

CHALLENGES OF THE GREEN ECONOMY IN UZBEKISTAN**Nazarova Mukaddas Erkinovna**

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Abstract: This paper examines the key challenges and prospects for Uzbekistan’s transition to a green economy. Particular attention is paid to environmental and socio-economic issues associated with the consequences of the Aral Sea disaster, the water crisis, and atmospheric pollution. The analysis identifies structural, institutional, and financial barriers hindering the effective implementation of green technologies. The article explores policy directions including the national strategy for low-carbon development, reforms in the energy and water sectors, and renewable energy initiatives. It concludes that a comprehensive approach integrating the efforts of government, business, and civil society is essential for achieving sustainable economic growth and environmental security.

Keywords: green economy; sustainable development; renewable energy; water crisis; environmental policy; investments; Uzbekistan

INTRODUCTION

In the modern world, the green economy has evolved from a trend into a strategic necessity. For Uzbekistan, which faces the long-term consequences of the Aral Sea crisis, chronic water scarcity, and urban air pollution, this transition represents not only an environmental priority but also a question of national security and sustainable development. Despite political will and initial progress, the path toward a low-carbon and resource-efficient model of growth remains fraught with systemic challenges.

Relevance of the Green Economy for Uzbekistan

Uzbekistan’s interest in the green economy is driven by a combination of objective and pressing factors.

The legacy of the Aral Sea catastrophe.

The disappearance of the Aral Sea led to both an environmental and humanitarian disaster. Salt storms disperse toxic sediments, destroy fertile land, and harm public health.

Water resource crisis.

Uzbekistan is among the countries experiencing the highest water stress. Aging irrigation infrastructure, population growth, and climate change exacerbate the problem, posing a direct threat to agriculture and food security.

Air pollution.

Major industrial centers such as Tashkent, Almalyk, and Navoi face recurring smog episodes caused by emissions from industrial facilities and transport.

Thus, the “greening” of the economy is not a fashionable trend but an urgent necessity for ensuring the country’s sustainable future.

Key Problems and Barriers

Structural Dependence on the “Brown” Economy

Uzbekistan’s economy remains dominated by resource- and carbon-intensive sectors: natural gas and gold extraction, the chemical and cement industries, and water-intensive agriculture. A radical restructuring of these sectors requires massive investment, new technologies, and time—constituting a significant structural barrier to transformation.

Energy Transition: Potential and Reality

The country possesses one of the region’s highest potentials for solar and wind energy, but its utilization remains slow due to several constraints:

- **Aging infrastructure:** most generation and grid assets require urgent modernization.
- **Price distortions:** long-term subsidization of gas and electricity tariffs has discouraged energy efficiency.
- **Integration challenges:** effective absorption of intermittent renewable energy requires smart grids and system upgrades.

Water Crisis and Inefficient Agriculture

The agricultural sector consumes about 90% of the country’s water resources and remains the least efficient component of the economy.

- **Outdated technologies:** widespread open-ditch and furrow irrigation cause up to 50% water losses.
- **Inherited crop patterns:** dependence on traditional water-intensive crops (cotton, wheat) persists despite growing water scarcity.
- **Land degradation:** salinization and desertification reduce soil fertility and demand even greater use of water and chemicals.

Institutional and Financial Constraints

- **Legal gaps:** despite the adoption of the Laws “On Renewable Energy Sources” and “On Energy Efficiency,” the regulatory framework remains incomplete. Mechanisms for promoting a circular economy, green public procurement, and waste recycling require further development.

- **Financing deficit:** the state budget cannot cover the full cost of “greening.” The market for green bonds and loans is underdeveloped, while high regulatory risks deter private investment.

Low Environmental Awareness

Among both the public and part of the business community, understanding of the benefits and mechanisms of the green economy remains limited. The absence of habits such as energy saving, waste separation, and water conservation, along with insufficient infrastructure, slows down the transition process.

Initial Steps and Promising Initiatives

The Government of Uzbekistan has demonstrated a growing commitment to the green agenda through several measures:

- **Strategic planning:** Adoption of the *Strategy for the Transition of the Republic of Uzbekistan to a Green Economy for 2019–2030* established a comprehensive framework for sustainable reforms.
- **Implementation of large-scale renewable energy projects:** Major solar and wind power plants are being constructed in the Navoi and Samarkand regions in partnership with global leaders such as Masdar and ACWA Power.
- **Modernization of water management:** Pilot projects on drip irrigation and a transition toward a cluster-based agricultural system are being implemented.
- **Energy sector reform:** Gradual liberalization of gas and electricity tariffs is creating market-based incentives for energy efficiency and conservation.

Conclusion

Uzbekistan’s transition to a green economy is a complex, multi-dimensional process whose success depends on the coordinated efforts of all stakeholders. The government must ensure consistent policies, improved legislation, and transparent conditions for investors. The private sector should actively adopt best available technologies and seek opportunities in emerging green sectors. Society as a whole needs to cultivate a culture of responsible consumption. Overcoming current challenges will pave the way not only for environmental restoration but also for building a modern, competitive, and sustainable national economy.

REFERENCES

1. Decree of the President of the Republic of Uzbekistan No. UP-5863 (October 30, 2019) “On Approval of the Environmental Protection Concept of the Republic of Uzbekistan until 2030.”
2. Resolution of the President of the Republic of Uzbekistan No. PP-4477 (October 4, 2019) “On Approval of the Strategy for Transition of the Republic of Uzbekistan to a Green Economy for 2019–2030.”

3. United Nations Development Programme (UNDP) in Uzbekistan. (2025). *National Human Development Report: Economic Growth and Environmental Challenges*.
4. Asian Development Bank (ADB). (2020). *Reports and Reviews on Irrigation System Modernization Projects in Uzbekistan*.
5. Spot.uz and Gazeta.uz. (Various years). Publications on renewable energy, water reforms, and environmental policy.