Alternative methods of production and consumption as tools for solving global problems of modern society and implementing the principles of sustainable development

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Abstract. At the end of the 60s of the 20th century, a transformation of human civilization took place, which entered a qualitatively new state. During this period, the term "global problems" appeared in the scientific literature. In the context of scientific and technological progress, the load on the environment in terms of greater anthropogenic impact is increasing, thereby creating an objective need to find new ways to prevent environmental disaster. At the end of the 20th century, a direction in economics called the "green economy" was formed, designed to reduce the negative impact on the environment and solve the global problems of today's realities through the use of green technologies. In this direction, both legislative (tax regulation in the field of anthropogenic impact) and the introduction of alternative energy sources, as well as the preservation of existing national natural resources, are applied. With the advent of the "green economy" concept, many new elements of regulating the economy and the harmful effects of human industrial activity on nature have been introduced into world practice. One such element is the cross-border carbon tax, which is being introduced by the European Union. This tax is an additional charge on the import of goods with a large carbon footprint into the European Union. It is unprofitable for the economies of many countries that import raw materials and supplies to the countries of the European Union, but it is necessary, since global warming, which is a consequence of human industrial activity, can lead to disastrous consequences in the future. The purpose of the work is to identify the main problems of human and social development and find ways to solve them, determine the impact of the new tax on the state of the environment.

1 Introduction

Concern with environmental problems is shown in their works by Golovina E.A., Prokopyeva O.G., Pak D.V. and others. The problems of introducing "green" technologies within the framework of the "green" economy were dealt with by such scientists as: N.I. Ivanova, L.V.

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Levchenko, E.I. Chibisova, Bekmurzaeva R, Kh. The problems of carbon regulation are addressed by such scientists as Kokorin A.O., Krenke A.N. Xueqing Chen, Lozovsky D.S., Ptichnikov A.V., Shvarts E.A. The view on carbon regulation in the works of Russian and foreign scientists is twofold. The advantages and disadvantages of this method of climate control are revealed.

The author's understanding of existing approaches to transboundary carbon regulation and strategic directions for the development of domestic climate policy and integration into international anti-carbon mechanisms was based on research by Russian and foreign authors.

2 Materials and methods

The research methodology is based on an analysis of publications by domestic researchers devoted to the analysis and assessment of the impact of a transboundary carbon tax. The main research methods used by the authors include: induction, analysis of the results obtained from studying books and articles, identifying problems, summing up, summarizing the information obtained

The information base of the study consists of statistical data from Rosstat, the Federal Customs Service of Russia, the European Commission, reports of independent research groups on issues of climate regulation and energy efficiency of countries' economies.

3 Results and discussion

An environmental problem is the problem of human anthropogenic impact on the environment. The harmony of the surrounding nature is disrupted due to human activity. Initially, scientific and technological progress did not have a significant impact on nature, but with the growth of humanity, the negative anthropogenic impact is also growing, acquiring a global scale.

Currently, the environmental problem is interpreted by scientists as an imbalance in the relationship between man and nature, caused by limited opportunities to influence the process of deterioration of the environmental situation.

What are the main environmental problems?

This is, first of all, water and air pollution, which can lead to a shortage of clean water for 40% of the world's population in the coming years. The next problem is related to the massive deforestation, the disappearance of which will lead to an increase in the greenhouse effect. There are also problems such as global warming, desertification, and extinction of animal and plant populations.

There is also air pollution due to the release of greenhouse gases. To solve the problem of harmful emissions into the atmosphere, a new transboundary carbon tax is being introduced, which is designed to protect the environment and minimize harm to the environment. Such tax regulation follows from the concept of "green" economy.

The green economy is alternative sources and methods of development, using gentle technologies in the sphere of human life.

Existing problems in the environmental sphere determine the objective need to search for measures to stabilize the situation. One of such measures can be called the use of "green" technologies.

Many countries around the world have switched to the use of green technologies in production through the use of alternative methods of generating energy, recycling plastic, etc.

The "green economy" acts mainly as a facilitator for the introduction of sustainable technologies in areas of activity that have a human footprint. As part of this economy, the

2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals were adopted globally in 2015.

The core message of these goals is to eradicate poverty worldwide while increasing economic growth while addressing environmental issues.

Thus, the goals of sustainable development are the transformation of existing methods of production and consumption towards those that are gentle in terms of anthropogenic impact.

It is also necessary to note the fact that green technologies are an opportunity to adequately solve the main problem of the economy - meeting unlimited needs with limited resources through their effective use.

This means that existing methods of protecting the environment today are included in the directions of the green economy. Areas of environmental protection through green technologies include an emphasis on the legislative framework, including tax payments for the use of natural objects, and the introduction of green technologies into production processes.

An example of the use of green technologies is the replacement of conventional cigarettes with electronic ones, which solve not only the problem of harmful effects on the human body, but also prevent the release of toxic substances into the air.

One of the ways to influence the reduction of damage to natural resources is environmental taxation and excise taxation, which helps reduce the consumption of “harmful” products (cigarettes, alcohol) and influences the consumption of a “reasonable” amount of these resources (fuel), while at the same time solving the question of replenishing the state budget from revenues from these payments.

A serious problem for humanity is dependence on gadgets, which mediates the emergence of many other problems, such as a decrease in human physical activity, leading to obesity, as well as problems with vision, spine, cervical spine, etc. This problem is associated with addiction and is treated along with alcoholism, smoking and drug addiction. The term “computer addiction” has been used since 1990, after the active spread of computer technology began.

Simplifying life through the use of phones has serious costs in terms of visual health of the population. Visual impairment in 60% of the country's adolescents and schoolchildren is a consequence of the population's use of telephones.

The cause of obesity is not only a sedentary lifestyle due to the use of computers and phones, but also poor nutrition. Nutrition of people is a basic human need, on which all other needs are based, and it is the attempt to satisfy this need that bears the main anthropogenic burden on the environment. But today, the main problem in terms of nutrition is the use of economical technologies by entrepreneurs in the process of preparing food to reduce production costs, which are extremely harmful to health and contribute to obesity. Such technologies include harmful mixtures to increase shelf life, enhance, and improve taste.

Fast food products are known to contain particularly large amounts of carcinogens and harmful additives. Fast food, which has become very popular among the population, has its origins in the United States and, accordingly, the problem of obesity is especially relevant for them.

One of the serious problems today is air pollution, the consequences of which are fatalities among the population, or rather, more than seven million deaths are recorded per year. In some countries, smog makes it impossible to see the sky.

The production of goods at every stage is associated with emissions of carbon dioxide, which causes global warming and the greenhouse effect. The level of emissions differs depending on the types of production. Naturally, the largest carbon dioxide emissions are observed in the mining and processing industries.

Adjustments to the regulation of the climate agenda in today's realities are becoming increasingly relevant in the economies of many countries around the world, becoming an essential element of transformational changes.

International institutions for combating and reducing greenhouse gas emissions were no exception, suggesting the use of a transboundary carbon adjustment mechanism in relation to products in the production of which technologies with a high carbon footprint are used. Thus, achieving carbon neutrality is expected through tax innovations, in particular, the introduction of a cross-border carbon tax. The introduction of this tax is a climate regulation project in countries importing high-carbon products.

From an economic point of view, the idea of a cross-border tax is the realization of countries investing large amounts of money in green programs, against the backdrop of increased competition between producers of products paying a carbon tax and producers who do not have carbon regulations in their countries.

Thus, the introduction of a transboundary carbon tax is intended to reduce harmful emissions into the atmosphere and this tax regulation begins on January 1, 2023, and the transition period will last until the end of 2025. The adoption of the carbon regulation bill aims to attract companies to the transition to “green” technologies in production processes. Hopes are pinned on a transboundary carbon tax in terms of leveling out the situation in the field of emissions and, accordingly, preventing the intensification of global warming processes.

The tax will apply to countries that export raw materials and sell them to EU countries. One of such countries is the Russian Federation, whose export-oriented industries of steel, aluminum, cement, and electricity fall under this type of tax.

In the provision on the introduction of a carbon tax, it is planned to switch to electric vehicles over the next 10 years, transfer all types of gasoline transport to a paid emission quota regime.

A cross-border carbon tax is hoped to reduce carbon emissions and reduce the greenhouse effect. Methods for customs climate regulation are at the development stage. In terms of air pollution, Russia is in the top five, which necessitates the development of a climate agenda in the country.

Today, there is a decrease in carbon dioxide emissions in the country, and over the past 30 years this figure has decreased by one and a half times. Volumes of greenhouse gas emissions in the Russian Federation for the time interval 2010-2019. changed significantly (-22.8%), and the annual dynamics are characterized by an oscillatory increase/decrease in the volume of greenhouse gas emissions. If we compare the current state of carbon intensity in Russia, then compared to 1990, the volume of greenhouse gas emissions into the atmosphere has decreased by one and a half times.

The policy of climate regulation in the Russian Federation has a rich chronology, associated both with the solution of the issue on 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 publication of the Decree of the Presidents of the Russian Federation of 2020 “On the reduction of 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 in parallel with the strengthening of international cooperation in terms of implementing climate conservation policies, which necessitates the development of a multidirectional strategy for reducing the carbon intensity of domestic products.

The situation is complicated by the fact that the introduction of green technologies into the production process is quite expensive and this can affect the prices of the final product towards its increase.

Despite the movement of countries towards the protection of natural resources and minimization of human impact, the adoption of appropriate measures by the state, a poor environmental situation is still characteristic of many countries, such as, for example, Madagascar, Eritrea and Somalia.

Finland ranks first in the world in terms of environmental efficiency. Russia is in 32nd place in the ranking of 180 countries, which indicates a fairly effective environmental policy in the country.

The anthropogenic impact of humans on nature is detrimental not only to natural resources, but also to humans themselves. The construction of buildings and structures, factories and plants entails serious consequences for human health due to air and water pollution, not to mention the lack of a rational approach to the use of exhaustible resources.

Therefore, it is necessary to realize not only the advantages of rapid scientific and technological progress, but also the disadvantages. The healthcare system also needs to be given serious attention, since diseases are "getting younger," and a physically unhealthy generation of young people cannot have high productivity, require social support, and therefore cause damage to the level of economic development of the country.

In 2020, positive dynamics were observed in the field of hospital financing in the Russian Federation. Compared to 2019, healthcare costs have increased. Russia has a mixed budget-insurance model of healthcare, which provides for the state to pay most of the medical costs. The peculiarity of this healthcare model is low funding from budgetary funds, as well as through compulsory health insurance. At the moment, in the Russian Federation, total spending on healthcare is less than 6% of GDP, and from public sources does not exceed 4% of GDP, this is the lowest level of funding in the world. But this is explained by the fact that an increase in healthcare costs will lead to an increase in the tax burden for citizens, which the country's population is not yet ready for.

The most striking example of a budget model is Great Britain, where there is a state (budgetary) healthcare system. There, the state budget covers 70% of health care costs, and the rest of the costs are paid by the private medical insurance. In this system, government spending amounts to 7.2% of GDP, which is significantly more than in Russia. The state regulates the market for medical goods and services, and social and medical assistance to the population is provided by social services.

In the United States, there is a private healthcare model, in which medical care is distributed to a certain segment of the population, and the provision of medical services is of a specific nature. The main source of healthcare financing is private insurance, which covers 50% of all costs. The state provides assistance to the population with disabilities through social programs.

Despite the diversity of healthcare systems in the world, there is still an acute problem associated with decreased life expectancy, deteriorating health, and a decrease in the quality of life of the population. In addition to the environmental problem, there are a number of other reasons that aggravate this problem. Among them are high prices for medicines, inaccessibility and insufficiency of national health care programs for an ever-growing population, alcoholism, drug addiction and tobacco smoking.

A transboundary carbon tax will encourage states that extract and process large quantities of raw materials to switch to green technologies and not cause significant harm to nature, humans and animals.

To solve these problems it is necessary:

- introduction of standards prohibiting products with carcinogenic properties;
- encourage entrepreneurs to produce healthy food products through benefits and various concessions;
- increase the population's literacy in the area of the harmful effects of consuming "quickly satiating" foods;

- to popularize a healthy lifestyle, sports, and increase the physical activity of the population;
- introduction of improved computers and gadgets to minimize the harmful effects on vision and human health in general.
- development of a methodically correct fixation of taxation of environmental management and implementation of a mechanism for taxation of activities with a high level of carbon dioxide emissions.

The most important problem on a global scale has been and remains the problem of unlimited needs with limited natural resources. By nature, the more a person consumes, the more he feels the need for something; this determines the task of producing goods for the economy of any country. And the purpose of goods is to satisfy needs.

The essence of needs is the need to maintain his life activity and personal development. Needs are a factor stimulating the activity and activity of people, since satisfying a need for something forces a person to work. Unmet needs of people are sources of irritation and feelings of dissatisfaction. It should be noted that it is impossible to satisfy all people's needs, since a person does not experience a feeling of satiation throughout life, and resources are depleted at this time.

The main problem is also the problem of disproportionate distribution of resources, since in some parts of the world people suffer from obesity, while in others they go hungry. There are resources on the planet that can satisfy the needs of billions of people, but for this it is necessary to learn how to use them competently and rationally [13].

The green economy is precisely aimed at solving the problem of limited resources and their rational use. It will not be able to solve it completely, since exhaustible resources cannot be made renewable, but they can be used rationally using green technologies. Today, as already noted, alternative methods of generating energy are used, already used products are processed, and the production process is started in the second round, without spending new resources - a completely new product is obtained from already used resources [13].

The identified problems can be solved by:

- prohibition of the use of harmful product substitutes
- encouraging entrepreneurs to produce healthy food products through tax incentives;
- increasing population literacy in the field of unhealthy and healthy nutrition;
- to popularize a healthy lifestyle, sports, and increase the physical activity of the population;
- introduction of improved computers and gadgets to minimize the harmful effects on vision and human health in general;
-implementation of a climate regulation mechanism through the introduction of a transboundary carbon tax.

4 Conclusion

Thus, environmental problems worry the minds of scientists on a global scale, since with the development of production and trade, these problems become international in nature. "Green" technologies within the framework of the "green" economy concept are becoming the main trend of the climate agenda of developed countries. A cross-border carbon tax is a green economy tool undertaken internationally by most states. Attitudes towards its introduction are ambiguous, however, today it is not practical or possible not to take into account the fact of the damage caused by carbon dioxide emissions and not to participate in the global climate agenda. The introduction of certain elements of the climate agenda is necessary after the development of a carbon neutrality mechanism suitable for the country, taking into account the level of pollution and the resources existing in the country to neutralize the carbon footprint.

1. The concept of green economy appeared as a response to environmental problems in the world

2. At the end of the 20th century, the concept of "green economy" appeared, implying alternative sources and methods of development, using gentle technologies in the sphere of human life.

3. "Green" technologies are tools for implementing the green economy and sustainable development goals, adopted by all countries of the world as a vector of development.

4. The most important problem on a global scale has been and remains the problem of unlimited needs with limited natural resources.

5. The concept of "green economy" and the use of "green" technologies do not solve the problem of limited resources, since many resources are not renewable. But "green" technologies make it possible to create new resources that are close in properties and functions to natural ones and, thus, saving the limited available resources, satisfy people's needs.

6. In the context of scientific and technological progress, the load on the environment in terms of greater anthropogenic impact is increasing, thereby creating an objective need to find new ways to prevent environmental disaster.

7. With the advent of the "green economy" concept, many new elements of regulating the economy and the harmful effects of human industrial activity on nature have been introduced into world practice.

8. The emergence of an environmental focus in development through the green economy determines the emergence of specific "green" technologies, which are actively beginning to be encouraged and used by developed countries.

9. Green technologies are the use of recycled materials (plastic recycling), saving paper by sending them by email, etc.

10. The use of green technologies within the framework of the green economy is the main global trend in terms of the environmental agenda.

11. One of the methods used to prevent global warming is the introduction of cross-border carbon taxation by the EU.

12. A cross-border carbon tax encourages states to use green technologies.

13. Climate programs account for a significant portion of the expenditures of many developed countries.

14. Transboundary carbon taxation as one of the elements of the "green" economy concept is unprofitable for the economies of certain states, including the Russian Federation, but in the future it will significantly reduce the rate of global warming and minimize the harm caused to the environment by industrial activities of society.

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