

BANGLADESH CLIMATE FINANCE MARKET SCOPING

— FULL VERSION —

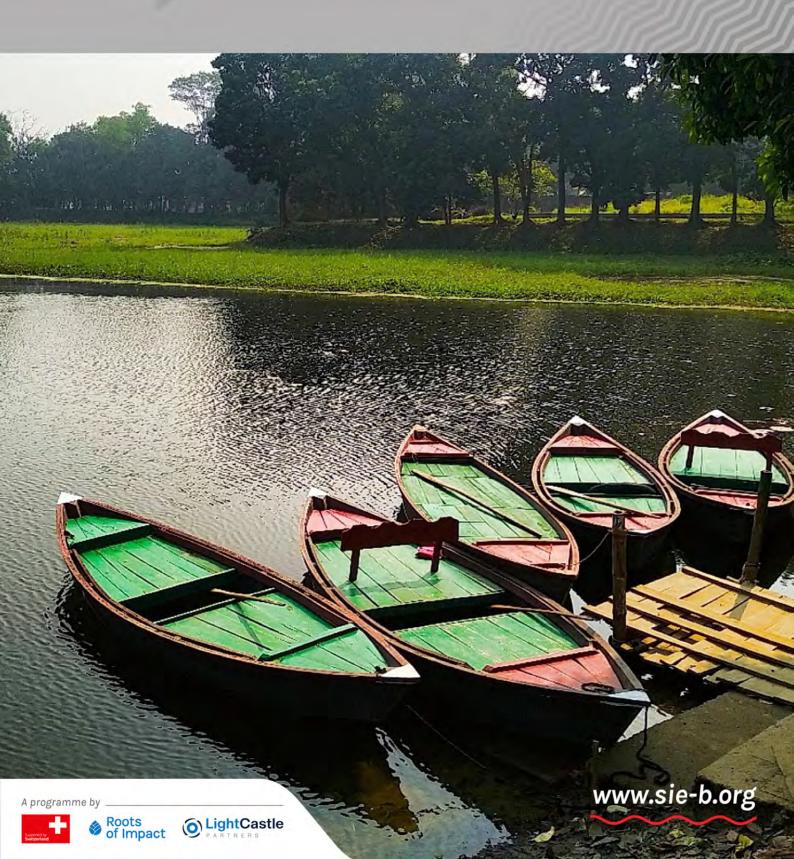










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REPORT PURPOSE

A training document that helps impact enterprises in Bangladesh to understand the carbon markets and their relevance to their business, as well as other climate finance opportunities. This document is intended to be used in conjunction with the Climate Finance Navigator, which provides more detailed guidance, tips and tricks for impact enterprises seeking to access climate finance. The glossary of terms, as well as resource library provided within the Climate Finance Navigator are integral parts of this document.

LIST OF ABBREVIATIONS

BCDP: Bangladesh Climate and Development Platform

CDM: Clean Development Mechanism

CO2: Carbon Dioxide

COP: Conference of the Parties

EACs: Energy Attribute Certificates

EIB: European Investment Bank

EU: European Union

GCF: Green Climate Fund GHG: Greenhouse Gas

IMF: International Monetary Fund

ITMO: Internationally Transferred Mitigation Outcome

NDCs: Nationally Determined Contributions

REDD+: Reducing Emissions from Deforestation and Forest Degradation

UNDP: United Nations Development Programme

UNFCCC: United Nations Framework Convention on Climate Change

VCS: Verified Carbon Standard

ABOUT B-BRIDDHI

A key goal of growth in Bangladesh is to develop an inclusive ecosystem, which allows the entire population to participate. Impact enterprises can play a vital role in this vision. By developing and scaling innovative solutions to social and environmental challenges, people still living in disadvantaged conditions can receive an equal chance to benefit from economic prosperity in their roles as customers, suppliers and employees.

B-Briddhi is a multi-year public-private development partnership (PPDP) supported by the Embassy of Switzerland in Bangladesh, implemented by Roots of Impact, LightCastle Partners and other stakeholders, including investors, private sector organizations, incubators, and support organizations for impact enterprises.

Biniyog Briddhi ("B-Briddhi") was launched in 2020 to enhance the financial, social, and environmental performance of impact enterprises by enabling them to master Impact Investment Readiness (IIR) as well as Impact Measurement and Management (IMM). In addition, it gives them much-needed access to innovative and catalytic funding, which puts them in a much better position to scale their impact.

B-Briddhi's primary actions are organised around four pillars of activity, which include capacity building, catalytic finance, advocacy, and knowledge management. The overall objective is to help impact entrepreneurs grow and scale with Impact-Linked Finance and reach more vulnerable customer groups and to help build is to help build an ecosystem in which impact entrepreneurs have increased access to suitable growth capital and where investors receive exposure to a pipeline of investment-ready impact enterprises.

CARBON AND OUR GLOBAL ENVIRONMENT

GREENHOUSE GASSES AND THEIR IMPACT

Carbon dioxide (CO2) is a gas that is naturally found in the environment, but the proportion of the gas in the atmosphere is increasing since the beginning of industrialisation. There are several sources of carbon dioxide - in particular from fossil fuels, industry and land use, as well as sinks, or activities that remove carbon dioxide from the atmosphere for storage, in particular land and ocean sinks. As global sources and sinks become out of balance, due to human activities, atmospheric carbon is increasing, which drives climate change. Climate change is caused by human activity: it is driven through the emissions of greenhouse gasses (GHGs), mostly carbon dioxide, but also methane and nitrous oxide, into the atmosphere.¹

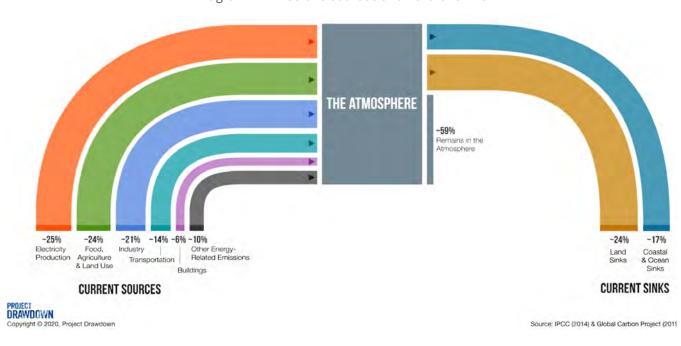


Diagram 1: Emissions sources and natural sinks

Source: Project Drawdown

Research has conclusively identified that this rapid increase in atmospheric carbon has dangerous consequences for humans globally. Bangladesh has been identified as one of the most vulnerable countries to the effects of climate change as it is a densely populated and a low-lying nation, where sea level increases will greatly impact communities. Starting at the Earth Summit in 1992, governments around the world have attempted to develop a joint strategy for addressing this global crisis.

In 2016, at the United Nations Conference on Climate Change, known as Conference of the Parties (COP) in Paris, 196 parties (mostly countries) agreed to limit long term global surface temperature increase in a legal binding agreement known as the Paris Agreement. The Paris Agreement stipulates that all countries to the party shall take actions to limit warming to well below 2 degrees Celsius, ideally below 1.5 degrees Celsius.

¹ GHGs often referred to by their equivalent warming potential in carbon dioxide (eg. carbon dioxide equivalent). This report refers to carbon dioxide for simplicity.

^{2 &}lt;a href="https://unfccc.int/process-and-meetings/the-paris-agreement">https://unfccc.int/process-and-meetings/the-paris-agreement

These actions include:

- Reducing emissions sources: shifting to renewable electricity, improving energy efficiency, addressing consumption patterns for food, protecting ecosystems, improving industrial processes, improving transport, and improving buildings.
- Supporting emissions sinks: shifting agriculture practices, protecting ecosystems, reforesting degraded land as well as developing engineered sinks to remove carbon from the atmosphere.

The specific actions and detailed targets that each country will pursue is outlined in their Nationally Determined Contributions (NDCs).

COMPANIES: CLIMATE IMPACT, MITIGATION AND ADAPTATION

Many of the activities that drive GHG emissions - such as transportation, energy, production of goods - are undertaken by private companies. These activities are collectively called the 'footprint' of a company - and describe the overall negative impact that a company has on the environment. At the same time, the activities which reduce emissions globally - such as transitioning to renewable energy, increasing availability of recycling or alternative proteins, and increasing energy efficiency - are also often undertaken by private companies. The positive impact that a company has through its products and services is often referred to as the 'handprint.'

The company footprint is typically calculated in accordance with the Greenhouse Gas Protocol (GHG Protocol) - which provides a common framework for GHG accounting, and calculates the footprint according to 3 different activity areas, or 'scopes':

- Scope 1 emissions include combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment.
- O Scope 2: GHG emissions from the generation of purchased electricity consumed by the company. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organisational boundary of the company.
- Scope 3: emissions that are a consequence of the activities of the company, but occur from sources not owned or controlled by the company. Some examples of scope 3 activities are extraction and production of purchased materials; transportation of purchased fuels; and use of sold products and services. This scope is often not measured or reported by smaller companies.

In order to reduce their impact on the environment, many companies are voluntarily, or based on legal requirements, reducing their emissions by setting clear targets and finding more climate friendly ways to produce and deliver their goods and services. For more information about how impact enterprises can calculate and reduce their carbon footprint is available in the Climate Finance Navigator.

Companies that have a positive carbon 'handprint' include all the products and services that drive carbon sinks, or support our society to reduce emissions. Examples of driving carbon sinks include eco-tourism that protects forests, carbon dioxide removal companies, and agroforestry companies. Examples of companies that have a positive handprint by reducing global emissions include solar panel and electric vehicle manufacturers, clean cookstove companies, and software companies that help optimize transport and energy systems.

Climate adaptation is the process of adjusting to the effects of climate change. Climate adaptation includes ensuring that crops, technology, and infrastructure are able to withstand increased temperatures, higher sea level, or changing weather conditions. It is important that companies assess whether their businesses are at risk from the effects of climate change, and take actions to adapt to those risks. Companies are also important in helping to drive climate adaptation for our society - by providing important products and services such as water purification for saline water, drought resistant crops, or conserving mangroves to reduce the risk of flooding.

Implications for impact enterprises in Bangladesh: Impact enterprises should evaluate and understand their footprint, handprint, and ability to support climate resilience. Understanding how their company fits within these climate goals will enable impact enterprises to speak the language of financing organisations, to identify relevant partners and possibly access climate finance opportunities. The first steps of evaluating climate impact, mitigation and adaptation can be undertaken with guidance provided in the Climate Finance Navigator.

FINANCING CLIMATE ACTION

WHO IS SUPPORTING AND FUNDING CLIMATE ACTION GLOBALLY?

To achieve global climate goals, actions are already being taken by: governments, development partners, the private sector and individuals. Each of these groups are contributing to global climate goals in different ways, and through different mechanisms:

- O Governments: through Nationally Determined Contributions (NDCs):
 - Emission reductions and removals within a country
 - Supporting international climate action, in particular contributions to support the conditional commitments of countries in the Global South

O Development partners:

- United Nations Framework Convention on Climate Change (UNFCCC), coordinates global climate action
- Green Climate Fund, is the financing vehicle of the UNFCCC
- Multilateral development finance institutions, such as the World Bank or Asia
 Development Bank which work to provide grants and concessional finance

O Non governmental organisations:

 Fundraise (from governments, private sector and individuals) and distribute funds to climate projects Raise awareness and advocate for more climate action

O Private sector:

- Companies of all sizes globally are contributing to solving the climate crisis through needed products and services
- Companies make commitments to change their way of doing business, including setting 'Science Based Targets' and committing to 'Net Zero'
- Individuals: consider environmental factors in consumption decisions and contribute to climate action through project contributions.

The majority of the investments into climate action are undertaken by governments and development partners, with a smaller share contributed through the private sector and from individuals.³ A key challenge for all of these actors is to identify how best to take action on climate - in other words - how to channel funds into highly impactful projects that achieve climate goals. Several approaches have been developed which meet the needs of different types of actors, and help channel funding into climate action.

HOW ARE THESE ACTIONS TO FUND CLIMATE ACTION UNDERTAKEN?

There are several pathways within climate finance that are of particular relevance to impact entrepreneurs in Bangladesh that have a positive environmental impact. These funding mechanisms exist to finance climate action:

- Carbon market: establishing markets that use an instrument called 'carbon credits' to exchange positive climate impact between projects and an organisation seeking to have a climate impact, always measured in terms of carbon dioxide equivalents. Similar markets exist for other environmental attributes, such as Energy Attribute Certificates (EACs).
- Value chain climate action: corporations who have committed to reducing their carbon emissions purchase input materials with lower carbon intensity at a premium, or provide other additional benefits to suppliers to support the climate benefit they provide through lower carbon production.
- Concessional and grant funding: concessional funding is debt based financing distributed at favourable terms (such as below market rate interest rates) for the purpose of supporting climate action, often alongside technical assistance. Grant funding is money given to an organisation for a specific purpose, which is agreed between the organisation receiving funds (grantee) and the grantmaker.

BANGLADESH CLIMATE COMMITMENT

The Paris Agreement is a treaty that was signed by the government of Bangladesh. The commitment that the government of Bangladesh made in Paris builds on a long history of climate action. Bangladesh has been very focused on climate adaptation - adjusting to the impacts of climate change. As the

³ Climate Policy Initiative, Global Landscape of Climate Finance 2024

economy of Bangladesh has grown, it has increasingly paid attention to climate mitigation - or reducing emissions.

The government of Bangladesh, with a number of development partners, has recently established the Bangladesh Climate and Development Platform (BCDP) which will be accountable for implementing the Bangladesh climate agenda. BCDP will develop a pipeline of climate projects, ensure that climate risks are integrated into fiscal planning, improve the sensitivity of public investment management to climate-related challenges, bolster climate-related risk management for financial institutions including climate stress testing, strengthen monitoring and reporting of climate-related spending.⁴

Bangladesh climate commitment:

- Bangladesh has committed to the Paris Agreement and outlined its plans to reduce emissions through its Nationally Determined Contribution (NDC) in 2021.
- The Bangladesh NDC outlines plans to reduce emissions by 6.73% by 2030 with an increased ambition of reducing emissions by 15.12% if additional financing and support can be identified. This increased ambition scenario is called the 'conditional commitment.'5
- The government of Bangladesh has defined specific activities it will undertake to achieve its unconditional emission reduction target, as well as other activities that would require additional external funding - the conditional reduction target. An overview of the mitigating actions can be found in the Bangladesh NDC.⁶
 - Examples of unconditional target mitigating activities include efficiency improvements in energy production (eg. for gas turbines and coal power plants), implementation of hydro and solar energy, implementing alternative wetting and drying in rice cultivation, and widening roads to facilitate cycling and pedestrian walkways.
 - Examples of conditional target mitigating activities include establishing a charging network and electric bus system in major cities, implementing solar irrigation systems, and improving livestock feed variants.
 - Overall, the main focus of Bangladesh's NDC is on reduction of energy related emissions, including transitioning to renewable energy and increasing energy efficiency.
- Private sector is expected to reduce emissions related to its operations and is also needed to develop and scale innovations that reduce emissions in Bangladesh.

⁴ International Monetary Fund press release, 3 December 2023, <u>Bangladesh and its Partners are Launching the Bangladesh Climate</u> and <u>Development Platform to Leverage Adaptation and Mitigation Investments</u>

⁵ NDC Partnership website, Bangladesh.

⁶ Bangladesh NDC, updated 2021, accessed via **UNFCCC website**.

Climate finance to date in Bangladesh:

- Bangladesh has a strong history of taking action to support global climate goals.
- Organisations, including impact enterprises, in Bangladesh have been taking action on climate with funding from the carbon markets since the early 2000s. Bangladesh registered over 40 different carbon projects across the Clean Development Mechanism (CDM), Verra and Gold Standard. These projects include a number of different project types such as clean cookstoves, reduction of gas leakages, and renewable energy. See also the section 'carbon market' below.

Bangladesh climate finance scale:

- O United Nations Development Programme (UNDP) estimates the total costs of the mitigation actions in Bangladesh to be 176 billion US\$ over ten years (2021-2030).⁷ This amounts to approximately 3-4% of GDP in Bangladesh.
- The International Monetary Fund (IMF) estimates that 610 million USD has been committed to supporting the private sector to support the government climate agenda, including 442 million USD for a series of nine climate projects funded through the Green Climate Fund (GCF).8
- The European Union (EU) and the European Investment Bank (EIB), have committed to providing a "Bangladesh Renewable Energy Facility," consisting of an EU-guaranteed EIB Loan of 381.5 million. This loan will support renewable energy projects, which are part of the Bangladesh climate mitigation targets.

Implications for impact enterprises in Bangladesh: Impact enterprises should understand whether their climate handprint addresses any goals of the Bangladesh NDC. Specifically, they should understand which mitigating activities they can support and note whether these activities are part of the conditional or unconditional part of the NDC. Activities from within the conditional NDC target are likely to be supported through international climate finance and remain eligible for voluntary carbon market approaches. Activities that fall under the unconditional NDC target of the government of Bangladesh should be aligned with BCDP and are unlikely to be eligible for voluntary carbon market approaches. To evaluate this, impact enterprises should read the published Bangladesh NDC.

BANGLADESH CLIMATE FINANCE TODAY

Impact enterprises in Bangladesh can contribute towards global climate goals and leverage climate finance in order to support their activities. There are several different pathways to monetise climate impact that impact enterprises can pursue. Each climate finance pathway fulfills differing use casesbeing deployed by different actors, to reach differing aims. While it can happen that climate action is

⁷ ibid.

⁸ International Monetary Fund press release, 3 December 2023, <u>Bangladesh and its Partners are Launching the Bangladesh Climate and Development Platform to Leverage Adaptation and Mitigation Investments</u>

taken by other combinations of funders and project monitoring approaches - the approaches outlined in the diagram below are the most common. Taken together, they form the landscape of climate finance that is relevant to impact entrepreneurs in Bangladesh. More detailed information - including detailed requirements and project monitoring approaches are outlined in the Climate Finance Navigator.



Diagram 2: Climate finance pathways

*note: these pathways represent the most common scenarios, but approaches sometimes vary

Carbon market

The carbon market globally has experienced several phases, including the CDM period (from 2006 to 2012) which focused on compliance markets for highly polluting industries, and the Paris Agreement period (from 2015 to 2024) which focused on voluntary action by the private sector. The market is now entering a new phase, following the COP29 in Baku. In this phase, it is anticipated that the market will be used by both governments as well as the private sector to reach climate goals. In November 2024, at the COP29 in Baku, the parties agreed to the details that will govern carbon finance, also known as 'Article 6.' This agreement foresees a new carbon credit market to be formed which is facilitated by the United Nations - enabling countries as well as the private sector to fund climate action through carbon credits. This is considered a major milestone in the establishment of the carbon crediting mechanism, and it is anticipated that it will result in a more robust carbon market that leverages the learnings made from previous carbon markets (CDM, voluntary carbon market, etc). In the future, it is anticipated that this new market will replace existing voluntary markets - but leverage many of the standards, methodologies and approaches from the voluntary market.

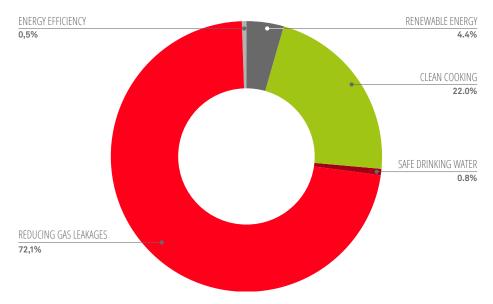
The carbon market in Bangladesh has two primary markets:

- Voluntary markets- including credits such as Gold Standard, Verra, REDD+ etc typically used by the private sector to make sustainability claims.
- Government markets includes credits purchased by the government of Bangladesh or foreign governments to reach NDCs, typically called Internationally Transferred Mitigation Outcome (ITMO) and governed according to rules of article 6.2 and 6.4 of the Paris Agreement.

The voluntary market includes numerous different carbon standards, such as VCS/Verra, Gold Standard as well as numerous other smaller standards - such as ACR, Climate Action Reserve and Plan Vivo. Bangladesh currently only has projects from Verra and Gold Standard operational. These credits can be generated and sold to organisations that are looking to make a climate impact that is

measured per tons of CO2 equivalent. Until recently, these credits were typically used to make claims such as 'climate neutral' by companies. Under new requirements, these credits need to be approved by host governments and require host governments to deduct these impacts from their own climate inventories (a process known as 'corresponding adjustments') for international buyers to be able to make climate neutrality claims.

Diagram 3: Project types and the percentage of overall issued credits in Bangladesh (as per registry data obtained from VCS/Verra, Gold Standard and CDM)



 While credits issued in Bangladesh total over 50 million, and come from a wide range of projects, and different project types, many of these credits were never retired, and consequently, most likely were never sold.

Table 1: Percentage of sold credits per project type

	Issued	Retired	Percentage retired
Renewable energy	2,237,294	95,301	4%
Clean cooking	11,124,369	3,292,166	30%
Safe drinking water	425,970	45,572	11%
Reducing gas leakages	36,413,302	4,168,760	11%
Waste management	29,914	0	0%
Energy efficiency	264,580	2,653	1%
Biogas	0	0	
Total	50,495,429	7,604,452	15%

In Bangladesh, overall, approximately 15% of credits issued were eventually retired - this stands in stark contrast to the global average of approximately 50%. In other words, credits issued in Bangladesh were less likely to eventually be sold than those issued in other countries.

⁹ Voluntary Carbon Market Review 2023, Climate Focus.

Those projects where a high percentage of the issued credits were sold, are likely to have unique features that make them attractive to buyers, were developed by a carbon project developer that was successful in marketing and selling the credits, and in some instances, projects may have been co-developed with a future buyer.

Implications for impact enterprises in Bangladesh: Impact enterprises need to undertake careful financial project planning and be conservative in the estimates of how many generated credits could be sold. This financial planning should be undertaken within the context of a full feasibility study that considers technical feasibility as well as financial feasibility. Further details on carbon project feasibility considerations can be found in the Climate Finance Navigator.

Globally, the standards originally developed within the voluntary market are increasingly also used by foreign and host governments as a mechanism for accounting for positive impacts which will be accounted for within their NDC. Projects that use the main principles, methodologies and monitoring approaches of the voluntary carbon market will be well placed to benefit from the carbon market as it matures and evolves in the future.

Despite the historic involvement in the carbon markets, Bangladesh hasn't developed the institutional framework necessary to fully engage in the carbon markets since the implementation of the Paris Agreement. In particular, a legal and policy framework that defines: the types of climate actions, certification approaches and conditions under which these can be undertaken under the global 'article 6 framework.' This (currently) creates risks for carbon project developers, which may not be able to issue or sell carbon credits if the legal and policy framework in Bangladesh is later developed in a way that prevents this. For the moment, voluntary carbon market standards are still used in Bangladesh, however, in the future, any carbon project development undertaken in Bangladesh, including for voluntary purchasers will need to adhere to requirements that the government of Bangladesh will lay out in the future.

In June 2024 the government of Bangladesh formed its Designated National Authority (DNA) which is accountable for implementing article 6 related activities. The DNA is chaired by the Ministry of Environment, Forest and Climate Change, and includes representation of numerous other agencies. It is anticipated that the DNA, in partnership with other organisations will ensure the policy framework to be clarified in early 2025.

Implications for impact enterprises in Bangladesh: Impact enterprises should carefully consider which organisations would be most interested in funding their specific climate impact. For activities where the government would be the primary purchaser, it is recommended to speak with a representative of the DNA. For voluntary carbon projects, international project developers should be contacted. For all projects, assessments of the scale, potential methodologies, monitoring approach and business model should be undertaken. Further information and guidance is available in the Climate Finance Navigator.

Value chain climate action

Companies around the world that have committed to the Science Based Targets initiative (SBTi) will be interested in reducing the emissions associated with all of their sourced products. This could include many major export items from Bangladesh, including textiles and agricultural products.

By far the greatest share of export products from Bangladesh comes from the ready made garment industry - accounting for more than 95% of exports. With products being sold to the United States and Europe.

Table 2: Overview of largest ready made garment purchasers in Bangladesh

Company	No. of Bangladeshi factories they are working with	Committed to Science Based Targets?
H&M	96	Yes
Carrefour	56	Yes
Li & Fung	190	Yes
C&A	156	Yes
Kmart	118	No
Primark	111	Yes
Otto Group	70	Yes
VF Corp.	60	Yes

Source for largest purchasers: https://apparelresources.com/business-news/sourcing/leading-brands-retailers-will-increase-sourcing-bangladesh/ SBTi status checked on 25 November 2024 on the SBTi Dashboard

Companies purchasing ready made garments that have committed to Science Based Targets will need to reduce the emissions associated with the sourcing and production of those garments, on average, by approximately 40% by 2030. Some examples for achieving those reductions include - using renewable energy sources, increasing energy efficiency of production, using lower emission cotton, and reducing wastage in production. To achieve these aims, sourcing companies may seek to fund the implementation of projects, or pay premiums or offer preferential sourcing to give suppliers the confidence to implement these changes within their factories. An example is H&M and Bestseller - two major purchasers of ready made garments in Bangladesh investing into a wind farm to supply up to 40% of the country's energy requirements.¹¹ In order to track the reduced carbon footprint of their supply chains, companies will calculate the emissions changes using customized emissions factors, or they may opt to use the Value Chain Intervention approach. Overall, the monitoring associated with the supply chain emission reductions is significantly less onerous than the traditional carbon market.

Implications for impact enterprises in Bangladesh: Impact enterprises that supply a product or service used within the ready made garment industry may be able to collaborate with purchasing companies to reduce the climate impact of the value chain. Important first steps are to calculate the handprint using guidance available in the Climate Finance Navigator, and discuss the impact potential with their clients to evaluate their appetite for leveraging the climate impact within the value chain.

¹⁰ Trellis blog, 5 January 2024, H&M is funding offshore wind in Bangladesh to get garment factories off fossil fuels

Concessional and grant finance

Concessional and grant finance to achieve climate goals in Bangladesh comes from a number of different sources and is distributed to beneficiaries through a combination of different instruments - including grants, as well as technical assistance, below market rate loans and other financing mechanisms.

Government funding

The government of Bangladesh was a pioneer in establishing a trust fund for climate change adaptation and mitigation using its own funding. In 2009, the government established the Bangladesh Climate Change Trust Fund (BCCTF) which allocates grants to government agencies, NGOs, and research institutions for projects in areas such as agriculture, water management, disaster preparedness, and coastal protection.

In 2010 the Bangladesh Climate Change Resilience Fund (BCCRF) was established with support from development partners and managed by the government of Bangladesh. While the BCCTF is financed through the budget of the government of Bangladesh, BCCRF channelled funding from donor countries. The funds were largely spent by various ministries (90%) with a smaller allocation (10%) managed by Palli Karma-Sahayak Foundation (PKSF) for distribution to local NGOs.¹¹ The BCCRF closed prematurely in 2018 after the World Bank, which acted as secretariat of the fund, declined to continue serving as secretariat.

The government has established strong agreements with development partners and jointly established the BCDP which will also ensure increased donor funding for projects in Bangladesh. BCDP will achieve this by focusing on building a pipeline of projects and establishing a clear financing strategy for those projects.

Local Government Initiative on Climate Change (LoGIC): This initiative supports vulnerable communities in Bangladesh through climate change adaptation actions. It includes performance-based climate resilience grants to enhance local government capabilities in climate action, and focuses on financially supporting women and youth entrepreneurs through grants to support them to develop climate resilient businesses. LoGIC is a multi-donor collaborative initiative of GoB, UNDP, UNCDF, EU, Sweden and Denmark.¹²

In 2011 the Bangladesh Bank established a pioneering green finance policy. Within this policy, the bank outlines how the financial sector in Bangladesh can support the transition towards Bangladesh's climate goals. In 2020 the Bangladesh Bank issued a "Sustainable Finance Policy for Banks and Financial Institutions" document, which outlines over 60 product and project areas which would be deemed green finance, ¹³ and for which proponents could approach their local bank for concessional financing.

¹¹ Bangladesh Bank, Green Banking In Bangladesh

¹² UNDP website, Local Government Initiatives on Climate Change (LOGIC)

¹³ Bangladesh Bank, <u>Sustainable Finance Policy for Banks and Financial Institutions.</u>

International Climate Finance

Bangladesh is a significant recipient of international climate finance, which includes concessional and grant finance from various international organisations and bilateral donors.

- Green Climate Fund (GCF): Bangladesh is a key recipient of GCF grants, which are used for large-scale projects. Projects include adaptation projects such as resilience to floods and cyclones, improving water management, and enhancing sustainable agriculture, as well as mitigation projects, including clean cookstoves, and improved energy efficiency in industrial settings. An interesting example supports investments into energy efficiency in the ready made garment sector, aiming to reduce 14.5M tons of carbon by investing 340M USD.
- O Global Environment Facility (GEF): Through its projects, GEF provides grants for climate change mitigation and adaptation, including initiatives in biodiversity, renewable energy, and sustainable land management.
- Adaptation Fund (AF): The AF supports projects that help vulnerable communities adapt to climate impacts. Bangladesh has accessed these funds for projects focused on coastal resilience, agriculture, and water resources.
- World Bank and other donors: The World Bank, along with countries like Germany, Sweden, and the UK, supports various climate-related projects in Bangladesh. These grants are often directed toward enhancing disaster resilience, improving infrastructure, and supporting sustainable development practices. In December 2024 the World Bank committed an additional 1.16 billion USD towards inclusive and climate resilient development, including significant investments in drinking water and sanitation.¹⁴ This funding will likely be disbursed through procurement calls where relevant organisations can bid to support the implementation of the funding goals.

International climate finance typically focuses on large scale programmes (50 million USD+), which subsequently disburse funding to smaller project recipients (sometimes as small as 500,000 USD). Therefore, when impact enterprises look to gain funding through international climate finance, it makes sense to focus on funding windows that are already established. For example, the Green Climate Fund has developed a programme in Bangladesh for energy saving in the textile and garment industries, impact enterprises could review whether they have technologies that could be used by the program, rather than seeking financing directly with the Green Climate Fund.

Grant financing through NGOs

Numerous NGOs in Bangladesh, such as BRAC, Practical Action, and the Bangladesh Red Crescent Society, have implemented climate mitigation programmes with the help of grants.

¹⁴ World Bank press release, 19 December 2024, <u>Bangladesh Receives \$1.16 Billion World Bank Financing for Inclusive and Climate-Resilient Development.</u>

Implications for impact enterprises in Bangladesh: Impact enterprises should evaluate the funding windows of the government, international and NGO financing organisations. For government and international climate financing it is recommended for impact enterprises to evaluate whether they fall directly in scope of the activities outlined within an established funding window - to be assessed for receiving a sub-grant - as the scale of the funding is larger and applications are more complex and onerous. NGOs may sometimes be more flexible and engaging with them directly is the best way to understand whether there is the possibility to gain grant funding. For grant funding, the best first step is to establish a good understanding of the climate handprint (or adaptation impact) and have a measurement and monitoring approach in place. Guidance for this is available in the Climate Finance Navigator.

INNOVATIONS WITHIN CLIMATE FINANCE GLOBALLY

Each climate finance pathway brings unique challenges, and there have been a number of innovations which seek to overcome key barriers in the market.

CONCESSIONAL FINANCE

Carbon Finance in Climate-Linked Debt Instruments: Climate bonds can play a crucial role in achieving a net-zero economy by raising capital for the specific purpose of climate action. These bonds typically are tied to a specific use case which is defined by the issuer of the bond. In some cases, the interest rate can also be adjusted based on specific impact related metrics. This innovation helps overcome two key challenges facing project developers: the bond provides up front capital to invest into capital expenditures as well as project related finance, and the incentives are aligned to ensure that impact is maximized, to reduce costs. An example of an impact linked bond in Bangladesh is the green bond raised by PRAN Agro Limited (PAL), one of the country's largest conglomerates focusing on agricultural processing and distribution with support from Standard Chartered. The bond is valued at 13.6 million USD with a fixed interest rate of 9% - and was fully subscribed. The green bond's metrics seek to support the UN SDGs, linking funding costs to PAL's impact on poverty alleviation, zero hunger, good health, economic growth, responsible consumption, climate action, and life on land. The bond has since positively influenced various environmental aspects, such as resource efficiency, waste management, and renewable energy adoption. In the specific purpose of climate action, and life on land. The bond has since positively influenced various environmental aspects, such as resource efficiency, waste

CARBON CREDIT MARKETING AND SALES INNOVATIONS

Carbon Removal Purchase Agreements (CRPAs) and Carbon Forward Markets: are contracts that are entered between a buyer of a specific type of credit and a carbon project - which guarantees the buyer access to those credits at a defined future date. This innovation helps project owners and developers that successfully reduce emissions, have predictable future cash flows, which enable them to get financing for capital expenditures as well as operational expenditures by de-risking the project through guaranteed future revenues. In the carbon removal space, where credit availability both today, as well as the future, is expected to be lower than demand, this form of contracting is more common than other areas of the carbon market.

¹⁵ Climate Bonds Initiative website, Resources

¹⁶ Standard Chartered website, Dawn of a new era: The story behind Bangladesh's first green bond

An example of a carbon removal purchase agreement is the recent commitment by Swiss Re, a reinsurance company based in Switzerland, to purchase carbon removals from climeworks worth 10 million USD over a period of 10 years.

Pooled approaches: involves pooling together projects that have similar attributes to create economies of scale at various portions of the project development and sales/marketing cycle. Programmes of Activities (PoA) are designed to provide efficiency by allowing multiple projects under them to be organized under a coordinating or managing arrangement that reduces administrative costs and enables smaller-scale activities that might not otherwise be able to participate in a carbon crediting programme. These PoA activities are typically sourced and developed through international carbon project developers.

The D-REC initiative is an example which pools project marketing. Under the platform, credits for distributed renewable energy are promoted, and some buyers are simply interested in supporting this, rather than any specific project. As such projects benefit from the overall marketing efforts and are better able to access buyers, than they would be able to as a stand alone environmental project. See also the case study further below.

DIGITALIZATION TO INCREASE TRANSPARENCY

Tokenized carbon credits: is the process of tracking the issuance, transfer and use of carbon credits on the block chain. This innovation can help increase transparency in the market - which is fragmented and not fully transparent.

An example of tokenized carbon credits is AirCarbon Exchange (ACX) which has established the world's first regulated carbon exchange and clearinghouse, leveraging tokenisation to enhance efficiency and transparency in carbon trading.

Digital and automated MRV: leverages cutting-edge technologies such as sensors, satellite imagery, and real-time data analytics. This precision ensures accurate measurement of environmental variables, providing organisations with reliable insights into their carbon footprint, water usage, and other crucial metrics. Once established, these automated monitoring approaches also reduce operating costs of the project as traditional monitoring approaches are typically time intensive to undertake for project teams.

IMPLICATIONS FOR IMPACT ENTERPRISES IN BANGLADESH

- 1. There are opportunities for impact enterprises in Bangladesh to leverage climate finance.
- 2. Impact enterprises should consider who would be interested in funding the climate benefits, and explore the best approaches for marketing and sales of the climate benefits.
- 3. Impact enterprises should get their climate-related data organised and evaluate which climate finance pathway fits best (for example by using the Climate Finance Navigator).

- 4. Impact enterprises need to be aware of the requirements set forth by the specific climate finance approach they intend to use.
- 5. While the landscape for climate finance is evolving, it is ultimately gaining in importance, and opportunities for impact enterprises to access climate finance are likely to increase in the future.

CASE STUDIES

CARBON MARKET

Boomitra, operates globally including in India

Boomitra is a technology-driven company that helps farmers to reduce emissions through regenerative agriculture. It uses satellite imagery, remote sensing, and AI to measure soil organic carbon levels, enabling farmers and landowners to earn carbon credits by adopting sustainable farming practices. Boomitra enables farmers to be paid for implementing climate friendly agricultural practices, using its satellite and AI technology to measure, report and verify soil carbon sequestration. Boomitra has developed its technology in accordance with international carbon standards, which enables it to register projects that use Boomitra technology for digital monitoring. According to Boomitra, their technology reduces monitoring costs by 99% compared with conventional monitoring approaches. Boomitra partners with NGOs, farmer cooperatives, and agribusiness to bring this agri technology to farmers. The Boomitra business model is focused entirely on carbon credit generation - meaning their product and its use is financed through carbon credit revenues, and farmers do not pay to use the technology. Boomitra currently works with 150,000+ farmers across 5M+ acres, and more than 10M tons of carbon have been sequestered through its network of farmers.

Bangkok e-bus programme under article 6.2

The Bangkok Electric Mobility Project, part of Thailand's cooperation with Switzerland under article 6 of the Paris Agreement, focuses on transitioning Bangkok's bus fleet to electric vehicles (EVs). This initiative is a key climate mitigation effort aimed at reducing emissions from the transport sector. The project, financed by the Swiss KliK Foundation, supports the deployment of a minimum of 1,900 electric buses across 122 routes by 2030, replacing fossil fuel-powered buses. The project will generate at least 500,000 Internationally Transferred Mitigation Outcomes (ITMOs), equivalent to 500,000 metric tons of CO2 emissions, which Switzerland will use to meet its own carbon reduction commitments under the Paris Agreement. These ITMOs are expected to help close the financial gap for electric buses, as the total ownership costs of EVs are still higher than for traditional buses. A key requirement for the generation of the ITMOs was the project proponents demonstration that the introduction of electric buses was not considered a priority within the Thailand NDC, and would require additional financing. Thailand confirmed the need for this additional financing, and will not count the use of electric vehicles towards its own NDCs.

Project bundling for easier project development and sales: D-REC Initiative for Renewable Energy

The D-REC initiative is a multi-stakeholder initiative that aims to scale the adoption of distributed

energy in rural areas of the global south. The coalition enables distributed solar energy projects to be certified (either with the Gold Standard or through the i-REC standard) and also works to gain buy-in from corporates who can use these certificates for their renewable energy commitments. Central to the value proposition is the innovative automation and measurement, reporting and verification (MRV) technology, this instrument will enable distributed renewable energy projects to access global environmental markets for the first time. D-REC Initiative created a market opportunity for small renewable energy projects in low and middle income countries by creating a pathway to certification and a much easier marketing channel for the emerging credits.

VALUE CHAIN CLIMATE ACTION

Barry Callebaut Forever Chocolate

Barry Callebaut is one of the largest cocoa trading companies in the world - sourcing cocoa beans in West Africa, as well as Ecuador and Indonesia. Barry Callebaut purchases the cocoa beans from farmers and farmer cooperatives, which are all independently owned and operated. As part of its sustainability commitment to reduce its carbon emissions in line with 1.5 degrees, it has made a commitment to source cocoa sustainably through its Cocoa Horizons programme. Purchasers of this cocoa pay a sustainability premium which Barry Callebaut invests into planting trees and eliminating deforestation, installing solar home systems for farmers, and providing clean cookstoves. In exchange for producing cocoa sustainably, the farmers benefit from the programme benefits. More recently, the programme has also integrated payments for environmental services (PES) for farmers directly - thereby enabling farmers to monetise their environmental impact directly with their supply chain partners. The Forever Chocolate programme enlists farmers and farm cooperatives and provides materials and capacity building with an expectation that certain farming practices are met. The programme uses some digital monitoring and verification systems. Farmers are paid a premium for adhering to the requirements laid out in the programme.

Elysis Zero Carbon Aluminum

The US technology company Apple, has committed to reducing its emissions by 75% by 2030. In order to achieve this goal it must reduce emissions from all of its production, sourced materials and distribution. Apple is working with existing and new suppliers to identify opportunities to reduce its emissions. To support the development and scale of these emission reducing activities across its value chain, Apple launched a series of Green Bonds. One project it supported was a technology called Elysis. Elysis uses a novel production method to create aluminum without any carbon emissions, unlike traditional aluminum which is very carbon intensive. After a period of testing and development, Apple is now using Elysis aluminum within some of its products - including the Macbook Pro as well as the iPhone SE.¹⁷ This example from the technology industry highlights how even in industries which are highly price sensitive, lower carbon commodities are becoming mainstream.

CONCESSIONAL AND GRANT FINANCE

Climaventures Fund, Pakistan

Climaventures 18 is a GCF-backed fund that aims to reduce carbon emissions in Pakistan by providing grant and concessional financing to start up enterprises that achieve environmental outcomes. Climaventures is poised to be a groundbreaking initiative designed to kick start Pakistan's climate startups ecosystem and accelerate Pakistan's transition towards a low-carbon, climate-resilient economy. The fund is managed by Sarmayacar and was launched in October 2024, with an overall fund size of 50 million USD. The money will be distributed through a combination of grants, for earlier stage enterprises, as well as equity investments, which act as a first loss tranche for later stage companies. Venture Accelerator, the foundational component with a size of 10 million USD, will provide financial and technical support to ideation-stage climate-focused businesses, helping them develop and scale their climate products.¹⁹

Lendable Decarbonization Fund, operates globally including in India

The Lendable Decarbonization Fund is a debt based fund that provides debt financing as well as a technical assistance facility to small enterprises with a climate impact.²⁰ Target organisations include those that are seeking to reduce their own emissions, as well as enabling enterprises that are creating environmental changes through their products and services. The fund has three distinguishing features:²¹

- 1. Sustainability Linked Loan Fund (SLL fund): Deploys sustainability linked loans to incentivize preagreed sustainability performance targets through an interest adjustment mechanism.
- 2. Maestro application: Lendable's proprietary technology is embedded into the client's systems to support loan monitoring and impact tracking, reducing administration costs.
- 3. Carbon Project Preparation Facility (CPPF): Provides technical assistance and funding to support new carbon offset projects.

Investment in energy efficiency in the Ready Made Garment Industry through IDCOl in Bangladesh

This GCF-backed programme seeks to reduce emissions in the Textile and Ready Made Garment (RMG) industries in Bangladesh, which together account for nearly 30% of industrial emissions. The programme provides an integrated package of concessional financing for textile and RMG manufacturers, and technical assistance to create an enabling environment and ultimately to reduce 14.5 million tonnes of carbon dioxide equivalent in emissions. This is facilitated through capacity building, awareness raising, policy development and support in loan disbursal, monitoring and evaluation of the programme parameters. Unfortunately, the programme has yet to disburse any funds - but expects to do so in 2025.

¹⁸ Green Climate Fund website, Climaventures: Harnessing the Domestic Private Sector Ecosystem for Climate Action in Pakistan

¹⁹ Business Recorder, 26 October 2024, NRSP launches \$50m 'Climaventures Programme'

²⁰ Lendable, 2024 Impact Report

²¹ Climate Finance Lab, <u>Lendable Decarbonization Fund</u>



