

# Trade & Development Finance Brief (ATDFB)

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## Financing Green Infrastructure

Financing green infrastructure is critical in responding to global environmental challenges, particularly, climate change on account of its devastating impact on the global economy. Accordingly, there is an increasing call for investments in environmentally friendly infrastructure, in recognition of the imperative for developing infrastructure with minimal environmental impact. Financing green infrastructure involves a combination of financial and non-interventions instruments deployed to ensure that investment in green infrastructure is more affordable and less risky to private sponsors, financial markets, and governments. Financing green infrastructure focuses on dealing with the growing infrastructure requirements of an increasing population and urbanisation, while at the same time protecting the environment.

The main sources of green infrastructure finance include public sector, instruments issued by development banks, carbon finance and the private sector.

Public financing for green infrastructure supports environmentally friendly projects through grant-based mechanisms. Revenue streams include government budget allocations, emission allowance auctions, transport taxes, carbon taxes, fossil fuel royalties, and innovative fiscal instruments like financial transaction taxes. These funds aim to reduce environmental impact while promoting sustainable infrastructure development. The growing concern over climate change, coupled with global crises including protectionism, escalating trade and tariff wars, and heightening geopolitical tensions, have prompted governments to rethink their financing strategies. While some developed countries have already introduced these mechanisms, recent challenges are accelerating their adoption in more countries. For example, many African countries are turning to these public finance sources to support the development of green infrastructure to advance regional sustainability goals.

Instruments issued by development banks serve as a critical mechanism for scaling up finance for green infrastructure projects. Such instruments include green bonds and leveraging existing balance sheet capacity. Development banks play a pivotal role by providing loans, including concessional (e.g., IDA-type) and non-concessional financing, to support sustainable infrastructure development. Additionally, funds are bolstered by replenishments and paid-in capital contributions from member countries to multilateral development banks (MDBs), which are strategically allocated to advance green infrastructure initiatives. Some MDBs have used these sources of finance to promote green infrastructure in countries. For instance, the Asian Development Bank (ADB) invested US\$600 million in green infrastructure in China, which included converting waste into clean energy thereby reducing carbon emissions, promoting green transportation, and protecting wetlands.

Carbon finance includes financial mechanisms that support projects reducing greenhouse gas emissions or enhancing carbon sequestration. It operates through carbon markets where carbon credits, representing the reduction of one ton of CO<sub>2</sub> or its equivalent, are traded. These credits are generated by projects like renewable energy, reforestation, and energy efficiency. A carbon price of US\$20 to US\$25 per tonne could potentially raise US\$100 to US\$200 billion in private capital. Although there is no universally accepted method for calculating carbon prices, this financing source has been crucial in generating revenue for green infrastructure in countries with low emissions. For instance, Brazil used this form of finance to develop the Jirau hydro dam which is expected to reduce carbon emissions by 180 million tons over 30 years- it generated about US\$3.6 billion in 2020, and it is projected to potentially generate about US\$7.2 billion by 2040 if carbon prices rise.

Private sector investment also plays a pivotal role in financing green infrastructure, leveraging mechanisms such as green bonds and public-private partnerships (PPPs). By incentivizing private investors to fund sustainable projects, this approach scales up capital for initiatives like renewable energy, energy efficiency, and climate-resilient infrastructure. In return, investors benefit from stable, lower risk returns that are often more predictable than traditional high-risk investments.

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This model not only bridges the funding gap for green infrastructure but also aligns financial incentives with long-term environmental and social goals, fostering a collaborative pathway toward sustainable development. Governments, MDBs and other agencies have scaled up a lot of private finance in promoting green infrastructure projects. For example, Ghana's power crises were addressed through private financing aimed at developing green infrastructure such as the Kpone Independent Power Plant, which now provides approximately 10% of Ghana's total installed capacity and 15% of its thermal generation capacity.

Financing green infrastructure has become crucial for both countries and the environment. The rise of green finance has led to innovative financial mechanisms, such as carbon finance, which were previously underutilized. Many countries now participate in carbon trading and offsetting, helping to reduce carbon emissions. Green infrastructure projects, often incorporating nature-based solutions like reforestation, improving air and water quality, sequester carbon,

and preserving biodiversity. Additionally, financing green infrastructure has accelerated infrastructure development. Moreover, such initiatives contribute significantly to job creation, with China's waste-toenergy project offering employment opportunities. African countries need to prioritize green infrastructure development as financing opportunities increase. Green infrastructure promotes sustainable growth, addressing environmental challenges, while fostering job creation, energy security, and long-term development. By focusing on renewable energy, energy efficiency, and climate-resilient systems, countries align economic growth with environmental sustainability. Also, countries with carbon-sinking facilities, such as forest reserves and low carbon emitters, can leverage these assets to raise funds for infrastructure projects through carbon trading. Lastly, countries need to explore the establishment of development banks to attract private sector investments with a view to enhancing green infrastructure financing.

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