Climate Finance: Financing Instruments

Bijon Islam | CEO

LightCastle Partners
Keynote Presentation

BANGLADESH

U N
D P

Table of Contents

What is Climate Financing?

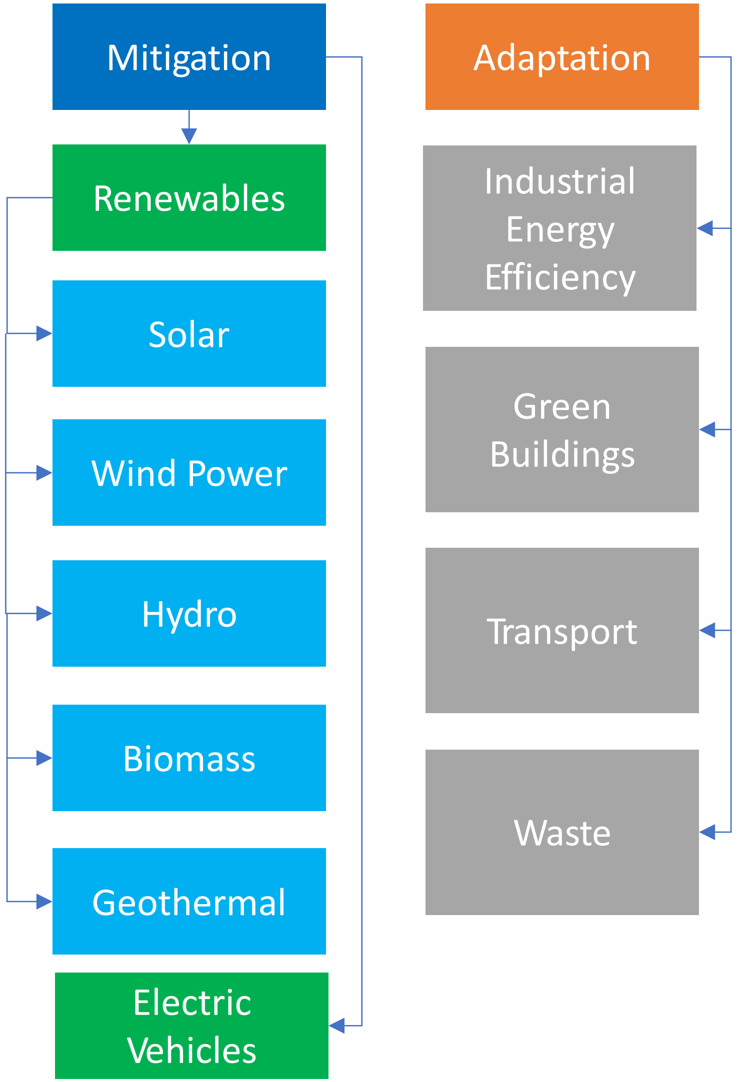
Climate Financing is Required for both Mitigation and Adaptation

The Definitions and Mechanisms

Climate finance refers to ***local, national or transnational financing*** drawn from ***public, private and alternative sources*** of financing that seeks ***to support mitigation and adaptation actions*** that will ***address climate change.***

Main Pillars:
As per the UNFCC convention and provisions under the Kyoto Protocol and the Paris Agreement,

- Financial assistance are expected to flow from parties with more financial resources to parties that are less endowed and more vulnerable to climate changes.
- Climate finance is needed for ***mitigation*** as large-scale investments are required to significantly reduce emissions.
- Climate finance is equally important for ***adaptation*** as financial resources are needed to adapt to the adverse effects and reduce the impacts of a changing climate.



Source: United Nation's Framework Convention on Climate Change (UNFCCC)

Global Climate Financing Funds

Development Financial Institutions are Frontrunners

The operation of the financial mechanism can be entrusted to one or more existing international entities such as –

Organization	Funds
United Nations	Global Environment Facility (GEF)
	Green Climate Fund (GCF)
	Special Climate Change Fund (SCCF)
	Least Developed Countries Fund (LDCF)
	Adaptation Fund (AF)
World Bank Group International Finance Corporation (IFC)	Climate Investment Funds
Asian Development Bank (ADB)	ADB Climate Change Fund

Source: United Nation’s Framework Convention on Climate Change (UNFCCC), Asian Development Bank, World Bank Group, OECD Database on Climate Funds

*Detailed information on these funds can be found in Annex 1

**The list is not exhaustive

Potential for Climate Financing in Emerging Markets

Climate Smart Investment Opportunities

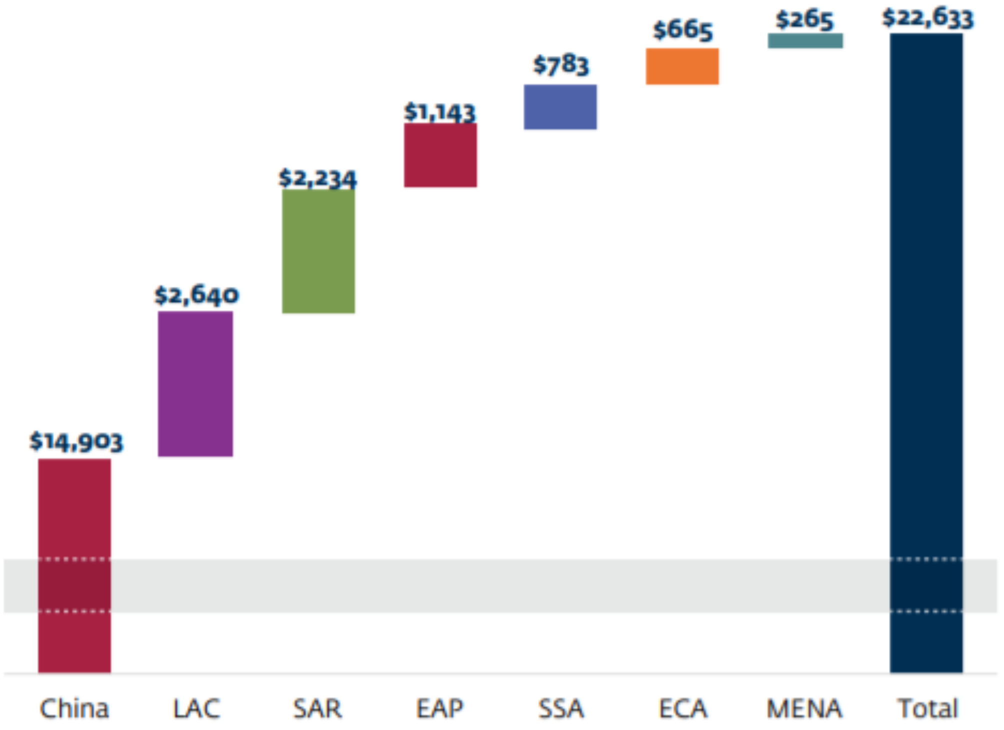
The 21 emerging markets represent 62% of the world's population and are responsible for 48% of global GHG emissions.

A study by International Finance Corporation (IFC) has estimated ***U$23 trillion in climate-smart investment opportunities*** exists in the emerging markets between 2016 to 2030.

Key climate-smart investment opportunities will be –

- Green buildings in the East Asia
- Sustainable transport in Latin America
- ***Climate-resilient infrastructure in South Asia***
- Clean energy in Africa
- Energy efficiency and transport in Eastern Europe
- Renewables in the Middle East

Climate-Smart Investment Potential 2016 - 2030 ($ billion)



Note: EAP = East Asia Pacific; ECA = Europe and Central Asia; LAC = Latin America Carribean; MENA = Middle East and North Africa; SA = South Asia; SSA = Sub-Saharan Africa.

Source: Climate Investment Opportunities in Emerging Market, International Finance Corporation (IFC), 2016

Potential for Climate Smart Investment in Emerging Markets

LightCastle Partners

Investment Potential by Region And Sector (U$ Billion)

	Wind	Solar	Biomass	Small Hydro	Geothermal	All Renewables	Electric Transmission & Distribution	Industrial Energy Efficiency	Buildings	Transport	Waste	Subtotal
East Asia Pacific	231	537	48	34	16	866	392	143	13,235	1,357	53	16,046
Latin America and Caribbean	118	44	45	11	14	232	0	21	901	1,460	26	2,640
South Asia	111	211	16	0	0	338	0	85	1,543	255	13	2,234
Europe and Central Asia	51	39	6	7	6	109	0	57	410	78	11	665
Sub-Saharan Africa	27	63	3	3	27	123	0	0	153	499	8	783
Middle East and North Africa	50	46	0	1	0	97	21	1	92	50	4	265
Total Climate-Smart Investment Potential by Sector ($ billion)	588	940	118	56	63	1,765	413	307	16,334	3,699	115	22,633

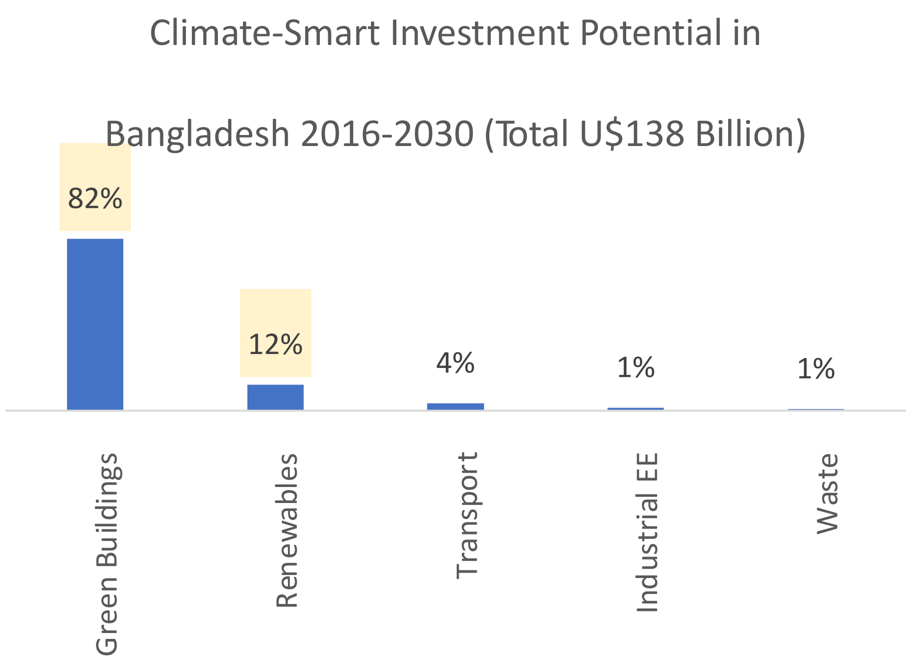
>1000
>500<1000
>250<500
>100<250
>50<100
>25<50
<25

Source: Climate Investment Opportunities in Emerging Market, International Finance Corporation (IFC), 2016

Climate Smart Investment Potential in Bangladesh

Approximately U$138 Billion of Investment Potential by 2030

- Bangladesh is one of the most vulnerable countries to the effects of climate change because of its large population and degraded natural resources (for example, damaged and depleted aquifers, degrading forests and soils).
- Bangladesh's Nationally Determined Contribution (NDC) highlights the ***urgent need to enhance adaptive capabilities and livelihood options for its citizens.***
- Climate change is already affecting water supply, hydro and thermal power, transport, and agribusiness in the country.
- The country's NDC focuses on ***the energy sector to mitigate emissions in the power, transport, and industry sectors*** – each representing opportunities for future private sector investment.



Source: International Finance Corporation (IFC)

Source: Climate Investment Opportunities in Emerging Market, International Finance Corporation (IFC), 2016

Climate Financing in Bangladesh: Industrial Sector

LightCastle Partners

IDCoL Mobilized U$256 Million Concessional Credit Line under Green Climate Fund

Implementing Agency: Infrastructure Development Company Ltd (IDCoL), a government-owned non-bank financial institution.

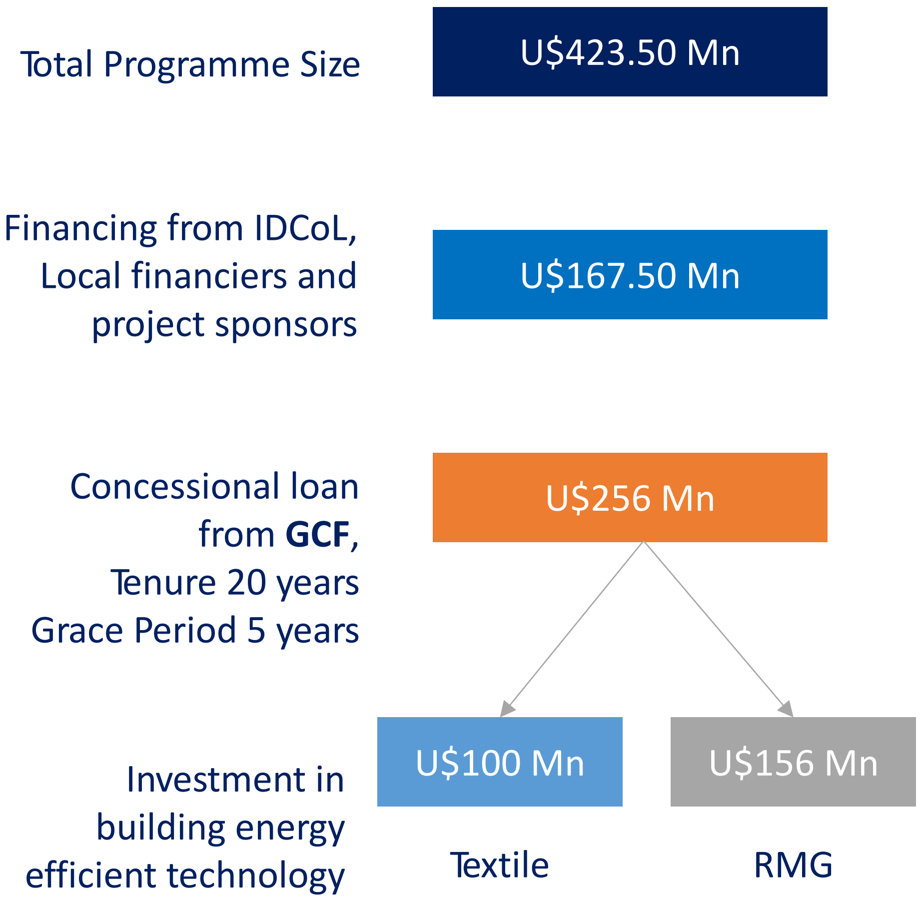
Fund: Green Climate Fund, UN.

Amount: U$256m concessional credit line

Objective: The fund is targeted to promote private sector investment through large-scale adoption of energy-efficient technologies in the textile and garment sectors.

Brief Description: IDCoL has received the approval of the funding proposal for its programme titled "Promoting private sector investment through large-scale adoption of energy-saving technologies and equipment for Textile and Readymade Garment sectors of Bangladesh".

As the garment sector accounts for the highest CO2 emissions at 15%, while textile comes next with 12.4%, the fund is be expected to be of great help to effectively address the needs of the sectors.



Source: Financial Express

Case Study 2

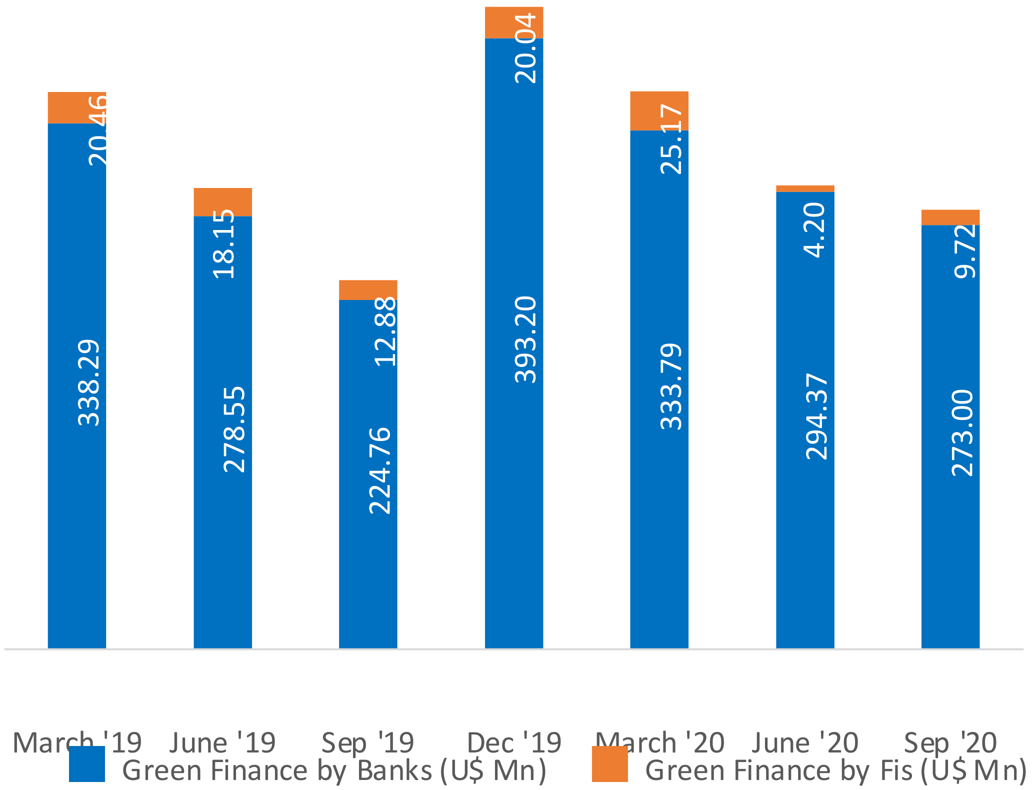
Bangladesh Bank Channelled U$1.3 Bn in Green Financing From July ‘19 to June ’20

Implementing Agency: Bangladesh Bank

Brief Description:

- Bangladesh Bank mandated banks and financial institutions (FIs) to form a “**Climate Risk Fund**.”
- BB directed the banks and financial institutions to allocate at least 10% of their corporate social responsibility (CSR) budget to the Climate Risk Fund, either by providing direct grants or by providing finance at a reduced rate of interest.
- Additionally, banks and FIs are instructed to provide financing for solid waste management systems, rainwater harvesting plants, and solar power panel projects.

Financing by Banks and Financial Institution under Bangladesh Bank's Green Financing Programme (U$ Mn)



Source: Bangladesh Bank Sustainable Financing Department

Case Study 3

U$185 Mn World Bank Financing for Renewable Energy

Implementing Agency: The Government of Bangladesh

Fund: Climate Investment Fund, World Bank.

Amount: U$185 million to develop 310 MW renewable energy generation capacity

Brief Description:

- **The project will establish the country's first large-scale 50MW grid-tied solar PV generation plant in Feni district,** implemented by the Electricity Generation Company of Bangladesh (EGCB).
- To fill the gap in the **long-term domestic financing market for renewable energy**, the project will also support **IDCOL to manage a Renewable Energy Financing Facility** for both rooftop and utility scale solar PV.
- It will also help **Sustainable and Renewable Energy Development Authority (SREDA)** identify sites for large-scale projects and promote new net metering policy for rooftop PV.

Credit from **International Development Association (IDA)**, Tenure 30 years Grace period 5 years Interest rate 1.25% Service charge 0.75%	U$155.75 Mn
Loan from Strategic Climate Fund (SCF) Tenure 40 years Grace period 10 years Service Charge 0.1%	U$26.38 Mn
Grant from SCF	U$2.87 Mn
Targeted investment from private sector, commercial banks, and other sources	U$212 Mn

Source: International Financial Corporation (IFC)

IFC Partnership for Cleaner Textile (PaCT) Project Mobilizes U$44 Mn to Inspire Cleaner Production Practices

Implementing Agency: International Finance Corporation

Investment: U$ 44 Million

Brief Description:

- IFC led Advisory Partnership for Cleaner Textile (PaCT) is a holistic program that support the entire textile value chain – spinning, weaving, wet processing and garment factories in adopting Cleaner Production (CP) practices.
- The programme engages with brands, technology suppliers, industrial associations, financial institutions, government to bring about systemic and positive environmental change for the Bangladesh textile sector and contribute to the sector's long-term competitiveness and environmental sustainability..

PaCT has reached to 338 RMG factories in Bangladesh, trained 6,641 personnel through 399 training sessions and resulted in the following impacts (cumulative).

Water Savings

28.7 billion liter/year

GHG Avoided

558,391 tonnes CO_2 eq/year

Energy Savings

2.9 million MWh/year

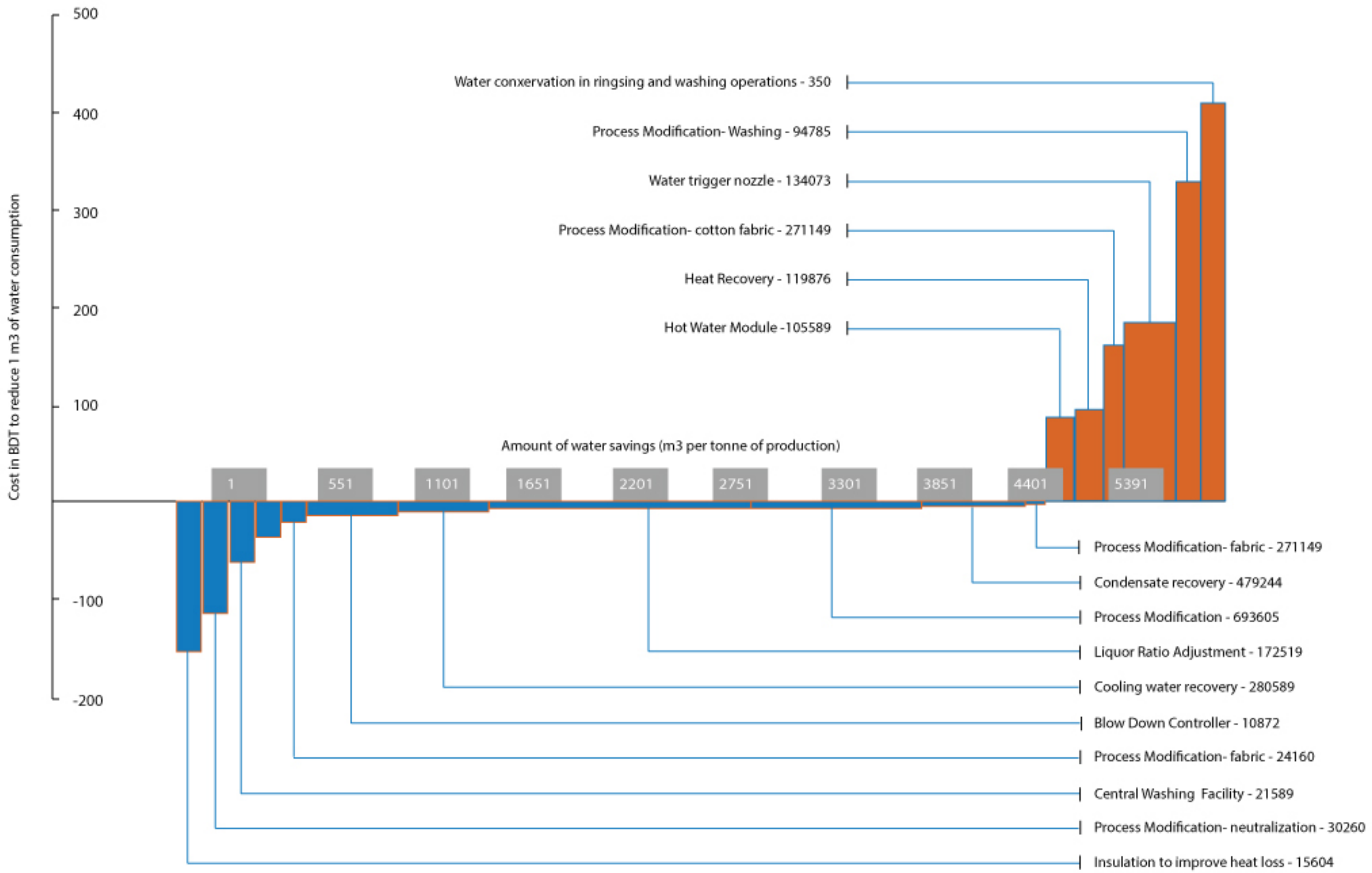
Wastewater Avoided

24.1 billion liter/year

Source: International Financial Corporation (IFC)

Cost savings can make the project commercially viable – Abatement Curves

Benefits of using better technology over mainstream production stack over a time period



Source: PACT Program, IFC

Climate Financing in Bangladesh: Startups

Startup Investment to Accelerate Climate Financing

Environmental Impact, Green Future, Circular Economy

Existing: Biniyog Briddhi Scaling Impact Enterprises of Bangladesh (SIE-B)	▪ Biniyog Briddhi (“B-Briddhi”) is a multi-year programme dedicated to supporting a thriving ecosystem where impact enterprises of Bangladesh can grow and scale their impact. ▪ Set up as a public private development partnership (PPDP) between the Swiss Agency for Development and Cooperation, Roots of Impact, and LightCastle Partners, the programme strives to improve the **financial, social and environmental performance of impact enterprises.** ▪ The programme grants funding ranging from U$ 50,000 to 200,000 in form of debt, equity or revenue sharing agreement.
Existing: Youth Co:Lab by UNDP and Citi Foundation	▪ Youth Co:Lab is the largest youth social entrepreneurship movement in Asia, supported jointly by United Nations Development Programme (UNDP) and Citi Foundation. The programme aims to empower and invest in youth, so that they can accelerate the implementation of Sustainable Development Goals through leadership, social innovation and entrepreneurship. ▪ So far Bangladeshi startups like Avijatrik - community-based tourism, Liter of Light Bangladesh – a social enterprise working on renewable energy lighting solutions, ReLeaf - an urban roof-top gardening social business, among others have received funding and awards from this programme.
Upcoming: ADB Ventures	▪ With a view to generate commercial returns, ADB ventures targets technology-driven businesses with significant potential to scale and deliver impact in developing Asia Pacific. ▪ The Investment Fund 1 makes equity investments in cleantech, agritech, fintech, and healthtech companies, supporting scale-ups in **South and Southeast Asia with a focus on climate impact.**
Upcoming: Investments for Circular Economy-based Startups	▪ **GARBAGEMAN,** a tech-based recycling business in Bangladesh, was founded in 2018 with its vision to contribute in creating a Cleaner and Greener Bangladesh by introducing a modern and scientific approach towards an efficient waste management system. The company has received DIY plastic recycling machines and getting other technical support from the Delft University of Technology under an affiliation. ▪ **SOLshare**, a Dhaka-based solar energy company that enables P2P electricity trading, has raised U$1.1M in a new funding round for an off-grid solar energy marketplace. IIX Impact Partners supported the funding round. ▪ An increasing number of startups working towards building a greener future are making their way, while investors with a focus on environmental impact are entering the market.

Source: Biniyog Briddhi Website, ADB Venture Website, The Daily Star

The Future of Green Financing

Innovative Green Financing Instruments

Capital Market in Fueling Transition

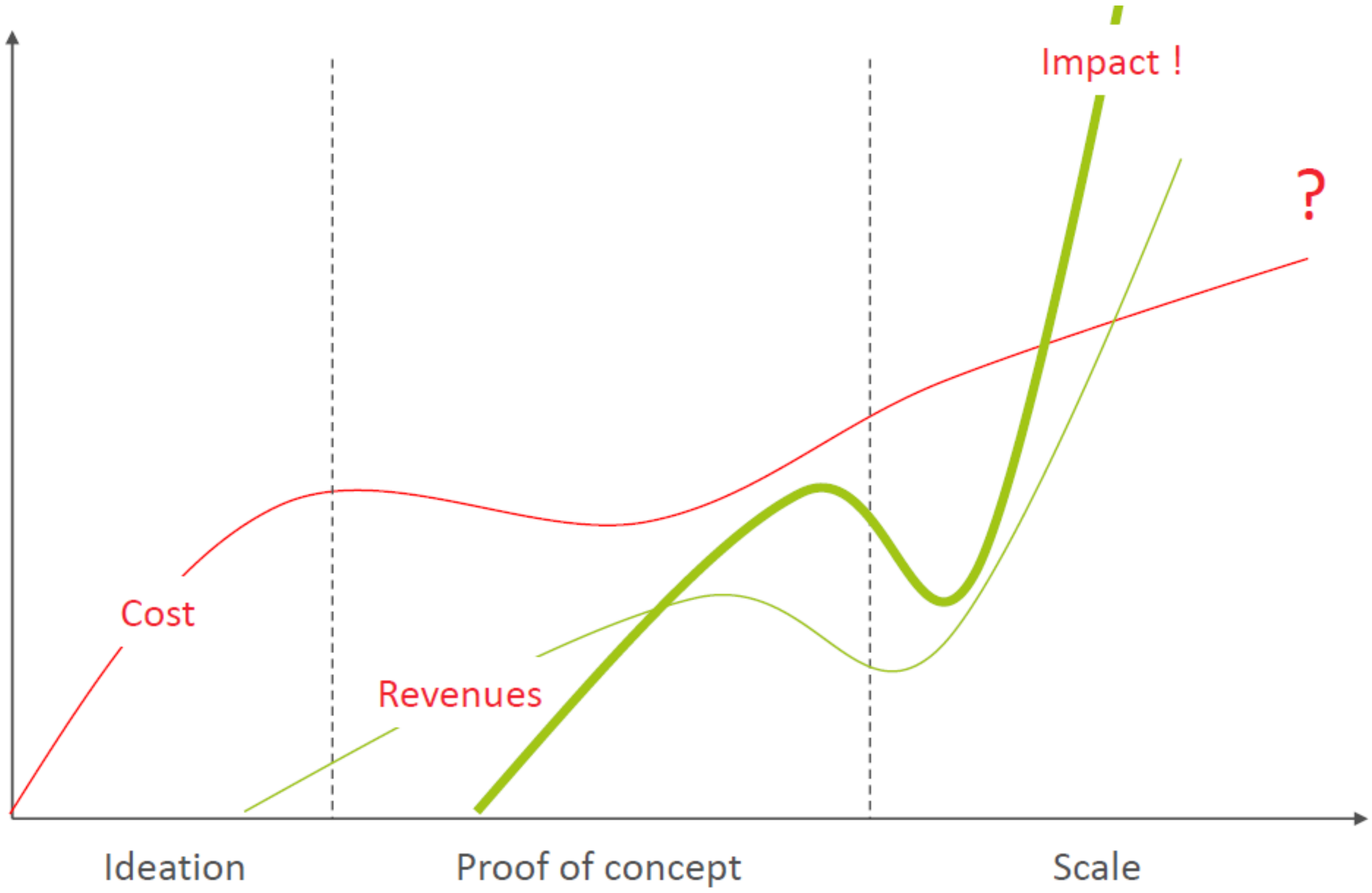
LightCastle Partners

Instruments	Implementation
Carbon Pricing	▪ Governments are pricing carbon because it provides a "**triple dividend**": - It is good for the environment; - It raises revenue efficiently, making it possible to reduce other taxes; - It drives innovation and critically needed investments in clean technologies.
Initiating Strong Driver for Private Sector Investment	▪ Providing certainty through **simplified permitting procedures and standardized documents** like power purchase agreements are strong drivers of investments as they make projects bankable and attract funding.
Green Finance	▪ "Green finance" refers to the financing of investments that provide environmental benefits in the broader context of environmentally sustainable development.
Green Bonds	▪ Green bonds are example of an aggregation and securitization vehicle that offers investors a green investment opportunity without sacrificing returns. Since 2008, the World Bank Group has issued more than U$14 billion in green bonds. Proceeds from these bonds are used to support low-carbon projects.
Blended Climate Finance	▪ Blending small amount of public concessional funds with commercial financing to fund new projects that have a high development impact and strong potential to create a demonstration effect, but have not yet established a commercial track record can be an efficient way to drive commercial investment.

Source: Bloomberg, International Energy Association (IEA)

Climate Enterprise needs more longer term capital and need a different fit

Since they ensure not just financial but environmental dividends



Source: Biniyog Briddhi, Bjoern Struewer, Roots of Impact, Swiss Development Corporation

Innovative Financing Toolkit

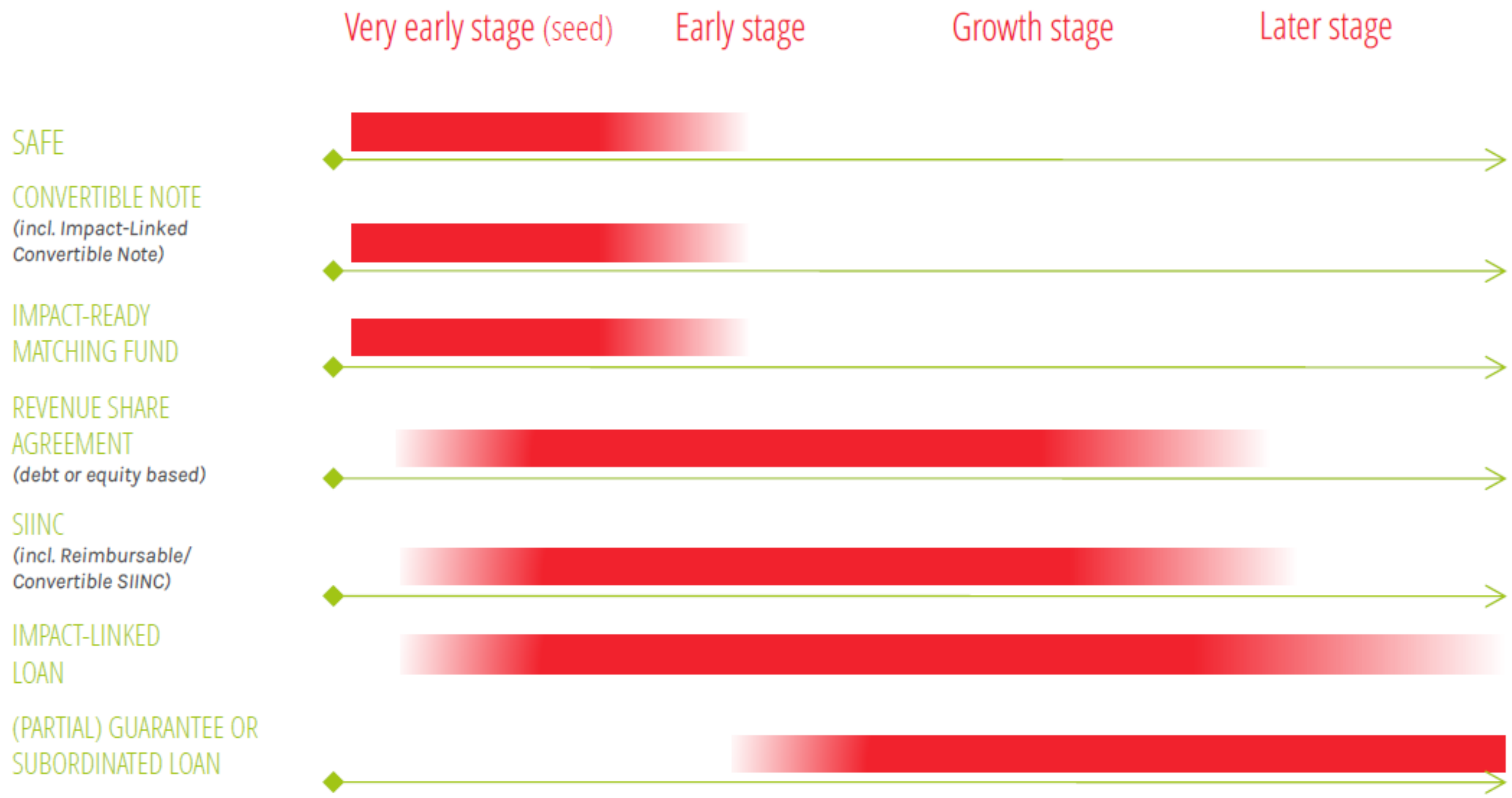
For Impact Investment

Instruments	Description
Blended Finance	▪ Blended Finance "is the use of catalytic capital from public or philanthropic sources to increase private sector investment in developing countries to realise the SDGs" (Convergence. ▪ Catalytic nature, contribution towards achieving the SDGs and yield of positive financial returns are the distinctive characteristics. ▪ This mechanism de-risks the investment by reducing the risk for the private investor ▪ This also ensures return enhancement by increasing the return for the private investor
Result-Based Finance	▪ "Green finance" refers to the financing of investments that provide environmental benefits in the broader context of environmentally sustainable development.
Impact-Linked Finance	▪ Impact-Linked Finance refers to linking financial rewards for market-based organisations to the achievement of positive social outcomes ▪ Catalytic nature, financial reward for impact and focus on outcomes are the key features.
Social Impact Incentives (SIINC)	▪ SIINC acts as an additional revenue stream that directly improves the P&L of the impact enterprise and makes it more attractive for investors. ▪ It enables the enterprise to continue or even accelerate its efforts to generate deep impact while scaling and offering sufficient returns to investors.
Impact Ready Matching Fund (IRMF)	▪ The IRMF is designed to provide matching funds to impact enterprises. The IRMF is non-repayable funding that rewards enterprises for building their capacities in impact management and measurement (IMM) and once they receive matching private sector investment

Source: Biniyog Briddhi, Bjoern Struewer, Roots of Impact, Swiss Development Corporation

Different Instruments at Different Lifecycle of the enterprise

Making the best fit for current stage of the company



Source: Biniyog Briddhi, Bjoern Struewer, Roots of Impact, Swiss Development Corporation

Key Takeaways

Key Takeaways

- Climate financing means local, national or transnational financing drawn from public, private and alternative sources of financing that seeks to support mitigation and adaptation actions that will address climate change.
- Potential for climate-smart financing in emerging market is rising. Building green infrastructure projects including affordable housing will require the highest amount of investments in Bangladesh.
- Innovative investment concepts like carbon pricing, green bonds, blended approach, impact investments, ESG investment among others are yet to capture the Bangladesh market.
- Innovative impact financing instruments like – blended financing, impact-linked finance, IRMF, SIINC will play instrumental roles in channelling finance for climate projects.
- Incentivizing private sector investors to finance climate change mitigation and adaptation projects through policy intervention could be the game changer.

LightCastle Partners
Level 5, House 10/12, Road 1, Block B, Niketan, Gulshan 1,
Dhaka - 1212, Bangladesh

Email: info@lightcastlebd.com
Mobile: +8801744 736621, +88 01711 385988
Web: www.lightcastlebd.com
Data on Demand Platform: www.databd.co

Authors

Bijon Islam
Chief Executive Officer
LightCastle Partners

Silvia Rozario
Project Manager & Sr. Business Consultant
LightCastle Partners

Annex 1

Existing Climate Funds by the UN

Funds	Brief Description	Target	Mechanism
Global Environment Facility (GEF)	The fund was established in 1992 at the Rio Earth Summit. The financial contributions are replenished every four years by the 40 GEF donor countries. Between 2018-22, the fund is set to mobilize U$4.1 billion.	Developing countries and countries with economies in transition	Typically, the GEF provides funding to support government projects and programs.
Green Climate Fund (GCF)	It was set up by the UNFCCC in 2010 with a view to support the goal of keeping average global temperature rise well below 2 degrees Celsius.	Developing countries to reduce their greenhouse gas emissions and enhance their ability to respond to climate change	It aims to use public investment to stimulate private finance, unlocking the power of climate-friendly investment for low emission, climate resilient development. To achieve maximum impact, GCF seeks to catalyse funds, multiplying the effect of its initial financing by opening markets to new investments.
Special Climate Change Fund (SCCF)	The Special Climate Change Fund (SCCF) was established under the Convention in 2001 to finance projects relating to: adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification. To date the SCCF has a portfolio of more than U$350 million supporting 85 projects globally.	The SCCF complements the Least Developed Countries Fund (LDCF). Unlike the LDCF, the SCCF is open to all vulnerable developing countries. In addition, it funds a wider range of activities related to climate change.	The SCCF funds adaptation related to water resources management, land management, agriculture, health, infrastructure development, fragile ecosystems (including mountainous ecosystems) and integrated coastal zone management.
Least Developed Countries Fund (LDCF)	The Least Developed Countries Fund (LDCF) was established to support a work programme to assist Least Developed Country Parties (LDCs) carry out, inter alia, the preparation and implementation of national adaptation programmes of action (NAPAs).	As of October 31, 2019, 51 countries (LDCs and former LDCs) had accessed a total of U$1.4 billion for the preparation and implementation of NAPAs, the NAP process and elements of the LDC work programme.	In 2018, each LDC is eligible to access up to U$50 million cumulatively from the LDCF. Since 2018, there is also an access cap, under which each LDC can draw up to U$10 million in LDCF resources toward the U$50 million cumulative ceiling during the GEF-7 period. This is to "ensure more timely access to resources by as many LDCs as possible, while also maintaining the practice of equitable access"
Adaptation Fund (AF)	The Adaptation Fund (AF) was established in 2001 to finance concrete adaptation projects and programmes in developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change.	Developing countries vulnerable to the adverse effects of climate change.	The Adaptation Fund is financed with a share of proceeds from the clean development mechanism (CDM) project activities and other sources of funding. The share of proceeds amounts to 2 per centÂ of certified emission reductions (CERs) issued for a CDM project activity.

Source: United Nation's Framework Convention on Climate Change (UNFCCC)