

Subjects of Analysis and Users of Information on the Environmental Sustainability of the Corporation

Abstract: The issues of developing an organizational mechanism for analyzing the environmental sustainability of a corporation have not been given due attention so far. A logically complete, systematic approach to understanding the essence and content of environmental sustainability analysis as an independent block analysis, based on private and generalizing indicators within the framework of a comprehensive economic analysis, was not formulated. To a greater extent the authors described certain organizational and methodological issues of analyzing the environmental sustainability of a corporation as part of the analysis of the financial state of organizations, technical and economic analysis. We have undertaken an attempt to fill the existing gap in this block of economic analysis, to identify the subjects and users of the results of the analysis of the environmental sustainability of the corporation. Interested users of information on environmental sustainability analysis study environmental strategy and policy in the field of environmental protection, environmental management and ensuring environmental safety, evaluate the effectiveness of environmental decisions on the introduction of the best available and environmentally friendly technologies, evaluate investments in environmental protection measures.
Keywords: environmental sustainability, analysis, subjects of analysis

Introduction

The aim of the study is to develop theoretical, organizational and methodological representatives of the economic analysis of the environmental sustainability of corporations, aimed at substantiating solutions to applied problems in the field of environmental safety management of corporations, the broadest development of corporations and sustainable states in the field of environmental protection.

The solution of the tasks set in the work was carried out on the basis of the application of general scientific research methods within the framework of comparative, logical and statistical analysis, as well as through the analysis of structure and dynamics, graphical interpretation of information, methods of investment analysis.

Information on the Environmental Sustainability of the Corporation

A special place among the factors of environmental sustainability is occupied by the presence of an environmental service and the relationship with other divisions of the corporation. According to the Federal Law “On Environmental Protection”, any planned and implemented economic and other activity carries a potential environmental hazard, in this regard, the organization should create a department or service responsible for environmental safety. Each industrial enterprise has established an environmental service with the following powers [Fedoseev 1978, pp. 23–26, 163]:

- implementation of industrial environmental control;
- Carrying out measures for the protection and improvement of the environment, rational use of natural resources;
- Ensuring compliance with environmental quality standards and compliance with the requirements of legislation in the field of environmental protection [Tomakova 2016, pp. 69–78].

The existing trends persist in the economic activity of the Voronezh region, as well as in the country as a whole. We analyzed the influence of factors in the Central Black Earth region, within which our research objects operate.

On the territory of the Voronezh region in 2017, 1,079 types of waste of I–V hazard classes were formed with a total volume of 8105.034 thousand tons, which is 1413.236 thousand tons or 17.4% more than in 2016. 94.4% of the generated waste is practically non-hazardous and low-waste waste - 7653379.527 tons [Strakhova 2012, pp. 113–118].

The problem of analyzing environmental sustainability in the field of waste management can unite the efforts of scientists and specialists in various fields for many years, since a serious situation has developed in Russia both in various areas of industry and in everyday life. Currently, there are no necessary capacities, technologies, financial resources, legal support for the mechanism for ensuring environmental safety, as well as a mechanism for state regulation. As a result, there are significant costs in environmental protection activities, deterioration of the environmental situation.

Since in terms of the structure of economic activity the Voronezh Region is an industrial-agrarian one, the main supplier of industrial waste in the Voronezh Region is the enterprises of mechanical engineering, power engineering, the chemical industry, animal husbandry and the processing of agricultural raw materials. They account for 4/5 of the total industrial output.

The obligation for corporations to introduce low-waste technologies based on the use of the latest scientific and technological advances is limited by the declarative provisions of the legislation.

In the Voronezh Region, the State Program of the Voronezh Region “Environmental Protection” has been approved (Resolution of the Government of the Voronezh Region No. 1182 dated December 30, 2013). By order of the Department of Natural Resources and Ecology of the Voronezh Region dated April 20, 2014 No. 49, a comprehensive waste management scheme was approved on the territory of the Voronezh Region for the period until December 31, 2020.

The implementation of a comprehensive scheme will allow, within 8 years, to ensure 100% coverage of the population with a planned-regular system for collecting solid household waste, the gradual elimination of landfills, land reclamation, the involvement of waste into economic circulation as secondary material resources, the disposal of hazardous waste, as well as the preservation of favorable the environment to meet the needs of the population of the Voronezh region and ensure the environmental sustainability of corporations.

The approval by Order of the Government of the Russian Federation of September 24, 2015 No. 1886-r of the list of finished goods, including packaging, to be disposed of after they lose consumer and other regulatory legal acts governing waste management from the use of finished goods, as well as the adoption of the procedure for collecting environmental fees will allow In the near future, to solve the problem of a low percentage of waste recycling in the region by targeted spending of funds received by the budget as a result of the payment of environmental fees by corporations, on the creation of specialized entities in the region for the disposal of goods and packaging that are not utilized by manufacturers and their financing. This measure will reduce the fines and penalties charged by business entities for waste management, which will allow corporations to save money.

In 2020, the Office of the Federal Service for Supervision of Natural Resource Use (Rosprirodnadzor) in the Voronezh Region conducted 23 planned, 25 comprehensive and 72 unscheduled inspections, 96 raids.

Table 1. The Number of Checks and the Amount of Fines Collected

Verification activities carried out			Violations identified / violations eliminated legal entity faces	Prescriptions issued / Prescriptions fulfilled should. faces	Fines imposed pcs.			Amount of fines imposed, thousand rubles.	Fines collected, thousand rubles	Claims filed / damages reimbursed, thousand rubles
Total	including checks				physical faces	should faces	physical faces			
	plan-ned	unplan-ned								
2019 year										
366	31	118	202 / 190	85 / 84	288			5390,5	4239,6	135350,3
					42	174	72			
2020 year										
216	23	73	204 / 139	65 / 45	199			3392,1	3740,7	126624,2
					43	104	49			

As a result of verification measures, 204 violations of environmental legislation were revealed, of which 139 were eliminated, 61 orders were issued on their implementation. To administrative responsibility in the form of fines in the total amount of 3392.1 thousand rubles. involved 43 legal entities, 104 officials, 49 individuals, 153 fines were collected in the amount of 3740.7 thousand rubles [Tomakova 2016, pp. 69–78].

Analyzing the data in the table. 1, we can say that the number, and, accordingly, the amount of fines is decreasing, nature users are becoming more conscious every year.

The priority area of the Office in 2020 is the prevention of administrative offenses. For 2020, the Department plans to conduct large seminars with nature users, lectures for students and senior schoolchildren to form a worldview and understanding of the principles of environmental protection.

Economic regulation in the field of environmental protection is carried out with the aim of creating an interest among corporations in compliance with environmental requirements established by law. Over the past 5 years, payments for negative impact on the environment have been received in the amount of more than 802.5 million rubles. So, in 2016–141.2 million rubles were received, in 2017–153.6 million rubles, in 2018–178.6 million rubles, in 2019–172.4 million rubles, and in 2020–156.7 million rubles. The decrease in the received payment for the negative impact on the environment in 2017 compared to previous years is due to the fact that small and medium-sized businesses will pay for the negative impact on the environment at the

end of the year in 2020. The register of payers of payments for negative impact on the environment is constantly expanding. As of 01.01.2021, 7908 economic entities are registered with the Department.

Since 2016, manufacturers and importers of certain types of goods and packaging are obliged to pay an environmental fee, which was introduced as a new non-tax payment by the Federal Law of December 29, 2014 No. 458-FZ “On Amendments to the Federal Law On Production and Consumption Waste”. This measure gives positive results, as a result of its adoption, the development of facilities for the disposal and disposal of waste, the creation of facilities for the processing of goods and packaging, the development of the market for secondary raw materials, as well as the saving of land and resources will take place.

Currently, there is a need for a comprehensive methodology for analyzing the results of economic activities of corporations, understood not only from the side of obtaining a certain amount of profit, but also increasing the environmental sustainability of an economic entity, including taking into account the influence of environmental-oriented factors. The peculiarity and difficulty of assessing the environmental sustainability of corporations is that it is multifaceted. Consequently, the complexity of the analysis will be determined by studying it as a complex category that combines economic, environmental, technical and social aspects. Factors that have a significant impact on the impact of the corporation on the environment, set the level of environmental sustainability of the economic entity and serve as sources of reserves to reduce the cost, and as a result, improve the financial results of the economic entity. Since environmental sustainability is not an independent component, but refers to the sustainability of a corporation, the analysis of environmental sustainability is based on the main indicators of economic analysis, but taking into account the environmental factor.

The subjects of the analysis of the environmental sustainability of the corporation are the environmental, economic and social services of the organization, as well as the supervising, judicial, environmental and controlling federal bodies and bodies of the subjects of the Federation in accordance with the current legislation of the Russian Federation. As part of optimizing the activities of structural divisions in order to manage the environmental sustainability of the corporation, we propose the following structure for building document flow between divisions.

As a result of the study of the relationship between the elements of the workflow of the environmental protection department with other divisions, it is possible to present a scheme of interaction between the structural divisions of the corporation in order to ensure environmental sustainability. The successful implementation of the corporation's activities in the field of environmental sustainability is impossible without the formation of a scheme for the interaction of structural divisions of the organization, since it allows you to build hierarchical subordination and determine the relationship between its employees. The principle of constructing this scheme of

interaction is based on assigning responsibility for the implementation of activities in the field of environmental protection to an official - deputy director - chief engineer, which will ensure the effective combination of achieving production and environmental goals of the corporation, while simultaneously implementing cost-effective environmental protection activities.

The main goals and objectives to be achieved by these structural units are:

- development and implementation of environmental policy, determination of priority environmental aspects of activities;
- implementation of the planned environmental protection measures;
- development and maintenance of internal reporting in the field of environmental protection;
- development of incentives for personnel in order to involve them in the implementation of environmental activities;
- implementation of industrial environmental control in the corporation.

Table 2. Interrelation of Document Flow Elements of the Environmental Protection Department (OOOP) with Other Divisions of the Corporation

Subdivision Corporations	Receives from the given subdivisions	Transfers to the given subdivision
1	2	3
Financial department	Copies of documents on payments made for the services of third-party organizations under contracts concluded by the environmental protection department	Monthly payment plans for contract works
Department of Labor Organization and Wages	Approved staffing table and changes to it; regulations and other documents on bonuses, payment of remuneration, the establishment of allowances and surcharges; certificates, clarifications on labor and wages; control copies of the regulations on the department, job descriptions	– Time sheet; – proposals for the regulation and other documents on bonuses, payment of remuneration, the establishment of allowances and surcharges; – proposals for changing the number of staff and the structure of the department; – report on the performance of bonus indicators
Planning and Economic Department	Limits for materials, travel expenses, etc.	Payment plan for contractual works

Subjects of Analysis and Users of Information on the Environmental Sustainability of the Corporation

Management System Department	<p>Updated external regulatory documents (GOST, OST, TU);</p> <p>program for conducting internal audits;</p> <p>plans for conducting internal audits;</p> <p>acts based on the results of internal and external audits;</p> <p>plan for the development and revision of the documents of the integrated management system;</p> <p>organization standards, instructions, methods and other documents of the integrated management system;</p> <p>minutes of the meeting of the commission for the analysis of the integrated management system;</p> <p>minutes of the meeting of the commission for the analysis of the integrated management system</p>	<p>– Applications for the purchase of regulatory documents;</p> <p>– reports on the implementation of corrective actions to acts of internal and external audits;</p> <p>– draft standards, instructions, methods of the integrated management system and changes to them (for departments);</p> <p>– objectives in the field of quality and ecology and a report on their achievement;</p> <p>– data for assessing the effectiveness of the functioning of the integrated management system</p>
Department of industrial safety and labor protection	<p>Internal regulations governing the procedure for work in the field of industrial safety and labor protection;</p> <p>prescriptions;</p> <p>lists for medical examination;</p> <p>- minutes of meetings on industrial safety</p>	<p>– Information on the results of sanitary and hygienic control of work places of departments;</p> <p>– a report (up to the 5th day of the month) on the ongoing preventive</p> <p>– work to ensure compliance with the rules of industrial safety and labor protection;</p> <p>– notifications about the fulfillment of prescriptions</p>
Personnel training department	<p>Plans, technical training and professional development programs</p> <p>cadres</p>	<p>Applications for the organization of a professional training of workers, advanced training of managers, specialists of the department</p>
Accounting department	<p>Information about the consumption of raw materials, materials and production;</p> <p>material reports;</p> <p>personal accounts for wages</p>	<p>– Calculation of payments for environmental pollution;</p> <p>– documents on the work performed under the contracts concluded by the department;</p> <p>– Documents for accounting for the receipt and consumption of inventory items</p>
Legal service	<p>Conclusions, written and oral information on practical activities</p>	<p>– Draft orders, instructions, regulations, contracts and other documents to verify their compliance with the laws of the Russian Federation;</p> <p>– originals of contracts concluded by the department</p>
Logistics Department	<p>Copies of primary reporting documents confirming waste disposal activities</p>	<p>– Approved applications for the purchase of inventory items;</p> <p>– general information about waste intended for transfer for use or disposal to third parties</p>

Transport Bureau	Copies of primary reporting documents confirming waste disposal activities	<ul style="list-style-type: none"> – General information about waste intended for transfer for use or disposal by third-party organizations; – applications for the provision of transport
Production and technical department	<p>Proposals (plans) to reduce the harmful effects of production on the environment;</p> <p>rates of consumption of raw materials, materials, waste generation;</p> <p>drafts of technological regulations, instructions and other normative and technical documentation for approval;</p> <p>information on the operating time of sources of atmospheric pollution, production output, consumption of raw materials and materials, generation and disposal of waste;</p>	<ul style="list-style-type: none"> – Information on violations of environmental management norms (in technological units); – approved plans for environmental protection measures; – conclusions (reviews) on drafts of technological regulations and other materials; – applications for the purchase of external regulatory documents (JV, SanPiN, etc.) used in the implementation of activities in the field of environmental protection
	other information within the competence of the department, necessary to perform the tasks and functions assigned to the department of nature protection	Wednesday
Center for technical development	<p>Pre-design and design materials for the development, reconstruction, technical re-equipment of production (including those carried out by the corporation);</p> <p>plans for technical re-equipment, other plans for organizational and technical measures;</p> <p>other information within the competence of the department, necessary to perform the tasks and functions assigned to the PLO</p>	<ul style="list-style-type: none"> – Proposals for inclusion in the organization's technical development plans; – conclusions (reviews) on pre-design and design materials; – initial data for design within their competence
Chief Power Engineer Department	<p>Proposals (plans) to reduce the harmful effects on the environment;</p> <p>drafts of technological regulations, instructions and other normative and technical documentation for approval;</p> <p>water use limits and information on water consumption, waste treatment;</p> <p>a list of control wells for industrial storm and industrial sewage systems;</p> <p>other information within the competence of the department, necessary to perform the tasks and functions assigned to the department of nature protection</p>	<ul style="list-style-type: none"> – Reports on the results of laboratory control of wastewater from hydraulic structures, river and artesian water from the water intake facilities of the enterprise, the quality of groundwater in the zone of influence of hydraulic structures; – conclusion of technological regulations and other materials

Production divisions of the corporation	Proposals (plans) to reduce the harmful effects of production on the environment; reports on the elimination of violations of environmental norms and rules, on the implementation of environmental measures, on the operation of dust and gas cleaning equipment, on the generation and disposal of waste, on the costs of environmental protection, information provided by the corporation's standards; a list of work areas and hazardous substances that can be released into the air of the working area; a list of environmental aspects by division and a card of their assessment;	– Prescriptions on violations of environmental norms and rules; – standards for maximum permissible emissions (WAS), VAT (WSS); – general information about the waste generated in the unit. The results of monitoring the standards for maximum permissible emissions (WAS), VAT (WSS), the efficiency of combined cycle plants; – control results – sanitary and hygienic indicators at workplaces; – register of significant environmental aspects and measures to reduce them
	other information within the competence of the department, necessary to perform the tasks and functions assigned to the department of nature protection	

The main goals and objectives to be achieved by these structural units are:

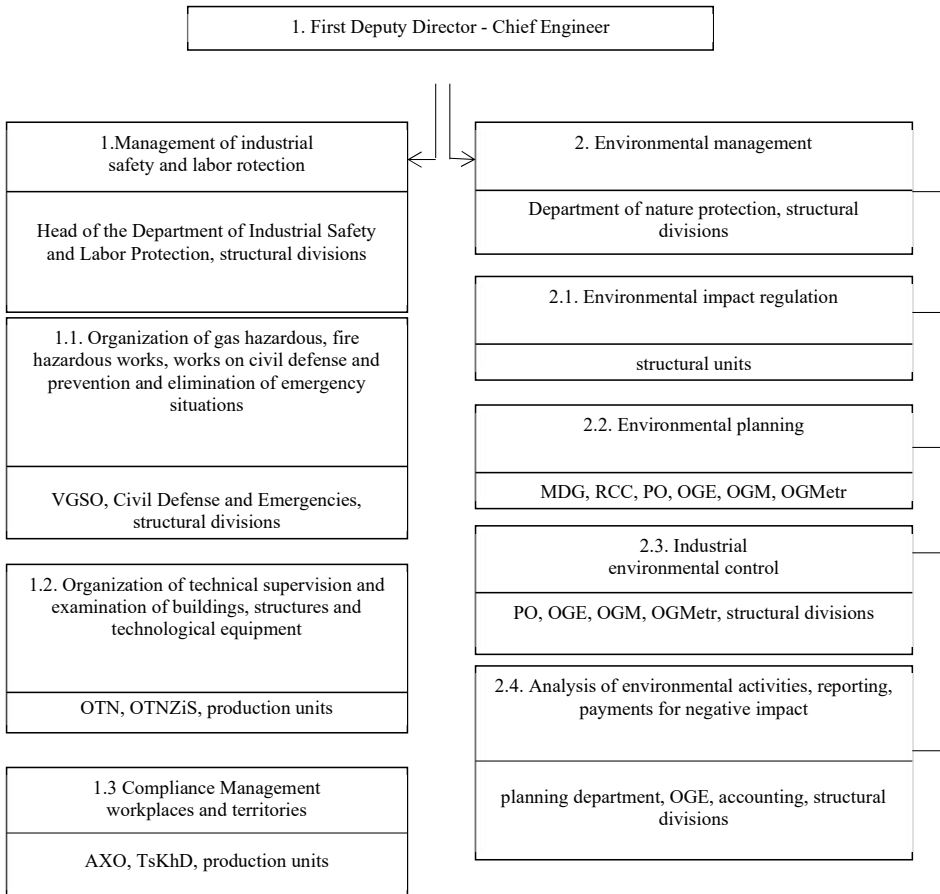
- development and implementation of environmental policy, determination of priority environmental aspects of activities;
- implementation of the planned environmental protection measures;
- development and maintenance of internal reporting in the field of environmental protection;
- development of incentives for personnel in order to involve them in the implementation of environmental activities;
- implementation of industrial environmental control in the corporation.

In order to ensure the developed workflow and the scheme of interaction of structural units, each department is assigned a measure of responsibility for fulfilling its functions in their regulations and job descriptions, which will allow achieving an effective result from environmental activities.

To increase the interest of the corporation's employees in ensuring environmental sustainability, it is necessary to introduce additional payments for the development of proposals as part of the implementation of environmental activities. Identification of these proposals is possible in the process of conducting internal industrial environmental control when drawing up reports for each structural unit.

As a result of the considered interaction of structural units in forecasting and drawing up an action plan within the framework of industrial environmental control in order to ensure the environmental sustainability of the corporation, it is possible to determine the degree of responsibility of each department and its employees, which will allow to ensure full control over their activities in the field of environmental protection.

Figure 1. Scheme of Interaction of Structural Divisions of Management the Production and Environment of the Organization in the Process of Ensuring the Environmental Sustainability of the Corporation



Conclusion

Interested users of information on the analysis of environmental sustainability study environmental strategies and policies in the field of environmental protection, rational use of natural resources and ensuring environmental safety, assess the effectiveness of environmental decisions on the implementation of the best available and environmentally friendly technologies, evaluate investments in environmental protection measures.

The work defines the circle of interested users of the results of the analysis of environmental sustainability and reflects the area of their economic interests. As part of the dissertation research, the interrelation of the elements of the workflow of the

environmental protection department within the corporation is shown, as well as the scheme of interaction between the structural divisions of the industrial and environmental management of the organization in the process of ensuring the environmental sustainability of the corporation.

Bibliography

- Fedoseev P.N. (1978), *Philosophy and integration of knowledge* [in:] P.N. Fedoseev, "Questions of Philosophy" No. 7.
- Filobokova L.Yu. (2008), *Ecological audit: methodological approaches to management and assessment of the effectiveness of environmental policy* [in:] L. Yu. Filobokova, *Economic analysis: theory and practice*. Moscow.
- Kharach O.G. (2009), *Management of sustainable development of industrial enterprises based on the ecological-systems approach (on the example of the electronics industry)* [in:] O.G. Kharach, *abstract dissertation. for a job. uch. Ph.D. degree*, Moscow.
- Kharina N.L. (2019), *Features of preparation of management reporting to improve the efficiency of Russian enterprises* [in:] N.L. Kharina, *News of the South-West State University*. Series: "Economics, Sociology, Management" No. 30.
- Kharchenko E.V. (2017), *Non-traditional tools for the development of the company and bringing innovative products to the market* [in:] E.V. Kharchenko, P.V. Heiderich, *News of the South-West State University*. No. 75.
- Khomyachenkova N.A. (2011), *The mechanism of integral assessment of the stability of the development of industrial enterprises* [in:] N.A. Khomyachenkova, *abstract dissertation. for a job. uch. Ph.D. degree*.
- Strakhova N.A. (2012), *Methodological approaches to environmental and economic decision making during environmental audit* [in:] N.A. Strakhova, Yu. Bobarykina, M.V. Smorgunova, *New technologies*, No. 3.
- Titarchuk L.V. (2012), *Philosophical category 'time' as an ecological resource from the point of view of an economist* [in:] L. V. Titarchuk, *Youth. The science. Future: technologies and projects: materials of international scientific-practical. conf. young scientists and specialists, October 21–22, 2011: in 3 volumes*, Kazan: Publishing house "Poznanie" of the Institute of Economics, Management and Law.
- Tomakova I.A. (2017), *Organizational culture as an administrative resource and instrument in the occupational safety and health system at an enterprise*, I.A. Tomakova, M.V. Tomakov, Yu.N. Charkina, A.V. Brezhnev (2018), *News of the South-West State University*. Series: "Engineering and technology" No. 25.
- Tomakova I.A. (2016), *On the financial support of preventive measures to prevent occupational diseases and industrial injuries* [in:] I.A. Tomakova, V.I. Tomakov, *Bulletin of the South-West State University*. Series: "Engineering and technology" No. 18.
- Tumin V.M. (2011), *Theoretical and methodological foundations for managing the environmental sustainability of a corporation* [in:] V.M. Tumin, O. M. Makhalina, S.Yu. Chmel, *News of higher educational institutions*. Series: "Economics, finance and production management".