

Pakistan's Path to Sustainable Finance: Green Taxonomy and Carbon Market Readiness

Introduction

Climate change is one of the biggest problems in the twenty-first century that poses severe danger to the environment, the society and the economy. In order to resolve this issue, the economy must be essentially re-oriented towards sustainability with inclusion of investment, climate resilient growth and low carbon development (UNEP FI, 2023). In this context, there is a need to coordinate capital flow with financial development, economic expansion and climate goals.

To help investors, regulators and legislators, nations around the world are creating green taxonomies, which are classification schemes that specify environmentally sustainable economic activity. Important turning points in this transition include China's Green Bond Endorsed Project Catalogue, the European Union's Green Taxonomy and the ASEAN Taxonomy for Sustainable Finance (EU Commission, 2020; ASEAN, 2021). At the same time, carbon markets have become more popular as a way to set prices for carbon emissions and encourage low carbon investments; more than 70 countries have either implemented or are preparing to implement carbon pricing instruments (World Bank, 2023).

Pakistan's vulnerability to the effects of climate change and its obligations under the Sustainable Development Goals and Nationally Determined Contributions make the adaptation of these frameworks even more urgent. An important step in bringing financial industry practice into line with Pakistan Vision 2030's sustainable development and climate goals is the National Green Taxonomy, which was started by the State Bank of Pakistan and the Securities and Exchange Commission of Pakistan.

This article offers policy recommendations to hasten Pakistan's shift to sustainable finance by analyzing the country's progress in creating a National Green Taxonomy and assessing its preparedness for integration into the carbon market.

Understanding National Green Taxonomy

A national Green Taxonomy is a systematic framework of classification that establishes what economic activities are considered environmentally sustainable. It reduces greenwashing and improves the integrity of sustainable finance by giving banks, investors, and regulators a uniform framework for identifying, tracking, and reporting green investments (OECD, 2024). The EU's Green Taxonomy, China's Green Bond Catalogue and the ASEAN Taxonomy for Sustainable Finance are a few examples of the global taxonomies that direct financial flows toward climate resilient projects (EU Commission, 2023; ASEAN, 2024).

Recently, Pakistan has made significant progress in this area. In February 2025, the State Bank of Pakistan (SBP) released the draft National Green Taxonomy for public comment, working with the Ministry of Climate Change and Environmental Cooperation (MoCC & EC) and with assistance from the World Bank. In order to help financial institutions with credit allocation and portfolio alignment, the framework attempts to

categorize activities into green, amber and red groups according to their environmental performance (SBP, 2025). Measurable screening criteria and performance standards are being established for seven major sectors: energy, agriculture, manufacturing, transportation, construction, water and ICT (ISSI, 2025).

This taxonomy is a first step in integrating sustainability and climate risk into Pakistan's financial system. It would improve Pakistan's preparedness for carbon markets and sustainable finance reporting in accordance with international norms, help mobilize green capital and connect investment flows with SDGs and NDCs.

The Carbon Market Framework

A carbon market is a policy-driven system that gives carbon emissions a monetary value, enabling nations, businesses or organizations to effectively meet climate goals by purchasing and selling carbon credits. It functions through two main mechanisms: voluntary carbon markets (VCMs), where organizations offset their emissions through approved projects like reforestation or renewable energy, and compliance markets, which are set up under regulatory frameworks like the EU Emissions Trading System (EU ETS) (World Bank, 2024). Globally, carbon markets are acknowledged as economical instruments to stimulate innovation, encourage emission reductions and raise private funds for low carbon development (UNDP, 2025).

As part of its obligations under the Paris Agreement and Nationally Determined Contributions (NDCs), Pakistan has started getting ready for the carbon markets in recent years.



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In order to create carbon pricing tools and a measurement, reporting and verification (MRV) system, the Ministry of Climate Change and Environmental Coordination (MoCC & EC) began technical studies in 2024 with assistance from the World Bank's Partnership for Market Implementation (PMI) program (MoCC & EC, 2024). In order to guarantee that sold credits come from verified, sustainable activities like renewable energy, afforestation and energy efficiency initiatives, Pakistan's strategy places a strong emphasis on an integrity-focused carbon market mechanism with the National Green Taxonomy.

In addition to bolstering Pakistan's climate governance, the creation of a local carbon market will create new avenues for green investment, international credit trading and private sector involvement in emission reduction. According to Article 6 of the Paris Agreement, if Pakistan wants to become a carbon-free or even low-carbon economy, then it is essential to put serious attention on a sustainable shift which will only be possible by making robust decisions at the strategic level.

Linking Green Taxonomy and Carbon Market Readiness

The strategic convergence of climate governance and sustainable finance is exemplified by the integration of Pakistan's National Green Taxonomy (NGT) with its framework for carbon market preparation. In order to ensure that investment and financial flows are focused on low carbon and climate resilient initiatives, the NGT offers a classification system for ecologically-friendly economic activities. Concurrently, these initiatives can provide a demonstrable reduction in emissions that can be sold for carbon credits thanks to the carbon market framework (SBP, 2024).

This congruence guarantees that green-labeled activities under the taxonomy like waste management, sustainable agriculture and renewable energy can also be eligible to participate in voluntary or compliance carbon markets. To ensure openness and integrity, the State Bank of Pakistan is working with the Ministry of Climate Change and Environmental Coordination to establish a mechanism for green financing verification and carbon accounting protocols (MoCC & EC, 2024). By reducing risks and boosting the legitimacy of green initiatives, such coherence not only draws in foreign climate money but also encourages private sector involvement.

Furthermore, integrating the NGT with carbon market mechanisms increases Pakistan's capacity to meet its Nationally Determined Contributions (NDCs) under the Paris Agreement. It ensures that both policy instruments, finance and carbon pricing, mutually reinforce each other, resulting in measurable emission reductions and resilient economic growth. In order to mobilize sustainable finance, promote innovation and develop a low carbon inclusive economy in Pakistan, taxonomy-based classification and carbon trading must work together.

Institutional Roles and Governance Mechanisms

Healthy coordination, an uncluttered governance system and an interconnected vision within the institutions are essential for Pakistan's Green Taxonomy and carbon market attentiveness and the style must be promulgated positively.

By incorporating the taxonomy into the financial sector's risk management, investment screening and green financing rules, the State Bank of Pakistan plays a crucial role in ensuring that banks and DFIs direct credit towards sustainable sectors (SBP, 2024). In order to facilitate taxonomy-aligned investments, the Securities Exchange Commission of Pakistan is responsible for integrating environmental, social and governance disclosure criteria into corporate reporting frameworks (SECP, 2024).

In order to guarantee integrity and adherence to international standards, the Ministry of Climate Change and Environmental Coordination is responsible for overseeing the governance of the carbon market and providing the national policy framework. Establishing a Measurement, Reporting and Verification system for carbon emissions and green funding requires coordination between these organizations (MoCC & EC, 2025). Moreover, encouraging innovation, the adaptation of green technologies and creation of regional carbon projects depend heavily on the involvement of the business sectors and academic cooperation. International partners including the World Bank and UNDP continue to support regular alignment, institutional capacity building and preparedness for global carbon credit markets (UNDP, 2025).

Consequently, to guarantee Pakistan's seamless transition to a sustainable, low carbon financial ecosystem, a clearly defined governance structure supported by interagency cooperation, policy consistency and reliable data systems is still crucial.

Challenges and Opportunities in Implementation

Notwithstanding a number of institutional, technological and market-based obstacles, Pakistan's National Green Taxonomy and carbon market framework implementation offers substantial long-term prospects for sustainable growth. Accurately classifying and tracking green investments is hampered by the scarcity of trustworthy environmental data (SBP, 2024). Additionally, the absence of MRV (Measuring, Reporting and Verification) infrastructure undermines the credibility of emission reduction claims and regulatory overlaps between financial and environmental institutions may cause uncertainty in compliance procedures (MoCC & EC, 2025).

Operationalization is further deferred by capacity constraints among corporations and financial institutions, especially in ESG reporting, corporate accounting and green project review (SECP, 2024). Besides, there are fewer incentives for private sector involvement because market liquidity and the pricing mechanism for carbon credits are still being developed. But these obstacles also provide excellent possibilities.

The Green Climate Fund (GCF) and voluntary carbon markets are two international sources of climate financing that Pakistan can mobilize through the NGT (UNDP, 2025). Enhanced alignment between carbon market norms and taxonomy criteria can draw foreign direct investment in sustainable agriculture and renewable energy. Moreover, new opportunities for transparency and traceability are presented by the digitalization of reporting systems and the use of blockchain-based MRV technologies.

Hereafter, the increasing convergence of sustainable finance and carbon trading holds great potential for Pakistan's green economic transformation and climate resilience even while institutional and capability gaps still exist.

Policy Recommendations and the Way Forward

A strategic policy roadmap that incorporates institutional capacity, private sector involvement and regulatory clarity is necessary to operationalize Pakistan's National Green Taxonomy and guarantee carbon market readiness. To oversee implementation and address regulatory overlap, the government should first create a National Sustainable Finance Council (NSFC), a cross-institutional coordination body comprising the State Bank, SECP and the Ministry of Climate Change and Environmental Coordination (MoCC & EC, 2025). Secondly, improving transparency, traceability and verification of green investments and carbon credits requires the connection of digital MRV systems with climate data repositories. To encourage private sector participation, the SBP and SECP should provide taxonomy-aligned financial products such as carbon credit-backed assets, green bonds and loans tied to sustainability (SBP, 2024). Thirdly, Pakistan needs to fund programs that increase the ability of financial institutions, regulators and businesses to comprehend carbon accounting techniques, ESG disclosures and green classification criteria. Collaborations with the World Bank, IFC and UNDP can improve financial flows and technical know-how (UNDP, 2025).

Finally, to enhance public, corporate and investors' understanding of the financial possibilities of sustainable finance, a robust communication plan is required. Pakistan will be positioned as a regional leader in green growth and climate resilient development if the NGT and carbon markets are in line with its Vision 2030, SDG commitments and Nationally Determined Contributions (NDCs).

Conclusion of the Study

Nations have been forced to realign their financial systems toward sustainability and low carbon development due to the increasing urgency of climate change. An important step in bringing the financial sector into line with environmental and climatic goals is Pakistan's National Green Taxonomy (NGT). The conceptual underpinnings, institutional functions and policy processes that connect the NGT with carbon market preparedness are examined in this study, with a focus on the coherence between frameworks for carbon pricing and green finance and integrating environmental standards into financial regulation, such as the State Bank of Pakistan, SECP and Ministry of Climate Change and Environmental

Coordination. Another way to mobilize sustainable finance, induce new investment opportunities and expand transparency is through the MRV system, despite data limitations, capacity constraints and regulatory overlaps. If Pakistan wants to make a paradigm shift into a green economy, there is a need to enhance governance, digital infrastructure and partnerships with the private sector.

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