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IMPROVEMENT OF MECHANISMS FOR SUSTAINABLE AND GREEN DEVELOPMENT OF THE HOTEL INDUSTRY IN UZBEKISTAN

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ABSTRACT

The hotel industry in Uzbekistan is undergoing rapid expansion, driven by ambitious national tourism targets and progressive economic reforms. As the sector scales to meet the goal of 20 million annual foreign tourists by 2030, the imperative to embed sustainability and green principles into its growth trajectory becomes increasingly urgent. This paper examines the current state of sustainable development in Uzbekistan's hospitality sector, analyzes the existing policy and institutional mechanisms supporting green transition, and identifies critical gaps and systemic constraints. Drawing on international best practices and recent empirical studies conducted in the Uzbek context, the article proposes an integrated framework for improving mechanisms that drive sustainable hotel development. Key recommendations include establishing a mandatory national green certification system aligned with global standards, scaling up targeted green financing instruments, integrating circular economy principles into hotel operations, fostering public–private partnerships for capacity building, and leveraging digital technologies for environmental performance monitoring. The findings contribute to the scholarly discourse on sustainable tourism in transition economies and offer actionable pathways for policymakers, industry stakeholders, and researchers seeking to advance the green transformation of Uzbekistan's hotel industry.

KEYWORDS: *Sustainable Tourism, Green Hotel, Hospitality Industry, Uzbekistan, Green Economy, Esg Principles, Circular Economy, Eco-Certification*

INTRODUCTION

Uzbekistan's tourism sector has experienced unprecedented growth in recent years, emerging as a strategic pillar of national economic diversification. Under the "Uzbekistan–2030" Strategy, built around five core priorities including green development and sustainable economic growth, the country has set ambitious targets: increasing the annual number of foreign tourists to 20 million, raising tourism services exports to $6 billion, and creating 4,000 new accommodation facilities across the regions. As of early 2025, the total number of accommodation facilities exceeded 6,100, with over 161,000 beds, reflecting a significant expansion of the hotel stock.

However, rapid growth in tourism infrastructure presents both opportunities and environmental challenges. Hotels are resource-intensive enterprises, consuming substantial amounts of energy, water, and materials while generating significant waste and carbon emissions. Without deliberate integration of sustainability principles, the expansion of the hotel industry risks exacerbating environmental degradation, straining local resources, and undermining the long-term competitiveness of Uzbekistan as a tourist destination. Recognizing this challenge, the government has declared 2025 the "Year of Environmental Protection and the Green Economy" and has initiated a range of policy measures to steer the tourism sector toward a more sustainable trajectory.

Yet, despite growing policy attention and emerging industry initiatives, the mechanisms for translating green commitments into widespread operational practice remain underdeveloped. The transition to sustainable hotel operations is constrained by fragmented regulatory frameworks, limited access to green financing, insufficient technical capacity among hoteliers, and the absence of a nationally recognized eco-certification system. This paper addresses these gaps by asking: *What mechanisms can effectively drive the sustainable and green development of Uzbekistan's hotel industry, and how can they be improved?*

The study adopts a multi-method approach, integrating a comprehensive review of academic literature, policy documents, and industry reports with empirical insights from recent studies conducted in the Uzbek context. The remainder of the paper is structured as follows: Section 2 reviews the theoretical and empirical literature on sustainable hotel development. Section 3 analyzes the current policy and institutional landscape in Uzbekistan. Section 4 identifies key challenges and systemic constraints. Section 5 presents an integrated framework for

improving sustainability mechanisms. Section 6 concludes with policy implications and directions for future research.

LITERATURE REVIEW

2.1 Theoretical Foundations of Green Hotel Development

The concept of the "green hotel" has evolved from a niche environmental concern to a mainstream business imperative in the global hospitality industry. Green hotels are defined as accommodation establishments that adopt environmentally responsible practices in energy management, water conservation, waste reduction, and sustainable sourcing, often certified by recognized eco-labels. Theoretical underpinnings draw from ecological modernization theory, which posits that environmental protection and economic growth can be mutually reinforcing when supported by appropriate technological innovation and institutional frameworks. In the hotel context, this translates into operational efficiencies that reduce both environmental impact and operating costs, creating a "win–win" proposition.

Recent scholarship has extended this framework by incorporating circular economy principles, which emphasize closing material loops through reuse, repair, remanufacturing, and recycling. Studies have identified Green Absorptive Capacity as a critical enabler and Green Dynamic Capabilities as essential for adaptive circular economy strategies in small and medium hotels. These theoretical advances are particularly relevant for Uzbekistan, where the hotel sector is dominated by smaller establishments that may lack the resources for comprehensive green transitions but possess flexibility that can be leveraged through appropriate support mechanisms.

2.2 Empirical Evidence on Sustainable Hotel Performance

A growing body of empirical research demonstrates the business case for sustainable hotel operations. A study conducted in Bukhara, Uzbekistan, developed a framework for sustainable resource management in hotel operations and evaluated its impact on cost efficiency and environmental outcomes. The findings showed that adoption of environmentally friendly practices significantly enhances cost-effectiveness and resource use while generating substantial environmental gains, with green-measured hotels reporting significantly lower operating costs compared to hotels with conventional practices. This evidence challenges the persistent misconception that sustainability inevitably entails higher costs.

At the national level, a comprehensive analysis using semi-logarithmic regression models on statistical data from 2000–2023 revealed that the growth rate of GDP, the use of renewable energy sources, population well-being, public transport usage, and the ecological footprint index all positively impact tourist arrivals. Notably, an increase in the share of renewable energy improves the country's image in the international tourism market by ensuring environmental sustainability. This finding underscores the strategic importance of aligning hotel industry greening with broader national renewable energy targets.

2.3 ESG Integration in the Hospitality Sector

The integration of Environmental, Social, and Governance (ESG) principles into hospitality operations has gained traction globally as investors, consumers, and regulators increasingly demand accountability for sustainability performance. In Uzbekistan, the hospitality industry has been rapidly expanding, particularly in Tashkent, Samarkand, and Bukhara, with ESG principles being integrated into regulatory frameworks and business practices as part of the country's sustainable development efforts. However, the adoption remains uneven, with significant gaps between policy intent and implementation at the enterprise level.

International experience from countries such as Japan, Sweden, South Africa, Denmark, and Singapore offers valuable lessons for Uzbekistan. Successful models demonstrate that effective green hotel programs combine mandatory standards with voluntary incentives, supported by robust monitoring and verification systems. The challenge lies in adapting these models to Uzbekistan's specific institutional, economic, and cultural context.

POLICY AND INSTITUTIONAL FRAMEWORK IN UZBEKISTAN

3.1 National Strategies and Targets

Uzbekistan has established a comprehensive policy framework for sustainable development, with the "Uzbekistan–2030" Strategy serving as the overarching roadmap. The strategy prioritizes deepening integration into global networks, enhancing economic potential, and transitioning to a "green economy." Specific targets relevant to the hotel industry include increasing renewable energy capacity to 25,000 MW, expanding the share of renewable energy to exceed 50% of total power generation by 2030, and reducing carbon emissions through energy-saving technologies.

The 2025 State Program, aligned with the Year of Environmental Protection and the Green Economy, outlines initiatives to expand renewable energy, launch 16 green power plants with combined capacity of 3.5 GW, and install solar panels in 35,000 households and 27,000 private and social facilities. Critically for the hotel industry, the program includes developing green urban strategies for major tourist cities such as Tashkent, Samarkand, Bukhara, Shakhrisabz, Kokand, and Khiva.

3.2 Green Financing Mechanisms

Recognizing that financial barriers are a primary obstacle to green investment, Uzbekistan has introduced several innovative financing mechanisms. In November 2025, the government announced a package of incentives including subsidies for tourist startups of up to UZS 1 billion, reimbursement of half the costs for hotels seeking "green" certification, VAT refunds for companies organizing international events that attract at least 100 foreign visitors, and customs duty exemptions for importing buses, electric buses, and tourism vehicles.

International financial institutions are also playing an active role. The European Bank for Reconstruction and Development's Green Economy Financing Facility (GEFF) program supports private sector investments in energy efficiency and renewable energy through local partner financial institutions. A specialized seminar on green financing for HoReCa enterprises held in Tashkent in February 2026 brought together SMEs interested in modernizing facilities through energy-efficient kitchen equipment, heating and cooling systems, refrigeration equipment, and solar photovoltaic systems.

3.3 Eco-Certification and Standards

The development of green standards in the hospitality industry has emerged as a priority area. A recent study analyzing international practices and prospects for application in Uzbekistan identifies key areas including environmental sustainability, efficient resource use, and energy efficiency in hotel operations. The research proposes aligning the national standard "Hospitality Industry Criteria" with international requirements and introducing a "green hotel model" based on national design concepts.

A significant milestone was achieved when InterContinental Tashkent became the first hotel in Uzbekistan to earn Green Key certification, implementing comprehensive sustainability practices including smart energy systems, free bicycles for guests, drip irrigation, eco-certified chemicals, monthly sustainability campaigns, and community volunteering. This achievement demonstrates that internationally recognized certification is attainable within the Uzbek context and provides a model for other hotels to emulate.

At the regional level, efforts are underway to introduce a harmonized eco-certification standard for Central Asia, developed based on GSTC criteria and international eco-labeling programs such as European Flower and Leaf of Life. A regional working group meeting supported by UNEP highlighted the role of Uzbekistan in promoting sustainable certification across the hospitality sector.

3.4 Industry Engagement and Capacity Building

The hotel industry's engagement with sustainability issues is increasingly evident through sectoral events and partnerships. The HOTELPRO HUB Business Forum 2025, organized with support from the Tourism Committee, aimed to create a sustainable hospitality ecosystem and brought together over 600 professionals from 100 hotels and 40 suppliers. Similarly, the Hotel Business Forum-2025 was dedicated to the theme "Innovation and Sustainability: New Technologies in the Hospitality Industry," featuring sessions on green technologies for a sustainable hotel future, digital transformation, and inclusive development.

The SWITCH-Asia program's Strategic Foresight for the Circular Economy in the Tourism and Hospitality Sector highlights strong and growing momentum toward sustainability in Uzbekistan, driven by increasing stakeholder recognition that circular economy principles offer both environmental benefits and market advantages. This awareness is translating into concrete actions across the hospitality sector, supported by a favorable policy environment that includes green tourism decrees, financial incentives, and eco-labelling schemes.

CHALLENGES AND SYSTEMIC CONSTRAINTS

Despite significant progress, the transition to sustainable hotel development in Uzbekistan faces persistent challenges that constrain the effectiveness of existing mechanisms.

4.1 Fragmented Regulatory Framework

While numerous policy documents reference green development, the regulatory framework lacks coherence and specificity regarding the hotel industry. Existing standards for hospitality are primarily focused on service quality

and safety, with environmental criteria remaining optional or vaguely defined. The absence of mandatory environmental performance requirements for hotels creates uneven playing fields, where sustainability leaders incur additional costs without corresponding market advantages, while laggards face no penalties for environmentally harmful practices.

4.2 Limited Green Financing Penetration

Although green financing mechanisms exist, their penetration remains limited, particularly among small and medium hotels that constitute the majority of Uzbekistan's accommodation stock. Many hoteliers lack awareness of available financing options, find application procedures daunting, or are deterred by perceived risks associated with new technologies. The SWITCH-Asia foresight process identified limited rural infrastructure and investment, weak waste-management coordination, skills and capacity gaps, and legal ambiguities affecting alternative tourism models as persistent constraints.

4.3 Capacity and Knowledge Gaps

Technical capacity for implementing green hotel practices remains unevenly distributed. Many hotel managers lack training in energy auditing, water conservation techniques, waste management systems, or sustainable procurement. The absence of readily accessible technical assistance and demonstration projects limits the diffusion of best practices. Furthermore, the hospitality workforce, which has expanded rapidly with the creation of over 51,000 new jobs in tourism and related industries, often lacks the specialized skills needed for green operations.

4.4 Weak Monitoring and Enforcement

Even where environmental regulations exist, monitoring and enforcement are often weak. The Tourism Committee, while designated as the coordinating authority for various tourism incentives, lacks the resources and technical capacity to systematically verify compliance with green standards. Data collection on environmental performance indicators across the hotel sector is inconsistent, making it difficult to track progress, benchmark performance, or identify areas requiring intervention.

4.5 Consumer Awareness and Market Signals

Although international tourists increasingly seek environmentally responsible accommodation options, the domestic market for green hotels remains underdeveloped. Limited consumer awareness about eco-certification and its meaning, combined with the absence of visible green labeling at hotel properties, means that sustainability efforts do not translate into premium pricing or increased occupancy. This weakens the business case for green investment and reduces the effectiveness of market-based mechanisms.

AN INTEGRATED FRAMEWORK FOR IMPROVING SUSTAINABILITY MECHANISMS

Drawing on the analysis above, this section proposes an integrated framework comprising six interconnected mechanisms for advancing sustainable and green development of Uzbekistan's hotel industry.

5.1 Establish a Mandatory National Green Certification System

The absence of a nationally recognized and mandatory green certification system represents the most significant institutional gap. Uzbekistan should develop a tiered certification framework aligned with international standards such as GSTC, Green Key, or LEED, adapted to local conditions. The framework should include:

- **Basic compliance level** covering minimum environmental standards (energy efficiency, water conservation, waste management) applicable to all new and existing hotels.
- **Advanced green level** requiring higher performance thresholds, sustainable sourcing, and third-party verification, qualifying hotels for enhanced incentives.
- **Premium eco-level** recognizing exceptional performance and innovation, including carbon-neutral or zero-waste operations.

The system should be administered by the Tourism Committee in partnership with accredited third-party certifiers, with certification costs partially subsidized through the existing 50% reimbursement mechanism. Mandatory certification should be phased in over 3–5 years, starting with new construction and large hotels before extending to existing establishments.

5.2 Scale Up Targeted Green Financing Instruments

Building on the existing GEFF program and government subsidies, Uzbekistan should expand and diversify green financing options for hotels:

- **Green revolving fund** dedicated to hospitality sector energy efficiency and renewable energy projects, capitalized through international climate finance mechanisms.

- **Performance-based incentives** linking incentive amounts to verified environmental outcomes rather than simply investment costs.
- **Green mortgage products** for hotel construction and renovation, offering preferential interest rates for projects meeting green building standards.
- **Technical assistance grants** for energy audits, feasibility studies, and certification preparation, particularly for small and medium hotels.

The foresight process identified the need for expanded green finance and improved investment conditions as essential for achieving the "Preferred Future" of sustainable tourism in Uzbekistan.

5.3 Integrate Circular Economy Principles into Hotel Operations

Beyond incremental efficiency improvements, a circular economy approach offers transformative potential for the hotel industry. Key interventions include:

- **Food waste reduction and composting**: Given that food services constitute a major component of hotel operations, Uzbekistan's hospitality sector should adopt systematic food waste measurement, prevention, and diversion strategies, aligned with the SWITCH-Asia circular economy pathways.
- **Reusable and refillable systems**: Phase out single-use plastics in favor of refillable amenity dispensers, reusable linens programs, and bulk purchasing arrangements, building on initial steps already taken by many Uzbek hotels.
- **Furniture, fixture, and equipment circularity**: Establish take-back programs, refurbishment services, and secondary markets for hotel furnishings, reducing waste and creating new business opportunities.
- **Water recycling and rainwater harvesting**: In water-stressed regions such as Bukhara and Khiva, hotels should be required to implement on-site water recycling systems, with technical standards developed by the Ministry of Ecology.

5.4 Strengthen Public–Private Partnerships for Capacity Building

Sustainable hotel development requires sustained investment in human capital and institutional capacity. Recommended actions include:

- **Green hospitality training programs** integrated into vocational education curricula at tourism and hospitality schools, including the "Silk Road" International University of Tourism and Cultural Heritage.
- **Demonstration hotel network** comprising leading green hotels (e.g., InterContinental Tashkent as the first Green Key-certified property) that serve as learning sites and mentors for other establishments.
- **Industry knowledge platform** providing online resources, case studies, toolkits, and expert advice on green hotel operations, accessible to all hoteliers.
- **Supplier matchmaking events** connecting hotels with vendors of green products, equipment, and services, building on the B2B exhibitions already organized at industry forums.

5.5 Leverage Digital Technologies for Monitoring and Transparency

Digitalization offers powerful tools for enhancing environmental performance monitoring and market transparency:

- **Hotel Energy and Water Management Systems**: Require hotels above a certain size to install submetering and real-time monitoring systems, with data aggregated anonymously to establish benchmarks and track sectoral progress.
- **Blockchain-based certification verification**: Ensure the integrity and traceability of green certifications through distributed ledger technology, preventing greenwashing and building consumer trust.
- **Mobile application for green hotel discovery**: Develop a user-friendly platform allowing tourists to search for certified green hotels by location, certification level, and specific sustainability features.
- **Digital carbon accounting**: Implement the Hotel Carbon Measurement Initiative (HCMI) system across Uzbekistan's accommodation facilities, enabling standardized measurement and reporting of carbon emissions.

5.6 Align Incentives with Performance and Create Market Pull

The effectiveness of any sustainability mechanism depends on the alignment of incentives with desired outcomes. Uzbekistan should adopt a comprehensive incentive architecture:

Stakeholder	Incentive Type	Mechanism
Hotel Investors	Financial	Tax credits, accelerated depreciation, customs exemptions for green equipment
Hotel Operators	Operational	Lower utility costs (via efficiency), reduced waste disposal fees
Hotel Guests	Behavioral	Green loyalty points, carbon offset options, preferential rates for certified hotels
Tour Operators	Market	Green hotel inclusion in government-promoted tour packages
Financial Institutions	Risk mitigation	Partial guarantee schemes for green hotel loans
Local governments	Performance	Budget allocations tied to regional green hotel targets

Crucially, the existing 50% VAT refund for international events that attract at least 100 foreign visitors should be extended to require that a portion of accommodation used for such events be in certified green hotels, creating demand pull for certification.

CONCLUSION AND IMPLICATIONS

The improvement of mechanisms for sustainable and green development of Uzbekistan's hotel industry is not merely an environmental imperative but a strategic necessity for maintaining the country's tourism competitiveness in an increasingly carbon-conscious global market. This paper has demonstrated that while Uzbekistan has made commendable progress in establishing policy frameworks, green financing mechanisms, and industry engagement platforms, significant gaps remain in translating these enablers into widespread operational change.

The integrated framework proposed here—encompassing mandatory certification, scaled-up financing, circular economy integration, capacity building, digital monitoring, and aligned incentives—offers a coherent pathway forward. Implementation will require sustained political commitment, adequate resourcing of implementing agencies, and genuine partnership between government, industry, financial institutions, and civil society.

Several directions for future research emerge from this analysis. First, empirical studies are needed to quantify the cost–benefit ratios of green hotel investments across different hotel sizes and types in the Uzbek context, building on the promising work already conducted in Bukhara. Second, research on consumer preferences for green hotels among both international and domestic tourists in Uzbekistan would inform market positioning and certification design. Third, longitudinal studies tracking the environmental and financial performance of hotels adopting green practices would provide evidence to overcome remaining skepticism.

The window of opportunity for embedding sustainability into Uzbekistan's rapidly expanding hotel industry is finite. As the sector scales to meet the 2030 targets, decisions made today about infrastructure, technology, and operational standards will lock in environmental outcomes for decades. By acting decisively to improve the mechanisms for sustainable and green development, Uzbekistan can position its hotel industry as a regional leader in responsible tourism—demonstrating that economic growth and environmental stewardship are not opposing forces but mutually reinforcing dimensions of a prosperous and resilient future.

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