

UDC 657.37:[330.34-021.387:631.11]
JEL: M14; M20; O13; Q01; Q15; Q51
DOI: <https://doi.org/10.32983/2222-4459-2024-4-138-146>

DISCLOSURE OF SOCIAL AND HUMAN CAPITAL IN THE REPORT ON SUSTAINABLE DEVELOPMENT OF AGRICULTURAL ENTERPRISES

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Metelytsia V. M., Gagalyuk T. V. Disclosure of Social and Human Capital in the Report on Sustainable Development of Agricultural Enterprises

The study aims to acquaint the scientific and professional community with the Sustainability Reporting Platform, which is the basis for preparing the ESGI report (Sustainable Development and Investment Report). This article describes standardized forms and indicators for measuring, preparing and disclosing human and social capital information because this component of agricultural production is the most sensitive and uncontrolled during the period of martial law. The Sustainability Reporting Platform includes three components: ESGI report, webinars (videos, materials) and publications (scientific articles, presentations). The ESGI report consists of standardized reporting forms and survey questionnaires. Standardized forms enable comparisons of sustainability indicators among different economic entities that helps to adjust their business strategies and goals. The survey questionnaires provide each economic entity with the opportunity of in-depth self-assessment of sustainable practices and define their sustainability goals by 2030. One of the main provisions of the ESGI report is consideration of the size of an enterprise (micro, small, medium, large). In particular, regarding social and human capital, additional information is not required to be disclosed if all employees of an enterprise receive adequate salaries and are covered by social protection (sickness leave, social leave, disability benefits). For comprehensive measurement and presentation of social aspects of the enterprise's economic activity, the authors proposed 10 indicators: 1) material social risks and opportunities; 2) social risks and transition opportunities; 3) social risks of martial law; 4) diversity of human capital; 5) work-life balance; 6) employment dynamics; 7) adequate salary; 8) education and career development; 9) occupational health, safety and hygiene; 10) freedom of collective bargaining and social dialogue. Reference levels have been introduced for each indicator. The resulting matrices allow to convert the actual data into points and to draw the diagram that visualizes the measurement results. Webinars for agribusinesses interested in updates of the information about sustainability measurement and reporting represents a promising direction for further development of the Sustainability Reporting Platform. Another important direction is the improvement of the ESGI report by introducing more accurate indicative assessment levels based on the data received from the Platform users.

Keywords: Sustainability Reporting Platform, ESGI report, human and social capital, reference level, assessment matrix and diagram.

Fig.: 3. **Tabl.:** 9. **Bibl.:** 17.

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UDC 657.37:[330.34-021.387:631.11]
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Метелиця В. М., Гагалюк Т. В. Розкриття соціального та людського капіталу у звіті зі сталого розвитку аграрних підприємств

Метою дослідження є ознайомлення науково-професійної спільноти із Платформою звітності сталого розвитку, яка служить основою для підготовки ESGI-звіту (Звіт зі сталого розвитку та інвестицій). У даній роботі зосереджено увагу на описі стандартизованих форм і показників для вимірювання, підготовки та розкриття інформації про людський і соціальний капітал. Адже ця складова сільськогосподарського виробництва є найбільш чутливою та неконтрольованою в період воєнного стану. Представлено Платформу звітності сталого розвитку, яка включає три складові: ESGI-звіт, вебінари (відеозаписи, матеріали) та публікації (наукові статті, презентації). ESGI-звіт складається зі стандартизованих форм звітності та анкет опитування. Стандартизовані форми нарешті дозволять вирішити важливу проблему – можливість порівняння показників різних суб'єктів господарювання для коригування власних бізнес-стратегій і цілей. Анкети опитування забезпечать кожному суб'єкту господарювання глибокий рівень самооцінки сталих практик і дозволять визначити свої цілі до 2030 року. Одним із основних положень у підготовці ESGI-звіту є врахування розміру підприємства (мікро-, малі, середні, великі). Зокрема, в частині соціального та людського капіталу не вимагається розкривати додаткову інформацію, якщо всі власні працівники підприємства отримують адекватну заробітну плату та охоплені соціальним захистом (лікарняні, відпускні, виплати по інвалідності). Для комплексного вимірювання та представлення соціальних аспектів економічної діяльності підприємства авторами запропоновано 10 показників: 1) матеріальні соціальні ризики та можливості; 2) соціальні ризики та можливості переходу; 3) соціальні ризики воєнного стану; 4) різноманітність людського капіталу; 5) баланс між роботою та особистим життям; 6) динаміка зайнятості; 7) адекватна заробітна плата; 8) освіта та кар'єрний розвиток; 9) охорона праці, безпека та гігієна; 10) свобода колективних переговорів і соціального діалогу. За кожним показником введено орієнтирні рівні. Матриці дозволяють перевести фактичні дані в бали, а діаграма – унаочнити результати вимірювання. Перспективним напрямком подальших досліджень є постійна підтримка Платформи звітності сталого розвитку шляхом проведення вебінарів для суб'єктів агробізнесу, які зацікавлені отримувати інформацію про зміни в цьому питанні. Іншим важливим напрямком є вдосконалення самого ESGI-звіту через введення більш точних орієнтирних рівнів оцінки на основі даних, отриманих від користувачів Платформи.

Ключові слова: Платформа звітності сталого розвитку, ESGI-звіт, людський і соціальний капітал, орієнтований рівень, матриця та діаграма оцінки.

Рис.: 3. Табл.: 9. Бібл.: 17.

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The scale of damage and destruction caused by Russian military aggression indicates that the successful post-war reconstruction of Ukraine's agricultural sector will depend on international support and significant amounts of foreign investment.

Under the circumstances of the EU integration of Ukraine and reform of the Common Agricultural Policy of the EU, aimed at achieving even more ambitious goals of sustainable development, international and European investors, financial and credit institutions will be interested in financing of the reconstruction and development of primarily those agribusiness entities that are ready to implement sustainable development practices, such as low-carbon technologies involving digitalization, innovation, biodiversity conservation, etc. Thus, to minimize their risks, international investors will require access to non-financial information of investee companies, including data on management processes, environmental and social impacts of the companies' activities.

Nowadays, one of the main research questions in the literature on sustainable development of agriculture is the following: under which conditions would agricultural producers agree to adopt sustainable farming practices. Choice experiments prevail as a methodology applied to answer this type of questions.

For example, the study by I. Unay-Gailhard, M. Bavorova, and F. Pirscher applied a discrete choice logit model to assess the data from the survey of organic farmers in Germany. They found that older organic farmers (in the age of 60 and more) are more likely to implement agri-environmental measures (AEM). Farms from agronomically less fertile areas of Germany and with personal experience of implementing environmentally friendly practices are more likely to switch to organic farming. This study also found that neither the frequency of interpersonal communication with other farmers nor the frequency of participation in agricultural organizations explained the adoption

of additional agri-environmental measures by organic farmers [1].

M. Schaafsma, S. Ferrini, and R. Turner conducted a discrete choice experiment (DCE) to assess the possibilities of implementing climate-smart agriculture (CSA), sustainable intensification, and conservation agriculture [2]. More specifically, respondent farmers in Malawi made their choice among different attributes: physical (land ownership), social (support from government and relatives), financial (income), human (education, knowledge of crop rotation) and natural (planting trees). The results of this study indicate that farmers are willing to switch to climate-smart agricultural production without additional financial incentives as long as crop yields are not reduced and food security is not threatened. In general, the implementation of CSA directions depends on the UN sustainable development goals (SDGs) prioritized by the Malawian government, namely no poverty (SDG 1), zero hunger (SDG 2), reduced inequality (SDG 10), and climate action (SDG 13).

Using a sample experiment, Y. Zhu and J. Chen concluded that green agriculture incentives depend on the type of farmers in China. For example, economically oriented farmers can switch to green technologies if they are motivated by green subsidies and technical support. For security-oriented farmers, incentives for green transition are agricultural insurance, environmental propaganda, and green subsidies, while for autonomy-oriented farmers, environmental propaganda, agricultural insurance, and green subsidies play a role. Based on these findings, researchers propose a typology of small farmers' green agriculture incentive preferences (including security, monetary, and autonomy orientations), offering suggestions for future green agriculture policy optimization [3].

Having studied these and other publications, we found that the literature generally neglects the issue

of agribusinesses' intentions and readiness to prepare and publish sustainable development reports.

The present article *aims* to reveal science-based methodological approaches to measuring and disclosing information about human and social capital in the Report on Sustainable Development and Investments (ESGI report) developed for Ukrainian agriculture by the Sustainability Reporting Platform.

The study involves the literature review on incentives for agricultural enterprises to transition to sustainable agricultural practices to understand what factors may influence the adoption of the ESGI report. The development of the forms and indicators of the ESGI report involved analysis of the legislation of the European Union, standards of sustainable development reporting, technical guidelines of and practices of measuring agro-ecological measures, statistical data on the agricultural sector of Ukraine as well as sustainability reports of Ukrainian agroholdings.

We combine the methods of induction and deduction, analogy and logical generalization, as well as of system analysis.

Several international and European norms [4–9] regulate issues of compliance with human rights in labor relations. ESRS S1-S4 standards dated July 31, 2023 [10], determine the procedure for disclosing social issues in sustainable development reporting.

These norms were the basis for the development of the Report on Sustainable Development and Investments (ESGI report), which was carried out as part of the EU funded project in terms of the MSCA4Ukraine program [11] and presented on the Sustainability Reporting Platform (Fig. 1).

The main part of the Platform is the ESGI report, which includes reporting forms and survey questionnaires on the extent of sustainable development of agricultural enterprises.

The resources listed in Fig. 2 were used for the development of the ESGI report. They can also be used as valuable sources of information for agricultural enterprises in the process of preparation of ESGI reports.

Amid the full-scale Russian invasion and current martial law in Ukraine, issues of security are the first priority. Thus, disclosure of information about human and social capital in the ESGI report is highly relevant today.

The term “human capital” denotes a set of abilities, personal traits, and motivations of individuals applied in their economic activity. Human capital contributes to improvement of labor productivity and affects the growth of an enterprise and national income. Human capital includes the company's employees and contractors (service providers) under civil law contracts.

In turn, social capital is a public good formed based on the realization of the potential of mutual trust and assistance in relations between people involving obligations, expectations, information exchange and social norms. For the ESGI report, social capital refers to employees in the value chain, individual suppliers and contractors, natural persons – land lessors, consumers, end users, and community representatives.

To disclose information about human and social capital in the ESGI report, we propose 10 indicators (Tbl. 1). Each indicator is assessed according to its financial implications, investment impact measures, and a target level for 2030. The base period is 2023.

We suggest evaluating risks by the categories of severity (acute or periodic), probability of occurrence (high, low) and magnitude (points). Each risk is assigned a score from –1 (high probability with neutral impact, yellow color) to –5 (high probability with very negative impact, red color).

In the group of material social risks, the following risks should be assessed:

1. Interruptions in work processes during the adaptation period of new employees;
2. Alcohol abuse, alcohol and drug addiction;
3. Theft, appropriation of enterprise property;
4. Disclosure of confidential information;
5. Violation of discipline, absenteeism;
6. Loss of labor productivity.

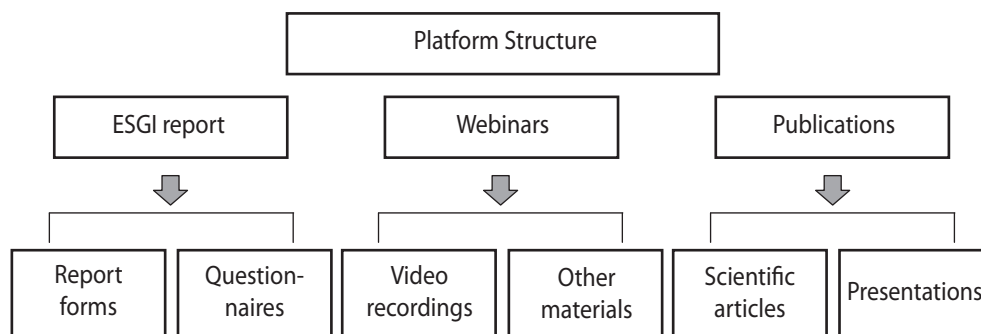


Fig. 1. Structure of Sustainability Reporting Platform

Source: developed by the authors on the basis of [12].

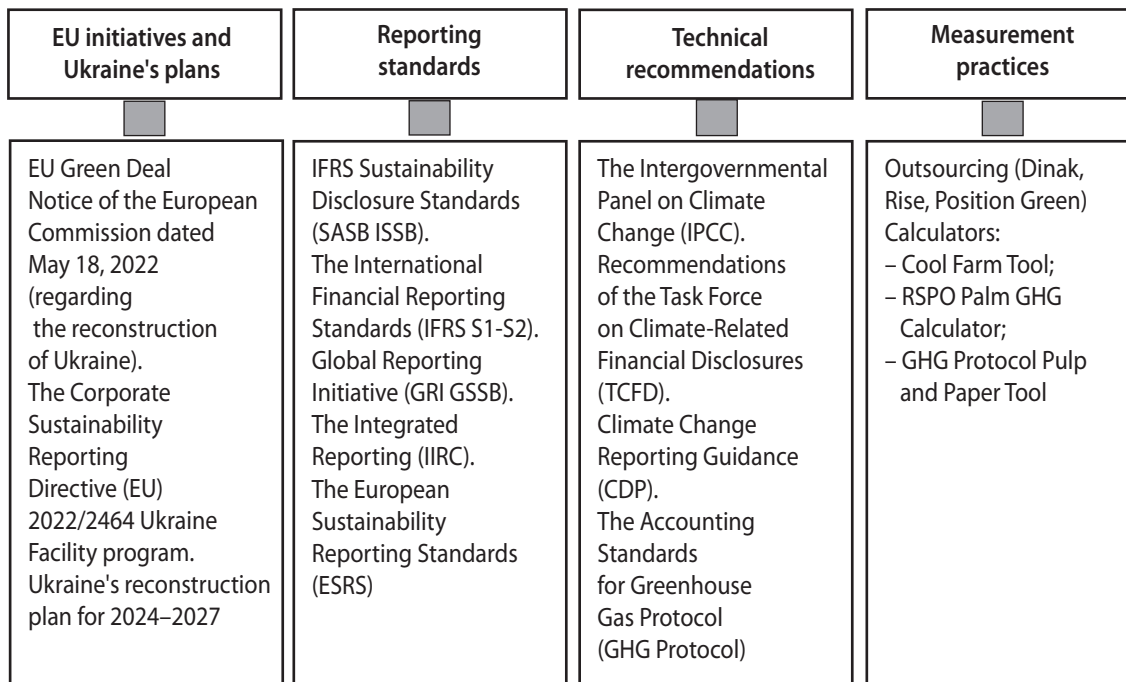


Fig. 2. Resources used for development of the ESGI report

Source: developed by the authors.

Table 1

ESGI report: Human and social capital

No.	Indicators
1	Material social risks and opportunities
2	Social risks and transition opportunities
3	Social risks of martial law
4	Diversity of human capital
5	Work-life balance
6	Employment dynamics
7	Adequate salary
8	Education and career development
9	Occupational health, safety and hygiene
10	Freedom of collective bargaining and social dialogue

Source: developed by the authors.

Risks determine opportunities, and the enterprise's ability to assess them is important for the users of the information about the enterprise. Opportunities are suggested to be evaluated by the probability of their occurrence (high, low) and magnitude (points). Each opportunity is scored from 1 (low probability with neutral impact, light yellow) to 5 (high probability with very positive impact, blue).

In the group of material social opportunities, it is particularly necessary to assess the possibilities of staff evaluation before hiring, reducing staff turnover, establishing systems for monitoring of production

processes, and observing the rules of internal labor regulations.

The average value of the assessment is calculated as the ratio of the number of points and the number of risks and opportunities displayed in the matrix (Tbl. 2).

Table 2

Impact	Probability			
	Risks		Opportunities	
	Low	High	Low	High
Very positive			4	5
Positive			2	3
Neutral		-1	1	
Negative	-2	-3		
Very negative	-4	-5		

Source: developed by the authors.

Europe plans to become the first climate-neutral continent by 2050. In this regard, it is important to assess the consequences of the transition of agricultural enterprises to sustainable development technologies. We propose to evaluate the risks of transition's negative social consequences and the possibilities of its positive social impacts in the short, medium and long term. Social risks on the way to transition are as follows:

- ✦ Interruptions and loss of productivity;
- ✦ Layoffs;
- ✦ Negative feedback from stakeholders.

However, such risks also create social opportunities for transition, including re-qualification of own employees and strengthening of own competitiveness in both the domestic and global markets of agricultur-

al commodities. The most difficult part here is the assessment of the risks of negative social consequences of martial law and military operations. Such risks include the following:

- ✦ mobilization of workers and difficulties in obtaining deferments from military service;
- ✦ staff migration abroad;
- ✦ workers suffering from hostilities;
- ✦ decrease in the purchasing power of the population.

Reference levels must be used to assess the levels of sustainable development according to the seven criteria listed below. These levels can be set by the enterprise independently based on the choice of one of three sources of information, including own evaluation experience, sectoral best practices, e. g. published sustainability reports of Ukrainian agroholdings, and statistical data for Ukraine as a whole or the region of enterprise operations.

After comparing the actual data with the benchmarks, matrices are used to convert the data into points. For confirmed data (personnel documents, reporting), the following ranking points are applied: -5 (unstable level of development), -3 (moderately unstable), -1 (indicative), 3 (moderately stable), 5 (stable). In turn, for the self-assessment data, the following rankings are applied: -4 (unstable level of development), -2 (moderately unstable), 1 (indicative), 2 (moderately stable), 4 (stable).

Table 3

ESGI report: Quantitative and age composition of human capital

Key indicators	2023 as the base year
The average number of full-time employees (ANE), <i>people</i> :	
<i>by level</i>	
<i>by segments</i>	
<i>by gender</i>	
<i>by age</i>	
<i>by state of health</i>	
<i>by type of employment contract</i>	
<i>by nature of employment</i>	
Employment of own workforce	
<i>Reference level</i>	
ANE per 1 thousand hectares of area, <i>people/thousand hectares</i>	29,96
ANE per 1,000 tons of harvested grain, <i>people/thousand tons</i>	0,59

Source: developed by the authors.

In most cases, we used the information on sectoral best practices to establish the reference levels for indicators, that is our calculations are based on the data of sustainability reports of publicly listed Ukrainian agroholdings [13; 14]. Based on this information, we propose, e. g. with respect to the "Diversity of human capital" indicator, to disclose information on the quantitative and qualitative composition of full-time employees with an indicative employment level of 29.96 people per 1 thousand hectares of farmland area operated by an enterprise (*Tbl. 3*).

It is expedient to estimate the average number of full-time employees (ANE) for each of the three groups of employees as per Classifier of Professions of Ukraine [15]: managers; professionals and specialists; technical employees and the least skillful professions).

In the "Work-life balance" indicator, the employee's right to leave plays the main role. A higher value of this indicator indicates a better level of sustainable development (with the reference level of 96.72% of full-time employees who used the right to parental leave before the child reaches the age of three) (*Tbl. 4*).

As a reference level for the "Employment dynamics" indicator, we propose to use the employee turnover rate, calculated as a percentage ratio of the number of employees who resigned and retired to the average number of full-time employees (ANE) employed at the enterprise for the selected period. *Tbl. 5* gives an indicative value of the employee turnover rate.

The assessment of the indicator "Adequate salary" is carried out by comparing the average salary of a full-time employee with the nominal salary of full-time employees in agriculture (12.243 UAH) in percentage (*Tbl. 6*).

Table 4

ESGI report: Social leave

Key indicators	2023 as the base year
Fourteen-day leave at the birth of a child, <i>people</i>	
Additional ten-day leave for childcare (two or more children under the age of 15, or a child with a disability), <i>people</i>	
Exercising the right to parental leave before the child reaches the age of three:	
<i>Reference level</i>	
% of own employees who used their right to leave	96,72
Return to work and maintenance after parental leave until the child reaches the age of three, <i>people</i>	

Source: developed by the authors.

Table 5

ESGI report: Employment and employee turnover

Key indicators	2023 as the base year
Number of new jobs created, <i>people</i>	
Number of employees hired, <i>people</i>	
Number of own employees conscripted for military service, <i>people</i>	
Number of dismissed employees, <i>people</i>	
Number of employees retired, <i>people</i>	
Employee turnover	
<i>Reference level</i>	
Employee turnover rate, %	18,17

Source: developed by the authors.

Table 6

ESGI report: Salary, remuneration, financial support

Key indicators	2023 as the base year
Employee compensation fund, <i>UAH</i>	
The ratio of the average salary of a full-time employee to the nominal salary of full-time employees in agriculture (UAH 12,243*), %	100
<i>Reference level</i>	
Non-refundable financial assistance, % from the ANE	
Free meals, % from the ANE	
Assistance for treatment, medicines, voluntary medical insurance, life insurance, % from the ANE	
Material assistance to mobilized workers, % from the ANE	

Source: developed by the authors.

When disclosing data on the "Education and career development" indicator, we suggest calculating the number of training hours per employee (by topic and by format), as well as indicating the number of employees who participated in the evaluation of competency and performance.

Competency assessment means a review of employees' knowledge, skills, and abilities for the formation of a personnel reserve, a training plan, and personnel development. Performance evaluation consists of the periodic analysis of employees' achievement of key performance indicators (KPI). The average annual number of hours of training per employee (6.9) is the reference level (*Tbl. 7*).

Table 7

ESGI report: Education, skills and career development plans

Key indicators	2023 as the base year
Average annual number of training hours per employee	
<i>Reference level, hours</i>	6,9
Total number of training hours, including:	
<i>by study topics</i>	
<i>by training format</i>	
Number of employees who took part in the competence assessment, <i>people</i>	
Number of employees who participated in the performance evaluation, <i>people</i>	

Source: developed by the authors.

For a comprehensive assessment of the enterprise's health, safety and hygiene system, we offer the indicators listed in *Tbl. 8*. It is advisable to assess the level of injuries and mortality at work by calculating three coefficients: the lost time injury frequency rate (LTIFR), lost workday rate (LWR), and fatal injury frequency rate (FIFR). These coefficients can be measured using respective calculators ([16; 17]). The reference level of FIFR is 0.1 cases per year.

Table 8

ESGI report: Health and safety indicators

Key indicators	2023 as the base year
Average number of full-time employees (ANE), <i>people</i>	
Number of hours worked by full-time employees, <i>man-hours</i>	
Total number of training hours on the topics of labor protection, fire safety, occupational hygiene, <i>hours</i>	
Number of registered industrial injuries	
Number of industrial injuries with significant consequences (<i>excluding fatal cases</i>)	
Number of deaths due to injuries at work	
Level of injuries and mortality at work	
<i>Reference level for fatal injury frequency rate (FIFR)</i>	0,1
Certification and permit system	

Source: developed by the authors.

We propose establishing the indicator "Freedom of collective bargaining and social dialogue" as the tenth indicator for assessing the sustainable develop-

ment of social and human capital. Collective bargaining is conducted between an employer and a trade union to determine working and hiring conditions. The greater the number of employees covered by the collective agreement relative to the number of employees whose working conditions are regulated by the collective agreement, the higher the level of sustainable development. The reference level of this indicator is 40–50% (*Tbl. 9*).

Table 9

ESGI report: Freedom of collective bargaining and social dialogue indicators

Key indicators	2023 as the base year
Social dialogue	
Average number of full-time employees (ANE) who are members of a trade union: <i>people</i>	
<i>in % to the ANE</i>	
Collective bargaining	
Average number of full-time employees (ANE) who are members of a trade union: <i>people</i>	
<i>in % to the ANE, including:</i>	
Reference level	40–50

Source: developed by the authors.

We propose to describe the strategies, plans, policies, measures, actions, and resources regarding the company's environmental practices in the Notes for the ESGI report. The reporting enterprises can use the Self-Assessment Questionnaires and webinars on the Sustainability Reporting Platform to prepare the Notes for the ESGI report. There are three questionnaires, each containing 23 questions on each aspect of sustainable development.

We suggest to visualize the results of measuring the social level of sustainable development using a diagram (*Fig. 3*), in which red zones correspond to unsustainable development, orange zones to moderately unsustainable development, yellow zones to reference, green zones to moderately sustainable development, and blue zones to sustainable development. The line of sustainable development of an enterprise is built according to the values of the indicators (from –5 to 5 points).

CONCLUSIONS

The full-scale Russian invasion of Ukraine caused not only significant material damage to the domestic economy but also a severe socio-demographic crisis. Due to the outflow of personnel abroad and the mobi-

lization of workers for military service, the agricultural sector of the economy faced significant difficulties, accompanied by risks of interruption, reduction or stoppage of production. However, the democratic states of the world and Europe expressed their strong support for Ukraine's Euro-Atlantic integration. Among the initiatives of financial and technical assistance, a key role is assigned to implementing the strategy of rebuilding Ukraine's economy based on the principles of sustainability including introduction of low-carbon technologies, renewable energy, digitalization, greening of workplaces, etc.

The attraction of foreign investments in rebuilding of Ukraine's economy, particularly in the agricultural sector, largely depends on accessible and understandable information. Considering the damage caused to the environment and the population due to hostilities, priority is given to non-financial information about social and human capital.

To assess the level of sustainable development, preparation and publication of non-financial information, we have developed the Report on Sustainable Development and Investments (ESGI report). The proposed indicators will allow measuring the social level of sustainable development at the micro level by comparing actual data with best practices and statistical information on the agricultural sector. This tool aims to simplify access to foreign financial resources in the post-war period and during martial law. Using the materials of the Sustainability Reporting Platform (survey questionnaires, recordings, materials for webinars, presentations, and articles) will contribute to improvement of this tool. ■

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The social level of sustainable development, 2023 as the base year

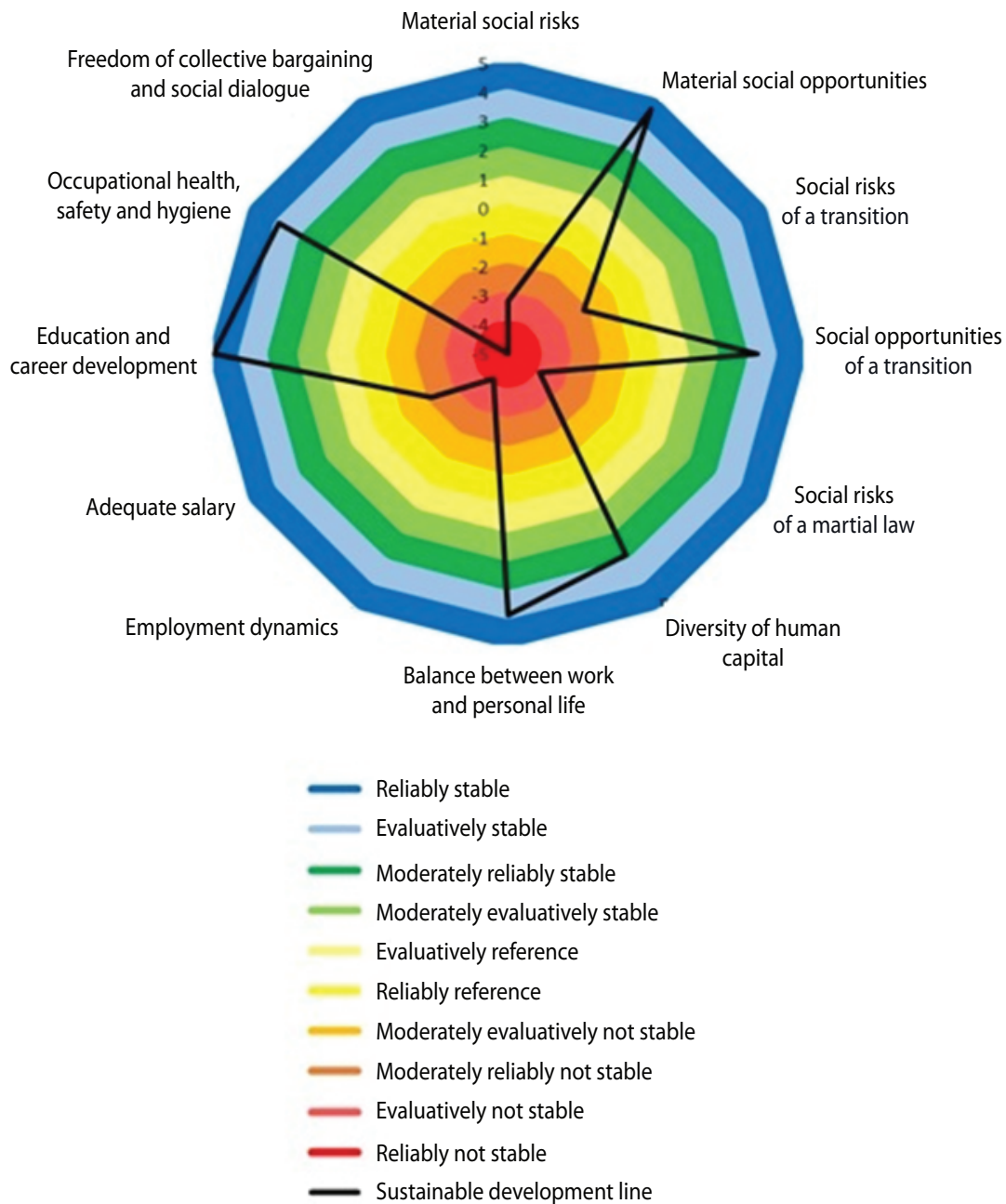


Fig. 3. ESGI report: Diagram of the social level of sustainable development

Source: developed by the authors.

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