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DEVELOPMENT TRENDS AND CURRENT STATE ANALYSIS OF GREEN
FINANCING IN OUR COUNTRY

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Abstract: *This article examines the development trends, current state, and future prospects of green economy and green financing mechanisms in Uzbekistan. It analyzes the implementation of green budgeting principles, the scale of climate adaptation and mitigation financing, and the environmental impact of public budget expenditures. The study evaluates the dynamics of climate-related expenditures for 2020-2024 and their share in GDP and total government spending based on statistical data. The role of green bonds, international grants, and loans, as well as Uzbekistan's priorities in developing a green finance market, are discussed in detail. The article concludes that strengthening the institutional framework of green finance, expanding private sector involvement, and integrating ESG principles are essential for ensuring long-term economic and environmental sustainability.*

Keywords: *green economy, green finance, green budgeting, climate change, green bonds, ESG, sustainable development, state budget, climate expenditures, renewable energy*

Annotatsiya: *Ushbu maqolada O'zbekistonda yashil iqtisodiyot va yashil moliyalashtirish mexanizmlarining rivojlanish tendensiyalari, mavjud holati va istiqbollari tahlil qilingan. Yashil budjetlashtirish tamoyillarining joriy etilishi, iqlimga moslashish va mitigatsiya choralarini moliyalashtirish hajmi, shuningdek, davlat budjeti xarajatlarining ekologik ta'siri baholangan. Tadqiqotda 2020-2024 yillardagi iqlimga oid xarajatlarning dinamikasi, ularning YaIM va umumiy davlat xarajatlari tarkibidagi o'rni statistik ma'lumotlar asosida ko'rib chiqildi. Yashil obligatsiyalar, xalqaro grantlar va kreditlarning roli, shuningdek, O'zbekistonning yashil moliya bozorini rivojlantirishdagi ustuvor vazifalar ochib berilgan. Xulosa sifatida, yashil moliyalashtirish tizimini institutsional mustahkamlash, xususiy sektor ishtirokini kengaytirish va ESG tamoyillarini joriy etish kelgusida iqtisodiy- ekologik barqarorlikni ta'minlashda muhim omil ekanligi ta'kidlanadi.*

Kalit so'zlar: *yashil iqtisodiyot, yashil moliyalashtirish, yashil budjetlashtirish, iqlim o'zgarishi, yashil obligatsiyalar, ESG, barqaror rivojlanish, davlat budjeti, iqlim xarajatlari, qayta tiklanuvchi energiya*

Аннотация: *В данной статье изучены тенденции развития, современное состояние и перспективы механизмов зеленой экономики и зеленого финансирования в Узбекистане. Проведен анализ внедрения принципов «зеленого»*

бюджетирования, объёмов финансирования адаптационных и смягчающих мер по изменению климата, а также экологического воздействия государственных расходов. На основе статистических данных рассмотрена динамика климатических расходов за 2020-2024 годы, их доля в ВВП и общем объёме бюджета. Раскрыта роль зеленых облигаций, международных грантов и кредитов, а также приоритетные задачи Узбекистана в развитии рынка зеленых финансов. В заключение отмечается, что укрепление институциональной базы, расширение участия частного сектора и внедрение ESG-принципов являются ключевыми факторами обеспечения долгосрочной экономической и экологической устойчивости.

Ключевые слова: *зеленая экономика, зеленое финансирование, зеленое бюджетирование, изменение климата, зеленые облигации, ESG, устойчивое развитие, государственный бюджет, климатические расходы, возобновляемая энергия*

INTRODUCTION

In Uzbekistan, the development of a green economy and green financing instruments is emerging as one of the strategic priorities of state policy. The regulatory and institutional foundations of this sector are being gradually improved and aligned with international standards and sustainable development criteria. In this process, strengthening the mechanisms for implementing adopted legal documents, expanding private sector participation, and diversifying financial instruments play an important role in ensuring economic and environmental sustainability.

In recent years, ecological sustainability, the transition to a low-carbon economy, and the development of green infrastructure have become global priorities. In this context, green finance has emerged as one of the main drivers, as financing economic activities based on environmental safety principles plays a significant role in ensuring sustainable development in countries.

Uzbekistan has also implemented significant reforms to introduce green finance mechanisms, establish the necessary regulatory frameworks, and align them with international standards. The relevance of the topic lies in the need for sustainable financing instruments to reduce environmental problems, improve energy efficiency, and expand the use of renewable energy sources in the country.

Methods and methodology. The study of development trends and the current state of green financing in our country is based on a comprehensive and systematic scientific approach. Green financing is considered as an integral component of sustainable economic development, aimed at mobilizing financial resources for environmentally friendly projects, energy efficiency, renewable energy, and climate-resilient infrastructure. In this context, the research focuses on identifying key trends, institutional frameworks, and financial instruments that shape the national green finance system.

The methodological foundation of the research relies on a systemic and integrative approach, which allows green financing to be analyzed as a complex interaction between financial institutions, government policy, environmental objectives, and market mechanisms. This approach ensures a holistic assessment of the current state of green finance and its role in supporting sustainable development goals at the national level.

In terms of research methods, analytical and descriptive methods are used to examine the structure, dynamics, and composition of green financial flows, including green bonds, sustainable banking instruments, and climate-related investment programs. Statistical analysis is applied to evaluate trends in green investments, financing volumes, and sectoral distribution over time. Additionally, comparative analysis is employed to assess national green financing practices in relation to international experience, allowing the identification of gaps and best practices. Where applicable, econometric and forecasting methods are utilized to analyze the relationship between green financing indicators and macroeconomic or environmental performance, as well as to assess future development prospects.

Literature review. The literature review demonstrates that green financing has been widely examined in international academic research, policy reports, and institutional studies. Publications by international organizations such as the World Bank, OECD, UNEP, and IMF provide a conceptual framework for green finance, highlighting its role in climate mitigation, sustainable investment, and financial system resilience. Academic studies emphasize the importance of regulatory frameworks, risk assessment, and incentive mechanisms in promoting green financial markets. At the national level, research on green financing focuses on the formation of legal and institutional foundations, the role of the banking sector, and the integration of environmental criteria into investment decision-making.

National policy documents, including strategies on sustainable development, climate policy, and financial sector reform, form an essential part of the literature base. These sources underline the growing importance of green financing in supporting the transition to a low-carbon and resource-efficient economy. Overall, the reviewed literature provides both theoretical insights and practical guidance, which serve as a basis for analyzing current trends and developing recommendations to strengthen the green financing system in our country.

Results and discussion. National strategies aimed at implementing climate policy comprise a set of systematic and comprehensive measures focused on ensuring sustainable development, rational and efficient use of natural resources, consistent reduction of greenhouse gas emissions, and strengthening environmental security. These strategies prioritize the widespread adoption of renewable energy sources in the energy sector, the use of environmentally friendly and low-carbon technologies in industrial production, the development of resource-efficient agro-technical solutions

in agriculture, and the enhancement of environmental awareness among the population.

Climate-related risks and threats have significant negative impacts on key areas such as economic growth, poverty reduction, environmental sustainability, and food security. Therefore, Uzbekistan is placing particular emphasis on strengthening adaptation and mitigation measures to alleviate the consequences of climate change, accelerate the transition to a “green” economy, and support an inclusive and sustainable development model. Between December 2021 and September 2024, the regulatory basis necessary for the phased financial support of the transition to a green economy was created, along with institutional mechanisms for its practical implementation.

The trial results of the 2022 budget execution were published in the “Budget for Citizens” and presented to Parliament and the public. Subsequently, climate budget tagging was integrated into the budget preparation process, enabling the identification and assessment of climate-related expenditures in the 2024 budget. In 2023, UNDP and FTA developed a methodology for the “Green Classification of Public Budget Expenditures.” This methodology evaluates the impact of public spending on climate and the environment and assesses compliance with green budgeting principles [5]. Under this approach, measures with positive or negative impacts on climate change and the environment are identified and classified into three main groups: climate change mitigation, climate adaptation, and other environmental impacts. Each group is evaluated according to its positive or negative effect. Classification based on green budgeting principles is a logical extension of categorizing expenditures by their climate impact. A phased approach is proposed for implementing and applying this classification, particularly in cases where the direct environmental impact of budget lines cannot be determined and additional data are required. [6]

Green budgeting consists of two main stages and serves as an institutional mechanism for planning public finance based on ecological sustainability principles. In the first stage, budget expenditures are systematically evaluated according to ecological and climate priorities-such as reducing greenhouse gas emissions, strengthening climate resilience, ensuring sustainable water use, improving natural resource efficiency, gradually introducing circular economy principles, reducing pollution levels, preserving biodiversity, and restoring natural ecosystems.

In the second stage, the actual ecological and climate impact of expenditures is assessed. Based on this assessment, expenditures are categorized into:

- those with a positive impact supporting one or more climate-environmental goals;
- those with mixed impact (potentially positive in some areas but possibly negative in others);
- and those with negative impacts contrary to environmental and climate sustainability.

This classification helps increase the ecological efficiency of financial flows, clarify the green share of the budget, and align public finance with long-term sustainable development strategies.

If the environmental impact of specific budget lines cannot be directly assessed, supplementary information is used. As Uzbekistan expands renewable energy use, enhances resource efficiency across the economy, and improves resilience to climate-related natural disasters, public expenditures directed toward implementing approved measures are increasing. According to climate budget tagging data, 11.2% (35,060.1 billion UZS) of total expenditures planned for 2024 are climate-related [6].

However, according to UNDP estimates, more than USD 5.8 billion is required for climate-change mitigation, and the total financial need for climate adaptation measures by 2030-covering five sectors (water, agriculture, healthcare, emergency response, and buildings) and three regional adaptation plans (Karakalpakstan, Bukhara, and Khorezm)-amounts to USD 18 billion. The state budget is expected to allocate approximately USD 8 billion for adaptation measures by 2030, while an additional USD 10 billion must be mobilized in line with the Financial and Investment Strategy developed under a UNDP project and financed by the Green Climate Fund under its Readiness Programme [6].

To achieve climate and development goals, Uzbekistan must attract additional funding sources, especially from the private sector. Besides strengthening and deepening its domestic capital market, the country can use green financial instruments-particularly green bonds-to finance key components of the green transition. There is potential to expand the pool of potential green bond issuers and to diversify the available financial instruments. Uzbekistan can build on its initial experience with three thematic bond issuances, improve conditions for corporate issuances, remove legislative barriers for subnational governments, and utilize domestic and international demand for Islamic green financial instruments such as sukuk.

As Uzbekistan progresses toward financing its gradual transition to a green economy, it is expected to gain several strategic advantages. Thematic bonds represent a modern form of sovereign debt instruments, providing investors with regular coupon payments prior to maturity.

In the future, Uzbekistan aims to further refine its national green taxonomy and align it with long-term climate policy-particularly with goals to approach net-zero emissions and implement a low-carbon development strategy. Strengthening corporate disclosure mechanisms, ensuring transparency of sustainability-related information, and introducing reliability requirements for reporting have become urgent priorities.

Improving the assessment of the economic impact of green financial instruments is essential. This includes measuring their contribution to creating “green” jobs using specialized indices and composite indicators. The efficiency indicators of each green

instrument-green bonds, grants, subsidies, concessional loans, and other environmentally oriented financial tools-should be calculated separately and analyzed sector-by-sector. This approach enables a deeper understanding of the real impact of green finance on the national economy.

Although Uzbekistan's green financing system is not yet fully formed, institutional and regulatory reforms conducted in recent years have resulted in major advancements. As state priorities, the government is implementing green economy principles, expanding renewable energy sources, increasing energy efficiency, and establishing mechanisms to finance ecological and low-carbon projects in cooperation with international financial institutions:

1. A long-term decarbonization strategy for 2021-2050 is being developed.
2. Presidential Decree PQ-4477 (October 4, 2019) approved the "Green Economy Transition Strategy," outlining a strategic roadmap for sustainable economic growth.
3. Presidential Decree PQ-436 (December 2, 2022) reinforced this strategy within the New Uzbekistan Development Strategy, establishing a goal to reduce greenhouse gas emissions per unit of GDP by 35% compared to 2010 levels by 2030.
4. Presidential Decree PQ-362 (August 11, 2023) mandated the development and implementation of the National Action Plan on Climate Change through the Presidential Council on Climate Change, including the implementation of the Second NDC.

Nevertheless, the domestic financial market still lacks sufficiently developed green bonds, bank loans, investment instruments, and environmentally oriented financial products. Strengthening ESG principles, enhancing financial institutions' environmental responsibility, and increasing private-sector participation are expected to significantly expand the potential of green financing in Uzbekistan.

National strategies are being developed in line with international environmental conventions, the Paris Agreement, and the UN Sustainable Development Goals. This alignment helps ensure a balance between economic growth and environmental sustainability, reduce the carbon footprint, manage climate risks, and improve the efficient use of natural resources.

Climate change negatively affects economic growth, poverty reduction, environmental and food security. Therefore, Uzbekistan is intensifying adaptation and mitigation measures, accelerating the transition to a green and inclusive economic model, and strengthening relevant policies. Between December 2021 and September 2024, the regulatory basis for financing the strategic goals of the green economy was created.

During the preparation of the 2024 budget, mechanisms to identify climate-related expenditures were introduced. The methodology for green classification of public budget expenditures, developed in 2023 by UNDP and FTA, assesses expenditures based on their environmental and climate impact.

The results of classifying state budget expenditures for 2023-2025 according to green budgeting principles show that the share of “A”-category expenditures decreased from 13.9% in 2023 to 10.2% in 2024, while the share of “D”-category expenditures increased from 83.2% to 86.7% (table 1).

From 2020 to 2024, climate-related budget expenditures declined from 14,878.9 billion UZS to 729.3 billion UZS. This decrease is attributed to the inflow of international grants, loans, and private investments, as well as the cyclical nature of projects, including construction and equipment procurement phases.

Table 1

Results of classifying state budget expenditures for 2023-2025 according to “green” budgeting principles, trillion UZS [3]

Categories	2023 Execution	%	2024 Execution	%	2025 Approved	%
Total	281.1	100	312.9	100	344.6	100
Category “A”	39.1	13.9	32.0	10.2	26.4	7.7
Category “B”	7.2	2.6	7.4	2.4	8.5	2.5
Category “C”	0.9	0.3	2.4	0.8	1.3	0.4
Category “D”	233.9	83.2	271.4	86.7	308.4	89.4

Nevertheless, climate-positive budget expenditures continued to show growth in absolute terms. The share of climate-positive expenditures in total public spending and GDP increased from 10.3% and 2.5% in 2020 to 11.1% and 3.0% in 2022. However, between 2022 and 2024, these indicators decreased by 0.2% and 0.05% and amounted to 729.34 billion UZS (table 2).

Table 2

Climate-related public budget expenditures of Uzbekistan for 2020-2024 [3]

Indicators	2020	2021	2022	2023	2024
Total state budget expenditures (billion UZS)	144,143.0	188,257.0	236,579.0	282,133.0	312,921.0
Climate protection expenditures (billion UZS)	14,878.9	16,809.8	26,302.4	753.7	729.3
GDP (billion UZS)	602,193.0	738,435.0	888,342.0	1,204,485.4	1,454,573.9
Climate protection expenditures (% of total state budget)	10.3	8.9	11.1	0.3	0.2
Climate protection expenditures (% of GDP)	2.5	2.3	3.0	0.06	0.05
Annual change in total state budget expenditures (%)	-	130.6	125.7	124.0	126.0
Climate-positive expenditures (annual change, %)	-	113.0	156.5	-	-

Public budget expenditures aimed at expanding the use of renewable energy sources, increasing resource efficiency, and enhancing the climate resilience of the economy are growing. In 2024, 35,060.1 billion UZS (11.2%) of total expenditures will be allocated to climate-related activities.

According to UNDP estimates, over USD 5.8 billion is required to finance climate change mitigation efforts, while the total financial need for climate adaptation by 2030 across five sectors (water, agriculture, healthcare, emergency response, and buildings) and three regional adaptation plans (Karakalpakstan, Bukhara, and Khorezm) amounts to USD 18 billion.

Approximately USD 8 billion is expected to be allocated from the state budget for climate adaptation measures by 2030, while an additional USD 10 billion must be mobilized according to the Financial and Investment Strategy prepared by UNDP and the Green Climate Fund.

Conclusions. Uzbekistan has several advantages in financing the transition to a green economy. Thematic sovereign bonds enable the government to meet debt obligations through regular coupon payments. In developing economies that are ineligible for official development assistance, corporate thematic bond issuance is becoming more prevalent. At the same time, in rule-of-law countries such as Uzbekistan, public-sector issuances account for more than half of total sovereign bond issuances [4].

In conclusion, although Uzbekistan's green financing system has not yet fully developed, significant progress has been achieved through reforms carried out in recent years.

The state has initiated the integration of "green economy" principles, the development of renewable energy sources, and the financing of environmentally oriented projects in cooperation with international financial institutions. However, the domestic financial market still lacks sufficiently advanced green bonds, green loans, and investment tools.

Strengthening the regulatory framework, increasing environmental responsibility within financial institutions, and expanding private sector involvement could substantially enhance Uzbekistan's green financing potential in the coming years.

Green financing practices and policy foundations in Uzbekistan continue to evolve steadily.

The country is developing important legal, financial, and institutional mechanisms to ensure environmentally sustainable development.

However, further improvements in market infrastructure, the adoption of standards, and strengthening the capacity of the financial sector remain necessary.

Uzbekistan has the potential to become a regional leader in the development of a green finance system, and reforms in this direction are expected to accelerate in the near future.

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