



## **Building Readiness of the Private Sector in Bangladesh for GCF Accreditation**

**Business case for the Bangladeshi private sector to invest in climate change and access international climate finance**

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## 1. 10 key takeaway messages

If you do not want to read the entire business case, here are the 10 things you need to know:

1. Climate change is a reality; the best available science confirms the climate is changing and that more severe impacts will occur now and in the future. Bangladeshi private sector know this and have ample evidence of the impacts of climate change on the country, with some understanding of the potential future risks.
2. Climate change presents both **risks and opportunities**; the private sector is no stranger to risk management nor to innovation. It has the commercial savvy, innovative skill set and technical capabilities to devise the transformational solutions required by climate change.
3. The private sector in Bangladesh is beginning to recognise that climate change presents a number of **significant opportunities**. Interviewed organisations (10 companies and 1 business association) see a variety of opportunities, including **developing new products and services** (100%), **accessing new and expanded markets** (83%), **creating reputational benefits** (67%), **building more resilient supply chains** (58%) and taking advantage of **cost savings** (58%). Many of these opportunities are seen as immediate.
4. Climate change acts as an additional stress to existing risks and impacts existing objectives and priorities. First-mover companies report multiple drivers for undertaking a climate-related activity, highlighting that climate change presents a **window of opportunity** to take action on issues and areas that are already important to the business, such as water stress, logistical response to extreme weather events and waste management.
5. Case studies of four sectors – **energy, agriculture, insurance and financial services** – show that some Bangladeshi businesses are already benefiting from climate related opportunities, for example by developing and marketing climate resilient seeds or by developing a new market for solar home systems.
6. Several challenges stand in the way of businesses scaling up their climate-related initiatives and seizing further opportunities; these vary from sector to sector and fall primarily in four categories: information (awareness) gaps (92%), weak financial markets or lack of access to finance (83%), capacity constraints (83%) and policy or regulatory barriers (73%). **Only 8% perceive market size as a constraint.**
7. **The GCF can help address the barriers businesses face and help them harness opportunities**, specifically through its **Private Sector Facility (PSF)**, a dedicated financial window to mobilise and channel private capital and expertise at scale.
8. A range of Bangladeshi private sector actors interviewed are aware of and interested to seize the opportunities that GCF may offer. However, the interest and knowledge about GCF processes is not uniform.
9. Case studies show that **opportunities can be harnessed by building partnerships** with other businesses, associations, NGOs, government agencies and development partners to take advantage of the resources, networks and expertise provided by each. International development partners in particular have the resources to help create and finance market opportunities.
10. Further steps for businesses to begin to seize the opportunities of climate change include **securing buy-in** for climate related activities among senior executives, setting up a **climate**



**change cell** within the business and developing a platform to lobby government for an **enabling investment environment**.

## **2. Why should businesses in Bangladesh care about climate change?**

Climate change is a reality; the best available science confirms the climate is changing and that more severe impacts will occur now and in the future. The impacts of climate change are already being felt in Bangladesh, across all economic sectors and by all segments of society, including business. Bangladeshi companies report a number of impacts from climate change including overall production decline and degradation of productive land in the coastal regions<sup>i</sup>, changing rainfall patterns leading to early harvest, damaged infrastructure, and disrupted delivery of goods due to extreme weather.

Businesses know that to be successful, they must adapt to constantly changing market conditions, and that changes can stem from economic, social or environmental factors. The impacts of climate change are already being experienced by businesses, and many see a clear commercial rationale in terms of managing risks and harnessing opportunities. The process of transformation to a resilient economy brings new opportunities for businesses, including new products and services, new and expanded markets, cost savings, building more resilient supply chains and creating reputational benefits<sup>ii</sup>, all of which provide returns on investment and a positive impact on the bottom line. New sources of finance are available to support investment in these new markets, products and services, including the Green Climate Fund (GCF), which has a specific focus on the private sector.

This paper aimed at you, members of the Bangladeshi private sector, was developed based on consultation with 10 Bangladeshi businesses and one business association as well as four public sector bodies (see Annex 1 for methodology). It outlines why you should care about climate change and what's in it for you: more specifically, what opportunities available for you to seize as a result of climate change? This includes accessing new sources of finance, specifically the GCF. The report provides a snapshot of the available opportunities focusing on four sectors: energy, agriculture, insurance and banking/finance, including examples of companies which are at the forefront in developing new products and services and creating new markets in response to climate change. It concludes with a checklist to guide your next steps in accessing the opportunities available to you now.

### **2.1. Why the private sector?**

Why is this report aimed at the private sector in Bangladesh? Before answering this question, it is important to consider who makes up this community. The private sector is very diverse and includes large national corporations, multinational companies, small and medium-sized enterprises (SMEs) and private investors, among others. In Bangladesh, SMEs<sup>iii</sup> are the backbone of the national economy. The International Monetary Fund (IMF) Country Report (2012) indicated that SMEs in Bangladesh accounted for more than 99% of private sector industrial establishments and created job opportunities for 70%–80% of the nonagricultural labor force.<sup>iv</sup> It is important to note that while non-governmental organisations (NGOs) and civil society organisations (CSOs) contribute significantly to Bangladesh's economic development, they are not considered as part of the private sector in this report. Social enterprises, which use market mechanisms to achieve social purposes, are discussed where relevant.

All of the above business actors play a significant role in the economy of Bangladesh. The private sector is recognized as the primary engine of growth, owning and operating production systems and accounting for most of the investment of the country.<sup>v</sup> Private sector-led growth in Bangladesh has accelerated since the middle of the 1980s, transforming Bangladesh from one of the poorest countries in the world into a nation on the verge of achieving middle-income status.<sup>vi</sup> In 2010, the private sector accounted for 93% of GDP, 81% of total investment, 94% of consumption expenditure, and 80% of domestic credit.<sup>vii</sup> The private sector therefore produces most of the goods and services consumed by society, and provides most of the capital investment. When SMEs are considered, they represent a large aggregate number with significant capacity for employment generation, technological innovation and new product development. Put simply, the private sector has the commercial savvy, innovative skill set and technical capabilities to devise the transformational solutions required by climate change.

## 2.2. Climate change: what is the story?

The climate is already changing in Bangladesh and further changes are projected in the near term and longer term (see Box 1). Climate change will have profound impacts on the economy of Bangladesh and the development of key sectors such as agriculture and infrastructure. The 1998 monsoon flood and 2007's Cyclone Sidr exposed the vulnerability of Bangladesh' society and economy to disasters. In 1998 flooding covered over two-thirds of the country, resulting in damage and losses amounting to more than USD 2 billion (4.8% of GDP) across agriculture, infrastructure, and industry. More recently, the 2007 cyclone led to damage and losses of more than USD 1.7 billion (2.6% of GDP) with half of the losses in the housing sector, and the remaining in agriculture and infrastructure.<sup>viii</sup>

### Economic impact of climate change

Employee sickness through waterborne diseases and the inability to reach work following the 2004 Bangladesh floods was estimated to have cost the country's garment industry USD 3 million per day (PwC, 2013).

### Box 1: Observed and Projected Climate Change in Bangladesh

Bangladesh is highly vulnerable to the impact of climate change, due to its geographic location and natural resource-based economy. Located in a low-lying delta between the Himalayas and the Bay of Bengal, Bangladesh primarily consists of low and flat land with some hilly areas in the northeast and southeast and is one of the most climate vulnerable countries in the world. The country is particularly exposed to extreme weather events, such as floods and cyclones. Flooding has become more severe and recurrent over recent years, while a decrease in frequency (but increase of intensity) of monsoon has been observed in the Bay of Bengal since 1970. In terms of future projections, the majority of climate change predictions relevant to Bangladesh have been made using regional climate models, which project particularly rapid temperature increases across South Asia – faster than those seen in the previous century and faster than the average global rate of warming. Extreme weather events are projected to increase in frequency, including heatwaves and high rainfall. Tropical cyclone intensity is also expected to rise by 10 - 20% as sea surface temperature rises by 2 - 4°C. Sea level is set to rise by at least 40cm by the end of the century.

Source: Practical Action, Promoting Adaptation to Climate Change in Bangladesh, 2008

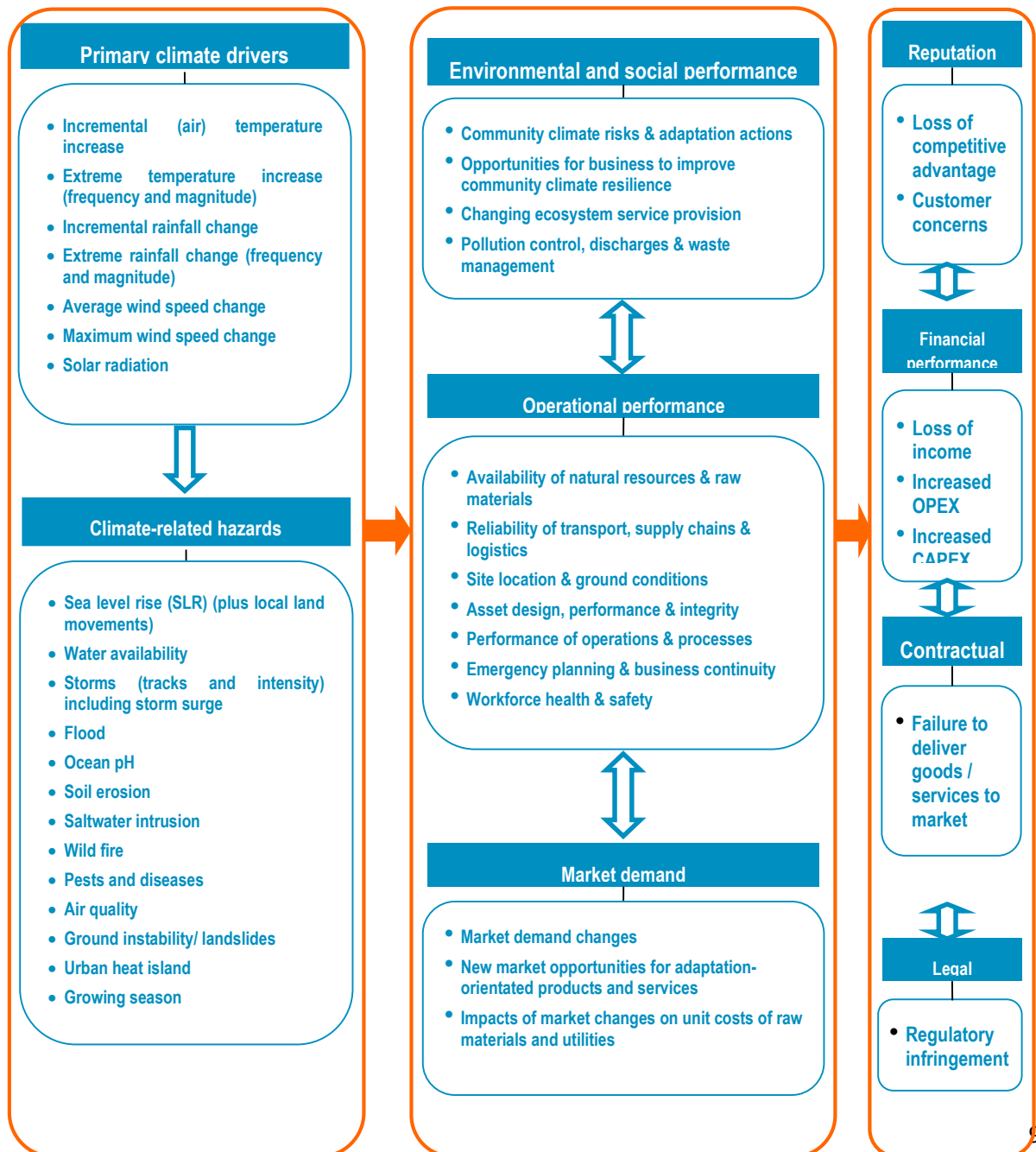


### 2.3. What does it mean for business?

Globally, businesses are experiencing the impacts of climate change, which present both risks and opportunities, direct and indirect (see

Figure 1). On the risk side of the equation, climate change acts as a stressor, exacerbating existing risks (such as old or aging equipment or water stress impacting production processes) while creating new ones (such as shareholder or government pressure to report on carbon emissions or the inability to operate infrastructure located near the coast due to sea level rise). Business assets, operations and supply chains are at risk from climate change, which poses a threat to revenue and cost streams, hindering companies' profitability.

Figure 1: Direct and indirect impacts of climate change on business (Acclimatise Business Risk Pathways Model™ ©2016)



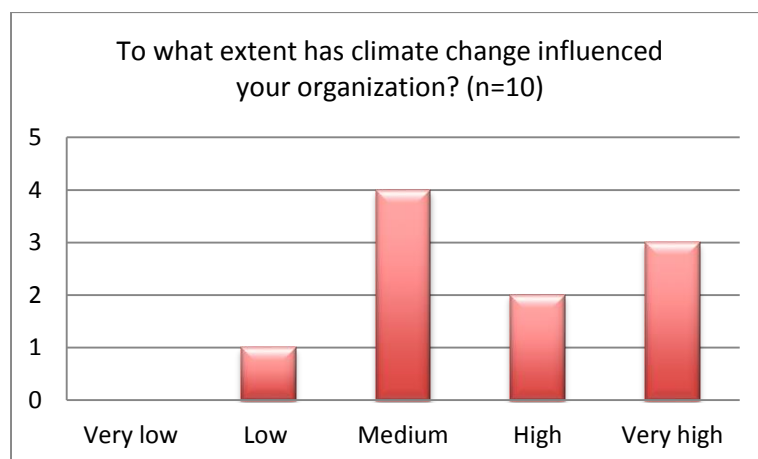
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Interviews and existing literature show that many Bangladeshi businesses are already well aware of weather and climate-related risks, due the country’s low-lying, flood prone nature and high incidence of extreme weather events. As noted by Sohel Ahmed, Chief Operating Officer at Grameen Shakti, a non-profit organization with a mission to promote, develop and supply renewable energy:

*“Bangladesh is very small; every area is prone to something, cyclone or flood, so we don’t have an option of choosing to leave certain areas. There was a huge cyclone a few years back, as a result we had to re-consider when to take loan repayments from clients, decided that they could wait until the next season; this is just part of our practice. As we are operating within a country where these impacts are happening, you have to incorporate it into your business.”*

As Figure 2 shows, among eleven respondents, three perceived the impacts as very high and two as high. Understanding how the occurrence of these impacts is likely to change in the future will be key for companies to manage risk effectively and remain competitive.

**Figure 2: Perception of Bangladeshi private sector about climate change impact on their business (source: interviews with in-country stakeholders)**



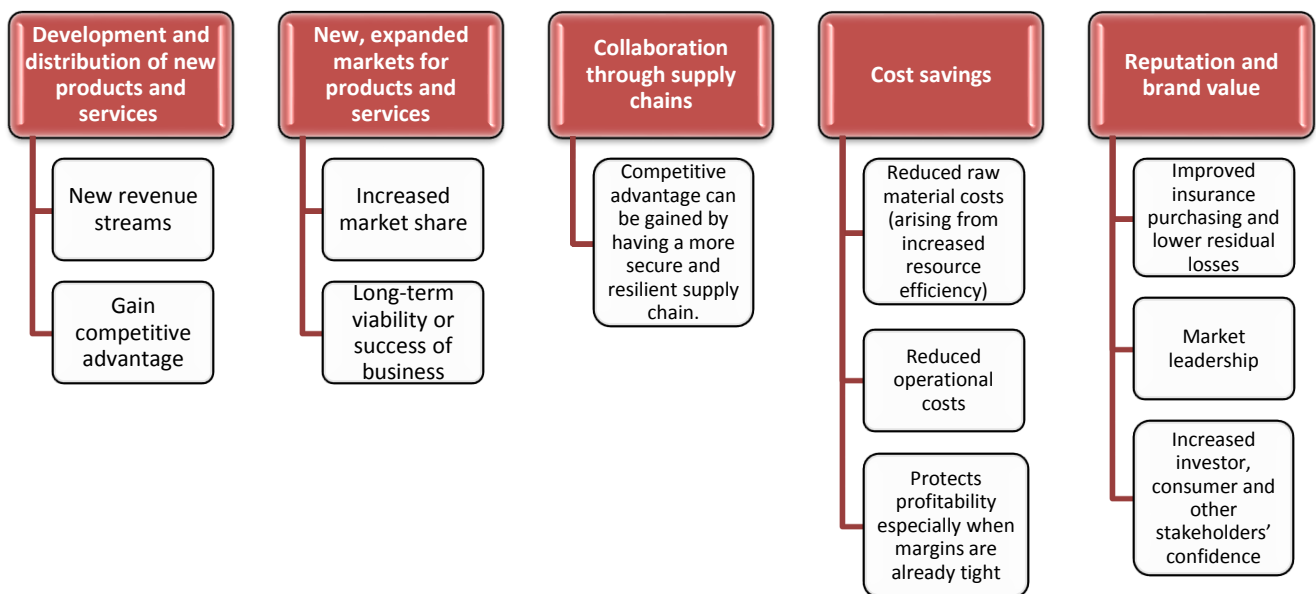
#### 2.4. Responding to risk and opportunity

The private sector is no stranger to risk management or to innovation. The commercial rationale for engaging in climate-related activities is becoming increasingly clear to companies globally and in Bangladesh, based on managing risks and harnessing opportunities. Within the broader context of sustainability, global companies and investors agree that taking climate change seriously makes good business sense. According to James Gorman, CEO of global investment bank Morgan Stanley, sustainability is “far from being just an exercise in risk mitigation, [it] represents a significant growth opportunity for those companies that successfully anticipate the products, strategies, and services that the future will demand.”<sup>ix</sup> Climate change drives organisations to manage the risks posed to their current business models and identify and capitalise on the opportunities that result from more indirect impacts, particularly in the market.<sup>x</sup> Companies around the world are identifying



opportunities to build resilience, increase business efficiencies and capitalise on expanding, shifting and emerging markets, including the growing market for emissions reduction (see Box 2). Figure 2 shows the primary types of business opportunities presented by climate change. These opportunities apply to both activities that reduce greenhouse gas (GHG) emissions (in climate change parlance: mitigation) or providing products/services that help manage climate risks and opportunities (adaptation).

**Figure 2: Business opportunities presented by climate change (adapted from PWC, 2013<sup>xi</sup>)**



**Box 2: What does the Paris Agreement mean for business? The We Mean Business Coalition weighs in**

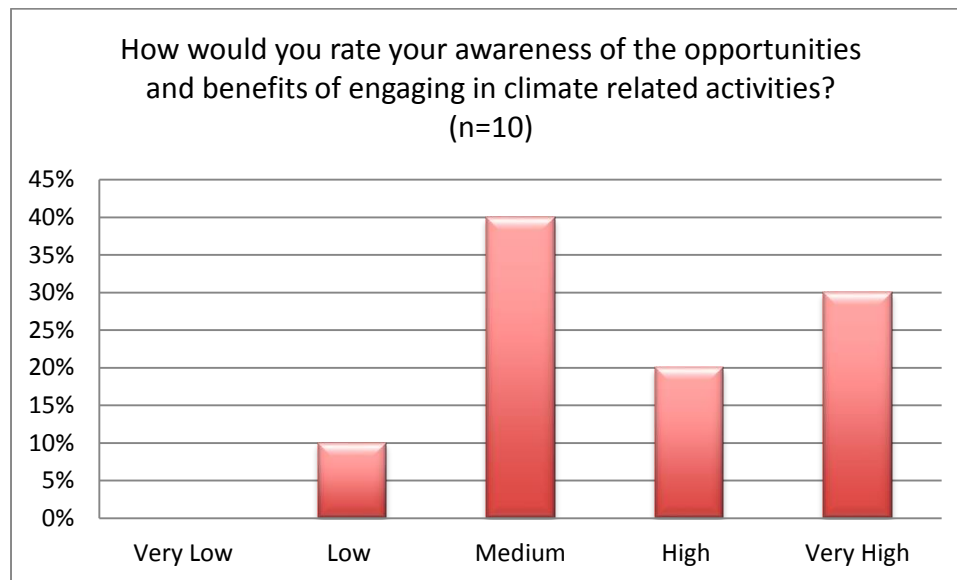
*We Mean Business is a coalition of organizations working with thousands of the world’s most influential businesses and investors who recognise that the transition to a low carbon economy is the only way to secure sustainable economic growth and prosperity for all. Members with operations in Bangladesh include H&M, Infosys and IKEA. Following the Paris Agreement on climate change, We Mean Business released a short report outlining the implications for business, including significant market opportunities.*

On a global scale, the Intended Nationally Determined Contributions (INDCs) or national climate commitments submitted by 188 countries under the Paris Agreement represent at least a US\$13.5 trillion market for the energy sector alone in energy efficiency and low carbon technologies through 2030.<sup>xii</sup> The global clean technology market is growing significantly faster than the global economy as a whole<sup>xiii</sup> and the national climate plans of developing countries will open new market opportunities. These include expanded markets in building efficiency and demand-side energy management; low-carbon and electric vehicles; solar, wind, hydro and geothermal energy; and water and waste management. Businesses that act boldly and swiftly will reap the rewards of these market opportunities.

Source: The Paris Agreement: What It Means for Business (We Mean Business Coalition)

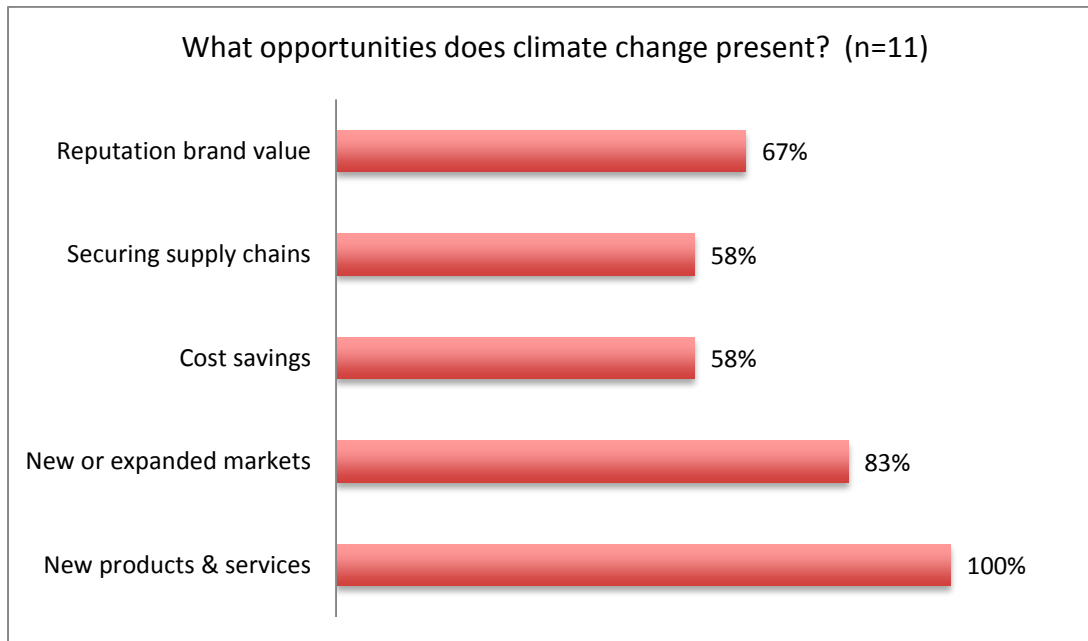
In Bangladesh, a number of businesses are already very aware of the opportunities and benefits of engaging in climate related activities, while others have some level of awareness (see Figure 3). Out of ten private sector respondents, five (50%) felt they had a very high or high level of awareness in this regard. Four respondents perceived a medium level of awareness, and one a low level; indicating the need for further information and evidence of a commercial rationale.

**Figure 3: Awareness of the opportunities and benefits of engaging in climate related activities among Bangladeshi businesses (source: interviews with in-country stakeholders)**



Internationally, Bangladesh has a track record of leadership and innovation in climate change management, and many Bangladeshi businesses are already pursuing concrete opportunities to provide new products and services that build resilience and reduce emissions. Figure 4 shows the opportunities perceived by interviewed Bangladeshi businesses. The most important source of opportunity is the development of new products and services, as identified by 100% of organisations interviewed. This opportunity is already being exploited to some extent in the country. For example, a number of commercial activities under the umbrella of “green economy”, within the fields of renewable energy, energy efficiency, waste management and recycling, are being undertaken by businesses in Bangladesh. Agribusiness companies are developing and marketing climate resilient seed varieties (see case studies for further detail). Closely linked is the opportunity for new and expanded markets, identified by 83%, followed by reputation and brand value at 67%, and secured supply chains and cost savings both at 58%.

**Figure 4: Opportunities perceived by Bangladeshi businesses due to climate change (source: interviews with in-country stakeholders).**



The opportunities illustrated in the graph above are perceived to have potential in both the short and long run. Based on interview responses, the development of new products and services and access to new markets are seen as profitable opportunities available in the present. On the other hand, cost savings, reputation and brand value as well as securing supply chains may take more time to achieve and reap the benefits. See section 0 for further information on the concrete opportunities available in four specific sectors.

## 2.5. Climate change as a window of opportunity

It is important to note that these opportunities are often pursued as a response to several driving forces, including climate change among other socio-economic and environmental factors. As previously mentioned, climate change acts as an additional stress to existing risks and impacts existing objectives and priorities. First-mover companies report multiple drivers for undertaking a climate-related activity, highlighting that climate change presents a **window of opportunity** to take action on issues and areas that are already important to the business. For example, Rahim Afrooz Renewable Energy sees an opportunity to improve its key business function of logistics and the company's ability "to deliver and service in remote areas. Within 48 hours we promise our customers that we will deliver to any area. Now given climate change impacts, we have a chance to think more proactively, how we ensure that the customer gets what they request for." Companies also cited undertaking energy or resource efficiency initiatives to reduce costs. Recycling the millions of tonnes of garment waste created daily has become a business for hundreds of SMEs in Bangladesh, supported by the Small and Medium Enterprise Foundation (SMEF). The primary driver for this enterprise was reducing the consumption of materials and creating new materials from the waste garments; Md Mamunur Rahman, Deputy General Manager of SMEF, stated that many SMEs are "tackling the issues of climate change without realising – for instance recycling, which is being

funded without the primary rationale of tackling climate change...” yet which contributes to emissions reductions since most waste is usually burned in highly polluting brick kilns. Responding to climate change presents an opportunity to extend this model to other sectors, such as plastics, “There is huge potential here – if we can recycle our own waste we can also create new businesses,” according to Mr Rahman.

### 3. Opportunities presented by the Green Climate Fund (GCF) to the private sector in Bangladesh

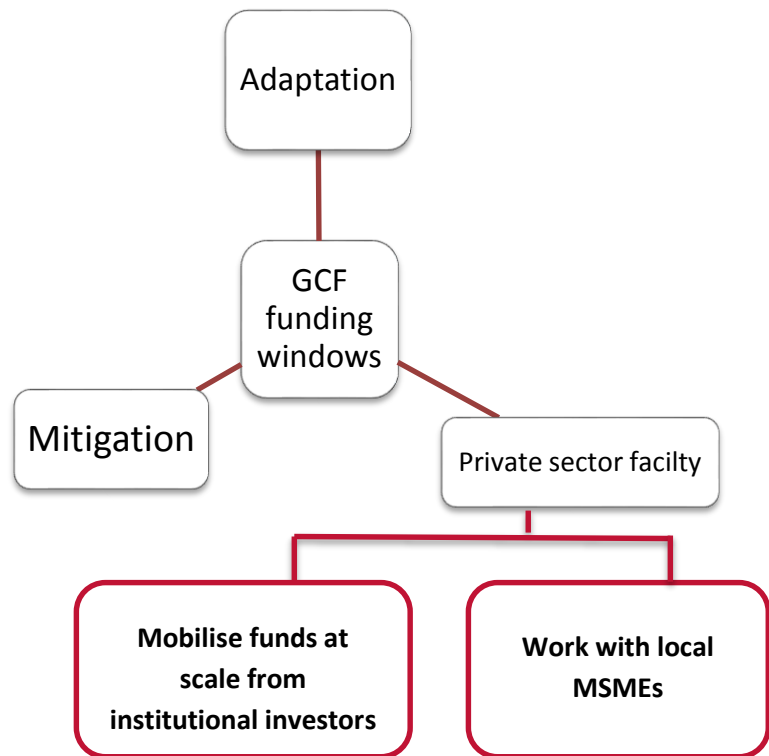
While a variety of new market opportunities exist across sectors, many respondents interviewed cited access to concessional sources of finance as one of the major barriers. Climate relevant investments in low income markets are often considered to be longer term, higher risk and generating a lower financial return. Risk averse commercial investors are less willing to spend time, build relationships and market demand required to generate a decent return, requiring more ‘patient’ or ‘concessional’ forms of capital instead.<sup>xiv</sup>

Some actors also believe that although public finance might be available, the procedures to access can be highly “bureaucratic, stringent and cumbersome” discouraging private sector to harness such opportunities.<sup>xv</sup> Thus access to finance is not the only primary issue. Lack of access to the appropriate form of finance delivered

through appropriate mechanisms is a **Figure 5: GCF funding windows**

major challenge. For example, targeting low income communities through climate change responses will require innovative products and funding mechanisms which are currently lacking. Harnessing support of SMEs also require innovation in new funding mechanisms, where public finance can play a role.<sup>xvi</sup>

The GCF can help address some of these barriers and harness some of these opportunities. Countries can access GCF finance through three funding windows: adaptation, mitigation and private sector facility (PSF) (See **Error! Not a valid bookmark self-reference.**)<sup>xvii</sup> The PSF is a dedicated financial window to mobilise and channel private capital and expertise at scale.



The Facility seeks to support the private sector to engage in climate relevant actions through two alternative mechanisms (see **Error! Not a valid bookmark self-reference.**) that addresses the supply side (eg. institutional investors investing funds) and the demand side (eg. SMEs receiving funds).<sup>xviii</sup>

First, GCF seeks to mobilise funds at scale from institutional investors such as commercial banks, investment funds, insurance companies, pension funds and sovereign wealth funds. To engage these actors the fund will develop a range of investable products from which institutional investors can benefit. Second, GCF aims to use public finance to work with local private entities particularly SMEs

through its SME pilot programme. The PSF will issue Request for Proposals (RFPs) to all accredited entities, both multilateral implementing entities (MIEs) and national implementing entities (NIEs). Further detail on these opportunities and how businesses can engage is explained in more detail in the next section.

### 3.1. What opportunities does GCF offer?

#### 3.1.1. Mobilising funds at scale from institutional investors:

As access to low cost and adequate finance is one of the primary barriers for investors, GCF aims to mobilise funds at scale by leveraging from a range of institutional investors. However, to ensure investors seek returns GCF is designing a range of products targeting commercial banks, insurance companies and sovereign trust funds. In Bangladesh, interviewed capital market companies such as Green Delta Insurance, Green Delta Capital, MTBL, etc., can potentially harness the following range of products.<sup>1</sup>

Table 1: GCF instruments for institutional investors (source: Private sector document of GCF<sup>(ix)</sup>)

Types of instruments for institutional investment	What opportunities they offer for institutional investors
<b>Green and blue bonds</b>	Green and blue bonds are fixed income, long term instruments that provide opportunities for investors to support environmentally sound projects.
<b>Commercial papers</b>	Commercial papers are unsecured short term debt instruments that will be issued by the GCF to finance short term credit needs. These instruments are well suited to seek investments from banks and present a great opportunity to bring funds for SME programmes.
<b>Syndication and club deals</b>	Syndication has a low transaction cost and thus can be used to raised needed funds for smaller scale projects in less mature markets. They are also subject to lower regulatory/licensing hurdles than commercial paper and bonds fall under the same regulatory framework as loans.

#### 3.1.2. Engaging local SMEs

GCF creates specific opportunities for SMEs to help them engage in climate relevant markets. For example, the SMEs pilot programme will channel concessional resources to improve SMEs access to finance through accredited entities. These concessional resources can be used for financing the supply chains and the trade of SME products.

<sup>1</sup> NOTE: These are only assumptions and will take time. GCF will be actually able to issue bonds only once it has obtained a risk rating from a qualified agency.



In addition to fulfilling accreditation requirements, the GCF would issue a RFP to entities that are able to demonstrate:

- A track record of successfully working with and financing SMEs;
- The ability to monitor the results achieved through the SME Pilot Programme; and
- The ability to use financial resources to create a significant climate impact.

Selected respondents to the RFP who will administer and manage the Fund's SME Pilot Programme will be allocated a capacity building component to fund the appropriate and adequate preparation and auditing of financial statements and/or feasibility studies by the SMEs that require such capacity building to access financing for use in climate sensitive investments.

### **3.2. Ways in which the private sector can engage with GCF**

#### **3.2.1. How can the private sector access GCF?**

There are two ways that Bangladeshi businesses can access the GCF; by becoming accredited as an implementing entity or by implementing projects as an executing entity. Agencies such as local commercial banks, the central bank and special purpose agencies (such as Infrastructure Development Company Limited (IDCOL), BRAC, Grameen Shakti, etc), that have a track record of working with SMEs on climate change projects can become accredited entities to channel funds if they meet the Fund's fiduciary criteria. These financial intermediaries can then channel concessional resources to improve SMEs' access to finance. The accredited entities can screen or propose pipeline projects received from executing entities or respond to RFPs issued by the GCF.

So far most agencies who have gained accreditation to access GCF are public sector entities or multilateral entities from developed nations or large economies. To ensure climate finance is more accessible to local economies of the most vulnerable countries (in particular least developed countries, small islands developing states and African nations), it is important that more entities both private and public at the national level get accredited to access finance.

#### **3.2.2. How can the private sector use GCF funds to address barriers to climate investment?**

The GCF can also help in overcoming some of the barriers that the private sector faces in further investing in climate related activities in the sectors analysed in this report (energy, agriculture, insurance and finance). This includes:

- Providing access to low cost finance
- Addressing information gaps
- Supporting policy reform
- Supporting capacity building and skill development
- Making specific provisions for large scale investors, particularly in the energy sector

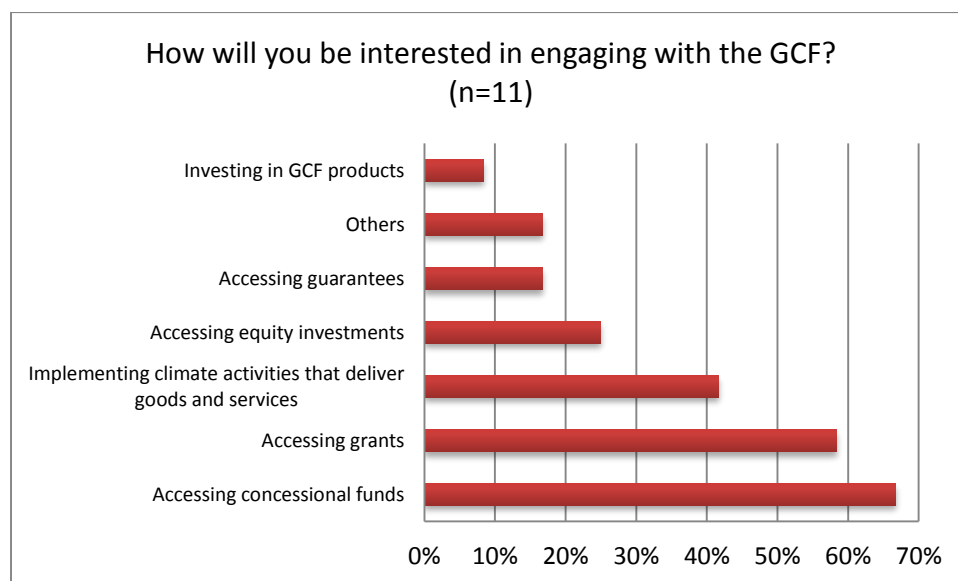
These will be further elaborated in section 4.5.

### 3.3. Interest of Bangladeshi private sector in accessing the GCF

Recognising the barriers to engage in climate relevant action, a range of private sector actors are interested to seize the opportunities that GCF may offer. Presently the interest and knowledge of actors about GCF processes is not uniform. Fifty percent of respondents interviewed were either partially or not aware about the GCF, whilst nearly 80% of them were interested to access the fund. Two respondents who had not previously heard of the GCF expressed interest in accessing it.

Figure 6 below shows that a majority of respondents (54%) are interested in accessing concessional finance and grants from the GCF while 18% are also interested in benefiting from the market of climate relevant goods and services that might result from projects funded by the GCF. Capital market players such as Green Delta Capita are particularly interested in accessing grants in early stages of institutional investment specifically for capacity enhancement as the capital market is a nascent market in Bangladesh.<sup>xx</sup> A significant proportion of respondents are also interested in applying as an intermediary or participating in the submission of project proposals to the GCF as an executing entity however not all are very clear about the Fund’s accreditation and project submission procedures and requirements. Green Delta Capital particularly expressed interest in harnessing the green bond market through the GCF, which is still nascent in the country.

**Figure 6: Preferred methods of engagement with the GCF**



## 4. Case studies

This section presents insights from four key sectors, namely the agriculture, energy, insurance and financial sectors, using specific case studies from Bangladeshi companies who have already begun seizing the opportunities presented by climate change. Considerations specific to SMEs will also be outlined where relevant. It is clear that there are important links and synergies between various sectors when it comes to capitalising on the opportunities presented by climate change. For example, there are synergies between the insurance and agriculture sectors in the provision of weather based index insurance. Importantly, banks play the role of intermediary in providing finance for investment in new products and services in all sectors.

### 4.1. Energy

The energy sector is a critical sector for Bangladesh particularly from a climate change and developmental perspective. The energy sector is both a contributor to GHG emissions as well as the most vulnerable to climate change impacts. Furthermore, increasing access the electricity network is a key developmental priority<sup>xxi</sup>. Although 34% of the country has no access to electricity the remaining 70% significantly rely on fossil fuel based energy with a majority of the electricity coming from gas-powered thermal stations and diesel generators used substantially to meet increase in demands during summer months<sup>xxii</sup>. Although the overall GHG emissions of the country remain relatively low in comparison to its neighbouring countries, the share of energy sector in GHG emissions is substantial (i.e. nearly 30% to total GHG emissions). The emissions from the energy sector alone have increased by 154% between 1994 to 2005, particularly due to an increase in fugitive emissions (unintended gas leaks from pipes and valves) from burning fossil fuels<sup>xxiii</sup>. Bangladesh's INDC also recognises power sector as one of the focus sectors (amongst transport and industry) to meet the target of 5% reduction in GHG by 2030<sup>xxiv</sup>.

Investments in renewable energy and energy efficiency measures can help to achieve this target, as Bangladesh has a considerable renewable energy potential. So far, the country has significantly invested in renewable energy projects in rural areas through projects such as Solar Home Systems (SHS), solar micro grids and solar irrigation pumps. Targets are also set for grid based technologies such as utility scale solar and wind. Despite great prospects, utility scale projects have been less successful in harnessing renewable sources of energy.

Nonetheless climate change responses open substantial opportunities for investors to harness the renewable energy potential of the country both in the off grid and grid based markets. Prominent private sector actors include the commercial financial (banking) sector; social enterprises or Micro Financial Institutions (MFIs); renewable energy SMEs and suppliers; and private investors in renewable energy generation.

### Commercial financial sector:

The commercial financial sector includes commercial banks such as Mutual Trust Bank Limited (MTBL) providing low cost loans to SMEs for investments in renewable energy and energy efficiency projects. Banking financial institution invests in renewable energy markets with the help of low cost refinancing facility provided by the Central Bank. According to the scheme, the Central Bank refinances the commercial banks with low interest loan of up to 5% for on lending directly to SMEs or through MFIs for investments in green investments such as bio gas, solar home systems, solar irrigation pumps, effluent treatment plants, hybrid Hoffman kilns and solar assembly plants. Additionally, the green banking policy of the Central Bank also obligates commercial banks to channel 5% of their lending to green products<sup>xxv</sup>. As a result, private commercial banks on-lent nearly US\$295.62 million to finance renewable projects in 2014 (SREDA, 2015).

### Social enterprises or MFIs:

While not strictly private sector, social enterprises constitute a relevant group of players in the renewable energy markets. They play an important role as intermediaries between agencies such as IDCOL and households by procuring renewable technologies from manufacturers and lending concessional loans to buyers of solar home systems and solar irrigation pumps. MFIs (along with NGOs) are often sought as intermediaries specifically because of their established reach in rural communities: their local market knowledge, their relationships with relevant agencies, groups and individuals, and their understanding of the barriers and risks specific to these markets<sup>xxvi,xxvii</sup>. Organisations such as Grameen Shakti are one of these partnering organisations.

#### **Box 3: Commercial banks financing SMEs in the renewable energy sector (source: interviews with in-country stakeholders)**

**BRAC Bank**, established in 2001 is an SME focused bank that offers market loans at competitive rates. The green banking department's goal is to comply with the regulatory guidelines, align with internal green banking activities with the central bank and with internal policies of the bank. It offers products related to energy efficiency and renewable energy. Most recently they have developed a product called - Planet Solution an Energy Efficiency Financing Loan to assist readymade garments and textile industries to invest in energy efficiency technology. These include audit and Energy Efficient equipment for borrowers at the rate of 6%. The International Finance Corporation (IFC) is involved in this project. This is an unsecured loan (no collateral) offered to manufacturers and exporters in textile.

**MTBL** offers a green product called Green Energy Loan which finances customers to set up renewable energy projects such as solar, biogas, wind, hydro, brick kiln financing and any other potential renewable plants finances. The bank lends to microfinance entities who lend to small borrowers for home and commercial uses. Through microfinance institutions they have funded 12 solar irrigation projects in North Bangladesh. Other examples of projects financed include green agro projects such as biogas, recyclable cups.

#### **Box 4: Social enterprises engaged in delivering renewable energy services in Bangladesh (source: interviews with in-country stakeholders)**

**Grameen Shakti** was established by Grameen Bank as a non-profit arm of the bank. It began working with IDCOL to deliver SHS programmes through IDCOLs refinancing scheme. The organisation is now also investing in and scaling up solar irrigation pumps.

### **Suppliers and manufacturers:**

Another group of private players comprise of suppliers and manufactures that provide equipment and install renewable energy technologies. They serve as effective intermediaries as provide cost competence and high-quality after-sales services. In Bangladesh some suppliers are now entering into agreements with financial institutions to provide credit and related services for the SHS and Solar Irrigation Pump (SIP) schemes, in the same way as microfinance providers. That is, rather than simply supplying equipment to microfinance institutions and NGOs, companies have taken over the role of these intermediaries and are providing end users with credit.

**Box 5: Rahim Afrooz Renewable Energy Limited (source: interviews with in-country stakeholders)**

Rahimafrooz Renewable Limited is an SME in solar technologies in Bangladesh. The organization has five main operations: (a) Solar Home System (SHS); (b) Rooftop Solar Power System; (c) Solar Telecom Solutions; (d) Solar Powered Pumps; and, (e) Engineering Procurement and Construction. Their activities primarily centre on energy access, lighting and energy for cooking.

### **Utility investors**

In comparison to the off grid market, the renewable market in the utility sector is a new but evolving market. Bangladesh's INDC, the Scaling up Renewable Energy Programme (SREP) and the Renewable Energy development targets (2105-2021) all call for most of new energy capacity to come from utility scale solar and wind. In fact the RE targets specifically propose to hold auctions for IPP investment on government land and to negotiate fixed tariffs for private investment. The private investment community is now investing in these markets but it is still at an early stage.

The responses from interviews further summarise how concrete opportunities are being harnessed by private sector actors in the energy supply chain of Bangladesh as seen in Figure 7:

**Figure 7: Opportunities for the renewable energy sector (source: interviews with in-country stakeholders)**



The box below further details on how Rahimafrooz is turning climate change into an opportunity:

**Box 6: Case study on Rahimafrooz - Taking advantage of opportunity**

Established in 1954, Rahimafrooz Group has a significant presence in the Energy sector of Bangladesh and offers a wide range of renewable and conventional energy solutions. Companies in this division are: i) Rahimafrooz Renewable Energy Ltd. ii) Rahimafrooz Energy Services Ltd.

Over the decades, Rahimafrooz has grown in size, scale, and diversity. The Group today has eight operating companies. As of 2013, the Group employed more than three thousand people directly and a further twenty thousand indirectly as suppliers contractors, dealers and retailers. In 1985, it pioneered in solar power in collaboration with British Petroleum (BP). In 2004, the Group received the McGraw-Hill Platt Global Energy Award for Renewable Energy.

**What are the opportunities?**

Rahimafrooz entered into this market with solar battery products. But when the climate change agenda gained momentum and energy security of the country became a concern, significant amount of development fund were channelled to encourage alternative sources of energy particularly through solar home systems with IDCOI and World Bank. Rahim Afroz is now a pioneer in scaling up solar energy market in Bangladesh and till date it has harnessed a market of nearly 100,000 rural homes in Bangladesh. It began investing in 2000 with solar home systems and solar panels in rooftops and expanded considerably between 2006-2010 particularly after the Clean Development Mechanism gained momentum in 2005 in Bangladesh. In 2010, the company began exploring energy efficiency opportunities in order to reduce carbon emissions and also entered into CDM service agreements with large scale factories such as the Akij Group. The company has also established Emission Reduction Purchase Agreements with large companies such as Tricorona.

While the need to mitigate climate change clearly presents a case for investment in renewable energy and energy efficiency projects in Bangladesh, there are a range of barriers that discourage private sector to invest in this sector. For further information on barriers to investment in climate-related opportunities and specifically how the public sector can help remove these barriers, please refer to the policy brief [Private sector engagement in climate change action in Bangladesh: creating an enabling environment](#).

**Barriers for banking sector:**

- **Information gaps and low knowledge levels** discourage the commercial banks to link up on energy financing with specific branches that are responsible for delivering finance in off grid areas;
- **Weak or shallow financial markets:** a few banks such as MTBL are investing in green energy activities but the practice is not widespread amongst the financial sector of Bangladesh. As a result the financial market is not fully mature; and,
- **Capacity constraints:** Banks are wary of investing in commercial entrepreneurs engaged in energy industry as they lack adequate demonstrable experience to assure commercial viability.

**Barriers for suppliers and manufacturers:**

- **Inadequate low cost finance from mainstream financial sector:** climate change and renewable energy projects require considerable concessionary support as projects are not viable in pure commercial terms. Financial markets are less interested in providing affordable capital to such markets.

**Information gaps and capacity constraints:**

- The private sector lacks awareness of the challenges or the opportunities of climate change business; and,
- Information on climate funding opportunities is limited to public sector organisations and private sector has little understanding on how to access or engage with funds like GCF.

**Barriers for private sector actors in the utility scale markets:**

Bangladesh's renewable energy sector has so far primarily focussed on small scale off grid renewable technologies. However, Bangladesh's GHG reduction potential significantly lies with investment in large scale infrastructure. This is recognised in the Bangladesh's INDC which identifies targets to increase utility scale investments, but growth of this sector is currently hindered by the following challenges<sup>xxviii</sup>:

- Access to land for solar and wind technologies particularly above the scale of 10 megawatts (MW);
- Low feed-in tariff by the government acting as a disincentive to the private suppliers who are often facing high costs of generation preventing them from staying profitable; and,
- Uncertainty about grid extension by the government is a deterrent for mini-grid investors.

**4.2. Agriculture**

Agriculture is a critical sector for the Bangladeshi economy, accounting for 16% of GDP and employing 47% of the country's labour force.<sup>2</sup> Agriculture is inherently vulnerable to the impacts of climate variability and change, due to the natural connections and dependencies that exist between climatic conditions and plant development and animal health. Businesses in the agriculture sector

***Climate risks to revenue generation in agriculture***

According to Lal Teer, climate related events have a direct impact on the bottom line: Lal Teer's target for the month of April 2016 was 8 crore (80 million) BDT (their annual turnover is 140 (1.4 billion) BDT) but at the time of interview (April 2016) their total sales to date were equal to 5 (50 million) crore. This was directly attributed to the drought in the western part of Bangladesh.

know all too well that erratic rainfall trends, flooding, sea level rise and salinisation, and increasing temperatures directly affect agricultural production and yields, along with food security and livelihoods. Climate change is expected to lead to significant agricultural losses, corresponding to approximately 3.1% of GDP estimated annually between 2005 and 2050. These losses will amount to USD 36

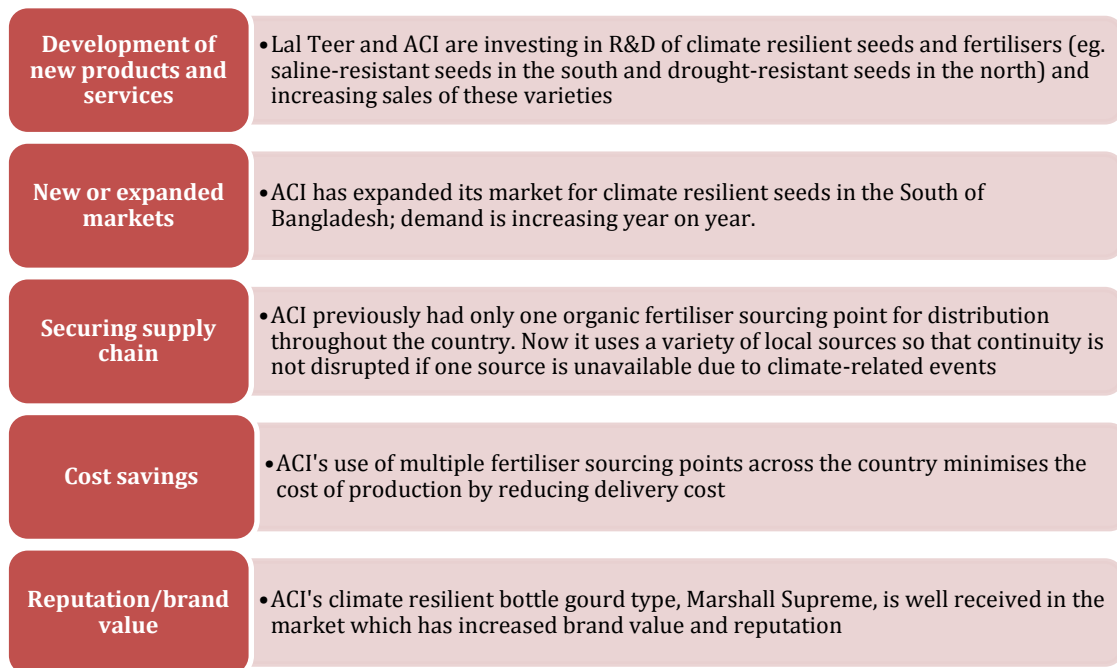
<sup>2</sup> Central Intelligence Agency (2016). The World Factbook. Retrieved 7 May 2016 from: <https://www.cia.gov/library/publications/the-world-factbook/geos/bg.html>



billion in lost economic value.<sup>xxix</sup> A variety of actors make up the agriculture sector in Bangladesh, from smallholding farmers to large conglomerates; this section focuses on agribusiness.

But in managing these risks lie significant opportunities to build resilience to changing climatic conditions – opportunities the agricultural sector in Bangladesh has already begun to identify and pursue. Among all organisations interviewed, agricultural businesses saw the highest number of categories of opportunity as relevant to them. Concrete opportunities are being seized in the agriculture sector in Bangladesh by all companies interviewed, as seen in Figure 8.

**Figure 8: Opportunities for the agricultural sector**



It is clear that the focus of agribusiness has been on developing climate resilient seeds; from a global perspective, this represents a significant market opportunity. World seed markets were worth USD 45 billion in 2012. If a low estimate of 20% of those markets were at risk then there could be a market of USD 9 billion for climate resilient seed types<sup>xxx</sup>.

See the box below for further detail on how ACI is turning climate change into an opportunity.

**Box 7: Case study-on Advanced Chemical Industries (ACI) - Taking advantage of opportunity:**

Advanced Chemical Industries (ACI) is a large conglomerate operating primarily in pharmaceuticals, consumer brands and agribusiness. The agribusiness part of the company, ACI Agribusiness & ACI Agrolink Limited, provides solutions to consumers along the entire value chain, from agricultural input to agricultural processes and retail.

**What is the opportunity?**

ACI has created opportunity from the risks that climate change poses to agriculture. Climate change significantly threatens agriculture in Bangladesh, altering the nutrient balance, moisture levels and salinity of soils, and in some areas, changing precipitation patterns leading to the need for early harvest. This has created a demand among farmers for new products and services to be able to cope with these changes. As a result, ACI has identified and pursued significant opportunities for the development of new seed varieties and fertilisers that are resilient to changes in climate, as well as agricultural machinery that can reduce total harvesting time when early harvests are required.

Climate change has also driven ACI to invest extensively in research and development (R&D), particularly in biotechnology, which is rare in Bangladesh. It owns a research centre, Advanced Seed Research and Biotech Centre (ASRBC). So far ACI has released over 20 seed varieties through its dedicated lab, with 40 more in the pipeline. ACI's climate-resilient products have been very well received in the market, for example the bottle gourd variety *Marshal Supreme* and the indigenous variety of potato *Laal Pakri*, developed further to be climate resilient.

**Market as primary motivation**

It is clear that the bottom line is driving ACI's decision to invest in the development and marketing of these new products. According to Mr Mohammad Saifullah, Chief Strategy Officer, ACI Agribusiness & ACI Agrolink Limited: *"If we have a climate resilient variety it increases the reputation and also the business – it's a big business. If the seed is developed in our country, [there is a] pretty high gross profit, compared to imported products....the market is very wide, especially [as we are] expanding to the South and it is growing faster, demand [is] increasing."*

**Integrating climate change into strategy**

Behind its success is the fact that ACI has embedded climate change management into its business strategy. The company has also long been engaged in R&D. It has worked with the Netherlands Space office on satellite data for the past 30 years, looking at how climate change has affected cropping pattern and yield quality. This helps create the baseline of a dataset to facilitate analysis of climate change in Bangladesh. Furthermore, ACI updates its product planning with seasonality and makes investments in farming and retailer training on new technologies and climate resilient product varieties.

While there is a clearly established business case for investment in climate-related activities by agribusiness, there are several challenges to further unlocking these opportunities. The following were noted as specific obstacles to be overcome. For further information on barriers to investment in climate-related opportunities and specifically how the public sector can help remove these

barriers, please refer to the policy brief [\*Private sector engagement in climate change action in Bangladesh: creating an enabling environment.\*](#)

- **Seed regulation:** it is difficult to release new seeds; under current Seed Policy, it takes at least 2-3 years for approval and release.
- **Lack of low cost finance:** At the moment companies must use commercial finance at 16-18% interest rates. Low cost or concessional finance is mostly unavailable, which would help stimulate further investment in climate resilient activities.
- **Inadequate data:** There is a lack of weather and climate data Bangladesh which would help guide the planning of R&D activities. Relevant data is not always accessible, for example on cropping patterns; furthermore there is no analysis of this data.
- **Lack of knowledge and capacity on climate change:** in-house capacity is sometimes lacking, particularly when it comes to developing project proposals for external funding.

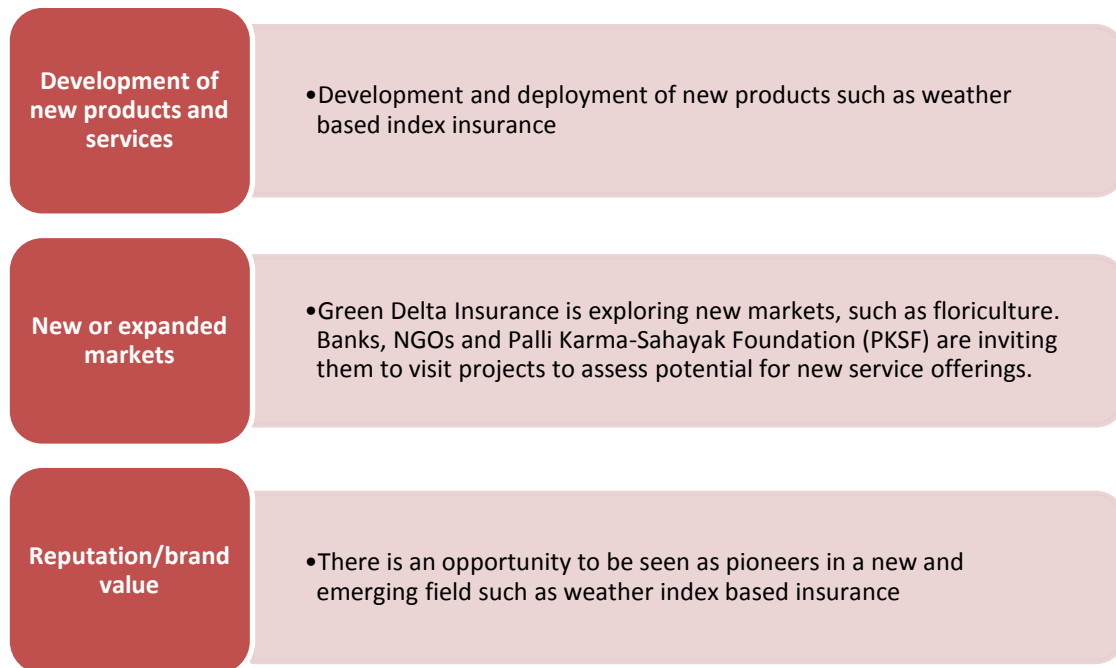
### 4.3. Insurance

Insurance plays a key role in protecting all segments of society from risk and hazards, including those related to weather. The insurance penetration rate (premiums as a percentage of GDP) in Bangladesh is among the lowest in the world, at 0.9%<sup>xxxii</sup>; however the microinsurance sector is recognised as thriving in the country, providing insurance solutions to the poorest populations. This section focuses on insurance in relation to agriculture. The two are closely linked in Bangladesh due to agriculture's dependence on weather and climate and the resulting need for risk management strategies. Crucially, it is in the area of agriculture insurance that evidence of commercial opportunities currently exists in Bangladesh.

Climate change presents significant opportunities in insurance markets globally. Among private sector actors, the insurance industry, with its expertise in risk management and loss prevention, is in a unique position to develop creative solutions to manage the impacts of climate change<sup>xxxii</sup>. Many international insurance and re-insurance companies recognise the potential opportunities arising from the impacts of climate change, including Swiss Re, Munich Re, AXA, Lloyd's, and Aviva among others<sup>xxxiii</sup>. As an example of the potential market size, 9 million farmers had weather index insurance in India between 2010 and 2011, with a total premium value of USD 258 million<sup>xxxiv</sup>.

Figure 9 shows the potential opportunities for the Bangladeshi insurance sector, based on consultation with Green Delta Insurance, as well as IFC who are actively supporting this emerging market in Bangladesh.

**Figure 9: Opportunities for the insurance sector (source: interviews with in-country stakeholders)**



The box below provides further detail on a partnership between Green Delta Insurance, PRAN and IFC in developing new insurance solutions for farmers in Bangladesh.

**Box 8: Case study on Green Delta Insurance, PRAN and IFC- Taking advantage of opportunity**

**Who are the players?**

Green Delta Insurance Ltd. is a leading non-life insurance company which provides one-stop solutions to customers, with products designed to cater to different market segments, including SMEs, other commercial enterprises, and personal insurance for individuals. Green Delta Insurance has developed and deployed insurance products to address weather-related risks faced both by lenders and farmers.

PRAN-RFL Group is a Bangladeshi food-products corporation and the largest food and nutrition company in Bangladesh. PRAN is aware of the impact of climate change in Bangladesh and has been exploring ways to build resilience, specifically by investing significantly in research and development of new crop varieties for areas prone to salinity.

The International Finance Corporation (IFC) is an international financial institution that offers investment, advisory, and asset management services to encourage private sector development in developing countries.

Other partners include:

- SwissRe (reinsurance)
- Silvan Agriculture, a sister concern of PRAN, looking after cassava production.

### **What is the opportunity?**

Green Delta Insurance entered into an agreement with PRAN, in collaboration with IFC (one of Green Delta's investors), to develop and launch a pioneering agriculture weather-index based insurance product in Bangladesh. The insurance programme aims to insure cassava farmers for damages due to low temperatures and excessive rainfall.

Weather index based insurance means that insurance payments are triggered if a rainfall index, for example, falls below a certain level over a predefined period. The product is based on modelling of weather risks and does not require the services of a claims assessor, allowing for claims settlement process to be quicker and more objective. The indemnity is calculated based on a pre-agreed sum insured per unit of the index (e.g. dollars/millimeters of rainfall). It has been commercially underwritten since 2002<sup>xxxv</sup>. In the Bangladeshi model, if the temperature is continuously less than 9 degree Celsius for 5 days in the months of January to February, the payout will be 10%-50%. If there is excess rainfall for more than continuous 3 days from 180 mm up to 380 mm, the payout starts from 1% and increases with the amount of rain.

PRAN is bearing all expenses for the scheme, as it is within a contract farming agreement; PRAN receives the entire cassava harvest, which it uses in many of its products such pharmaceuticals and juice, as well as for export. Farmers are contributing the labour and land and are aware of the insurance coverage. PRAN is cultivating 5,000 acres of cassava and has plans to scale up to 12,000. They are monitoring the results and based on this will decide whether or not to increase the premium.

IFC provided technical expertise by designing the actuarial product.

### **Key success factors:**

- Partnership between insurance and agribusiness sector, along with development partner;
- Awareness, interest and engagement in climate change issues on behalf of involved businesses (Green Delta Insurance and PRAN);
- Innovation and technical capacity provided by IFC;
- Good management and readiness to harness opportunities on behalf of PRAN; and,
- Dialogue with farmers to raise awareness about the products.

While there are significant business opportunities for insurance companies to develop new products and serve new markets in order to protect vulnerable populations from climate related impacts, currently the market for weather index based agriculture insurance and related products is nascent in Bangladesh. Right now only a handful of pilot schemes are operational on the ground. For example, the national insurance company, Shadharan Bima Corporation, in partnership with the Asian Development Bank (ADB) and various other private and non-government partners, has recently begun a weather index based crop insurance programme to reduce farm income losses caused by climate and natural disaster risk.<sup>xxxvi</sup> Pragati Insurance, Swiss Re, Oxfam and others collaborated on a flood insurance scheme which was triggered for the first time by the floods in August and September 2014.

A number of challenges need to be overcome for these types of projects to reach a larger commercial scale, as outlined below. For further information on barriers to investment in climate-related opportunities and specifically how the public sector can help remove these barriers, please refer to the policy brief [Private sector engagement in climate change action in Bangladesh: creating an enabling environment](#).

**Policy and regulatory environment:** A clear policy signal would help encourage crop insurance uptake. For example, crop insurance is mandatory in India, which has stimulated a large market for weather index based insurance products.

**Inadequate infrastructure and data:** Automated weather stations are few and the data required for modelling risks is often poor or inaccessible.

**Lack of internal capacity:** Bangladeshi insurance companies often do not have the capacity to design and price complex index insurance products; further capacity building is required, as in the case of Green Delta Insurance, where IFC provided technical advisory services for product development.

**Lack of awareness in the market:** Farmers are often not aware of the benefits of insurance, thus hindering demand and market penetration. Insurance awareness is a totally new concept; the risks that farmers face due to changing future climate cannot be assessed by referring to past experience, therefore insurance may seem very costly to them. (IFC, 2010) Greater information to build awareness of climate risks and risk management tools is needed.

**High costs:** Premiums are currently very high due to the high risk in Bangladesh, taking into account factors such as climate change and the increasing frequency of extreme events. Subsidies would help to overcome initial investment barriers, introduce the benefits of these products and help stimulate demand.

#### 4.4. Financial services

The financial sector plays a crucial role in Bangladesh's growth and development. It acts as the facilitator of all economic transactions, providing the capital businesses need to grow, thus stimulating growth in the country's major economic sectors. For example, the financial sector has been instrumental in making the country's apparel export sector the second largest in the world behind China's<sup>xxxvii</sup>. However, private sector investment in Bangladesh has stagnated at around 19%<sup>xxxviii</sup> of GDP, which means there are several challenges hindering further private investment, including an increase in non-performing loans to total loans, problematic corporate governance in banking, and restricted access to credit for doing business.<sup>xxxix</sup>

In Bangladesh the financial sector is made up of the capital market, the money market and microfinance; the banking subsector dominates, while non-banking financial institutions (NBFIs) and the capital market play a more limited role. This case study focuses on two types of actors: commercial banks and capital market investors. Both commercial banks and capital market investors aim to provide their clients with a range of financial products and services to suit a variety of needs, and to create sustainable economic value for their clients and, in turn, themselves. Thus, they need to know that their investments are secure and will provide a return, just like all businesses.

Unlike agriculture or energy, the impact of climate change on banks and other financial actors is not direct, yet it is significant. In their role as intermediaries, banks and financial service providers

experience the knock-on effects that climate change has on their clients and potential clients. While interviewed financial service providers did not generally perceive a direct impact of climate change on their day to day operations, they stated that climate change affects them through changing client and regulatory demands, which affects how they do business. Climate change poses a risk to the security and sustainability of investments<sup>xi</sup>; banks and financial service providers thus have an interest in integrating climate in their risk assessment and management strategies.

Along with changing market and regulatory demands comes the opportunity to provide new financial products and services. Interviewed financial service providers identified the **development of new products and services** and **new or expanded markets** as the primary opportunities presented by climate change. As Bangladeshi businesses in other sectors start identifying and investing in climate related activities, as many are already doing, they will require finance, in turn creating new demand and opportunity for banks and financial institutions (see Box 9). Banks have primarily identified tangible opportunities linked to energy, for example in financing energy efficiency and renewable energy activities (see Energy case study for more detail). Figure 10 outlines some of the opportunities for the financial services sector.

**Box 9: Increasing demand for climate related finance**

Green Delta Capital has observed increased investor demand for new climate related products and services:

*“The demand is increasing, three of our clients are already pitching to us that if you give low cost funding then we will change our conventional factories into green buildings, with LEED certifications.”*

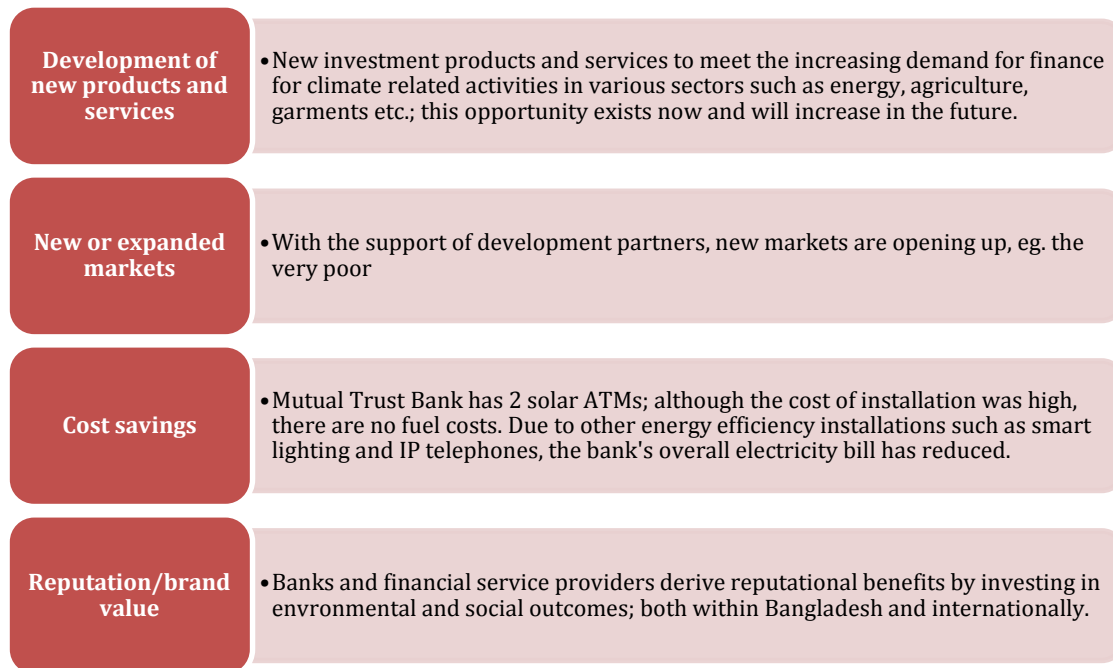
Demand can also come from the supply side of the market. Where low-cost funds are available for climate related purposes, such as drip irrigation or energy efficiency, then clients have an incentive to take up these investments. BRAC Bank has noted that demand exists, for example their Planet Solutions Loans, targeted at textile manufacturers or technology service providers who may be eligible for finance in water and energy efficiency improvements. This is a new product for which they have so far noticed a good response.

However, affordable finance remains an issue:

*“We have so many clients who are wanting to convert their factories from conventional to green, and put solar panels on for their own consumption, but they cannot because they do not have access to global funds, or other funds where they can gain access and implement, gain knowledge and enrich their skills for the future. We have been speaking to around 6-7 clients in the last 5-6 months [about this]. [Development Finance Institutions] DFIs...are providing rates of over 3 and close to 4.5 per cent which is not feasible.” (interview with Green Delta Capital)*

The GCF is thus an opportunity to help unlock the demand from other sectors for financial products and services for climate related initiatives.

**Figure 10: Opportunities for the financial services sector**



There are clear potential business opportunities linked to climate change, as acknowledged by all interviewed financial service providers. Yet challenges remain, constraining banks and other financial institutions from fully capitalising on the opportunities. For further information on barriers to investment in climate-related opportunities and specifically how the public sector can help remove these barriers, please refer to the policy brief [Private sector engagement in climate change action in Bangladesh: creating an enabling environment](#).

- **Lack of access to (low cost) finance:** With the growing demand for climate related or green projects, investors expect access low cost finance, yet it is currently not available at acceptable interest rates. MTBL, for example, would be interested if it could receive loans at a 2-2.5% interest rate.
- **Lack of awareness of clients:** While climate-related activities (such as energy efficient brick kilns) have lower production costs, the initial investment cost is very high, which makes per unit product cost high. Clients are tempted to invest in cheaper, conventional products that are not climate friendly, according to MTBL.
- **Low awareness of climate risk of banks and financial service providers:** Financial service providers in Bangladesh do not currently systematically consider climate risk to their investments. While many have environmental criteria in place for lending, this considers the impact of the investment activity on the environment, and does not consider how an investment will be impacted by future climate change. Furthermore, typically short investment time scales do not encourage consideration of climate change, which is seen as a long-term issue.
- **Lack of capacity within financial sector:** Banks are wary of investing in commercial entrepreneurs (for example in the energy sector) as they lack adequate demonstrable experience to assure commercial viability. For example, BRAC Bank stated that its credit



officers don't understand climate-related technologies very well so it's difficult to verify what entrepreneurs claim about the viability of their technologies.

- **Lack of availability of long-term finance:** the capital market is weak in Bangladesh, and the supply of long term financing is constrained as banks have limited access to long term resources and lack capacity to develop longer term financial products. This limits the amount of long-term investments, which are often necessary for climate-related initiatives with longer payoff periods.

#### 4.5. What are the opportunities of the GCF for the private sector?

The GCF can help in overcoming some of the barriers that the private sector experiences in further investing in climate related activities in the energy, agriculture, financial or insurance markets of Bangladesh, as outlined in the case studies above. GCF support could include the following:

- **Access to low cost financial instruments:** Access to low cost concessional finance whether grants, concessional loans or risk mitigation instruments is one of the main barriers for private sector investment.
  - Public funds from GCF in the form of grants or concessional loans can be used for early stages of market development and capacity enhancement while concessional loans can be used to scale up existing renewable markets or agriculture industry. For example both energy and agriculture sectors rely on credit based financing because of seasonal variations. Climate relevant investments in both these markets are also novel and risky. Using appropriate financial instruments ranging from grants, loans, or risk mitigation instruments available from GCF can incentivise private sector investments by mitigating risks and by unlocking finance for such novel markets.
  - Lack of access to low cost and long term finance is also stated as the biggest barriers for investment by the commercial banking or financial sector. GCF funds can be used to subsidise interest rates with long term repayment periods for on-lending by commercial banks :
  - Capital markets through innovative financial products (if offered by GCF) can help unlock finance from institutional investors; and,
  - Businesses investing in climate relevant actions such as renewable energy businesses or agribusinesses also incur high premiums for insuring their businesses due to associated high risks. GCF money can be harnessed for pre-financing the insurance premiums or subsidising the premiums.
- **Addressing information gaps:** Information gaps on climate funding opportunities are also a barrier for private investors. The GCF's readiness support could focus on dedicated awareness measures to engage with the private sector community;
- **Specific provisions for large scale investors:** Certain sectors such as the energy industry can address specific barriers for investment. For example, utility investors and mini grid investors in the renewable energy market experience significant barriers in terms of high land costs, low pricing offered by government and uncertainty around grid extension for mini grid investors. The GCF could support:
  - Utility investors to offset land costs;

- Negotiation of a standardised price for power purchase with the government by covering the losses; and,
- Encouragement of policy reform in planning for grid extension.
- **Support insurance and agricultural databases:** The insurance and agriculture sectors also experience barriers due to inadequate climate data or lack of information on precedence of success of such projects. Public finance available from the GCF can be used to develop climate information databases. Availability of robust databases can support the provision of weather based insurance. Agriculture data can be generated by investing GCF funds in weather stations, flood risk warning systems and livestock monitoring systems. Robust data provides certainty to the private sector, both insurers and investors.
- **Support policy reform:** GCF funds can be harnessed to support policy reform for private sector investment, for example by providing clear policy signals for purchasing power agreements in the energy sector, or mandatory crop insurance in the case of the agricultural insurance sector.
- **Support capacity or skill development in financial sectors:** Financial markets such as commercial banks or insurance markets lack capacity or demonstrable evidence for designing financial products such as credit portfolios or insurance products. GCF funds can be harnessed to support technical advisory services for product development in these sectors.

## **5. Seven things to consider if you want to act on the opportunities of climate change and engage with the GCF**

The evidence is undeniable; climate is changing and businesses are already starting to respond around the world, as well as in Bangladesh. The time is now to start taking action to build resilience and harness the opportunities presented by our changing climate. The GCF presents one such immediate opportunity. Below is a checklist of things to consider and steps to take if you a) want to take action on the opportunities of climate change; and, b) engage further with the GCF.

**Steps to identify and take advantage of climate related opportunities:**



- Build partnerships with other businesses, associations, NGOs, government agencies and development partners to take advantage of the resources, networks and expertise provided by these actors. International development partners in particular have the resources to help create and finance market opportunities;
- Secure buy-in for climate-related activities and investment among senior executives in your organisation. Many first-mover companies interviewed have highly informed and interested leaders who actively seek new opportunities from climate change;
- Consider setting up a climate change cell or strategy unit within your organisation to develop staff capacities and in identifying and harnessing opportunities; and,
- Develop a platform for interested businesses to lobby government to enact policy reforms to create a more enabling environment for private investment in climate related activities. Roughly three quarters of interviewed businesses stated that current policy frameworks or implementation mechanisms impeded investment.

**Steps to engage with the GCF:**

- Understand the basics of the GCF and the PSF by watching this short [video](#).
- Engage with Bangladesh’s National Designated Authority (NDA), Economic Relations Division (ERD) within the Ministry of Finance. The NDA’s role is to act an in-country focal point for the GCF, and can provide further information and guidance on accessing the GCF. Main contact is Mr. Mohammad Mejbahuddin (E-mail: [secretary@erd.gov.bd](mailto:secretary@erd.gov.bd) or [mejbah\\_uddin@yahoo.com](mailto:mejbah_uddin@yahoo.com))
- Explore the GCF’s website, with a section dedicated to the private sector: <http://www.greenclimate.fund/ventures/private-sector>
- Connect with ICCCAD (<http://www.icccad.net>) for updates about GCF related events in Bangladesh
- Refer to a practical [handbook](#) on how to access the Green Climate Fund directly as a national implementing entity

## Annex 1: Methodological note

The approach to the business case is twofold, developed on the premise that there is 1) a case for the private sector to engage in climate related activities as deliverers of goods and services and 2) a case for the private sector to access international climate finance (specifically the GCF) as financiers or those who channel finance to others.

*Methods:* The paper was developed through a combination of desktop research, literature review of key public policy documents, and 16 in-depth stakeholder interviews with both private and public actors in Bangladesh. Interview candidates were identified through a stakeholder mapping exercise that built upon previous work in this thematic area, the project’s inception meeting in Dhaka in March 2016, and the project team’s existing connections, which facilitated communication. Ten interviews were conducted face-to-face and six interviews were conducted by phone, following the same interview guide (see

Annex 2). Several informal expert discussions were also undertaken, with experts from the banking, energy and insurance sectors.

*Public and private sectors:* Interview candidates have been selected from both the public and private sectors. While the business case is directed at the private sector, the public sector plays a key role as it creates the enabling environment in which business takes place. Business associations were also deemed important to consult, as they represent private sector interests more broadly. SME interests were captured through an interview with SMEF.

*Sectoral representation:* The business case takes a targeted, sectoral approach, focussing on agriculture, energy, insurance and finance. Within these four sectors it was perceived that there are first-movers who are already undertaking climate-related initiatives, which means information is more readily available and examples of best practice can be identified. A sectoral approach also allows for further context-specific detail to be included, making the business case more relevant and valuable to its audience.

### Interviewees

The below table lists all interview participants, their sector, organisation and designation. All interviews were conducted between 13 April and 11 May 2016.

Private/public	Sector	Organisation	Name
Private	Energy	Rahimafrooz Renewable Energy Ltd.	Mr Munawar Moin
Private	Social enterprise/Energy	Grameen Shakti	Mr Sohel Ahmed, Chief Operating Officer
Private	Insurance	Green Delta Insurance	Mr Tareq Parvez
Private	Agriculture	Advanced Chemical	Mr Mohammad Saifullah Chief

		Industries (ACI), ACI Agribusiness & ACI Agrolink Limited	Strategy Officer, ACI Agribusiness & ACI Agrolink Limited
Private	Agriculture	PRAN	Mr Munaf
Private	Agriculture	Lal Teer Seed Ltd	Dr Abdur Rashid, General Manager
Private	Financial	BRAC Bank	Ms Tahmina Zaman Khan, Senior Manager, Basel Implementation and Coordinator, Green Banking Unit
Private	Financial	Mutual Trust Bank Limited (MTBL)	Mr Tarek Reaz Khan, Head of SME Banking & Retail Banking
Private	Financial	Green Delta Capital	Mr Rafiqul Islam, Managing Director and CEO
Private	Association	Federation of Bangladesh Chamber of Commerce and Industry (FBCCI)	Mr Abdul Matlub
Public	Government	Small and Medium Enterprise Foundation (SMEF)	Mr Md Mamunur Rahman, Deputy General Manager (presently on sabbatical)
Public	Government	Economic Relations Division (ERD), Ministry of Finance	Mr Iftekhar Hossain, Deputy Secretary, UN Branch-5
Public	Special purpose agency	Infrastructure Development Corporation Limited (IDCOL)	Mr Md Enamul Karim (Pavel), Lead of the Renewable Energy Financing Team IDCOL
Public	Government	Bangladesh Bank	Mr Asif Iqbal, Deputy Director, Sustainable Finance Department
Public	Government	Ministry of Environment and Forests (MOEF)	Mr. Nurul Karim, Additional Secretary

## Annex 2: Interview Questionnaire

### Building Readiness of the Private Sector in Bangladesh for Green Climate Fund Accreditation: Interview Guide

#### Project overview

This project aims to investigate the role of the private sector in Bangladesh to engage in climate-related activities, specifically accessing finance from the Green Climate Fund (GCF), and the opportunity this fund presents for climate and development investments. It is a project funded by CDKN and implemented by a team made of Acclimatise, IIED and ICCCAD. One week of initial inception consultation meetings has already been conducted, with organisations from public and private sectors, as well as development partners (ERD, BB, IDCOL, SMEF, GIZ, IFC, MBL, Rahimafrooz).

We see this project as an immediate follow-on activity from the workshop that took place in November (co-organised with UNDP) about accessing Green Climate Fund opportunities, options and challenges for private sector and CSOs in Bangladesh.

Our project has 3 phases:

- The first phase of the project aims to first raise awareness and build the business case about opportunities for Bangladeshi private sector to work on climate change and in particular access the GCF, with a view to gain a better understanding of the role that the Bangladeshi private sector can play in this respect.
- Based on this scoping exercise, we will conduct an institutional assessment to identify a short list of potential National Implementing Entities (NIEs) from the private sector (6 potential NIEs for Bangladesh have so far been identified; all are from the public sector).
- The shortlisted would benefit from further support under a third phase addressing potential capacity gaps and aiming to enhance their capacity to identify, develop and implement GCF projects.

**With this in mind, the purpose of this interview is to gain a better understanding of how the private sector in Bangladesh can engage in climate related activities, including accessing climate funds, and what are the opportunities and challenges associated with these activities.** We are focussing on select sectors - the agriculture, energy, and insurance sectors - which are particularly vulnerable to a changing climate and are already to some extent engaging in climate related activities.

We are particularly interested in hearing the views and perspectives of the [private sector/regulatory body]. We believe your expertise in/experience in/role as [insert as appropriate] would be valuable for the purpose of our study.

Many thanks for participating in this study. We understand you are very busy and your input is greatly valued. This will not take longer than 45 minutes.

**A few key terms that will be used throughout the interview:**

**Mitigation:** actions that reduce greenhouse gas (GHG) emissions eg. renewable energy (solar, wind, biogas), energy efficiency initiatives, etc.

**Adaptation:** actions that help reduce the risk or take advantage of opportunity in response to the impacts of climate change eg. climate resistant crop varieties, rainwater harvesting, drip irrigation etc.

**Climate related projects/activities:** projects/activities that contribute to mitigation or adaptation, or both

**Green Climate Fund (GCF):** Largest public-funded global mechanism for delivering climate finance to developing countries. The GCF incorporates a Private Sector Facility (PSF) to boost private sector investment in adaptation and mitigation activities.

**A) Background information about the respondent and his/her organisation (5 min):**

1. In 2-3 sentences, could you describe what your organisation does and what your specific role is?
2. On a scale of 1 to 5, 1 being very low and 5 being very high, how would you rate **your/the private sector's** awareness of the opportunities and benefits of engaging in climate related activities? This includes activities that contribute to the reduction of GHG emissions (such as renewable energy or energy efficiency measures), as well as activities that help adapt/build resilience to the effects of a changing climate (such as drought or saltwater resistant crops, water conservation methods).
3. On a scale of 1 to 5, to what extent do you feel confident talking about this topic?

**B) Awareness of climate change, mitigation and adaptation (5 min)**

1. On a scale of 1 to 5, to what extent has climate change influenced **your organization/the private sector**?
2. How has climate change influenced **your organization/the private sector** (for example, in terms of causing direct/indirect impacts, policy and regulatory requirements, market risks or opportunities, changing stakeholder or shareholder demands etc.)?

**C) Opportunities presented by climate change & drivers and barriers for action (15-20 min)**

*Questions for public sector stakeholders:*

1. What is in your opinion the role of the private sector in a) the development planning process and b) the response to climate change?

2. What are the potential challenges/barriers to the involvement of the private sector in climate action?
3. To what extent have you engaged with the private sector on climate change initiatives? Are you incentivized to do so?
4. With what type of private sector actors have you engaged on climate change: commercial financial institutions, multilateral financial institutions, SMEs, large corporates etc.?
5. Studies show that stronger public-private partnerships will be an important vehicle to enhance climate resilience and at the same time, create business opportunities, as is the case with the collection and use of climate data and deployment of early warning system technologies. What is your view on this? Have you engaged in any public private partnerships for climate change action?

*Questions for private sector stakeholders:*

1. What opportunities does climate change present? Please tick all of the relevant opportunities that apply to your organization. Please also expand briefly on each of your selections.
  - Development of new products and services
  - New or expanded markets for products and services
  - Cost savings
  - Securing supply chains
  - Reputation and brand value
  - Other (Please specify \_\_\_\_\_)
2. Are these immediate/medium/long term opportunities?
3. What are the barriers and constraints to taking action on climate related activities? Please tick the barriers/constraints relevant to your organization. Please also expand briefly on each of your selections.
  - Policy and regulatory environment constraints
  - Information gaps leading to market failure
  - Weak or shallow financial markets
  - Capacity constraints
  - Market size
  - Transaction costs
  - Other (Please specify \_\_\_\_\_)
4. What would help to overcome these barriers?
5. What support would you need to receive from the public sector to unlock the opportunities presented by climate change?

*[for financial/banking interviews skip to next sub-section]*

6. Studies show that in response to climate change, private companies can develop products and services that reduce costs and create new markets, offering a competitive advantage as well as more effective responses to climate change; this can be the basis for growing, profitable businesses. Have you engaged in any of these activities? *[If no, skip to next sub-section]*
7. If yes, can you tell us more:



- How did the initiative come about? What were the motivations of the company (monetary benefit/profit, reputation, social impacts/benefits, supply chain resilience, etc.)?
- Who were your partners? Did you work with any particular donors or funding organizations? What was your role and what was the role of the partner organization(s)?
- How did you fund the initiative? What sources of funding (self-financed, bilateral, multilateral, carbon finance, blended)? Did you co-finance it?
- What were the barriers you faced in developing and/or implementing this initiative? How did you or could you have overcome them?
- Can you share with us any data about this initiative that would help us demonstrate a business case? eg. increase in market share, new market creation, revenue etc. What specific indicators did you use to make the business decision to undertake this initiative?

*Questions specific to Financial/Banking Sector:*

1. Do you consider climate risk when investing?
2. Have you considered investing in climate-related projects?
3. Is there demand for finance for climate-related projects?
4. What are the risks associated with these types of projects? How would you make such investments less risky and more profitable?
5. Have you ever accessed finance from dedicated climate funds? If yes can you tell us more *[if no skip these questions]*:
  - From which fund?
  - What was the purpose of accessing climate finance (eg. for a specific project)?
  - What was the motivation behind accessing climate finance?
  - What type of finance was it (grant, loan, other)?
  - Who were your partners? Did you work with any particular donors or funding organizations? What was your role in the development and implementation of the project? What was the role of the partner organizations?
  - What worked and what didn't from this experience?
  - Would you consider accessing climate funds again?

**D) Opportunity presented by the GCF (10 min)**

1. What barriers to accessing finance do you face in general?
2. Knowledge of GCF
  - a. Are you aware of the GCF? If yes, how did you learn about the GCF?
  - b. What do you know about GCF? Do you know about the private sector facility of GCF?
  - c. Do you know about different ways you can engage with the GCF?
3. Interest in GCF
  - a. Will you be interested in applying for GCF funds?
  - b. Why or why not?
  - c. What would make the GCF appealing to you/ make you want to access funds from the GCF compared to other sources?
4. Methods of engagement with GCF

- a. How will you be interested in engaging with the GCF? Please tick all that apply.
- Accessing concessional funds
  - Accessing grants
  - Accessing guarantees
  - Accessing equity investment
  - Investing in GCF products, such as sovereign funds
  - Implementing climate activities as deliverers of good and services
  - Others
- b. Would you be interested in applying as an intermediary that can channel funds to other private sector actors?
- c. Are you aware about GCFs accreditation process? If so, will you be willing and interested to take on such a task which will allow you to access and channel funds directly from the GCF?
- d. Would you be interested in applying for GCF projects through 'request for proposals' that GCF will unfold?
5. Through what channels/awareness raising tools would you be most interested in receiving further information about the GCF and/or engaging in climate related activities (eg. leaflets, videos, toolkits, online resources, workshops etc)?

Thank you very much for your time. We will be in touch regarding the outputs of the first phase of the project very soon.

## Endnotes

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- <sup>i</sup> PricewaterhouseCoopers (PWC), 2013, *Stimulating private sector engagement and investment in building disaster resilience and climate change adaptation. Recommendations for public finance support.*
- <sup>ii</sup> Ibid.
- <sup>iii</sup> The Industrial Policy of Bangladesh (2010) defines small and medium enterprises as: “In manufacturing, small industry will be deemed to comprise enterprises with either the value (replacement cost) of fixed assets excluding land and building between Tk. 5 million and Tk. 100 million, or with between 25 and 99 workers,” and “medium industry will be deemed to comprise enterprises with either the value (replacement cost) of fixed assets excluding land and building between Tk. 100 million and Tk. 300 million, or with between 100 and 250 workers.”
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- <sup>viii</sup> World Bank, 2010, *Economics of Adaptation to Climate Change Bangladesh*.
- <sup>ix</sup> Morgan Stanley, 2015, *The Investor’s Guide to Climate Change*. Available from: <http://www.morganstanley.com/articles/the-investor-s-guide-to-climate-change>
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- <sup>xiii</sup> World Bank, 2014, *Building Competitive Green Industries: The Climate and Clean Technology Opportunity for Developing Countries*, p. 18. Cited in We Mean Business, 2016, ‘*The Paris Agreement: What It Means For Business*’. Available from: [http://www.wemeanbusinesscoalition.org/sites/default/files/The-Paris-Agreement\\_Z-Card\\_0.pdf](http://www.wemeanbusinesscoalition.org/sites/default/files/The-Paris-Agreement_Z-Card_0.pdf)
- <sup>xiv</sup> GrameenShakti (2016). [Interview responses from representative of Grameen Shakti].
- <sup>xv</sup> MTBL (2016). [Interview responses from representative of Mutual Trust Bank Limited ].
- <sup>xvi</sup> SMEF. (2016). Interview responses from representative of Small and Medium Enterprises Foundation (SMEF).
- <sup>xvii</sup> Rai, N., & Soanes, M. (2015). A practical handbook for Green Climate Fund accreditation in Bangladesh. IIED, London. Retrieved from <http://pubs.iied.org/10151IIED.html>
- <sup>xviii</sup> Smith, B., & Rai, N. (2015). Private Sector Facility, a review note prepared for the ninth board meeting of the Green Climate Fund in Songdo, Korea, 24th -26th March 2015. Retrieved from <http://pubs.iied.org/G03978.html?k=Green%20Climate%20Fund%20GCF>

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<sup>xxxvi</sup> Further information is available at <http://weatherinsurancebd.com/>. The project's objectives include:

- At least 6,000 farmers, particularly small and marginal farmers who are directly dependent on agriculture, are sensitized through awareness seminars on climatic risks and agricultural risk management techniques, and about the features of WIBCI.
- At least 400 officials/staff from the Insurance Development Regulatory Authority (IDRA), insurance companies, meteorological and weather data agencies, agriculture research institutions, microfinance institutions (MFIs) or nongovernment organizations (NGOs), and concerned government agencies are trained or educated about WIBCI.
- Regulations for WIBCI are drafted and are awaiting approval by IDRA and the Bank and Financial Institutions Division (BFID), along with standards related to weather data quality, product design, and underwriting and claim settlement.

<sup>xxxvii</sup> Personal communication with Muhammad A. (Rume) Ali, Chief Executive Officer at Bangladesh International Arbitration Centre (BIAC), April 2016.

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