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CURRENT STATE, PROBLEMS AND SOLUTIONS OF THE GREEN ECONOMY POLICY IN UZBEKISTAN

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Abstract

Based on the analysis of the research results of various authors, the content and essence of the concepts of "green economy" and "green economy policy" are highlighted in the article, as well as to raise awareness about the green economy, improve it through measures to stimulate its development, improve the quality of life of the population, and contribute to achieving the goals of sustainable development. recommendations have been developed. These recommendations include suggestions for improving the regulatory legal framework, increasing the effectiveness of green economy policy, as well as determining priority directions for the development of the green economy. The article analyzes the materials of the reports of prestigious international organizations such as the United Nations Environment Program (UNEP), the World Bank. Ways to increase awareness of the green economy among the population, government agencies and business circles are indicated. In addition, scientific proposals and practical recommendations aimed at improving the quality of life of the population by developing integrated investment projects to stimulate the development of the green economy, improve the quality of the environment, reduce greenhouse gas emissions, develop green jobs, increase energy efficiency and develop sustainable agriculture have been developed. .

Key words: green economy, green economy policy, effectiveness of green economy policy, renewable energy sources, green jobs, environmental protection.

Introduction

The study of green economy policy in Uzbekistan is very relevant in view of the global problems and obligations facing the country. Uzbekistan, like many countries in the world, is facing serious consequences of climate change, including drought, floods, land degradation and desertification. The transition to a green economy is key to adapting to and mitigating these challenges. As part of the 2030 sustainable development agenda, Uzbekistan as a member of the United Nations has declared its commitment to the implementation of the Sustainable Development Goals (SDGs), including "combating climate change and its consequences." The transition to a green economy is an important tool for achieving these goals. In addition, our country has ratified a number of international agreements aimed at protecting the environment and combating climate change, such as the Paris Agreement, and their implementation can be implemented by transitioning to a green economy[1].

At the national level, Uzbekistan faces problems related to the depletion of natural resources such as water, oil and gas. Improper use of these resources leads to their depletion and environmental degradation. The transition to a green economy allows to increase the efficiency of the use of natural resources and reduce their consumption. In Uzbekistan, the level of environmental pollution remains high, which negatively affects the health and quality of life of the population. The transition to a green economy will help improve the quality of the environment and reduce risks to public health.

Another important problem is the high level of unemployment. The transition to a green economy can create new jobs in areas such as renewable energy, energy efficiency, water treatment and waste treatment. Uzbekistan has a great potential for the development of the green economy. In particular, the country has a high potential for developing renewable energy such as solar and wind energy. The development of this sector allows to diversify the energy balance, reduce dependence on fossil fuels and reduce greenhouse gas emissions. Currently, the level of energy efficiency in Uzbekistan remains low. Therefore, increasing energy efficiency is set as another important task. Improving energy efficiency reduces energy consumption, energy consumption and greenhouse gas emissions. The development of "green" technologies such as water treatment, waste recycling and sustainable agriculture can be a factor in economic growth and job creation.

The need to conduct scientific research on the green economy policy in Uzbekistan is related to the importance of analyzing the existing policy, identifying their strengths and weaknesses. Based on the analysis, it is necessary to develop recommendations for improving the green economy policy in the country. It is also important to more effectively implement environmental initiatives among the population and government agencies and raise awareness about the advantages of a green economy that serves the sustainable development of Uzbekistan in general.

The purpose of the article's research is to comprehensively analyze the country's green economy policy, evaluate its effectiveness, and develop recommendations for improvement.

To achieve this goal, a number of tasks must be solved:

First, it's an analysis of the current policy, that's all in particular, to study the legal framework of the green economy in Uzbekistan, to analyze the goals and objectives of the policy, to evaluate the effectiveness of its implementation and to identify its strengths and weaknesses;

Secondly, to analyze the policy of green economy in other countries, to identify best practices and to make proposals regarding the possibility of applying them in Uzbekistan;

Third, assessing the impact of policies on the economy and the environment, including analyzing the impact on economic growth, employment and environmental quality;

And finally, and fourthly, it is necessary to develop scientific recommendations on improving the regulatory legal framework, increasing the effectiveness of the current policy, and improving the existing policy, having identified the priority directions for the development of the green economy in Uzbekistan.

The research object of the article is the green economy policy, its implementation mechanisms, levers and tools in Uzbekistan.

The subject of the article's research is the complex of economic relations related to the implementation of the green economy policy in Uzbekistan and its efficiency improvement, harmonization with international standards.

To achieve the goal of the research, it is necessary to collect and analyze information about the green economy policy in Uzbekistan, assess its impact on the economy and the environment, identify the strengths and weaknesses of the policy, and develop recommendations for its improvement. This approach allows for a deeper understanding of the current situation and offers measures to improve the green economy policy in Uzbekistan.

Literature review

In the last decade, green economy policies have become a central issue in the sustainable development strategy of many countries. This is due to the increasing awareness of environmental problems such as climate change, air pollution, and water scarcity, as well as the need to balance current economic needs with the preservation of opportunities for future generations. One of the main directions of green economy policy is to improve energy efficiency. Reducing energy consumption in industry, transport, buildings, and other sectors helps to reduce environmental impact and conserve resources. The development of renewable energy sources (RES) is also a key element of the green economy. Investments in solar, wind, hydroelectric, and other renewable energy sources help reduce reliance on fossil fuels and lower greenhouse gas emissions.

For instance, the European Union's strategy is aimed at achieving renewable energy targets and includes a goal to reduce greenhouse gas emissions by 55% by 2030. Reducing greenhouse gas emissions is another important area. Measures to reduce emissions in industry, transport, agriculture, and other sectors help combat climate change and its consequences. For example, China's national plan to combat climate change in 2021 highlighted the importance of green infrastructure and investments. Conserving natural resources plays an important role in the green economy. Protecting forests, water resources, and biodiversity helps maintain ecological balance and prevent environmental degradation. Costa Rica's 2019 national decarbonization plan includes measures to conserve natural resources and support biodiversity. Developing sustainable agriculture involves implementing environmentally friendly agricultural practices. These practices help minimize the negative impact on the environment and maintain the long-term fertility of agricultural lands. Promoting green businesses is an important aspect of green economy policy. Financial incentives and support for companies that produce and use environmentally friendly technologies help accelerate the transition to a sustainable economy. For example, the U.S. Energy Independence and Security Act includes provisions aimed at supporting green technologies and energy conservation.

Transitioning to a green economy is a complex and long-term process that requires active government policy and cooperation between business and society. Effective strategies combine various directions, taking into account the specific characteristics of the country and region. Costa Rica's "payments for environmental services" program (UNEP) is an example of successfully implementing green economy policies. The green economy represents a promising direction for sustainable development recognized internationally. According to the United Nations Environment Programme (UNEP) [33], "a green economy is one that improves human well-being and social equity, creates new conditions for decent work, while significantly reducing environmental risks and ecological scarcities." The Organisation for Economic Co-operation and Development (OECD)[34] offers a similar definition of the green economy: "a green economy leads to improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities."

The main goals of the green economy include reducing greenhouse gas emissions, improving energy efficiency, developing renewable energy sources, conserving natural resources, creating green jobs, and improving the quality of life for the population. Reducing greenhouse gas emissions is aimed at combating climate change, while improving energy efficiency helps reduce energy consumption. Developing renewable energy sources leads to the diversification of the energy balance, and conserving natural resources prevents their depletion. Creating green jobs stimulates economic growth, while improving the quality of life enhances the environment.

Existing research on the green economy covers various aspects of this field. Russian economists R.A. Kirillova, N.A. Larionova, and E.V. Sukhareva, in their article "Green Economy as a Global Model of Sustainable Economic Development in the XXI Century," present the concept of

the green economy as a global model for sustainable development. Authors V.A. Chereshev, N.L. Nikulina, and A.I. Boyarskikh, in their work "Theoretical Foundations for the Study of the Green Economy," explore the theoretical foundations of the green economy. In their article "Evolution of Research: From Sustainable Development to the Green Economy," the same authors examine the transition from sustainable development to the green economy.

A.A. Atroshchenko, O.N. Danilchenko, and N.V. Dubrovskaya, in their article "Green Economy and Environmental Quality Management Tools: An Analysis Using the Example of the Republic of Belarus," analyze the essence of environmental quality management tools in the context of the green economy [12]. According to Russian researcher K. Berdenova, the green economy is a trend in economic science that has emerged over the past twenty years, where the economy is considered a part of the natural environment it resides in. T.M. Kozhevnikova and S.G. Ter-Akopov view the green economy as a new vector for sustainable development that contributes to improving human well-being and ensuring social justice. B.N. Porfiryev defines the green economy as a set of economic activities and results that, along with modernization and increasing production efficiency, help improve the quality of life and the environment.

V.S. Bochko's approach considers the green economy as a process that ensures the transition of all productions to technologies that create environmentally friendly industrial and food products [8]. R. Pernik's works describe the green economy as controlling and reducing pollutant and greenhouse gas emissions, monitoring and predicting climate change, and developing and using technologies and equipment for energy and resource conservation and renewable energy. Y.V. Bulgakova and S.D. Nabok view the green economy as a system of comprehensive measures aimed at transitioning to a resource-saving, low-carbon economy that improves human well-being in the long term. According to N.A. Vukovich, the green economy is a sustainable growth economy dominated by environmentally friendly sectors using alternative energy and resource-saving technologies, actively promoted by the state's ecological-economic policy to preserve human civilization on Earth. V.M. Bautin defines the green economy as an economy with low carbon emissions, effective use of renewable resources, and serving the interests of the entire society.

The conclusions of existing research indicate that there are many studies on the green economy, covering various aspects such as concept, theoretical foundations, management tools, and implementation models. The results of these studies can be used to develop and implement green economy policies. The recommendations highlight the need to continue research on the green economy to address the challenges countries face during the transition to a green economy.

It should be noted that additional research is essential for a more comprehensive understanding of the emerging green economy in Uzbekistan. For instance, the World Bank's report "Green Economy for Uzbekistan: Sustainable Development Pathways" (2019) and other works assess the current state of green economy efforts and provide recommendations for its development.

Significant achievements have been made in the field of green economy research in Uzbekistan over the past five years. Authors R.N. Karimov, A.A. Abdullayev, and N.N. Juraev, in their monograph "Green Economy in Uzbekistan: Opportunities and Prospects" (2019), analyze the opportunities for developing a green economy in the country and provide recommendations for implementing state policy in this area. T.A. Azimov, D.A. Musaev, and Sh.M. Mirzaev [2,3], in their monographic research "Transition to a Green Economy in Uzbekistan: Problems and Solutions" (2020), study the challenges of transitioning to a green economy and propose solutions. N.N. Juraev and Sh.M. Mirzaev, in their article "Green Economy as a Factor of Sustainable Development in Uzbekistan" (2021), analyze the impact of the green economy on the country's sustainable development [14].

Additionally, the potential for developing renewable energy sources in Uzbekistan is assessed in the article "Development Potential of Renewable Energy Sources in Uzbekistan" (2022) by Kh.Kh. Khakimov, R.R. Rakhmatov, and F.F. Faiziyev [20]. The article "Problems and Prospects of Developing the Green Economy in Uzbekistan" (2023) by T.A. Azimov and D.A. Musaev analyzes the challenges and prospects of developing the green economy in the country [4].

The cited scientific articles cover various aspects of forming a green economy in Uzbekistan. For example, the article "The Current State and Development Trends of the Green Economy in Uzbekistan" (2019) by R.N. Karimov, A.A. Abdullaev, and N.N. Juraev analyzes the current state and development trends of the green economy, while the article "The Role of the State in Developing the Green Economy in Uzbekistan" (2020) by T.A. Azimov, D.A. Musaev, and Sh.M. Mirzaev discusses the role of the state in this process. The article "Financial Mechanisms to Support the Green Economy in Uzbekistan" (2021) by N.N. Juraev and Sh.M. Mirzaev focuses on issues related to the financial support of the green economy. The article "Innovations in Uzbekistan's Green Economy" (2022) by Kh.Kh. Khakimov, R.R. Rakhmatov, and F.F. Faiziyev examines the importance of innovations in the green economy. The article "International Cooperation in the Field of Green Economy" (2023) by T.A. Azimov and D.A. Musaev discusses issues of international cooperation in this field [15].

A.V. Vakabov and Sh.Kh. Khajibakiev emphasize that the term "green economy" cannot replace the concept of sustainable development and is a crucial condition for achieving sustainable development. The existing "brown economy" is characterized by environmental degradation (climate change, warming, loss of biodiversity), depletion of natural capital, increasing poverty, scarcity of clean water, food, energy, and changes in economic and social relations between people. Due to these reasons, the world, including Uzbekistan, needs to transition from a "brown economy" to a "green economy." The formation of the "green economy" ensures "green growth" and helps implement a sustainable development strategy [16].

A.T. Shermukhamedov, in his article "Development of the Green Economy in Uzbekistan," analyzes the transition process to a green economic growth model in Uzbekistan, noting that local and foreign analysts agree on the importance of demand for "green" products in determining the depth and speed of greening the economy [23]. D.Sh. Yavmutov, in his article "Priority Directions of the Policy for Transition to a Green Economy in Uzbekistan," studies the objective necessity of transitioning to a green economy for sustainable economic development and examines the priority directions of this policy from a structural perspective.

B.B. Alimov, in his article "Strategy for the Development of the Green Economy in Uzbekistan," highlights the definitions of the term "green economy" provided by global and local scientists and analyzes the importance and relevance of the "Green Economy" in Uzbekistan from the perspective of recent government regulatory documents. The article also mentions the integration of the new economy into the country's education system and its growing development trends.

A.I. Turaeva, in her article "Problems of Transition to the 'Green' Economy in the Republic of Uzbekistan," analyzes the prospects of transitioning to a green economy and highlights the preservation and restoration of natural capital in various sectors as one of the main reasons for transitioning to a "green" economy. Sh.D. Khamdamov's research analyzes the impact of energy and metallurgy sectors, including the oil and gas industry and coal mines, on the environment and human health. Theoretical and practical scientific recommendations for improving energy efficiency and reducing the impact on the environment, particularly transitioning to alternative energy, have been developed.

It should be noted that additional research is essential for a more comprehensive understanding of the emerging green economy in Uzbekistan. For instance, the World Bank's report "Green Economy

for Uzbekistan: Sustainable Development Pathways" (2019) and other works assess the current state of green economy efforts and provide recommendations for its development.

Thus, research covers various aspects of the green economy in Uzbekistan, from analyzing the current state and challenges to developing recommendations and strategies for sustainable development.

Research Methods

To achieve the research objectives, modern methods such as document analysis, surveys, comparative analysis, modeling, and evaluation were utilized. These methods provided a comprehensive and objective understanding of green economy policies in the country.

Analysis and Results

In recent years, Uzbekistan has made significant strides in developing a green economy. One of the major achievements was the approval of the "Strategy for Transition to a Green Economy for 2019-2030" by the Republic of Uzbekistan in 2019 [1]. This strategy laid the foundation for future changes and the sustainable development of the country.

The "Strategy for Transition to a Green Economy for 2019-2030" outlines the goals and objectives for transitioning to a green economy. According to this strategy, from 2019 to 2030, Uzbekistan is taking significant steps towards sustainable development and reducing the negative impact on the environment. The main directions and focal points of this transition include the adoption of strategic documents such as the green economy transition strategy and the National Strategy for Environmental Protection, which encompass legislative and institutional changes. Specialized agencies and institutions are established to coordinate and implement measures in the field of environmental protection and sustainable development.

In the energy sector, renewable energy sources such as solar and wind energy are being introduced, along with the development of infrastructure to increase energy efficiency and reduce dependence on fossil fuels. In industry and agriculture, technologies that reduce harmful emissions and enhance environmental sustainability are being implemented, while environmentally friendly methods are being developed and applied in agriculture to conserve natural resources and increase productivity. In the transport sector and urban infrastructure, the promotion of public transport use and the development of electric vehicle infrastructure are being encouraged, and waste management and water supply systems are being improved to enhance their environmental cleanliness and efficiency.

Financing and international cooperation play a crucial role in attracting investments for green economy projects, exchanging experiences with international organizations such as the UN, World Bank, and others, and securing financial support. Raising the level of environmental education and public awareness about the importance of environmental protection, as well as engaging the public and businesses in green economy initiatives, are important aspects. These measures aim to create conditions for sustainable economic growth, reduce environmental burdens, and improve the quality of life for the population of Uzbekistan.

Creating an institutional base is another crucial step. An interdepartmental commission on the green economy and a coordinating council for the development of renewable energy sources have been established. These bodies coordinate the efforts of various ministries and agencies, ensuring a holistic approach to implementing the strategy. The implementation of specific projects, such as the construction of solar and wind power plants, increasing energy efficiency, and introducing "green" technologies in agriculture, indicates that Uzbekistan is moving in the right direction.

However, the country faces several challenges and difficulties. Insufficient financing remains one of the main obstacles to the successful implementation of the green economy. Limited budget

funds and inadequate attraction of private investments make it difficult to expand projects and introduce innovative technologies. Low levels of public and business awareness also pose significant barriers. According to the OECD report (2013), raising awareness about the green economy is a key lever for the successful implementation of the strategy. The World Bank's report "Inclusive Green Growth: The Path to Sustainable Development" emphasizes the need to develop infrastructure for renewable energy and "green" technologies for a successful transition to a green economy.

Legislative shortcomings, including gaps in regulatory documents and the need for alignment with international standards, also require attention. Addressing these issues through increased financing from public and private investments and creating "green" funds is deemed appropriate. Raising awareness through information campaigns and educational programs is also necessary. Developing infrastructure for renewable energy and "green" technologies should be a priority. Improving legislation involves addressing deficiencies highlighted in the UN report "Transforming our world: the 2030 Agenda for Sustainable Development" and aligning with international standards.

In conclusion, Uzbekistan is on the path to developing a green economy. However, several challenges must be overcome to achieve the set goals and ensure the country's sustainable development. Our research revealed similarities and differences in green economy policies between Uzbekistan and other countries. Many countries face similar problems such as insufficient financing, legislative shortcomings, low public awareness, and inadequate coordination among government agencies. For example, according to the World Bank, Central Asian countries, including Kazakhstan and Kyrgyzstan, face similar issues. Similar tools are widely used to implement green economy policies: promoting the development of renewable energy sources (RES), increasing energy efficiency, developing green construction, and reducing environmental pollution.

For instance, projects to develop solar and wind energy in Germany are actively supported, significantly helping to reduce CO₂ emissions. However, the degree of development of green economy policies varies significantly across countries. While countries like Sweden and Denmark have achieved significant progress in transitioning to a green economy, countries like Uzbekistan are still in the early stages. For example, in Sweden, 54% of energy is produced from renewable sources, whereas in Uzbekistan, this figure is approximately 5% (Table 1).

Comparing our research results with previous studies in Uzbekistan shows that many problems and shortcomings remain relevant. For example, a 2018 study highlighted the lack of financial resources and low public awareness about the importance of the green economy. Our data supports these conclusions, emphasizing the need to improve information policy and educational programs. However, there are differences in the recommendations provided by various studies. For example, the Asian Development Bank (2020) study recommends focusing on developing renewable energy infrastructure, while our research emphasizes the importance of improving the legislative framework and coordination among government agencies.

Table 1: A cross-country analysis of green economy policy indicators [34]

Country	Share of renewable energy in energy	The main problems	Effective measures
Sweden	54%	High infrastructure costs	Promoting renewable energy
Germany	42%	Regulation of CO ₂ emissions	Development of solar and wind energy
Uzbekistan	5%	Inadequate funding, weak legislation	Initial steps in renewable energy

It should be noted that comparison of research results is complicated by differences in methodology. The use of different approaches and indicators makes it difficult to directly compare the data. In addition, the available information on the implementation of green economy policies varies by country. For example, EU countries publish detailed reports and statistics on this topic, while in Uzbekistan, information is limited and not always up-to-date.

The study of international experience allows us to come to the conclusion that it is necessary to take into account the best practices of other countries when improving the green economy policy in Uzbekistan. Regular research and monitoring help to assess the effectiveness of current policies, identify existing problems and ways to solve them. For example, we can look at the experience of the Netherlands in implementing systems for monitoring and reporting greenhouse gas emissions.

In order to achieve significant success in the field of green economy in Uzbekistan, it is necessary to conduct a comparative analysis with other countries using a single methodology. This allows us to identify the most effective approaches and adapt them to the conditions of Uzbekistan. In addition, it is necessary to regularly monitor the implementation of green economy policy and develop comprehensive programs for its improvement, including legislative initiatives, educational programs and measures to increase funding.

Conclusions and recommendations

Conclusions were formed as a result of research on the topic of the article. Uzbekistan has been making progress in the development of green economy policy in recent years. However, there are a number of problems that prevent the effective implementation of this policy. These problems include:

- a) insufficient financing in the context of a limited budget;
- b) low access to credit resources;
- c) lack of development of comprehensive laws on green economy and contradictions in legislation;
- g) low awareness of the population about the green economy; d) lack of a single coordinating body among state agencies, lack of coordination of actions of various ministries and agencies.

Based on these conclusions, the following recommendations were developed:

1. Increase funding for green economy policy - allocate more budget funds, create special funds, encourage investment, adopt a comprehensive law on green economy to improve legislation in the field of green economy, eliminate conflicts in legislation, raise public awareness of the principles and benefits of green economy increase, conduct information campaigns, include green economy issues in educational programs, strengthen coordination between government agencies responsible for the implementation of green economy policy, create a single coordinating body, improve inter-agency cooperation.

2. Implementation of these recommendations will help increase the efficiency of the green economy policy, accelerate the transition to a green economy, improve environmental indicators and improve the quality of life of the population.

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