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Smart Climate Finance

Designing public finance strategies to boost private investment in developing countries

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Scope of study

Recommend options and strategies for **public finance engagement** in developing countries, looking at seven specific country contexts:

Asia	Latin America	Africa
India	Costa Rica	Morocco
Thailand	Brazil	Namibia
Vietnam		

Objective: to **leverage private finance** into low-carbon sectors.

Leveraging Finance: PFIs in context

Two approaches to leveraging finance: **direct** and **indirect.**

Direct approach: financial policy

- Design the rules of finance to support low-carbon sectors in the first place.

  Examples: Japan (interest rates)
  Costa Rica (Green Bonds)

Indirect approach: public finance

- Spend public money to incentivise private money within the existing set of rules, without changing those rules.
- “PFI”s or “PFM”s

Best to combine both.

A single financing mechanism is not enough

- Low-carbon markets are **highly complex**, living systems.
- A variety of sub-sectors and technologies have **distinct financing demands**.
- Technologies are at different stages of maturity.
- Financing needs **change over time** as policy frameworks, technologies, and country conditions evolve.

→ A **package of financing instruments** is more likely to be meaningful.

→ Solution must be **flexible**, capable of adapting over time.

Think like a doctor

- Low-carbon development has significant parallels with the field of medicine. (Both deal with complex living systems.)
- Some tips from “Clinical Economics”:
  - Begin with *differential diagnosis.* Solutions are always tailored to individuals.
  - Solutions are co-created *with* the patient through consensual partnership. (Local ownership of financing strategy.)
  - Monitor results over time and modify solutions as needed.
  - Always put the patient before the solution!

A programmatic, country-based approach

- A distinct package of instruments – one for each country.
- Financing solution tailored to the local situation.
- Placed under a programmatic framework dedicated to low-carbon development *holistically.*

  …as opposed to targeting only specific low-carbon sectors, such as RE or EE.

- Programme manager based locally in the target country itself.
- Design strategy in partnership with local actors. Share ownership.
- Rigorously compare goals and outcomes on a regular basis. Modify financing strategy when relevant.

  Warning: impact assessment is very tricky.

Utilising existing PFIs

Existing instruments can be placed within a country-based programmatic framework or modified where appropriate to more closely reflect this approach.

Sample modifications:

- Add a low-carbon “diagnostic” facility to a narrow financing instrument.
- Give greater responsibility for financing strategy to local stakeholders.

→ Either option could be relevant for the BMU/KfW Global Climate Partnership Fund

(Overlap in Brazil, India, Morocco, Vietnam)

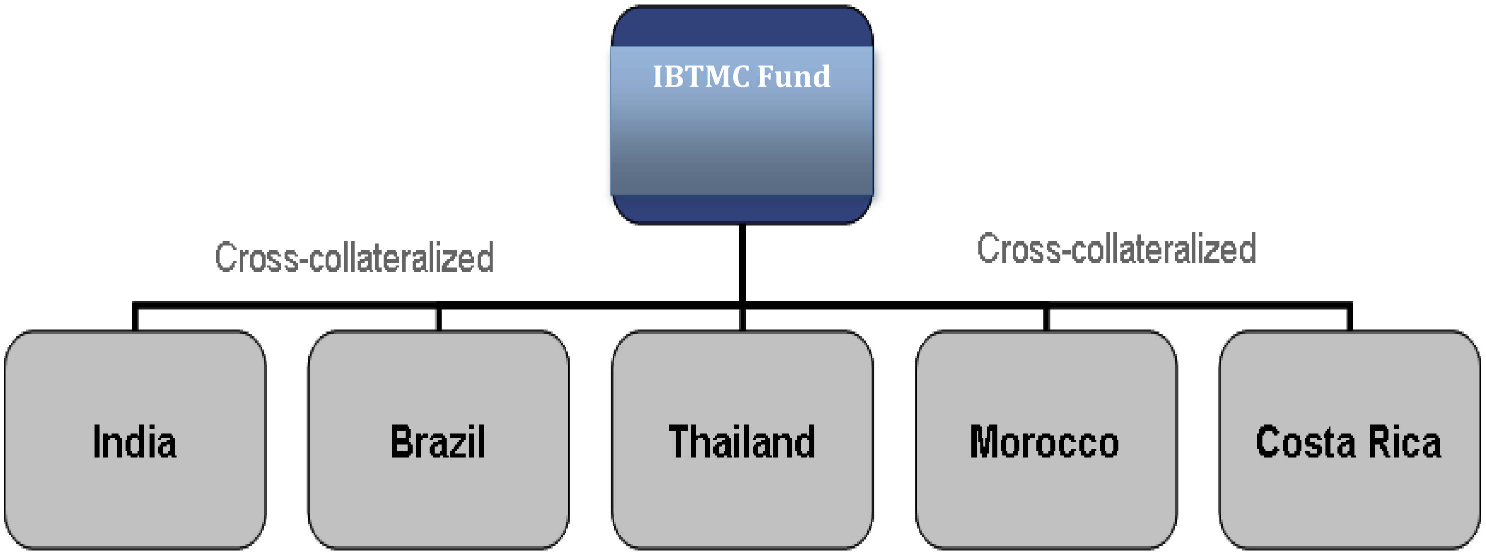
Establishing new PFIs

- New PFIs could take the form of National Centres for Low-carbon Finance.
  - Can estimate EUR 30-70 million per year for each centre. Minimum 5 years.
- Appropriate in any country that does not yet have a tailored national financing programme dedicated to low-carbon development holistically.
  - → This is the case in all study countries except India (where a partnership with current World Bank/DFID efforts could make more sense).
- Joint ownership with local stakeholders; public-private partnership structure.
- Link with NAMAs

Added value

- Without a mandate, the job cannot be done!
  → Mandating a comprehensive focus on the goal of low-carbon development is a critical first step towards a low-carbon path.
- Concentrating local experience, stakeholders and expertise allows cross-flows of intelligence and collaboration.

Possible Umbrella Fund Structure



→ Main advantage: enhances leverage potential.

Tailoring programmes to country contexts

Selection and design of PFIs depends on:

(i) The level of technological maturity,

(ii) The characteristics of the target market segment and

(iii) The country conditions, including the macro-economy, institutional structures and the maturity of the financial system.

Programmes should be designed to:

- **Redirect** existing financing
- Match local **government priorities**
  - → Maximise development and employment impacts
  - → Expand energy access
- Work with and through **local partners**

…to build local low-carbon development capacity

Targeting technologies

- Adopt a **portfolio approach**
  - Avoid creating path dependency on a single set of technologies while ignoring others that may have significant potential.
- Fill financing gaps in the technology development process:
  - Innovation
  - Demonstration
  - Commercialisation
  - Market diffusion

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Overcoming barriers to investment

Risks and constraints on private investment:

▪ Strategic	Technological change, shifting consumer preferences
▪ Operational	System errors or defects
▪ Financial	Interest rate movements, currency fluctuations, oil price volatility
▪ Political	Changing policy or regulatory frameworks
▪ Legal	Weak definition of property rights, land tenure rules
▪ Technical	Equipment quality, O&M suppliers
▪ External	Adverse weather events, conflict, resource shortages

Risks and constraints in the study countries

Recurring themes from interviews with local low-carbon investors:

- Lack of equity financing
- Currency risk
- Commercial risk of PPAs
- Loan tenor
- Insufficient deal flow
- Limitations in knowledge and capacity

Comparison of PFI activity among study countries

level	country
High level	India Brazil
Mid range	Thailand Morocco Costa Rica
Low level	Vietnam Namibia

Key factors with a clear correlation to the level of PFI activity are **country size** and **low-carbon policy commitment**.

Existing PFI activity in the study countries

- **Credit lines** to local CFIs for senior and mezzanine debt to projects;
- **Debt financing** of projects by entities other than CFIs;
- **Loan softening** programmes to mobilise private sources of capital;
- **Guarantees** to share the commercial risk of lending to projects and companies, to end-users, and to SME start-ups;
- **Grants** and **contingent grants** to share project development costs;
- **Equity** funds and **quasi-equity** investing risk capital in companies and projects;
- **Venture capital funds** investing risk capital in technology innovations;
- **Carbon finance facilities** that monetise the advanced sale of emissions reductions to finance project investment costs;
- **Technical assistance** to build the capacity of all actors along the financing chain.

Assessing leverage potential

	Financial sector development	Size of domestic market	Low-carbon policy commitment
India	√	√	√
Brazil	√	√	√
Thailand	√	√	√
Morocco	√	√	√
Costa Rica	√		√
Vietnam	√	√	
Namibia	√		

Potential for PFI engagement to leverage private low-carbon investment in the target countries:

strong

India Brazil	Large domestic markets; mature financial sectors; established low-carbon policy frameworks.
Thailand	Mid-size market with strong low-carbon policy commitment.
Morocco	Mid-sized market with moderate policy commitment.
Costa Rica	Small country, limited PFI experience yet strong policy support for low-carbon development.
Vietnam Namibia	Lack of adequate low-carbon policy frameworks, implying limited leverage potential.

weak

Leverage potential of low-carbon interventions

Activity Type	Leverage
Applied R&D	• Direct industry co-funding
Technology accelerators	• Direct industry co-funding • Catalysed market, leading to significant commercial investment
Business incubator services	• Subsequent fundraising by supported companies as a result of incubation services (10:1 leverage potential)
Enterprise creation	• Direct industry co-investment
Early stage funding for low carbon ventures	• Co-investment by private sector funds (10:1 leverage potential) • Further catalysed market for low carbon investment through demonstrated success
Deployment of existing energy efficiency measures	• Initially free, but eventually shared cost with business • Stimulate investment by organisation receiving support
Skills/capacity building	• Leverage of partner company resources • Catalysed markets by freeing supply chain capaciy constraints
National policy and market insights	• Catalysed markets by enabling development of regulatory regimes which incentivise and de-risk low carbon private sector investment

Publicly backed guarantees

In principle, **guarantees can leverage private finance per unit of public money spent better than either grants or direct loans**. This is because fees for guarantees are a fraction of the committed loan or equity capital.

However, guarantees are only appropriate in financial markets **where borrowing costs are reasonably low** and where a good number of **CFIs are interested in the targeted market segment**.

→ e.g. India, Thailand, Morocco, Costa Rica
(potentially Brazil in coming years)

All finance is leveraged

In today’s Fractional Reserve banking system, banks “create” money by leveraging capital into loans.

The vast majority (in the range of 97%) of the money supply is created this way.

At an 8% capital requirement, capital can be leveraged by a **factor of twelve**, so long as the banks can attract sufficient deposits to clear the outgoing checks. (Which is never a problem because deposits can be borrowed from other banks nearly interest-free.)

→ **Green Banking** can be an excellent option for leveraging finance into low-carbon sectors using the rules of Fractional Reserve.

Thank you

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