

Reporting in the area of sustainable development in agribusiness

Guzaliya Klychova^{1,*}, Alsou Zakirova¹, Elvira Sadrieva¹, Fayaz Avkhadiev¹ and Aigul Klychova¹

¹Kazan State Agrarian University, Department of Accounting and Audit, 420015 Kazan, Russia

Abstract. The aim of the present article is substantiation of theoretical provisions and development of practical recommendations for reporting in the field of sustainable development formation in compliance with the international standard “Guidelines for sustainability reporting” elaborated within the scope of Global Reporting Initiative. The research objectives are as follows: to study the content of non-financial reporting generated in compliance with the GRI guidelines and to offer new methodological approaches towards sustainability reporting formation. Using such general scientific methods as systematic approach, comparison, method of systematization and generalization of data, the research work revealed the essence, content, principles of formation and reporting structure in the field of sustainable development. The work contains recommendations on social activity of accounting organization with the use of information technology, such as: supplementary invoices application for accounting and development of forms for reports containing information of social character.

1 Introduction

Non-financial reporting presentation is one of the tools to increase the investment attractiveness of an organization. It reflects the results of the company’s activity in respect of its influence on the social and environmental spheres. Standards, among which we can accentuate the “Global Reporting Initiative” (hereinafter referred to as GRI) Standards and the Institute of Social and Ethical Accountability Standard (AccountAbility 1000, AA1000), have been developed in the area of non-financial reporting. The companies at present independently determine the content, forms and a system of non-financial reporting indicators. In this connection, it is necessary to develop and adopt a common structure of consolidated reporting on sustainability issues.

Many companies prefer to generate non-financial reporting in accordance with the generally recognized international standard “Guidelines for Sustainability Reporting” developed under the Global Reporting Initiative. The application of the GRI Guidelines is a voluntary initiative in most of the countries the world over. Sustainability reporting is a complex information system reflecting the costs of sponsorship and charity programs of a company, the costs of ecological and environmental protection measures which render

*Corresponding author:kgaukgs@mail.ru

impact on the company, shareholders, contractors and government bodies and the like development.

2 Materials and Methods

The Sustainability Reporting Guidelines provide for the possibility of reports generation in two versions: basic and expanded. The choice of the version does not depend on the location, size or industrial belonging of the organization. The selected variant should meet the needs of the company and the information needs of the parties concerned.

Information on economic, environmental and social impact of the organization is disclosed within the framework of significant aspects. The basic version of the reports preparation contains information subject to obligatory disclosure by the company, on the impact of its economic, environmental, social activity as well as the corporate governance activity. The extended version is built on a basic version, but requires the inclusion of additional standard reporting elements on strategy and analysis, corporate governance, as well as ethics and the company's bona fides.

The following principles shall be observed at the Sustainability Reporting development:

1. Determination of the report contents, which include: interaction with stakeholders, the sustainability development context, significance, completeness.
2. The quality of the report provision: balance identity, comparability, accuracy, timeliness, clarity, reliability.

In accordance with the report content determination principles, the reporting organization shall disclose information:

- on the degree of employees, shareholders, suppliers interests consideration, as well as the vulnerable local population groups, social groups, and others;
- on the organization performance in the broad context of sustainable development;
- reflecting the significant impact of the organization on the economy, the environment and the society.

The information in the reporting shall be sufficient to reflect a significant impact on the economy, the environment and the society and give the stakeholders the opportunity to assess the performance of the organization for the reporting period [1, 5].

The report quality provision principles regulate the issues of proper presentation of information in the sustainability reporting. The report reflects positive and negative aspects of the company's performance in accordance with these principles. Information shall be presented so as to allow the stakeholders to analyze changes in the company's performance. Stakeholders using the report shall be able to compare the information provided on the economic, environmental and social performance of the company with the results of the company's activity for the previous periods and its objectives and, as far as possible, with the performance of other companies [4, 7]. Reporting is provided at regular intervals, and is published in a form that is understandable and accessible to the parties concerned. Stakeholders shall be sure of the possibility to verify the report for proving the reliability degree of its content and the adequacy of the reporting principles application [2, 6].

The accounting data is a key source of information in the process of indicators formation for the sustainable reporting. Social activity accounting - is a set of activities aimed at generating a report based on information from primary accounting [8, 9].

The most effective way of providing accounting data is automation of accounting processes through the use of information technology [13]. Information technology shall be understood as the process of storage, processing, transmission, protection and display of information, focused on increasing the activity efficiency. When organizing an automated sustainable reporting system, it is necessary to take into account the fact that the data is provided by the accounting department of the enterprise. Therefore, they determine the

composition of the primary documents that will be used to compile the reports [10]. They also reveal the relationships between the indicators of all reporting forms and develop a workflow scheme used in planning [17].

The GRI standard adopted in 2016 consists of 36 modules: 3 universal and 33 specialized, dealing with specific aspects of the organization. Specific standard elements of reporting are grouped into three categories: economic, environmental and social. Undoubtedly, the main factor in the operation efficiency of any company is the knowledge of the needs of its main customers. Key success factors are understood as follows: a high level of production, high quality products, qualified personnel, an optimal program for products promotion and manufacturing new products complying with market requirements [3].

3 Results

The category “Ecological” considers a degree of environmental impact rendered by the company and measures a negative impact on nature. Information is disclosed in several aspects: materials, energy, water, biodiversity, emissions, discharges and wastes, products and services.

The aspect “Materials” requires indication of the total amount or volume of materials expended in the production and packaging of the main products and services in the company during the reporting period, broken down by the consumed non-renewable and renewable materials.

Renewable materials include materials produced from renewable resources, that is, resources having the capacity for self-renewal, which can last for a certain period of time (biosphere - plant and animal life). One of the most effective ways to solve the problem of recycling wood wastes is their recycling into fuel briquettes.

Non-renewable resources include minerals, which have found wide application in modern industry being a raw material for fuel production (stone and brown coal, slate, peat, oil) and building materials.

We propose to specify the sub-account “Renewable materials” and “Non-renewable materials” in the account “Materials” in the computer plan of all accounts ((Table 1)).

Table 1. Excerpt from the Plan of Accounts: accounts of materials.

Plan of accounts				
Account code	Account name	Sub-count	Type*	Quan*
10	Materials	Nomenclature	A	+
10.01	Renewable materials	Nomenclature	A	+
10.01.1	Raw and materials	Nomenclature	A	+
10.01.2	Fuel	Nomenclature	A	+
10.01.3	Tare and tare materials	Nomenclature	A	+
10.01.4	Spare parts	Nomenclature	A	+
10.01.5	Building materials	Nomenclature	A	+
10.02	Non-renewable materials	Nomenclature	A	+
10.02.1	Raw and materials	Nomenclature	A	+
10.02.2	Fuel	Nomenclature	A	+
10.02.3	Tare and tare materials	Nomenclature	A	+
10.02.4	Spare parts	Nomenclature	A	+
10.02.5	Building materials	Nomenclature	A	+

*Type: A – active account, «P» - passive account, «AP» - active and passive account.

*Quan.: indicator of quantitative calculation in the account.

Operations on receipt and disposal are recorded in documents on materials acquisition, sale and writing-off into production. Primary documents are a source of information for the automated filling in of reports providing non-financial information [14, 16]. For sustainable reporting in the aspect of “Materials” we propose to use the form of a turnover-balance sheet, which is incorporated in any computer accounting program, making a certain additions into the details of the report (Table 2).

Table 2. Nonfinancial reporting form “Report: aspect “Materials””.

“Lesnoy Rodnik” LLC Report: aspect “Materials” Period: November 2017 Account: 10 Sub-count: Nomenclature							
Nomenclature	Indicators	Opening balance		Period turnover		Closing balance	
		Debit	Credit	Debit	Credit	Debit	Credit
Renewable	ACC	309 800		4 000	81 850	231 950	
Fuel brick	ACC	301 800			75 450	226 350	
	Quan.	50 300			12 575	37 725	
Timber	ACC	8 000		4 000	6 400	5 600	
	Quan.	1 000		500	800	700	
Non-renewable	ACC	1 000		200	780	420	
Petrochemicals	ACC	400		200	480	120	
	Quan.	10 000		5 000	12 000	3 000	
Building sand	ACC	600			300	300	
	Quan.	2 000			1 000	1 000	
Total	ACC	310 800		4 200	82 630	232 370	

We propose to specify the following data in the computer plan of accounts, particularly in the account of costs for auxiliary production of the sub-account by types of sources and directions of energy consumption, for reflecting of information within the framework of the “Energy” aspect (Table 3).

Table 3. Excerpt from the Plan of Accounts: accounts of costs for electric energy.

Account code	Account name	Sub-count	Type	Quan.
23	Auxiliary production	Cost item	A	+
23.1	Energy consumption of non-renewable sources	Cost item	A	+
23.1.1	Electric energy for heating consumption	Cost item	A	+
23.1.2	Electric energy for cooling consumption	Cost item	A	+
23.1.3	Steam consumption	Cost item	A	+
23.2	Power from renewable sources consumption	Cost item	A	+
23.2.1	Electric energy for heating consumption	Cost item	A	+
23.2.2	Electric energy for cooling consumption	Cost item	A	+
23.2.3	Steam consumption	Cost item	A	+

In computer accounting, the receipt and consumption of electricity is registered in the Act of rendered services. We propose a form of the report with the indicator “renewable” (“non-renewable”) included in the settings to summarize the data in the aspect of “Energy” (Table 4). Water supply of organizations (especially industrial and agricultural enterprises), and its disposal shall represent a unified system, in which all processes occur stepwise as follows: water supply, its disposal and treatment before re-use. Sewage waters, which are formed as a result of economic activity, may appear environmental threat.

Table 4. Nonfinancial reporting form “Report: aspect “Energy”.

Consumption direction	Indicators	Consumption for the period	
Non-renewable	ACC	400 000	400 000
heating	ACC	200 000	200 000
	Quan.	50 000	50 000
cooling	ACC	80 000	80 000
	Quan.	20 000	20 000
steam	ACC	120 000	120 000
	Quan.	30 000	30 000
Total	ACC	400 000	400 000

Organization of in-plant recycling zero discharge water supply system at the enterprise shall be one of the methods to eliminate such type of threat. For industrial purposes, it is advisable to use water not from drinking water pipe, particularly from a utility water supply network, but from wastewater source recovered for the secondary use. Water recycling gives economic benefit to an enterprise from its secondary use, and also reduces the negative impact on water bodies [15].

To obtain data on the water volume consumption, it is possible to specify it in the account for auxiliary production costs of the sub-account for water supply sources (Table 5).

Table 5. Excerpt from the Plan of Accounts: accounts of costs for water supply.

Account code	Account name	Sub-count	Type	Quan.
23	Auxiliary production	Cost item	A	+
23.3	Water supply	Cost item	A	+
23.3.1	Surface waters (including bogs, rivers, lakes and oceans)	Cost item	A	+
23.3.2	Underground waters	Cost item	A	+
23.3.3	Rain waters, collected and stored by the company	Cost item	A	+
23.3.4	Sewage waters of the other organization	Cost item	A	+
23.3.5	Municipal and other water supply systems	Cost item	A	+

In computer accounting, water supply is registered in the Act of rendered services. For the sustainable reporting in the aspect of “Water” you can use the data of the turnover-balance sheet for the accounting of auxiliary production.

Industrial and agricultural enterprises render impact on all environmental components: flora and fauna, air, water. Gases, wastewater, industrial wastes are emitted into the atmosphere and reservoirs. Wastes are divided into the utilizable and non-utilizable. Utilizable wastes can be re-used as fuel, feed and fertilizers, as well as raw materials for production, both at the enterprise itself and for realization to other enterprises.

The re-used discharges volume of another organization shall be specified in non-financial reporting. A separate sub-account on the settlement account with different debtors and creditors is proposed for their accounting (Table 6).

Table 6. Excerpt from the Plan of Accounts: accounts of wastes and discharges sold to the other company.

Account code	Account name	Sub-count	Type
76	Settlements with different debtors and creditors	Contractors	AP
76.10	Wastes and discharges sold to the other company	Contractors	AP

The total number of fines and non-financial sanctions imposed for non-compliance with environmental legislation, indicating the total amount of fines and the number of cases of non-financial sanctions, is specified in the sustainability reporting part of the “Compliance” aspect.

If in the preparation of non-financial reporting no cases of environmental legislation violation have been revealed, a brief statement of this fact is made in the relevant section of “Compliance”.

In order to take into account the amount of the fine for non-compliance with regulatory requirements in the field of ecology, it is suggested to specify a sub-account of accounting account for other revenues and expenses (Table 7)

Table 7. Excerpt from the Plan of Accounts: accounting of fines for non-compliance with regulatory requirements.

Account code	Account name	Sub-count	Type
91	Other revenues and expenses	Other revenues and expenses	AP
91.01	Other revenues and expenses	Other revenues and expenses	P
91.02	Other revenues and expenses	Other revenues and expenses	A
91.02.1	Fines for non-compliance with environmental legislation and regulatory requirements	Other revenues and expenses	A

The “General Information” aspect requires reflecting the costs of environmental protection, including the costs for:

- 1) storage or utilization of wastes and purification of emissions;
- 2) liquidation of environmental damage;
- 3) for prevention of the environmental impact and for the system of environmental management.

The following special fixed assets are provided for the environmental protection from the negative impact rendered by the activity of enterprises:

- control and measuring equipment for determining the volume of emissions into the atmosphere, discharge and concentrations of pollutants;
- facilities and installations for wastewater treatment;
- facilities for waste disposal (polygons, storage tanks);
- installations for trapping and neutralizing harmful substances from gases coming from process units and from ventilation air, just before they are released into the atmosphere;
- equipment for collection of oil, garbage and other wastes from the water basins of rivers and water reservoirs;
- equipment, vehicles and communication facilities designed for the operation of natural reserves and other nature conservation areas;
- equipment for noise and vibration level reduction from industrial installations, transport;
- equipment for processing, neutralization and disposal of radioactive wastes.

The costs due to acquisition and construction of fixed assets for nature protection purposes shall be considered in a separate sub-account “Construction and acquisition of fixed assets intended for nature protection purposes” to the account “Investments in non-current assets” [11, 12] (Table 8). Current costs associated with the maintenance and operation of inventory, fixed assets of environmental and nature protection purposes, which are used for air, water basins purification, noise, vibrations and harmful emissions elimination, must be accounted for separately [18].

Table 8. Excerpt from the Plan of Accounts: accounting of fixed assets intended for nature protection purposes.

Account code	Account name	Sub-count	Type
08	Investments in non-current assets		A
08.09	Fixed assets of nature protection purposes	Nomenclature	A

To account for these expenses, we recommend opening additional accounts to the working plan of the economic entity accounts. For example, you can open an account “Costs for the maintenance of inventory and fixed assets intended for nature protection purposes”. This account can correspond to the accounts of expenses calculation, which are meant for writing-off the costs associated with the operation and maintenance of fixed assets and inventory intended for nature protection and environmental purposes (Table 9).

Table 9. Excerpt from the Plan of Accounts: accounting of costs for inventory maintenance and fixed assets intended for nature protection purposes.

Account code	Account name
17	Costs for operation and maintenance of fixed assets and inventory intended for nature protection purposes

To account for the costs of accepting, storage or disposal of ecologically hazardous wastes, it is recommended to use the free account “Expenses for acceptance, storage and disposal of hazardous wastes” by the wastes management directions. (Table 10).

Table 10. Excerpt from the Plan of Accounts: accounting of costs for acceptance, storage and disposal of hazardous wastes.

Account code	Account name
18	Expenses for acceptance, storage and disposal of hazardous wastes

It is supposed to compile the report Based on the information received from the account “Costs for acceptance, storage, disposal of hazardous wastes” in the form proposed in Figure 11.

Table 11. Non-financial accounting form “Report: Costs for acceptance, storage and disposal of hazardous wastes”.

“Lesnoy Rodnik” LLC	
Report: Costs for acceptance, storage and disposal of hazardous wastes	
Period: 4 quarter, 2017.	
Account: 18	
Reference directions	Period from 01.10.2017 till 31.12.2017
secondary use	5 000.00
multiple use	2 000.00
composting	3 000.00
burning down in bulk	21 200.00
pumping into deep underground horizons	1 200.00
storage on the polygon	20 000.00
storage on the enterprise site	20 000.00
Total	72 400.00

In social reporting, the following data shall be reflected: expenses on the protection of flora and fauna; on protection of architectural monuments, historical sites and ancient settlements, representing scientific, cultural and public interest; preservation of natural landscapes. For accounting of these costs, we can apply the free account “Costs for nature protection events” by opening the corresponding sub-accounts (Table 12).

Table 12. Excerpt from the Plan of Accounts: accounting of costs for nature protection events.

Account code	Account name
27	Costs for nature protection events
27.1	Scientific-research activity for negative impact on the environment decrease
27.2	Bio-diversity protection
27.3	Water reservoir protection
27.4	Air basin protection
27.5	Protection from noise, vibration, hazardous radiation
27.6	Energy saving activities
27.6.1	Electric energy saving
27.6.2	Water saving
27.6.3	Fuel saving

Research activities for reduction of negative impacts on the environment involve the development of new ways and tools for protecting the environment.

The costs of biodiversity protection include the costs of habitat conservation, protection and restoration of species numbers, as well as laboratory research and analytical measurements.

Protection of water reservoir consists in organization of a water supply system, including the purification of sewage and cooling water, as well as in the constant monitoring and laboratory analysis of water quality. Measures of the air basin protection include purification of ventilation gases and laboratory studies of atmospheric air.

Protection from noise, vibration, harmful radiation is achieved through the use of anti-noise and anti-vibration facilities for transport, and environmental safety provision during transportation and processing of highly radioactive wastes.

Based on the data generated by the documents on the writing-off of materials for the nature protection events implementation (request-waybill), calculation of wages, accrual of depreciation, etc., a report is expected to be drawn up (Table 13).

Table 13. Nonfinancial accounting form “Report: Costs for nature protection events implementation”.

“Lesnoy Rodnik” LLC Report: Costs for nature protection events implementation Period: 4 quarter, 2017. Account: 27	
Type of events	Period from 01.10.2017 till 31.12.2017
Scientific-research activity for negative impact on the environment decrease	30 000.00
Bio-diversity protection	10 000.00
Water reservoir protection	20 000.00
Air basin protection	10 900.00
Protection from noise, vibration, hazardous radiation	900.00
Electric energy saving	10 000.00
Water saving	10 000.00
Fuel saving	30 000.00
Total	121 800.00

In the “Social” category of sustainable reporting, the issues of staff-management relations, workplace safety, additional training and education of employees, non-discrimination, forced or compulsory labor, participation in the development of local communities shall be disclosed.

The content of subcategories of the Social section is regulated by international universal standards: the Universal Declaration on Human Rights, 1948; The International Convention on Economic, Social and Cultural Rights, 1966; The UN Convention on the Elimination of All Forms of Discrimination against Women, 1979; The International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work (1998), which is based on eight ILO Conventions (on Forced or Compulsory Labor, on Freedom of Association and Protection of the Rights to Organization, on the Right to Organize and Maintain collective bargaining, equal remuneration, the abolition of forced or compulsory labor, discrimination in employment, the minimum age for admission to employment, the worst forms of child labor) (Consolidated set of GRI sustainability reporting standards, 2016).

We can apply a free account 30 “Social Expenses” by opening the corresponding sub-accounts for accounting of expenses on ensuring a favorable life and work conditions of employees, allowances for pensions and benefits to retiring veterans of labor, medical treatment or rest repayment, holding classes in clubs, sports clubs and groups, attending cultural and entertainment or sports events, contributions to social programs of a sponsorship and charitable nature. Based on the results of these sub-accounts, it is proposed to use the form of the non-financial report “Social Expenses” (Table 14).

Table 14. Form of non-financial reporting “Report: Expenses for nature protection events implementation.

“Lesnoy Rodnik” LLC Report: Social Expenses Period: 4 quarter 2017 Account: 27	
Directions	Period from 01.10.2017 till 31.12.2017
Training and qualification upgrading	5 000.00
Liability insurance	2 000.00
Safe labor conditions provision	3 000.00
Therapeutic resort treatment organization	25 800.00
Benefits rendered to the employees, working on a full-time basis	2 800.00
Benefits rendered to the young employees	23 000.00
Benefits rendered to the pensioners and veterans	2 000.00
Total	63 600.00

As a result of non-financial reporting content study compiled in accordance with the guidelines of the Global Reporting Initiative, new recommendations have been proposed for the sustainable reporting development with the help of tools incorporated in the computer accounting program.

4 Conclusions

Thus, the sustainable reporting is formed on the basis of accounting data. There is a concern of the authorized organizations about a question of the primary documentation development for registration of operations connected with social activity of the enterprises. Application of information technology for the sustainable reports preparation will significantly simplify the process of obtaining the accounting data related to economic, environmental and social activity of the organization.

Further work is needed to determine the composition and structure of reporting containing information of a social nature, as well as research on the methodology, which could serve the basis for resolving the issue of the relationship between the main forms of reports. The accounting methodology shall be directed to the social activity of the

enterprise. Currently, many enterprises support this direction, which positively affects their business reputation.

References

1. M.M. Alonso-Almeida, J. Llach, F. Marimon, Corp. Soc. Responsib. Environ. Manag. **21(6)**, 318–335 (2014)
2. B.E. Needles Jr., M.L. Frigo, M. Powers, A. Shigaev, Studies in Managerial and Financial Accounting **31**, 41 – 81 (2016)
3. B. Letsoalo, J. Coetzee, W. Ukpere, Development Intervention Mediterranean Journal of Social Sciences **5-1** (2014)
4. J.A. Fuente, I.M. García-Sánchez, M.B. Lozano, J. Clean. Prod. **141**, 737–750 (2017)
5. M. González, M.M. Alonso-Almeida, C. Avila, D. Dominguez, Neurocomputing **168**, 1181–1187 (2015)
6. Consolidated set of GRI sustainability reporting standards. Consolidated set of GRI sustainability reporting standards, The Netherlands: Global Reporting Initiative, <https://www.globalreporting.org/standards/> (2016)
7. G.S. Klychova, A.R. Zakirova, E.R. Kamilova, International Business Management **10**, 5254-5260 (2016)
8. G.S. Klychova, A.R. Zakirova, K.Z. Mukhamedzyanov, M.S. Faskhutdinova, Mediterranean Journal of Social Sciences **5-20**, 220-224 (2014)
9. G.S. Klychova, A.R. Zakirova, K.Z. Mukhamedzyanov, E.R. Sadrieva, A.S. Klychova, Journal of Engineering and Applied Sciences **12**, 4966-4973 (2017)
10. G.S. Klychova, L.N. Safiullin, A.R. Zakirova, Mediterranean Journal of Social Sciences **5-18**, 193-196 (2014)
11. G.S. Klychova, B.G. Ziganshin, A.R. Zakirova, G.R. Valieva, A.S. Klychova, Journal of Engineering and Applied Sciences **12**, 4958 (2017)
12. G.S. Klychova, D.I. Faizrahmanov, A.R. Zakirova, E.R. Sadrieva, Asian Social Science **11-11**, 302-307 (2015)
13. G.S. Klychova, A.R. Yusupova, Bulletin of Kazan State Agrarian University **1(43)**, 93-99 (2017)
14. K. McElhaney, Leader to Leader **52(1)**, 30-36 (2009)
15. N.K. Wan Ahmad, M.P. de Brito, J. Rezaei, L.A. Tavasszy, Journal of Environmental Planning and Management **59**, 577-601 (2016)
16. L.N. Safiullin, G.S. Klychova, A.S. Klychova, Mediterranean Journal of Social Sciences **5-18**, 183-186 (2014)
17. S. Stec, M. Paszkiewicz, A. Antypas, International journal of innovation and sustainable development **11(2-3)**, 130-148 (2017)
18. G.S. Klychova, E.N. Fakhretdinova, A.S. Klychova, N.V. Antonova, Asian Social Science **11-11**, 318 (2015)