

Ecological determinants of the development of coal mining enterprises in the russian federation

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Abstract. The work is devoted to the study of the external aspects of the functioning of modern coal mining enterprises in Russia. Particular attention is paid to foreign economic issues and regional risks of the development of the organization associated with environmental activities. Trends in the development of international legal norms, which, on the one hand, are aimed at protecting sustainable environmental development, and on the other hand, may hinder international trade in hydrocarbons and fossil fuels, as well as their consumption, are considered as the main factors affecting coal mining companies. The issues of regional development of coal-mining regions in the light of solving environmental problems were also considered.

1 Introduction

The activities of a coal mining enterprise are inextricably linked with its external environment. Accounting and foreseeing trends in the external environment are necessary to ensure the development and long-term effective functioning of the enterprise. Since mining enterprises cause significant harm to the environment, and the scale of their activities is significant, environmental issues are essential to ensure the prospects for the development of individual enterprises, the industry and global well-being.

The Russian coal industry has shown an increase in quality parameters in the past few years: an increase in Russia's share in international coal trade from 9 to 15 percent over the period from 2008 to 2018, an increase in labor productivity in main production by 1.5 times, and the average monthly productivity of a worker in coal production almost doubled (from 202 to 380 t / person per month) over the same period [1].

It should be noted that, to a large extent, Russian coal mining is oriented towards the external market. Thus, since 2016, export supplies of Russian coal have exceeded the volume of supplies to the domestic market. At the end of 2018, 54% of the produced Russian coal was sent to the external market [1]. All this allows us to conclude about the significant export orientation of the coal industry in Russia, which means the predominance of external threats in the structure of the economic security of coal enterprises in particular, and the coal industry

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in general. Experts note such challenges as the instability of the coal market environment and increased competition, a possible decrease in coal consumption in the world for environmental and climatic reasons.

In addition, it is impossible to carry out activities without taking into account the realities prevailing within the country. Since a significant part of the regions in the Russian Federation is mining, the regulatory framework and emerging trends in regional development require the study of trends and emerging practices in the management of environmental activities of companies in the regions.

2 Characteristic of the work

Currently, a system of international legal norms is being consistently formed, which can be aimed both at protecting sustainable environmental development and at creating obstacles in the field of international trade in hydrocarbons and fossil fuels, as well as their consumption. An active discussion is underway in the scientific and expert community aimed at forming a position on this issue. Our analysis allows us to draw the following conclusions.

In the context of the global economy, several basic trends in the field of mining are currently being formed.

First, a legal and policy framework is being laid for expanding the so-called transparency initiative in the extractive industries. The first step in this direction was the creation of the EITI Standards [2]. From 2002 to the present, 55 states with extractive industries have joined this initiative - The Extractive Industries Transparency Initiative (EITI). The main requirements of the EITI Standard are transparency of information throughout the entire value added cycle in the extractive industry, including the procedure for distribution and registration of licenses and contracts, beneficial owners of these operations, tax and legal mechanisms, production volume, amount of payments, distribution of income and its contribution to economy [3]. Russia, like many states-exporters of minerals (for example, the USA, Saudi Arabia, the United Arab Emirates, etc.) did not support this initiative. The next step towards transparency in the extractive industry was the EU Conflict Minerals Rule [4], which came into force in 2021. Its goal is to stop the trade in four minerals - tin, tantalum, tungsten and gold, which are sometimes used to finance armed conflicts or are mined using forced labor. It is the responsibility of the company to verify the sources of raw materials procurement. Obviously, this practice does not significantly affect the mining industry in Russia, however, the emerging trend towards transparency requires further study, both from the point of view of assessing the international investment attractiveness of Russian coal companies, their competitiveness in this market, and from the point of view of the availability of world raw materials markets.

Secondly, another obvious trend of the last decade, also causing serious discussions, is the expansion of the practice of cross-border carbon regulation in order to control the level of greenhouse gas emissions. From 2021, the Paris Climate Agreement comes into effect, adopted in December 2015 and signed in April 2016 by 197 countries [5]. The commitments of the Paris Agreement are calculated for the period from 2021 to 2030. Thus, climate policy is becoming more widespread, influencing the decisions of investors and companies. Public opposition to fossil fuels is also growing, pushing an increasing number of shareholders, investors and company executives to cut funding for the extractive sectors, especially coal. Since 2013, international exchanges have required companies to provide information about their own carbon footprint and develop strategies to reduce it. The most effective instruments for controlling emissions are carbon tax and emissions trading systems. These tools have already been implemented or are planned for introduction in 46 countries. To date, none of these instruments has been introduced in Russia.

The high level of energy intensity of the production of the most important domestic industrial products, combined with a high carbon footprint, can consolidate the further technological and hence economic lag of Russia, reduce the competitiveness of economic participants in Russia, which will inevitably affect the economic security of the country and the standard of living of its citizens.

2014-2015 in the Russian Federation, a regulatory and legal framework is being formed aimed at ensuring sustainable and balanced spatial development of the Russian Federation, including taking into account the environmental component. The basis of strategic planning for the development of the regions was formed by: Federal Law No. 172-FZ of June 28, 2014 "On strategic planning in the Russian Federation", decrees of the President of the Russian Federation of January 16, 2017 No. 13 "On approval of the Fundamentals of state policy of regional development of the Russian Federation for the period 2025 "and dated May 7, 2018 No. 204" On national goals and strategic objectives for the development of the Russian Federation for the period up to 2024 ", Presidential decree No. 176 dated April 19, 2017 No. 176" On the Environmental Security Strategy of the Russian Federation for the period up to 2025 of the year ", Order of the Government of the Russian Federation of 13.02.2019 N 207-r" On approval of the Strategy for the spatial development of the Russian Federation for the period up to 2025 ", other regulatory legal acts. In accordance with the Federal Law of June 28, 2014 No. 172-FZ "On Strategic Planning in the Russian Federation", all constituent entities of the Russian Federation have developed and approved Strategies for socio-economic development.

In the Russian Federation, about half of its constituent entities (41 out of 85 constituent entities of the federation) are officially identified as specializing in the extraction of minerals, including coal mining. Mining regions occupy 88.6% of the territory of Russia [8]. Considering the significant anthropogenic impact on the environment that the mining industry has, environmental issues are of great importance for coal companies and for the country as a whole.

A study of trends in strategic regional development shows that, in the long-term strategic perspective, the constituent entities of the federation generally identify environmental goals as important priorities. At the same time, the quality of the ecological component of the regional strategies of coal-mining regions does not meet modern requirements.

The direction of economic development in mining regions, taking into account ecological guidelines, is characteristic only for a small number of mining regions. Such activity involves the introduction of environmentally efficient technologies, the development of environmental monitoring. It should be noted that in the development management system of most of the producing regions, the ecological orientation is to a certain extent enhanced, however, the processes of greening in the management of the development of the producing regions are not fully developed.

A number of coal-mining areas are planning to address the problems of reclamation of disturbed lands among priority ones, and are also launching work to restore biological diversity. It should be noted that in comparison with large coal-mining countries of the world, the Russian Federation lags far behind in the regulatory and legal field of ensuring environmental safety. The solution of issues related to the environment is not systemic, which reduces the effectiveness of taking certain actions at the level of a particular region.

The following trends can be identified, which are just emerging in regional environmental management, and are characteristic of some of the most advanced regions in the field of environmental protection:

- formation of an effective management system in the field of environmental protection and environmental safety;
- improvement of regulatory and legal support for environmental protection and environmental safety;

- ensuring environmentally oriented economic growth and the introduction of environmentally efficient innovative technologies;
- prevention and reduction of the current negative impact on the environment;
- restoration of disturbed natural ecological systems;
- ensuring environmentally friendly waste management;
- preservation of the natural environment, including natural ecological systems, objects of flora and fauna;
- creation of a modern system of state environmental monitoring;
- formation of ecological culture, development of ecological education and upbringing;
- ensuring the effective participation of citizens, public associations, non-profit organizations and the business community in addressing issues related to environmental protection and environmental safety.

The financial and technological transparency of mining companies' activities is not properly secured in the legal and business environment of Russian coal mining companies. The issues of ensuring effective resource conservation, increasing the role of local communities in interaction with coal mining companies operating on their territory need to be addressed. Environmental performance must be backed by strong financial and non-financial incentives for companies.

On the part of coal mining companies, in turn, it is required to constantly monitor emerging trends that are formed in the external environment of the organization in order to adequately and flexibly respond to emerging opportunities and threats, and use them for effective activities.

3 Conclusion

The activities of Russian coal mining companies in modern conditions are inevitably influenced by the following parameters of the external operating environment, due to the urgent need to solve environmental problems and reduce the damage accumulated in the environment:

- Strengthening the legal and policy framework for enhancing the transparency of activities in the extractive industries;
- expanding the practice of transboundary carbon regulation in order to control the level of greenhouse gas emissions;
- increasing the level of environmental management in regional strategic development.

Accounting and proactive response to environmental changes will allow coal mining companies to effectively carry out their activities for the long term.

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