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GREEN INVESTMENTS AND THEIR IMPACT ON NATURAL RESOURCE MANAGEMENT IN THE SAMARKAND REGION

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Abstract: This article analyzes the impact of green investments on natural resource management in the Samarkand region. Green investments are examined as a form of environmentally safe, resource-efficient, and climate-resilient financing. The study explores the current state of the region's natural resources — including water, land, and minerals — as well as the challenges and opportunities associated with their management. The practical role of green investments in real projects is also reviewed. Based on international experiences, official statistics, and a SWOT analysis, the economic and ecological benefits of expanding green investments in the Samarkand region are identified. The article concludes with specific recommendations for the large-scale implementation of green investment strategies at the regional level.

Keywords: green investments, natural resource management, sustainable development, environmental safety, Samarkand region, renewable energy, waste management, green technologies, ecological tourism, environmental infrastructure, water conservation, land degradation, green economy, international financing, SWOT analysis.

Introduction

In today's context of globalization and increasing ecological imbalance, the green economy and its core mechanism — green investments — demand particular attention as one of the most critical tools for achieving sustainable development. Ensuring economic growth without harming the environment, promoting the rational and efficient use of natural resources, and strengthening environmental security have become priority objectives for nations around the world.

Green investments refer to capital flows directed toward environmental sustainability, energy efficiency, and the improvement of natural resource management. These investments not only yield economic returns but also contribute to social well-being and ecological safety. Recognized as "green" by international financial institutions such as the World Bank and the United Nations Environment Programme (UNEP), such investments are gaining strategic significance in many developing countries.

Uzbekistan has also taken significant steps in this direction. In particular, the "Environmental Strategy of the Republic of Uzbekistan for 2019–2030" and the "Concept for

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Transition to a Green Economy," approved on October 4, 2019, have laid the foundation for integrating ecological sustainability and resource efficiency into national policy through a phased and practical approach.

The Samarkand region — one of the largest and most economically dynamic territories in Uzbekistan — stands out for its rich natural resources (including water, land, minerals, and biodiversity) and its strong agricultural, industrial, and tourism sectors. Therefore, enhancing natural resource management through the attraction of green investments has become a pressing regional priority.

Green Investments: Concept and Key Areas of Implementation

Green investments refer to a form of financial capital aimed at promoting sustainable development and supporting economic growth without causing harm to the environment. These investments focus on funding projects that encourage clean technologies, energy efficiency, waste management, renewable energy, eco-friendly transport systems, and the rational use of natural resources.

Green investments are primarily directed toward the following sectors:

- Renewable energy sources – including solar, wind, bioenergy, and micro-hydropower systems.
- Waste management – such as recycling, composting, and waste-to-energy conversion.
- Green infrastructure – including energy-efficient buildings and environmentally friendly transportation systems.
- Natural resource conservation – involving water-saving technologies and land degradation prevention.
- Ecological agriculture – including agroecology and organic farming practices.

Unlike traditional investments, green investments are not solely evaluated by financial profitability. Instead, they aim to ensure environmental safety and social stability alongside economic returns. These investments are often assessed using a three-dimensional framework, which is illustrated in Table 1.

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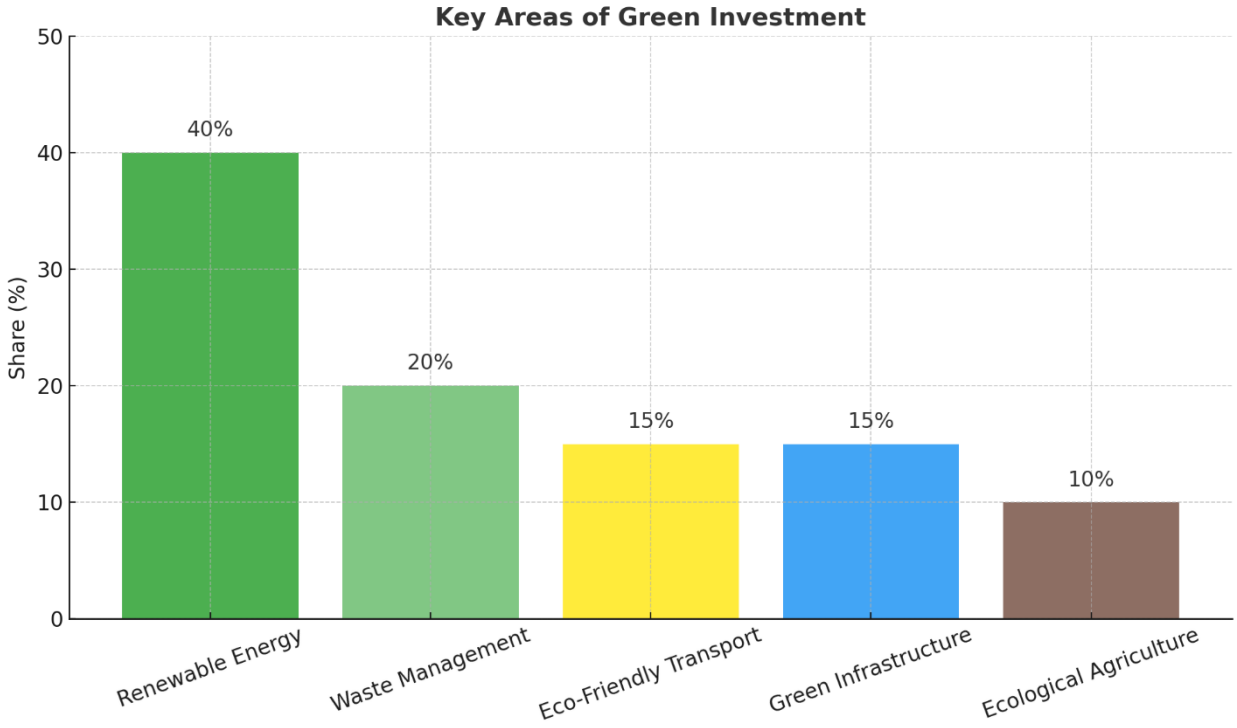
Table 1. The Three Dimensions of Green Investment

Dimension	Meaning in Green Investment
Economic	Profitability, job creation, contribution to GDP
Environmental	Reduction of CO_2 emissions, resource savings
Social	Public health, quality of life, stable employment

Figure 1. Key Areas of Green Investment (in percentages, illustrative)



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Green investments are grounded in the following theoretical models and conceptual frameworks:

- Sustainable Development Theory – emphasizes the integration of economic growth, environmental sustainability, and social equity.
- Triple Bottom Line (TBL) Model – evaluates impact based on the principle of "People, Planet, Profit."
- Ecological Economics Theory – views economic activity as intrinsically linked to natural systems and their limits.

These theoretical foundations provide a robust framework for analyzing the role of green investment within the economic system and for justifying its application in real-world contexts.

Natural Resources in the Samarkand Region and Their Management

The Samarkand region is considered one of the leading areas in Uzbekistan in terms of natural resource potential. It possesses a wide range of land, water, mineral deposits, forest reserves, and biological diversity. The region's socio-economic development is directly dependent on the efficient management of these resources. However, in recent years, the excessive exploitation of resources, insufficient implementation of modern management practices, and the impacts of climate change have led to a number of pressing challenges.

Samarkand is among the regions experiencing water scarcity. A significant portion of its irrigated agricultural lands is supplied by the Zarafshan River and local canals. However, traditional open-channel irrigation methods result in water losses of up to 30–40%. Therefore, it is essential to implement water-saving technologies such as drip irrigation and closed-pipe irrigation systems.

Although the region has a substantial area of arable land suitable for agriculture, its productivity is gradually declining due to salinization, erosion, and overuse. Land degradation has become particularly critical in districts such as Urgut, Pastdargom, and Nurobod. These risks can be mitigated through the adoption of modern agrotechnical measures and ecological farming models.

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Table 2. Degraded Land by District in Samarkand Region

District	Degraded Land (thousand ha)	Main Causes
Urgut	12.4	Salinization, improper irrigation
Nurobod	10.1	Erosion, overloading
Ishtixon	7.8	Nutrient deficiency

The Samarkand region is home to deposits of valuable minerals such as marble, granite, gold, and limestone. Unfortunately, a significant portion of these resources is extracted without full compliance with environmental safety standards. This not only harms the surrounding ecosystems but also indirectly affects water and land resources. The introduction of green mining technologies through green investment is considered the most viable and sustainable solution. Natural resource management in the region remains largely centralized. The involvement of local governments and communities in the decision-making process is minimal. The absence of systematic monitoring, digitalization, and an open data infrastructure reduces the efficiency and transparency of resource utilization.

SWOT Analysis (Horizontal Comparison Format)

Strengths	Weaknesses	Opportunities	Threats
Rich in natural resources: water, land, miner	Resource wastage (e.g., 30–40% water loss)	Green investment for modern technologies	Climate change: water scarcity, drought
Climate and terrain support ecosystem stabi	Lack of modern agro-technologies	International funding (UNDP, WB, Green Fun	Environmental violations in mining
Initial steps toward green technology adoptic	No monitoring or open data systems	Digital tools (GIS, eco-audit) introduction	Population pressure on resources
Public environmental awareness is increasing	Centralized management, weak local input	Eco-tourism as sustainable development pat	Weak public-private coordination

The Impact of Green Investments on Ongoing Projects in the Samarkand Region

In recent years, green investment projects implemented in the Samarkand region have played a vital role in improving the quality of natural resource utilization, ensuring

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ecological balance, and stabilizing economic activity. This section analyzes key active green projects in the region, their financial volume, funding sources, and impact on local resources.

Since 2022, small- and medium-scale solar power stations (SPS) have been installed in Samarkand city and the Urgut district. These projects have been financed through:

- Private investments from local companies,
- Subsidies under the national "Green Energy" program,
- Technical support from the United Nations Development Programme (UNDP).

As a result, these projects have contributed to a reduction in electricity consumption for irrigation pumps, decreased carbon emissions, and promoted long-term energy savings.

Since 2021, a modern waste landfill and recycling facility has been operational in Samarkand city. The project was funded with the support of the European Union and UNDP. In 2023, a separate waste collection and recycling system was launched in the Pastdargom district.

Key outcomes of these initiatives include:

- 12,000–15,000 tons of waste processed annually,
- Secondary raw materials such as plastic and paper exported,
- Creation of more than 150 new jobs for local residents.

Eco-tourism zones have been established in Nurobod and Urgut districts, where natural landscapes are preserved, and low-waste tourism services are offered. With the participation of local communities, eco-guesthouses and agro-ecological production activities have been launched.

Positive effects include:

- Increased local attention to natural resource conservation through additional income opportunities,
- Rehabilitation of degraded land through ecological farming methods.

Although significant steps have been taken toward introducing green investments and linking them with natural resource management in the Samarkand region, a fully systemic approach, financial stability, and institutional coordination remain underdeveloped. Therefore, it is essential to assess the current situation in order to identify both pressing challenges and promising opportunities. One major constraint is that many green projects require substantial initial capital. Neither local budgets nor the private sector can fully finance such projects, which results in a heavy reliance on external grants and international organizations.

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There is no unified coordination center that integrates environmental and investment policies. Disconnections between regional and central governance hinder the implementation of strategic programs. The lack of qualified professionals in renewable energy, waste management, and environmental auditing weakens the long-term sustainability of green initiatives. Additionally, awareness among the general public and business communities about the benefits of green investments remains low, which limits grassroots support and entrepreneurial engagement in this sector.

Despite these challenges, a number of significant opportunities have emerged. International donor programs—such as those by the UN, the European Union, and the World Bank—actively support green initiatives. Given its ecological potential, the Samarkand region is a strong candidate for these programs. Uzbekistan's national development strategy for 2030 prioritizes environmental safety and the rational use of resources, opening the door for enhanced legislation and financial incentives. Technological advances—such as GIS, big data analytics, and remote sensing—can be leveraged to improve the monitoring and management of natural resources. Moreover, an innovation-friendly environment is emerging to support green startups. Public engagement is gradually increasing through initiatives led by students, NGOs, youth organizations, and entrepreneurs. Projects such as "green schools" and "eco-volunteering" campaigns contribute to raising environmental awareness and promoting cooperation. Despite structural and institutional shortcomings, the Samarkand region possesses substantial potential for the expansion of green investment. The key to success lies in integrating these opportunities into a broader, systemic framework of institutional development and regional planning.

Conclusion

Green investment represents a new trajectory in modern economics, grounded in the principles of environmental, social, and economic sustainability. The research conducted in the context of the Samarkand region demonstrates that green investments not only contribute to environmental protection but also play a vital role in the rational use of natural resources, the development of ecological infrastructure, and the promotion of regional economic growth. Although the Samarkand region is rich in natural resources, its resource management systems still fall short of ensuring efficient and sustainable use. Current green investment projects in the region—including solar energy, waste recycling, and ecological tourism—are making positive contributions toward modernizing resource management practices.

Despite challenges such as financial constraints, a shortage of skilled professionals, and institutional fragmentation, emerging opportunities through international cooperation,

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technological advancements, and an environmentally focused national policy framework offer great potential for the region. To enhance the effectiveness of green investments, the following strategic actions are recommended:

- Increase local participation in resource management, implement digital technologies more widely, and promote ecological awareness at the community level;
- Develop a regional Green Investment Strategy, including customized financing mechanisms for each sector;
- Establish dedicated centers for green technology transfer and incubation (e.g., Green Tech Center – Samarkand);
- Encourage public-private partnerships (PPP) between local authorities and the private sector to implement joint green projects;
- Launch a digital monitoring system for key resource metrics, such as water consumption and waste volumes (e.g., online statistical platforms);
- Introduce training and capacity-building programs in higher education institutions across the region to prepare qualified specialists in green investment and sustainability.

References

1. Presidential Decree of the Republic of Uzbekistan No. PF-5863 (2019). Environmental Strategy of Uzbekistan for 2019–2030. www.lex.uz
2. UNEP (2011). *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication.* United Nations Environment Programme. https://www.unep.org
3. World Bank (2022). *Uzbekistan Country Economic Update: Investing in Sustainable Growth.* https://www.worldbank.org/en/country/uzbekistan
4. OECD (2020). *Green Investment and Sustainability Indicators.* Organisation for Economic Co-operation and Development.
5. Dunning, J.H. (2009). Location and the Multinational Enterprise: A Neglected Factor? *Journal of International Business Studies*, 40(1), 5–19.
6. Saydullaev A., Sultonov B. (2025). Investment Dynamics of the Samarkand Region: Analysis and Forecast Using a Polynomial Model. *American Journal of Social Sciences and Humanity Research*, Vol. 5(2), pp. 11–20.
7. Stock, J.H., & Watson, M.W. (2020). *Introduction to Econometrics* (4th ed.). Pearson Education.

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https://www.gejournal.net/index.php/APJMMR

8. State Committee of the Republic of Uzbekistan on Statistics (2023). *Statistical Compendium on Economic and Environmental Indicators of Samarkand Region.* https://stat.uz

9. UNDP Uzbekistan (2023). *Green Energy and Waste Management Pilot Projects in Samarkand.* https://www.uz.undp.org

10. Pardaeva O. (2021). Innovative Approaches in Waste Management. *Innovative Economy and Environmental Protection*, 2(1), 45–49.

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