

Topical Issues of Implementation of the Green Economy Principles

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Abstract: In the article, the author investigates the issues of the introduction of green economy technologies. Among the main problems of sustainable development, the author touched upon the environmental problems of modern society. The author once again stressed the need to make early decisions regarding the implementation of the principles of the green economy throughout our planet. She stressed that only the joint, coordinated work of the governments of the countries can contribute to accelerating the implementation of the principles of the green economy. Much attention is paid in the article to the need to improve environmental literacy among the population. The author insists on a more widespread introduction of environmental literacy courses among all levels of education in Russia. Everyone is obliged to know the consequences of the ecocatastrophe, on the verge of which humanity is now. It is also worth paying attention, according to the author, to the environmental consequences of decisions taken at the government level. Despite the fact that the current geopolitical situation in the world puts other issues and problems as priorities for decision-making, we should not forget that an environmental catastrophe is no less destructive for humanity than all wars and other confrontations that are relevant at this stage of human evolution.

1 INTRODUCTION

Despite numerous studies indicating the need to move to reducing the burden on the environment, this problem remains one of the most acute and requires rigorous measures. The volume of human economic activity at this stage of development has a huge impact on the climate and on the conditions of human existence, which forces us to look for numerous solutions, whether it is the establishment of quotas for the production of pollutants, the cessation of production of substances that destroy the ozone layer of the atmosphere, etc. Human activity exceeds the actual capabilities of the planet, and the number of artificially created objects exceeds the biomass of the Earth. If the production of anthropogenic mass continues, then, according to research, in 2040 the anthropogenic mass will exceed the Earth's biomass by three times (Ivanova, 2017). As a result, the need for the introduction of resource-saving technologies has been approached on a global scale. Among the world economic community, the idea of a green economy model is gaining more and more popularity. To deny the need for its implementation in these conditions of economic development is extremely

reckless. The essence of the study is the need to emphasize or refute the need to introduce "green" technologies into production. In the research of leading economic scientists, there are two points of view on the interaction and the consequences, therefore, of this interaction, between the prerequisites for the introduction of green economy technologies and labor productivity.

2 MATERIALS AND METHODS

One group of economic scientists considers environmental protection measures to be a burden and additional costs without increasing labor productivity as a result of the measures introduced, and, consequently, the profit received. This opinion is held by E. Denison (Denison, 1979), S. Issoufou, N. Ouattara (Issoufou, 2011). According to their research and their regression analysis of the impact of the introduced environmental standards on the level of labor productivity, they concluded that it was inappropriate to introduce "green" technologies into production, recommended that management be more careful with the introduction of "green" innovations.

Other scientists also joined their opinion, for example, M. Roberts, S. Dufour (Dufour, 1998).

However, M. Porter in the 90s for the first time suggested that the introduction of "green" technologies could lead to an increase in competitiveness, including by creating an image of a socially responsible enterprise that also cares about environmental protection (Porter, 1991). M. Porter's opinion was also supported by Linde in 1995 (Porter, 1995). In the future, S. Abrizio, who in 2017 conducted an empirical analysis at the level of firms and industries, was able to refute the main postulates of the Porter hypothesis, or to be more precise, the postulate that the introduction of environmental standards will contribute to improving the competitiveness of the firm. However, Porter's hypothesis was confirmed by N. Amara, R. Lin and Ch. Sheu (Amara, 1999; Lin, 2012). In their research, they found a causal relationship between the introduction of "green" technologies and effective production methods. They also stressed the great influence of institutional factors on the spread of the practice of using "green" technologies (Rutsky, 2020).

To date, the governments of all foreign countries have recognized the fact that the sustainable development of the country is closely linked to environmental factors. It is precisely how closely the state treats environmental problems inside and outside the country that affects the success of decisions that affect economic growth in the future. The leaders of all countries unanimously expressed concern about the existing, extremely catastrophic environmental situation on Earth. This topic is relevant and never-abating, it is necessary not only to reduce the destruction that causes human life activity to nature, but also to try to restore the damage that has already been done. Due attention should be paid to the mass media in order to convey to the population that humanity is one step away from a global ecocatastrophe, since the consequences can be irreversible and inescapable, among other things. It is necessary not only to provide scientific justification for the need to introduce the concepts of the green economy, but also practical, leading figures of science and technology should also be involved so that the state can more successfully introduce and implement the basic principles of the green economy.

It is also worth mentioning that one of the primary tasks is also the selection of those indicators by which the effectiveness of the introduction of green economy technologies is measured. Moreover, it is desirable that the indicators reflect not only the internal state of the environment, but also external

influences arising in the process of human activity. All current indicators of measuring the green economy can be classified according to different approaches. The first approach is based on the effectiveness of the environmental and resource component (measuring the degree of environmental friendliness, etc.);

The second approach is based on an ecological measurement of the quality of life, that is, on measuring how the environment affects the quality of life of citizens.

The third approach reflects the economic and political measures taken by management, that is, they measure the effectiveness of public policy to ensure the introduction of "green" technologies, etc. The group of environmental indicators covers four areas: climate change, ecosystem management, productivity and resource efficiency, as well as chemicals and waste management. The group of policy indicators includes "green" investments, "green" tax reform, assessment of externalities and assessment of ecosystem services, "green" procurement and training of skills necessary for "green" jobs.

3 RESULTS AND DISCUSSION

In this regard, it is worth noting the active efforts of the EU countries on the introduction of green economy technologies. According to the Main Directions for the Implementation of Climate and Energy Policy adopted in 2014 for the period from 2020 to 2030, it is planned to reduce greenhouse gas emissions, increase the energy efficiency of economies and achieve the share of renewable energy sources in the energy balance of the EU countries to a certain level.

According to official data, by 2017, the EU had reduced greenhouse gas emissions by 21.7% compared to the level in 1990; in the period from 2004 to 2018, the share of renewable energy sources in the European Union more than doubled, reaching 17.97% (which is higher than the global average of 17.5% in 2016) of total final consumption energy in 2018 (according to Eurostat).

At this stage of economic development, the Russian Federation lags far behind developed countries in terms of the introduction of green economy technologies. In this regard, it is worth noting that the introduction of green economy technologies implies a reduction in the use of hydrocarbons. This direction is extremely unprofitable for the raw materials economy of the Russian Federation. According to official sources, the

export of fuel and energy goods for 2021 amounted to 54.3%, which indicates an extremely unprofitable development vector for the Russian economy. Within the framework of the multilateral Paris Climate Agreement the Russian Federation prepared a draft "Strategy for the long-term development of the Russian Federation with low greenhouse gas emissions until 2050", according to which it is planned to reduce carbon emissions to 67% of the 1990 level by 2030. It is also worth noting that in addition to the Russian Federation, more than 100 countries took part in the signing of the Paris Climate Agreement and assumed liabilities to reduce carbon emissions. It is also worth noting that leading players such as the EU and the USA have joined the race of green technologies, since it is an indisputable fact that our future belongs to green technologies.

With the development of green technologies, those countries that will make the energy transition first will have a winning position in comparison with other countries. This suggests that countries that have already implemented energy transition or are at the stage of energy transition will occupy appropriate positions in the geopolitical space. According to scientists, the fact that energy transfer is carried out without a single scenario, in a separated and fragmented manner, indicates that there is a need for polycentric solutions.

However, each country chooses the most priority sectors of the economy, which it plans to green in the first place. For the Russian Federation, the industries that should introduce green economy technologies include industry, energy, agriculture and education. It is on these sectors of the economy that it is planned to focus the efforts of the country's leadership for a more successful implementation of the technologies in question. Special attention should be paid to measures to stimulate scientific research and innovative developments to increase the speed and efficiency of the transition to green economy technologies.

The transition to the principles of a green economy contributes, first of all, to the conservation and multiplication of natural resources, secondly, contributes to sustainable economic growth, thirdly, contributes to the well-being and improvement in living standards of citizens, a total of 17 sustainable development goals have been identified according to the UNEP classification, 10 of them can be adapted for Russia (Table 1).

Table 1: Objectives in the main sectors of the green economy of Russia according to the UNEP classification.

Sectors	Objectives of Russia by 2030
Agriculture	Increasing the dietary calories to 2800-3000 kcal/day by 2030.
Heating and lighting of buildings	Improving energy efficiency and reducing energy consumption and emissions. By 2030, provide 85% of heating and 75% of liquefied gas from the entire housing stock.
Energy supply	By 2030, increase the share of renewable energy to 10% of the total electricity generation.
Fishing	Achieving the maximum sustainable catch by reducing the total global catch by 50%.
Forestry	A 50% reduction in deforestation by 2030, as well as an increase in forest plantations to ensure stable production of forest products.
Industry	By 2030, the share of industries with a significant negative environmental impact in the industrial structure should be reduced from 60% to 50%.
Tourism	Achieve an annual growth of eco-tourism by 20%.
Transport	Introduce stricter fuel efficiency standards and emission standards, reward drivers who choose more efficient vehicles.
Water resources	Provide the population with clean drinking water 100% of the urban housing stock; 61-63% of rural housing stock
Energy sector	Reduction of greenhouse gas emissions to 70-75% compared to 1990 levels.

Source: (Sdasyuk, 2013).

For a successful transition to the implementation of the principles of green technologies, it is important to expand educational activities among all social groups of the population, using both the media and educational resources, such as schools, universities. Particular attention should be paid to civil society institutions such as youth activist movements, public opinion institutions, etc.

Ensuring the success of these ideas depends entirely on the state policy carried out on the territory of the country. The place of the country in the geopolitical space in the future depends on it.

The issues of measuring the introduction of green economy technologies also remain open, since the

GDP indicator, which was previously used to assess the effectiveness of the introduction of green technologies, does not fully reflect social and environmental factors. The most well-known and frequently used GGEI indicator is the Global Green Economy Index, which was introduced in 2010. GGEI is published by Dual Citizen LLC. The results of 2018 according to the index of the green economy indicate that the greatest attention at the government level is paid to green technologies in Sweden, Switzerland and Iceland (Table 2).

Table 2: The GGEI indicator - the Global Green Economy Index for 2018.

No.	Country	Percentile
1	Sweden	0.7608
2	Switzerland	0.7594
3	Iceland	0.7129
4	Norway	0.7031
5	Finland	0.6997

Note - Source - the Global Green Economy Index (Global Green Economy Index, <https://dualcitizeninc.com>)

4 CONCLUSIONS

The concept of sustainable development is an objective necessity for the harmonious development of modern society. The concept of sustainable development is a consequence of global human problems that have arisen as a result of the interaction of man and nature. The essence of the concept is to meet the needs of modern society without causing damage to the environment. The principles of sustainable development were supplemented and refined as human society evolved. However, the principles of sustainable development are still the subject of heated discussions not only for Russian, but also for foreign researchers. Since 2000, various measures have been taken to achieve sustainable development, one of the most significant results of these measures is the adoption of a UN resolution and the formulation of 17 Sustainable Development Goals. Focusing on the problems of "greening" of the Russian Federation, it is necessary to pay attention primarily to the raw materials orientation of the Russian economy, to the fact that at the state level, the issues of "greening" of the economy are not given due attention, that is, there are no stimulating factors that encourage representatives of science and technology to engage in relevant developments in the field of green technologies. The state, using a rather rigid

imperative system, does not use economic levers for the development and implementation of green technologies. It is also worth emphasizing that work on improving environmental literacy should be carried out at all levels of education, Russian society, in this case, as well as all people should know all the risks and threats associated with environmental disasters, on the verge of which humanity is now standing. The current difficult geopolitical situation that has developed in the world raises other issues as a priority, however, the ecocatastrophe on the verge of which humanity is, requires urgent attention and immediate decisions. Moreover, decisions should be made not only within the country, but in general, throughout the planet. That is, only through the joint efforts of all countries it is possible to limit the pace of impending threats and reduce their consequences, at least. It is necessary to pay more attention to monitoring the implementation of the assumed functions in the field of green technologies by various countries, since inattentive attitude threatens with irreversible consequences.

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