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Development of the Green Economy as a Tool for Mitigating Economic Security Threats in Russia and the World

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ABSTRACT

Objective. To demonstrate the potential of the green economy in reducing economic security threats and the importance of strategic transformation of the institutional environment for sustainable development. **Methodology.** The study applies content analysis, economic-statistical analysis, and correlation methods to assess the relationship between environmental indicators and economic security. **Results.** The analysis reveals that environmental pollution in Russia measured through greenhouse gas emissions and waste generation correlates strongly with economic performance indicators such as GDP. Russia's lag in green economy adoption

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is evident when compared to leading countries. Key constraints include insufficient institutional support, low investment attractiveness of green projects, and lack of mandatory environmental disclosure. **Conclusion.** Strengthening Russia's economic security requires advancing green economy initiatives through institutional reforms. Strategic measures should include public-private partnerships, green financing mechanisms, and the creation of a central coordinating body. International experience confirms that integrating ecological priorities into economic planning leads to greater long-term stability and competitiveness.

KEY WORDS: Green economy, economic security, sustainable development, socio-economic systems, institutional environment.

Introduction

The economic security of a country is a priority area of state policy that ensures the formation of economic and political independence and stability of economic development (Alimova et al., 2023, Kirillova et al., 2023). The system of economic security of the state is influenced by economic, social, demographic, environmental, and other factors (Alekseev et al., 2022). Currently, the state of the environment is significantly worsening due to the emergence of ecological problems and environmental pollution, which creates high risks, including economic ones (Gerasimova et al., 2024; Khrustalev et al., 2022). The urgency of these problems is determined not only by the necessity to fulfill obligations to achieve sustainable development goals but also by the necessity to eliminate high levels of environmental pollution (Bezdudnaya et al., 2021). Thus, under modern conditions, the transition to a green economy as a basis for ensuring the economic security of the state becomes particularly important (Sergeeva et al., 2023).

The formation of economic security based on the principles of the green economy can ensure stable and independent development of the state while adhering to ecological principles. At the



same time, it is important to ensure the development of the institutional environment and regulatory framework in this area, which will provide a more effective system for the transition to a green economy (Tryastina et al., 2024).

A high level of economic security forms the foundation of sustainable development for the state (Safiullin et al., 2023). The concept of economic security is not new and has been studied over a long period during the development and formation of society and the state. Russian and foreign authors offer different approaches to understanding economic security. For example, A.P. Gradov and I.V. Ilyin (2005) note that “economic security is the state of the national economy that ensures the satisfaction of the country's vital needs for material goods, regardless of the occurrence of force majeure circumstances of a socio-political, economic, or environmental nature in the world economic system or within the country”. Waller (2019) states that “economic security is the state in which a nation (state) can sovereignly, without external interference and pressure, determine the paths and forms of its effective development”. Analyzing the interpretations of researchers, it can be noted that there is a partial connection between economic security and environmental issues.

Based on the studied approaches, the following author's definition characterizes the novelty of the research: "Economic security of the state under the conditions of a green economy" is the state of the country's economic system that ensures the state's independence in financial markets, the ability to ensure effective production development, and the improvement of the population's well-being while adhering to the fundamental principles of the green economy, ensuring the environmental friendliness of economic entities' activities. The distinctive features of the proposed definition are its comprehensiveness, systematic approach, and consideration of the impact of green economy principles on economic security. Economic security implies the integration of political, economic, and technological factors into a single reproduction process that ensures the stability of the state. By ensuring the economic security of the country, the necessary conditions for the development of the production sector, the investment and capital



market are created, ensuring the reliable functioning of the national economy (Assessment of risks and threats to economic security in Russia 2018–2020, 2018, p. 107).

It should be noted that the green economy serves as the foundation for the socio-economic development of the country while adhering to the principles of environmental development using new technological frameworks. The mechanisms of the green economy's impact on social processes are either not described by most authors or are considered superficially. Moreover, there is no unified concept of the green economy. For example, Zakharova (2015) writes that "the green economy is an economy based on environmentally clean technologies, organic agriculture, efficient energy and water use, and the high-tech transformation of urban infrastructure". Adherence to the principles of the green economy contributes to the improvement of the quality of life by enhancing the economic and social environment. Based on the analysis of existing approaches to the essence of the green economy, the following author's definition can be given. "Green economy" is a type of economic development that involves the transition to innovative technologies that reduce the negative impact of industrial enterprises and the population on the environment.

Under modern conditions, the principles of the green economy are closely related to the sustainable development of the state, ensuring a high level of its economic security in various directions within the framework of the economic security concept (Vukovich, 2018, p. 129). It should be noted that the green economy, through its impact on the environment and the production process, ensures a high quality of life for the population and increases their well-being by influencing sustainable economic development through technological modernization. An important role in this case is played by the assessment of the regional potential of the carbon market (Vilkov et al., 2023). Critical interconnections of the green economy with the construction of a sustainable system of economic security of the state were examined by Newton and Newman. The authors defined the role of a well-structured environmental sector in ensuring "green cities" and a "green economy" (Kruglova, 2022). According to this model, there is a close



interconnection between the green economy and the development of city infrastructure, industry, and urban infrastructure. In Karl Burkhardt's green economy development model, the interconnection of the economy, society, and the environment is built on principles of variability, fairness, and value, resulting in sustainable development.

Having studied the models of "green economy" formation, it can be noted that the sustainable development of the state and its economic security largely depend on the principles of forming an effective production base based on the principle of "green economy" and the environment. It should be noted that there is a close interconnection between the environment and the processes occurring in the economy, the social sphere, and economic systems. To ensure the safety and sustainability of the existence of an open system of society and the state, it is necessary to ensure the stability of their functioning environment. In other words, it is important to pay attention to the natural and climatic environment, the development of energy-saving principles, and the implementation of modern technologies that comply with the principles of the "green economy".

In the concept of sustainable development of socio-economic systems in the context of ensuring economic security, the basis of the system formation is ensuring economic security by forming a sufficient level of resource provision. In this case, green finance serves as an instrument for the technological and innovative development of the state, ensuring the functioning of the state and its economy based on renewable resources. In forming the green economy as part of the economic security complex in the Russian Federation, a partial change or at least significant transformation of the basic paradigms of the socio-economic system development is necessary. When implementing the principles of the "green economy" in the context of ensuring the country's economic security, it is necessary to ensure the formation of an institutional structure of management bodies to provide a set of measures for forming an effective system of economic security in the country. In this case, the following structure of economic institutions that can ensure the implementation of the principles of the "green

economy" in the context of ensuring the country's economic security can be proposed (Figure 1).

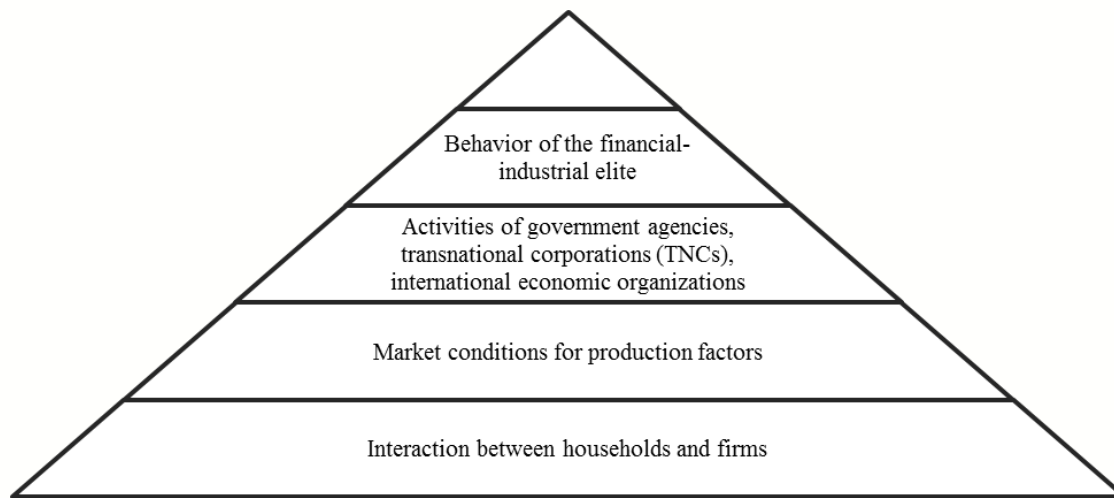


Figure 1. Vertical structure of economic institutions within the framework of managing economic security based on the principles of the "green economy"

Source: (Karybaeva, Dyykambayev, 2022)

In our opinion, this institutional structure can be improved by including the following institutions:

1. Committee for Economic Security Control based on the principles of the "green economy".
2. Committee for the Development of the Green Economy.

It should be noted that in the Russian Federation, unlike Western countries, when developing and implementing institutional support for the development of the green economy to ensure economic security, it is necessary to develop information components and ensure the mandatory inclusion of environmental impact data in company reports. It is important to ensure comprehensive control over environmental activities and the formation of effective technologies that will increase production efficiency in terms of environmental impact.



In international practice, the principles of the "green economy" are more actively applied for sustainable development. In foreign studies, the green economy is considered in connection with the natural environment to ensure resource savings and environmental protection in the following aspects:

The impossibility of infinitely expanding the sphere of influence in a limited space.

Constantly growing citizen needs cannot be satisfied in conditions of limited resources, which requires the implementation of the "green" principles of the economy.

Proponents of the "green economy" concept abroad note that the economic system is largely imperfect, although aimed at improving the standard of living. The authors of the "green economy" concept abroad note that in modern conditions, without applying the principles of the "green economy," ecological problems arise, natural potential is depleted, poverty develops, freshwater is scarce, and there is a food crisis. The transition to the green economy is necessary in countries where the ecological component of production processes is high. In the long term, the application of the principles of the "green" economy contributes to the stability of the country's development.

According to the classification of the Organization for Economic Cooperation and Development (OECD), "green technologies" affect the following areas of life: waste management, land restoration, energy production, reduction of harmful emissions into the atmosphere, and the development of energy efficiency technologies, which in turn is closely related to ensuring economic security. The idea of the green economy was adopted in 2008 as part of the UN Environment Program UNEP (Green Economy of the UN, n.d.).



In some research, the following main channels for the development of the green economy that contribute to the stable economic growth of the state are presented:

1. The transition to the green economy can increase the input resources of natural, physical, and human capital, improve the productivity of natural resources through their more efficient use, and reduce the population's morbidity.
2. The transition to the green economy contributes to structural changes in the economy, the development of system-forming industries, and the growth of national investments.
3. The transition to the green economy stimulates innovative activity, affecting the competitiveness of the state, the development of the Russian market, and ensuring the stability of economic systems.

In global practice, particular attention is paid to the formation of modern infrastructure in the transition to the green economy, which has a key influence on the development of the country. To ensure the economic security of foreign countries in the conditions of the transition to the green economy, it is important to develop water infrastructure, etc.

Thus, the development of "green" technologies contributes to ensuring social and economic stability, increasing GDP, developing environmentally friendly sectors of the economy, increasing citizens' incomes, and improving the standard of living of the population.

The goal set by the authors when writing the article is to show the prospects for the development of the green economy to mitigate threats to economic security and the importance of strategic transformation of the institutional environment to ensure sustainable development. As a scientific novelty, it is worth noting the clarification of the concept of "economic security of the



state in the conditions of the green economy" and its theoretical and research (practical) interpretation.

Methodology

The results presented by the authors are based on the application of content analysis of modern approaches to the study of the green economy, taking into account aspects of economic security. Content analysis allowed for the systematization and generalization of existing knowledge and approaches, highlighting key aspects that affect economic security in the context of the green economy.

The study used methods of economic-statistical and correlation analysis. Economic-statistical analysis made it possible to quantitatively assess the main trends and dynamics of indicators characterizing the development of the green economy. Using correlation analysis, the interconnections between various factors affecting the stability and security of economic systems were assessed.

Special attention was paid to assessing the impact of various factors on the stability of economic systems. Data on parameters such as environmental policy, technological innovations, and global economic trends were analyzed for this purpose. Effective measures for risk minimization were developed based on the results of the correlation analysis, which allowed for proposing specific strategic directions to strengthen economic security in the transition to the green economy.

Results and discussion

Economic-statistical analysis of environmental pollution trends revealed the prerequisites for the development of the green economy in Russia in the context of economic security. The most



important influencing factors, in our opinion, were the volumes of waste generation and handling and total greenhouse gas emissions. Data on waste generation, utilization, neutralization, and placement in Russia from 2016 to 2022 are presented in Table 1.

Table 1. Waste Generation, Utilization, Neutralization, and Placement in Russia from 2016 to 2022 (million tons)

Year	Waste Generation	Including Hazardous	Waste Utilization and Neutralization	Waste Placement on Company-Owned Sites	Located in:	
					Storage Sites	Disposal Sites
2016	5441,3	98,3	3243,7	2620,8	2105,3	503,8
2017	6220,6	107,2	3264,6	3204,5	2378,5	826,0
2018	7266,1	127,6	3818,4	3575,4	2546,2	1029,2
2019	7750,9	100,6	3881,9	3800,8	2621,9	1178,9
2020	6955,7	98,1	3429,0	3706,4	2874,1	832,3
2021	8448,6	117,9	3937,2	4492,3	3510,8	981,5
2022	9017,3	104,7	4125,2	6212,9	3797,5	2415,4

Source: compiled by the authors based on Environmental protection (n.d.)

The growth of industrial waste in the considered period is due to industrial and economic growth within the country. At the same time, the increase in industrial waste volume negatively affects the environment and requires the implementation of projects to reduce the negative impact of industry on ecology. A negative factor influencing the ecology is the increase in the volume of hazardous waste in 2021, which can negatively affect the level of economic security of the country.

Details of total greenhouse gas emissions in Russia from 2016 to 2021 are presented in Table 2.

Table 2. Details of Total Greenhouse Gas Emissions in Russia from 2016 to 2021 (million tons CO₂)

Indicator	2016	2017	2018	2019	2020	2021



Total	2034,0	2082,6	2145,2	2136,5	2061,1	2156,6
Including						
Carbon Dioxide (CO ₂)	1634,9	1666,1	1712,5	1705,0	1632,9	1712,0
Methane (CH ₄)	289,5	295,6	305,2	308,7	299,9	314,8
Nitrous Oxide (N ₂ O)	81,4	82,7	82,2	84,0	86,5	88,4
Hydrofluorocarbons (HFCs)	23,6	34,4	42,5	36,0	39,1	38,6
Perfluorocarbons (PFCs)	3,7	2,7	1,7	1,6	1,7	1,6
Sulfur Hexafluoride (SF ₆)	0,9	1,2	1,1	1,1	1,1	1,2

Source: compiled by the authors based on Environmental protection (n.d.)

There is a high share of carbon dioxide and methane emissions in the overall structure of emissions, which negatively affects the environmental situation and the state of the environment. The dynamics show a reduction in greenhouse gas emissions, which is a positive trend.

To reveal the prerequisites for the development of the green economy, it is necessary to compare information on pollution volumes and the dynamics of environmental protection costs.

Environmental protection costs in Russia are presented in Figure 2.

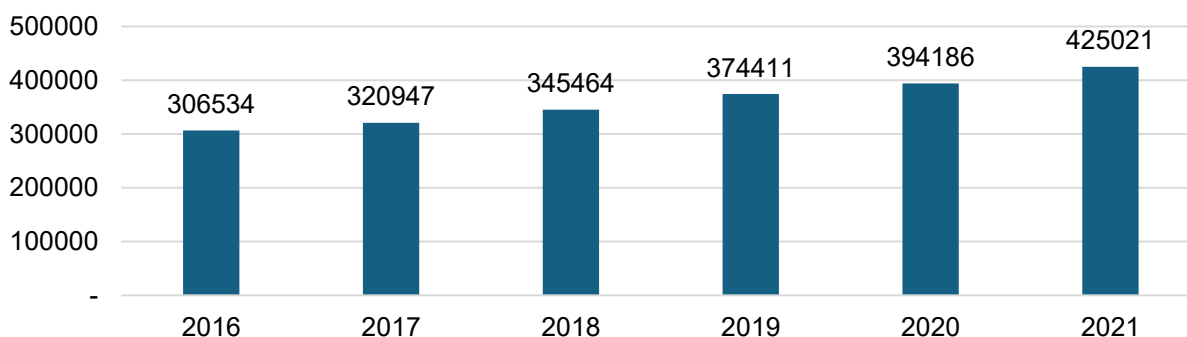


Figure 2. Environmental Protection Costs in Russia (million rubles)

Source: compiled by the authors based on Environmental protection (n.d.)



In the considered period, there is an increase in environmental protection costs due to the growing need for ecological development and the implementation of "green" economy principles. It should be noted that a significant amount of funds is spent on environmental protection programs, which could be used for other purposes. However, ensuring the sustainable development of the environment and reducing emissions into the atmosphere is a prerequisite for developing a green economy based on careful environmental management. At the same time, significant budgetary funds are diverted to eliminate environmental pollution consequences, creating a threat to the country's economic security.

The following directions of damage to national security due to neglecting the principles of the "green" economy can be highlighted:

1. Increased anthropogenic load, which affects the quality of life, labor productivity, resource use efficiency, and GDP.
2. Increased costs for environmental restoration. This expense can be considered a deduction from the gross product, leading to budgetary fund diversion that could be used for infrastructure development, improving consumption quality, and other social goals.

Since the pace of industrial production development significantly negatively affects the quality of the natural environment, creating threats to economic security, it is necessary to supplement the analysis with the dynamics of gross domestic product (GDP) (Table 3).

Table 3. GDP Dynamics in Russia from 2016 to 2023 (billion rubles)

Year	GDP	Absolute Deviation (billion rubles)	Growth Rate (%)
2016	85 616,1	-	-
2017	91 843,2	6 227,1	107,27
2018	103 861,7	12 018,5	113,09

2019	109 608,3	5 746,7	105,53
2020	107 658,1	-1 950,2	98,22
2021	135 773,8	28 115,6	126,12
2022	155 188,9	19 415,1	114,30
2023	172 148,3	16 959,4	110,93

Source: compiled by the authors based on National accounts (n.d.)

In 2016-2019 and 2021-2023, there was GDP growth, increasing production and trade sectors, indicating economic growth and sustainable development of the Russian economy. To determine the impact of environmental protection costs on the country's economic potential and GDP, we will construct a correlation dependence. The data is presented in Figure 3.

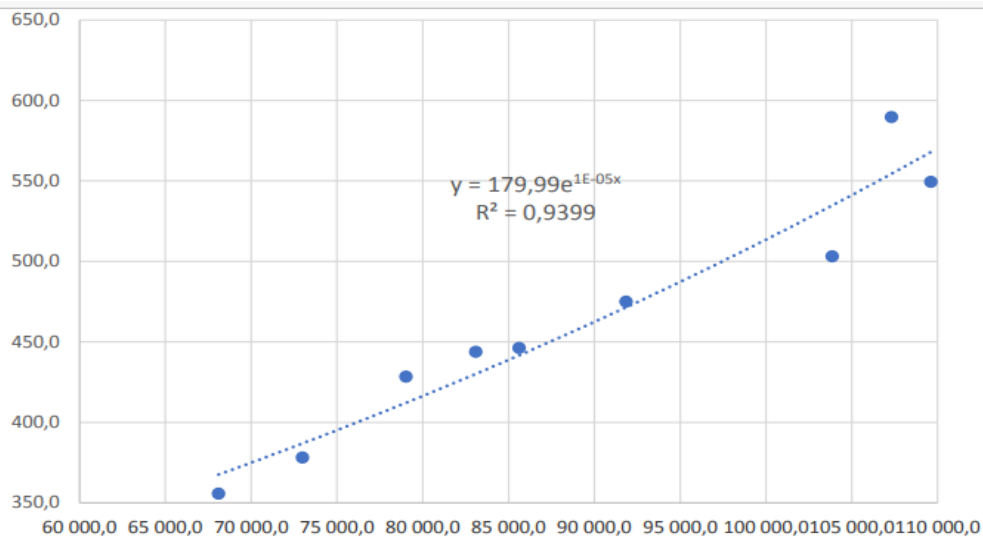


Figure 3. Correlation Dependence Between GDP Volume and Environmental Protection Costs in Russia

Source: compiled by the authors

It should be noted that there is a significant correlation between the volume of environmental protection costs and GDP, confirming the hypothesis that environmental pollution and the level



of green economy development significantly affect economic growth and, consequently, the country's economic security.

We will analyze the dynamics of emissions in connection with the dynamics of the urban population and other parameters of the country's economic development (Table 4).

Table 4. Analysis of Emission Dynamics in Connection with Urban Population Dynamics and Other Economic Development Parameters in Russia from 2016 to 2021

Year	Urban Population (million people)	Emissions from Stationary Sources	GDP Physical Volume Index (%)	Industrial Production Index (%)
2016	108,6	17,3	100,3	102,2
2017	109,0	17,5	101,6	102,1
2018	109,3	17,1	102,3	102,0
2019	109,5	17,2	101,9	101,9
2020	109,5	17,6	102,1	101,8
2021	109,3	17,4	102,0	101,9

Source: compiled by the authors based on National accounts (n.d.)

There is a direct correlation between the urban population and emissions into the atmosphere. As the urban population increases, emissions into the atmosphere also increase, negatively affecting the environmental situation. The impact of green economy development on the country's economic security is also determined by the need to reduce negative factors through the implementation of modern technologies.

It should be noted that the level of development of European countries in implementing green economy measures is higher than in Russia, which is determined by the stage of development of European countries and the financing rates of green economy measures. We will consider the long-term and intermediate goals of environmental policy within the framework of sustainable development in Europe, which are currently being applied (Figure 4).

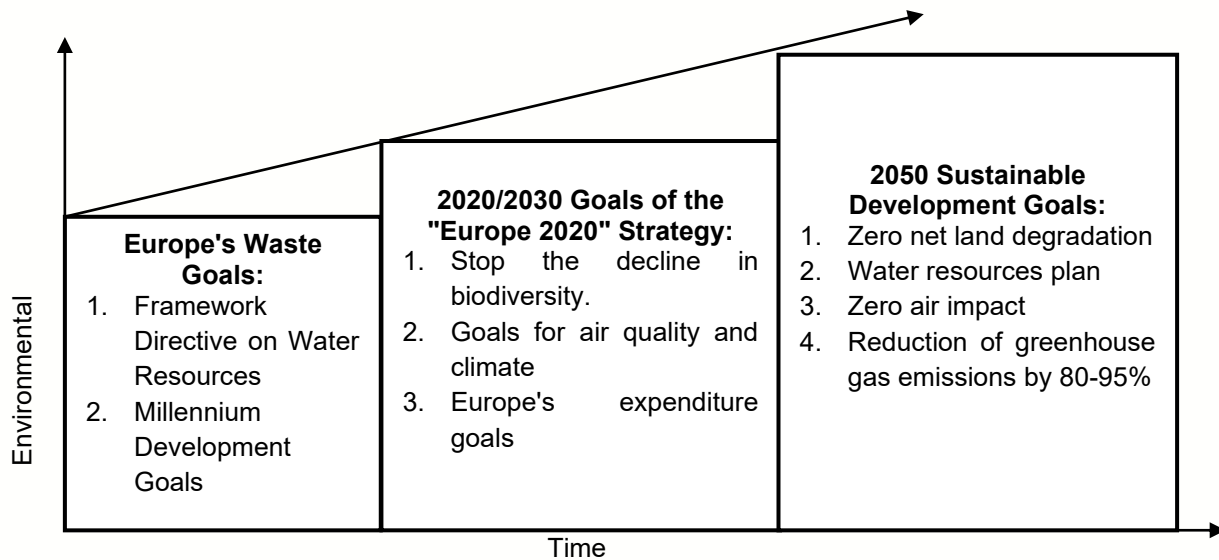


Figure 4. Long-Term and Intermediate Goals of Environmental Policy within the Framework of Sustainable Development in Europe

Source: compiled by the authors

Implementing these goals is a promising direction for government authorities in European countries, as the principles of the "green" economy form the basis for ensuring the economic security of these countries. It should be noted that Western European countries and the USA use two forms of economic methods to regulate policies against environmental pollution: tax regulation of environmental pollution and market mechanisms. We will consider the ranking of foreign countries by the level of environmental pollution as of early 2021 (Table 5).

Table 5. Ranking of Foreign Countries by Environmental Pollution Levels as of Early 2021



No.	Country	Territory Pollution	Damage to the World
1	Mongolia	93.20	171.28
2	Myanmar	93.08	169.12
3	Afghanistan	91.94	165.72
4	Ghana	89.95	161.37
5	Bangladesh	88.81	159.75
6	Lebanon	87.65	156.44
7	Nigeria	87.16	155.82
8	Egypt	86.31	154.05
9	Vietnam	86.29	154.57
10	Monaco	86.04	158.17
...			
52	Bulgaria	63.57	115.30
53	Bosnia and Herzegovina	63.53	112.96
54	Russia	63.49	109.38
67	Italy	54.97	93.21
71	Poland	52.88	94.04
72	Greece	52.48	91.60
73	Argentina	51.89	88.34
74	Belgium	50.48	85.78
80	Belarus	43.75	72.46
81	France	42.91	71.53
82	Slovakia	40.64	68.32
83	United Kingdom	40.63	67.10
84	Czech Republic	40.09	67.72
85	Spain	39.16	64.12
88	USA	35.74	59.20
107	Sweden	17.45	27.46

Source: compiled by the authors based on Rating of countries by environmental pollution level (n.d.)

It should be noted that European countries occupy rather low positions in the ranking, indicating low levels of polluted territories. This trend is due to the measures taken to implement "green" technologies and reduce industrial enterprise emissions into the environment.



We will consider the top 10 countries by the Green Economy Development Index. The countries and main positions in the ranking are presented below:

1. Sweden – 1st position
2. Switzerland – 2nd position
3. Iceland – 3rd position
4. Norway – 4th position
5. Finland – 5th position
6. Germany – 6th position
7. Denmark – 7th position
8. Taiwan – 8th position
9. Austria – 9th position
10. France – 10th position Russia – 114th position

It should be noted that the Russian Federation occupies the 114th place in the ranking, indicating a low level of green economy development. At the same time, the top positions are held by European countries as well as Iceland and Taiwan. These countries pay the most attention to green economy measures to ensure sustainable development and economic security.

We will consider data on the global volume of household waste and forecast values until 2050 to determine the level of environmental pollution in foreign countries. The dynamics of household waste volumes according to the World Bank are presented in Figure 5.

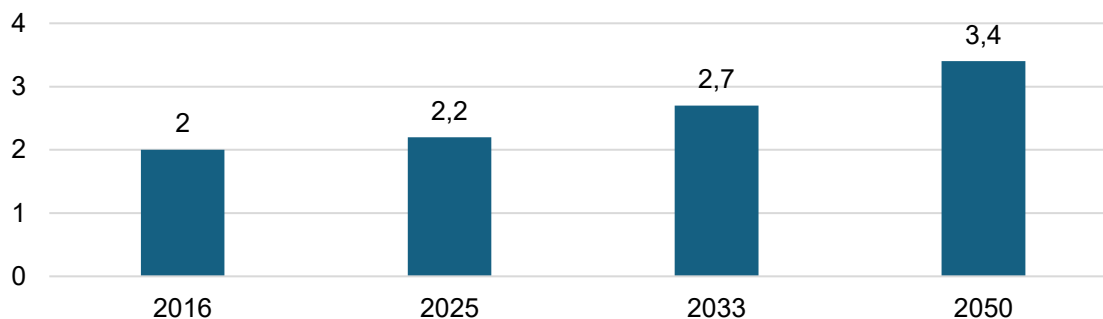


Figure 5. Dynamics of Global Household Waste Volumes According to the World Bank (billion tons)

Source: compiled by the authors based on Green Economy in the World (n.d.).

According to World Bank estimates, there is an increase in household waste volumes, negatively affecting the environmental situation, industry, and the sustainability of foreign countries' development. European countries and the USA implement environmental strategies and programs for the green economy's development. Germany's strategy is "Wind Instead of Black Gold"; the USA's is "The New Green Deal," based on principles of environmental responsibility and social justice; France's involves renewable energy sources ("green" cars, "green" urban development).

It should be noted that European countries are focused on "green" development and implement various directions for developing technologies in the field of environmental protection for sustainable development.

We will consider the cost of the new "green deal" in European countries if implemented by 2029.

The assessment is presented in Figure 6.

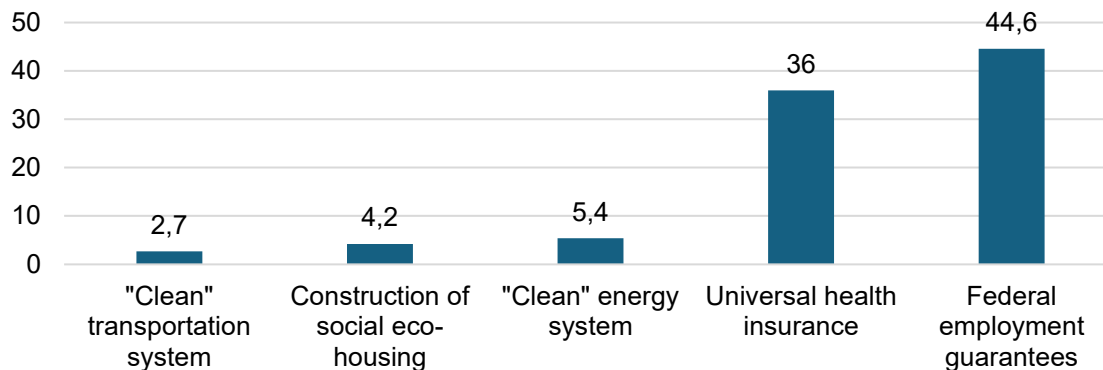


Figure 6. Cost of the New "Green Deal" in European Countries if Implemented by 2029 (trillion USD)

Source: compiled by the authors based on Green Economy in the World (n.d.).

Thus, the total cost of implementing the "green deal" in European countries is 929 trillion USD. Each Eurozone country implements its policy within the "green deal".

According to the Waste Management Association, Sweden is the most developed country in ensuring the principles of the "green" economy, managing 100% of waste from industrial enterprises and the population. More than 50% of waste is recycled, 1% goes to landfills, and 49% to waste incineration plants.

We will consider the ranking of countries worldwide by the level of economic security published in 2022. The data is presented in Table 6.

Table 6. Ranking of Countries Worldwide by Level of Economic Security in 2022



No.	Country	Index
1	Iceland	1078
2	New Zealand	1198
3	Portugal	1247
4	Austria	1275
5	Denmark	1283
6	Canada	1298
7	Singapore	1321
8	Czech Republic	1337
9	Japan	136
10	Switzerland	1366
11	Slovenia	1369
12	Ireland	1375
13	Australia	1386
14	Finland	1404
15	Sweden	1479
16	Germany	1494
17	Belgium	1496
17	Norway	1496
19	Bhutan	1501
20	Malaysia	1525
21	Netherlands	1528
22	Romania	1541
23	Mauritius	1544
24	Hungary	1559
25	Slovakia	1568
26	Croatia	1615
27	Qatar	1616
28	Bulgaria	1628
29	Poland	1657
30	Estonia	168
...		
121	United States of America	2307
154	Russia	3049

Source: compiled by the authors based on Rating of countries by environmental pollution level (n.d.).

In European countries, especially in Germany, the green economy is one of the tools for combating climate threats and increasing national competitiveness. Within the framework of the sustainable development concept based on the principles of the "green" economy, Germany



has developed and is implementing a sustainable development strategy that includes main activities based on environmental protection, improving the population's quality of life, and social cohesion of society.

In Germany, the market volume of green (environmental) technologies and resource efficiency is increasing. Six main leading "green" technical markets can be highlighted in the country:

1. Energy efficiency;
2. Environmentally friendly electricity production, storage, and distribution;
3. Maximum safe mobility;
4. Material resource efficiency;
5. Sustainable water resource management;
6. Waste disposal and recycling.

It should be noted that the demand for green technologies is growing faster in Germany than in global markets. In the coming years, strict environmental standards, the energy transition to green generation, and the realization by companies in the energy sector of the need to increase material and resource efficiency will ensure further growth in demand for "green" products, processes, and services. At the same time, growing environmental requirements for the Russian market also create additional opportunities for green technical companies.



The authors' study confirms the lower level of green economy development in Russia compared to other countries. However, the correlation between environmental protection costs and GDP growth is high, reflecting the readiness of institutional forms to solve the problem.

The variability of the socio-economic environment requires constant changes in national security and economic development. Under modern conditions, there are barriers to the development of the green economy due to various factors. The absence of effective policies to maintain a high level of economic security can lead to serious threats and disruptions to the stability of the socio-economic system.

The green economy is a relatively new concept different from the principles of the traditional economy and has a strong institutional focus.

In this regard, it can be noted that there are certain institutional barriers in Russia due to the lack of effectively functioning government institutions controlling the implementation of the principles of the "green" economy to ensure economic security.

Transitioning to a sustainable model of the green economy requires significant transformations of the institutional environment. However, several limitations of green growth in Russia can be highlighted:

1. Infrastructural support of the economic system not meeting the needs of green economy development;
2. Incomplete or unspecified property rights;
3. External effects of state environmental policy and economic behavior of enterprises;



4. External effects of incomplete and asymmetric information;
5. Low rate of return on "green" investments;
6. Problems of state regulation of green economy development (Kruglova, 2022).

Measures to overcome these obstacles should be of an institutional and strategic nature: developing infrastructure based on public-private partnerships (PPP), modernizing the property rights system, subsidies for environmentally significant technologies, product labeling, government and public support, and implementing a project financing system.

Conclusion

The analysis showed that there is a direct correlation between the level of economic security and costs to create conditions for the green economy's development. The higher the costs of ensuring high environmental quality, the higher the economic growth. It is important to consider the necessity of implementing resource-saving technologies and technologies to reduce emissions into the atmosphere to ensure the effective development of "green" projects. In foreign countries, the green economy is more extensively developed, with projects ensuring environmental protection from industrial waste being implemented everywhere, positively affecting the stability of foreign countries.

Among the main barriers to the green economy's development for economic security in Russia, institutional problems, an insufficient level of legislative base development, and the absence of an effective control system for implementing "green" projects can be highlighted.

The development of the green economy to ensure economic security has its positive and negative aspects. The main limitations are due to the need to transform existing environmental



support systems to a state that ensures a high level of socio-economic development of the state. The main problems include:

Low profitability of "green" projects and lack of sufficient investment volume. Most investors invest their funds in projects for profit. Green projects are less profitable but significantly impact the environment and the country's economic security in the Russian market. Profitability is currently a determining factor in investment decisions, so it is necessary to increase the attractiveness of "green" projects.

Lack of information on the financial effect of "green" projects. Many companies do not reflect information on "green" projects in their reporting due to their uninformative nature and low indicators. This problem is less pronounced in foreign countries. For example, the World Bank includes the "green" GDP indicator in its reporting, which could replace the GDP indicator in several years. The Russian Federation does not use this indicator yet, but all the prerequisites for its implementation are in place.

In the Russian Federation, the use of "green" indicators is voluntary. Disclosure of environmental information is voluntary for Russian companies; however, refusal to disclose it can negatively affect the market value and reputation of the company.

An important problem in transitioning to the "green" economy and ensuring high economic security is the lack of resources to solve corresponding tasks. In other words, there is not enough human capital to participate in implementing "green" economy projects, assessing the effectiveness of these projects, and their impact on economic security.

Developing a state strategy for sustainable development in the Russian Federation, which would integrate environmental and socio-economic problems and determine ways to solve them, is an important direction. Currently, the Ministry of Economic Development's long-term



programs are aimed at reducing greenhouse gas emissions by 2050, with energy modernization being one of the development directions.

The absence of a single coordination center for the transition to the "green" economy and sustainable development. Currently, the Security Council and the President of the Russian Federation, as well as government bodies within their competence, are responsible for coordinating activities in this direction. However, in our opinion, one of the directions for transitioning to the green economy and sustainable development should be the creation of a Coordination Center for analyzing the situation and developing directions for sustainable development. During the transition to the green economy, the absence of unified management creates certain risks and threats of not achieving the declared development goals.

It should be noted that green economy problems are not unique to the Russian Federation; national difficulties arise worldwide due to the absence of immediate effects from the introduced measures. Also, the rejection of existing institutions in foreign countries does not lead to immediate effects. However, new institutions may be imperfect, and the institutional transformation process may drag on for many years.

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