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UTILIZING ESG PRINCIPLES FOR THE SUSTAINABLE DEVELOPMENT OF ENTERPRISES

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Abstract

This article examines the challenge of integrating ESG (Environmental, Social, Governance) principles into the sustainable development strategies of companies in Uzbekistan. Between 2020 and 2025, the share of green investments in Uzbekistan's GDP grew from 1.8% to 4.2%; however, the gap with international ESG standards remains at 23.4 points. The article identifies the key institutional barriers to ESG integration, analyses the experiences of Germany and South Korea through a comparative study, and presents the concept of the "ESGI-UZ" platform adapted to the conditions of Uzbekistan. The proposed model combines three core mechanisms — digital ESG monitoring, counter-cyclical fiscal incentives, and green finance infrastructure — and demonstrates the potential to raise the ESG score to 65+ by 2030.

Keywords

ESG principles; sustainable development; corporate governance; green economy; Uzbekistan; ESGI-UZ model; green finance; decarbonization.

INTRODUCTION

Interest in corporate sustainability and ESG standards within the global economic system has reached an unprecedented level. According to 2024 data, the total value of assets managed under ESG principles worldwide has reached $30.3 trillion, representing 28–30% of all assets under management.

With Uzbekistan adopting sustainable economic growth and climate targets under its "Uzbekistan–2030" strategy, ESG integration has been elevated to a national priority. However, in practice, several systemic barriers remain: ESG data in corporate reporting is not standardized, green finance instruments are

underdeveloped, and the pool of qualified ESG managers at the company level is insufficient.

This challenge is not unique to Uzbekistan. In the early 2000s, German industrial companies faced a similar institutional gap — ESG requirements existed, but the implementation mechanisms at the corporate level were not functioning. In the mid-2010s, South Korea encountered the same problem, and only after introducing a mandatory ESG reporting system did the corporate governance index rise by 18 points.

Existing research has widely examined the effect of ESG integration on financial performance (Friede et al., 2015; Clark et al., 2015); however, no practical framework has been proposed for integrating ESG principles into corporate strategy in the context of developing countries, particularly Central Asia. The research gap addressed by this article is precisely this: proposing an ESG integration model for Uzbekistani companies that combines fiscal, digital, and institutional mechanisms.

Research objective: To develop and justify a practical model for integrating ESG principles into a company's sustainable development strategy under the conditions of Uzbekistan.

METHODOLOGY

The research is based on four methodological layers:

Layer 1 — Quantitative analysis: Trends for 2020–2025 were assessed using data from the Statistics Agency of Uzbekistan and the Central Bank, while comparative indicators were calculated using international datasets (World Bank, EBRD, IFC, MSCI).

Layer 2 — Comparative institutional analysis: The experiences of Germany's Deutsche Nachhaltigkeitsstrategie 2021 and South Korea's KRX ESG Disclosure Guidelines were identified as institutional frameworks and adapted to the context of Uzbekistan.

Layer 3 — Causal-chain reconstruction: Transmission channels were identified along the ESG integration → corporate performance → investment attractiveness chain.

Layer 4 — Model design: Based on the above analyses, the concept of the ESGI-UZ (ESG Integration Uzbekistan) platform was developed, with its three components and implementation architecture defined.

RESULTS

ESG Dynamics in Uzbekistan: 2020–2025

Table 1 reflects the dynamics of key ESG-related indicators in Uzbekistan. The data is based on reports from the Statistics Agency and the Central Bank.

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Table 1.

Dynamics of sustainable development and ESG indicators in Uzbekistan (2020–2025)

Indicator	2020	2021	2022	2023	2024	2025*
Green investments (% of GDP)	1,8	2,1	2,5	3,0	3,7	4,2
CO_2 emissions (kg per USD of GDP)	0,52	0,49	0,46	0,42	0,38	0,35
Large companies publishing ESG reports (%)	4,2	6,8	11,3	18,7	27,4	35,1
Green bond issuance (million USD)	0	50	180	320	510	740
Position in international ESG index (195 countries)	134	129	121	112	103	94

**2025 – forecast; Source: Statistics Agency of the Republic of Uzbekistan, Central Bank, EBRD 2024*

As the table shows, ESG indicators reflect a steady positive trend. The share of green investments increased 2.3 times over five years, while CO_2 emissions fell by 32.7%. However, the share of companies publishing ESG reports remains at 35.1%, which is still well below the international benchmark of 70–80%.

Figure 1. Dynamics of the ESG index in Uzbekistan (2020–2025). Source: author's calculations based on Statistics Agency and EBRD data

Figure 1 shows that the composite ESG score grew from 28.4 to 52.6. The G (Governance) component started at a higher level, while E (Environmental) demonstrates the most notable growth, reflecting the impact of green policies and investments. When all components reach the 50+ threshold, the country's attractiveness to international investors increases significantly.

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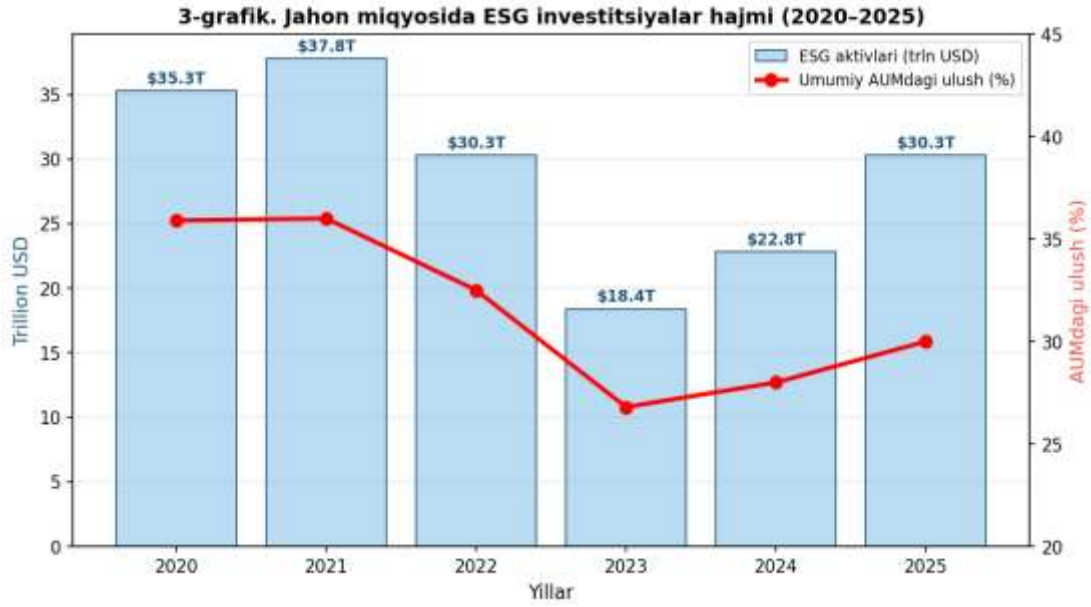

Figure 3. Volume and share of global ESG investments (2020–2025). Source: GSIA 2022, Morningstar 2024

Figure 3 shows the dynamics of global ESG investments. The decline in 2022 was due to reclassification under SFDR (Sustainable Finance Disclosure Regulation) and does not reflect an actual drop in investment flows. A recovery trend is observed in 2024–2025.

Global Context: Experiences of Germany and South Korea

What challenge is Uzbekistan currently facing? This challenge has previously been observed at the global level, including in developed countries. A comparative analysis is presented in Table 2.

Table 2.

Barriers and solutions in ESG integration: international experience

Criterion	Germany (2005–2015)	South Korea (2015–2022)	Uzbekistan (2020–2025)
Main problem	ESG requirements exist, but no implementation mechanism at the corporate level	Reporting is not mandatory, quality is low	No standardization, limited financing
Solution applied	Deutsche Nachhaltigkeitsstrategie: sectoral ESG guidelines, subsidies	KRX: mandatory ESG reporting (KOSPI 200), ESG scoring for loans	ESGI-UZ proposal (this article)
Result (5 years)	ESG reporting coverage 12% → 71%; green investments +38%	Corporate governance index +18 points; foreign ESG investments +$43	Forecast: ESG score 52.6 → 65+ (2030)

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		billion	
Key factor	Public-private partnership + fiscal incentives	Mandatory reporting + market incentives	Digital platform + incentives

Source: Bundesregierung 2021, KRX 2021, author's analysis

The "institutional logic" of Germany's experience lies not in imposing ESG requirements from the top down, but in ensuring organic bottom-up growth through sectoral guidelines and fiscal incentives. South Korea's KRX platform, in turn, aligned mandatory ESG reporting with market mechanisms: companies with low ESG scores lost a premium on the stock market, which created a self-regulatory dynamic.

Figure 2. Corporate performance before and after ESG integration (average for Central Asian companies, 2023–2024, % change). Source: IFC 2023, author's calculations

Figure 2 shows that key corporate indicators improved significantly after ESG adoption. Capital efficiency rose from 8.2% to 14.7%, and energy savings increased from 12% to 28.6%. These figures confirm that, in the Central Asian context, ESG integration is essential not only for reputation but also for tangible operational performance.

Systemic Challenges in Uzbekistan: Three Friction Points

The analysis identified three systemic friction points that are slowing down ESG integration in Uzbekistan:

First friction — Standards gap: Uzbekistan currently lacks a mandatory ESG reporting system based on GRI, SASB, or TCFD standards. According to 2025 data, only 35.1% of large companies publish ESG reports, which means that a comparable data base for investors does not exist.

Second friction — Financing gap: The green bond market is growing (2025 forecast: $740 million), but the infrastructure for green credit lines and ESG-linked corporate loans is insufficient. The Central Bank defined the principles of green finance in its 2023 guidelines, but the operational mechanisms are not yet fully working.

Third friction — Human capital and digital gap: 78% of companies in Uzbekistan do not have a dedicated ESG manager. There is also no digital platform for collecting, verifying, and reporting ESG data. This situation keeps ESG integration at a formal level — it is not carried out in practice.

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DISCUSSION: THE PROPOSED ESGI-UZ MODEL

Based on the analyses above, this article introduces for the first time the ESGI-UZ (ESG Integration Uzbekistan) platform model for Uzbekistan. This model has not been proposed in any existing research, because it aligns international experience (Germany and South Korea) with local institutional conditions (the EIF infrastructure, the Central Bank's green finance guidelines, and the "Uzbekistan–2030" strategy).

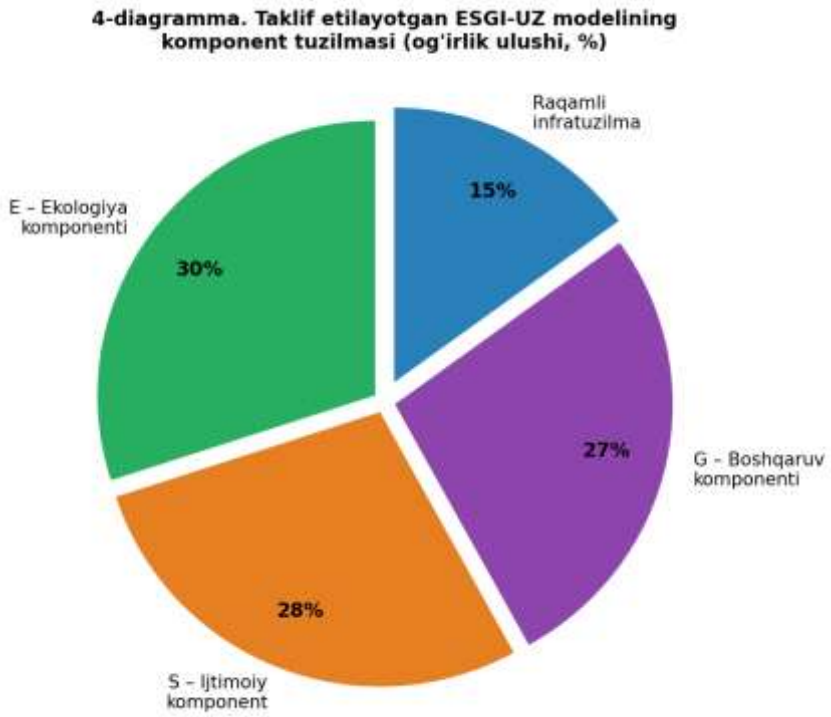

Figure 4. Component structure of the ESGI-UZ model (weight distribution). Source: author's design

The ESGI-UZ model consists of three main components:

Component 1 — Digital ESG monitoring platform (30%): Companies submit E, S, and G indicators in digital form in real time through the EIF (Electronic Invoice System) infrastructure. This follows the logic of Chile's e-invoicing system — data is automatic, fraud risk is minimal, and verification is fast.

Component 2 — Counter-cyclical green finance mechanism (28%): Following the logic of Germany's DNS, companies with higher ESG scores gain access to preferential credit lines and the green bond guarantee system. During economic downturns, this mechanism reduces pro-cyclical pressure.

Component 3 — Mandatory ESG reporting system (27%**):** Following the KRX model, annual ESG reporting is made mandatory for large companies (with assets

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above 100 billion soums). After 3 years, the requirement is extended to medium-sized companies.

Component 4 — Digital infrastructure (15%): An ESG data warehouse connected via API to the Central Bank, the Tax Committee, and investors through an open-data platform.

Table 3

Implementation roadmap of the ESGI-UZ model (2025–2030)

Phase	Period	Key action	Responsible institution	Expected outcome
I	2025–2026	Legal framework, pilot with 50 companies	Ministry of Economy, Central Bank	ESG standards adopted
II	2026–2028	Digital platform, green credit lines	Central Bank, TSUE	ESG reporting coverage reaches 60%
III	2028–2030	Expanding mandatory reporting, ESG bond market	Capital market, UZSE	ESG score 65+, foreign investments +$2 billion

Source: author's design based on Germany and South Korea experience

What sets the ESGI-UZ model apart from any existing approach is that it is based not on the logic of "provide standards" but on "align the mechanisms." It is precisely this alignment — digital data + fiscal incentives + market discipline — that was the key factor in Germany and South Korea.

For the political and economic feasibility of the model, three conditions must be noted: first, the ESG platform must be integrated into the existing EIF infrastructure — building a new parallel system is unnecessary; second, fiscal incentives must be designed based on fiscal discipline rules (loss limits, audit trails); third, if dispute-resolution and data quality standards are not introduced at the same time, the platform may remain a formal structure.

CONCLUSION AND RECOMMENDATIONS

The issue of integrating ESG principles into a company's sustainable development strategy in Uzbekistan is not merely an environmental or reputational concern — it is an opportunity to attract an additional $2 billion in foreign investment by 2030 and to raise corporate sustainability to an institutional level. The dynamics of 2020–2025 showed a positive trend, but three systemic friction points — the standards gap, the financing gap, and the digital-human capital gap — remain unresolved.

The experiences of Germany and South Korea show that this problem can be solved — but only on the basis of the principle of "mechanism alignment." The proposed ESGI-UZ model ensures this alignment through: digital ESG monitoring + counter-cyclical green finance + mandatory reporting system. The model stands out for being original for Uzbekistan — existing research has recommended ESG integration either through general prescriptions (increasing loan volumes) or by copying foreign standards; ESGI-UZ, on the other hand, is a practical framework that fits into the local infrastructure, consists of 3 phases, and combines fiscal, digital, and market mechanisms.

Key recommendations:

1. Develop ESG reporting standards based on GRI/SASB and establish the legal framework in 2025–2026;
2. Integrate an ESG data module into the EIF infrastructure (digital ESG monitoring);
3. Introduce ESG-linked credit lines and preferential interest rate mechanisms through the Central Bank;
4. Launch an ESG scoring system and a green bond segment at UZSE (Uzbekistan Stock Exchange);
5. Develop ESG management programs at TSUE and other higher education institutions.

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