

**FROM FINANCIAL AUDIT TO CLIMATE AUDIT: EXPANDING ACCOUNTABILITY
MECHANISMS FOR UZBEKISTAN'S GREEN ECONOMY GROWTH**

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Abstract: Uzbekistan is moving through a strategic transition into a green economy; it is therefore essential to have the Green Economy Transition Strategy for 2019–2030 and climate resilience commitments under the Paris Agreement. This transition demands a lot of green investments in areas such as green bonds, renewable energy, and climate-smart agriculture. Yet, transparency and a genuine green image for the investments without falling to greenwashing remain huge hurdles for building investor confidence. Financial audits in Uzbekistan have traditionally focused on compliance with legal norms and the accountability of public money, but the somewhat novel domain of green finance calls for a new audit paradigm: climate audit. In order to ensure financial accountability, climate audit bridges the gap between conventional financial auditing techniques and international standards of Environmental, Social, and Governance (ESG) reporting, and helps in meeting the Sustainable Development Goals (SDGs). Based on the institutional setup of the country, this research analyzes existing lines of accountability, highlights gaps therein, and compares international best practices to propose a roadmap for introducing climate audit mechanisms into Uzbekistan's financial control system.

Key words: Climate Audit Financial Accountability, Green Economy, Sustainable Finance, Green Bonds Uzbekistan, ESG Reporting Sustainable Development Goals (SDGs), Climate-Resilient Development, Environmental Auditing

1. Introduction

The worldwide shift toward low carbon and sustainable development has metamorphosed financial markets and accountability and auditing practices in governance systems. With the rise of green bonds, climate funds, and sustainability-linked investment, transparency and greenwashing have become key issues of concern. Traditional financial audits, while very effective in ensuring compliance with laws and fiscal discipline, usually cannot grasp the greater environmental and social implications of green economy projects-this has led to climate audits: an expanded accountability measure brought about by environmental, social, and governance (ESG) considerations in financial oversight. Uzbekistan's ambitious Green Economy Transition Strategy for 2019-2030 and commitments under the Paris Agreement come at an important juncture as it redefines its development trajectory. With the country's intense environmental degradation, high greenhouse gas intensity, and vulnerability to climate change, there is a need beyond sustainable financing-a credible system of verification and assurance. Climate auditing can strengthen public trust. To attract international investors and forward national policies in line with SDGs. In this scientific study, we are looking at the metamorphosis of financial auditing into climate auditing in Uzbekistan. Thus, the integration of climate audit mechanisms into the framework of accountability of the country increases transparency with respect to green finance utilization and fosters faster climate-resilient development. Drawing on international best practices and the policy landscape of Uzbekistan, the current research provides the conceptual background against which a detailed analysis of the ways in which auditing can be positioned as a strategic instrument for the promotion of sustainable economic growth may follow.

2. Literature review

The development of auditing research shows that people understand traditional financial audits which verify fiscal responsibility do not adequately assess climate change risks and sustainable development challenges. The traditional auditing systems established their main focus on checking regulatory compliance and financial statement accuracy and identifying fraudulent activities according to Gray and Manson (2019). The green economy requires new accountability systems which show environmental and social and governance performance. The concept of climate audit emerged through the combination of sustainability principles with assurance practices which now verify financial statements together with climate-related disclosures and performance results as described by O'Dwyer and Owen (2005) and Simnett et al. (2009).

The literature base includes studies which analyze sustainability reporting frameworks and ESG disclosure standards that use Global Reporting Initiative and Sustainability Accounting Standards Board and International Sustainability Standards Board standards. The frameworks establish specific rules which help organizations reveal their climate and sustainability performance data. The experts agree that companies produce deceptive environmental statements because they do not have third-party confirmation according to reports from KPMG and Eccles and Krzus. Studies by Cohen and Simnett together with Casey and Grenier show that external verification of ESG reports creates trust which leads to investor safety and better sustainability goal achievement for companies.

Research studies investigate how auditing functions within sustainable finance operations to verify proper allocation of green bond and climate fund resources. The International Capital Market Association (ICMA) Green Bond Principles mandate issuers to disclose information continuously while requiring independent verification according to their 2021 guidelines. Studies demonstrate that green finance tools which receive thorough external audits achieve better market acceptance and reduced risk premiums according to Tang and Zhang (2020) and Zerbib (2019). The auditing process in emerging economies faces obstacles because auditors lack proficiency and regulators fail to enforce rules properly according to ADB (2023). The observation holds particular importance for Central Asia because this region continues to build institutional frameworks for climate-related assurance according to UNDP (2023).

Research studies examine the operational aspects of auditing functions as described in The literature points to Supreme Audit Institutions (SAIs) as essential institutional accountability systems which perform audits of public funds dedicated to sustainable development projects. The INTOSAI Working Group on Environmental Auditing together with Guthrie and Farneti showed in 2008 and 2021 that national audit offices now include climate risk assessment in their standard audit procedures. According to OECD research from 2020 countries which use environmental auditing for public finance monitoring achieve better alignment between their fiscal policies and climate targets. The Green Economy Transition Strategy of Uzbekistan for 2019–2030 presents two main challenges and opportunities because its ambitious targets face threats from inadequate climate spending audit systems which could result in poor financial management.

Emerging scholarship examines the use of technology in auditing through blockchain-based climate finance monitoring systems and real-time emissions tracking and artificial intelligence auditing tools (Lefevre et al., 2022). The tools help investors track their environmental impacts while making the process transparent and reducing fraudulent reporting. Uzbekistan has developed a pilot blockchain-based registry for green finance which matches worldwide trends but its connection to auditing procedures remains underdeveloped.

3. Research methodology

In this article, the study employs a mixed-methods approach to analyze the shift between financial auditing and climate auditing and its potential to enhance accountability for

Uzbekistan's green economic development. The research achieves a thorough examination of institutional practices and policy frameworks and stakeholder perspectives through its combination of qualitative and quantitative methods.

3.1 Research Design

The research uses an exploratory approach together with a comparative analysis framework. The study examines how Uzbekistan can turn its existing financial auditing methods into climate auditing systems through a method which unites traditional auditing practices with modern climate assessment tools. The research study conducts its analysis through examining policy documents and audit regulations and sustainability reports. The study evaluates financial data and environmental statistics which exist in public records to track green project information and investment movements and budget allocations. The research study uses interviews together with expert consultations to gather qualitative information from auditors and policymakers and financial institutions and development partners.

3.2 Data Sources

Primary Data

The research team conducted interviews with officials from the Chamber of Accounts and Supreme Audit Institution and Ministry of Finance and auditing firms and commercial banks which handle sustainable finance. The study distributes questionnaires to auditors and accountants who will perform climate audits to determine their current level of preparedness for this process.

Secondary Data

National documents including the 2019–2030 Strategy for Transition to a Green Economy and the Law on Renewable Energy (2020) and audit regulations. International frameworks and standards (INTOSAI environmental auditing guidelines, ISSB, GRI, ICMA Green Bond Principles). The information comes from academic research together with reports which the World Bank and ADB and UNDP have created.

Analysis and discussion of results

The auditing and accountability system of Uzbekistan shows forward movement together with ongoing obstacles when it comes to transforming standard financial oversight into climate auditing requirements. The Green Economy Transition Strategy of Uzbekistan from 2019 to 2030 created a governance framework which the country used to join the Paris Agreement and the SDGs yet it lacks proper systems for independent verification and accountability. The transition from financial audit to climate audit demands complete transformations in policy frameworks and institutional readiness and professional operational standards.

SWOT Analysis of Uzbekistan's Audit and Accountability Framework for Green Economy Growth

Strengths	Weaknesses	Opportunities	Challenges
- <i>National Green Economy Strategy 2019–2030</i> under ESG Supreme Audit Institution oversight. Banking	- No specialized climate audit framework. Auditors lack expertise in impact measurement. Fragmented responsibilities across sector institutions.	- Adoption of global standards (INTOSAI, GRI, ICMA). Use of blockchain and AI for transparency. International training programs to build professional capacity.	- Risk of greenwashing and weak government monitoring. - Lack of accountability reduces investor confidence. - Institutional resistance to expanding audit scope.

Strengths	Weaknesses	Opportunities	Challenges
developed financial systems initial programs.	audit with ESG		

Policy basis is present — The Green Economy Strategy 2019–2030 delineates a target of 35% reduction of GHG emissions per unit of GDP by 2030, but measures to audit progress are not yet established. Weak ESG reporting and verification — Only 1 in 10 large companies in Uzbekistan provides ESG data, compared with 80% in OECD countries. This constrains opportunities for undertaking climate audits. Capacity — Less than 15% of professional auditors in Uzbekistan have had formal exposure to standards related to sustainability or climate-related auditing. Financial scale of the problem — Uzbekistan will need approximately USD 6.5 billion annually through 2030 for green investments (World Bank, 2022), putting a premium on accountability in mobilizing external finance. Trust of investors is still tenuous — The country's first sovereign SDG bond issuance (USD 300 million, 2021) gained international recognition, however, without a domestic climate audit process, external reviewers provided most of the verification. There is a readiness to establish policy, however, the government has not yet put in place any regulatory frameworks for climate audit. Auditors in the country remain focused on compliance and performance financial, while very little attention is placed on climate related risks or ESG metrics. Capacity gaps exist - auditors do not have expertise in sustainability assurance, impact measurement, and carbon accounting. There are some opportunities to adopt best practices from others around the world, for example, the INTOSAI environmental auditing guidelines, ISSB environmental auditing requirements, and to utilize blockchain-enabled audit tools.

Trust of investors is at risk of declining rapidly, meaning that stronger audit based accountability systems is one option to encourage attractive sustainable finance. Uzbekistan's transition from financial to climate audit is both necessary and urgent. Other key factors of strengthening accountability systems will reduce risks of greenwashing while also improving credibility in the international investment community. Institutional reform, educating and training the profession, and adopting established international audit standards is critical in establishing climate audit within Uzbekistan's green economy development strategy.

Conclusion

Uzbekistan is currently at a turning point in its economic and institutional transformation, where the need for sustainable growth intersects with calls for accountability on climate action from around the world. Traditional financial auditing has long been at the heart of attitudes toward fiscal discipline and compliance but is insufficient to face the larger threats of climate change, environmental stewardship, and sustainable development. This research shows how the move from financial audit to climate audit is not only important, but a necessity, for Uzbekistan to successfully realize its Green Economy Transition Strategy for 2019–2030 and its international commitments under the Paris Agreement and the Sustainable Development Goals (SDGs).

This research revealed that Uzbekistan has set important policy groundwork, but major gaps still remain. The absence of a climate audit framework, divided responsibilities among institutions, and limited auditor capacity on ESG and impact measurement erodes the reliability of climate

investments. These gaps create risks around greenwashing, decrease investor confidence, and slow international climate finance. Without appropriate systems of accountability, there can be little enthusiasm for Uzbekistan's green transition despite the political will to move forward.

At the same time, considerable opportunities exist. Through international adaptations such as INTOSAI environmental auditing guidelines, ISSB disclosure standards, and GRI/ICMA reporting principles, Uzbekistan can more quickly build credibility and align with global standards. Digital innovations like blockchain registries and AI-based audit tools also provide avenues to increase transparency and traceability of green finance. Building the capacity of the Supreme Audit Institution, increasing opportunities for professional development and training in climate audits, and enhancing joint coordination between financial regulators and environmental regulators will be important for embedding climate-long term accountability across sectors.

In conclusion, the transition from financial audit to climate audit is a strategic reform that may advance Uzbekistan's green economy agenda. Climate audits will both assess the quality of sustainable finance and ensure capital investments provide environmental and social benefits. With an established culture of climate audit, Uzbekistan will build investor trust, attract sustainable capital, and develop into a regional leader in climate accountability. This shift will then support the nation achieving resilient, inclusive, and sustainable growth while contributing global climate and development objectives.

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