Assessment of the environmental responsibility of industrial enterprises in the region

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Abstract. The article discusses the problems of accessibility of information about the impact of enterprises on environmental components for stakeholders. Assessing the environmental component of non-financial reports allows to analyse the environmental activities of any company and draw appropriate conclusions about the effectiveness of the policies of enterprises. Russian companies, unlike foreign ones, have lower trends to disclose environmentally significant information, but there is a positive trend in placing such information in the public domain. The study analyzed the trend of non-financial reporting following the international recommendations of the Global Reporting Initiative (GRI). In the period June-November 2019, the number of Russian companies reports presented in the international GRI database increased by 10%, with a global dynamics of 1.7%. According to the National Register of the Russian Union of Industrialists and Entrepreneurs, 80% of non-financial reporting is the reports of sustainable development field, the most open are the enterprises of the oil and gas industry and the electric power industry. The study covered 107 negative impact facilities of the 1st category, high and significant risk category, located in the Volgograd region. To assess the openness of regional enterprises, we analyzed their official websites and databases of the rating of environmental business performance. Official sites identified for 72% of facilities demonstrate the predominance of environmentally significant declarative information, it is 87% of analyzed sites. A study of companies' readiness to disclose data on anthropogenic impact for stakeholders used copyright checks and showed the commitment of less than 10% of respondents. Regional companies did not support the initiative on the openness of environmentally significant information, which less than 2% of enterprises publish in the open access, and are not ready to prepare reports on sustainable development following international criteria. Since 2018, the exclusion of quantitative data on the negative impact on specific enterprises as a mandatory component of regional reports on the state of the environment has exacerbated the identified trend.

1. Introduction

To solve environmental problems, environmentally responsible companies use various tools in their practice, including social reporting with an environmental component. Developing within the framework of social responsibility, environmental responsibility should exceed the legislatively established requirements in the field of environmental protection, comply with standards and feed into the business plans of companies for future development. The publication of data on the impact of the company on the components of the environment, areas of environmental activity, allows us to assess
the organization's commitment to sustainable development goals, a modern trend in world development.

2. Research and discussion
The current level of corporate responsibility among the world's largest companies, G250, according to the Corporate Performance Review - Responsibility Report 2017, is more than 90%, which represents a new trend of sustainability accounting [1]. Companies and organizations of all types, sizes and sectors from around the world issue sustainability reports. Thousands of companies in all sectors have published reports that link to the GRI Sustainability Reporting Guidelines [2-4]. Government agencies and nonprofit organizations are also major reporters. The GRI Sustainability Disclosure database contains all the well-known GRI reports. As of November 1, 2019, the GRI database contains 33286 reports executed following the GRI Guidelines, 14269 various organizations, the share of Russian companies is 1.1% - 163 companies [5].

Over the 5 months of this year, the increase in the report number of Russian companies amounted to 10%, with an increase in reporting companies by 1%. Considering that the total number of reports in the GRI database for the period under review increased by 1.7%, the dynamics of the Russian companies' indicator, in our opinion, has a positive trend (Figure 1).

As a tool for the environmental policy of environmentally responsible companies, non-financial reporting allows deeply analyzing the activities of each organization. Business entities that have the most developed system of environmental measures comply with not only legal acts and regulations but also openly demonstrate the results of both their impact on the natural environment and the measures taken to reduce it.

In Russia, the Russian Union of Industrialists and Entrepreneurs (RUIE) is engaged in the systematization and placement of non-financial reporting in the National Register. Currently, 71% of reports relate to sustainable development (35%) and social orientation (36%) and less than 10% are made by ecology reports [6]. Figure 2 presents the distribution of reports by industry affiliation.

In the framework of non-financial reporting, Russian companies prefer reports in the field of sustainable development, 79.5%, while environmental reports occupy only 20.5%. The distribution by industry is as follows: Oil and gas and energy companies are most interested in the openness of
environmental information and provide reports on sustainable development. An interesting fact is a certain imbalance in the provision of non-financial reports, that is, companies are ready to provide either environmental reports or sustainable development reports.

Since 2015, Russia has introduced the categorization of anthropogenic objects that is the division into 4 categories depending on the level of impact [7]. The facilities’ categorization is based on types of economic activity, technological production capacity and indicators of negative impact. The level of state supervision depends on the category of the enterprise, its location and other parameters: federal includes all Negative Environmental Impact category 1 facilities [8] and regional. The legislation establishes the classification of impact objects as the following risk categories: low, moderate, medium and significant. Depending on the territorial location, for example, within the boundaries of a specially protected natural territory of federal significance, or in case of legal violations in the field of environmental protection, in case of administrative offence or invalid licence on activities in the field of waste management, facilities are subject to classification to a higher risk category, for example, extremely high [9].

The objects of the study were enterprises of fist category located on the territory of the Volgograd region, of a high and significant risk category, having a significant negative impact on the environment and relating to the areas of application of the best available technologies. As of November 2019, according to the data of the public portal, Software and hardware for an accounting of facilities with a negative impact on the environment, more than 297 thousand objects have registered on the territory of the Russian Federation, of which 7400 belong to the 1st category. On the territory of the Volgograd Region, among the objects subject to federal environmental supervision, it is about 40% of all subjects of regional environmental protection agencies, 6.5% of enterprises belong to 1st category (Figure 3), of which more than 25% are classified as high risk [10].
According to the territorial body of the Federal State Statistics Service for the Volgograd Region, the mass of pollutant emissions into the atmosphere in the Volgograd Region from stationary sources amounted to 138.0 thousand tons for 2017. Meanwhile, over 60% of pollutant emissions is in the city of Volgograd, the rest of it fell to the satellite city Volzhsky. In 2017, an average of less than 52% of emissions was captured and neutralized in the region. Pipeline transport enterprises make a significant contribution to the total air pollution since their emissions come without treatment. The territorial production enterprise Volgogradneftegaz JSC RITEK, located in several districts of the region, belongs to the first risk category and contribute about 6% to the total air pollution by enterprises of the high-risk category.

Information of 2017 from the annual reports on the state of the environment of the Volgograd Region showed that 34 companies are the main sources of air pollution, 44% are enterprises of the 1st category, 53% is the 2nd category, and the 1st enterprise is the 3rd category (Volgograd branch of Omsktekhuglerod LLC). Figure 4 presents the volume of pollutant emissions for 2017 by categories of negative environmental impact objects.
The enterprises, the main sources of anthropogenic impact, account for 103.9 thousand tons, that is 75.3% of the total amount of emitted substances from stationary sources. More than 67% of the indicated volume of emissions are the objects of the negative impact of the 1st category (Figure 5).

Figure 5. Dynamics of emissions of pollutants by enterprises of 1 category, tons [11-13].

The diagram shows three enterprises with the greatest negative impact on atmospheric air in the region: Volzhsky Abrasive Plant OJSC, LUKOIL-Volgogradneftepererabotka LLC and Sebryakocement JSC, which account for 45.6% of emissions of category 1st enterprises, 23% of total emissions in the region, 12.2%, 6.1% of the total, and 12.5%, 6.2% of total, respectively. Thus, 3 enterprises of the region form together more than one-third of the total emissions, 35.3%.

In the region, the main sources of wastewater pollution are utilities, chemical industry, building materials industry and the fishing industry. The list of enterprises, the main sources of pollution of water bodies in the region in 2017 included LLC Water Supply Concessions, Volgograd, which belongs to the 1st category of Negative Environmental Impact facilities.

Since 2010, the amount of waste generated in the region has increased by 0.803 million tons or 98.29%. The enterprises, the main sources of environmental pollution in the region engaged in waste management, include Ekomaster LLC and Volga-Business LLC, both organizations are 1st category of Negative Environmental Impact facilities.

In terms of assessing the information openness of environmentally significant information at the regional level, it is necessary to note, starting in 2018, the negative trend of the exclusion of data on the impact on environmental components of individual enterprises, which are the main sources of anthropogenic impact from the annual report on the state of the region’s environment.

On the territory of the Volgograd region, there are 4 enterprises included in the List of facilities that harm the environment belonging to 1st category and contribute at least 60% to the total emissions and discharges of pollutants in the country [13].
LLC Concession of water supply as a housing and communal services company engaged in the reconstruction and modernization of the central cold water supply and sanitation system has in its structure sewage treatment plants of the 1st category located on Golodny island [10].

Regional companies of the 1st category also include the oil refinery LLC LUKOIL-Volgogradneftepererabotka which specializes in the production of fuel and oil components, the construction plant of AO Sebryakovcement located in Mikhailovka city of Volgograd Region, and the pipe metallurgical plant OJSC Volzhsky Pipe Plant.

According to the report for 2018, the Volzhsky Abrasive Plant emitted more than 33 thousand tons of pollutants [14] which is more than 65% of the total missions from stationary sources in the city of Volzhsky and 23% of the total contribution to the regional load.

When assessing the transparency of the reporting of the Volgograd region enterprises in the field of environmental impact, using publicly available information, we found that LUKOIL-Volgogradneftepererabotka LLC took 1756 place, Volzhsky Abrasive Plant OJSC for the first time disclosed impact indicators on environmental components in 2018, LLC Water Supply Concessions and JSC Sebryakovcement did not attach importance to participation in the rating of environmental business performance [15].

While a content analysis of the official websites of these enterprises, we found that the official website of LUKOIL-Volgogradneftepererabotka LLC does not contain analytical information about the company's impact on environmental components and the results of environmental measures.

On the official website of JSC Sebryakovcement in the production section, the ecology tab contains information about the equipment of the enterprise with treatment equipment from its foundation until 2013. The development strategy subsection referred to the reduction of negative environmental impacts as a priority in the Technical Upgrade Program. Thus, we can state that the organization’s website does not contain any information regarding environmental impact and the presence of environmental policy at the enterprise [16].

The official website of Volzhsky Abrasive Plant OJSC does not contain any information whatsoever about the damage to the environment components and the presence or absence of environmental protection measures.

On its official website, Water Supply Concessions LLC declares support for voluntary disclosure of information by the recommendation of the National Association of Concessionaires and Long-Duration Investors (NACDI) in the field of sustainable development and green investments, but there is no other environmentally significant information on the site. When studying the company's annual report on the corporate information disclosure platform, we noted the declarative nature of the environmental component of the report [17].

According to Interfax-ERA, 87 companies disclose indicators, therefore less than 2% of enterprises in the region registered on the Software and hardware for an accounting of facilities with a negative impact on the environment portal, 87 companies out of 4524, supported the initiative of transparency of environmentally significant information.

In the framework of the study, regional enterprises had the opportunity to show their interest in disclosing environmentally significant information by filling out the author's checklists structured in blocks. We sent formal requests to companies to provide information on emissions, discharges, disposal of production and consumption waste, as well as on energy consumption and energy conservation. The Manage and Responsibility and Openness blocks included issues of environmental policy, environmental protection costs, and the degree of readiness for opening up a business. The Manage block included two blocks: the main one: the presence of an environmental management system and a program of industrial environmental control, and additional: current and capital expenditures for environmental protection, the payments for negative environmental impact. The additional block has an emphasis on the results of state supervision of the company, violations of environmental laws and existing complaints from citizens regarding the impact of facilities on the environment. The Responsibility and Openness block focused on identifying the manager’s awareness of the existence of non-financial reports in the field of sustainable development and the global
reporting initiative (GRI). Assessing the potential willingness of companies to provide environmental information at the request of interested parties, posting quantitative data on the volume of pollution and the real costs of protecting the environment in the public domain was of particular importance in the checklist. Based on the processing of checklists, less than 1/3 of the companies provided answers to official inquiries. Over 70% ignored the request to participate in the study, 21.5% of respondents refused to provide information citing trade secrets or the accessibility of the requested information on the official websites of environmental authorities and territorial statistics agencies.

Only 6 companies submitted completed checklists: LLK-International LLC oil company, Volzhsky Pipe Plant JSC pipe plant, KF LLC research and production enterprise, Municipal Unitary Enterprise Plumbing and Sewer Facilities (sewage treatment facilities for biological reporting of wastewater from the urban district - Volzhsky city), chemical Volzhsky Orgsintez JSC and synthetic rubber company EKTOS-Volga.

Only Volzhsky Pipe Plant JSC and LLK-International LLC are aware of non-financial reporting and are ready to support the business openness initiative by generating reports on sustainable development.

3. Conclusion
In general, studying the official sites of regional objects of the 1st category of negative impact allows us to draw the following conclusions:

- 107 facilities of Negative Environmental Impact belong to 70 enterprises, of which only 72% have official sites;
- less than 2% of enterprises partially publish environmentally relevant information in the public domain;
- the information presented on the websites of 87% of organizations does not allow concluding the impact on environmental components and the effectiveness of environmental policies of enterprises since it does not contain quantitative data.
- the information available in annual corporate reports does not contain quantitative data directly on the Negative Environmental Impact facility which is a branch or structural unit of a large company;
- less than 10% of companies showed interest and participated in the study, 70% ignored official requests for information;
- none of the regional enterprises prepares reports on sustainable development following the requirements of international standards of public non-financial reporting.

The vast majority of regional enterprises do not consider the importance of the environmental component in the formation of modern information content, while this could increase their competitiveness in the international market.

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