

SMALL AND MEDIUM ENTERPRISES (SMES) IN NAMANGAN'S GREEN ECONOMY

Milimo Mundia Ciesler

Vice Director International Affairs and Scientific Research

Kimyo International University in Tashkent, Namangan Branch

PhD Candidate, Namangan State University of Engineering and Technology

<https://doi.org/10.5281/zenodo.17062076>

Abstract. This article explores the critical role of Small and Medium Enterprises (SMEs) in advancing the green economy in Namangan, Uzbekistan. It analyzes the current landscape, characteristics, and contributions of SMEs within key sectors such as agriculture, manufacturing, and renewable energy. The paper assesses the policy and institutional frameworks that support green SME development and identifies key challenges including limited access to green finance, technical capacity gaps, regulatory hurdles, and market constraints. Through case studies of pioneering green SMEs, the study highlights best practices and innovative approaches. Finally, it proposes strategic recommendations to enhance the growth, sustainability, and inclusivity of green SMEs, positioning them as vital drivers of Namangan's transition to a low-carbon, resource-efficient, and socially equitable economy.

Key Words. Small and Medium Enterprises (SMEs), Green Economy, Sustainable Development, Renewable Energy, Green Finance, Inclusive Entrepreneurship, Circular Economy

Introduction. Small and Medium Enterprises (SMEs) are the lifeblood of many economies around the world, playing a vital role in job creation, innovation, and local economic development. According to the World Bank (2023), SMEs account for approximately 90% of businesses and more than 50% of employment worldwide. In emerging economies, their role is even more pronounced as they provide flexible, adaptive, and often community-based solutions to local challenges. In Uzbekistan, and

more specifically in the Namangan region, SMEs have become increasingly important as the country undergoes a strategic transition toward a green and sustainable economy.

The concept of a green economy, as defined by the United Nations Environment Programme (UNEP, 2011), is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is an economy that is low-carbon, resource-efficient, and socially inclusive. This paradigm shift from traditional models of economic growth to greener approaches has gained momentum globally, driven by growing environmental concerns, international climate commitments, and the urgent need for sustainable development. In this context, SMEs have emerged as both drivers and beneficiaries of green economic practices, given their agility, innovation potential, and proximity to communities. Namangan, located in the Ferghana Valley in eastern Uzbekistan, is one of the most densely populated and industrially active regions in the country. Known for its agricultural productivity and manufacturing capacity—particularly in textiles and food processing—Namangan is uniquely positioned to lead the transition to a green economy. The region faces significant environmental challenges such as soil degradation, air and water pollution, and the impacts of climate change, which threaten its long-term socio-economic development. However, these challenges also present opportunities for innovation, investment, and sustainable transformation, particularly through the active participation of SMEs.

The government of Uzbekistan has recognized the importance of SMEs in achieving sustainable development and has introduced a range of reforms to support entrepreneurship, improve the business climate, and encourage green practices. These include regulatory changes, fiscal incentives, and strategic partnerships with international development organizations. In Namangan, such policies are increasingly aligning with efforts to support green initiatives, such as energy efficiency projects, sustainable agriculture, and waste management solutions, often led by or involving SMEs.

Background: Namangan and Its Economic Context. Namangan is located in the eastern part of Uzbekistan and is one of its most populous regions, known for its agricultural productivity and growing industrial base. The region's economy is dominated by SMEs operating in sectors such as agriculture, textiles, food processing, and light manufacturing. Recent government initiatives aim to integrate sustainable practices into these sectors, leveraging Namangan's natural resources, strategic location, and entrepreneurial culture. The green economy approach emphasizes resource efficiency, renewable energy, waste management, and sustainable agriculture, aligning with Uzbekistan's national development priorities.

SMEs in Namangan: Landscape and Characteristics. SMEs constitute the backbone of Namangan's economy, comprising approximately 85% of all registered enterprises. These firms are typically family-owned and range from micro-businesses with fewer than 10 employees to medium-sized firms with up to 250 workers. Most SMEs operate in traditional sectors but are gradually adopting green technologies and sustainable practices in response to regulatory incentives and market demand. Characteristics of green SMEs include a focus on organic agriculture, renewable energy solutions, waste recycling, and eco-friendly manufacturing processes.

The Role of SMEs in Namangan's Green Economy. SMEs contribute significantly to the green economy through job creation, innovation, and the adoption of environmentally sustainable technologies. They help reduce greenhouse gas emissions by implementing energy-efficient processes and renewable energy sources, enhance resource conservation through sustainable agriculture and waste management, and foster social inclusion by providing employment to marginalized groups. By promoting circular economy principles and eco-innovation, SMEs in Namangan facilitate the region's transition to sustainable economic models.

Policy and Institutional Framework. Uzbekistan's green economy strategy (2019–2030) provides the national policy backdrop for green SME development. Key legislation such as the Environmental Protection Law (2021) and Renewable Energy

Law (2019) establishes standards and incentives. Regional policies, including the Namangan Green Development Action Plan (2021–2025), operationalize these priorities locally. Institutions such as the Ministry of Economy and Finance, State Committee for Ecology, and regional chambers of commerce support SMEs through financial programs, training, and regulatory oversight. International organizations like UNDP, GIZ, and the European Bank for Reconstruction and Development provide technical and financial assistance. However, challenges remain in policy coherence, enforcement, and data monitoring.

Challenges Facing SMEs in the Green Transition Despite the supportive environment, SMEs in Namangan face obstacles including limited access to affordable green finance, weak technical and managerial capacity, regulatory complexity, insufficient infrastructure, and constrained market access. Financial institutions often require collateral and certified environmental credentials that SMEs cannot readily provide. Technical knowledge gaps hinder the adoption of sustainable technologies, while bureaucratic hurdles complicate compliance. Infrastructure deficits and high technology costs further limit green investments. Market demand for green products remains low domestically, and export challenges persist due to stringent international standards. Cultural attitudes of risk aversion and limited awareness slow the uptake of green entrepreneurship.

Case Studies of Green SMEs in Namangan:

- Eco Agro Farm utilizes organic farming and sustainable irrigation to reduce water consumption and chemical inputs, creating jobs and gaining organic certification despite high costs.

- NamSolarTech, a youth-led startup, provides affordable solar energy solutions to off-grid rural households, increasing energy access but facing maintenance and capital constraints.

- CleanCycle Uzbekistan runs a recycling facility that improves waste management and creates employment, challenged by material price volatility and regulatory cooperation.

- GreenStyle Textiles produces eco-friendly garments from organic cotton for export, navigating the high costs of certification and fluctuating niche demand.

- Green Future Hub delivers environmental education and consulting, building local capacity but facing funding and impact measurement difficulties.

Recommendations for Strengthening Green SMEs in Namangan. Key recommendations include expanding green finance through dedicated funds and simplified procedures; enhancing capacity-building programs; streamlining institutional coordination; investing in infrastructure and technology access; expanding market demand through awareness and green procurement; fostering inclusive green entrepreneurship, especially for women and youth; and strengthening data and monitoring frameworks to guide policy and investment.

Conclusion. SMEs in Namangan are critical agents of Uzbekistan's green economy transition, poised to drive sustainable development and social inclusion. Despite challenges, a conducive policy environment, institutional support, and innovative SME practices lay a strong foundation. With targeted interventions to improve finance, capacity, infrastructure, and market linkages, green SMEs can lead the region toward a resilient and inclusive low-carbon future.

References:

1. European Bank for Reconstruction and Development. (2022). *Green finance and SMEs in Uzbekistan*. EBRD Publications. <https://www.ebrd.com>
2. Government of Uzbekistan. (2019). Strategy for the transition to a green economy 2019–2030. Tashkent: Ministry of Economy and Industry.
3. International Finance Corporation. (2021). SMEs and green growth in Central Asia: Opportunities and challenges. World Bank Group. <https://www.ifc.org>
4. Namangan Regional Administration. (2021). Namangan Green Development Action Plan 2021–2025. Namangan: Regional Government Press.
5. United Nations Development Programme. (2023). Aid for Trade: Supporting green SMEs in Uzbekistan. UNDP Uzbekistan. <https://www.undp.org/uzbekistan>
6. GIZ Uzbekistan. (2023). Fostering green SME development through inclusive economic policies. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).
7. World Bank. (2022). Enabling green transition in Uzbekistan: Key sectors and regional priorities. World Bank Publications. <https://www.worldbank.org>
8. OECD. (2021). Green entrepreneurship and SME policy frameworks: Lessons for emerging economies. OECD Green Growth Papers. <https://www.oecd.org>
9. Asian Development Bank. (2020). Uzbekistan: Promoting inclusive and sustainable rural development through SMEs. ADB Reports. <https://www.adb.org>
10. FAO. (2022). Sustainable agriculture and agri-SMEs in Central Asia: Country profile – Uzbekistan. Food and Agriculture Organization of the United Nations. <https://www.fao.org>.