

Green economy as a tool for sustainable development and a factor contributing to the formation of a low-carbon economy

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Abstract. With the development of humanity, a number of global problems have emerged. One of the most dangerous problems for people's lives is the environmental problem, which is based on the harmful influence of humans on nature. Environmental problems became more dangerous for humanity after the industrial revolution, when man began to dictate his own rules to nature, ignoring its laws. This article defines the concepts of "green" economy, "green" technologies, "cross-border carbon tax", "carbon neutrality", discusses the principles on the basis of which they operate, and also provides examples of some "green" technologies. Throughout the development of mankind, the question of the exhaustibility of resources and meeting the unlimited needs of people with limited resources has been relevant and remains so today, which raises an objective need to find solutions to emerging global environmental problems. The rapid development of production not only contributes to an increase in the level of well-being of the population, but is also associated with enormous damage to the environment due to anthropogenic impact. In the development of world economic processes, the industrial revolution was a new step, but at the same time it led to the formation of a huge number of problems that need to be dealt with. The green economy, as one of the tools for sustainable development, implies, among other things, a low level of carbon emissions, thus responding to the solution of environmental problems and, in principle, ensuring social well-being. In order to stimulate this area, it is necessary to constantly look for mechanisms and tools, one of which is the introduction of a carbon tax.

1 Introduction

The Industrial Revolution, undoubtedly, appeared as a new stage in the development of the world, but it also gave rise to a number of problems that we, people, must fight. The destruction of the ozone layer, tons of oil waste thrown into the seas and oceans, tons of

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plastic that does not decompose on its own and causes the formation of garbage “spots” in the World Ocean, all this is ours today. Automotive emissions account for almost the lion's share of greenhouse gas emissions, which necessitates a detailed study of this problem and the introduction of more gentle technologies in this area, such as electric vehicles. The spread of electric vehicles, in turn, is driven by the need to develop charging infrastructure [1].

The problem of the green economy and the introduction of a transboundary carbon tax was dealt with by such authors as Anatoly Ivanovich Bazhan Doctor of Economics, Head of the Department of Economic Research at the Institute of Europe of the Russian Academy of Sciences, Sergey Anatolyevich Roginko Candidate of Economic Sciences, Head of the Center for Ecology and Development of the Institute of Europe of the Russian Academy of Sciences, Professor of the Financial University under the Government of the Russian Federation, Kuzminykh Yulia Valerievna, Sergey ROGINKO, VARNAVSKY Vladimir Gavrilovich.

Varnavsky Vladimir Gavrilovich in his article “Transboundary carbon regulation of the European Union: a new instrument of global governance” says that “the legitimacy of transboundary carbon regulation raises serious doubts. The EU system of monitoring and control proposed in it over production processes in companies exporting from third countries in terms of greenhouse gas emissions contradicts international law and undermines their sovereignty” [2]. He concludes that “SVAM has all the signs of discrimination, protectionism, and restrictions on competition in the environmental and production sphere in relation to exporters” [3].

Yulia Valerievna Kuzminykh in her article “The Impact of Trans-Border Carbon Taxation on the Financial Results of Pulp and Paper Enterprises in Russia” comes to the following conclusions: “Trans-border carbon taxation will negatively affect the financial results of Russian exporters; the consequences of the introduction of the CAR will be a partial loss of sales revenue or an increase in commercial expenses, which will lead to a reduction in profitability; To minimize financial losses of Russian exporters, it is necessary to intensify measures to regulate greenhouse emissions by launching internal schemes for trading rights to greenhouse gas emissions and their integration with the ETS.” [4]

Thus, in the pursuit of “acquiring” carbon neutrality, one cannot ignore the possible negative consequences of introducing a transboundary carbon tax; its introduction requires a preliminary understanding of all the potentially positive and negative consequences in order to introduce the most effective format for collecting this tax.

2 Materials and methods

The work uses data on global problems of modern society, on the problems of anthropogenic impact based on research by Russian and foreign scientists. Comparative methods, statistical materials and materials from law enforcement practice were used.

3 Results and discussion

In modern realities, awareness of environmental problems by the population in order to organize programs that neutralize these problems is of particular importance. The measures that are expected to be implemented to solve problems of anthropogenic impact consist of several categories (Figure 1.).

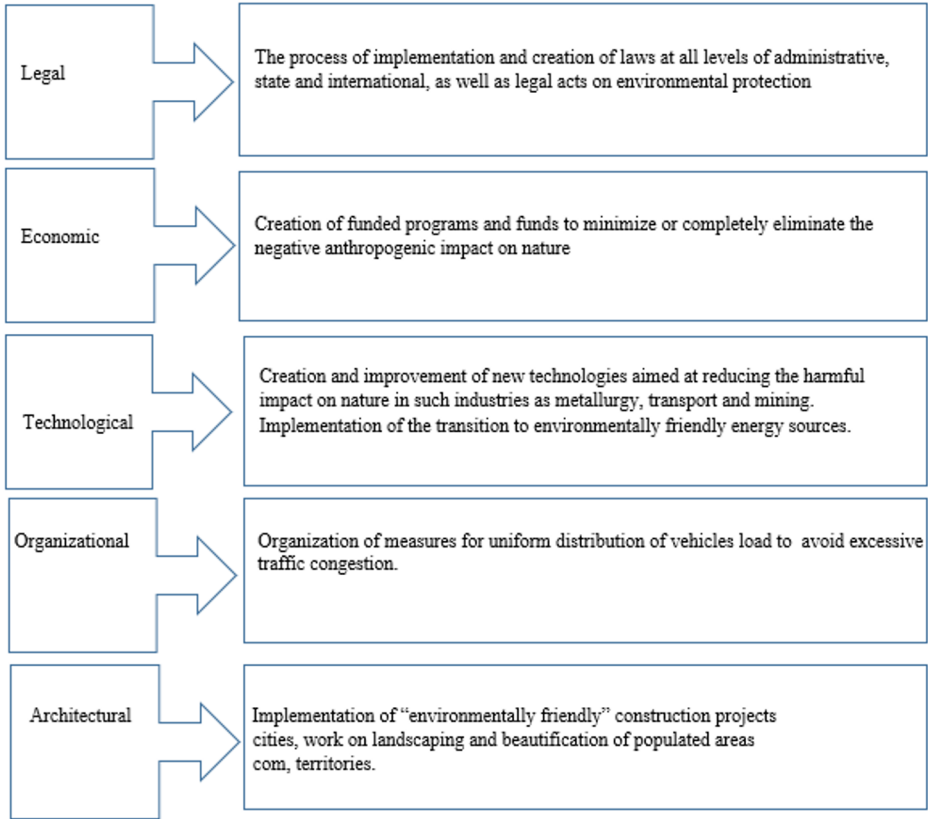


Fig. 1. Measures aimed at preserving and protecting the environment

The problem and attempt to transition to a green economy and the use of green technologies today is placed first in the world community. The ultimate goal is to maintain and increase economic growth while conserving natural resources [5].

To implement environmental programs, basic principles have been formed, on the basis of which “green” methods are implemented (Figure 2).



Fig. 2. Principles of a green economy (compiled by the author).

As the world transforms with advances in technology, climate, politics and economics, so do solutions that positively balance environmental and social goals for the benefit of nature, people and business in particular [6]. The “Green Economy”, an economic model centered on people’s well-being and environmental sustainability, is a leader in the implementation of this direction [7].

The essence and importance of the green economy is that it contributes to a more sustainable and low-carbon economy. With the wide spread of the concept of the “Green” economy, the term “green” technologies also appeared. Green technologies are essentially one of the methods of the “green” economy [8].

The use of “green” technologies is also possible in agriculture, since agriculture also contributes to the aggravation of environmental problems through the use of fertilizers and animal waste (organic farming, meat substitutes, etc.) [9].

A promising direction in the implementation of sustainable development goals is a carbon tax, as it is the most effective way to encourage consumers and users of carbon fuels to pay for the climate damage that was caused by the release of carbon dioxide and vapors into the atmosphere. If tax rates are high, this will force everyone to switch to clean energy, since the use of carbon will simply become unprofitable [10].

The introduction of a carbon tax gives consumers and producers a monetary incentive to reduce their carbon emissions.

A carbon tax is also called a form of greenhouse gas emissions pricing, where the government sets a fixed price for carbon emissions in certain sectors. Price is passed on from businesses to consumers. By increasing the cost of greenhouse gas emissions, governments

hope to reduce consumption, reduce demand for fossil fuels and push more companies to create cleaner substitutes.

A carbon tax is a way in which the government can exercise some control over carbon emissions without resorting to the levers of a command economy, through which the government could control the means of production and require the end of carbon-emitting production and services [11].

In order to survive in the green market, exporting countries will need to create their own government system for accounting and assessing carbon gas, develop tariffs, as well as an incentive system for enterprises that refuse to use carbon gas, thereby minimizing possible climate damage. Only in this case, when the state promptly responds to rapidly growing changes in all areas of the global market, will it be possible to maintain the country's competitiveness, as well as ensure sustainable development.

In addition to the listed measures, there is an objective need for promoting environmental awareness among young people as a promising direction in this area, because It is young people who will shape environmental behavior among future generations, including through economic measures, namely the taxation of natural resources, taking into account the raw material potential of the region, which will contribute to the rational use of natural resources, because changing tax rates will lead to more responsible behavior towards the environment.

Accordingly, "green" technologies require a significant amount of investment, or rather financing in various forms, both at the public and private, and at the international level.

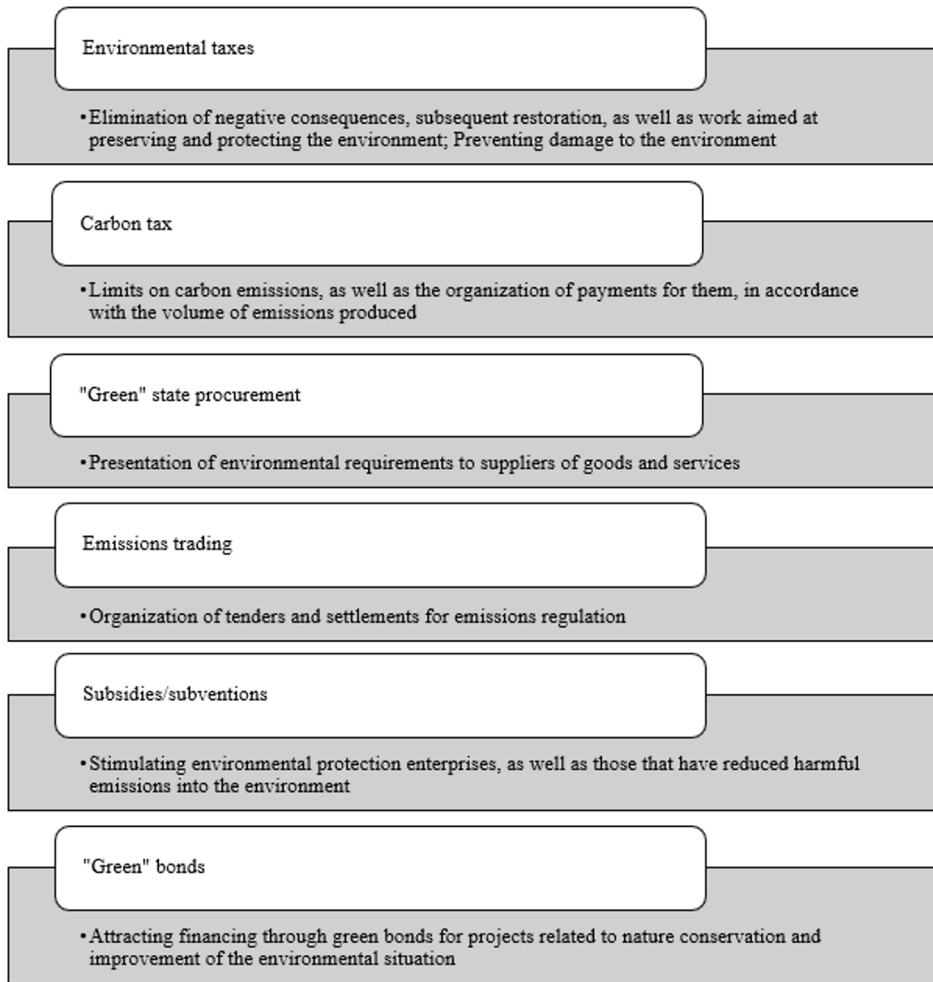


Fig. 3. Financial instruments to stimulate “green” industries (compiled by the author).

Of all the financial instruments presented above to stimulate the economy, special attention should be paid to the carbon tax due to the possibility of obtaining several effects from it: the prospects for its impact on reducing the use of fossil fuels; and this is the price for pollution [12].

A cross-border carbon tax can be an effective tool for reducing carbon emissions, but it can also have undesirable consequences. Therefore, its introduction requires a preliminary understanding of all the pros and cons in order to introduce the most effective format for collecting this tax.

Positive aspects of the introduction:

- a positive effect is achieved by reducing emissions as a reaction to increasing production costs after the introduction of the tax, forcing manufacturers to look for ways to use “green” technologies in production;

- funds for agencies managing the consequences of climate change are increasing.

Negative sides:

- the regressive nature of this tax;

- the consequences of the introduction of this tax can lead to shocks in the economy due to increased production costs for many enterprises;

- This tax will also apply to enterprises that cannot switch to alternative technologies, in particular, urban planning organizations.

The point of carbon taxes is to try to incentivize businesses to adopt the most cost-effective ways to reduce carbon emissions. In world practice, there are examples of significant reductions in carbon emissions after the introduction of this tax. For example, Sweden experienced a 26% reduction in such emissions over two decades, with economic growth of 78% [13].

However, the disadvantages of introducing a carbon tax should also be revealed. As noted above, the carbon tax is regressive, and when gasoline and gas prices rise, these high percentages will become a heavy burden for the population, who will not be able to go green, that is, everyday things will become unaffordable for them. Based on this, it is necessary to introduce a carbon tax gradually so that people get used to the fact that prices will only rise and look for alternative options [5].

The course towards a green economy has been taken by the European Union, which sets the goal of maximizing the reduction of carbon emissions by 2050, including through the introduction of a carbon tax on imports into EU countries. If everything goes according to plan, importers will have to buy carbon certificates corresponding to the carbon price that would be paid in the EU if the goods were produced locally.

The EU has proposed a tax on imported carbon-intensive products that would define the role of trade in the fight against climate change. The measures are controversial among the EU's trading partners, some of whom consider them "green protectionism." At its best, a proposed carbon tax should promote a common understanding of carbon-based trade policy, maximizing both environmental and economic benefits [13].

In Russia, the introduction of a transboundary carbon tax may have positive consequences in terms of the development of the renewable energy sector, leading to a reduction in the cost of production, and the development of carbon dioxide capture, storage and utilization technologies in the Russian Federation.

4 Conclusions

1. To solve global environmental problems, Russia's participation in the global "green" trend is necessary.
2. The essence and importance of implementing green technologies is that the green economy contributes to a more sustainable and low-carbon economy.
3. In order to stimulate this area, it is necessary to constantly look for mechanisms and tools, one of which is a carbon tax, the introduction of which can have both advantages and disadvantages.
4. At the same time, the Russian economy is not ready for such structural changes as the introduction of a carbon tax, since it will be necessary to reconsider all areas, starting with the regulatory and legislative framework, but cannot help but respond to changes occurring throughout the world, since a cross-border tax, introduced in the EU countries, first of all, will have a negative impact on the Russian economy and its competitiveness.
5. It is advisable to do further research within the framework of this topic with an emphasis on the formation of environmental consciousness of the population and methodologically correct fixation of environmental taxation, as factors that can have a significant impact on the assessment of the state of the entire environmental and financial-budgetary system of the country.

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