statements [18, c. 452]. M. S. Pushkar states that retrospective financial reporting does not reproduce the content and complexity of the business model and the purpose of intangible assets in business conduct [26, p. 132].

In general, works on non-financial reporting pay attention to general theoretical issues. However, beyond the attention of researchers, the question remains how sustainability reporting can become a practical tool for attracting investments, loans, and insurance products for the post-war reconstruction of agribusiness entities on the principles of sustainable development, in particular, through the introduction of low-carbon technologies and the construction of biogas plants and power plants on photocells.

The article aims to generalize the existing international experience and European Directives, Regulations, standards, and guidance in preparing non-financial information and to develop the Sustainability Reporting Platform for application in the practice of Ukrainian agricultural enterprises.

The main research material. The environment suffers from the economic activity of business entities. Various scenarios regarding global warming of 1.5-3 degrees Celsius by 2050 determine the need to form such a model of social development in which it is possible to meet the current generation's needs without negative consequences for the future.

However, Ukrainian enterprises are only beginning to implement strategic principles in management activities and, for the most part, do not develop long-term sustainable development strategies, which reduces the reliability of their forecasts. In addition, there are no strategies, laws, standards, or methodical recommendations for preparing sustainable development reports in Ukraine [24; 25]. The lack of man-
The main goal of the EGD is the firm transition of all European countries to climate neutrality by 2050. To achieve this goal, several program documents have already been implemented in various areas: Sustainable Finance Strategy, Circular Economy Action Plan, EU Biodiversity Strategy for 2030, Farm to Fork Strategy, Green Agriculture Strategy, Action Plan for the Development of EU Organic Production, Communiqué "Fit for 55" (achieving the EU climate target by 2030 on the way to climate neutrality).

In May 2022, the European Commission published a notice on creating an international communication platform for reconstructing Ukraine based on the principles of green recovery, reduction of greenhouse gas emissions, waste reuse, energy saving, and digitalization [3].

In June 2023, the European Commission announced a financial assistance tool for Ukraine for 50 billion euros - the Ukraine Facility [9]. This tool will contribute to maintaining macro-financial stability, reconstruction, and modernization of Ukraine during European integration. Financing of 50 billion euros is forecast for the period 2024–2027.

Ukraine Facility contains three key goals (European integration, digital transformation, green transition) and three components [16].

The first component outlines financial support through grants and loans to ensure financial stability. Payments will be made quarterly after the European Commission has verified the fulfillment of contractual terms.

The second component is an investment program that will attract public and private investments to restore and reconstruct Ukraine. 8 billion euros will cover credit risks for investors, allowing receiving additional financing of 30 billion euros through such international organizations as the European Bank for Reconstruction and Development, the European Investment Bank, and the World Bank [27].

The third component involves technical assistance and other supporting measures (mobilization of reform experience, support of local authorities, and civil society) in transitioning to a green, digital and inclusive economy.

The key priorities in the agricultural sector should be: reforming the industry according to the standards of the EU Common Agricultural Policy (CAP); registering producers in the State Agrarian Register; approving the Strategy for the Development of the Agro-Industrial Complex until 2030; introducing programs to support the agricultural sector, innovations in agrotechnical and food technologies; modernization of infrastructure; promotion of sustainable energy and organic production.

Already today, thanks to the use of such methods of renewable agriculture as reduced tillage (no-till, strip-till, mini-till), the use of siderates or cover crops, organic fertilizers instead of synthetic ones, leaving crop residues on the field, Ukrainian farmers can accumulate organic matter in the soil carbon and...
integrate into the international carbon market. For example, participation in the Agreena project allows producers who use reduced cultivation technologies to earn 32 euros for one carbon certificate obtained for keeping an approximate equivalent of up to 1 ton of CO₂ on 1 ha [30].

To obtain the support mentioned above, the Government developed the Plan of Ukraine for 2024–2027, in which the introduction of ESG standards is recognised as one of the catalysts for capital investments and access to foreign capital markets [21]. This plan complements the Recovery Plan of Ukraine for 2023–2032 [22] and defines the key issues of demining agricultural lands, decentralising grain storage infrastructure and restoration of the irrigation system.

Therefore, in the current conditions, ESG reporting should turn into an ESGI report, the information from which is aimed at attracting potential investors and partners, which will contribute to the further climate-neutral development of the agricultural sector and Ukraine’s economy.

These processes correspond to regulatory changes at the EU level. Following EU Directive No. 2022/2464 dated 14.12.2022, which amended the EU Directive on corporate sustainability reporting (CSRD), the first mandatory sustainability reporting must be published by a part of enterprises and their groups in EU countries in 2025 for 2024 [4]. Therefore, Ukrainian enterprises today need to assess whether they are ready to meet the requirements of European markets for the sale of their products and services.

In addition to risk management issues, the updated CSRD addresses social challenges: compliance with the principles of inclusiveness, equality and justice. The directive covers over a hundred indicators that require the active participation of all stakeholders in the value chain. A mandatory assurance requirement, including external audit procedures, is introduced to increase user confidence in measured sustainability indicators.

According to the CSRD, from January 1, 2024, sustainability reports must be submitted by large organisations whose securities are listed on a regulated EU market, credit and insurance companies of the EU, and entities of public interest with a staff of 500 employees. Reports must be submitted by large organisations and groups of EU companies in which the total balance sheet exceeds 20 million euros, and the net turnover exceeds 40 million euros, the number of employees exceeds 250 people.

The number of EU entities publishing sustainability reports will gradually increase (Table 1).

From 1 January 2028, reporting will be extended to non-EU companies that have an EU subsidiary (it must be a large EU company or an EU company registered on a regulated market and not a micro-enterprise) or a branch in EU with a net turnover exceeding EUR 40 million in the previous financial year. In addition, these companies must have an annual net turnover on a consolidated or individual level exceeding EUR 150 million for each of the last two financial years.

To implement the CSRD, in July 2023, the European Commission approved the first twelve new European Sustainability Reporting Standards (ESRS) developed by the European Financial Reporting Advisory Group (EFRAG). The standards contain disclosure requirements (ESRS 1, 2); environmental problems (ESRS E1-E5 – circular economy, climatic conditions, water, biodiversity and environmental pollution); social issues (ESRS S1-S4 – working conditions and equal treatment of employees, respect for human rights in the value chain); components of management (ESRS G1 – corporate bodies, systems of internal control and risk management, fight against corruption, political influence) [5].

The need to satisfy the demand for qualitative, quantitative, retrospective, short-, medium-, and long-term perspective information was conditioned by the unification of efforts of international initiatives in the field of regulation of non-financial information: the Global Reporting Initiative (GRI), the International Sustainability Standards Board (ISSB) of the IFRS Foundation, the European Financial Reporting Advisory Group (EFRAG).

Analysis of known standardization systems of sustainability reporting shows that the GRI can be called the most common. Consider the key characteristics of some leading sustainability reporting systems (Table 2).

Let's focus on the key centres of the development of standards for sustainability reporting.

Table 1 – Compulsory publication of the sustainability reports in the EU

| Large subjects of public interest | From January 1, 2024 – mandatory |
| Maternal subjects of public interest | From January 1, 2024 – mandatory |
| Large, except subjects of public interest | From January 1, 2025 – mandatory |
| Maternal, except subjects of public interest | From January 1, 2026 – mandatory |
| Small and medium subjects of public interest, except micro | Voluntarily |
| Medium, small, micro, which are not subjects of public interest | Voluntarily |

Source: compiled by the author based on analysis of EU legislation.
### Table 2 – Leading sustainability reporting systems

<table>
<thead>
<tr>
<th>Bodies and initiatives of the sustainability reporting systems</th>
<th>Key characteristics of the system</th>
<th>Reporting entities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Global Reporting Initiative (GRI)</strong></td>
<td>Covers universal, industry and thematic standards. In particular, GRI 13 (2011) focuses on agriculture, aquaculture and fishing</td>
<td>The GRI is used in more than 23,000 reports by major companies around the world</td>
</tr>
<tr>
<td><strong>The International Sustainability Standards Board (ISSB)</strong></td>
<td>A recently established part of the IFRS Fund aims to consolidate existing ESG systems</td>
<td>The Board has no authority to mandate the application of its standards. Businesses can choose whether to apply them or not</td>
</tr>
<tr>
<td><strong>The Sustainability Accounting Standards Board (SASB)</strong></td>
<td>77 industry standards covering all aspects of ESG</td>
<td>Any business entity can use SASB standards</td>
</tr>
<tr>
<td><strong>The Climate Disclosure Standards Board (CDSB)</strong></td>
<td>The Board focuses on the aspect of ecology (E) and covers information on the environment and climate change. From 2022, the CDSB is consolidated within the IFRS Foundation and will no longer issue any standards</td>
<td>Subjects from the financial and non-financial sectors. Other structures are also applying these standards as managers and capital owners want to better understand risk and its impact on investments</td>
</tr>
<tr>
<td><strong>The International Integrated Reporting Council (IIRC)</strong></td>
<td>The international integrated reporting system covers all aspects of ESG</td>
<td>Any business entity has the right to choose this system</td>
</tr>
<tr>
<td><strong>The Task Force on Climate-related Financial Disclosures (TCFD) of the Financial Stability Board</strong></td>
<td>The main focus of the TCFD is on climate change issues. These guidelines can be applied to any ESG reserve system [12]</td>
<td>Investors and financial institutions, analysts, corporations, exchanges, accounting firms, environmental, social and governance (ESG) data providers, rating agencies, financial service providers</td>
</tr>
<tr>
<td><strong>The Carbon Disclosure Project (CDP)</strong></td>
<td>The CDP runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts (environmental problems, carbon emissions, water use and deforestation) (E) [2]</td>
<td>Most large business entities</td>
</tr>
<tr>
<td><strong>The Greenhouse Gas Protocol</strong></td>
<td>A multilateral partnership of companies, organizations, and governments formed to develop and implement standards and reporting on greenhouse gases [14]</td>
<td>Non-governmental organizations, state institutions and universities</td>
</tr>
<tr>
<td><strong>The Office of the United Nations High Commissioner for Human Rights</strong></td>
<td>The United Nations Guiding Principles on Business and Human Rights (UNGP), which focus on the dimension of social development (S)</td>
<td>Non-financial institutions, budgetary organizations</td>
</tr>
<tr>
<td><strong>The Organisation for Economic Co-operation and Development (OECD)</strong></td>
<td>OECD Due Diligence Guidelines for Responsible Business Conduct, derived from the UNGP Guidelines and developed specifically for specific sectors, including agriculture</td>
<td>Any business entity can contribute to achieving the goal of responsible business behavior and disclose the actions it takes</td>
</tr>
<tr>
<td><strong>The Social Accountability International (SAI)</strong></td>
<td>SA8000 standards focus on the aspect of social development (S), covering child labour, forced or compulsory labour, freedom of association and the right to collective bargaining, discrimination issues, disciplinary practices, working hours and remuneration</td>
<td>Enterprises and organizations that provide consulting services on energy conservation, management of the surrounding natural environment</td>
</tr>
<tr>
<td><strong>The Ethical Trading Initiative</strong></td>
<td>A social system with a focus on the supply chain. The most relevant for the agricultural sector are the recommendations on gender equality and child labor</td>
<td>Subjects of the financial and non-financial sectors</td>
</tr>
</tbody>
</table>

Source: systematized by the author based on the analysis of public information from Internet sources [2; 12; 14]
its first standard in 2000. The standards are structured into three series: universal, branch, and thematic [15]. From January 1, 2024, the updated GRI 13 "Agriculture, Aquaculture and Fishing Sectors 2022" will be applied in the agricultural sector.

Another centre of international standardisation of sustainability reporting is the International Sustainability Standards Board (ISSB), which, in June 2023, at the annual conference of the IFRS Foundation, presented the first two standards for the disclosure of ESG information aimed at harmonising non-financial reporting in the world. These are IFRS S1 "General Requirements for Disclosure of Sustainability-related Financial Information" (includes several requirements for disclosure of information about risks and opportunities related to sustainable development in the short, medium and long term) and IFRS S2 "Climate-related Disclosures" [6].

These standards are another step towards forming unified global approaches to the disclosure of high-quality, comparable information on sustainable development necessary for making investment decisions. They are based on the recommendations of the G20 Task Force on Climate-Related Financial Disclosures (TCFD). Since the G7 actively supported the adoption of sustainability reporting standards, we expect that the ISSB standards will gradually become mandatory in these countries.

The date of entry into force of the first two standards is January 2024. Their implementation will take place in two stages. In the first year of implementing the new rules, business entities can limit themselves to disclosing information on climate risks and opportunities (standard S2). Businesses will not be required to disclose information on scope 3 greenhouse gas emissions under the Greenhouse Gas Protocol.

The international standards and sustainability reporting guidelines formed the basis for implementing the European Sustainability Reporting Standards (ESRS), developed by the European Financial Reporting Advisory Group (EFRAG).

The approaches of GRI, ISSB, and EFRAG do not compete but complement each other because the goal of standardisation is not just to provide structured information to users but also to ensure its comparison at the level of business entities and industries. Therefore, we expect these developers to continue working together to overcome asymmetry and build consumer trust by disclosing information about the level of sustainability in the value chain.

Considering Ukraine's course towards rapid integration into the EU, it is expedient for Ukrainian enterprises in the agricultural sector to start formulating an ESG policy and familiarise themselves with standards, regulations, and guidelines in sustainability reporting.

However, despite the growing interest in environmental and social issues, today, among agribusiness, only stock exchange-listed entities publish a report on sustainable development because they have such a requirement [1; 7].

We believe that in wartime, Ukrainian agribusiness entities should be ready to submit information in the Report on Sustainable Development and Investments (ESGI report). This Report must contain indicators regarding ecology, social development and management, and also built matrices and graphs for assessing the level of sustainable development at the enterprise for presenting this information to banks, insurers, and investors.

We are already working on the creation of forms and questionnaires for this Report on the Sustainability Reporting Platform (Center of Professional Accountants) [23] as part of the MSCA4Ukraine project [8].

The conducted research allows us to form a scheme of scientific-methodical and regulatory support for sustainability reporting to attract investments for the reconstruction of the agricultural sector of Ukraine based on low-carbon technologies, digitalization, innovations and greening of workplaces (Figure 1).

**Conclusion.** Ukraine's obtaining the status of a candidate for EU membership in June 2022 emphasized the European vector of Ukraine's development against the background of a full-scale Russian military invasion. The consequences of this invasion and hostilities on the territory of Ukraine determine the need for reconstruction of agribusiness. International and European partners are ready to help in such reconstruction based on the principles of sustainable development. In order to respond to the readiness for such assistance, Ukraine needs to implement reforms, particularly in the field of accounting and reporting.

Responding to climate challenges, international and European investors, credit institutions, and insurance companies are interested in reconstructing agribusiness entities ready to move from traditional technologies to sustainable agricultural activities. However, they need information to minimize their risks. So, the Report on Sustainable Development and Investments (ESGI report) is one of the tools for attracting funds for the green reconstruction of agribusiness. Starting from June 2023, within the MSCA4Ukraine program, which the EU funds, we have started the development of this Report. All materials (forms, questionnaires, webinars) are posted on the Sustainability Reporting Platform.

Preparation and publication of an ESGI report by agribusiness entities should contribute to solving the following tasks:
- identification and management of enterprise risks;
- increasing trust and loyalty to the enterprise;
EU initiatives

- The European Green Deal (EGD, December 11, 2019)
- Notice of the European Commission, dated May 18, 2022 (Platform for the Reconstruction in Ukraine)
- The European Corporate Sustainability Reporting Directive, dated December 14, 2022, No. 2022/2464
- The Ukraine Facility program (October 3, 2023, €50 billion in grants, loans for the recovery of Ukraine)

Ukraine’s plans

- The Government’s plan for the recovery of Ukraine for 2023–2032 (including the New Agrarian Policy)
- Ukraine’s reconstruction plan for 2024–2027 (European integration, digital transformation, green transition)

Report on Sustainable Development and Investments in the agricultural sector – ESGI report
(MSCA4Ukraine program, June 2023 – May 2025)

EU standards for sustainability reporting (07.2023)


Sustainability reporting international standards

- Accounting standards for sustainable development (SASB, ISSB, including "Agricultural products")
- International standards for disclosure of information on sustainable development (IFRS S1, S2, 07.2023, including Industry-based Guidance on implementing Climate-related Disclosures No. 20 "Agricultural Products")
- The Global Reporting Initiative Standards (GRI GSSB, including No. 13 "Agriculture, Aquaculture and Fisheries")
- The Integrated Reporting Framework (IIRC)

International technical guidelines

- The IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptations
- The TCFD recommendations on climate-related financial disclosures
- The CDP Climate Change 2023 Reporting Guidance
- The GHG Protocol Corporate Accounting and Reporting Standards (GHG Protocol, Scope 1-3)

Practices for measuring indicators of sustainable development

- Outsourcing and consulting (RISE, Dinak and others)
- Online calculators (RSPO PalmGHG Calculator, GHG Protocol Pulp and Paper tool, Cool Farm tool, FAO EX-ACT tool)

Figure 1 – Methodical support for sustainability reporting to attract investments for reconstructing Ukraine’s agricultural sector based on low-carbon technologies, digitalization, innovation and greening of workplaces

Source: developed by the author based on the analysis of public information
The publication of the ESGI report will contribute to the green reconstruction of the agricultural sector and increase its investment attractiveness. It will also create prerequisites for the involvement of Ukrainian farmers in income support programs within the framework of the EU’s Common Agricultural Policy during the period of Ukraine’s membership in the EU, equalization of competitive trading opportunities and overcoming carbon customs barriers.

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