

## PRIORITY DIRECTIONS OF SUSTAINABLE DEVELOPMENT OF THE GREEN ECONOMY IN UZBEKISTAN

**Abdumalik Bektemirov**

Head of the Department of “Investment and Innovations”  
of SamIES,  
Doctor of Science, Professor



**Abstract:** *This article analyzes the processes of transition to a green economy in the Republic of Uzbekistan, its current state, development trends and strategic priorities. During the study, the reforms implemented to expand renewable energy sources, introduce resource-saving technologies, develop green financing mechanisms and ensure environmental sustainability were studied, problems and shortcomings in this process were identified, and proposals and recommendations were developed to eliminate them.*

**Keywords:** *green economy, sustainable development, renewable energy, green technologies, environmental management, resource efficiency, green financing, digital economy, ESG-investments, innovative strategy, environmental safety, carbon neutrality.*

In recent years, the acceleration of economic growth and industrialization processes on a global scale has had a negative impact on the environment. Climate change, depletion of natural resources, and increased waste are posing new economic and environmental challenges to humanity. In this regard, the concept of a “green economy” is recognized as one of the most effective ways to maintain ecological balance and ensure rational use of natural resources, along with economic development.

Another reason for its relevance is that Uzbekistan is one of the countries in Central Asia that is most affected by climate change. Environmental problems such as the drying up of the Aral Sea, desertification processes, air pollution, and water

scarcity make the transition to a green economy an economic necessity. Therefore, the implementation of the principles of a green economy is a factor in ensuring not only environmental, but also social and economic stability.

The study of trends and strategies for the sustainable development of a green economy is one of the most urgent issues today. In this regard, the studies conducted by international institutions and economists are noteworthy. Below we will get acquainted with and analyze the main ones.

In the Republic of Uzbekistan, the concept of a green economy has been formed as one of the priority areas of state policy. The Presidential Decree “On the Strategy for Transition to a Green Economy” (PF-4477), adopted on October 4, 2019, became the legal basis for fundamental reforms in this area. This document sets out specific goals for the introduction of environmentally friendly technologies in all sectors of the economy, the development of resource-efficient production, and the expansion of renewable energy sources in the period until 2030.

This Decree is the main regulatory and legal document that defines the strategic directions of the transition to a green economy in the Republic of Uzbekistan. It sets out the goals for 2030, including increasing energy efficiency, reducing emissions, expanding renewable energy sources, and ensuring environmental safety. This Decree raised the green economy to the level of state policy in the country and created a legal basis for directing investment projects in this direction [1].

The Resolution of the Cabinet of Ministers of the Republic of Uzbekistan “On the Program for the Development of Renewable Energy Sources until 2030” is an important document for modernizing the country’s energy system and reducing its carbon footprint. The program plans to gradually implement solar, wind, bioenergy, and hydropower projects. The resolution sets a goal of increasing the total share of renewable energy sources to 25 percent by 2020–2030. The document also includes specific financial mechanisms and areas of international cooperation to attract green investments [2].

The Asian Development Bank's 2023 report provides analytical data on renewable energy projects (solar and wind power plants, energy storage systems – BESS) implemented in Uzbekistan. The report analyzes the economic efficiency of green energy investments using the example of large PV (photovoltaic) projects implemented in Samarkand, Navoi and Bukhara regions. The ADB also provides strategic recommendations for the development of “green finance” for Uzbekistan [3].

An analytical publication prepared by the European Bank for Reconstruction and Development (EBRD) examines the process of transition to a green economy in Central Asian countries. It analyzes the practice of energy reforms, environmental policy financial instruments, and Green Finance Lines using the example of Uzbekistan. The EBRD pays special attention to supporting Uzbekistan in the implementation of sustainable energy solutions in the industry, transport and construction sectors within the framework of the “Green Transition Initiative” program [4].

The 2023 report of the Organization for Economic Cooperation and Development (OECD) presents a methodology for assessing the level of sustainable development of countries through green growth indicators. The system of indicators developed by the OECD (environmental efficiency, resource use, climate change impact, level of green innovations) can also serve as a useful methodological basis for Uzbekistan in monitoring and analyzing the green economy. The report highlights scientific approaches to maintaining a balance between economic growth and environmental sustainability on a global scale [5].

A. Bektemirov's scientific work “Green Economy: Theory and Practice” provides an in-depth analysis of the theoretical foundations, institutional mechanisms and practical applications of the green economy. The author pays special attention to the issues of attracting green investments, improving the environmental management system and rational use of resources in the process of economic modernization of Uzbekistan. The work compares national and foreign experiences, and also puts

forward proposals for developing a “green economy model” suitable for Uzbekistan [6].

The national report prepared by the United Nations Development Programme (UNDP) covers the implementation of the UN Sustainable Development Goals (SDGs) in Uzbekistan. In particular, it analyzes the results of national projects, investment programs and international cooperation in the areas of Goal 13 (Combating Climate Change) and Goal 7 (Affordable and Clean Energy). The report also highlights the growing role of public-private partnerships in implementing green economy policies [7].

Together, these sources provide a comprehensive overview of the legal, institutional and practical framework for the formation of a green economy in Uzbekistan:

Decree No. PF-4477 - the normative framework;

MoV resolution - practical programs;

ADB and EBRD reports - international investment and financial experience;

OECD reports - an indicator-based assessment system;

Bektemirov (2024) - the scientific and theoretical framework;

UNDP reports - the global SDG context.

As a result, these resources will create an excellent scientific and practical basis for Uzbekistan to transition to a green economy, improve the investment climate and ensure environmental sustainability.

The decarbonization processes of the economy of the Republic of Uzbekistan have intensified in recent years. The country is implementing “green” projects in the energy, transport, construction, agriculture and water management sectors. Including:

In the energy sector. Much attention is being paid to increasing the share of renewable energy sources (solar, wind, bioenergy) in the energy sector. For example:

Projects such as the Nur Navoi and Samarkand PV solar power plants, the Navoi-2 wind farm are being implemented in cooperation with the Asian Development Bank (ADB) and the European Bank for Reconstruction and Development (EBRD);

By 2030, it is planned to increase the share of renewable energy to 25 percent of the total electricity generated;

A strategy for the development of hydrogen technologies is being developed within the framework of the Green Hydrogen Uzbekistan project.

In transport and infrastructure. In Uzbekistan, electric vehicles, metro lines, and smart logistics systems are being widely introduced based on the “green transport” concept. Based on the “Transport Decarbonization Program until 2030” adopted in 2024, a goal was set to reduce exhaust gases in road traffic by 30%.

In agriculture. In agriculture, work is expanding on the modernization of agricultural technologies, the introduction of water-saving drip irrigation systems, and the development of organic production systems. The establishment of the “agroinsurance” system is gaining importance as an important innovative mechanism for managing environmental risks.

In construction and industry. The practice of using energy-efficient materials in construction, waste recycling, and the introduction of a “green certification” system has begun. In industry, green financing mechanisms (green bonds, green loans) are being developed.

The Government of the Republic of Uzbekistan has developed medium- and long-term strategies for the development of a green economy. The main ones are:

Integration of digital technologies. Optimization of resource consumption using artificial intelligence, "big data" and digital monitoring systems.

Expansion of the green financing system. Attracting investments based on green bonds, ESG (Environmental, Social, Governance) rating systems.

Creation of renewable energy clusters. Formation of solar and wind energy zones in each region.

Improvement of the system of environmental taxes and benefits. The tax burden on environmentally harmful enterprises will be increased, and incentives will be provided to environmentally friendly producers.

Raising the environmental awareness of the population. Widely introducing the principles of "green thinking" in the education system, promoting environmental culture in the media.

Along with the above positive aspects, there are a number of systemic problems in the development of the green economy. They include the following:

Lack of financing sources. Since green projects are a long-term and capital-intensive sector, commercial banks are investing little in this area.

Underdeveloped green technology market. Local manufacturers have not sufficiently mastered environmentally friendly technologies.

Low staff qualifications. The system of training specialists in the green economy is just being formed.

Incomplete regulatory framework. The system of environmental taxes, "green bonds" and "carbon credits" has not yet been fully implemented.

Non-transparent environmental data. Public data on the environmental activities of enterprises in state statistics is limited.

To eliminate these shortcomings, we recommend the following proposals identified as a result of research:

1. Expand green financial instruments. It is necessary to expand the portfolio of "green loans" for commercial banks and insurance companies, and develop the corporate bond market.

2. Support local manufacturers. Tax incentives should be provided for enterprises developing green technologies.

3. Expand international cooperation. Creation of joint "green investment" platforms in cooperation with ADB, EBRD, UNDP and the World Bank.

4. Formation of a regional cluster system. Establishment of renewable energy, waste processing and agro-industrial clusters in Samarkand, Navoi, Kashkadarya regions.

5. Implementation of a digital management system. Real-time monitoring of the environmental activities of enterprises through the national information platform “Green Data”.

6. Increasing human resources capacity. Expansion of areas such as “Green Economy”, “Environmental Management”, “Digital Ecology” in higher educational institutions.

Conclusion. The transition to a green economy is an opportunity for Uzbekistan to increase not only environmental sustainability, but also economic competitiveness. The introduction of green technologies will increase energy efficiency, rational use of resources will be established and new jobs will be created. Therefore, the strategy for developing a green economy is one of the most important directions for ensuring a sustainable, innovative and environmentally friendly future of the country.

### References

1. O‘zbekiston Respublikasi Prezidenti. “Yashil iqtisodiyotga o‘tish strategiyasi to‘g‘risida” PF - 4477-sonli Farmon. – Toshkent, 2019-yil 4-oktabr.
2. O‘zbekiston Respublikasi Vazirlar Mahkamasi qarori. “2030-yilgacha qayta tiklanuvchi energiya manbalarini rivojlantirish dasturi to‘g‘risida”. – Toshkent, 2020-yil.
3. Asian Development Bank. Renewable Energy Investment Projects in Uzbekistan. – Manila, 2023. – 78 p.
4. European Bank for Reconstruction and Development (EBRD). Green Transition in Central Asia. – London, 2022. – 96 p.
5. OECD. Green Growth Indicators 2023. – Paris: OECD Publishing, 2023. – 112 p.
6. Bektemirov A. Yashil iqtisodiyot: nazariya va amaliyot. – Toshkent: TDIU nashriyoti, 2024. – 210 b.

7. UNDP Uzbekistan. National Report on Sustainable Development Goals. – Tashkent, 2022. – 95 p.
8. Jahon banki. Green Transition in Uzbekistan: Opportunities and Challenges. – Washington DC, 2023. – 130 p.