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FEATURES OF DEVELOPING "GREEN" FINANCING IN THE ECONOMY

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Abstract
This article examines the interrelationship of the concepts of ecology and the "green" economy, "green" space, and "green" financing, which have become urgent problems of our time. In recent years, climate change, the ecological crisis, and the limitation of natural resources have posed new challenges to the global financial system. The concept of "green" financing is being formed as a way to solve these problems. Green financing is a set of financial strategies aimed at ensuring sustainable economic growth in an environmentally safe manner.

Keywords: Green economy, green financing, ecology, energy, renewable energy, water supply, solar panels and solar collectors, environmental problems.

Annotatsiya:
Ushbu maqolada bugungi davrning dolzarb muammosiga aylangan ekologiya va “yashil” iqtisodiyot, “yashil” makon, “yashil” moliyalashtirish tushunchalarining o’zaro bog’liqligi korib chiqilgan. So‘nggi yillarda iqlim o‘zgarishi, ekologik inqiroz va tabiiy resurslarning cheklanganligi global moliyaviy tizim oldiga yangi muammolarni qo‘ymoqda. Ushbu muammolarni hal etish yo‘li sifatida “yashil” moliyalashtirish konsepsiyasi shakllanmoqda. Yashil moliyalashtirish barqaror iqtisodiy o‘sishni ekologik jihatdan xavfsiz tarzda ta’minlashga qaratilgan moliyaviy strategiyalar yig‘indisidir.

Kalit so‘zlar: yashil iqtisodiyot, yashil moliyalashtirish, ekologiya, energiya, qayta tiklanadigan energiya, suv ta’minoti, quyosh panellari va geliokollektorlar,ekologik muammolar.

Аннотация:
В данной статье рассматривается взаимосвязь понятий экологии и «зеленой» экономики, «зеленого» пространства и «зеленого» финансирования, которые стали актуальными проблемами нашего времени. В последние годы изменение климата, экологический кризис и ограниченность природных ресурсов поставили перед глобальной финансовой системой новые вызовы. Концепция «зеленого» финансирования формируется как способ решения этих проблем. Зеленое финансирование — это комплекс финансовых стратегий, направленных на обеспечение устойчивого экономического роста экологически безопасным способом.

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Ключевые слова: зеленая экономика, зеленое финансирование, экология, энергетика, возобновляемая энергия, водоснабжение, солнечные панели и солнечные коллекторы, экологические проблемы.

Introduction

In the modern world, environmental degradation and climate change are pressing issues. The need for large investments to achieve sustainable development goals has been noted: for example, according to the Sustainable Development Network, $7 trillion is needed annually to implement the SDGs, while according to UNCTAD, about $4 trillion is missing annually[1]. In this regard, “green” financing is being seen as a set of new financial mechanisms. Studies have shown that green finance plays an important role in solving climate problems and achieving sustainable development by financing environmental projects. The structure of green finance has also been given importance in the international community: in 2015, almost 200 countries agreed to expand green financing within the framework of the Paris Agreement, and since 2007, the global green bond market has reached $521 billion. This shows that globally, "green" financing has become one of the main tools for building a sustainable economy. Green finance is based on the principles of sustainable development and ecological economics. According to the theory of sustainable development (Brundtland Commission), development is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs,” and it seeks to reconcile economic growth, social inclusion, and environmental protection[2].

The concept of green finance supports sustainable development: it relies on the inextricable link between economic strategies and new technologies and climate-friendly technologies. Ecological economics views the economy as part of the environment; it emphasizes the optimal use of limited resources and the consideration of environmental externalities. For example, the transition to an ecologically clean economy requires the redirection of capital flows to renewable sectors and the pressure to reduce emissions.

Methods

The study used document analysis, statistical analysis, and expert interviews to collect data on financing and improving the green economy. Document analysis analyzed the legislative framework and financial mechanisms, statistical data helped identify economic trends, and interviews provided a summary of expert opinions.

Results and Discussion

In Uzbekistan, developing a green economy is crucial to addressing the country’s environmental challenges and ensuring long-term economic stability. One of the key challenges facing Uzbekistan is the depletion of natural resources and environmental degradation. The country’s reliance on natural resource extraction and intensive farming practices has led to water depletion, soil erosion, and air and water pollution.

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These environmental challenges not only threaten human health and well-being, but also undermine the long-term sustainability of the country's economy. In addition to environmental challenges, Uzbekistan is also vulnerable to the impacts of climate change. The country is already experiencing changes in temperature and precipitation levels, which are affecting agricultural productivity, water availability, and the frequency of natural disasters. These climate-related impacts pose serious threats to the country's economy and food security, and require urgent measures to mitigate and adapt to their consequences. In response to these challenges, Uzbekistan has recognized the need to transition to a green economy in order to promote sustainable development and address environmental and climate-related risks. The government has taken a number of measures to promote the development of a green economy, including the adoption of national strategies and policies that prioritize environmental protection and sustainable development. One of the main trends in the development of a green economy in Uzbekistan is the use of renewable energy sources and increasing energy efficiency. The country has a certain potential for the development of renewable energy sources, such as solar, wind and hydropower, which will help reduce the country's dependence on fossil fuels and reduce greenhouse gas emissions. The government has introduced incentive and support mechanisms aimed at introducing renewable energy technologies and increasing energy efficiency in various sectors of the economy. Another important trend in the development of a green economy in Uzbekistan is promoting sustainable management of agriculture and natural resources. In order to increase the sustainability of agricultural production and reduce environmental degradation, the country is implementing measures to improve the use of water resources, conserve soil and protect biodiversity. These efforts are aimed at promoting sustainable land use practices and reducing the negative impact of intensive agriculture on the environment. In addition, Uzbekistan is also focusing on promoting green innovation and technology transfer as a means of ensuring economic growth and environmental sustainability. The country is investing in research and development in green technologies, such as clean energy, sustainable agriculture and waste management, to stimulate innovation and create new opportunities for economic diversification and job creation. On May 17, 2023, an agreement was signed in Samarkand between the European Union, the French Development Agency (FTA) and the Government of Uzbekistan to support and finance Uzbekistan's strategy for transition to a green economy by 2030. In our country, the Ministry of Economic Development and Poverty Reduction has been designated as the competent authority for the development of the green economy and the implementation of the principles of green growth, as well as for the coordination of activities to reduce greenhouse gas emissions. The Ministry of Energy is the authorized body for the development of "green" energy, in particular, the widespread introduction of renewable energy sources and hydrogen energy, as well as for increasing energy efficiency and reducing the energy intensity of manufactured products. Starting from June 1, 2023, a system of "green certificates" will be introduced based on the requirements for limiting the impact on the environment and the environment in the production process[7]. In

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2022–2026, an infrastructure for state regulation of greenhouse gas emissions will be gradually created, which provides for the following:

– state accounting of greenhouse gas emissions and maintaining a state cadastre of them;

– setting targets for reducing greenhouse gas emissions in economic sectors;

– state support for measures to reduce greenhouse gas emissions.

In the context of current environmental problems, it is necessary, first of all, to understand the environmental problems that Uzbekistan is facing. The country has experienced significant environmental degradation due to inefficient resource management and polluting industries. Problems such as air and water pollution, deforestation, and soil erosion have become urgent issues and require urgent action. Secondly, rapid deforestation leads to soil erosion and habitat destruction, desertification, and leads to a significant loss of vast areas and rich forest resources. In addition, unregulated hunting and poaching pose a threat to rare and endangered animals, and habitat destruction further exacerbates the decline in biodiversity.

Industrial emissions, outdated technologies, and dependence on fossil fuels are the main causes of Uzbekistan's air pollution. This poses serious health risks, especially in cities, leading to respiratory and cardiovascular diseases. Uzbekistan relies heavily on the waters of the Amu Darya and Syrdarya rivers for irrigation and drinking purposes. Overuse and misuse of water resources have led to the drying up of rivers, leading to water shortages. Uzbekistan is highly vulnerable to the impacts of climate change, including rising temperatures, extreme weather events, and reduced precipitation. These changes will affect agriculture, water supply, human health, and overall economic stability. To address these environmental challenges, Uzbekistan needs to implement sustainable initiatives and policies, focusing on:

Strengthening environmental legislation:

–implementing stricter laws and regulations to prevent deforestation and combat pollution;

–implementing penalties for illegal hunting and wildlife trafficking;

–encourage the use of organic farming techniques and reduce dependence on chemical pesticides;

–implement water-efficient irrigation systems to reduce water scarcity;

–create recycling programs and waste separation initiatives in urban and rural areas to implement effective waste management;

–encourage public participation in waste reduction and recycling efforts;

–invest in renewable energy infrastructure to expand renewable energy sources and reduce air pollution;

–develop the use of solar and wind energy in residential and industrial sectors.

By prioritizing these measures and working with international organizations, Uzbekistan can improve its environmental status, conserve its natural resources, and secure the well-being of its citizens for future generations. In 2020, the World Bank published a 12-section Climate Change Legislation Framework, based on an analysis of

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climate-related regulatory and legal acts in more than 30 countries. This framework, along with an international toolkit and resource materials, can be useful for Uzbekistan in the process of developing its own climate change legislation. In recent years, large-scale measures have been implemented at the government and enterprise levels to expand drinking water and wastewater services. According to data, a total of 5,870 water and sanitation facilities were built or reconstructed in 2017–2023, 31,837.5 km of drinking water and sewage networks were laid, improving the drinking water supply of 11.8 million people, and providing centralized drinking water to 6.6 million citizens for the first time.

In 2024, 454 infrastructure projects were implemented by "O'zsuvtaminot AJ", within which 1,817 km of drinking water and 294 km of sewage networks were laid, and 243 water/wastewater facilities were built or reconstructed. As a result, the level of centralized drinking water supply of the population increased from 77.4% to 80.9% in 2024.

According to statistical data for July 2025, the share of the population provided with centralized drinking water in the country reached 81.5%.

At the same time, the level of supply by region remains inconsistent: for example, in 2025, it was reported that Tashkent city was the lowest with an indicator of 98.4%, and Kashkadarya region was only 61.2%.

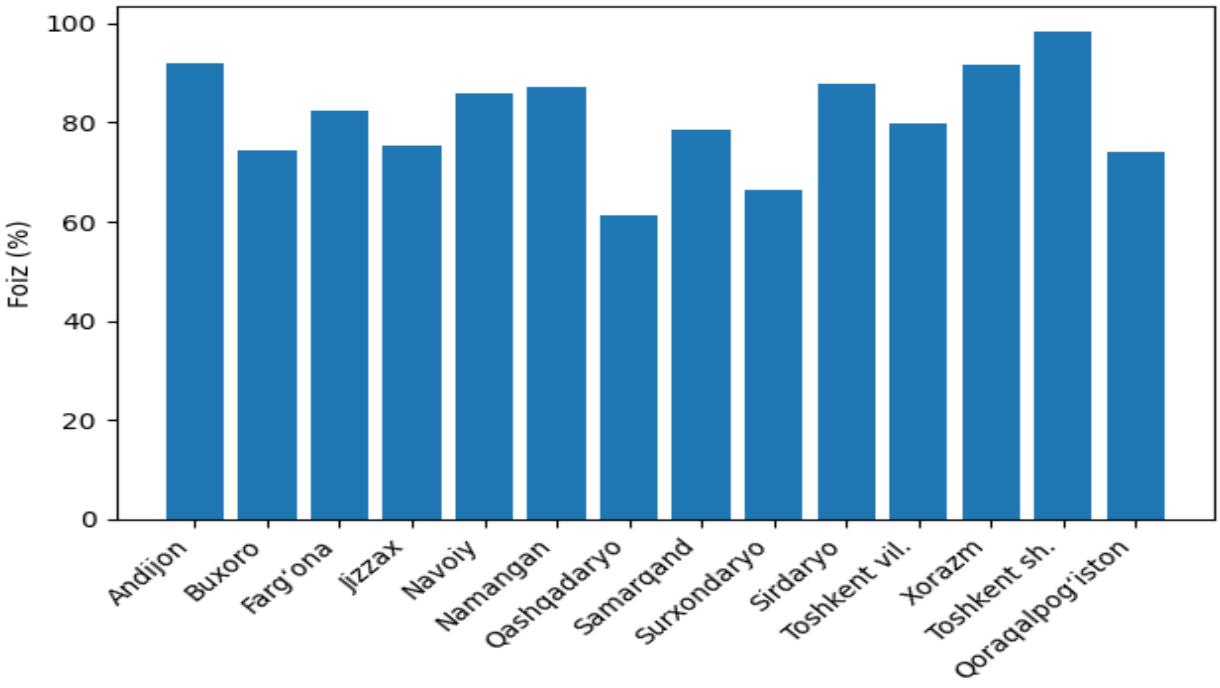

Figure 1. Level of drinking water supply in regions by 2025

Histogram analysis shows that the level of indicators is not the same across regions, and there are significant differences between them. The highest result falls on the city of Tashkent, where the indicator is 98.4 percent. This is explained by the developed

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infrastructure in the capital, the level of technological innovation and high investment activity. High indicators are also recorded in Andijan (92 percent) and Khorezm (91.6 percent) regions, which reflect the effectiveness of systemic reforms implemented in these regions in recent years. The group of moderately high indicators includes Namangan (87 percent), Syrdarya (87.7 percent), Navoi (85.8 percent), Fergana (82.5 percent) and Tashkent region (79.9 percent). The stable formation of indicators in these regions indicates the consistent modernization processes in existing production and social infrastructure facilities. In particular, the introduction of energy-efficient technologies and the rational use of resources appear to be important factors in these results.

Relatively low indicators are observed in the regions of Samarkand (78.6 percent), Jizzakh (75.3 percent), Bukhara (74.3 percent), the Republic of Karakalpakstan (74.2 percent) and Surkhandarya (66.5 percent). The lowest result is in the Kashkadarya region, where the indicator is 61.2 percent. This situation can be explained by the outdated technical infrastructure in these regions, limited financial resources and relatively low investment activity. In general, the results of the histogram show that the level of development is not uniform between regions, justifying the need to strengthen targeted programs, attract investments and widely introduce energy-saving and innovative technologies in regions with low indicators. Reducing these differences is important for ensuring sustainable regional development.

Conclusion

This research work provides a comprehensive analysis of the theoretical foundations, practical mechanisms of "green" financing, and directions for its development in the economy of Uzbekistan based on global and national experience. The results of the study showed that in the context of climate change, resource scarcity, and increasing environmental pressure, traditional models of financing economic growth are losing their effectiveness, and this situation makes the transition to "green" financing not an alternative, but a necessary strategic choice. The study found that in world practice, "green" financing is being successfully implemented through green bonds, environmental lending, public-private partnerships, and the participation of international financial institutions. These mechanisms serve not only to finance environmental projects, but also to ensure long-term economic stability and competitiveness. However, it was found that the high effectiveness of these mechanisms is directly related to a strong institutional environment, clear classification criteria, and transparent monitoring systems.

An analysis of the experience of Uzbekistan has shown that the legal and strategic framework for “green” financing has been created in the country, but their practical effectiveness has not yet been fully realized. Although state initiatives and regulatory and legal acts have created an important starting point for “green” projects, the insufficient development of market mechanisms, limited financial instruments and low private sector activity continue to limit the effectiveness of the system.

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The study substantiated that the sectors of renewable energy, water supply and energy efficiency are the areas with the highest economic and environmental efficiency in the implementation of “green” financing for Uzbekistan. It is precisely in these areas that the possibility of ensuring environmental sustainability through targeted and comprehensive allocation of financial resources, while transitioning to a qualitatively new model of economic growth, has been scientifically substantiated.

In general, the conclusions and recommendations are of significant theoretical and practical importance in improving the "green" financing system in Uzbekistan, ensuring a balance between environmental and economic interests, and achieving the sustainable development goals set by 2030.

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