

ESG approaches as a factor in the competitiveness of enterprises in the context of global challenges of the green economy

Nataliya Plaskova^{1,*}, *Svetlana Bychkova*² and *Diana Kurazova*³

¹Plekhanov Russian University of Economics, Department of Financial Control, Analysis and Audit, Basic chair of the Main control Department of Moscow, Moscow, Russia

²St. Petersburg State Agrarian University, Department of Economics and Accounting, St. Petersburg, Russia

³Kadyrov Chechen State University, Grozny, Russia

Abstract. The article discusses the concept of sustainable development and ESG principles in relation to enterprises of the agro-industrial complex (hereinafter referred to as the agro-industrial complex). Sustainable development has become one of the main trends, as the world community understands that economic growth is closely related to the solution of environmental, climate, and social issues. It underlies the assessment of an organization's non-financial performance, taking into account the fact that investors and other stakeholders are increasingly paying attention to the compliance of economic entities with ESG principles, i.e. responsible attitude towards the environment, creating favorable social conditions, ensuring high quality corporate governance. The authors of the work carried out a critical analysis of international and domestic regulations on the topic of research, and formed, based on industry characteristics, a list and content of indicators for the sustainable development of agricultural enterprises. When preparing public non-financial reporting, they can be additional to the legally established basic indicators, and they can be used in the development of industry standards for the sustainable development of the agro-industrial complex.

1 Introduction

Currently, the world community is facing quite acute problems of an environmental and socio-economic nature. Major environmental problems include depletion of the ozone layer, acid rain, soil degradation, etc. Among the socio-economic difficulties that require an urgent solution, one should highlight: urbanization, rising unemployment, stratification of society, demographic crisis in developed countries, backwardness of third world countries, caused in part by the fact that population growth rates exceed economic growth rates and the provision of food for humanity. The world economy is built on the concept of growing production and consumption. In developed countries, the population, with a smaller population, consumes

* Corresponding author: plask55@mail.ru

several times more than in developing countries. This contributes to the growth of poverty, both in individual countries and on a planetary scale. Poverty, hunger, overconsumption and environmental pollution must be more actively combated. Currently, conscious consumption, sustainable development, lean production (management), and environmental friendliness are becoming global trends.

For the first time in 1987, the International Commission on Environment and Development (ICED) gave an official definition of the term “sustainable development”. The ICED report, *Our Common Future*, noted “sustainable development must meet the needs of the present without compromising the ability of future generations to meet their own needs.” To involve business structures in the formation and development of the concept of sustainable development and social responsibility, it was created in 2000. UN Global Compact (UNGC). In 2015, all UN member states adopted the 2030 Agenda for Sustainable Development. It sets out a kind of general plan for ensuring peace, prosperity for people and the planet now and in the future [11]. As part of this document, 17 sustainable development goals (UN SDGs) were adopted, with 169 objectives. They cover environmental, social and economic aspects in achieving sustainable development. States developing their own strategies and programs use the UN SDGs as a guide.

The Russian Federation actively supports the concept of sustainable development and implements its principles in national projects and strategies. In accordance with Decree of the President of the Russian Federation No. 474 of July 21, 2020 “On the national development goals of the Russian Federation for the period until 2030.”, five main development goals have been identified that correspond to several UN SDGs in terms of ensuring public health, well-being, safety, and decent work. The goals and key areas of sustainable development (including green) of the Russian Federation were approved by Decree of the Government of the Russian Federation dated July 14, 2021 No. 1912-r. This document reveals the sources of the financing system for green projects and all sustainable development initiatives, and establishes their goals and directions for subsequent activities.

Sustainable development affects all sectors of the economy, incl. and agricultural enterprises. Closely related to the issue of sustainable development are the principles of ESG (Environment, Social, Governance), which take into account the environmental, social and governance aspects of the organization’s activities. ESG principles encourage responsible management of business entities through investment instruments.

2 Materials and methods

The research methods were based on the study of international and domestic regulations, as well as on the results of a review of scientific works of domestic, foreign scientists and specialists devoted to the implementation of ESG principles in the agricultural sector.

3 Results and discussion

The FAO State of Food Security and Nutrition in the World report notes that an average of 735 million people, or about 9.2% of the world's population, faced hunger in 2022, an increase in hunger compared to the period time before the COVID pandemic - 2019. In addition, 900 million people experienced acute food insecurity [11]. The second of the 17 UN SDGs aims to “end hunger, achieve food security and improved nutrition, and promote sustainable agricultural development.” In the Russian Federation, food security is an important component of national security.

The food security doctrine, approved by Decree of the President of the Russian Federation No20 of January 21, 2020, defines it as the state of the country’s economy, ensuring food

independence, guaranteeing the availability for every citizen of the country of food products that meet the requirements of the legislation of the Russian Federation on technical regulation, in volumes no less than rational standards of food consumption necessary for an active and healthy lifestyle. One of the main sources of supplying sufficient quantities of high-quality food to the population, various industries with raw materials and sustainable development of the state is the agro-industrial complex. Agricultural production uses in its activities methods aimed at achieving high productivity, but does not strive to widely and on a long-term basis introduce methods of harmonious interaction with the environment. Agricultural production is one of the largest sources of greenhouse gas emissions. Incorrectly applied mineral fertilizers and disposed waste negatively affect the quality of land resources. Climate change is becoming a significant factor determining the economic development of all countries of the world. Ignoring climate risk can lead organizations, especially agricultural ones, to serious losses. The Russian government is taking certain actions in solving the problems under study: developing and adopting National projects in which many aspects intersect with the UN SDGs. In addition, the Russian Federation has begun the transition to a low-carbon economy. This is noted in the Strategy for the socio-economic development of the Russian Federation with low greenhouse gas emissions until 2050, adopted by the Ministry of Economic Development in 2020. In 2016, Russia signed the Paris Climate Agreement, which was ratified in 2019, and in 2021 Federal Law No. 296-FZ “On the Limitation of Greenhouse Gases” was adopted.

According to Article 5 of the Federal Law of December 29, 2006 No. 264 - Federal Law “On the Development of Agriculture”, state agricultural policy is aimed at the sustainable development of agriculture and agricultural territories. For this industry, this means organizing a system for conducting its activities without causing damage to the environment, which will provide agricultural workers with a stable income, the population with sufficient safe food, and industry with raw materials. ESG principles are intended to help integrate the concept of sustainable development into the activities of enterprises, including agricultural ones, mainly through investment projects. This opinion is one way or another shared by many scientists and specialists. A.S. Mustafina and I.A. Bakin believe that it is important for agricultural enterprises to take into account ESG principles in business plans to form a successful and socially responsible business [7]. Efimova O.V. believes that “following ESG principles is a driver of market returns for investors” [2]. Zaitsev A.G., Khapilina S.I. emphasize that the organization’s commitment to ESG principles serves as the main criterion when making decisions on financing by banks, potential investors and the state [3]. Thus, the trend towards responsible investing is becoming more widespread. Many investors require disclosure of non-financial information. The publication of non-financial reporting is becoming increasingly relevant for most organizations. In order to increase environmental and social responsibility in the country, and ensure transparency of the activities of economic entities, on May 5, 2017, the Concept for the development of public non-financial reporting was approved. Its main task was to promote the implementation and development of public non-financial reporting, which helps strengthen business reputation, increase investment attractiveness and information openness of the largest Russian companies. It should be noted that this regulation is rather explanatory and advisory in nature, and does not regulate anything. In implementing this Concept, a significant role is assigned to the national Register of Corporate Non-Financial Reports, which contains a list of organizations preparing non-financial reports, and specifically:

- environmental (ER);
- social (SR);
- sustainable development (SDR);
- integrated (IR).

Table 1 shows organizations from the agricultural sector, whose reports are recorded in the national Register of Corporate Non-Financial Reports [9].

Table 1. List of organizations in the agricultural sector, whose reports are reflected in the national Register of Corporate Non-Financial Reports

Name of company	Report name	Year
LLC "Group of Companies "Rusagro"	SDR	2021
	IR	2022
PJSC "INARCTICA"	SDR	2022
PJSC Cherkizovo Group	IR	2020

The number of agricultural enterprises that submitted non-financial reports is small, only three enterprises out of 263 (as of February 26, 2024). These organizations belong to large agricultural formations. An analysis of non-financial reports showed that they reflect a large number of social and environmental indicators, but there are no uniform requirements for the calculation methodology, as well as for the information content and reliability of the data. When compiling sustainable development reporting (SDR), economic entities rely not only on domestic, but also on international standards containing principles and requirements for them, such as the CRI (Global Reporting Initiative) standards developed by the Council for Global Standards for Sustainable Development (GSSB). For example, PJSC INARCTIC, when preparing its sustainability report, relied on the GRI Standards 2021 for sustainability reporting, and the industry standard GRI 13: Agriculture, Aquaculture and Fishing Sectors 2022, as well as SASB standards adopted by the Accounting Standards Board sustainable development (SASB). SASB standards are used by business entities when disclosing management, environmental, and social issues and help identify sustainable development issues that can have a significant impact on the value of organizations in 77 industries, incl. and in agricultural production (SASB «Agricultural Products»). In June 2021, SASB and the International Integrated Reporting Council have merged to form the Value Reporting Foundation (VRF). At the UN Climate Change Conference (COP 26) in Glasgow in November 2021, the IFRS Foundation announced the creation of the International Sustainability Standards Board (ISSB), which also includes the VRF and the Climate Disclosure Standards Board (CDSB). From August 2022, ISSB is responsible for the promotion and development of SASB standards. In addition, he took over the functions of the Task Force on Climate-related Financial Disclosures (TCFD), which since 2017 has advised companies on how to disclose financial risks due to climate change. The goal of ISSB is to develop a common framework for sustainability reporting standards throughout the global community. SASB standards complement the standards GRI. GRI 13: Agriculture, Aquaculture and Fishing Sectors 2022 - it is a standard for agriculture, aquaculture and fisheries released in June 2022. It is recommended for use by agricultural organizations when preparing sustainable development reports from January 1, 2024, and discloses information about the economic, social and environmental consequences of their activities and helps reduce risks. ISSB taking into account market realities and the requirements of the G-20 member countries, on June 26, 2023, it released a package of IFRSs on financial disclosure related to sustainable development, namely IFRS S1 "General requirements for financial disclosure related to sustainable development" development" and IFRS S2 "Climate-related disclosures". These standards will come into force on January 1, 2024, may become mandatory (if this is established by domestic regulations) for large and medium-sized companies, commercial banks, state-owned enterprises, and should show the impact of natural and climatic risks on the financial performance of economic entities. These standards are also designed to increase investor confidence in disclosed information about sustainable development.

The domestic regulatory framework on the issue under study is at the initial stage. Taking into account the global trend towards the disclosure of information reflecting the sustainable development of organizations, incl. and agricultural, the Ministry of Economic Development of the Russian Federation has prepared a draft Federal Law “On public non-financial reporting”, and the Government of the Russian Federation has developed a draft Resolution “On approval of the list of key (basic) indicators of public non-financial reporting”. Unfortunately, these bills have been developed for a long time and the process has not yet been completed. At first, the delay was due to the COVID pandemic - 2019, because... a more current agenda appeared; in 2022, work on the draft Federal Law “On Public Non-Financial Reporting” was suspended in accordance with the instructions of the Government. In addition, experts note that many large Russian companies are not interested in disclosing their non-financial statements. Some of them believe that the preparation and publication of non-financial reporting should remain voluntary. A number of companies note difficulties in preparing non-financial reporting. This is due to the fact that the requirements for non-financial reporting are not clearly stated in domestic regulatory documents (Article 5 of the draft Federal Law “On Public Non-Financial Reporting” lists them, but their essence is not disclosed), and the procedure for confirming the reliability of the information presented is not defined. Currently, the issue of verification of public non-financial reporting has been poorly studied. The main problem is the lack of uniform standards for the preparation of non-financial reporting and the audit of non-financial reporting.

The Bank of Russia also pays special attention to sustainable development and responsible investing and advises taking into account ESG factors. He published an Information Letter on recommendations for the disclosure by public joint stock companies of non-financial information related to the activities of such companies dated July 12, 2021 No. IN-06-28/49 (hereinafter referred to as the Recommendations). Although this document is aimed at public joint-stock companies (PJSC), non-public ones can also apply it on a voluntary basis. The procedure and timing for disclosing non-financial information in accordance with Section 7 of the Recommendations are presented in Figure 1.

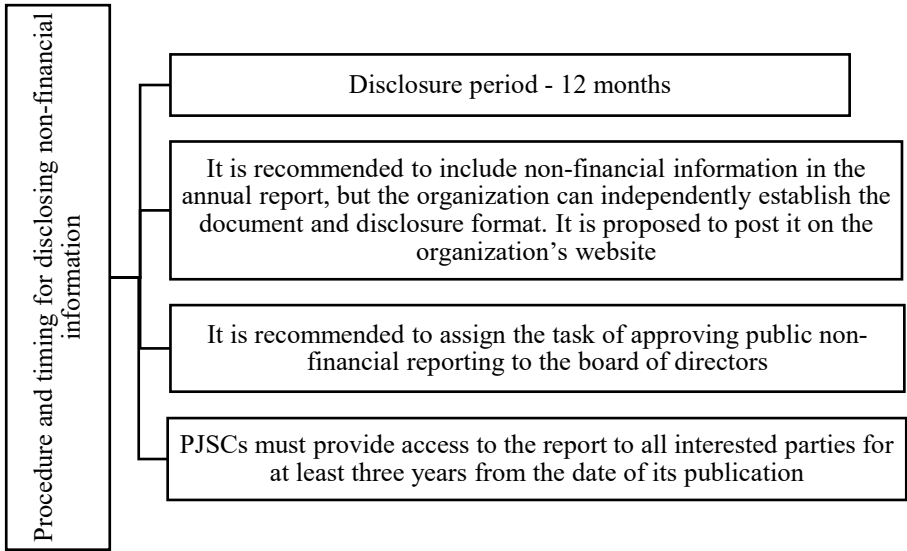


Fig. 1. Procedure and terms for disclosing non-financial information of PJSC.

Section 5 of the document in question indicates what information must be disclosed, namely:

- sustainable development strategy;

- information about the business model;
- information on corporate governance;
- tasks set and solved, principles of sustainable development;
- non-financial performance indicators of the organization;
- any issues related to ESG principles

As we can see, the criteria and requirements for non-financial reporting set out in the Recommendations are quite vague. However, the document does not provide for any sanctions for providing false information.

Approved by Order of the Ministry of Economic Development of the Russian Federation No. 764 dated November 1, 2023, “Methodological recommendations for the preparation of reporting on sustainable development” (hereinafter-referred to as Methodological Recommendations No. 764) contain detailed explanations on a number of previously poorly disclosed issues. In particular, this standard reflects the basic indicators of reporting on sustainable development, namely 44 indicators, which are combined into groups: economic, environmental, social, and management. This document also provides the procedure for their calculation. If international and Russian standards for the generation of information on sustainable development correspond to the scope of activity of an economic entity and the expectations of stakeholders, then Methodological Recommendations No. 764 do not prohibit their use when drawing up a report on sustainable development. In this case, the basic indicators of sustainable development are reflected in a separate section, and the reporting must indicate all the standards that were applied during its formation, as well as provide explanations for the calculated indicators. According to paragraph 3, Methodological Recommendations No. 764 can be used by all organizations wishing to disclose information about sustainable development and make their activities more transparent. Having analyzed international standards (SASB, CRI, IFRS) and domestic regulations, taking into account the needs of all stakeholders, the specifics of the agro-industrial complex, and based on compliance with the principles of non-financial reporting established in the draft Federal Law “On Public Non-Financial Reporting”, we offer additional list of sustainable development indicators to the basic ones (Table 2).

Table 2. Additional indicators of sustainable development of agricultural enterprises

Indicator name	Sources of information
Economic	
Growth rates of production volumes, including:	
crop production;	Form No. 9 - AIC (Agro-Industrial Complex) “Report on production, costs, cost and sales of crop products.”
livestock farming;	Form No. 13- AIC “Report on production, cost and sales of livestock products”
primary and industrial processed products made from agricultural raw materials	Form No. 14- AIC –“Report on production, costs, cost and sales of primary and industrial processed products made from agricultural raw materials”.
Costs of innovation activities	Statistical form No. 4 – innovation
Share of costs for innovation activities in total sales	Income statement
Level of innovative activity of the organization, %*	
Social	
Dynamics of the percentage ratio of the average salary of an agricultural	Form No. 5- AIC “Report on the number and wages of employees”, websites of territorial bodies of Rosstat,

enterprise with the average salary in the region	Internet service "Transparent Business" (https://pb.nalog.ru/).
Соотношение потребительских цен и заработной платы	Form No. 5- AIC "Report on the number and wages of employees", websites of territorial bodies of Rosstat, Internet service "Transparent Business", Rosstat website (https://rosstat.gov.ru/).
G4-LA6 Health and safety at work (the number of workers injured at work, suffering from occupational diseases, as well as the number of deaths in the course of professional activities, absence rate**)	Information from accounting services, personnel departments, labor protection.
G4 – H12 Complaint mechanisms for human rights violations (number of complaints related to labor disputes)	Documents from the HR departments, legal departments, Internet service "Online Inspection. RF"
G4-SO 3 Anti-corruption (proportion of departments for which corruption risks were assessed***)	Documents disclosing information about the organizational and management structure of an economic entity, the directions of its activities, the powers of structural divisions and the job responsibilities of employees (for example, the organization's charter, staffing table, etc.).
Environmental	
Amount of applied mineral fertilizers per 1 ha of arable land, kg/ha	Form No. 8-AIC "Report on costs of main production". Form No. 9 -AIC "Report on production, costs, cost and sales of crop products." Form No. 9- AGR (Agriculture) "Information on the application of fertilizers and work on chemical land reclamation."
Growth rate and share of lands subject to degradation, incl. erosion, waterlogging, bush growth, oxidation, etc.	Primary accounting documentation for recording soil fertility indicators, land management documentation
Climatic	
Climate-related transition risks (IFRS S2). Number and share of assets, business activity indicators exposed to climate transition risk	Accounting data. Greenhouse Gas Emissions Report
Climate-related physical risks (IFRS S2). Number and share of assets, business activity indicators exposed to physical climate risk	Accounting statements of agricultural organizations
Allocation of capital (IFRS S2). Costs allocated to optimize climate risks	Accounting data
<p>*The indicator is calculated according to the Methodology for calculating the indicator "Level of innovative activity of organizations", approved. By order of Rosstat dated December 27, 2009. No. 818;</p> <p>**$KO = RD/OD$, where KO is the absence coefficient, RD – the number of working days missed by the employee; OD – total number of working days;</p> <p>***the assessment of corruption risks is carried out in accordance with the Methodological Recommendations developed by the Ministry of Labor and Social Protection of the Russian Federation for assessing corruption risks arising during the implementation of functions</p>	

For each indicator set out in Table 2, the source of information and the calculation procedure are determined.

We propose to additionally include in the economic group indicators of growth rates of production volumes in areas of the agricultural industry. The volume of production is one of the main indicators that determine the activities of an agricultural producer. The degree of satisfaction of the population's needs for food and industrial production with raw materials depends on its size. It also affects the level of product costs, revenue, financial results and the overall financial condition of the organization. In recent decades, innovative technologies have played an important role in the functioning of enterprises in the agricultural sector of the economy. They are one of the main factors of their sustainable development, influence economic efficiency, and allow optimizing the management of agricultural producers. Therefore, it is advisable to introduce into the economic group of the report indicators characterizing the innovative activity of the organization.

Urbanization, which began in the mid-20th century, led to the decline of rural areas and contributed to a decrease in the importance and attractiveness of the work of agricultural workers and an outflow of the population to cities, which ultimately had a negative impact on the industry. To solve the problem of shortage of labor resources, especially qualified ones, it is necessary to improve the social infrastructure of rural areas, namely to ensure the availability and quality of medical and educational services, personal protection, respect for human rights, and also increase the level of wages. Pay for agricultural workers continues to be low compared to other industries. In order to ensure the growth of social sustainability, we propose to introduce additional indicators into the reporting, set out in Table 2. Some of them are based on aspects reflected in the GRI 4 requirements.

In agricultural activities, land is the main means of production, allowing the production of a significant part of the product, and at the same time acts as a subject of labor. Man, acting on the soil, creates conditions conducive to the formation of products. Considering the fact that land resources in agriculture are non-renewable means of production, their rational exploitation is important for the economy of the agro-industrial complex and the state as a whole. Soil degradation and the use of certain agricultural methods can lead to the release of large amounts of greenhouse gases and carbon dioxide into the atmosphere. When mineral fertilizers are applied, especially incorrectly, the soil begins to release nitrous oxide, causing the leaching of useful substances (magnesium, calcium, etc.) from it, which affects photosynthesis and plant resistance to disease. Taking into account the above factors, the environmental group includes indicators reflecting the amount of applied mineral fertilizers, growth rates and the proportion of degraded lands.

In Table 2, climatic indicators are separated into a different group. The concepts of “climate” and “ecology” are different. Ecology is associated with the state of the environment. As a science, it studies the relationship between the environment and organisms, including humans. Climate is a long-term pattern of weather that repeats from year to year in a certain area. Leaders of states and representatives of international organizations at the 27th UN International Climate Conference, held in Sharm-el-Sheikh in November 2022, noted that the risks associated with climate change have increased many times over and in terms of the likelihood of occurrence and the amount of damage they will become unprecedented, will threaten all of humanity. Climate risk can lead to bankruptcy of a business entity. Due to a lack of information about climate conditions, organizations may lose potential investors. The climate indicators set out in Table 2 are disclosed in accordance with IFRS S2. IFRS S1 and S 2 were developed taking into account the recommendations of the TCFD 2017.

They identify two main types of climate risks:

- transitional – risks associated with the transition to a low-carbon path of economic development;
- physical – risks determined by extreme climatic events.

IFRS S1/S2 reflects reporting requirements for disclosing the impact of climate risks on financial performance. In particular, it should provide interested parties with information about how the value of assets, and, consequently, business activity indicators, incl. creditworthiness in the event of climate risks.

4 Conclusions

Our research has shown that sustainable development of the agro-industrial complex is possible only if ESG principles are observed. To implement these principles, increase the responsibility of all participants in the agro-industrial complex, and provide stakeholders, incl. insurance organizations, government bodies, investors with the necessary information need to be legislated for the mandatory publication of public non-financial reporting by organizations, incl. agricultural sector of the economy. The analysis of domestic regulations relating to issues of sustainable development and public non-financial reporting showed insufficient regulation of legal relations at the present stage. For example, the requirements for public non-financial reporting are not clearly defined, the Federal Law “On Public Non-Financial Reporting” has not yet been adopted, there is no standard for the audit of public non-financial reporting, etc. The basic indicators for reporting on sustainable development approved in Methodological Recommendations No. 764 do not take into account the specifics of agricultural production. Based on the results of the analysis of domestic and international standards, the experience of large agricultural holdings in the preparation of public non-financial reporting, we have developed a list of additional indicators of sustainable development. The recommendations outlined in this article can be used in the development of industry standards regulating the procedure for generating reporting on sustainable development.

References

1. V.D. Gazman, *Economic journal of the Higher School of Economics*, **26 (4)**, 579–597 (2022) <https://doi.org/10.17323/1813-8691-2022-26-4-579-597>
2. O.V. Efimova, *Finance: theory and practice*, **4**, 82-97 (2021) <https://doi.org/10.26794/2587-5671-2021-25-4-82-97>
3. A.G. Zaitsev, S.I. Khapilina, *Bulletin of Agrarian Science*, **2(95)**, 122-127 (2022) <https://doi.org/10.17238/issn2587-666X.2022.2.120>
4. V.G. Zakshevsky, I.N. Merenkova, I.I. Novikova, E.A. Parkhomov, *Economy of the region*, **19(3)**, 683–696 (2023) <https://doi.org/10.17059/ekon.reg.2023-3-6>.
5. I. Korshunov, *Economy of the region*, **19(1)**, 15–28 (2023) <https://doi.org/10.17059/ekon.reg.2023-1-2>
6. Y. Lavrikova, O. Buchinskaya and E. Wegner-Kozlova, *Economy of the region*, **17 (4)**, 1110–1122 (2021) <https://doi.org/10.17059/ekon.reg.2021-4-5>
7. A.S. Mustafina, I.A. Bakin, *News of the Timiryazev Agricultural Academy*, **(5)**, 101-114 (2023) <https://doi.org/10.26897/0021-342X-2023-5-101-114>
8. M.I. Stolbov, M.A. Shchepeleva, *Economic issues*, **(11)**, 136-148 (2022) <https://doi.org/10.32609/0042-8736-2022-11-136-148>
9. Russian Union of Industrialists and Entrepreneurs: official website Moscow Updated throughout the day URL: <http://rspp.ru/> (date of access: 02/26/2024) National Register
10. Global Reporting Initiative (GRI): official website (Toronto) Updated throughout the day URL: <https://www.globalreporting.org/>

11. United Nations: official website (NY) Updated throughout the day URL:
<https://www.un.org/ru/>.
12. IFRS Foundation: official website London Updated throughout the day URL:
<https://www.ifrs.org/>.