Capacity Building of low carbon and climate resilient city development in India: CapaCITIES, India

CB Module: Mapping

Climate Finance for Indian Cities

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

CapaCITIES
LOW CARBON • CLIMATE RESILIENT • CITY DEVELOPMENT

ICLEI Local Governments for Sustainability

econcept Research / Consulting / Evaluation

NIUA National Institute of Urban Affairs

south po The Climate Company

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Outline

Cities both contribute to and are vulnerable to Climate Change..

75* per cent of the global GHGs emissions attributable to cities

30-55% of infra assets in jeopardy due to climate change vulnerability

~USD 2.3 tn. cumulative investment required- South Asian Cities till 2030 towards development of climate resilient infrastructure

Source: IFC Assessment, 2020

..but mobilizing climate finance is a major challenge for cities due to:

Lack of upfront public capital

Lack of pipeline of bankable climate resilient infrastructure projects

Limited knowledge and access to sources of urban climate finance

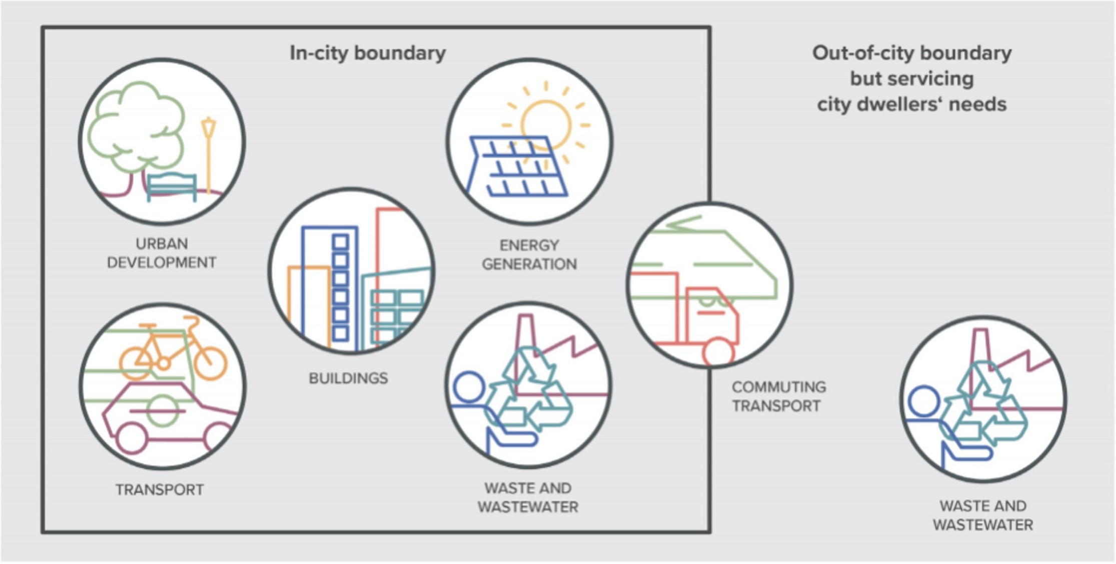
Additional perceived costs and unquantified benefits of "sustainable" projects

What is Urban Climate Finance ?

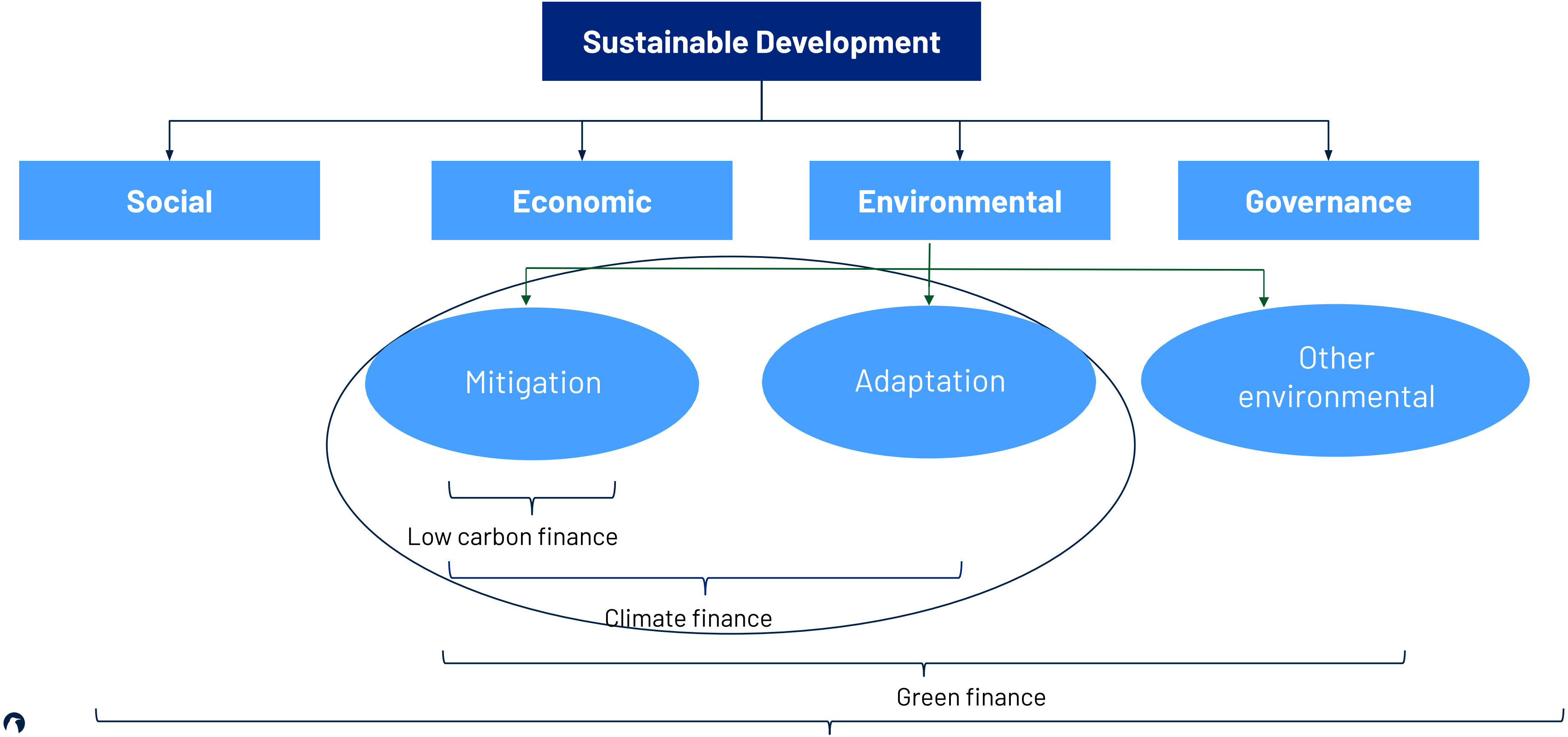
"Urban climate finance refers to resources directed to activities limiting city-induced GHG emissions or aiming to address climate-related risks faced by cities, contributing to resilience and low carbon development" - Climate Policy Initiative, 2021

Purpose

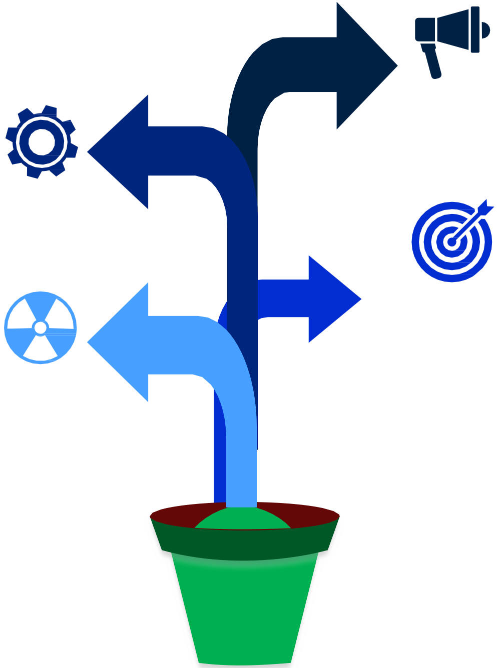
- **Climate mitigation** *(reduce GHG emissions)*
- **Climate adaptation** *(build resilience of economic sectors, communities and ecosystems to climate change impacts)*



How it is different from sustainable finance?



Role of Urban Climate Finance



Injects finance into new projects

with measurable GHG mitigation impacts (and other sustainable development benefits)

Makes projects more financially attractive (feasible)

considering life cycle cost analysis and measuring costs on account of GHG emissions or putting price to carbon

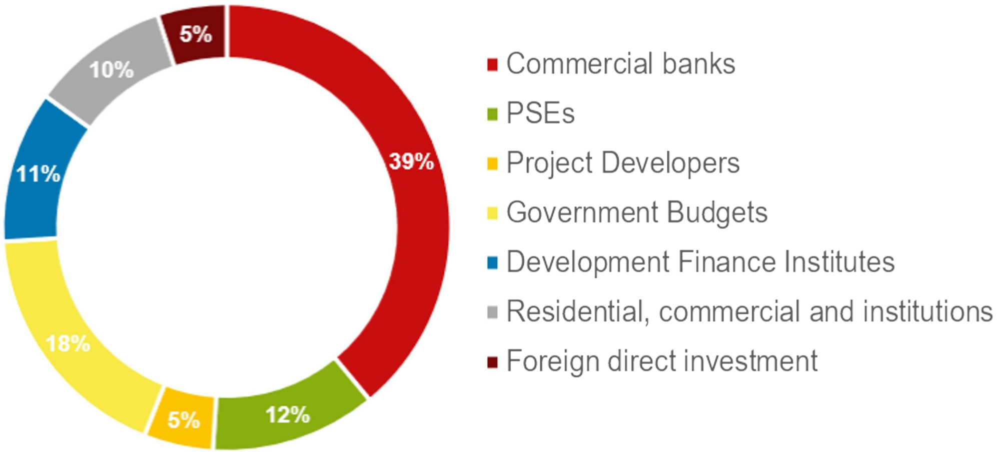
Provides de-risking instruments to ensure minimum performance

Provides technical assistance grants for readiness activities

to develop policy, regulatory, legal framework, public financial incentives to catalyze private sector investments or for capacity building activities

Climate Finance Landscape in India

The financial flow of green finance in India increased from INR 111 thousand crores in FY 2017 to INR 137 thousand crores in FY 2018



> PSEs. Commercial banks are important channels for intermediation of funds to cities from international channels and capital markets. They also operate as a critical source of green finance.

Sources of Urban Climate Finance

Source of Urban Climate Finance

International

Climate Funds (TA, Grant, Loans): AF, CTF, GEF, GCF, SCCF, CDIA

Carbon Market (ITMOs, Voluntary carbon /plastic credits

International DFIs (TA, Grant, loans, guarantees) : WB, ADB, AFD, KfW,

Multi donor initiatives (C40, 100 RC, PPIAF among others)-TA

International Philanthropic Finance (TA, Grants): Citi, Rockefeller

Public

Specialized Entities- (Loans, Equity, Guarantee): HUDCO, REDA, EESL, NABARD

Green Infrastructure Funds (Equity, Hybrid): GGEF

Private

Conditional Transfers (grants) from Upper tier government: FFC

Debt capital market : (Green/ Climate bonds)

Schemes under 9 national missions- 12 schemes (grants)

Local

Commercial Banks: (Green Loans)

Municipal Own Sources- Climate budget and tools

Project Developers (equity/service)- PPP, IaaS

Abbreviations: **FFC**: Fifteenth Finance Commission; **HUDCO:** Housing and Urban Development Corporation; **NABARD**: National Agriculture Bank and Rural Development; **IREDA:** India Renewable Energy Development Authority; **EESL:** Energy Efficiency Services Limited; **WB:** World Bank; **ADB:** Asian Development Bank; **KfW:** German Development Bank; **AfD:** French Development Bank; **AF:** Adaptation Fund; **CTF:** Clean Technology Fund; **GEF:** Green Environment Facility ; **SCCF:** Special Climate Change Fund; **CDIA**: City Development Initiative of Asia; **ITMO:** Internationally Transferred Mitigation Outcomes; **100 RC:** 100 Resilient Cities; **PPIAF:** Public Private Infrastructure Advisory Facility

Public Sources

Ministries and Government Agencies	• Conditional Transfers (FFC) • Government Schemes (9 National missions) • Specialized financial institutions (EESL, IREDA, NABARD, HUDCO)	Grants, Concessional loans, guarantees, credit enhancements
Municipal Own Sources	• User Charges • Development Charges • Taxes • Other Sources	Integrating into climate budget/ used for O&M
Development Finance Institutions and Climate Funds	• Multilateral Development Banks (MDB) • Bilateral Financial Institutions • Climate Funds	Technical assistance, financial instruments & specialized knowledge
Other International Public Climate Finance	• Country Partnerships • Carbon Markets • RECs	Technical assistance, pilots & monetizing carbon

Private Sources

Commercial Finance Institution	• Scheduled Commercial Banks- Green lending • International Development Finance Institutions • Institutional Investors- Insurance cos, pension funds	Grants, Concessional loans, guarantees, credit enhancements
Debt Capital Market Investors	• Municipal Bonds • Green/ Climate Bonds	Integrating into climate budget/ used for O&M
Equity Investors	• Private Equity Investors (through SPV) • Infrastructure Funds • Project Developers (under various PPP formats) • IaaS- Infrastructure as as service • InviTs/ REITs	Investment against returns
Other Private Climate Finance sources	• (Inter)national philanthropic finance • Voluntary Carbon Markets • Impact Funds	Grants, Guarantees, Concessional lending and financing

Why is climate finance gap?

- Investments in some of the climate projects often make business sense.
- However, such investments still do not happen at the scale needed, because of the existing (or perceived) **barriers and risks** faced by investors, or because the expected climate and other **benefits are not understood-integrated in project preparation**
- **Finding targeted solutions** to these barriers/risks and attracting private sector investments is a key to achieve climate action at scale to meet NDC and global 1.5- 2 degrees Celsius targets.
- **Public institutions still play key role in attracting private finance** in climate projects: through R&D, policies & regulations, technical assistance, demonstrational projects, de-risking and other financial incentives

Public Sources- Local

Government Schemes & Transfers

Sectors	Sources and Type of Funding	Channel	City Access
Energy and green buildings	• <u>Street Lighting National Program</u>- Ministry of Power, **ESCO Funding** • <u>Municipal Energy Efficient Program (MEEP)</u>, Ministry of Power – **ESCO Funding**	EESL- Pay as you save model	Direct
	• <u>Program on energy from Urban Municipal Waste</u>- Ministry of New and Renewable Energy- **Grant Funding**	Private Developer	Indirect through developer
Air Quality and Mobility	• <u>FAME India Scheme Phase II</u> - Department of Heavy Industries, Government of India- **Grant Funding** • State EV Polices- **Incentives**	CESL, Direct (charging infra, Indirect- e-buses)	Mixed
	• <u>Urban Transport</u> **, Ministry of Housing and Urban Affairs- Equity Investments**	Through SPV	Direct
	• **Fifteenth Finance Commission**, Clean Air **Grant Funding**	State Govt.	Direct

Cross Sectoral Sources

- AMRUT
- Smart City

Government Schemes & Transfers

Sectors	Sources and Type of Funding	Channel	City Access
Waste Management	• Swachh Bharat Mission- Urban, **MoHUA, Grant Funding** • Program on energy from Urban Municipal Waste- Ministry of New and Renewable Energy- **Grant Funding**	Direct	Direct
Water Management	• National Water Mission, Ministry of Jal Shakti- **Grant Funding** • AMRUT, Ministry of Housing and Urban Affairs- **Grant Funding**	State	Direct
Urban Planning, Green Cover and Bio Diversity	• Enhancing tree cover in urban and peri urban areas (including institutional lands) , Ministry of Environment and Climate Change- **Grant Funding**	District & State	Direct
	• National Adaptation Fund for Climate Change (NAFCC), MoeFCC- **Grant Funding**	NABARD	Through State

Cross Sectoral Sources

- AMRUT
- Smart City

Specialized Entities

Specialised Entities are PSEs/ DFIs setup by Government of India to intermediate finance for development purposes. These entities being independent are able to raise funds from capital markets and development financial institutions at cheaper rates. They provide financing to cities in form of:

- Grants
- Concessional Loans
- Equity
- Guarantees

Specialized Entities

HUDCO	• Concessional loans and guarantees for Urban Infrastructure Projects • Direct access to city through regional office
IREDA	• Concessional loans for Renewable Energy, Energy Efficiency Projects • Direct access to city minimum loan size ~ INR 50 Lakhs
SECI	• Grant and Subsides for Solar Energy Projects • Access through RFP and call for proposals
EESL	• Equity investments for Energy Efficiency Project recovered through Pay as you save model • Direct access to the city
NABARD	• Grants for climate adaptation/ urban resilience projects as implementation entity for National adaptation fund and UN Adaptation Fund • Proposal to be submitted through State Governments

Public Sources- International

International Sources

Institutions	Type of Instrument	Sector	Eligibility and access to City
1 THE WORLD BANK IBRD · IDA	Loans (IBRD) & Credits (IDA-concessional) with sovereign guarantee A. Investment Project Financing B. Development Policy Lending (DPL) C. Program for results D. Private sector financing & Guarantees through MIGA and IFC	Sustainable Urban Infrastructure-Agnostic	Indian cities eligible- indirect through central govt.
2 ADB	Urban Financing Partnership Facility A. Technical Assistance B. Guarantees C. Investment D. Loans	Climate Smart Urban Infrastructure	Indian cities eligible- indirect through central govt.

Development Finance Institutions

	Institutions	Type of Instrument	Sector	Eligibility and access to City
3	KFW	A. Concessional Loans B. TA tied concessional loans C. Line of Credit	RE, EE, Sustainable Urban Development, Nature based solutions	Indian cities eligible- indirect through central govt. Line of credit- may be obtained through partner financial institutions
4	AFD AGENCE FRANÇAISE DE DÉVELOPPEMENT	A. Concessional Loans B. Technical assistance C. Grants	RE, EE, Reinventing cities- transport, energy, waste and waste management	Indian cities eligible- indirect through central govt.

Climate Funds

#	Institutions	Relevant Themes	Sector	Support	Eligibility and access to City
1	ADAPTATION FUND	Urban Development and Water Management	Adaptation	TA Grant Financing	Designated Authority: MoEFCC NABARD (NIE) - proposal and concept to be submitted through NABARD.
2	CIF CLIMATE INVESTMENT FUNDS Clean Technology Fund	Renewable energy, industry, transport and building sectors	Mitigation	TA Concessional Loans Grants	CTF projects are need to be part of a national level investment plan Cities cannot directly access funds from CTF
3	CIF CLIMATE INVESTMENT FUNDS Strategic Climate Fund	Adaptation, climate resilience, forest investment program	Adaptation and Mitigation	Grants Concessional Loans Guarantees	Access through MDBs

Climate Funds

4	GREEN CLIMATE FUND	8 impact areas related to mitigation, adaptation and sustainable development. Low carbon and climate resilient infrastructure	Mitigation and Adaptation	TA Concessiona l Loans Grants, Guarantees and Equity	Through National Designated Authorities- Ministry of environment and climate change or Accredited Entities: NABARD, SIDBI, Yes Bank, IDFC Bank, IL&FS environment
5	gef	Biodiversity, Climate Change Mitigation, International Waters, Land Degradation, Chemicals and Waste, Sustainable Forest Management)	Mitigation and Adaptation	TA Grants and project funding grants	Project in GEF are proposed through Official Focal Point (OF) in India- the OF is from Ministry of Finance and Ministry of environment and climate change

Climate Funds

Adaptation Fund

Overview

- Financial instrument under UN Framework Convention on Climate Change (UNFCCC) to finance concrete adaptation project and programs in developing countries.
- Operational since 2009. As of November 2020, the Fund's total financial contributions received over time amount to approximately USD 1.05 billion.
- Managed by World Bank as trustee

Objective

- to increase resilience through concrete adaptation projects and programmes that reduce the adverse effects of climate change facing communities, countries, and sectors.

Activities Supported

The Adaptation Fund programmes primarily cover food security, agriculture, water management, and disaster risk reduction.

How to access adaptation fund?

Access through National Implementing Entity (NIE)

Fund can be accessed directly by Eligible Countries including India through National Implementing Entity, NABARD has been accredited as National Implementing Entity for Adaptation Fund in July 2012 and is the only NIE for India.

SUBMIT- PROJECT PROPOSAL THROUGH STATE GOVT.

SCRUTINIZED BY NABARD & ENDORSED BY MOEFCC

INITIAL COMMENTS FROM AF SECRETARIAT

REVISED PROPOSAL SEND TO AF BOARD

AF BOARD APPROVES/ REJECT PROJECT

AF PROJECTS IN INDIA

Sr. No	Name of project	State	Executing Entity/ies	Project Outlay (Rs. in Crores)
1	Conservation and Management of Coastal Resources as a Potential Adaptation Strategy for Sea Level Rise	And ra Pradesh	MSSRF	0.69
2	Enhancing Adaptive Capacity and increasing Resilience of Small and Marginal Farmers in Purulia and Bankura Districts of West Bengal	West Bengal	DRCSC	2.51
3	Building Adaptive Capacities of Small Inland Fishermen Community for Climate Resilience and Livelihood Security	Madhya Pradesh,	TAAL	1.79
4	Climate Proofing of Watershed Development Projects in the States of Rajasthan and Tamil Nadu	Tamil Nadu and Rajasthan	Multiple Agencies	1.344

AF PROJECTS IN INDIA

Sr. No	Name of project	State	Executing Entity/ies	Project Outlay (Rs. in Crores)
5	Climate smart actions and strategies in north western Himalayan region for sustainable livelihoods of agriculture-dependent hill communities	Uttarakhand	BAIF	0.969
6	Building Adaptive Capacities in Communities, Livelihoods and Ecological Security in the Kanha-Pench Corridor	Madhya Pradesh	Royal Bank of Scotland Foundation, India (RBS FI)	2.556

Climate Investment Fund (CIF)

- pair of multilateral trust funds that provide funding to 48 developing and middle-income countries in support of low carbon and climate resilient development:

Clean Technology Fund

Strategic Climate Fund

- implemented by the five multilateral development banks (MDBs):

- funds are dispersed as grants, highly concessional loans and de-risking instruments

Climate Investment Fund (CIF): The Clean Technology Fund

- The Clean Technology Fund (CTF) promotes scaled-up financing for demonstration, deployment and transfer of low-carbon technologies with significant potential for long- term greenhouse gas emissions savings.

- The CTF finances 12 country programs and one regional program.
- Activities supported by the CTF include programs within the:

  Power Sector: renewable energy and highly efficient technologies to reduce carbon intensity

  Transport Sector: efficiency and modal shifts; and

  Energy Efficiency: buildings, industry, and agriculture

- Options include programs and large-scale projects at:
  Sectoral or sub-sectoral levels in a given country;

  Sub-national levels, focusing activity on particular provinces/states/municipalities; and Regional levels, particularly where regional cooperation is required.

Clean Technology Fund (CTF): Who can access?

The fund uses a blend of financial instruments, including **grants**, **concessional loans and guarantees** for both **public** and **private sector** investors in developing countries.
Three types of public/private sector players can access the fund:

Project sponsors	Investors in climate mitigation projects	Financial intermediaries
Developers of clean technologies or large companies implementing new technologies	Any financing corporation, banks, pension and equity funds, insurance companies, etc.	Financial intermediaries developing new lines of credit for climate change investment

Clean Technology Fund (CTF): How to access?

Public Sector Proposals: CTF funding is only accessible to public sector through Multilateral Development Banks, MDBs generally follow the process below:

- **MDBs country investment plan**, i.e., a multiyear proposal identifying how climate investment funds resources together with co-financing will support the country's existing development strategies.
- **Approval from CTF Trust Fund Committee:** review of the investments plan and endorsing a resource envelope for programs and projects to be co-financed by CTF

Private Sector Proposals: can be submitted as individual projects or programme envelope utilising less than USD 50 million of CTF funds- proposals explain the alignment of project with CTF objectives and additionality for CTF funding

CIF CLIMATE INVESTMENT FUNDS

CIF Projects in India (1/2)

Name of the Project	Fund	Amount (USD Mn)	Co-Financing (USD Mn)	MDB
Innovations in Solar and Hybrid Technologies	Clean Technology Fund	49.81	350	IBRD
Development Policy Loan to Promote Inclusive Green Growth and Sustainable Development in Himachal Pradesh	Clean Technology Fund	100	2058	IBRD
DPSP III: Scaling Up Demand-Side Energy Efficiency Project	Clean Technology Fund	47.9	546	ADB
Partial Risk Sharing Facility for Energy Efficiency	Clean Technology Fund	25	139	IBRD
Rajasthan Renewable Energy Transmission Investment Program (Multi-tranche Financing Facility / MFF)	Clean Technology Fund	195	600	ADB

CIF Projects in India (2/2)

Name of the Project	Fund	Amount (USD Mn)	Co-Financing (USD Mn)	MDB
Shared Infrastructure for Solar Parks - Phase I	Clean Technology Fund	25	3675	IBRD
Solar Park Transmission	Clean Technology Fund	50	400	ADB
Solar Rooftop PV	Clean Technology Fund	125	940	IBRD

Green Climate Fund: Overview

Green Climate Fund (GCF)

Overview

- Main financial mechanism under the UN Framework Convention on Climate Change (UNFCCC). The largest dedicated climate fund globally: USD 10.3 billion pledged from 43 governments
- Established in 2010 under the UNFCCC, operational since 2013.
- Headquartered in Songdo, South Korea.
- Governed by a 24-member board (GCF Board), comprised equally of developed and developing countries.

Objective

- To promote the paradigm shift towards ate-resilient development pathways.
- To make a significant and ambitious contribution to global efforts towards attaining the international community's goal to keep climate change well below 2 degrees Celsius

In the background image – GCF headquarters

Green Climate Fund (GCF)

Fund size

- USD 10.3 billion from 43 governments. Committed: USD 8.8 billion, Projects under implementation: USD 6.1 billion
- Major donors: USA (29%), Japan (15%), UK (12%), Germany (10%), France (10%)

Financial instruments

- Grants, loans, guarantees, equity, exploring use of innovative instruments such as green bonds
- **GCF uses public investment to stimulate private finance, unlocking the power of climate- friendly investment**
- To achieve maximum impact, GCF seeks to catalyse funds, multiplying the effect of its initial financing by opening markets to new investments.

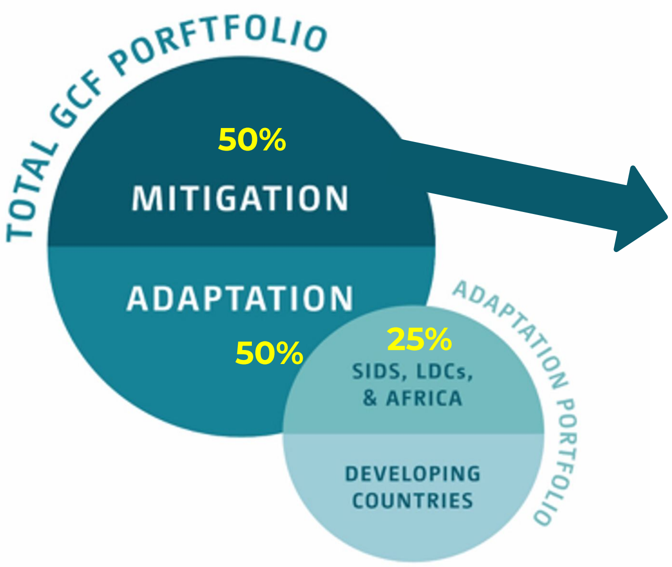
Access to finance

- **Only through already accredited entities (AE)** + approval of the national designated authority (NDA)

GREEN CLIMATE FUND

Green Climate Fund (GCF)

Types of project and focus area



Source: GCF Infographics

Mitigation project focus areas

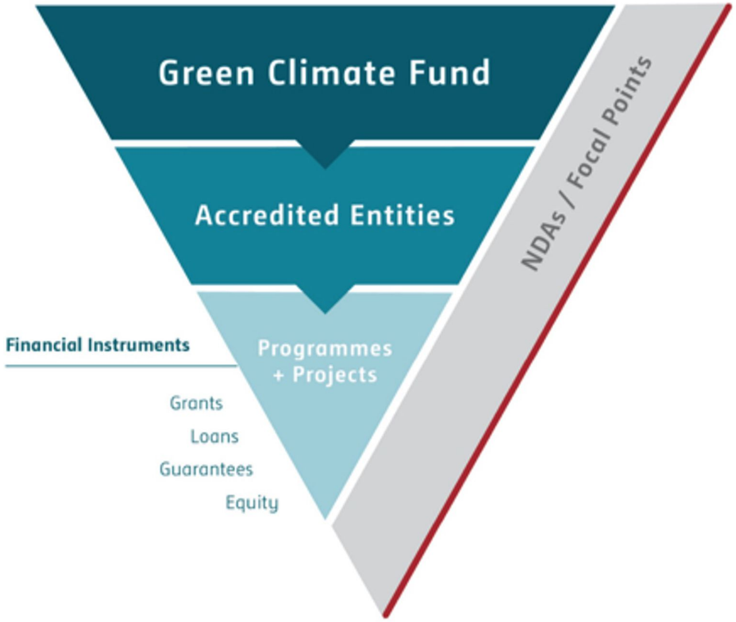
- Energy generation and access
- Buildings, cities, industries & appliances
- Transport
- Land use and forestry

Project sizes

XS	< $10 million
S	$10-50 million
M	$50-250 million
L	> $250 million

GREEN CLIMATE FUND

Green Climate Fund (GCF) Architecture



- Accredited Entities (AEs) play the central role in the GCF architecture
- Strong country ownership: National Designated Authorities (NDAs) ensure that Accredited Entities (AEs) submit projects and programmes that benefit country

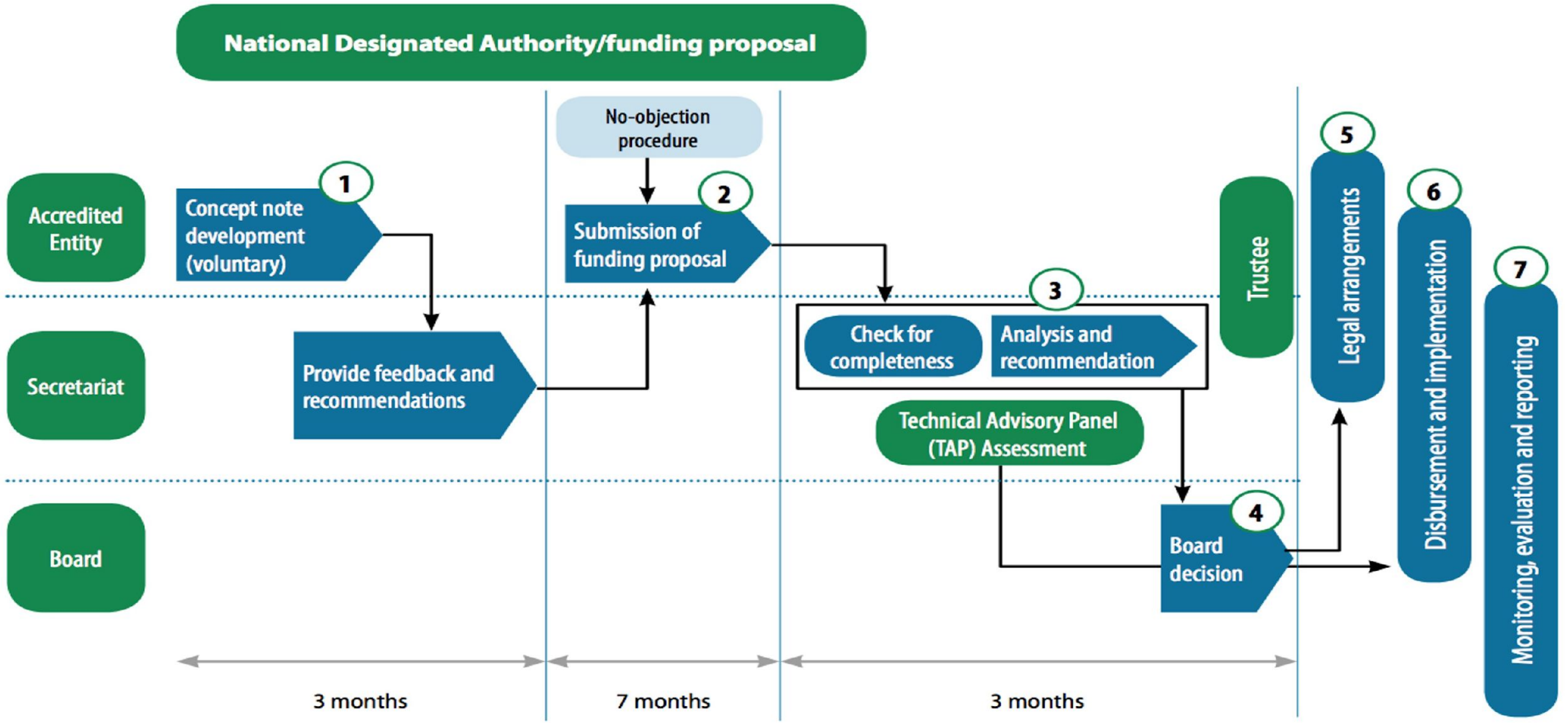
Source: *[GCF Infographics]*

GCF Financing Instruments Range

Instrument Type	GCF Instrument	Description
Equity	**Equity**	Provides critical capital base for early stage projects until it is commercially viable and to assure a sufficient debt/equity ratio
Debt	**Subordinated Loans**	Loans that have a secondary claim on debt in case non-payment of the principal funding
	Senior Loans	Loans with primary claim on debt
Guarantee	**Guarantees**	Protects investors against failure of borrower to repay as a result of pre- specified events (de-risking instrument)
Grants	**Grants**	Funds for projects that would remain unfunded through traditional channels: support for technical assistance, capacity building activities, feasibility studies, etc.
	Reimbursable Grants	• Grant to cover high risk stage of project, that can become loans in case of success of early stages (e.g. exploration of geothermal energy sources) • Often used to complement other instruments, such as concessional loans, to maximize the impact of investments.

Source: *WRI Institute Glossary* & *GCF Project Information*

GCF Project Cycle



Source: GCF proposal toolkit 2017, CDKN

GCF Project Examples in India

Projects and Sector	GCF Instrument	Amount (USD Mn)	Total Project Value (USD Mn)	Project Details and Impact
Line of Credit for Solar rooftop (TATA CLEAN TECH)–Private Sector	Loan	100	250, (40% GCF, 60% Co-Financing (100 Loan and 50 Equity)	Solar Roof Top (250 MW) Reduction in 5.2 million tonnes of CO2e
Green Growth Equity Fund-Private	Equity (First	132.5	944.5 (14.5% GCF,	Renewable Energy, Transport, Building,
Sector	Loss) Grant	4.5	85.5% Co-Financing Equity	Cities, Industries and Appliances Reduction in 166 million tonnes of CO2e
Enhancing climate resilience of India's coastal communities-Public Sector	Grant	43.4	130.3 (33.3% GCF and 66.6% Co-Financing, Grant and in Kind)	Restoring Mangroves, Seagrass and enhancing climate adaptive livelihoods. . Reduction in 3.7 million tonnes of CO2e and 10 million beneficiaries (in AP, Maharashtra and Orissa)
Ground Water Recharge and Solar Micro Irrigation to Ensure Food Security and Enhance Resilience in Vulnerable Tribal Areas of Odisha: Public Sector	Grant	34.35	166.3 (20.7% GCF and 79.3% Co-Financing Grant and loan (7 mn)	Ground Water Recharge shaft and resilient crop planning through solar micro irrigation for enhancing Food Security. Reduction in 52.3K tonnes of CO2e and 16 million beneficiaries in Orissa)

Green Growth Equity Fund: Case Study...(1/3)

- Project Eligibility: **Mitigation/Adaptation Projects**
- GGEF Projects: **Energy Access and Power Generation, Low Emission Transport, Buildings, Cities, Industries and Appliances**
- Total Fund Size: **940 Million USD of Equity; GCF Contribution of Equity:**
- **132.5 million USD and 4.5 million of Technical Assistance** to address capacity, knowledge and policy gaps
- Leveraging GCF's Initial Contribution: The GGEF Platform is expected to **mobilise ~890 million USD of equity from other investors and USD 2.9 billion of debt at platform level.**
- Total capital: **3.9 billion (around 30 times leverage)**

Green Growth Equity Fund: Case Study...(2/3)

- Role of GCF's Initial Contribution in removing barriers to access to climate finance from private investors: **GCF's equity is uniquely structured to de-risk institutional investors**
- The Offshore Fund consist of 3 investor classes (Class A, B and C): **Investors in Class A benefit from Capital Protection offered by Class B investors and Class C shareholder will be offshore manager for the purpose of receiving carried interest**
- Class A investors targeted are Public and Private risk averse investors with appetite of commercial returns, that would not normally participate unless risk protection is offered by Class B (GCF Fund)
- Class A Investors: **NIIF Fund of Funds (USD 155 million), DFID –UK (USD 155 million), Eversource Capital (USD 30 million)**

Green Growth Equity Fund: Case Study...(2/3)

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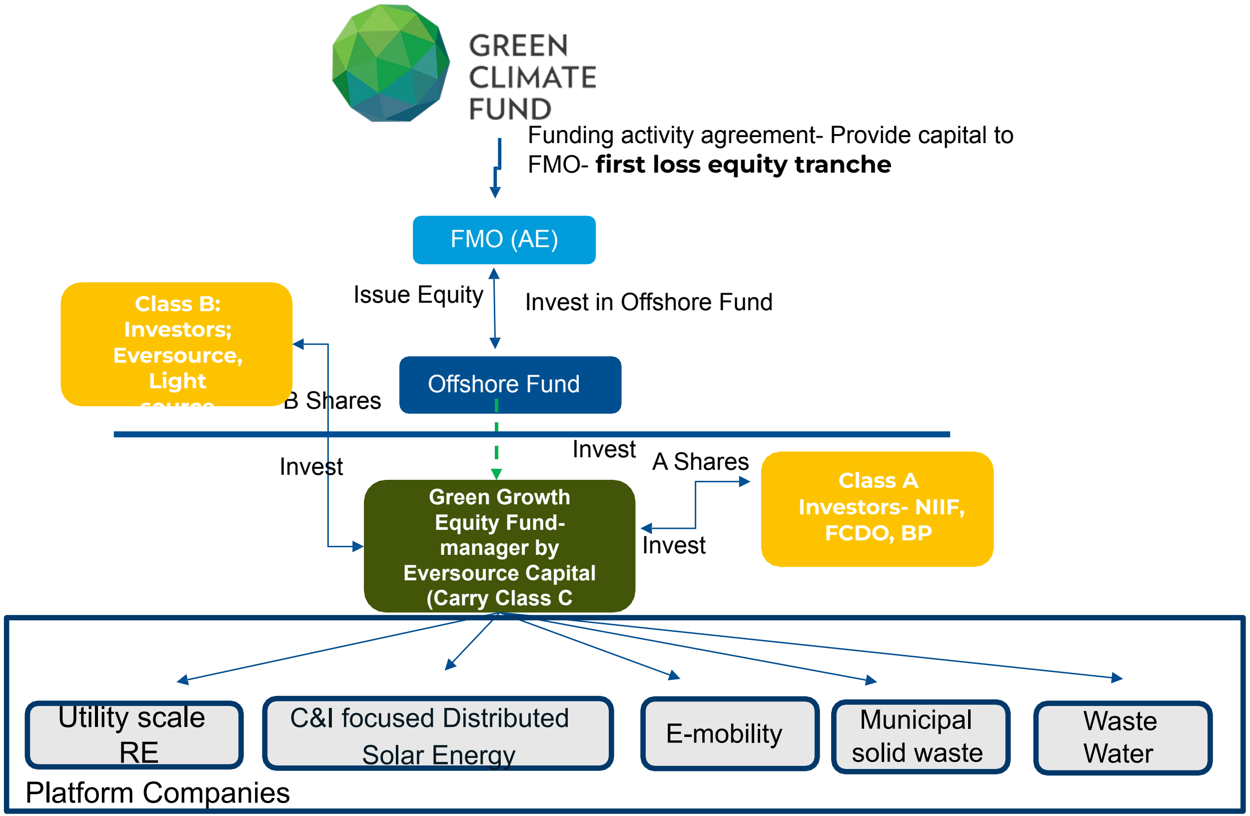
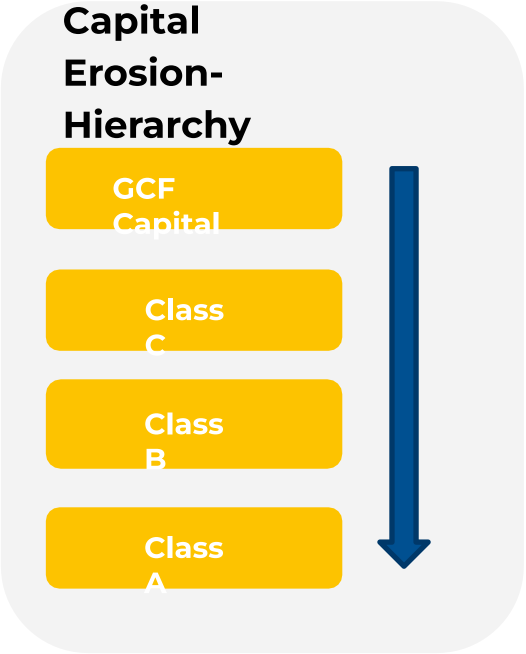
Green Growth Equity Fund



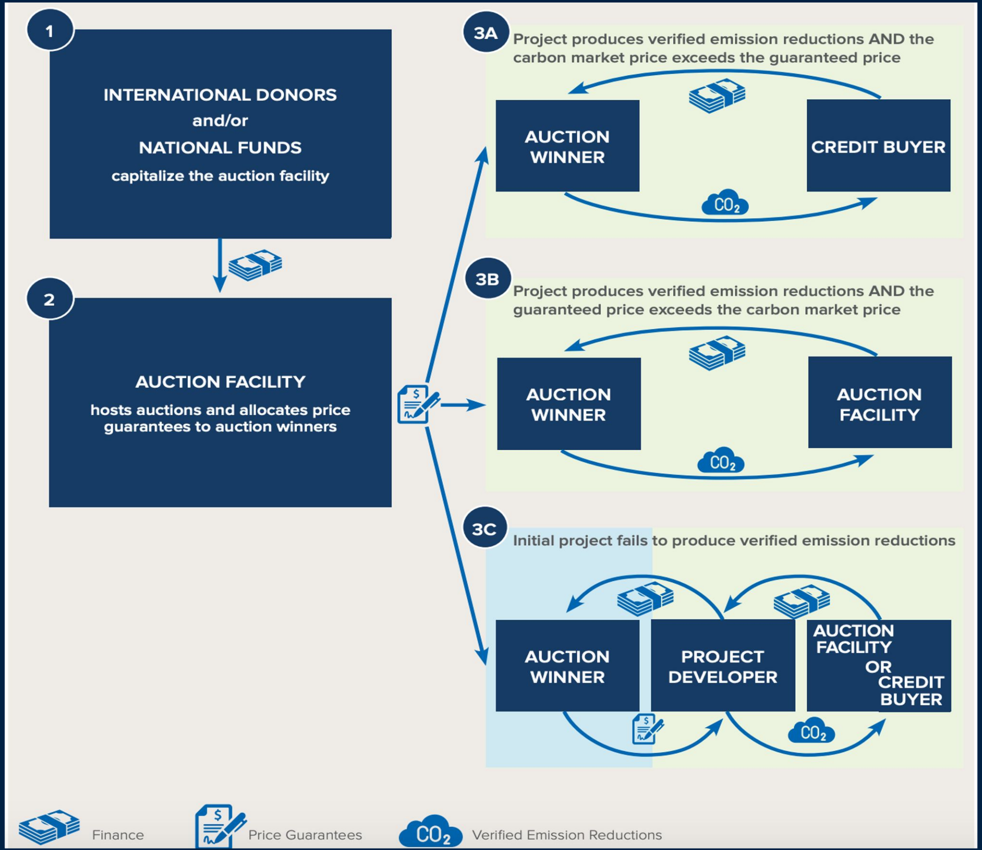


Pilot Auction Facility: Overview

Pilot Auction Facility

- an **innovative, pay-for-performance mechanism** developed by World Bank
- aims to **stimulate investments in mitigation projects**.
- first launched in 2015, PAF has now **completed four auctions** with the latest auction being held in March 2020.
- supported by Germany, Sweden, Switzerland and the United States who allocate funding for the auctions
- the key objective of the PAF is to **demonstrate a new, cost-effective, and results-based climate finance mechanism that incentivizes private sector investment and action on climate change in developing countries by providing a guaranteed floor price on emission reductions in the form of carbon credits**.
- the carbon credits eligible for the PAF are based on the Clean Development Mechanism (CDM), Verra, and Gold Standard.

Pilot Auction Facility: how it works



Climate Finance Instruments

1. Green bonds

Some of green bonds project categories

Specifically earmarked to be used for climate and environmental projects or activities that are aligned with a set of defined green criteria.

Corporates/mitigation project developers, financial institutions

First bonds issued in 2007 by the EIB, 2008 by the World Bank.

Renewable energy

Energy efficiency

Clean Transportation

Water and wastewater management

Green Buildings

Biodiversity

Pollution prevention and control

Natural resources and land use

1. Green bonds

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Some of green bonds project categories

- Renewable energy
- Energy efficiency
- Clean Transportation
- Water and wastewater management
- Green Buildings
- Biodiversity
- Pollution prevention and control
- Natural resources and land use

Green bonds: Types

General Obligation Bonds

- **Proceeds** allocated to green projects
- **Full recourse** to the issuer
- Rating same as credit rating of the issuer

Revenue bonds

- Proceeds allocated to green projects
- **Debt Recourse**: Revenue streams from the issuer escrowed towards bond repayments

Securitized bonds

- Bonds proceeds either earmarked or directly go into underlying green projects
- Recourse is a group of financial assets that have been grouped as a collateral;

Project bonds

- Proceeds of bonds finance ring fenced to single/multiple 'Green' Projects;
- Investors have direct exposure to risk of the projects;
- Recourse only to project assets and revenues

Green bonds: Benefits for various stakeholders

Banks

1. Releases capital for **new financing;**
2. Helps **correct Asset-Liability mismatch**

Issuer

1. Help raise fixed cost long term debt which **improves equity returns;**
2. **Diversification** of investor base

Green Bond Investors

1. Investment in **“Green”** projects**;**
2. Potential **appreciation** as **“Green”** projects becomes more attractive

Government

1. More **capital** for financing of “Green” projects;
2. Development of market which brings further investment for “Green” projects thereby creating virtuous growth cycle

Green Municipal Bonds

Ghaziabad becomes first city in India to issue Green Municipa Bonds

Features:

- Funds to be used to recycle wastewater for drinking water
- Raised INR 150 Cr at coupon of (8.1%), subscribed 3 times
- Eleven cities have raised Municipal Bonds- Ahmedabad, Surat, Visakhapatnam, Amravati, Indore, Bhopal, Pune, Hyderabad , Lucknow and Vadodara
- 2% interest subvention under MoHUA Scheme- bringing cost of borrowing to 6%

Source: ET, 2020

Green Loans

Green Loan is a loan issued by banks, financing institutions for implementation of green projects or activities that are aligned with a set of defined green criteria.

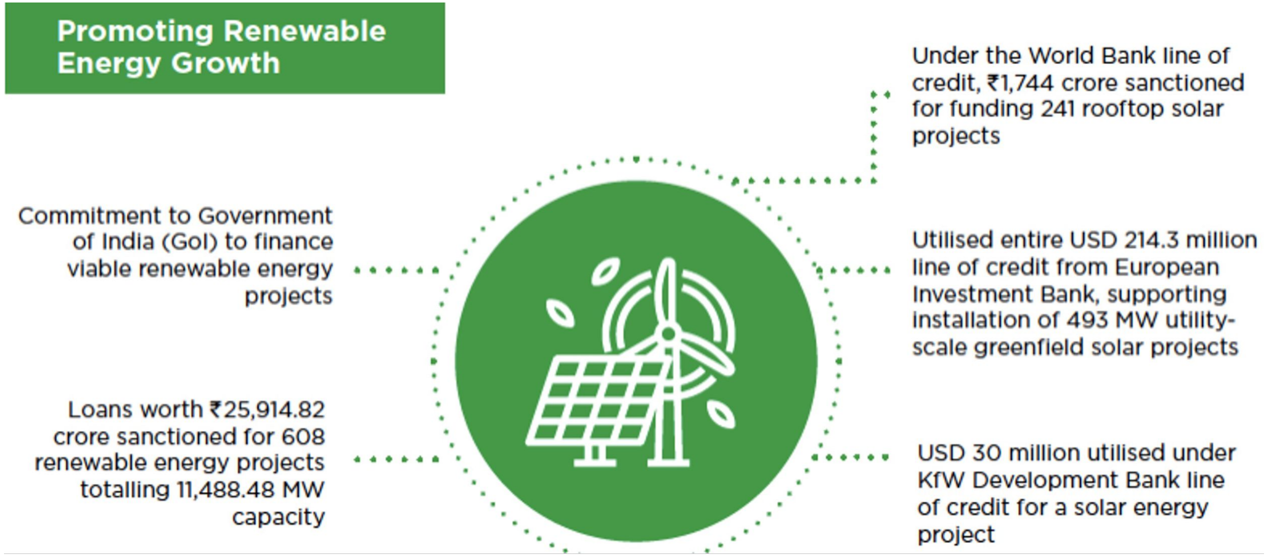
Overview:

- can be funded like any other loan or from proceeds from green bonds
- Green Loan Principles (GLP) were developed in 2018 and are voluntary and recommended guidelines and sets out a clear framework, enabling all market participants to clearly understand the characteristics of a green loan.
- provides consistent methodology across the wholesale green loan market & covers
  - a) use of proceeds
  - b) process of evaluation and selection of projects
  - c) management of proceeds
  - d) reporting
- accessible to SMEs, large corporates and individuals

Green Loan- an example

SBI Green Loans 2019-20

SBI

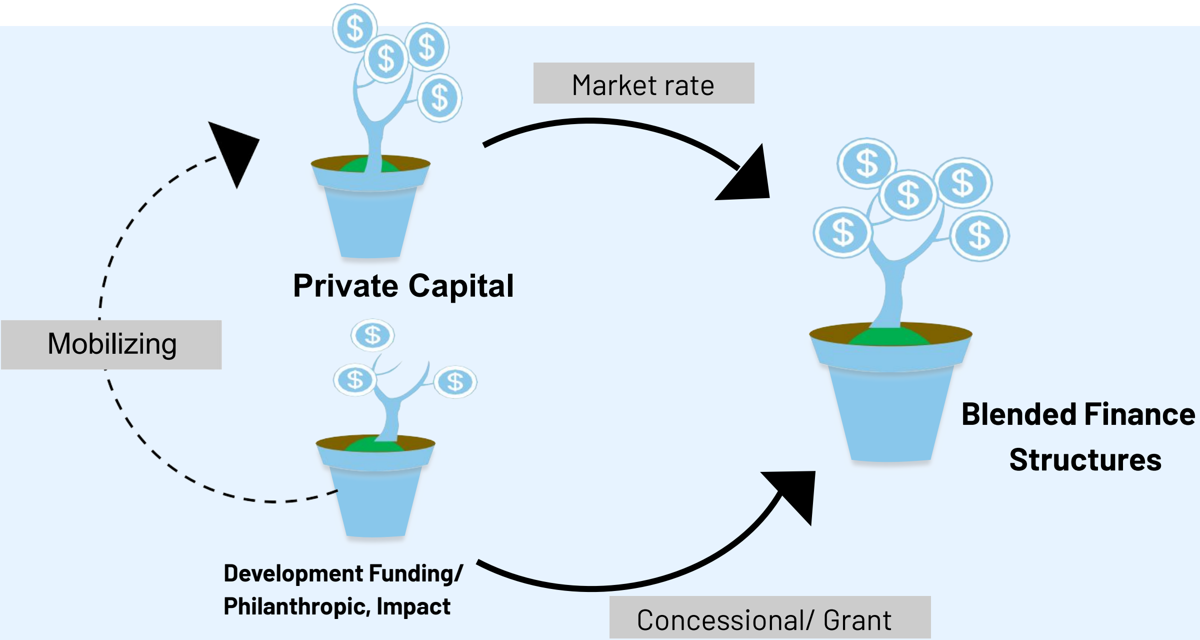


SBI and Bank of Baroda also operate a dedicated line to finance municipal waste to bio CNG projects

Source: SBI Sustainability Report, 2020

3. Blended Finance

Smart climate finance solutions that blend public and private funding, have an immense potential to leverage private capital, reduce investment risks, while bringing attractive returns together with climate/sustainable development benefits.



Public Funding can further be leveraged through Guarantee structures. Guarantees form an important form of financing, allowing counter- parties immediate access to payment without the cost of locking up cash

The main challenge is to design a targeted financial mechanism that can address **the existing barriers** and **promote scaled-up application** of low carbon/sustainable approach.

Blended finance – an example

$43 million grant and guarantee agreement towards the Partial Risk Sharing Facility for Energy Efficiency (PRSF)

- Agreement prepared and signed between The World Bank and Government of India
- Support enterprises and Energy Service Companies (ESCOs) mobilize commercial finance for investments in energy efficiency initiatives.
- The $43 million project consists of a partial risk sharing facility of $37 million — funded from a Global Environment Facility (GEF) contribution of $12 million backstopped by a Clean Technology Fund (CTF) contingent guarantee of $25 million — and a technical assistance and capacity building component of $6 million funded from GEF (will be managed by

Blended Finance: Impact Funds

A fund that brings together companies, governments and philanthropies who want to finance climate action at scale, pools together the group's money and invests it for them in a collection of projects and companies that generate a measurable, beneficial environmental and social impact.

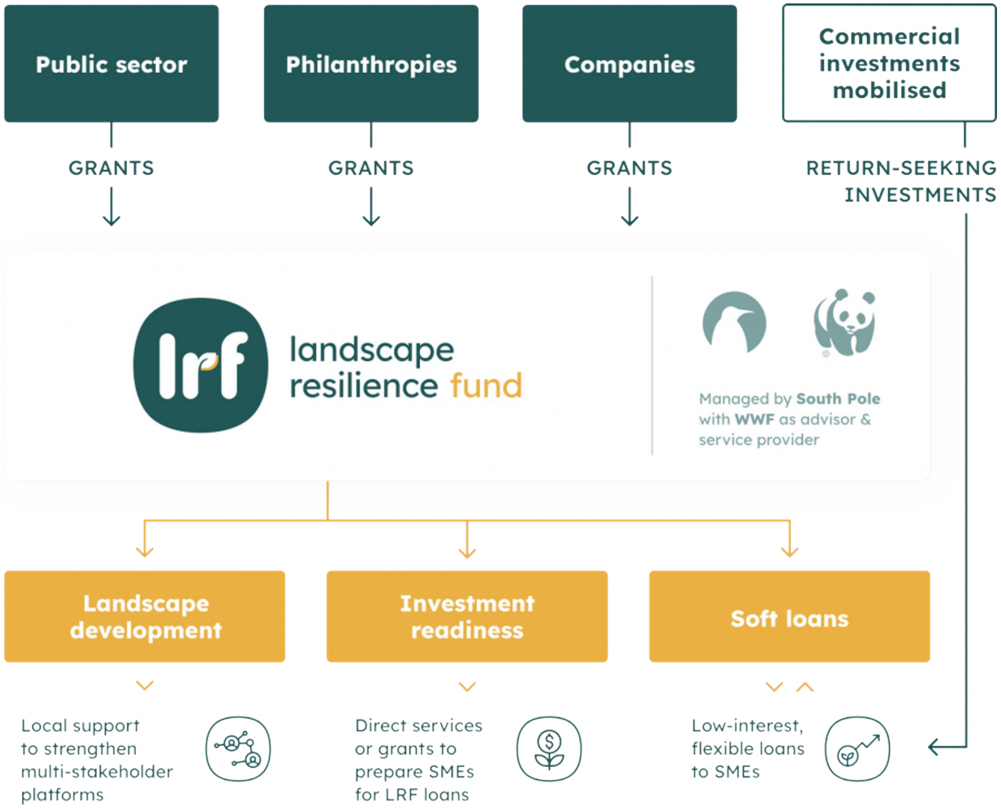
Why Impact Funds???

Be at the forefront of climate action and differentiate from competitors

Reach impact at scale and achieve more impact per USD of investment by recycling funds and mobilizing other investments

Access carbon credits and other sustainability attributes in the future with additional co-benefits

Landscape Resilience Fund



- Impact driven independent foundation
- Mobilizes private and public climate finance for vulnerable smallholders and landscapes.
- Co-developed by South Pole and the World Wide Fund for Nature (WWF)
- Anchor Investor: Chanel (25 mn Euro); GEF: Technical Assistance

How to design project/ programs to raise climate finance?

Key Design elements for program and project to raise international climate finance

Scope, objective, alignment with national policy priorities

GHG mitigation/adaptation and sustainable development targets

Main interventions		Enabling activities	
Technology, infrastructure interventions	Operating, management interventions	Policies, incentives	Awareness, trainings

MRV + M&E system

Institutional set-up and stakeholder engagement

Financial mechanism

Implementation roadmap including readiness plan

International climate finance may be used **to support only specific elements** of the programme, e.g. **enabling/readiness activitie** to incentivise implementation of emission reduction projects by the industry.

Criteria to evaluate funding-MDBs

Key funding criteria of donors	Climate project/programme
High climate mitigation/adaptation potential	✓
Transformational / paradigm shift potential	✓
Governmental support and alignment with national policy priorities and NDC	✓
Co-funding from domestic sources; Potential to catalyze private finance	✓
Economic efficiency / bankability	✓
Sustainable development co-benefits	✓
Feasibility	✓
Detailed design of all key elements including implementation roadmap with clear timelines, stakeholders' roles, etc.	✓

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