

# Current Issues of Transboundary Carbon Regulation

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**Keywords:** Climate policy, cross-border carbon tax, greenhouse gas emissions, carbon leakage, European Union, Russian Federation, consequences, adaptation possibilities.

**Abstract:** The transformational changes in the economic system that are currently taking place around the world are accompanied by a paradigm of the speed of consumption associated with the desire for an increase in the dynamics of consumption of carbon intensity bringing together in the distant climate ambitions of various countries the scope and mechanisms for the development of transboundary carbon regulation. This approach is currently being adopted by the countries of the European Union. In this regard, there is a persecution of mechanisms for cross-border regulation of carbon impact in the adaptation countries included in the action (countries importing energy-intensive products to the EU). The relevance of the study for the Russian Federation is beyond doubt. Thus, the purpose of this article is to study the features of transboundary regulation of carbon emissions and the prospects for the development of domestic climate policy, taking into account the peculiarities of international cooperation in a standard issue.

## 1 INTRODUCTION

Climate regulation in one form or another is becoming an integral element of the transformational changes that are normal in the economies of many countries. This is the International Institute for the Control of Gas Emissions, which involves the application of a mechanism for cross-border carbon adjustment in relation to products that use technologies with a high carbon footprint. One such tool is the cross-border carbon tax. The carbon tax is a project of cross-border carbon corrective regulation, intended and expected to be implemented in the territory of application in producing countries, which include imports to countries. From the point of view of economic theory, consideration of cross-border fundraising in the understanding of countries, investing large amounts of financial resources in "green programs", intensifying competition between producers of products that pay a carbon tax, and producers that are not taken into account in their countries by carbon regulation (Christians, 2022).

Therefore, a cross-border carbon tax reduces the reduction in global carbon emissions. The mechanism of customs carbon adjustment in countries with a low carbon cap standard and untapped modern technologies for capturing and cleaning polluting emissions will be applied by 2023. Currently, the

mechanism and format of its application are not applied and are not repeated and are used in the mode of ongoing improvements (Cheng, 2021; Dorsey-Palmateer, 2020).

Thus, the purpose of this article is to study the features of transboundary carbon regulation and determine promising directions for the development of domestic climate policy, taking into account the peculiarities of international cooperation in this matter.

## 2 MATERIALS AND METHODS

The research methodology is found on the basis of the analysis of statistical data reflecting the directions and specifics of the possible impact of the transboundary carbon measurement in the EU within the framework of the expected change in the frequency of the Russian Federation and transformational processes in the assessment in the measurements of the climate measurement. Information base of the study of the data registry of Rosstat, the Federal Customs Service of Russia, coverage of the commission, monitoring reports and studies of the group on climate regulation and energy efficiency of the economies of countries. The scientific observations of domestic researchers devoted to the analysis and assessment of the impact

of the transboundary carbon tax formed the basis for the formation of the author's idea of the existing approaches to carbon transboundary regulation and strategic directions for the development of domestic climate policy and integration into international anti-carbon mechanisms.

### 3 RESULTS

Issues of cross-border carbon tax regulation have recently received close attention in the academic literature. The increased interest of domestic researchers is explained by the fact that this issue is extremely important for Russian exporting manufacturers, which account for a significant part of European imports. Also, scientific concern is manifested against the background of the prospects for the introduction of carbon tax regulation within the Russian Federation.

A significant layer of scientific research is related to the study of the consequences of the introduction of carbon regulation mechanisms on the development of industry in Russia. So, in the study of M.M. Balashov (Balashov, 2020) notes that the introduction of a cross-border tax carries significant risks for the manufacturing industry in Russia, predicting that such areas as petrochemistry, metallurgy and fertilizer production will suffer the most. At the same time, it is noted that the European policy of carbon adjustment will have much more serious consequences for the Russian economy, affecting not only carbon-intensive and electricity-intensive industries, but will also affect all other sectors of the country, leading to a rise in the cost of producing carbon-intensive export products (Kuzminykh, 2022). The author rightly, in our opinion, notes that the main economic "subtext" of the cross-border carbon tax on imported into the EU is to ensure the competitiveness of producers of European products with a carbon footprint, which has lost its price advantage. Particularly relevant is the problem of protecting European producers against the backdrop of aggravated international relations and trade wars, which have now led to an increase in the cost of products, the raw material base of which is resources exported from the territory of the Russian Federation. Analyzing the main theses set out in (Balashov, 2020), there is no doubt that the mechanism of cross-border tax regulation of the carbon consequences of production activities is becoming an economic instrument of political pressure on trade partners of the EU countries by imposing on them a similar model of carbon regulation. As a result, Russian

export-oriented producers with this approach will lose their price advantages, which are available, among other things, due to the resource base on which production is based.

The European "carbon" policy is at odds with the "Strategy for the development of the manufacturing industry of the Russian Federation until 2024 and for the period until 2035" adopted in Russia in 2020. According to this strategy, the economic policy of the Russian Federation will be aimed at creating high-performance export-oriented sectors in the manufacturing industry, developing on the basis of modern technologies and provided with qualified personnel. At the same time, the transformation of export-oriented areas is the second stage in the development of the manufacturing industry based on the development of the domestic market and domestic technologies. Thus, sharing the views of the author (Balashov, 2020) regarding the threat to the economic security of the country, we note that it is necessary to take preventive measures, taking into account the prospect of introducing hydrocarbon regulation in the EU countries and reflect them in the Strategy, which will allow us to adapt to changing economic and geopolitical conditions and ensure the leadership of the Russian Federation in energy intensive industries.

Some researchers agree that the GBAM mechanism (transboundary carbon collection mechanism) will become a catalyst for the development of ESG regulation in the Russian Federation (Anankina, 2021). The ratification of the 2019 Paris Agreement has intensified the development of ESG principles for regulating the production activities of carbon-intensive industries in Russia. Thus, a draft low-carbon development strategy has been prepared. The mechanism for introducing carbon payments within the country is under discussion, the Central Bank has given market participants recommendations on carbon regulation, on accounting for climate risks in the insurance sector. This process is considered by the author as one of the effective tools to stimulate investment in low-carbon technologies. This will increase the efficiency of production in the country and prepare domestic enterprises for sustainable production processes.

In addition, a number of positive effects (opportunities) are highlighted from the introduction of a cross-border carbon tax for Russian companies with flexible development strategies. First of all, we are talking about the development of renewable energy in Russia. In an environment where the cost of carbon emissions will have a significant impact on the cost of production, renewable energy sources will acquire additional economic attractiveness for

industrial consumers. The carbon tax can become an additional incentive for the development of technologies for capturing, storing and utilizing carbon dioxide in the Russian Federation. The timely introduction of ESG regulation in Russia will allow us to occupy niches in the markets of consumers focused on hydrocarbon emissions in the supply chains.

The lack of a flexible strategy for carbon regulation can have an extremely negative impact on the availability of financial resources and the investment attractiveness of Russian industrial enterprises. Similar risks are predicted in the works of E.A. Motosova, I.M. Potravny (Motosova, 2014), E. Anankina (Anankina, 2021). Despite the fact that the ratified Kyoto Protocol (2004) did not bring the Russian Federation the predicted political integration into the mechanism of international environmental regulation, a number of authors agree that the refusal to accept obligations under subsequent international climate agreements will lead to the fact that for Russian carbon-intensive industrial enterprises will face serious risks in a number of industries, primarily due to limited access to promising sources of financing for the reconstruction and modernization of production facilities and advanced production technologies that meet the principles of ESG regulation (Main indicators of environmental protection, <https://rosstat.gov.ru/>). The degree of financial risk due to ESG factors is characterized by the fact that currently domestic companies are less subject to pressure within the concept of carbon regulation than others. This is largely explained by the fact that they have more differentiated sources of cheap investment. We have to agree with the author (Anankina, 2021) that it is not very likely that Russian carbon-intensive industries can avoid investor pressure to require companies to participate in carbon regulation and reporting.

Currently, the development of international relations with counterparties and investors interested in ESG transformation has an impact on the transformation of the development strategies of some Russian banking structures. Thus, Sberbank announced its readiness to finance the agro-industrial complex through concessional lending to enterprises that invest in low-carbon technologies. It should be noted that today Sberbank is one of the largest creditors of the domestic economy, which accounts for up to 33.9% of loans issued to legal entities. At the same time, the bank itself has developed an ESG transformation strategy at Sberbank, within which work has begun to develop practices for managing

climate risks and opportunities (Impact assessment report, 2021).

Assessing the prospects and consequences of the introduction of a cross-border tax for the Russian Federation, the author (Grishchenko, 2021) cites a hypothesis according to which the introduction of a mechanism for a cross-border carbon tax will become a serious factor that in the future will have an impact on the economic stability of the Russian Federation. The author's key arguments in favor of this hypothesis are that the European Union is one of Russia's key partners. According to Eurostat in 2021, in the structure of foreign trade of the Russian Federation, the EU accounted for 36% of external trade. The share of Russian exports to EU countries was 38.3% (Eurostat, <https://ec.europa.eu>). According to Grishchenko Yu. Yu. The Russian Federation, in the context of the transformation of international trade under the influence of ESG principles, needs to act preventively on an integrated basis. In particular, it is necessary to provide for the mandatory inclusion in the reporting of organizations of information on greenhouse gas emissions produced on the basis of approved emission measurement standards. Sustainable economic development should be ensured through the diversification of export products. Fuel and energy products traditionally remain predominant in the structure of Russian exports (54.3% in 2021). Metallurgical and chemical products also occupy a significant share in Russian exports (18.1% in 2021). Considering that a significant part falls on European markets, there is a threat of losing key markets.

A number of authors (Medvedev, 2021) in their studies, when assessing the consequences for the Russian Federation of the introduction of the EU carbon tax regulation, focus on the analysis of the future competitiveness of the sectors of the economy that will be the object of carbon regulation. In particular, the authors predict that industries such as the glass industry, fertilizer production, pulp and paper, metallurgy, and the chemical industry will suffer the most. The technological backwardness of domestic steel companies, which leads to an increase in the carbon intensity of this industry, reduces the competitiveness in front of producing countries whose steel industry is much more efficient in terms of carbon emissions concentration (India, Turkey, EU countries). The countries of the European Union will clearly benefit from carbon tax regulation, as they have already reduced the concentration of carbon emissions by investing more resources in environmentally efficient production. "Thus, the EU border tax could transform the market for high

footprint producers in favor of European or low footprint companies.”

According to the authors, the regulation of the negative consequences of the introduction of the carbon tax is possible through the development of measures of the main nature, including: low-carbon development of the Russian economy through environmentally friendly and energy-efficient technologies; development and legislative consolidation of methodological approaches to measuring the absorption capacity of Russian ecosystems and forests in order to offset when paying the EU transboundary carbon tax; domestic carbon market and development of mechanisms for its regulation. The importance of developing a methodological framework for determining the volume of greenhouse gas absorption by domestic ecosystems is also noted in the study by the authors Bobylev P., Semeykin A. (Bobylev, 2020), who consider the introduction of a transboundary carbon tax as an exclusively instrument of EU protectionism. The authors rightly note that cross-border regulation is aimed not only at reducing greenhouse gas emissions, but also at reducing the EU's import dependence on energy resources from other countries. For example, the stability of the European auto industry and the construction sector depends on the supply of Russian steel, iron and non-ferrous metals. At present, Russian steel exports to the EU account for 10-15%.

Analyzing the status, risks and possible options for Russia's response to the introduction of a border corrective carbon mechanism, representatives of the

Institute of Europe of the Russian Academy of Sciences (Bazhan, 2020) describe the subject of discussion of this article as a dubious initiative from a legal point of view, which carries clear risks for domestic exporters. At the same time, the authors of the study point out the specific features of the EU approach in matters of methodology for the implementation of cross-border tax regulation. In particular, the closed nature of the adoption of key decisions on the mechanism of cross-border regulation, the low level of development of the initiative, the short time for obtaining the opinion of interested parties, etc.

A decade ago, Russia ranked fifth in the world in terms of emissions (Energy efficient Russia, 2009). Research conducted in 2021 by the Carbon Brief organization in the field of global climate regulation suggests that the Russian Federation has moved to third place after the United States and China in the ranking of the world's main environmental polluters.

Volumes of greenhouse gas emissions of the Russian Federation for the time interval 2010-2019 changed significantly (-22.8%), and the annual dynamics is characterized by an oscillatory increase/decrease in greenhouse gas emissions. If we compare the current state of carbon intensity in Russia, compared with 1990, the volume of greenhouse gas emissions into the atmosphere has decreased by one and a half times.

The statistics of greenhouse gas emissions by sectors of the Russian economy has the following structure (Figure 2).

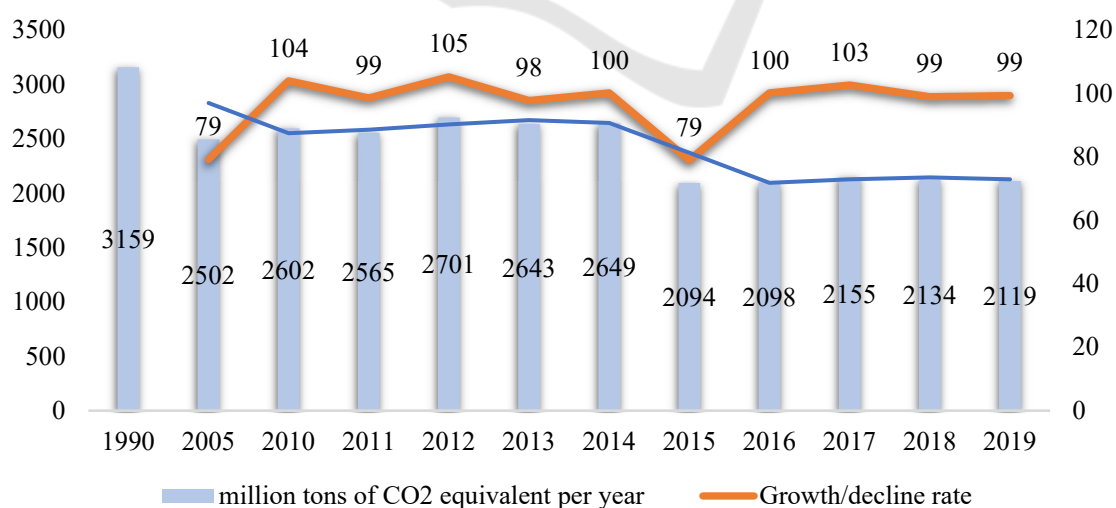


Figure 1: Volumes and dynamics of greenhouse gas emissions in Russia.

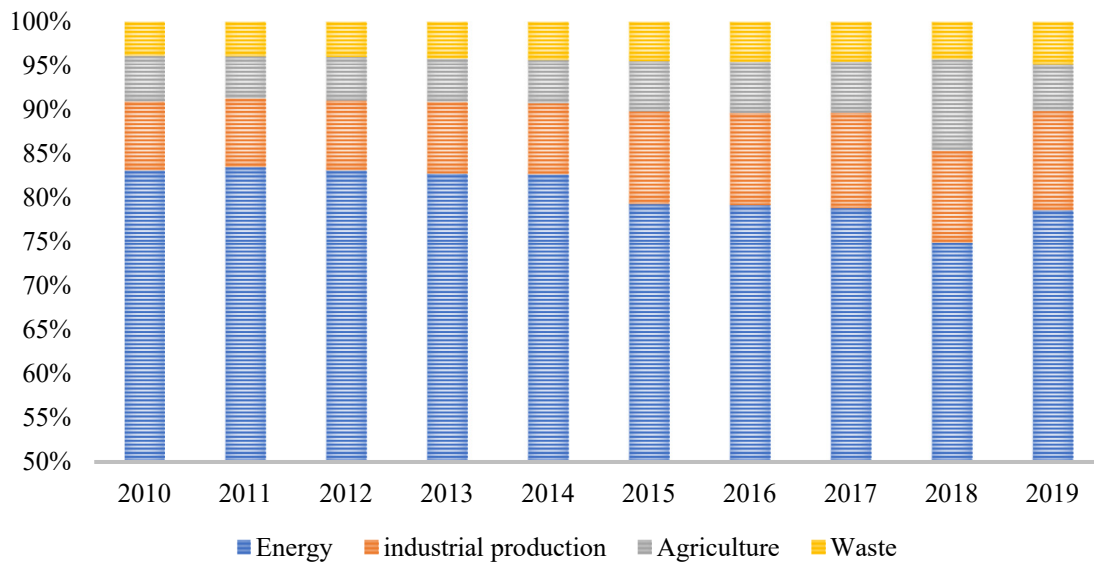


Figure 2: Structure of greenhouse gas emissions by sectors of the economy.

## 4 DISCUSSION

The policy of climate regulation in the Russian Federation has a rich chronology, connected both with the solution of this issue within the country and in the process of integration into the international climate agenda. One of the latest key decisions in the field of carbon regulation in Russia is the issuance of Decree of the Presidents of the Russian Federation of 2020 “On reducing greenhouse gas emissions” No. 666. The Decree contains a target for reducing greenhouse gas emissions by 2030 to 70%.

Thus, the development of Russia's domestic climate policy in this area goes hand in hand with the strengthening of international cooperation in the implementation of climate conservation policy, which necessitates the development of a multidirectional strategy to reduce the carbon intensity of domestic products.

In our opinion, when integrating the Russian Federation into international programs and mechanisms of transboundary carbon regulation, it is necessary to pay attention to the following key points:

- the possibility of creating and developing domestic carbon markets in order to ensure the receipt of carbon fees in the country's budget system, which will make it possible to subsequently compensate domestic producers for payments made through various government programs (subsidizing the industry, concessional lending, tax preferences

(the most preferable, in our opinion, option, etc.);

- assessment of the correctness of the proposed mechanism of transboundary regulation in terms of compliance with a “clean” climate policy. In the context of the aggravation of international economic relations, such mechanisms of transboundary carbon regulation should be approached critically, evaluating them, first of all, as possible instruments of trade restrictions and unfair cross-country competition. The recognition of the presence of an element of economic and trade barriers in the idea of a transboundary carbon tax, in our opinion, is quite justified, at least for one fact: many European countries do not have a raw material base for the production of metallurgy, chemical industry, mineral fertilizers (strategically important in agriculture). The European approach should be carefully assessed when justifying the need for a cross-border tax as a tool to combat the phenomenon of “carbon leakage”. According to the European initiators, the “leakage of carbon” occurs against the backdrop of a tightening of the European program to combat harmful emissions, which, however, is refuted in authoritative studies by domestic scientists. Thus, representatives of the Russian Academy of Sciences (Bazhan, 2020) believe that the “carbon leak” is not confirmed by sufficient facts, justifying their position, for example, as

follows: the relocation of energy-intensive industries ended 10-20 years ago; the movement of industrial enterprises in energy-intensive industries is caused, first of all, by the availability of cheap labor in some countries; The restructuring of the EU economy is already largely complete, and the carbon-intensive products consumed in the EU are mostly imported.

- the possibility of taking into account the absorbing potential of Russian ecosystems when paying a transboundary carbon tax. The state of the carbon balance is characterized by the fact that in Russia the emission of harmful substances significantly exceeds their absorption by ecosystems. The level of absorption of harmful substances in the Russian Federation at present (the latest up-to-date data from Rosstat) is estimated at 534.8 million tons of CO<sub>2</sub> equivalent per year. Thus, Russian forest ecosystems provide compensation for up to a quarter (25.2% in 2019) of anthropogenic emissions. "However, the absence in Russia - unlike the leading countries of the world - of a reliable, time-tested forest inventory system is a significant factor hindering the development of sustainable use of forest resources and ensuring a full accounting of greenhouse gas absorption by forests" (Bazhan, 2020).

## 5 CONCLUSION

In conclusion, we note that the need to ensure sustainable economic development of the Russian Federation, the main one of which is currently the raw material base, against the background of Russia's significant contribution to greenhouse gas emissions, requires a balanced approach when making decisions in the field of international climate cooperation.

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