

FOREIGN EXPERIENCE IN DEVELOPING GREEN FINANCING: THE CASE OF DEVELOPED AND DEVELOPING COUNTRIES

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ABSTRACT

This thesis compares the foreign experience of developed and developing countries in building green-financing systems. It reviews the theoretical foundations of green finance, examines the European Union model, contrasts it with China's bank-centred approach and with the constraints faced by other developing economies, and uses Uzbekistan as a case study. It concludes with lessons for developing countries seeking to close their green-investment financing gap..

Introduction

Green financing has become central to the global transition toward a low-carbon, climate-resilient economy. Emerging markets and developing economies alone need close to USD 3 trillion a year by 2030 for climate adaptation, and around USD 7.5 trillion annually to meet broader development and climate goals. Developed and developing countries, however, have followed very different paths: developed economies have built mature regulatory frameworks, deep capital markets and standardised taxonomies, while developing economies rely far more on donor and multilateral support, face weaker institutions and struggle to mobilise private capital at scale. Understanding these divergent trajectories, and identifying which elements of developed-country practice can realistically be transferred to developing-country contexts, is the central task of this thesis.

The aim of the thesis is to study foreign experience in developing green financing in developed and developing countries and to formulate recommendations applicable to developing economies, including Uzbekistan. To achieve this aim, the thesis clarifies the theoretical essence of green financing, examines the institutional model built by developed economies, analyses the experience of leading developing and emerging economies, and draws comparative conclusions illustrated by the case of Uzbekistan. The research relies on a comparative-analytical method, drawing on reports of the European Commission, the European Environment Agency, the OECD, the International Finance Corporation, the Climate Policy Initiative, the Climate Bonds Initiative, the Green Finance and Development Center, and the Ministry of Economy and Finance of the Republic of Uzbekistan.

1. Theoretical Foundations of Green Financing

Green financing is the set of financial instruments and flows directed toward projects delivering climate and environmental benefits, including mitigation, adaptation and resource efficiency. It corrects a persistent market failure whereby environmentally harmful activity has historically been underpriced, while green projects carry higher upfront costs, longer

payback periods and less familiar risk profiles. Its principal instruments are green bonds, green loans and credit lines, green banks and public climate funds, carbon-pricing mechanisms, sustainability-linked loans and bonds, and blended-finance structures that combine concessional public capital with commercial capital to make green projects investable at scale.

The supporting international architecture rests on the Paris Agreement and the Sustainable Development Goals, together with dedicated multilateral climate funds such as the Green Climate Fund and the Global Environment Facility, and development-finance institutions such as the International Finance Corporation. Globally, over forty countries now have national green-finance or sustainable-finance strategies, up from only seventeen a few years earlier, and the number of national green taxonomies in use has grown from three to forty-seven — evidence of rapid institutionalisation of the field.

2. Experience of Developed Countries

2.1. The European Union green-finance model

The European Union has the world's most developed regional green-finance architecture, combining a common classification system (the EU Taxonomy), disclosure obligations under the Sustainable Finance Disclosure Regulation, and the European Green Bond Standard, binding since December 2024. This scaffolding has supported rapid market growth: green bonds accounted for only 0.1% of total EU bond issuance in 2014 but reached 6.9% by 2024, up from 5.3% the year before. Supranational issuance has played a major role — the European Commission's NextGenerationEU programme can raise up to €250 billion in green bonds, and its first 2021 issue, a 15-year, €12 billion bond, was at the time the largest single green-bond transaction ever completed; by October 2025 around €78.5 billion had been raised against an eligible envelope of about €261 billion.

Development remains uneven across member states: France and Germany together held close to 60% of EU governments' outstanding green-bond stock at end-2022, while eleven member states had issued none. By 2024, Sweden and Denmark led relative to GDP (13.8% and 12.3% respectively), and together with France exceeded 16% of national bond issuance, while thirteen member states still issued no green bonds at all. This divergence shows that even within one regulatory area, domestic capital-market depth and institutional quality matter as much as the common rules themselves.

2.2. Green banks and complementary instruments

Alongside capital-market instruments, developed economies have built dedicated green banks that use limited public resources to absorb risk and crowd in much larger volumes of private capital. A review of over fifty such institutions across more than twenty countries found that even mature green banks continue to face constraints, including limited access to capital, regulatory gaps and shortages of specialised technical capacity — showing that institution-building in green finance is a continuous process, not a one-off reform.

3. Experience of Developing and Emerging Economies

3.1. China and other large emerging markets

China leads developing economies through a bank-centred, policy-driven model: outstanding green loans reached about RMB 35.75 trillion (USD 4.9 trillion) by Q3 2024, a 19% year-on-year rise and 13.9% of total lending, while Chinese issuers led global green-

bond issuance in 2023 with USD 131.3 billion. This has translated into real outcomes — China accounted for around 64% of new renewable-energy capacity installed worldwide in 2024. Weaknesses remain, including limited participation of non-state issuers (about 20% of green-bond volume) and an incomplete disclosure system. Comparative legal analysis of India, Brazil and South Africa points to a common set of barriers across large emerging markets outside China — underdeveloped institutions, weak investor protection and limited structured products — despite tax incentives and green-bond regulations introduced in each jurisdiction.

As a result, developed countries have attracted about 44% of global climate finance, emerging markets and developing economies as a group only about 14%, and least-developed countries a mere 2%, even though their relative investment needs are far larger. Excluding China, developing-economy climate-finance needs are projected to reach roughly USD 2.4 trillion a year by 2030, a more than fourfold increase on recent flows, while concessional multilateral finance — a key channel for the most vulnerable economies — fell by about 8% in 2023 compared with its 2019–2022 average.

3.2. Case study: Uzbekistan's emerging green-bond market

Uzbekistan illustrates how a transition economy can begin building a green-finance system largely through internationally supported pilot instruments. Its first sovereign Sustainable Development Goal bond (July 2021, USD 235 million) was the first of its kind in Central Asia; its first sovereign green Eurobond (October 2023, UZS 4.25 trillion) was placed on the London Stock Exchange and drew over thirty international investors; and a 2024 corporate sustainability bond from a leading Uzbek bank (USD 400 million) financed thirty projects in its first year. Table 2 summarises these milestones.

Date	Instrument	Key parameters
July 2021	Sovereign SDG bond	USD 235 million, 3-year tenor, 14% coupon; first in the region, proceeds for education, water, health, transport and pollution-control projects
October 2023	Sovereign green Eurobond	UZS 4.25 trillion on the London Stock Exchange; over 30 international investors from the US, UK, EU and Asia
July 2024	Corporate sustainability bond (SQB)	USD 400 million; financed 30 projects in its first year, generating 121,432 MWh of energy savings and cutting ~16,237 tonnes of CO ₂
By Dec. 2024	Allocation report	Full proceeds of the 2023 green bond allocated under the SDG Bond Framework to water-efficiency and land-restoration projects

Table 2. Key milestones in the development of Uzbekistan's green and sustainability bond market.

The OECD notes that an outsized state role in the economy, an underdeveloped domestic capital market and limited institutional capacity for proceeds allocation and monitoring

remain the key constraints, and recommends capacity building for banks and a regulatory framework enabling green sukuk to broaden the domestic investor base.

4. Comparative Analysis and Recommendations

Criterion	Developed countries (EU)	Leading emerging economy (China)	Developing economies
Dominant instrument	Sovereign/corporate green bonds, EU Green Bond Standard	Green loans, policy-bank lending	Concessional loans, pilot sovereign bonds
Market scale (2024)	Green bonds = 6.9% of EU bond issuance (up from 0.1% in 2014)	Green loans $\approx$ USD 4.9 trillion, 13.9% of total lending	Single-digit/pilot issuances; thin markets
Main constraint	Uneven issuance across member states	Low non-state issuer participation	Weak institutions, high perceived risk

Table 1. Comparative overview of green-financing models by country group.

The comparison confirms that the maturity of a green-finance system depends less on the mere existence of green instruments, now formally available almost everywhere, than on capital-market depth, institutional quality, disclosure regimes and risk-sharing mechanisms. Based on the foreign experience reviewed, the following measures are recommended for developing countries, including Uzbekistan:

- Adopt a national green taxonomy and disclosure rules aligned with international standards, following the EU example, to reduce information asymmetries and greenwashing risk.
- Diversify instruments beyond sovereign bonds toward corporate green bonds, green leasing and green insurance, as illustrated by China's broader instrument mix.
- Build or strengthen a national green bank able to absorb early-stage project risk and crowd in private capital.
- Strengthen institutional capacity for proceeds allocation, impact monitoring and reporting, building on Uzbekistan's existing technical-assistance cooperation.
- Broaden the domestic investor base for green instruments, including through new instrument types such as green sukuk.
- Pursue coordinated international support to correct the mispricing of climate risk in developing markets, including through blended-finance structures.

Conclusion

Developed economies, led by the EU, have built mature regulatory and market ecosystems that turned green bonds into a mainstream financing channel within a decade. China shows that a bank-centred, policy-driven model can mobilise very large volumes of green finance and translate it into leading renewable-energy deployment, while other developing economies, including Uzbekistan, still face institutional and market constraints that leave them with a disproportionately small share of global climate finance relative to their needs. Developing countries do not need to copy developed-country instruments wholesale, but should selectively adapt taxonomies, disclosure standards, green banks and

blended-finance tools to their own conditions, combined with sustained international support, in order to close the growing green-financing gap.

The comparative evidence assembled here also points to a broader lesson: the pace of green-finance development depends less on formal instrument availability, which is now nearly universal, than on the underlying quality of domestic institutions, disclosure practices and capital-market infrastructure. For Uzbekistan and similar transition economies, this implies that continued progress on sovereign and corporate green-bond issuance should be matched by parallel reforms to deepen domestic capital markets, diversify the investor base and build lasting technical capacity within national financial institutions, rather than treating individual bond issuances as an end in themselves.

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