



DEPARTMENT OF
**ECONOMIC AND
SOCIAL AFFAIRS**

Bangladesh

Developing the strategic guidelines for climate financing, multilateral climate funds, considering possible linkages between climate financing and post COVID 19 agricultural development in Bangladesh

Report of the DESA project, “Strengthening the capacity of least developed countries to develop evidence-based, coherent and well financed strategies to implement the 2030 Agenda”

October 2021

This report was prepared under the capacity development activities of the Development Policy Branch (DPB), Economic Analysis and Policy Division (EAPD), United Nations Department of Economic and Social Affairs (DESA). The Project is funded by the UN Peace and Development Trust Fund (UNPDF): "2030 Agenda for Sustainable Development Sub-Fund" (2030 ASD Sub-Fund). Inputs from the project consultant Mr. Maksudur Rahman are gratefully acknowledged. For more information, please contact Namsuk Kim, EAPD/DESA (kimnamsuk@un.org). The content, findings, interpretations and conclusions as expressed in this report do not necessarily represent the views of the United Nations or the Government of Bangladesh.

Contents

| | |
|---|-----------|
| EXECUTIVE SUMMARY | V |
| LIST OF ACRONYMS | XI |
| 1. INTRODUCTION..... | 1 |
| 1.1 BACKGROUND | 1 |
| 1.2 OBJECTIVE AND SCOPE..... | 3 |
| 1.3 METHODOLOGY AND STRUCTURE..... | 4 |
| 2. PRESENT SCENARIO OF CLIMATE CHANGE IN BANGLADESH | 5 |
| 2.1 CLIMATE CHANGE RISKS AND IMPACTS | 5 |
| 2.2 INSTITUTIONAL AND POLICY FRAMEWORK OF CLIMATE ACTION IN BANGLADESH..... | 7 |
| 2.3 KEY ACTORS AND STAKEHOLDERS..... | 9 |
| 3. CLIMATE FINANCE LANDSCAPE IN BANGLADESH | 12 |
| 3.1 INTERNATIONAL STREAMS..... | 12 |
| 3.2 DOMESTIC RESOURCES | 14 |
| 4. INTERFACE OF CLIMATE CHANGE WITH AGRICULTURE AND FOOD SECURITY | 16 |
| 4.1 VULNERABILITY OF THE AGRICULTURAL SECTOR | 16 |
| 4.2 IMPLICATIONS OF THE COVID19 PANDEMIC | 17 |
| 4.3 PRIORITY INTERVENTION AREAS..... | 18 |
| 5. PROSPECTIVE CLIMATE FINANCE VEHICLES..... | 20 |
| 5.1 GREEN CLIMATE FUND..... | 22 |
| 5.2 LEAST DEVELOPED COUNTRIES FUND (LDCF)..... | 23 |
| 5.3 INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT (IFAD) – ADAPTATION FOR SMALLHOLDER AGRICULTURE PROGRAM (ASAP)..... | 24 |
| 5.4 ASIAN DEVELOPMENT BANK (ADB) | 26 |
| 5.5 UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)..... | 28 |
| 5.6 SMALL GRANTS PROGRAMME (SGP) – GLOBAL ENVIRONMENT FACILITY (GEF)..... | 30 |
| 5.7 LOCAL CLIMATE ADAPTIVE LIVING FACILITY (LOCAL) – UN CAPITAL DEVELOPMENT FUND (UNCDF)..... | 32 |
| 5.8 BANGLADESH CLIMATE CHANGE TRUST FUND (BCCTF)..... | 34 |
| 5.9 PUBLIC-PRIVATE PARTNERSHIP AUTHORITY – GOVERNMENT OF BANGLADESH | 35 |
| 6. STRATEGIC CONSIDERATIONS..... | 38 |
| ANNEX 1: LIST OF STAKEHOLDERS | 42 |
| ANNEX 2: MULTILATERAL CLIMATE FINANCED PROJECTS BETWEEN 2016 – 2021 | 51 |

| | |
|--|------------|
| ANNEX 3: CLIMATE-RELATED DEVELOPMENT ASSISTANCE IN AGRICULTURE (2015 – 2019) | 55 |
| ANNEX 4: ACCESS MODALITIES OF PROPOSED FUNDS | 70 |
| ANNEX 4.1: GREEN CLIMATE FUND (GCF) | 70 |
| ANNEX 4.2: LEAST DEVELOPED COUNTRIES' FUND (LDCF) | 76 |
| ANNEX 4.3: INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT (IFAD) | 79 |
| ANNEX 4.4: ASIAN DEVELOPMENT BANK (ADB) | 82 |
| ANNEX 4.5: UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID) | 85 |
| ANNEX 4.6: SMALL GRANTS PROGRAMME (SGP) – GLOBAL ENVIRONMENT FACILITY (GEF) | 90 |
| ANNEX 4.7: LOCAL CLIMATE ADAPTIVE LIVING FACILITY (LoCAL) – UN CAPITAL DEVELOPMENT FUND (UNCDF) | 92 |
| ANNEX 4.8: BANGLADESH CLIMATE CHANGE TRUST FUND (BCCTF) | 94 |
| ANNEX 4.9: BANGLADESH CLIMATE CHANGE TRUST FUND (BCCTF) | 97 |
| REFERENCES | 101 |

EXECUTIVE SUMMARY

The impacts of global climate change have become increasingly evident in recent years with rising sea levels, shifting weather patterns and increasing frequency and magnitude of extreme weather events being observed all over the world. The Least Developed Countries (LDCs) remain especially susceptible to these impacts, due to lacking adequate technical, financial and institutional capacity to effectively deal with the crisis. In 2001, the United Nations Framework Convention on Climate Change (UNFCCC) established the LDC Work Programme (and subsequently updated it at the 24th Conference of Parties (COP24) in 2018). The Programme outlined a set of actions for developed country Parties to enhance capacity and knowledge within LDCs to better manage the issue of climate change.

To support the implementation of the Work Programme, a range of financing mechanisms and entities have been set up over the years. This includes dedicated multilateral financing entities with varying objectives and modalities such as the GEF Trust Fund, Least Developing Countries' Fund (LDCF), Special Climate Change Fund (SCCF), Adaptation Fund, Green Climate Fund etc. Multilateral development banks like the World Bank, Asian Development Bank (ADB) have also been crucial players through provision of technical and financial assistance for climate related action, as well as acting as intermediaries for multilateral climate funds. Also, billions of dollars have been channelled by various bilateral donors towards climate-relevant development assistance in LDCs. In addition, several LDCs have taken steps to support climate action using domestic resources through integrating climate related investments in national budgets and establishing extra-budgetary national climate funds.

Despite these ambitious efforts, LDCs continue to experience growing financing needs for adapting to climate change. The LDC 2050 Vision Report from 2019 states that around USD 40 billion between 2020 and 2030 will be required for LDCs to implement adaptation priorities outlined in their Nationally Determined Contributions (NDCs). This ongoing challenge has been made worse by the recent COVID19 pandemic, which has put immense stress on the economies of these LDCs, further aggravating their state of climate vulnerability and threatening their path towards meeting the 2030 Sustainable Development Agenda.

In light of the above, UN Department of Economic and Social Affairs (DESA) has taken up the project titled **“Strengthening the capacity of developing countries to develop evidence-based, coherent and well financed strategies to implement the 2030 Agenda”** with a view to build capacity of targeted LDCs for better accessing and utilizing climate finance, primarily from international sources. This report presents the current scenario of climate change in Bangladesh, highlighting risks and vulnerabilities, particularly in the agriculture sector, and provides a brief overview of the country's climate finance landscape. Subsequently, the report proposes a set of funding options and vehicles available to Bangladesh that could serve as

potential sources of financing for sustaining the country's trajectory towards economic growth and sustainable development in response to the dual crisis of climate change and COVID19.

Climate change scenario of Bangladesh

Bangladesh is frequently touted as one of the most climate vulnerable nations in the world. Due to its geographic and hydrogeological setting, the country has always been prone to extreme climate variability and a range of natural disasters including tropical cyclones, tidal storm surges, coastal and river flooding, droughts and salinity intrusion. With climate change becoming more and more prominent, these are likely to get more frequent and intense. Bangladesh is also characterized by high poverty, population density and governance related challenges. As such, climate change poses severe risks to the country's socioeconomic development, with impacts cascading through all sectors of the economy starting from food security to water management, and from safeguarding ecosystems to securing energy. Agriculture, fisheries, energy access and the health sector are already under duress, a situation that is likely to get worse in the years ahead.

In past decade or so, the Government of Bangladesh has demonstrated remarkable commitment towards addressing the issue. Important efforts have been made to ensure climate action is integrated within various national legal, policy and financial frameworks. Most notably, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) was formulated in 2009 to serve as the primary document for guiding climate action in the country. The country has also prepared climate-change relevant strategy documents such as the National Adaptation Programme of Action (NAPA), Bangladesh Delta Plan 2100, Country Investment Plan for Environment, Forests and Climate Change etc. Aspects of climate change mainstreaming have been considered within the country's medium and long-term plans such as the Perspective Plan (2021-2041) and 8th Five-year Plan (2021-2025) as well as within various sectoral plans and policies. Necessary measures have also been undertaken to help incorporate climate action within the country's public financial management systems. This includes completion of a Climate Public Expenditure and Institutional Review (CPEIR), and the adoption of the Climate Fiscal Framework in 2014, further revised in 2020 with a broader scope.

Climate finance landscape in Bangladesh

Notwithstanding its high vulnerability to climate change, Bangladesh has been a major recipient of international financing support for climate action. This includes assistance from dedicated climate finance facilities such as the GEF Trust Fund, GCF, PPCR, AF etc. Multilateral development banks i.e. the World Bank and the Asian Development Bank (ADB) have also been vital financiers, with their various programmes, instruments and modalities on funding climate change interventions. Bangladesh has also received support from many development partners, including the USA, UK, Germany, Sweden, Denmark, Japan among others. To mobilize domestic resources, the Government of Bangladesh had established the Bangladesh Climate Change Trust Fund (BCCTF) with the primary aim to support actions

delineated in the BCCSAP. Private sector actors, such as commercial banks, non-banking financial institutions etc. have also been contributing towards low-emission, climate compatible infrastructure development in the country.

Vulnerability of the agriculture sector

The agriculture sector is considered to be the backbone of the Bangladesh economy. It constitutes a significant proportion of the annual GDP and employs more than half the population, and as such, has been an important driver of poverty reduction in the country. While the sector has experienced steady growth in recent years, the imminent impacts of climate change coupled with the COVID19 pandemic bear substantial risks to agriculture and food security in Bangladesh. Agricultural production relies on climatic factors such as temperature, rainfall, wind intensity, radiation, which render the sector highly vulnerable to climate change impacts. Accelerated intensity and frequency of storm surges, drought, salinity intrusion, irregular rainfall, high temperature and flash floods due to climate change will have a range of consequences all across the agricultural supply and value chain. A decrease in agricultural GDP by 3.1 percent is projected per year due to the impacts of climate change, amounting to an overall loss in added value of USD 36 billion between 2005 and 2050. The sector has also been impacted by the recent pandemic, owing to transportation and mobility issues, stifled market access as well as reverse urban-rural migration.

Considering the importance of the sector to the Bangladesh economy, it is essential that limited financial resources available both at the international and national level, are channelled towards effective measures that would safeguard food security and socioeconomic development in the country. The report proposes a set of priority intervention areas for the sector which include:

- Promotion of climate smart agricultural practices and technologies
- Crop diversification
- Ensuring optimal and efficient use of water resources
- Infrastructural development
- Education and capacity building
- Strengthening institutions and policies

Prospective financing options

In light of the country's present context and priorities, nine (9) potential climate funding vehicles have been proposed to support socioeconomic recovery and growth, particularly in the agricultural, in response to the compounded crisis of COVID19 and climate change in Bangladesh. It must be noted that, while there are a plethora of other funding options available, these nine vehicles have been shortlisted because of the diversity they offer in terms of financial instruments, targeted sectors, access modalities as well as implementation approaches. These funds can also be delivered by a range of actors at different levels, and hence a wider scope of access can be ensured. The potential climate finance vehicles highlighted in the report are:

- 1. Green Climate Fund (GCF)** – GCF has positioned itself as the largest and most prominent multilateral climate funding facility with commitments up to USD 8.8 billion at present. GCF exercises a 50:50 split between adaptation and mitigation action, wherein 50% of all adaptation is also meant especially for LDCs. In addition, a core principle of GCF is the notion of country ownership, whereby the fund aims to support interventions that are aligned with national context and priorities. The fund has eight impact areas, one of which is on food security, and the others have some degree of bearing on climate resilient agricultural development. Bangladesh has already made significant progress in terms of engaging with the fund through setting up a National Designated Authority (NDA), a couple of national-level Direct Access Entities (DAE) and accessing five projects till date. Considering the above, GCF is likely to be an important source of climate finance for the country.
- 2. Least Development Countries Fund (LDCF)** – Established under the Global Environment Facility (GEF), LDCF is exclusively focused on supporting climate change interventions laid out in the NAPAs of the LDCs. Agriculture and food security is listed as one of the six targeted sectors for the fund and the Bangladesh NAPA built on four pillars which are: i) food security; ii) energy security; iii) water security; and iv) livelihood security – all of which have relevance for the agriculture sector in the country. Furthermore, LDCF offers simpler access modalities and has earmarked allocations for each LDCs. Considering the fact that, of the seven projects funded by LDCF in Bangladesh so far, none has directly been targeted at agriculture, there is scope for exploring additional support from the fund towards agricultural development and food security in the country.
- 3. International Fund for Agricultural Development (IFAD) – Adaptation for Smallholder Agriculture Program (ASAP)** – IFAD represents the only dedicated multilateral funding facility purely focused on agricultural and rural development in developing countries. The ASAP programme under IFAD had been established as a flagship programme for channelling climate and environmental finance to smallholder farmers in developing countries. Supporting smallholder farmers and marginalized communities is crucial for building climate resilience of those most vulnerable, and ASAP actively considers climate components in its portfolio. Presently, a new phase (Enhanced Adaptation for Smallholder Agriculture Programme, ASAP+), set to begin in 2021 with a finance mobilization target of USD 500 million, is under development. Bangladesh has been a long-time recipient from IFAD, and one project under ASAP has been funded so far. Considering a new phase with significant funding value is underway, Bangladesh could benefit from accessing the fund to support agricultural development and food security.
- 4. Asian Development Bank (ADB)** - ADB is one of two multilateral development banks operational in Bangladesh and has been a vital agent supporting the country's socioeconomic development. ADB offers a wide range of financial instruments including loans, grants, equities etc. and has special climate change funds set up. In its recent Country Operations Business Plan (COBS) 2021-2023 for Bangladesh, significant commitments have been made towards agricultural resilience as well as COVID19 recovery. The COBS is aligned with the Bangladesh Country Partnership Strategy (CPS) 2016–2020 as well as

with the country's 5-year development plans. As such ADB can be a prospective vehicle for agricultural adaptation and resilience to climate change.

5. **United States for Agency for International Development (USAID)** – While there are several bilateral development partners supporting climate relevant interventions in Bangladesh, USAID has been proposed due to its track record and experience of executing agriculture projects in Bangladesh, and also considering the agency's growing commitment towards climate action. Agriculture is among the sectors that is considered high priority by the agency for Bangladesh, and has accordingly received the highest proportion of financial assistance in the country over the years. USAID/Bangladesh's Country Development Cooperation Strategy (CDCS) 2020-2025 considers several interventions in the agricultural sector including stronger market-oriented agriculture, strengthened food supply chains, promotion of climate smart farming practices.
6. **Small Grants Programme (SGP) – Global Environment Facility (GEF)** - The above options primarily channel large-scale finance through central government mechanisms, which can hinder the process of funds efficiently reaching the local level. SGP offers an option for NGOs and CBOs, who often operate at the local level, to directly access small grants which can be leveraged towards supporting needs of vulnerable farmers and thereby contribute to climate change resilience in the agriculture sector. Bangladesh is presently in the process of becoming a participating country under the programme. Since locally-led action on climate change will be crucial for sustainable development, particularly in the context of COVID-19 recovery, SGP is likely to become a highly prospective avenue.
7. **Local Climate Adaptive Living Facility (LoCAL) – United Nations Capital Development Fund (UNCDF)** – LoCAL is a mechanism under UNCDF set up with the aim enhance climate finance access for local authorities in developing countries. Fundamentally, LoCAL intends to facilitate fiscal decentralization in LDCs and thus channels funds through local governments, with the aim enhance the effectiveness of local planning and public financial management for supporting climate action. In Bangladesh, LoCAL has already engaged 71 local governments and delivered over USD 2 million in grants across 263 small-scale climate resilience investments. Since projects targeting food security and agricultural adaptation are often executed at the local level, by channeling funds through local authorities, the programme offers an avenue to implement climate adaptation projects that adequately and accurately respond to the needs and priorities at the local level, which would be vital for agricultural resilience.
8. **Bangladesh Climate Change Trust Fund (BCCTF)** – BCCTF is a flagship national fund set up by the national government as a block-budgetary allocation. Aim of the fund is to support actions against the six thematic areas and 44 programmes of action outlined in the BCCSAP, several of which are related to agricultural development and food security. Since 2009, the fund has allocated hundreds of millions of dollars across a variety of interventions and sectors. However, studies have found that only a small proportion of projects have been

explicitly focused on the agriculture sector. Thus it would be important to tap into this pool as an important source of climate finance for agricultural recovery.

9. Public Private Partnership Authority (PPP Authority), Government of Bangladesh – Private sector has been fundamental to the Bangladesh economy, but their engagement in climate action has been limited due to lack of incentives. The PPP Authority aims to combine public sector accountability and private sector expertise to deliver high-quality infrastructure projects. It has set up funds and options for de-risking private sector investment, and can thereby be an important channel for mobilizing large volumes of private finance towards climate action. Agriculture is among the focus areas of PPP Authority; however very little projects have been undertaken in the sector so far.

Detailed information on each of the funds as well as step-by-step procedures for Bangladesh stakeholders to access them, have been provided as an Annex to the report.

Strategic considerations

The report acknowledges that in order to ensure enhanced availability, access of utilization of the funding options presented above, stakeholders operating within the climate change arena need to take account of a number of considerations, some of which include:

- Building capacity for developing bankable projects
- Enhancing coordination among financial mechanisms and entities
- Decentralising the delivery of climate finance
- Engaging the private sector in climate change adaptation efforts
- Exploring diverse and innovative financial instruments

LIST OF ACRONYMS

| | |
|---------------|---|
| BAU | Business-as-Usual |
| BCCSAP | Bangladesh Climate Change Strategy and Action Plan |
| BCCT | Bangladesh Climate Change Trust |
| BCCTF | Bangladesh Climate Change Trust Fund |
| BDP | Bangladesh Delta Plan |
| BDT | Bangladeshi Taka |
| BIFFL | Bangladesh Infrastructure Finance Fund Limited |
| CBO | Community Based Organization |
| CCU | Climate Change Unit |
| CDM | Clean Development Mechanism |
| CEO | Chief Executive Office |
| CFF | Climate Fiscal Framework |
| CIF | Climate Investment Funds |
| CIP | Country Investment Plan |
| COL | Concessional OCR Lending |
| COP | Conference of Parties |
| CPEIR | Climate Public Expenditure and Institutional Review |
| CPS | Country Programme Strategy |
| DAE | Direct Access Entity |
| DAE | Direct Access Entity |
| DESA | Department of Economic and Social Affairs |
| DFID | Department for International Development |
| DMC | Developing Member Country |
| EAPD | Economic Analysis and Policy Division |
| EFCC | Environment, Forestry and Climate Change |
| EIB | European Investment Bank |
| ERD | Economic Relations Division |
| ESS | Environment and Social Safeguards |
| FAA | Funded Activity Agreement |
| FAO | Food and Agriculture Organization |
| FCDO | Foreign, Commonwealth and Development Office |
| FP | Funding Proposal |
| FPD | Full Project Document |
| FSP | Full-Sized Projects |
| FY | Fiscal Year |
| GCF | Green Climate Fund |
| GDP | Gross Domestic Product |
| GEF | Global Environment Facility |
| GHG | Greenhouse Gas |
| GIZ | Deutsche Gesellschaft für Internationale Zusammenarbeit |

| | |
|---------------|--|
| IBFI | Index-based Flood Insurance |
| IDCOL | Infrastructure Development Company Limited |
| IFC | International Finance Corporation |
| INCom | Initial National Communication |
| INDC | Intended Nationally Determined Contributions |
| INGO | International Non-Government Organization |
| ISM | International Support Measures |
| ITAP | Independent Technical Advisory Panel |
| IUCN | International Union for Conservation of Nature |
| JICA | Japan International Cooperation Agency |
| KfW | Kreditanstalt für Wiederaufbau |
| LCG | Local Consultative Group |
| LDC | Least Developed Countries |
| LDCF | Least Developed Countries Fund |
| LoCAL | Local Climate Adaptive Living Facility |
| MDB | Multilateral Development Bank |
| MoEFCC | Ministry of Environment, Forests and Climate Change |
| MSP | Medium-Sized Projects |
| NAPA | National Adaptation Programme of Action |
| NC | National Coordinator |
| NDA | Nationally Designated Authority |
| NDC | Nationally Determined Contributions |
| NGO | Non-Government Organization |
| NSC | National Steering Committee |
| NSDS | National Sustainable Development Strategy |
| OCR | Ordinary Capital Resources |
| ODA | Overseas Development Assistance |
| PBCRG | Performance-Based Climate Resilient Grant |
| PIC | Project Implementation Committee |
| PIF | Project Identification Form |
| PIU | Project Implementation Unit |
| PKSF | Palli Karma-Sahayak Foundation |
| PPCR | Pilot Programme for Climate Resilience |
| PPF | Project Preparation Facility |
| PPG | Project Preparation Grant |
| PPP | Public Private Partnership |
| PPPA | Public-Private Partnership Authority |
| RMG | Ready-made Garments |
| SAP | Simplified Approval Process |
| SCCF | Special Climate Change Fund |
| SDG | Sustainable Development Goals |
| SGP | Small Grants Programme |
| SIDA | Swedish International Development Cooperation Agency |

| | |
|---------------|---|
| SIDS | Small Island Developing States |
| SNC | Second National Communication |
| SREP | Scaling up Renewable Energy Programme |
| TNC | Third National Communication |
| UMIC | Upper Middle-Income Country |
| UN | United Nations |
| UNCDF | United Nations Capital Development Fund |
| UNDP | United Nations Development Programme |
| UNEP | United Nations Environmental Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| UNIDO | United Nations Industrial Development Organization |
| UNOPS | United Nations Office for Project Services |
| USAID | United States Agency for International Development |
| USD | United States Dollar |
| WFP | World Food Programme |

1. INTRODUCTION

1.1 Background

Climate change is arguably the most pressing crisis facing the globe today. Since the emergence of industrial revolution about a century and a half ago, human activities such as rapid industrialization, widespread deforestation and large-scale agriculture have resulted in exorbitant amounts of greenhouse gases being expelled to the Earth's atmosphere. This has led to an unnatural and dramatic rise in the Earth's temperature within a short period of time.¹ This rapid warming has triggered significant changes in the global climate system, with rising sea levels, shifting weather patterns and increasing frequency and magnitude of extreme weather events (e.g., droughts, cyclones and floods) already being observed all over the world.² These alarming changes bear far-reaching impacts on the global economy, infrastructure, human health, ecosystems, biodiversity and the broader society in general.

Least Developed Countries (LDCs) are particularly vulnerable to these impacts, owing to their limited technical, financial and institutional capacity to tackle the issue. In 1992, the United Nations Framework Convention on Climate Change (UNFCCC) was founded as a flagship international treaty for addressing global climate change. Article 4 of the Convention states that “the Parties shall take full account of the specific needs and special situations of the least developed countries in their actions with regard to funding and transfer of technology”. In order to implement this, the LDC work programme was established in 2001, and updated at the 24th session of the Conference of the Parties (COP) in December 2018. The work program calls upon the following set of actions³:

1. Strengthening existing national climate change secretariats and/or focal points to enable the effective implementation of the Convention and the Kyoto Protocol in the LDC Parties;
2. Providing ongoing negotiations training to build the capacity of negotiators from the LDCs to participate effectively in the climate change process;
3. Supporting the preparation of national adaptation programs of action (NAPAs). NAPAs were structured around an eight-step process resulting in a list of discrete projects. Having completed a NAPA would make the country eligible for the Least Developed Countries Fund (LDCF);
4. Promoting public awareness programs to ensure the dissemination of information on climate change issues;
5. Developing and transferring technology, particularly adaptation technology; and

¹ Houghton, J. T. (2001). Climate Change 2001: The Scientific Basis.

² Intergovernmental Panel on Climate Change (IPCC). (2014). AR5 synthesis report: Climate change 2014.

³ United Nations Framework Convention of Climate Change (2020). LDC Work Programme of 2001 as updated in 2018. URL: <https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans-naps/ldc-portal/ldc-work-programme-of-2001-as-updated-in-2018>. Retrieved 14 July 2021

6. Strengthening the capacity of meteorological and hydrological services to collect, analyze, interpret and disseminate weather and climate information to support the implementation of

In accordance with the above, several dedicated financing mechanisms have been set up over the years for addressing the issue of global climate change. One of the earliest of such entities is the Global Environment Facility (GEF). GEF was established in 1992 as an independent international cooperation entity, mandated to help developing countries and countries with economies in transition meet the objectives of international climate change conventions, while enabling economic growth. GEF administers several funds targeted at supporting climate action in LDCs. This includes, but is not limited to, the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF). Established in 2001, LDCF remain the only dedicated funding mechanism out there aimed at exclusively supporting climate adaptation action in LDCs. As of 2020, the Fund has helped 51 countries with the preparation and implementation of their National Adaptation Programs of Action (NAPAs) and is presently supporting the formulation of National Adaptation Plans (NAPs) in these countries. The LDCF also supports the LDC work program under the UNFCCC.

The Adaptation Fund is a financial mechanism under the UNFCCC and Kyoto Protocol, financed partly by proceeds from Clean Development Mechanism (CDM) project activities and voluntary pledges of donor governments. Operational since 2010, the fund aims to support concrete adaptation activities in developing countries. Since its inception, the fund has committed USD 783 million towards climate adaptation and resilience activities, including supporting 115 concrete adaptation projects, with over 27 million total direct and indirect beneficiaries. In 2010, the Green Climate Fund (GCF), was established and it represents one of the most prominent climate financing channels in operation today. It has been designed to support both mitigation and adaptation activities for low-carbon climate resilient development in developing countries. It is mandated to invest 50% of its resources towards mitigation and 50% towards adaptation activities. At least half of the resources for adaptation, are expected to be invested in the most climate vulnerable countries which include LDCs, Small Island Developing States (SIDS) and African States. Till date, the Fund has committed around USD 8.9 billion towards 177 projects across the globe.⁴

In addition to the above, multilateral development banks such as the Asian Development Bank, World Bank and the African Development Bank continue to make substantial financial contributions towards global climate action through their various schemes and programmes. Bilateral development partners have also been playing a crucial role, and billions in Overseas Development Assistance (ODA) have been channelled over the years towards reducing vulnerability and building resilience to climate change in LDCs. Bilateral donors also contribute to the many multilateral public climate funds and have set up a number of dedicated programs and funds for climate change activities. Furthermore, to help curb overreliance on external support, several LDCs have integrated climate related investments in their national

⁴ Green Climate Fund (2021). URL: <https://www.greenclimate.fund/>. Retrieved on 14 July 2021

budgets, and there are cases of national climate funds being established to mobilize domestic resources towards the issue. In recent years, the role of private sector in tackling climate change has been growing, and several facilities and mechanisms have been established to catalyse and channel private sector investment towards climate action.

While there are numerous sources and vehicles in place for supporting climate action in LDCs, it is essential to ensure consistent and effective mobilization of these resources for adequately supporting the growing financing needs in these countries. The Adaptation Gap Report 2020 estimate the annual global adaptation cost to be between USD140 – USD300 billion in 2030. According to the LDC 2050 Vision Report 2019, LDCs will require around USD40 billion between 2020 and 2030 to be able to implement adaptation priorities outlined in their Nationally Determined Contributions (NDCs).

The recent COVID19 pandemic has further exacerbated many of the challenges faced by LDCs in this regard. LDCs susceptible to natural disasters and climate induced shocks and stresses, often tend to rely heavily on overseas development assistance (ODA), remittances and tourism. These sources of income have been adversely affected through global demand reduction, travel restriction and job destruction in hosting countries. The debt stress induced by the pandemic is likely to result in reduction of efforts and resources geared towards climate action, further limiting their potential for accomplishing the 2030 Sustainable Development Agenda.

It is against this background, the UN Department of Economic and social Affairs (DESA) is implementing the project titled “**Strengthening the capacity of developing countries to develop evidence-based, coherent and well financed strategies to implement the 2030 Agenda**”. The aim of the project is to contribute to building the capacity of developing countries to mobilize funding for sustainable development. Under this project, Economic Analysis and Policy Division (EAPD) aims to conduct capacity building activities of international support measures (ISMs) for climate finance for Bangladesh, helping the Government officials and practitioners to develop climate change projects and secure climate financing.

1.2 Objective and Scope

This objective of the report is to provide strategic guidelines and step-by-step procedures for accessing various means of climate financing support, including ISMs, to support climate resilience in Bangladesh, particularly in the agriculture sector. The report is primarily targeted at Government officials, policymakers as well as practitioners engaged in the country’s climate change and agricultural development arena. It should be noted that the report is not designed to be an exhaustive list of climate financing sources and mechanisms available in Bangladesh, but rather it outlines some of the prospective vehicles which can support climate resilience and post-COVID19 economic recovery for the country as it moves forward with its aim to fulfil the 2030 Agenda for Sustainable Development, and to become a developed country by 2041.

1.3 Methodology and Structure

The preparation of this report employed a largely qualitative methodological approach. A combination of primary and secondary data collection was applied which entailed reviewing available literature, and, soliciting inputs from topic experts working within the climate change, environment and agricultural sector in Bangladesh.

The literature review consisted of analysing published reports, academic papers, case studies and policy briefs paper on the topic of climate finance and agricultural resilience. Strategy and guidance documents, as well as website data from various national, bilateral and multilateral climate financing entities were appraised. In addition, semi-structured interviews were conducted (n=6) with national experts including policymakers, practitioners and researchers, to gather their perspectives on the present state and future of climate finance in Bangladesh, particularly in the context of agricultural resilience. Data collected from the literature review and interviews were subsequently analysed to produce this report.

The report is structured as follows: Section 2 provides a summary of climate change risks and impacts in Bangladesh, specifically highlighting the vulnerability of the critical agriculture sector. In Section 3, policy and institutional frameworks for climate action in Bangladesh is illustrated. Section 4 covers the broad scenario of climate financing in the county. Section 5 identifies five (5) important sources of climate finance in Bangladesh, and delineates on their project processes and application procedures. Finally, section 6 recommends a set of strategic considerations for ensuring availability and access, as well as effective utilization of adequate financial resources for facilitating climate resilience in the country.

Box 1. Definitions of key concepts

Vulnerability to climate change is “the propensity or predisposition to be adversely affected”. It is a complex and dynamic phenomenon and that several characteristics of a given social-ecological system contribute to make people and territories more or less vulnerable.

Adaptation refers to adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change.

Mitigation involves actions that reduce the rate of climate change through limiting or preventing greenhouse gas emissions and by enhancing activities that remove these gases from the atmosphere.

Resilience is the capacity of systems to survive, adapt and grow no matter what kinds of acute shocks and chronic stresses they experience. Attributes of a resilient system include the following: robust, flexible, reflexive, resourceful, inclusive, integrated and redundant

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

2. PRESENT SCENARIO OF CLIMATE CHANGE IN BANGLADESH

2.1 Climate change risks and impacts

Bangladesh is consistently placed among the most climate vulnerable countries in the world. This can be attributed to a combination of biophysical, hydrogeological and socioeconomic factors. The country is geographically located within the active Ganges-Brahmaputra-Meghna delta in South Asia and possesses a flat, low-lying topography⁵. Owing to regional monsoon patterns, the country also demonstrates extreme climate variability. As such, Bangladesh has always been subjected to a wide array of natural disasters, with tropical cyclones, tidal storm surges, coastal and river flooding, droughts and salinity intrusion being frequent phenomena. As the manifestation of climate change becomes increasingly apparent, it is expected that the frequency and magnitude of these climatic shocks and stresses will substantially worsen in the coming years. The state of climate vulnerability is further exacerbated by the country's high population density and incidence of poverty, along with weak infrastructure and governance setups. The impacts of climate change in Bangladesh are expected to be so overwhelming that it will cascade through all sectors of the economy starting from food security to water management, and from safeguarding ecosystems to securing energy, hindering overall socioeconomic development and prosperity of the country.

In Bangladesh the impacts of climate change can be seen to impact the country's agriculture and food production. Climate change impacts such as rising temperature, reaching critical levels in Bangladesh during the susceptible stages of the rice plants, could potentially affect overall rice production⁶. The increasing temperature also leads to rise in sea levels, which affects coastal and deltaic rice production in Bangladesh. A study from the World Bank denotes that with soil salinity increasing as a result of climate change, by 2050 at least 9 coastal areas in Bangladesh could see rice yield declining by 15.6%.⁷ Bangladesh is largely dependent on the fisheries sector, making up at least 23% of the country's agriculture sector.⁸ The impacts of climate change such as salinity intrusion, riverbank erosions, and storm surges can lead to scarcity of various breeds of fishes that are unable to breed in saline water, threatening the fisheries industry as well. In addition, other crops, such as wheat, potato, maize, sugarcane and soybeans are also projected to suffer yield decreases due to the impacts of a changing climate.

⁵ Brammer, H. (1990). Floods in Bangladesh: Geographical Background to the 1987 and 1988 Floods. *The Geographical Journal* 156 (1):12-22.

⁶ Wassmann, R., Jagadish, S.V.K., Sumfleth, K., Pathak, H., Howell, G., Ismail, A., Serraj, R., Redona, E., Singh, R. K., & Heuer, S. (2009). Regional vulnerability of climate change impacts on Asian rice production and scope for adaptation. In: Sparks, D.L. ed. *Advances in Agronomy*. Burlington, MA: Academic Press. 102, 91-133

⁷ Allison, E.H., Perry, A.L., Badjeck, M.C., Neil Adger, W., Brown, K., Conway, D., Halls, A.S., Pilling, G.M., Reynolds, J.D., Andrew, N.L. & Dulvy, N.K. (2009). Vulnerability of national economies to the impacts of climate change on fisheries. *Fish and Fisheries*. 10(2), 173-196

⁸ Ahmed, A.U., S. Haq, M. Nasreen, and A.W. Raghieb Hassan. 2015. Sectoral Inputs towards the Formulation of Seventh Five Year Plan (2016-2020): Climate Change and Disaster Management.

Climate change will increase the frequency of river and tidal flooding in Bangladesh, leading to loss of both lives and livelihoods. Changes in the rainfall pattern, already visible in many regions, will become more and more prevalent, contributing to inconsistencies in water availability for household, commercial and industrial use. More devastating floods and cyclones can be expected, which will impact the water supply as well as the sanitation infrastructure in the country.⁹ In order to meet the growing agriculture demand and in light of worsening drought conditions, groundwater extraction has also accelerated, which is depleting the country's natural water table. In addition, issues such as sea level rise and salinization of coastal areas are threatening the availability of potable water in many parts of Bangladesh.

Livelihood in Bangladesh is highly dependent upon natural resources. The country's land area is covered by freshwater ecosystems and hosts the world's largest mangrove forest- the Sundarbans. The Sundarbans in Bangladesh, covers 580,000 hectares of land and is home to at least 334 known plant species and 269 animal species. Impacts of climate change such as a potential 45 cm sea level rise by the year 2050 could inundate the Sundarbans, and cause an extreme imbalance to the saltwater and freshwater composition, destroying the habitat for a variety of species and damaging biodiversity. Other risks such as increased temperatures causing drier conditions and prolonged droughts have increased the prevalence of forest fires. However, it should be mentioned that due to the country's successful conservation efforts has been successful in reducing forest loss in the Sundarbans in recent years.

Other areas that are facing adverse impacts of climate change include the energy sector. The relation between climate change and energy is two-fold; production of electricity is often dependent on burning fossil fuels which contribute towards climate change, and then the impacts of climate change itself prevents power production in the country. As extreme weather events become more frequent, energy infrastructure in the country such as power plants, transmission lines, will be subjected to damage, causing reductions in overall energy supply. It is suggested that the combination of increasing energy demand and increasing risks to supply due to climate change are likely to result in higher energy prices, affecting access for the poor.

The growing impacts of climate change can also be seen to affect human health. For example, many diseases, such as diarrhoea, cholera and other water borne diseases, occur when water sources are contaminated during disasters such as floods and cyclones. It is also understood that the rising salinity levels in coastal regions impact pregnant women, causing health issues such as hypertension and increase in blood pressure. Many people are also displaced due to the impacts of climate change destroying their livelihoods, and they are particularly susceptible to ailments such as malnutrition and vector borne diseases from living in poor environmental conditions.

⁹ General Economics Division (GED) (2009). Policy Study on The Probable Impacts of Climate Change on Poverty and Economic Growth and the Options of Coping with Adverse Effect of Climate Change in Bangladesh.

2.2 Institutional and Policy Framework of Climate Action in Bangladesh

Over the past couple of decades, the Government of Bangladesh has made remarkable strides in combatting climate change issues in the country. The country has been a forerunner when it comes to adaptation efforts and significant steps have been taken to integrate climate action within various national legal, policy and financial frameworks.

Bangladesh was one of the first LDCs to develop the **National Adaptation Programme of Action (NAPA)**¹⁰ – a document that identifies activities for addressing the immediate needs for climate change adaptation in the country. It was prepared in 2005 by the Ministry of Environment and Forests (MoEF), in wide consultation with the government and other stakeholders, and revised in 2009. The NAPA was built on four pillars – i) Food security, ii) Energy security, iii) Water security and iv) Livelihood security.

In 2009, the **Bangladesh Climate Change Strategy and Action Plan (BCCSAP)**¹¹ was prepared which serves as the primary strategic framework document for guiding climate change action in the country. It underlines 44 programmes of action to be undertaken over the short, medium and long term, within six thematic areas: i) Food security, social protection and health, ii) Comprehensive disaster management, iii) infrastructure, iv) research and knowledge management, v) mitigation and low-carbon development, and vi) capacity building and institutional strengthening. The document is currently in the process of being revised, and the updated version is expected to underscore new priorities and action areas necessary for addressing climate change risks and vulnerability in the country. Subsequently, the **Climate Change Trust Act 2010**¹² was enacted to provide a legal basis for enabling transparency of climate action in the country. The act dictates various rules, regulations, guidelines and operational procedures for submission, approval and amendment of project proposals as well as release and utilisation of funds for climate change.

In 2017, the **Bangladesh Country Investment Plan for Environment, Forestry and Climate Change (CIP-EFCC)**¹³ was launched with support from FAO. The document provides a strategic framework for planning and coordination of national and international investments on environment, forestry and climate change sector in Bangladesh. The overall goal of this document to enhance the contribution of these sectors towards sustainable development in Bangladesh. The document identifies 14 coherent and coordinated investment programmes over a five-year period of 2016-2021, across four pillars – i) sustainable development and management of natural resources; ii) environmental pollution reduction and control; iii) adaptation and resilience to, and mitigation of climate change; and iv) environment governance, gender and human and institutional capacity development. The framework also

¹⁰ MoEF, G. (2005). National adaptation programme of action (NAPA). Government of Bangladesh.

¹¹ MoEF. (2009). Bangladesh Climate Change Strategy and Action Plan (BCCSAP). Government of Bangladesh

¹² Government of Bangladesh. (2010). THE CLIMATE CHANGE TRUST ACT, 2010 ACT NO. LVII OF 2010.

¹³ MoEF. (2017). Bangladesh Country Investment Plan for Environment, Forestry and Climate Change (2016 – 2021).

specifies actions and targets that the Government has submitted to the UNFCCC in pursuance of the Paris Agreement. The total cost of the CIP-EFCC has been estimated at USD 11.7 billion of which 40 percent has already been financed through the government's own sources and contributions from development partners.

Bangladesh also recognizes the important of long-term vision and planning for addressing the issue of climate change. Accordingly, the **Bangladesh Delta Plan 2100 (BDP 2100)** has been formulated with support from the Government of Netherlands. It is a long-term strategy document which seeks to integrate the short to medium term aspirations of Bangladesh to achieve the status of Upper Middle-Income Country (UMIC) by 2030 and that of a prosperous country by eradicating extreme poverty by 2041. The plan delineates robust and integrated strategies, and subsequent interventions for ensuring long term water and food security, economic growth and environmental sustainability in Bangladesh while effectively reducing vulnerability to natural disasters and building resilience to climate change impacts. Investment priorities across a range of sectors have also been proposed.

Bangladesh is adopting two-fold approach to combatting climate change. While the country's primary focus is on reducing vulnerability and increasing resilience to the impacts of climate change, it is also pursuing the agenda of low-carbon development through reduction of greenhouse gas (GHG) emissions. Bangladesh submitted its **Intended Nationally Determined Contributions (INDC)**¹⁴ to the UNFCCC in September 2015 which puts forth mitigation actions planned by the country to contribute to global efforts of GHG emissions reduction. In the NDC, Bangladesh committed to reduce GHG emissions in the power, industry and transport sectors by 5 percent below 'business-as-usual' GHG emissions by 2030, or by 15 percent below 'business-as-usual' GHG emissions by 2030 if enough and appropriate support is received from developed countries. Considering adaptation is a priority for the country, the NDC also lays out adaptation goals and objectives. Subsequently, a ten-year **Implementation Roadmap for the Nationally Determined Contribution (NDCs)**¹⁵ for 2016-2025 had been prepared to manage growing emissions without compromising economic development. NDC Sectoral Action Plans have been produced for the power, industry and transport sectors as per the roadmap. It is expected that the roadmap will be a 'living' document to be updated over time to adapt to changing contexts. Presently, the government is conducting a stocktake of mitigation measures undertaken between 2015 and 2020, and is in the process of updating and developing enhanced NDC.¹⁶

Remarkable efforts have also been made to integrate climate action within the country's medium and long-term development plans. The upcoming **Perspective Plan (2021-2041)** and **8th Five-year Plan (2021-2025)** which are in formulation are expected to cover various aspects of climate change mainstreaming. Climate action has also been incorporated as a part of the country's various sectoral plans and strategies. This includes the National Agriculture

¹⁴ MOEF. (2015). Intended Nationally Determined Contributions (INDC). Government of Bangladesh.

¹⁵ MoEFCC (2018). Roadmap and Action Plan for Implementing Bangladesh NDC. Government of Bangladesh.

¹⁶ MOEFCC. (2020). Nationally Determined Contributions 2020 (Interim). Government of Bangladesh.

Policy (2018), National Plan for Disaster Management (2016-2020), National Water Management Plan: Development Strategy (2011), Coastal Zone Policy (2005) etc.

There have been advancements towards setting up necessary financial frameworks for addressing climate change in the country. In 2012, Bangladesh completed a **Climate Public Expenditure and Institutional Review (CPEIR)** to assess the policy, institutional and financial management of climate change activities in the country¹⁷. This led to the adoption of the **Climate Fiscal Framework (CFF)**¹⁸ in 2014, with the intent to guide climate fiscal policy making in Bangladesh by outlining tools and approaches and embedding climate action components within the country's public financial management systems. The CFF has been updated in 2020 with a broadened scope which includes the role of private sector, NGOs and CSOs in climate finance, and also highlights additional policies on lending and insurance.

Bangladesh has also taken active measures for realizing the UN Sustainable Development Goals (SDG). While SDG13 is specifically focused on Climate Action, several of the SDGs are interconnected and have synergies with climate change due to the cross-cutting, dynamic nature of the issues. The government prepared the **National Sustainable Development Strategy (NSDS)**¹⁹ for 2010-2021, which emphasises addressing environmental challenges that Bangladesh faces in the way to development. Climate change is actively considered in the strategy and action areas highlighted include the rehabilitation and climate proofing of coastal polders with especial focus on removing water logging, disaster risk reduction, mainstreaming disaster risk reduction and climate change, coastal char land afforestation, development of climate stress tolerant crop varieties and utilisation of climate change funds. Through a “whole of society” approach, ensuring wider participation of NGOs, development partners, private sector, media and CSOs a **National Action Plan for the Implementation of the SDGs**²⁰ has been formulated, which identifies action areas across all relevant ministries and sectors.

2.3 Key actors and stakeholders

The Ministry of Environment, Forests and Climate Change (MoEFCC) serves as the lead national institution for coordinating and overseeing all climate change related activities in the country. The ministry has been in charge of formulating and directing the various policies relevant to climate change including the NAPA, BCCSAP, NDCs etc. The ministry led the establishment of the flagship Bangladesh Climate Change Trust Fund (BCCTF), which operates under its supervision and guidance. MoEFCC also represents Bangladesh at international negotiations under the UNFCCC, number of UNFCCC committees, and other conferences on multinational environmental agreements. MoEFCC has led the Initial National

¹⁷ Steel, P., Islam, T. (2012). The Bangladesh Climate Public Expenditure and Institutional Review (CPEIR). UNDP.

¹⁸ Ministry of Finance. (2020). Bangladesh Climate Fiscal Framework. Government of Bangladesh.

¹⁹ Ministry of Finance. (2013). National Sustainable Development Strategy (NSDS) 2010-2021. Government of Bangladesh.

²⁰ General Economics Division (GED). (2018). National Action Plan of Ministries/Divisions by Targets for the Implementation of SDGs. Government of Bangladesh.

Communication (INCom), the Second National Communication (SNC) as well as the Third National Communications (TNC) to the UNFCCC. Furthermore, MoEFCC responds to queries on Bangladesh’s preparation and response to climate change in the national parliament. The MoEFCC also chairs the Local Consultative Group (LCG) on Climate Change and Environment, which is an apex coordination mechanism between the government and development partners on environment and climate change programs in Bangladesh. MoEFCC has led the process of identifying institutional focal point for climate change within each national ministry/agency and accordingly provides them with basic training on climate change issues. They also facilitate inter-ministerial coordination through these focal points. Department of Environment (DoE) under the MoEFCC plays subsidiary functions to support all of the above.

Several other ministries and associated government divisions / departments / programmes are engaged in supporting climate change adaptation and mitigation in varying capacities. Some of the major ones are provided in the table below:

| | |
|--|--|
| Ministry of Environment, Forests and Climate Change | Department of Environment |
| | Department of Forests |
| Ministry of Disaster Management and Relief | Department of Disaster Management |
| | Cyclone Preparedness Programme (CPP) |
| Ministry of Agriculture | Department of Agricultural Extension |
| | National Agricultural Research System (NARS) |
| Ministry of Fisheries and Livestock | Department of Fisheries |
| | Department of Livestock |
| Ministry of Water Resources | Bangladesh Water Development Board (BWDB) |
| | Institute of Water Modeling |
| | Flood Forecasting and Warning Center |
| | Centre for Environmental and Geographic Information Services |
| Ministry of Power, Energy and Mineral Resources | Energy and Mineral Resources Division |
| | Sustainable Renewable Energy Development Authority (SREDA) |
| Ministry of Local Government, Rural Government & Cooperatives | Local Government Engineering Department (LGED) |
| | Department of Public Health Engineering (DPHE) |
| | Local Government Division |
| Ministry of Planning | General Economics Division (GED) |
| | Programming Division |
| | Planning Division |
| Ministry of Finance | Economic Relations Division (ERD) |

The agencies presented above are responsible for the execution and management of key physical and social infrastructure targeted at reducing disaster risk and protecting climate sensitive sectors in Bangladesh. They have served as executing entities for delivering a range of climate-change related projects and programmes in the country, with support from international development organizations as well as national non-state actors.

Local governments, including Municipalities, Upazila Parishad and Union Parishad, are also essential for ensuring delivery of important social and infrastructure services to local communities. They often act as direct agents at the community-level, driving efforts related to disaster preparedness, management and rehabilitation.

Non-state actors have been vital players for taking the agenda of climate action ahead in Bangladesh, serving as critical agents for reducing vulnerability and promoting climate resilience in the country through their manifold services and expertise.

- **NGOs and INGOs** substantially contribute towards disseminating information and research on Bangladesh's particular vulnerabilities to climate change, and have advocated strongly for immediate climate change adaptation measures over the past two decades
- **CBOs** have the potential for designing and implementing locally appropriate approaches, creating greater local ownership, and ensuring sustainability of interventions beyond donor-funded project cycles
- **Research institutes, universities and think-tanks** conduct applied research and generate necessary evidence through which future policies and action plans on climate change can be informed. They also participate in international negotiation platforms, such as the UNFCCC helping shape global discourse on the issue, and contributing towards lobbying efforts
- **Private sector** involvement in the social development and climate change sphere has been growing in recent years. A number of banks and corporations are investing in green, low-carbon initiatives, while there are several private entities developing stress tolerant seed varieties and selling solar home systems.
- **Media**, in all forms, have a role to play in creating awareness on the urgency of climate action among the public, both in Bangladesh and also globally

A list of key relevant stakeholders and their roles and responsibilities in the climate change sphere has been provided in **Annex 1**.

3. CLIMATE FINANCE LANDSCAPE IN BANGLADESH

3.1 International streams

Considering the country' high vulnerability to climate change impacts, Bangladesh has been a priority recipient of financial support from several multilateral and bilateral climate financing entities over the years. An overview on the key sources of international funds that have found prominence for climate action in the country is presented below.

Global Environmental Facility (GEF), which is the oldest dedicated financial institution focused on environmentally sustainable development, has been a major contributor to implementing climate change related projects and programs in Bangladesh. In the past decade or so, 43 projects amounting to a total of USD 160 million in the form of grants and USD 1,037 million in co-financing²¹, have been supported by the GEF Trust Fund. GEF also manages other UNFCCC funds including the **Least Developed Countries Fund (LDCF)** and the **Special Climate Change Fund (SCCF)**. Till date, LDCF has approved a total of USD 34.4 million has been across seven (7) projects in the country.

Climate Investment Funds (CIF) has been another major source of multilateral climate finance in Bangladesh. Under the CIF, the **Pilot Programme for Climate Resilience (PPCR)**²² was established in 2008 with the aim to support developing countries in integrating climate resilience into development planning processes. PPCR has approved 11 projects in Bangladesh so far with a total fund of USD 176.66 million of funding and USD 1049.01 million co-financing. Support from PPCR has been essential in improving climate-resilient agriculture and food security, reliability of freshwater supply, sanitation and infrastructure, and enhancing the resilience of coastal communities in Bangladesh... **Scaling up Renewable Energy in Low Income Countries Programme (SREP)**²³ under CIF have recently disbursed USD 75 million in grants and low-cost financing from to catalyse investments in utility-scale renewable energy projects and expand off-grid solar markets in Bangladesh.

The **Green Climate Fund (GCF)** has emerged as the principal multilateral vehicle for channelling climate finance in developing countries worldwide. Bangladesh has made significant progress in engaging with the fund through setting up a National Designated Authority (NDA) in the Economic Relations Division (ERD) under the Ministry of Finance, and establishing two national organizations as Direct Access Entities (DAE), namely the Palli Karma-Sahayak Foundation and IDCOL. Till date, USD 351.1 million has been approved by

²¹ GEF. (2021). Bangladesh: Country-At-A-Glance. URL: <https://www.thegef.org/country/bangladesh>. Last accessed on 07 July 2021

²² Government of Bangladesh. (2010). Bangladesh: Strategic Program for Climate Resilience (SPCR). Available at: <https://www.climateinvestmentfunds.org/sites/default/files/PPCR%205%20SPCR%20Bangladesh%20nov2010.pdf>

²³ SREDA. (2015). Scaling Up Renewable Energy in Low Income Countries (SREP). Government of Bangladesh. Available at: https://www.climateinvestmentfunds.org/sites/default/files/meeting-documents/bangladesh_srep_ip_final.pdf

the fund across five projects focused on climate resilient infrastructure, flood protection, clean cook and enhancing adaptive capacities of women in coastal communities. A total of USD 5.1 million to support readiness activities aimed building the capacity of national institutions and systems for better accessing and delivering on the fund.²⁴

Multilateral Development Banks (MDBs) such as the World Bank and the Asian Development Bank (ADB) and UN organizations such as UNDP, UNEP, FAO, UNCDF, have been important catalysts in the social and economic development of Bangladesh ever since its independence in 1971. Their role in facilitating climate action in Bangladesh has been instrumental. Over the years, they have provided various forms of financial, technical and advisory support to both Government and non-government actors to spearhead action on climate change. They also represent primary intermediaries for channelling multilateral climate funds in the country through their status as Implementing Entities or GEF Partner Agencies. They also take undertake Readiness Support Programmes to help build capacity of national institutions better access climate finance. In addition, World Bank and ADB have established special financing facilities to promote low-carbon, climate resilient development in its member states, including Bangladesh.

Bilateral assistance from donor countries and development partners have been a vital source of international climate finance for Bangladesh. Over the years, development partners have channelled millions in Overseas Development Assistance (ODA) to support climate action in the country. They have made important contributions to the many multilateral public climate funds, and have set up number of dedicated programs and funds for supporting climate change activities. Bilateral support to Bangladesh is typically delivered through their respective development agencies, and the major ones include DFID in the United Kingdom (recently merged with the Foreign, Commonwealth and Development Office of the UK), USAID in the United States, GIZ in Germany and SIDA in Sweden. These development partners have collaborated with national government entities, multilateral organizations, NGOs and INGOs to deliver small, medium and large scale adaptation interventions across a wide array of sectors and thematic areas.

International philanthropic or charity organizations that do not represent a government or a multilateral agency have also served as important sources of complementary financing towards climate relevant projects and programming in Bangladesh. Notable ones include the Rockefeller Foundation, the Asia Foundation. In addition, several international non-governmental organizations (INGOs) are operational in Bangladesh. INGOs channel funds from bilateral and multilateral sources and cooperate with other actors, to implement climate change activities in the country. Some of the noteworthy INGOs in Bangladesh that have been actively engaged in climate action, are Action Aid, CARE, Caritas, Christian Aid, Concern Worldwide, International Union for Conservation of Nature (IUCN), Islamic Relief, Oxfam, Practical Action.

²⁴ Green Climate Fund (GCF). (2021). Country Profile: Bangladesh. Available at: <https://www.greenclimate.fund/countries/bangladesh>

3.2 Domestic resources

Resources at the national level have and continue to be primary contributors for implementing climate change interventions in Bangladesh. Climate change projects and other development projects with climate change components in Bangladesh are funded through either the revenue budget or the development budget drawn from the country's Annual Development Programme (ADP). The revenue budget is financed from domestic revenues and pays for regular government operations, and as such Ministry of Finance provides support to different line ministries to implement climate relevant projects and activities in the country. The ADP is financed through foreign and local resources and covers investment projects and technical assistance. The ADP supports capital investments that are aligned with the government's long-term development policies, programs, and investment. ADP projects are prepared by line ministries and are subject to review and approval by the Planning Commission.

Since the establishment of the CFF in 2014, the government has taken initiatives to track climate relevant expenditures across various ministries and departments. Projects and spending that respond to the six thematic areas of the BCCSAP, are considered to be 100% climate relevant. The Climate Budget Report 2020-2021 produced by the Ministry of Finance, reviewed climate related allocation and expenditure trend across twenty-five Ministries/Divisions which have climate actions and priorities of varying scale covering the period from FY2016-17 to FY2020-21. The total budget allocation of these twenty-five Ministries/Divisions accounts for 56.69% of the national budget of FY2020-21. In the period of FY2016-17 to FY2020-21, climate relevant allocation as percentage of total budget of twenty-five Ministries/Divisions have been between 7.4% and 7.8%. However, climate relevant allocation in absolute terms increased from BDT 143,231 million (approx. USD 1.7 billion) to BDT 242,257 million in FY2020-21²⁵. This demonstrates the government's commitment towards supporting climate action using domestic resources.

One of the most remarkable initiatives taken by the Government of Bangladesh to combat climate change issues in the country, has been the establishment of the **Bangladesh Climate Change Trust Fund (BCCTF)**. BCCTF was set up in 2009 with the primary objective of implementing interventions laid out in the BCCSAP, It represents one of the earliest examples of a national climate fund and is resourced from revenues arising from the annual non-development budget. Between FY 2009-10 to FY 2019-20, a total of BDT 38 billion (approx. USD 450 million) has been allocated to the fund to support climate change interventions across a range of sectors and thematic areas. In addition, following the CPEIR and the adoption of the CFF, efforts have been made by the government to embed climate action within national public financial management systems. Since 2017, significant budgetary resources have been allocated towards climate sensitive expenditures across various ministries and departments.

25

https://mof.portal.gov.bd/sites/default/files/files/mof.portal.gov.bd/page/6e496a5b_f5c1_447b_bbb4_257a2d8a97a1/2020-2021_Climate_BR_English.pdf

For the FY 2020-2021, the government has made a cumulative climate budget allocation for 25 ministries / divisions accounting for 56.69, of which 7.52% is climate relevant.²⁶

In addition to government resources, public and commercial banks, and non-banking financial institutions (NBFI) have also been contributing towards fostering low-emission and climate compatible infrastructure development in the country. **Bangladesh Bank**, the Central Bank of the country has been an active proponent in promoting green development in the country. In 2011, the bank launched a comprehensive green banking initiative to support and promote environmentally responsible financing. Under this initiative, the bank started offering incentive based schemes, e.g. financing facilities at a very low interest rate, to commercial banks and financial institutions in the country for lending in green projects. In 2016, Bangladesh Bank launched the USD 200 million Green Transformation Fund. That same year, banking and non-banking financial institutions in the country were instructed by Bangladesh Bank to set aside 10% of the CSR funds towards a Climate Risk Fund. Building on these lessons and practices, the **Sustainable Finance Policy for Banks and Financial Institutions** was formulated to provide guidance and regulations for greening initiatives to be undertaken by banks and financial institutions in Bangladesh.²⁷

²⁶ Ministry of Finance. (2019). Climate Financing For Sustainable Development: Budget Report (2019-2020). Government of Bangladesh.

²⁷ Bangladesh Bank. (2020). Sustainable Finance Policy. Government of Bangladesh. Available at: <https://www.bb.org.bd/mediaroom/circulars/gbcd/dec312020sfd05.pdf>

4. INTERFACE OF CLIMATE CHANGE WITH AGRICULTURE AND FOOD SECURITY

4.1 Vulnerability of the agricultural sector

Bangladesh is primarily an agrarian economy and agriculture represents the most prominent sectors of the country. While agriculture sector in Bangladesh can be understood to comprise four key sub-sectors i.e. crops, livestock, fisheries and forestry, the crop sub-sector remains the largest and most predominant. The sector is fundamental for the country's socioeconomic development, contributing to 17.5% of the national GDP and employing nearly half of the labour force. Poverty alleviation in the country is closely linked with the sector, with the rural poor, who represent majority of the population, being highly dependent on it for their livelihoods and income generation. The sector is also a major supplier of raw materials for agro-based industries, and makes notable contributions to the country's export earnings. As such, agriculture receives the highest priority from the government of Bangladesh.

The agriculture sector in Bangladesh has been steadily growing in the past few decades. However, mounting pressures of rapid population growth and urbanisation, coupled with climate change impact, pose significant challenges to ensuring food security in the country. Dependence of agriculture on climatic factors such as temperature, rainfall, wind intensity, radiation, make it one of the most vulnerable sectors to climate change. Accelerated intensity and frequency of storm surges, drought, salinity intrusion, irregular rainfall, high temperature and flash floods due to climate change, will have a significant bearing on the agriculture sector in Bangladesh. A decrease in agricultural GDP by 3.1 percent is projected per year due to the impacts of climate change, amounting to an overall loss in added value of USD 36 billion between 2005 and 2050.²⁸

Rising temperatures affect crop production in a number of ways. Different crops have different temperature ranges for their vegetative and reproductive growth, and any high temperatures which exceed these limits will result in substantial losses in yield of important crops such as Aman rice, wheat, potato, soybeans etc.²⁹ High temperatures also have an impact on organic soil matter and have been found to accelerate the incidence of crop diseases and pest attacks. Rainfall represents a major climatic factor for crop production. Erratic rainfall patterns influenced by climate change will harm the growth and development of crops during their critical stages. It was found that 1mm increase in rainfall at vegetative, reproductive and ripening stages decreased Aman rice production by 0.036, 0.230 and 0.292 ton respectively.³⁰ Flooding and waterlogging caused by excessive rainfall cause inundation of arable land for

²⁸ FAO, F. (2017). The future of food and agriculture—Trends and challenges. Annual Report, 296

²⁹ Lázár, A. N., Clarke, D., Adams, H., Akanda, A. R., Szabo, S., Nicholls, R. J., & Moslehuddin, A. Z. M. (2015). Agricultural livelihoods in coastal Bangladesh under climate and environmental change—A model framework. *Environmental Science: Processes & Impacts*, 17(6), 1018-1031.

³⁰ Amin, M., Zhang, J., & Yang, M. (2015). Effects of climate change on the yield and cropping area of major food crops: A case of Bangladesh. *Sustainability*, 7(1), 898-915

long periods of time, affecting crop plantation and harvest, resulting in further yield losses. Market access for agricultural products are also affected due to reduced mobility. Changing river flows as a result of temperature rise and unpredictable rainfall variability, will hinder surface water based irrigation for crops.

Salinity intrusion as a result of sea level will cause freshwater unavailability in the coastal zones of Bangladesh, which make up over 30% of the country's land area, and lead to gradual degradation of soil fertility. Crop yields and productions in the coastal areas will be significantly affected as a result. Irrigation for crop production largely draws from aquifers which are also adversely affected by the process of salinization. According to a study, it is estimated that 14,000 tons of grain production would be lost to sea level rise in eastern Bangladesh by 2030 and 252,000 tons would be lost by 2075.³¹ Long periods of droughts and water scarcity in the north-western region in the country will lead to a shortfall of rice production as well as other perennial agricultural resources, such as bamboo, betel and fruits like mango, jackfruit, banana etc., Cyclones and storm surges also have devastating consequences on all aspects of agricultural supply chain, starting from crop production to market access. Croplands are permanently destroyed by inundation caused by cyclones and livestock fatalities are commonplace. Incidence of the recent super cyclone Amphan in May 2020 affected 176,007 hectares of agricultural land across 17 coastal districts in the country³² and resulted in major losses in agricultural production.

The evidence is clear that with the growing impacts of climate change, agricultural practices and agricultural livelihoods will become increasingly unsustainable, resulting in income loss and unemployment of a significant proportion of the rural population. Considering the fundamental role of agriculture for Bangladesh's economy, this is a matter of pressing concern.

4.2 Implications of the COVID19 pandemic

Emergence of COVID-19 pandemic has also had significant impacts on the country's economy. With the agricultural sector already in fragile state, COVID-19 has brought about significant adverse impacts on the agricultural supply chain of Bangladesh. Effective functioning of agricultural production, material transportation as well market delivery had been hindered by enforced lockdown measures. In addition, the pandemic has led to the deceleration as well as shutdown of several industries and service sectors in urban areas, particularly the RMG sector, leading to unemployment of hundreds and thousands of people who have been compelled to return to their villages. This sudden reverse migration of large number of returnees from urban areas is exerting significant stress on rural livelihoods, especially in the agricultural sector.

³¹ Islam, M. A., Shitangsu, P. K., & Hassan, M. Z. (2015). Agricultural vulnerability in Bangladesh to climate change induced sea level rise and options for adaptation: a study of a coastal Upazila. *Journal of Agriculture and Environment for International Development (JAEID)*

³² Shovon, F. (2020), Cyclone Amphan: 1, 76,007-hectare agricultural land affected, Dhaka Tribune.

It is evident that the compounded effects of COVID19 and climate change places substantial stress on agriculture and food security in Bangladesh. To address the issue, Government of Bangladesh has implemented various stimulus packages and financing schemes. These include agriculture subsidy worth BDT 95 billion, agriculture refinancing scheme of BDT 50 billion, as well as a refinancing scheme for low-income farmers and small business of BDT 30 billion. In addition, financing entities, such as development banks, national agricultural banks, microfinance institutions, cooperatives etc. also have instruments and mechanisms in place to support post COVID19 recovery in the agriculture sector. It is also important to identify what sort of policies and practices need to be in place to ensure these financial schemes are effective in supporting needs of the sector.

4.3 Priority intervention areas

Considering the importance of agriculture to the economy of Bangladesh, as well as the sector's susceptibility to the ever-growing impacts of climate change, ensuring agricultural development and food security is a key priority for the country. The Government of Bangladesh has taken notable actions, both at the policy and action level, to safeguard the sector from various climatic and non-climatic shocks and stresses.

Major climate change related policies and plans in Bangladesh, such as the BCCSAP, NAPA, BDP2100 as well as the NDCs and NAP process, all recognize agriculture as one of the principal sectors in which both mitigation and adaptation actions will need to be mobilized. The National Agricultural Policy 2018 explicitly takes climate change risks into account, and accordingly recommends implementation strategies and options for the sector. Agricultural development and food security have been always been key areas of focus in the country's medium to long-term development plans. The recently produced 8th Five Year Plan has been developed in light of the COVID19 pandemic, and commits goals for the sector accordingly.

Based on review of the above national policies and strategies, the following broad set of interventions should be considered as potential for building agricultural resilience to climate change risks and post-COVID19 impacts.

Promotion of climate smart agricultural practices and technologies

- Varietal development or improvement of stress (heat, uncertain water supply, flood, drought, salinity) tolerant varieties for all climate sensitive crops
- Introducing bio-fortification of crops and developing seed varieties
- Development of low-cost technologies for easy adoption by rural farmers
- Redefining land use using geospatial mapping

- Rehabilitation of natural systems such as mangroves and coastal wetlands to protect agriculture in coastal areas against climate risks.

Crop diversification

- Promote urban agriculture through rooftop and vertical gardening
- Scaling up production of non-staple crops

Ensuring optimal and efficient use of water resources

- Use integrated water resource management to maintain and improve healthy functioning of watersheds.
- Adopt a range of water harvesting techniques, such as low-cost groundwater recharge methods, efficient irrigation systems and communal rainwater harvesting
- Undertake watershed management for comprehensive, climate-compatible infrastructure planning.
- Enhance flood risk management through necessary hard and soft infrastructure

Infrastructural development

- Road network development for facilitating market access to farmers
- Construction of disaster-proofed post-harvest storage facilities
- Development of water infrastructure to protect crop production from extreme weather events

Education and Capacity building

- Capacity building of policy maker, researchers, extension professionals for planning, development and extension of climate smart technologies
- Awareness raising of farmers at the field level to promote the adoption of climate smart practices
- Training of farmers for the usage and implementation of climate smart technologies
- Awareness raising and capacity building of farmers on climate information systems and agro-climatic advisory services at farmers level

Strengthening institutions and policies

- Establishing climate change expertise within all public sector agricultural institutions
- Enhancing coordination among different ministries and government departments
- Expansion of agricultural extension services

5. PROSPECTIVE CLIMATE FINANCE VEHICLES

Based on the context established, this section will outline nine (9) climate financing vehicles, including multilateral, bilateral as well as national, which can be considered essential for supporting climate-resilient sustainable development in Bangladesh going ahead. These are:

10. Green Climate Fund (GCF)
11. Least Development Countries Fund (LDCF)
12. International Fund for Agricultural Development (IFAD) – Adaptation for Smallholder Agriculture Program (ASAP)
13. Asian Development Bank (ADB)
14. United States for Agency for International Development (USAID)
15. Small Grants Programme (SGP) – Global Environment Facility (GEF)
16. Local Climate Adaptive Living Facility (LoCAL) – United Nations Capital Development Fund (UNCDF)
17. Bangladesh Climate Change Trust Fund (BCCTF)
18. Public Private Partnership Authority (PPP Authority)

These nine funds have been selected because of the diversity they offer in terms of financial instruments, targeted sectors, access modalities as well as implementation approaches. Funds covered here can be delivered by a range of actors funds at different levels, and hence a wider scope of access is ensured.

GCF has been considered as it is widely understood to become the largest and most important multilateral funding mechanisms on global climate action. They also promote country ownership and paradigm shift, which are essential features. Bangladesh has already made significant advancements in engaging with the fund, and is continuing to do so – as such, GCF will be one of the most crucial source of climate finance for the country.

LDCF on the other hand is specifically targeted at LDCs, and offer relatively simpler access modalities. Considering Bangladesh's is expected to graduate from its LDC status in a few year, it would be crucial to tap into LDCF's earmarked and underutilized funds for Bangladesh. It is also aligned with the country's NAPA priorities.

IFAD represents the only dedicated multilateral funding facility for agricultural and rural development in developing countries. The ASAP window, initiated in 2012, has strived to ensure climate components are well integrated within IFAD's portfolio. Currently, a new phase of the ASAP window is being developed, and once mobilized, can be an important source of climate finance for agriculture in Bangladesh.

Of the two major MDBs present in Bangladesh, ADB has been proposed because of the significant commitment demonstrated in its recent Country Operations Business Plan 2021-2023 for Bangladesh towards agricultural resilience as well as COVID19 recovery. The COBS

is aligned with the country's 5-year development plans. In addition, ADB has an array of special funds targeted at climate action.

Development assistance from bilateral partners is a crucial source of climate finance for the country, and Bangladesh has received from several development partners, including the UK, Sweden, Germany, Switzerland and the USA. USAID has been selected because of its substantial experience of delivering agriculture projects in Bangladesh, and also considering the agency's growing commitment towards climate action

While the above multilateral and bilateral entities generally channel financial support through the national government and other large multilateral and bilateral agencies, the SGP of the GEF offers promise because it allows access for NGOs and CBOs as well, who are vital agents of climate action in Bangladesh. Climate finance effectiveness hinges upon its ability to adequately deliver necessary action at the local level, where it is needed the most. The LoCAL programme proposes an innovative means of doing so.

It is also understood that international means of support will not be sufficient to meet the climate change needs of Bangladesh, and till date majority of climate change related activities in the country have been supported by domestic resources. As such, it would be important to focus on leveraging resources from the flagship national climate fund i.e. the BCCTF.

Private sector has been the principal driver behind the country's economic growth over the decades. As such, they have the potential to invest significant volumes of financial resources towards climate-compatible projects in the agriculture sector. The role of PPPs for financing climate action has been gaining traction in recent years. PPPs provide frameworks to ensure public leadership and accountability towards addressing climate change, while enabling ownership of certain components of financing to be transferred to private hands. Through optimal allocation of risks between the public and private party, PPPs can generate discernible "value for money". Engaging the private sector also allows for innovation, which is crucial for delivering long-term climate resilience. As such, there is significant potential for PPPs to serve as an effective vehicle for climate finance. The government of Bangladesh has set up the Public Private Partnership Authority in Bangladesh to facilitate the realization of PPP projects, and there is a need to explore how to better engage in climate action in the country.

It must be noted that there are numerous other sources and means of financing available support climate change action and agricultural development in Bangladesh, and funding windows and entities presented here do not necessarily cover the whole range of options that are available. Rather, the report presents an elaborate overview of the nine selected funding vehicles, specifically highlighting each of their relevance to food security and building climate resilience in the agricultural sector. Also, the report provides a detailed description of the access modalities of each of these funding windows.

Eligibility criteria, funding conditions, focus sectors and application procedures for these funds have been provided in **Annex 4**.

5.1 Green Climate Fund

The Green Climate Fund (GCF) represents the newest and the largest global financing mechanism under the UNFCCC. It was formally established at the 16th Conference of Parties of the UNFCCC in 2010 (COP16), and has been operational since 2015. The fund aims to help developing countries realize their ambitions towards low-carbon, climate-resilient pathways through reduction of greenhouse gas emissions and adaptation to climate change impacts. GCF has a multi-layered approach to mobilize climate finance, working directly with the public and private sector.³³

To achieve their aims, the fund invests across four major transition areas – built environment; energy & industry; human security, livelihoods and wellbeing; and land-use, forests and ecosystems. It applies a four-pronged approach to do so. First, the fund promotes transformation through integrated strategies, planning and policymaking to ensure co-benefits among mitigation, adaptation and sustainable development can be maximized. The fund also supports innovations in technologies, business models and practices. To scale up financial flow, the fund draws in private sector finance by enhancing the risk-reward profile of investments in climate actions. Finally, the fund targets mainstreaming of climate action by aligning its investment against sustainable development plans.

One of the core principles of GCF is the notion of country ownership. The fund applies a country-driven approach, whereby developing countries are assigned lead responsibility for GCF programming and implementation. Projects supported must also be well aligned with national priorities and plans. This is achieved by setting up a National Designated Authority (NDA) within the government in a country, and also through establishing national-level Accredited Entities. Another principal feature of the fund is that it practices balanced allocation wherein equal amount of resources are to be allocated for adaptation and mitigation. In addition, 50 per cent of allocated adaptation funds must be earmarked for developing countries, including LDCs and SIDs. Since its inception, the GCF has also set up several funding facilities and windows to facilitate availability and access for developing countries and help achieve its overarching goals and objectives.

Bangladesh has made significant progress in engaging with the fund. Secretary of the Economic Relations Division (ERD), Ministry of Finance serves as the NDA to GCF in Bangladesh. An NDA secretariat has been established at UN-Wing of the ERD. In Bangladesh, there are presently two national DAEs – i) Palli Karma-Sahayak Foundation (PKSF); and ii) Infrastructure Development Company Limited (IDCOL). International Access Entities operational in Bangladesh and are prominent include ADB, World Bank, IFC, UNDP, UNEP, WFP, FAO, EIB, JICA, KfW, GIZ and IUCN.

³³ Green Climate Fund (GCF). (2021). GCF in Brief: About the Fund. Available at: https://www.greenclimate.fund/sites/default/files/document/gcf-brief-about-fund_0.pdf

Till date, the fund has committed up to USD 8.9 billion in 177 projects across nearly 150 countries. For Bangladesh, USD 351.1 million has been approved across five projects so far³⁴. In addition, several Readiness Support programmes have been executed to build institutional capacity of the NDA secretariat as well as other DAE partners.

Relevance for agriculture and food security

GCF has eight results areas which are: i) Low-emission energy access and power generation; ii) Low-emission transport; iii) Energy efficient buildings, cities and industries; iv) Sustainable land use and forest management; v) Enhanced livelihoods of the most vulnerable people, communities, and regions; vi) Increase health and well-being, and food and water security; vii) Resilient infrastructure; viii) Resilient ecosystems. Food security is explicitly considered among the result areas. At the same time, other result areas also have bearing on climate resilient agricultural development and food security.

GCF exercises a principle of country ownership, whereby any intervention financed by the fund must be in line with various national policies, plans and strategies. Considering, agriculture is explicitly considered as a focus sector across several national plans and strategies on climate change, there is a scope for additional projects to be supported.

5.2 Least Developed Countries Fund (LDCF)

The Least Developed Countries Fund (LDCF)³⁵ is a multilateral financial mechanism set up under the UNFCCC to specifically support the adaptation needs of the LDCs. It was established at the 7th Conference of the Parties (COP 7) held in Marrakesh, Morocco in 2001 and has been operational since 2002. LDCF prioritises the identification and implementation of urgent and immediate adaptation needs outlined within the National Adaptation Programs of Action (NAPA) prepared by LDCs.

LDCF is administered by the Global Environment Facility (GEF) Secretariat and thereby follows GEF's fiduciary standards, result-based frameworks, and monitoring and evaluation practices. Accordingly, the World Bank serves as the financial trustee for the fund. Governance of the fund is dictated by a Council comprising of 32 GEF members which entails 14 members from donor constituencies and 18 from recipient constituencies.

In comparison to other major multilateral climate funding entities, procedures followed by the LDCF are far more streamlined and simplified in order to facilitate expedited access by LDCs.

³⁴ Green Climate Fund (GCF). (2021). GCF at a Glance. URL: <https://www.greenclimate.fund>. Retrieved:

³⁵ GEF. (2021). Financing Adaptation to Climate Change at the Global Environment Facility (GEF). Available at: https://www.thegef.org/sites/default/files/publications/GEF_Adaptation%20Bifold_2021_r2.pdf

For instance, project proposals submitted to the LDCF are approved on a rolling basis, as opposed to abiding by fixed investment cycles. Also, to ensure a balanced portfolio across all LDCs, the fund employs an Equitable Access principle, wherein a ‘ceiling’ for resource allocation for each LDCs, which cannot be exceeded. This helps ensure balanced distribution across all targeted LDCs under the fund, and restricts depletion of scarce LDCF resources.

As of October 31, 2019, LDCF had disbursed a total of USD1.4 billion across 51 countries (LDCs and former LDCs) for the preparation and implementation of NAPAs, the NAP process and elements of the LDC work programme³⁶. Bangladesh was one of the earliest recipients of the fund for the formulation of its NAPA. Till date, a total of USD 34.4 million has been approved across seven (7) projects in the country.

Relevance for agriculture and food security

Agriculture and food security is listed as one of the six targeted sectors for the LDCF. Also, the aim of LDCF is to support priority projects identified in a country’s NAPA. Bangladesh NAPA is built on four pillars which are: i) food security; ii) energy security; iii) water security; and iv) livelihood security – all of which have relevance for the agriculture sector in the country.

In addition, the seven projects funded by the LDCF in Bangladesh so far have focused on the forestry sector and ecosystem conservation. No dedicated project targeting the agriculture sector have been funded. Considering food security is one of the pillars of the Bangladesh NAPA, and LDCF has a fixed allotment of funds for each country, there is scope of exploring additional funding support towards agricultural development and food security in the country.

5.3 International Fund for Agricultural Development (IFAD) – Adaptation for Smallholder Agriculture Program (ASAP)

International Fund for Agricultural Development (IFAD) is an international financial institution established in 1978 as a specialized agency of the United Nations to support the agriculture and rural development in developing countries. Since its inception, IFAD has mobilized up to USD 23.2 billion in grants and low-interest loans towards a wide array of agriculture and rural development projects that have benefitted an estimated 518 million people worldwide. IFAD funded projects aim to enhance access to finance, markets, technology and information for the rural poor. The Fund also focuses promoting gender equality and inclusiveness, building the capacity of local organizations and communities, and strengthening resilience to climate change.

³⁶ United Nations (UN). (2021). Least Developed Countries Fund (LDCF). URL: <https://www.un.org/ldcportal/least-developed-countries-fund-ldcf/>. Last accessed at: 07 July 2021

IFAD's operations are primarily financed by member state contributions, loan repayments, investment income and special contributions from non-member states. Other sources of financing include sovereign borrowing, concessional loans and borrowing in international capital markets. The Fund is also considering the Debt Sustainability Mechanism in order to help low-income countries to restore or maintain their external debt sustainability.³⁷

IFAD has been active in Bangladesh for almost 40 years, and till date, the fund has executed 35 projects amounting to USD 2537.1 million, of which USD 970.58 million has come from IFAD's co-financing. IFAD's approach in Bangladesh presently focuses on enabling poor people in vulnerable areas to better adapt their livelihoods to climate change, helping small producers and entrepreneurs benefit from improved value chains and greater market access, and empowering marginalized groups, including poor rural women, both economically and socially. To do so, IFAD invests in necessary rural development infrastructure and value chains that support landless and marginal farmers, smallholder producers and rural entrepreneurs. The fund continues to engage a number of research and grant-funded activities in Bangladesh, including partnerships with the International Rice Research Institute, WorldFish, World Food Programme, World Bank and the Bangladesh Bureau of Statistics.³⁸

The Adaptation for Smallholder Agriculture Programme (ASAP) was launched by IFAD in 2012 as a flagship programme for channelling climate and environmental finance to smallholder farmers in developing countries. The programme is incorporated into IFAD's regular investment processes and it seeks to mainstream climate adaptation into IFAD's overall work portfolio. Since its inception, ASAP has been mobilized in in two distinct phases (ASAP1 and ASAP2) with a total endowment of USD 300 million from 10 donor partners.³⁹ The programme has supported in 43 countries till date. A next phase (Enhanced Adaptation for Smallholder Agriculture Programme, ASAP+) set to begin in 2021 with a finance mobilisation target of USD 500 million, is presently under development.

In Bangladesh, only one project titled 'Climate Adaptation and livelihood improvement project in the Haor basin (CALIP)' with an approved funding value of USD 13.77 million has been implemented under the ASAP programme so far.

Relevance for agricultural and food security

IFAD is the only multilateral development institution that focuses exclusively on transforming rural economies and food systems. The ASAP fund in particular allows IFAD country programmes to design projects from a climate-informed perspective and leverage resources for technical assistance. In the future, ASAP will ensure that approaches for addressing climate-related risks are integrated into all of IFAD's portfolio of loans and grants.

³⁷ <https://www.ifad.org/en/about>

³⁸ <https://www.ifad.org/en/web/operations/w/country/bangladesh>

³⁹ <https://www.ifad.org/documents/38714170/40213192/asap.pdf/b5a8c1f9-f908-4a68-ad30-e3d5eeb17c31?t=1521454445000>

Supporting smallholder farmers and marginalized communities, such as women in rural areas, is central to both IFAD and ASAP's vision. This is especially pertinent for building resilience of those most vulnerable.

Till date, only one project has been supported by ASAP funding in Bangladesh. Considering an Enhanced ASAP programme is underway with a significant funding portfolio, it is expected that Bangladesh will be able to leverage the fund to support agricultural development and food security in the country in the face of climate change and COVID19 impacts.

5.4 Asian Development Bank (ADB)

The Asian Development Bank (ADB) has been supporting Bangladesh since 1973 and remains one of the largest sources of funding for the country's social and economic development. Till date, ADB has committed loans, grants, and technical assistance worth USD 28.57 billion for Bangladesh, with a total cumulative loan and grant disbursements to Bangladesh amount to USD 17.12 billion. These were financed by regular and concessional ordinary capital resources (OCR), the Asian Development Fund (ADF), and other special funds.

ADB has had a growing focus on providing support towards climate change and disaster risk management action, and it seeks to help its member countries become more resilient to the effects of disasters triggered by natural hazards, while it continues to provide assistance to support post-disaster recovery needs. In 2018, ADB developed the Strategy 2030 - a guiding document that seeks to expand ADB's vision to achieve a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty.

One of the seven (7) Operational Priorities of the Strategy 2030, is 'Tackling Climate Change, Building Climate and Disaster Resilience, and Enhancing Environmental Sustainability'. Key responses identified against this priority area are - (i) scaling up support to address climate change, disaster risks, and environmental degradation; (ii) accelerating low GHG emission development; (iii) ensuring a comprehensive approach to build climate and disaster resilience; (iv) ensuring environmental sustainability; and (v) increasing focus on the water-food-energy nexus.

From 2011 to 2020, ADB approved about USD 41.6 billion in climate financing, with ADB's own resources accounting for USD 36.2 billion while external resources contributed almost USD 5.4 billion. ADB has been a major contributor to several multilateral climate funds and serves as one of the major 'intermediaries' or implementing agencies for channeling funds from GEF, GCF and CIF, in Bangladesh. In addition to its ordinary capital resources and grant programs, ADB has established a number of special funds specifically targeted at climate action. These include, but are not limited to, Asia-Pacific Climate Finance Fund (APCliff), Clean Energy Financing Partnership Facility (CEFPF), Climate Change Fund (CCF),

Integrated Disaster Risk Management Fund (IDRMF), Urban Climate Change Resilience Trust Fund (UCCRTF) and the Urban Environmental Infrastructure Fund (UEIF).

The **Climate Change Fund (CCF)** was established in May 2008 to facilitate greater investments in developing member countries (DMCs) to effectively address the causes and consequences of climate change, by strengthening support to low-carbon and climate-resilient development in these countries. CCF plays a key role in mainstreaming climate actions in ADB's operations and is critical for achieving the climate targets under Strategy 2030's third operational priority of tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability is critical for achieving the climate targets under Strategy 2030's third operational priority of tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability.

The fund has received a total of USD 98 million in ADB financing. As of 31 March 2021, pending CTL financial statements/updates, \$75.4 million of the \$98 million total fund resources (net of savings) has been allocated to 126 projects—46 on clean energy development, 73 on adaptation, 11 on REDD+ and land use, and one (1) on climate finance readiness.

The **Urban Environmental Infrastructure Fund (UEIF)** was established in 2009 as a trust fund which aims to support pro-poor and environmentally friendly urban development. The **Urban Climate Change Resilience Trust Fund (UCCRTF)** was established in 2013 with a view to build resilience in medium-sized Asian cities, with a focus on the urban poor. Bangladesh, as a DMC to ADB, is eligible to receive funding from all three of these funding facilities going ahead.

Relevance for agriculture and food security

In recent years, ADB has shifted its strategic focus from agriculture to a comprehensive multi-sector food security engagement with the goal of curbing food insecurity, particularly among the poor and vulnerable. It aims to do so by helping developing member countries (DMCs) strengthen inclusive food and agriculture value chains that enable integration of production, processing, markets, and distribution networks while improving farm and nonfarm employment opportunities, increased incomes, and better living standards of the poor, women, and other vulnerable groups.

ADB's Operational Plan for Agriculture and Natural Resources: Promoting Sustainable Food Security in Asia and the Pacific in 2015–2020 outlined the need to strengthen operations across three action areas which are: 1) improved market connectivity and agricultural value chain linkages to enhance connectivity and mobility between rural and urban areas; 2) use of high-level technologies (i.e., satellite and drone-assisted applications and climate-smart farming technologies) to ensure efficient resource use; and 3) enhanced food safety through improved policies, standards, and institutions for food traceability and tracking.

ADB's country operations business plan (COBP), 2021–2023 for Bangladesh ⁴⁰has been prepared in alignment with the Bangladesh Country Partnership Strategy (CPS) 2016–2020. The COBP is also consistent with the guiding principles of the 8th five-year plan as well as ADB's Strategy 2030. The COBP includes interventions across seven overarching results areas which are: i) agriculture, natural resources, and rural development; ii) education; iii) health; iv) energy; v) finance; vi) transport; and vii) water supply and other urban infrastructure and services sectors. The COBP particularly emphasizes the need to support gender inclusion, climate resilience, and private sector participation through public private partnerships.

As specified above, agriculture, natural resources and rural development is considered as the first and foremost result area in the COBP. Against this result area, ADB's planned outcomes include higher agricultural productivity, climate and disaster resilience, and improved rural livelihoods through activities such as improved irrigation facilities, integrated water-based natural resources management, investments in rural market infrastructure and better-managed flood control and riverbank erosion mitigation. Food security and investments in rural livelihoods will be thrust areas because of COVID-19. The Agricultural Productivity Improvement Project in 2021 will increase farm productivity by market access. In addition, Under the COBP 2021-2023, a total of USD 650 million (USD 70 million from regular OCR and USD 580 million from COL) has been identified as indicative resources available against this result area. As such, there is a significant volume of financial resources that can be accessed by Bangladesh from ADB to support agricultural resilience in response to climate change impacts and COVID19 fallout.

5.5 United States Agency for International Development (USAID)

The United States Agency for International Development (USAID) is the U.S. governmental agency for development cooperation. USAID has been one of the most prominent development partners to Bangladesh and till 2017, the agency has channeled up to USD 4.48 billion in net official development assistance to the country. Since the beginning of its operations in Bangladesh, USAID has partnered with several government and non-government entities to deliver projects and programs across a wide range of sectors, including food security, environmental resilience, democracy and governance, health, education, and humanitarian assistance.

Environment, energy and climate resilience have been among the key thematic priorities of the agency in Bangladesh. USAID works with the Government of Bangladesh to build resilience of individuals, communities, institutions, and the economy to the impacts of natural hazards and changing climatic conditions. One of the focus areas in this regard has been the improved management of natural resources. USAID does so through promoting co-management of wetlands and forest areas, and also providing alternative livelihood opportunities to people

⁴⁰ <https://www.adb.org/sites/default/files/institutional-document/632696/cobp-ban-2021-2023.pdf>

living near these protected areas. In addition, USAID provides training and capacity building support to climate vulnerable communities to help them better prepare for natural disasters and recover from climatic shocks. These include establishing early warning systems, constructing multi-purpose cyclone shelters as well as providing technical assistance to local governments to of climate information and analysis in decision-making. USAID also intends to promote improved efficiency in energy generation and expand the use of clean and renewable sources of energy, including solar and wind power in Bangladesh.

USAID/Bangladesh's Country Development Cooperation Strategy (CDCS) 2020-2025 builds upon the previous CDCS and had been developed in alignment with the strategies and objectives delineated in the country's 7th Five Year Plan (7FYP), taking into consideration the recent COVID19 pandemic. The CDCS 2020-2025 highlights three impact areas or development objectives: DO-1) Improved Democratic Systems that Promote Transparency, Accountability, and Integrity; DO-2) Enhanced Opportunities for an Inclusive, Healthy, Educated Society, and a Robust Economy; and DO-3) Strengthened Resilience to Shocks and Stressors.

Under the third development objective, there are two immediate results targeted which are: IR3.1) Improved Capacity to Mitigate Shocks and Stressors; and IR3.2) Enhanced Ability to Adapt to and Recover from Shocks and Stressors. IR3.1 is focused on preparation and prevention of climate change related impacts, through improved disaster risk reduction and preparedness, co-management of natural resources, more inclusive local governance, stronger market-oriented agriculture, and strengthening social safety net. IR3.2 is targeted at increasing absorptive and adaptive capacities of households and communities to climatic shocks and stresses by increasing access to social safety nets, disaster preparation, employment protections, climate-smart farming practices, and livelihood diversification.

USAID is currently in the process of developing a new Agency climate strategy which is to be launched at the Conference of Parties (COP26) of the United Nations Framework Convention on Climate Change (UNFCCC) in November 2021. The strategy will guide the Agency's efforts to target climate change resources strategically, ramp up climate change mitigation and adaptation efforts, and further integrate climate change considerations into international development and humanitarian assistance programs across all sectors. It is expected that USAID will mobilize substantial volumes of financial assistance and innovative programs to support climate action in its developing partner countries.

Relevance for agricultural and food security

Promoting agricultural development and food security has been a key focus of USAID interventions in Bangladesh, and these sectors have been among the largest recipient of U.S. development assistance channelled to the country. Between 2016 and 2020, USAID has spent approximately USD 207 million in the agriculture sector and USD 175 million in food related aid and assistance, which together make up about 30% of the total spending in development

assistance for Bangladesh in the same period. As such, it is clear that USAID considers agriculture and food security as a high priority area in Bangladesh.

USAID continues to engage with the Government of Bangladesh to help improve the availability and access to nutritious, domestically produced foods in the country. As part of United States Global Food Security Strategy and U.S. Government's Feed the Future (FTF) initiative, USAID works to improve agriculture sector productivity in Bangladesh through developing climate smart technologies and providing public and private extension services to deliver necessary information to farmers and fishermen. USAID promotes agricultural diversification by broadening the varieties of crops, fish and livestock available to agricultural communities, and through adoption of post-harvest practices and intermediate level processing, as well as promoting off-farm income.

USAID also strives enhance private sector competitiveness by promoting economic growth, good corporate practices, and supply chain development to benefit poor farmers and businesses. Assistance provided by USAID also targets improved formulation and implementation of food policy in Bangladesh through research, monitoring, training, and coordination within government agencies.

USAID's CDCS 2020-2025 for Bangladesh considers several interventions in the agricultural sector including stronger market-oriented agriculture, strengthened food supply chains, promotion of climate smart farming practices.

5.6 Small Grants Programme (SGP) – Global Environment Facility (GEF)

Global Environment Facility (GEF) is an independent international cooperation entity that was established on the eve of Rio Earth Summit in 1991, with a view to help developing countries and countries with economies in transition meet the objectives of international climate change conventions, while enabling economic growth. The facility operates the GEF Trust Fund, administers several other trust funds such as the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF), and also acts as an interim secretariat to the Adaptation Fund. The GEF Trust Fund is resourced by financial contributions from 40 donor countries and it represents the longest standing dedicated public climate change fund. Replenished every four years, the GEF Trust Fund is currently in its seventh investment cycle period i.e. GEF-7 (2018-2022), for which a total of US D4.1 billion has been pledged.⁴¹

⁴¹ GEF. (2018). Report on the Seventh Replenishment of the GEF Trust Fund. Available at: https://www.thegef.org/sites/default/files/council-meeting-documents/GEF.A6.05.Rev._01_Replenishment.pdf

Small Grants Programme (SGP)⁴² was developed by GEF as an additional funding window targeted at NGOs and CBOs, to complement the large and medium-sized investments mobilized by its various trust funds. It was guided the notion of local action for sustainable development. The programme provides financial and technical support to community projects aimed at conserving and restoring the environment, while ensuring well-being and livelihood security for the poor and vulnerable. It is guided by the principle that community-led action is crucial for achieving the necessary balance between human needs and environmental goals.

The programme aims to empower local communities and ensure their ownership over projects, and as such remains highly responsive to local needs and demands. Over the last couple of decades, over 20,500 civil society projects have been supported by the SGP - more than 60 percent of which have directly benefitted communities either through direct grants to CBOs or through other NGOs and CSOs working with communities.

In line with the above, the programme is underpinned by the following approaches: capacity building; community empowerment and participation; poverty reduction; gender equality; indigenous peoples' rights; youth participation; knowledge management; replication and up-scaling; and policy impact

The SGP is implemented by the United Nations Development Programme (UNDP) and executed by the United Nations Office for Project Services (UNOPS). It employs a decentralized and country-driven approach by setting up country programme teams made of up of a National Coordinator (NC), a Programme Assistant (PA) and a National Steering Committee (NSC). In addition, each country is expected to a develop Country Programme Strategy (CPS) in alignment with the SGP global strategic framework and country-specific needs and conditions.

The National Coordinator (NC) is responsible for managing country programme implementation and for ensuring that grants and projects meet GEF and SGP criteria. The NC is also in charge of liaising with the NSC, UNDP, local government and all other relevant stakeholders. The NSC is usually composed of civil society organizations, government representatives, UNDP, the academia, indigenous peoples' organizations, the private sector and the media. The NSC guides the development of the CPS and plays a vital role in the oversight of the programme at the national level. The functions of the NSC includes reviewing of proposals against the SGP criteria, approval of grants, providing advisory support, ensuring proper monitoring and evaluation of projects, and representing the programme at national and international platforms.

Bangladesh is presently in the process of becoming a participating country under the programme. Since 2019, the Government of Bangladesh has been liaising with the GEF Secretariat with an interest to join the GEF SGP. In August 2019, the first appraisal mission

⁴² GEF. (2021). The GEF Small Grants Programme. URL: <https://sgp.undp.org/>. Last accessed on 09 July 2021

was completed and an application package was submitted to the GEF Secretariat in June 2020. Currently, recruitment of country programme teams is underway.

Relevance for agriculture and food security

SGP offers a window through which NGOs and CBOs can apply for small grants to undertake climate relevant agriculture projects at the local level. Through these grants, NGOs and CBOs can undertake various interventions such as training and capacity building of farmers. Small grants can also diversify livelihood opportunities for farmers affected by climatic impacts

Considering the growing recognition of locally-led action and nature-based solutions in supporting climate action and sustainable development, particularly in the context of COVID-19 recovery, SGP is likely to become a highly prospective avenue for climate financing in Bangladesh once it becomes part of the program.

5.7 Local Climate Adaptive Living Facility (LoCAL) – UN Capital Development Fund (UNCDF)

United Nations Capital Development Fund (UNCDF) is an autonomous organization created by the United Nations in 1966, with the aim to support economic development in developing countries through the provision of grants and loans as supplementary to existing sources of capital assistance. It is resourced entirely by voluntary contributions from UN Member States, multilateral organizations, charity foundations and various other sources. UNCDF works closely with UNDP and other United Nations organizations to help developing countries realize their Sustainable Development Goals.

The Local Climate Adaptive Living Facility (LoCAL) was launched by the UNCDF in 2011 as a mechanism to enhance climate finance access for local authorities in developing countries, and thereby effectively channel adaptation investments for building resilience at the local level. LoCAL does so by mobilizing activities that aim to integrate climate change adaptation into local governments' planning and budgeting systems, increase awareness of and response to climate change at the local level, and increase the amount of financial support available to local governments for climate change adaptation.

The core principle of LoCAL is to facilitate fiscal decentralization in LDCs and thereby enhance the effectiveness of local planning and public financial management for supporting climate action. In line with this principle, LoCAL delivers resources through a mechanism called performance-based climate resilience grants (PBCRGs)⁴³. PBCRGs act as a 'financial

⁴³ UNCDF. (2019). Experiences with Performance-Based Climate Resilience Grants, 2018. Available at: <https://www.uncdf.org/article/4685/experiences-with-performance-based-climate-resilience-grants-2018>

top-up’ targeted at covering the incremental cost of incorporating climate adaptation and resilience components within larger investments at the local level. Grants are channelled through existing government fiscal transfer systems and dispersed as part of a local government’s regular budget envelope. LoCAL also provides technical and capacity building support to help local governments integrate climate change adaptation within their planning and budgeting processes, thereby ensuring local development is climate proofed.

LoCAL’s operation has been mobilised in three phases. Phase I represented a ‘Piloting’ phase, which entailed initial scoping of country-specific needs, following by testing in two to four local governments in each country. Phase II on ‘Learning’, focused on building upon lessons from the piloting phase and expanding support programmes to cover 5% to 10% of local governments in a country, in order to demonstrate the effectiveness of the mechanism at a larger scale. Phase III is targeted for ‘Scaling-up’, whereby the mechanism will be gradually extended to all local governments in a country, which in turn will help establish a standard national system for channelling adaptation finance to the local level. Since its inception, LoCAL has supported over 304 local government across more than 25 developing countries, majority of which are LDCs. Many of these countries are in the first two phases of LoCAL programming, while Bhutan and Cambodia are currently preparing for the final phase.

The LoCAL mechanism was first introduced to Bangladesh in 2014 with an initial roll out of PBCRGs in just three local governments. Local governments in Bangladesh, both at the ‘upazila parishad’ (sub-district) and ‘union parishad’ (grassroots) level, are mandated to perform important functions related to disaster preparedness and management, supporting local infrastructure development and the delivery of essential services to local communities. The aim of LoCAL is to ensure that planning and investments made by these local governments are resilient to climate change impacts. The country is currently in Phase-II stage, and as of January 2020, the programme has engaged 71 local governments in the country and delivered over USD 2 million in grants across 263 small-scale climate resilience investments. LoCAL has made vital contributions towards mainstreaming climate change resilience within local level development plans and programmes, and has also helped strengthen the overall fiscal transfer system for climate funds in the country.

Relevance for agriculture and food security

LoCAL’s menu of investments is aligned with the BCCSAP which highlights food security as a key thematic area. Many agriculture focused interventions in Bangladesh are undertaken at the local level, under the supervision and authority of local governments and actors. However

As of January 2020, 228 small-scale climate resilience schemes had been finalized under the PBCRG 2018–2019 cycle .Schemes typically target action on: hydroponics, reverse osmosis, culverts to sustain tidal surge and u-drains for agricultural irrigation. Other actions include road elevation, repair of a cyclone shelter and the road leading to it, rainwater harvesting, reconstruction of an embankment, pond sand filtering and desalinization, a solar photovoltaic

system, a flood defence wall, tree planting, guide wall construction, model resilient drought-tolerant high-value cropping, and household and community development. Some interventions focused on promoting more climate-resilient livelihoods, through demonstrations or capacity building on various climate- and water-efficient agricultural techniques (inter-cropping and green sheds for seedlings) and renewable energy interventions.

In Bangladesh, most projects targeting food security and agricultural adaptation are executed at the local level, and local governments are typically mandated to oversee the implementation of these interventions. However, most funds from international and national sources are typically channelled through the central government, and while local government possess a better understanding of local needs and priorities, they are usually unable to exercise influence or control over the design and delivery of such interventions. LoCAL offers an avenue to implement climate adaptation projects that adequately and accurately respond to the needs and priorities at the local level. This would be vital to ensure climate resilience of the agriculture sector.

5.8 Bangladesh Climate Change Trust Fund (BCCTF)

The Bangladesh Climate Change Trust Fund (BCCTF) is a flagship national climate fund set up by the Government of Bangladesh in 2009 to support the implementation of the Bangladesh Climate Change Strategy and Action Plan (BCCSAP). The fund is capitalized by a ‘block budgetary allocation’ in the form of annual endowments resourced entirely from the government’s non-developmental budget. Two-thirds of the total allocated amount annually is assigned for funding of projects and programmes, and the rest is reserved as ‘fixed deposit’ for emergencies. The interest accrued on the remaining one-third is also used for project implementation.

The fund is currently managed by the Bangladesh Climate Change Trust (BCCT). Governance of the fund is led by an independent Board of Trustees and a Technical Committee. The Board of Trustees, largely comprised of government representatives along with two non-government members, provides policy advice and has the final say in the approval of projects and activities for funding. The Technical Committee headed by the Secretary of MoEFCC is assigned with the primary function of reviewing project proposals and recommending them for approval by the board. Two sub-technical committees have also been formed with experts in the field, for providing technical and thematic guidance when required. Comprehensive mechanisms for Monitoring and Evaluation, and Accountability of funded projects have also been established by the BCCT under the Climate Change Trust Act 2010.

A total of BDT 38 billion (approx. USD 450 million) has been allocated to the fund up to the FY2019-2020. Till May 2019, the fund has supported 788 projects across range of sectors and thematic areas, more than 90% of which have been implemented by various government

ministries / divisions / departments. The remaining are supported through a NGO funding window supervised by the Palli-Karma Sahayak Foundation (PKSF)⁴⁴.

Relevance for agriculture and food security

BCCTF supports implementation of projects that are in line with the 44 programmes categorized within the six (6) thematic areas of the Bangladesh Climate Change Strategy and Action Plan (BCCSAP). Thematic Area 1 is Food Security, Social Protection and Health, and programmes under this thematic area include P1 – Institutional capacity and research towards climate resilient cultivars of food and their dissemination; P2 – Development of climate resilient cropping systems and production technologies; and P3 – Adaptation against drought, salinity submergence and heat. These programmatic interventions are vital for ensuring food security and climate resilience of the agricultural sector in Bangladesh.

In addition, the five other thematic areas also have programmes with linkages to the agriculture sector. For instance Thematic Area 3 – Infrastructure has programmes on repair and maintenance of existing flood embankments and coastal polders, which are necessary to protect crop production from climate related shocks and stresses.

An analysis of BCCTF funded projects between the period of 2009 and 2017, have found that less than 10% of projects have been mobilized through the Ministry of Agriculture towards projects targeted at food security and agricultural adaptation. Considering the high vulnerability of the sector, there is a make a strong case to the BCCTF for financing agriculture and food security projects.

5.9 Public-Private Partnership Authority – Government of Bangladesh

Bangladesh's economic growth over the years can be largely attributed to the booming private sector. As such, Government of Bangladesh has been placing significant emphasis on public-private collaboration for advancing socioeconomic development in the country. In 2010, the "Policy and Strategy for Public-Private Partnership (PPP)" was issued and subsequently a Public Private Partnership Authority (PPP Authority) was set up under the Prime Minister's Office, to help facilitate the realization of PPP projects in Bangladesh.

The PPP Authority aims to provide an enabling environment for government institutions to engage in public-private partnerships for the delivery and implementation of sustainable public service infrastructure in the country in an efficient, cost-effective manner. It supports line

⁴⁴ Ministry of Finance. (2019). Climate Financing For Sustainable Development: Budget Report (2019-2020). Government of Bangladesh

ministries to identify, develop, tender and finance high-quality PPP projects, and provides a professional, transparent, centralized portal for interested investors and lenders.

Since its inception, the Authority has set up a couple of catalytic funds to help incentivize private sector investment in public service infrastructure. **The Public Private Partnership Technical Assistance Fund (PPPTAF)** was set up with the aim provide funding support to sanctioned PPP projects for early stage project development activities which include project identification, pre-feasibility studies, detailed feasibility studies, documentation and evaluation and any other subsequent activities in relation to the project till signing the contract and achieving project financial closure with the awarded tenderer. The fund has been initially capitalized by a grant of BDT 2 billion (approx. USD 23 million) from the government. It will be supplemented through budgetary support from the Ministry of Finance where needed, and development partners, and other national and international institutions also have the scope to contribute.

The **Viability Gap Fund (VGF)** will provide supplementary government financing to projects that have high social and economic benefits but may not be fully financially viable on a commercial basis. The aim is to attract greater private investment for infrastructure development in the country. Resources from the VGF can be used to share the up-front cost of a project, and also on an annual basis to help subsidize PPP project costs.

Availability of long-term finance is vital for encouraging private sector investment. To facilitate access to long term finance, the government has mandated two non-banking financial institutions to provide funds to private investors for the financing of infrastructure and PPP projects. These are the Infrastructure Development Company Limited IDCOL and BIFFL, who have been. IDCOL is capitalized mainly through the contribution of multilateral donors, while BIFFL is capitalized through the provision of ring fenced budgetary funds from Government of Bangladesh.

As of May 2021, 79 projects been undertaken with support from the PPP Authority, and are at different stages of the project cycle. The projects span across a number of sectors including transport, power, industry, health, IT as well as urban development.

Relevance for climate adaptation in the agriculture sector

By combining public sector accountability and private sector expertise, PPPs can play a critical role in advancing agricultural development and food security in the face of climate change and COVID19 in Bangladesh. Several countries have had success in executing PPP projects to support the agriculture sector. These include improved access to knowledge and technology for farmers, investments in water infrastructure to protect crop production, setting up post-production storage facilities, undertaking R&D on climate resilient seeds and crop varieties, strengthening value chain and so and so forth.

The Policy and Strategy for Public-Private Partnership (2010) which include, outlines several vital sectors for PPP projects, including but not limited to irrigation and agricultural services, water supply and distribution, land and reclamation and dredging, roads and highways as well as other social infrastructure⁴⁵. All of these are interconnected and are highly pertinent to ensuring agricultural development in the country in the face of climate change and COVID19 impacts.

Till date, there have been very little projects undertaken by the PPP Authority that directly target the agriculture sector. As such there is substantial scope for mobilizing PPP projects in this area.

⁴⁵ https://www.pppo.gov.bd/what_we_do.php

6. STRATEGIC CONSIDERATIONS

As established earlier, there is a wide array of options at national and international level for financing climate change interventions in Bangladesh, with differences in funding conditions, focus areas as well as access modalities. Many of them offer special and unique features to help drive their agenda forward. Going ahead, there are a number of strategic considerations that stakeholders operating within the climate change sphere in Bangladesh should take account of, in order to enhance availability, access and utilisation of climate funds in the country. Some of these have been presented below:

- **Building capacity for developing bankable projects**

Accessing multilateral and bilateral climate financing typically requires applicants in developing countries to prepare strong project proposals that can be considered as bankable by the funders. Bankability of climate finance projects depend on a number of factors. One of the prominent ones is driven by the notion of ‘additionality’. Additionality in the context of climate finance dictates that funding for climate change should be ‘additional’ and separate from ‘traditional’ development aid programmes, wherein they must be targeted specifically for addressing climate risks and impacts. As such, funders place a strong emphasis on project proposals demonstrating the climate relevance and adaptation rationale of an investment. Proposals must clearly specify how a project will address climate risks now and in the future, and how proposed interventions are distinct from business-as-usual development activities.

Considering the uncertain and dynamic nature of climate change, specifying and calculating additionality can be also highly challenging. This requires the availability of, and access to high-quality weather and climate related data. While there are datasets available from different sources, there is no comprehensive database in Bangladesh, and there is often a lack of uniformity. This issue is exacerbated by the fact that many project implementers and relevant stakeholders in Bangladesh possess limited understanding on what exactly constitutes adaptation and therefore have difficulty establishing linkages between climate change risks and expected project outcomes and impacts. Proposal formats also require proponents to demonstrate cost-effectiveness and provide plans for results-based monitoring of project outputs and outcomes. Certain funders require proposals to be supported by comprehensive risk assessments and a number of feasibility studies which requires time and resources

As such, it is important to provide skills training and capacity building, and well as financial support to potential project proponents in Bangladesh to help them develop strong, robust project proposals and thereby secure climate funding from multilateral and bilateral sources. Research organizations, training institutes, NGOs and CBOs as well as the private sector can support this process. Also, GCF has set up a Project Preparation Facility (PPF)⁴⁶, through

⁴⁶ Green Climate Fund (GCF). (2020). Project Preparation Facility (PPF) Guidelines.

which they up to USD 1.5 million in financial and technical assistance for the preparation of project and programme funding proposals. PPF is accessible by the GCF Accredited Entities in the country.

- **Enhancing coordination among financial mechanisms and entities**

Despite the presence of various and funding mechanisms and entities in Bangladesh, they often operate in a disparate manner. Implementing agencies also tend to compete for funds. This often leads to overlapping actions, resulting in inefficient use of scarce financial resources. Also, due to the cross-sectoral nature of climate change, addressing the issue calls for a range of actors to collaborate with one another in assessing risks and problems, and identifying crucial and cost-effective solutions.

As such, there is a need for climate finance entities at various levels, national and international, to enhance coordination among themselves. This will allow for fairer and more efficient allocation of resources, help avoid duplication of efforts and achieve optimum benefits. Collaboration will also help ensure funded projects are well aligned with various national strategies and plans on climate change and development.

- **Decentralising the delivery of climate finance**

While ensuring sufficient quantity of climate finance is important, it would be just as critical to ensure effective utilization of these funds. Climate finance can only be considered as effective, if they adequately address the needs of local communities, who are considered to be most vulnerable to the impacts of climate change. However, studies have found that less than 10% of mobilised global adaptation finance reaches the local level⁴⁷. While several multilateral climate financing entities apply the principle of country ownership, it must be acknowledged that enabling fund access and management at the central government level does not necessarily ascertain that money will flow to the local level to those who need it the most. Many developing countries, including Bangladesh, often lack the necessary institutional capacity and governance structure to effectively do so.

Therefore it would be important to establish mechanisms and democratic processes through which climate finance can be effectively channelled to local governments and authorities, who will then be responsible for the management and disbursement of funds at the local level. Structures and measures which allow for direct transfer of funds to local authorities should be put in place. At the same time efforts must be made to mainstream climate adaptation activities within local government planning and budgets. Delegation of responsibilities should be such that local authorities can define their own adaptation needs and practise flexibility in the usage of funds. To this end, capacities of local governments to undertake bottom-up climate risk

⁴⁷ Soanes, M, Shakya, C, Walnycki, A and Greene, S. 2019. Money where it matters: designing funds for the frontier. IIED Issue Paper. IIED, London.

assessments, and also to practice transparent fiduciary management and institutional coordination will also need to be enhanced. As presented in the report earlier, the UNDCF LoCAL programme has made notable contributions to catalyse such a process in Bangladesh. Similar programmes will need to be explored by both multilateral funders and national policymakers

- **Engaging the private sector in climate change adaptation efforts**

The private sector in Bangladesh has the potential to mobilize large volumes of investment towards climate action, and also develop efficient innovative solutions to the issue. While private actors are increasingly engaging in environment and climate friendly activities, but they have largely been geared towards mitigation. Their contribution in adaptation activities has been limited so far. This can be attributed to the limited understanding among private actors on the rewards or economic benefits that can arise from investing in adaptation interventions.

Therefore, an enabling environment with necessary policies and regulatory frameworks should be in place to incentivize the private sector to invest in climate action. Knowledge exchange and lessons sharing among the private sector and other state and non-state actors should be promoted through setting up necessary platforms. Strong public-private partnerships (PPPs) can play a useful role here. PPPs allow the private sector to transfer some of the risks to the public, thereby increasing the likelihood of private investment in public projects. PPPs have the benefit of increasing quality of services, reducing implementation time as well as cost of providing goods and services. PPPs also transfer the risk to the private sector while promoting greater transparency and accountability.

To facilitate the realization of PPP projects in the country, the government has set up a Public-Private Partnership Authority (PPPA) and a Public Private Partnership Technical Assistance Fund (PPPTAF) has been established to this end. However the role of PPPA in climate action is not well understood and their participation in climate change decision-making and programming has been limited. It would be critical to catalyse their engagement in climate action area in Bangladesh, as they can play a vital role in promoting low-carbon, climate compatible infrastructure development in Bangladesh.

- **Exploring diverse and innovative financial instruments**

Addressing the challenges posed by climate change, and compounded by the COVID19 pandemic in Bangladesh, would require exploring diverse and multifarious channels through financial support can be delivered and extended to those affected. This would entail looking beyond the predominant medium of loans and grants provided by multilateral climate finance entities and bilateral partners, and exploring additional instruments.

Climate risk insurance offers a means through which financial risks associated with climate change, particularly extreme weather events, can be minimized. Climate risk insurance can come in many forms, of which weather-index based insurance has gained reasonable footing in recent years, particularly in the agriculture sector. Index-based insurance is a means through which smallholder farmers can be compensated for their losses, by offering payouts in correlation with a particular weather-index such as rainfall, temperature, precipitation etc. An innovative Index-Based Flood Insurance (IBFI) program has been recently developed by the International Water Management Institute (IWMI) in partnership with the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), and other partners with a view to provide tailored solutions to smallholders farmers affected by climatic shocks and stressors in Haor areas of the country.⁴⁸

Climate bonds or green bonds have emerged in recent years, as a promising financial instrument for attracting private sector investments in projects that offer environmental and climate change benefits. In 2021, Bangladesh launched its very first green bond, through a charity organization called the SAJIDA Foundation. The bond valued at approximately USD 12 million will help support and expand green and renewable energy projects in Bangladesh, and help ensure energy access for the poor and vulnerable⁴⁹.

Microfinance has long been playing an instrumental role in poverty alleviation and socioeconomic empowerment of marginalized communities in Bangladesh. Their role in climate change adaptation needs to be better understood. Microfinance not only helps contribute to livelihood diversification of vulnerable communities, but also helps build their adaptive capacity through teaching them asset management⁵⁰. In addition, microfinance institutions in Bangladesh have country-wide networks of delivery, and can thus reach a larger population through their services. Both funders and project proponents need to explore how microfinance can be integrated within the delivery of climate change projects and programmes.

⁴⁸ Saini, S., Giriraj, A. (2020). INNOVATIVE INDEX-BASED AGRICULTURE INSURANCE: WHERE HOPE MEETS POSSIBILITY. CCAFS. URL: <https://ccafs.cgiar.org/news/innovative-index-based-agriculture-insurance-where-hope-meets-possibility>. Retrieved on 12 July 2021

⁴⁹ Hossain, R. (2021). First ever Green Bond in Bangladesh approved for Sajida Foundation. Sajida Foundation. URL: <https://sajidafoundation.org/first-ever-green-bond-in-bangladesh-approved-for-sajida-foundation/>. Retrieved on 12 July 2021

⁵⁰ Hammill, A., Matthew, R., & McCarter, E. (2008). Microfinance and climate change adaptation. IDS Bulletin

ANNEX 1: LIST OF STAKEHOLDERS

| | Stakeholder Name | Type | Stakeholder relevance |
|----|---|------------|--|
| 1. | Ministry of Environment and Forests (MoEFCC) | Government | <ul style="list-style-type: none"> • Lead government ministry responsible for environment and climate change related activities in the country • Responsible for the formulation, implementation and oversight of relevant policies • Taking up environmental and climate change related issues to the national parliament • Representation at the international conventions and platforms on Bangladesh • Facilitates inter-ministerial coordination on climate change • Administers the Bangladesh Climate Change Trust (BCCT) |
| 2. | Department of Environment (DoE) | Government | <ul style="list-style-type: none"> • Mandated to implement the various environmental policies, plans, strategies, acts and rules developed by the country – and also oversee their application • Charged with fulfilling the obligations of regional and international conventions, contracts and protocols related to the environment • Serves as a key reporting agency to UNFCCC processes and protocols and therefore plays a major role in international climate change negotiations on behalf of Bangladesh. |
| 3. | Bangladesh Climate Change Trust | Government | <ul style="list-style-type: none"> • Manages the Bangladesh Climate Change Trust Fund (BCCTF) • Mandated to implement the BCCSAP through the fund |

| | Stakeholder Name | Type | Stakeholder relevance |
|----|--|--------------------------|---|
| 4. | Economic Relations Division (ERD) – Ministry of Finance | Government | <ul style="list-style-type: none"> • Primary entity responsible for mobilizing external / foreign resources for socioeconomic development in the country • Serves as the focal point of the Government for interfacing with the development partners as well as for coordinating on all external assistance inflows into the country • Assesses the needs of external assistance, devises strategies for loans/grants negotiations and mobilizes foreign assistance, formalizes and enables aid mobilization through signing of loans and grant agreements, formulates and executes external economic policy • Functions as the National Designated Authority (NDA) Secretariat to the Green Climate Fund in Bangladesh |
| 5. | Planning Commission | Government | <ul style="list-style-type: none"> • Chief economic public policy institution of government • Undertakes research studies and policy development initiatives for the growth of national economy and the expansion of the public infrastructure of the country • Planning division under the commission serves as the secretariat for all major economic policy questions and for initiating the appraisal of development projects and programmes. |
| 6. | Palli Karma Sahayak Foundation (PKSF) | Development Organization | <ul style="list-style-type: none"> • Apex development organization established by the government for sustainable poverty reduction through employment generation. • Provides financial assistance and institutional development support to appropriate organizations for implementing sustainable and inclusive financial programmes for |

| | Stakeholder Name | Type | Stakeholder relevance |
|----|--|------------|--|
| | | | <p>reduction of poverty through creating productive employment opportunities for the moderate and ultra-poor</p> <ul style="list-style-type: none"> • Operates the NGO funding window under BCCTF • Accredited as a Direct Access Entity under GCF |
| 7. | Ministry of Water Resources (MoWR) | Government | <ul style="list-style-type: none"> • Apex body of the government for development and management of the whole water resources of the country • Formulates policies, plans, strategies, guidelines, instructions and acts, rules, regulations, etc. relating to the development and management of water resources, and regulation and control of the institutions reporting to it • Prepares and implements development projects relating to flood control and drainage (FCD); flood control, drainage and irrigation (FCDI); riverbank erosion control; delta development and land reclamation • Provides irrigation, drainage, flood protection, bank erosion protection, land reclamation facilities by constructing barrages, regulators, sluices, canals, cross-dams, embankments and sea-dykes along the banks of the rivers and the coast, etc. |
| 8. | Bangladesh Water Development Board (BWDB) | Government | <ul style="list-style-type: none"> • A principal agency under MoWR and has the responsibility of accomplishing tasks of executing flood control, drainage and irrigation projects to increase productivity in agriculture and fisheries • Undertaken operations and maintenance of water-infrastructure, contributing to addressing climate sensitivity |

| | Stakeholder Name | Type | Stakeholder relevance |
|-----|---|------------|--|
| 9. | Ministry of Agriculture (MoA) | Government | <ul style="list-style-type: none"> • Apex body for formulation and administration of the rules and regulations and laws relating to the agricultural sector in Bangladesh |
| 10. | Department of Agricultural Extension (DAE) | Government | <ul style="list-style-type: none"> • Government department responsible for agricultural service provision in Bangladesh • Provide eco-friendly, safe, climate resilient and sustainable agricultural practices to ensure food security and promote socio-economic development of the country • Provide efficient, effective, decentralized, location specific, demand responsive and integrated extension services to all categories farmer in accessing and utilizing better know how to increase sustainable and profitable crop production |
| 11. | Bangladesh Agricultural Development Corporation (BADC) | Government | <ul style="list-style-type: none"> • Autonomous government body under MoA, that is responsible for the management of agricultural inputs • Makes suitable arrangements for the production, procurement, transport, storage and distribution of essential agricultural inputs such as seed and fertilizers and providing irrigation facilities through utilization of surface and underground water to the farmers • Responsible for developing stress-tolerant crop varieties |
| 12. | Bangladesh Agricultural Research Institute (BARI) | Government | <ul style="list-style-type: none"> • Autonomous organization part of NARS • Conducts research on a wide variety of crops, such as cereals, tubers, pulses, oilseeds, vegetables, fruits, spices, flowers, etc. |

| | Stakeholder Name | Type | Stakeholder relevance |
|-----|---|--------------------------|--|
| | | | <ul style="list-style-type: none"> • Carries out research on such areas as soil and crop management, disease and insect management, water management and irrigation, development of farm machinery, improvement of cropping and farming system management, post-harvest handling and processing, and socio-economic studies related to production, processing, marketing and consumption • Responsible for developing stress-tolerant crop varieties |
| 13. | Local Government Engineering Division (LGED) | Government | <ul style="list-style-type: none"> • Agency responsible for the provision of transport infrastructures in rural areas and to provide technical support to the rural and the urban local government institutions (LGIs), • Oversees planning and implementation of infrastructure development projects in the rural and urban areas to improve communication and transport network, job creation, and poverty reduction • Responsible for delivering and executing on key physical infrastructure related to disaster management and climate adaptation (e.g. coastal embankments, cyclone shelters, rainwater harvesting, desalinisation plants etc.) |
| 14. | UNDP Bangladesh | Development Organization | <ul style="list-style-type: none"> • Works closely with local government and central government to meet development challenges and build government capacity • Has undertaken several programmes on disaster risk reduction and management, and also climate change adaptation • Guides national actors towards SDG implementation • Implementer of the major GCF project |

| | Stakeholder Name | Type | Stakeholder relevance |
|-----|-------------------------------------|-------------------------------|--|
| | | | <ul style="list-style-type: none"> • Provides Readiness Support to the NDA secretariat for accessing GCF • Supporting the Ministry of Finance to embed climate action in national budgets |
| 15. | FAO Bangladesh | Development Organization | <ul style="list-style-type: none"> • Specialized agency of the United Nations • Priority areas of FAO in Bangladesh include enhancing food security and nutrition, enhancing agricultural productivity through diversification/intensification, increasing resilience of communities to withstand ‘shocks’ such as natural disasters, health threats and other risks to livelihoods • Has delivered agricultural resilience interventions for multilateral climate funds • Is an international access entity for GCF |
| 16. | Asian Development Bank (ADB) | Multilateral Development Bank | <ul style="list-style-type: none"> • Multilateral development that works closely with the government to deliver large scale investments targeted at poverty eradication and socioeconomic resilience • Promotes loans, technical assistance, grants, and equity investments to promote social and economic development and mobilizes financial resources through co-financing • Provides facilitating policy dialogues, providing advisory services, and mobilizing financial resources through cofinancing operations that tap official, commercial, and export credit sources • International access entities / partner agency for multilateral funding channels |
| 17. | World Bank | Multilateral Development Bank | <ul style="list-style-type: none"> • International financial institution that provides loans and grants to the governments for the purpose of pursuing capital projects • Works closely with the government on developing investment plans and strategies |

| | Stakeholder Name | Type | Stakeholder relevance |
|-----|-------------------------|---------------------|--|
| | | | <p>across various sectors including agriculture, fisheries, livestock and forestry</p> <ul style="list-style-type: none"> • Funded several large scale projects on climate change adaptation and mitigation over the decades • International access entities / partner agency for multilateral funding channels |
| 18. | USAID Bangladesh | Development Partner | <ul style="list-style-type: none"> • Independent agency of the United States federal government that is primarily responsible for administering civilian foreign aid and development assistance • Builds self-reliance by strengthening Bangladesh's ability to plan, finance and implement its own development solutions • Have delivered large-scale projects on agriculture, forestry, biodiversity and fisheries |
| 19. | GIZ Bangladesh | Development Partner | <ul style="list-style-type: none"> • Development agency supported by the German government • Priority areas include renewable energies and energy efficiency, good governance, rule of law and human rights, adaptation to climate change in urban areas • Develop knowledge product and policy advocacy materials for enhancing climate change governance • International access entity for GCF • Have provided important readiness support for developing the capacity of NDA secretariat to the GCF in Bangladesh • Developed guidance materials on GCF access and implementation in Bangladesh |
| 19. | BRAC | Development | <ul style="list-style-type: none"> • International development organization based in Bangladesh with recognition as the |

| | Stakeholder Name | Type | Stakeholder relevance |
|-----|------------------------|--------------------------|---|
| | | Organization | <p>largest non-governmental development organization in the world</p> <ul style="list-style-type: none"> • Empowers people and communities to overcome poverty, illiteracy, disease and social justice • Has large networks for delivery of services • Dedicated climate change programme developed working in a range of areas including social forestry, resilient housing, capacity building of vulnerable communities etc. |
| 20. | CARE Bangladesh | Development Organization | <ul style="list-style-type: none"> • International humanitarian organization with large scale operations in Bangladesh • Development portfolio includes food security and livelihoods; health and nutrition; agriculture and natural resources; climate change adaptation; women's empowerment and reduction of violence against women; civil society strengthening; HIV/AIDS; disaster risk reduction and emergency response |
| 21. | WorldFish | Research Organization | <ul style="list-style-type: none"> • International, non-profit research organization, actively working on strengthening livelihoods and enhancing food and nutrition security by improving fisheries and aquaculture • Develops technological innovations, strengthens institutions and policies, and delivers transformational impacts - in partnership with communities, research innovators, entrepreneurs and investors |

| | Stakeholder Name | Type | Stakeholder relevance |
|-----|---|------------------------------------|--|
| 22. | Bangladesh Institute of Development Studies (BIDS) | Research Organization | <ul style="list-style-type: none"> • Undertakes government-supported research on socioeconomic development issues • Have generated crucial knowledge and evidence for facilitating climate change related action and policies in Bangladesh |
| 23. | BCAS | Research Organization / Think Tank | <ul style="list-style-type: none"> • Conducts research on climate change impacts in various sectors – including agriculture, fisheries, forestry etc. • Produces knowledge products • Provides technical and advisory to support to key government agencies to help mainstream climate action |
| 24. | ICCCAD | Research Organization / Think Tank | <ul style="list-style-type: none"> • Undertakes action oriented research on a wide range of topics relevant to climate change in Bangladesh including resilient livelihoods, climate finance, climate governance, urban resilience, climate change induced migration • Promotes knowledge sharing on climate change through various platforms • Provides technical and advisory to support to key government agencies to help mainstream climate action • Delivers targeted training and capacity building initiatives e.g. to a wide range of state and non-actors engaged in climate change planning, programming and implementation |

ANNEX 2: MULTILATERAL CLIMATE FINANCED PROJECTS BETWEEN 2016 – 2021

| | Name of Project | Fund | Implementing Agency | Recipient Institution | Approved year | Funding approved (USD millions) | Summary |
|---|---|--------------------------|--|--|---------------|---------------------------------|---|
| 1 | Promoting private sector investment through large scale adoption of energy saving technologies and equipment for Textile and Readymade Garment (RMG) sectors of Bangladesh | Green Climate Fund (GCF) | Infrastructure Development Company Limited (IDCOL) | Economic Relations Division (ERD), Ministry of Finance | 2020 | 256.48 | The Programme provides an integrated package of concessional financing for textile and RMG manufacturers, and technical assistance to create an enabling environment and ultimately to reduce 14.5 million tonnes of carbon dioxide equivalent (MtCO ₂ eq) in emissions. This is facilitated through capacity building, awareness raising, policy development and support in loan disbursement, monitoring and evaluation of the programme parameters. |
| 2 | Extended Community Climate Change Project-Flood (ECCCP-Flood) | Green Climate Fund (GCF) | Palli Karma Sahayak Foundation (PKSF) | PKSF | 2019 | 9.68 | The project addresses climate-related flooding primarily through cluster-based plinth raising, which raises the land below the target villages above the high-risk flood zone, as well as complementary activities on flood-resistant crops, and improved water and sanitation. |

| | Name of Project | Fund | Implementing Agency | Recipient Institution | Approved year | Funding approved (USD millions) | Summary |
|---|---|---------------------------------------|----------------------------|--|----------------------|--|---|
| 3 | Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change induced salinity | Green Climate Fund (GCF) | UNDP | Ministry of Women and Children Affairs (MoWCA) | 2018 | 24.98 | Strengthening the adaptive capacity of coastal communities, especially women, to cope with the impacts of climate-induced salinity on their livelihoods and water security. |
| 4 | Global Clean Cooking Program - Bangladesh | Green Climate Fund (GCF) | IBRD | Department of Finance | 2018 | 20 | Removing barriers in the development of a sustainable market for the adoption of improved cook stoves in Bangladesh. |
| 5 | Building climate resilient livelihoods in vulnerable landscapes in Bangladesh (BCRL) | Least Developed Countries Fund (LDCF) | FAO | Department of Environment | 2019 | 8.93 | The proposed GEF LDCF project will help to reduce local level vulnerability to climate change and increase livelihood resilience in four (4) targeted landscapes in Bangladesh through testing and upscaling of adaptation technologies, resilient livelihood strategies and innovations, to enhance both community-level and institutional capacity and foster local private sector development. |

| | Name of Project | Fund | Implementing Agency | Recipient Institution | Approved year | Funding approved (USD millions) | Summary |
|---|--|---------------------------------------|----------------------------|------------------------------|----------------------|--|---|
| 6 | Integrating Climate Change Adaptation into Sustainable Development Pathways of Bangladesh | Least Developed Countries Fund (LDCF) | UNDP | Department of Environment | 2018 | 5.69 | To support Bangladesh in addressing urgent, medium and long-term climate change risks in selected agro-ecological zones. |
| 7 | Promoting Low Carbon Urban Development in Bangladesh | Global Environment Facility (GEF6) | UNDP | | 2018 | 3.77 | To reduce GHG emissions by enabling investments in renewable energy, energy-efficiency, and waste-to-energy applications to support urban development in Bangladesh |
| 8 | Adaptation Initiative for Climate Vulnerable Offshore Small Islands and Riverine Charland in Bangladesh | Adaptation Fund (AF) | UNDP | Department of Environment | 2019 | 10 | The main objective of the project is to enhance the climate resilience of vulnerable communities who live on coastal islands and riverine chars in Bangladesh. |

| | Name of Project | Fund | Implementing Agency | Recipient Institution | Approved year | Funding approved (USD millions) | Summary |
|----------|---|--|----------------------------|------------------------------|----------------------|--|---|
| 9 | Off-Grid Solar PV-Solar Irrigation | Scaling Up Renewable Energy Program (SREP) | ADB | Public sector | 2017 | 22.44 | To support investments on grid connected renewable energy, off-grid solar photovoltaic (PV), and development support for waste to energy. The investment components aim to develop a stable and sustainable power supply that will increase electricity access, enhance energy security, and reduce poverty in the country. |

ANNEX 3: CLIMATE-RELATED DEVELOPMENT ASSISTANCE IN AGRICULTURE (2015 – 2019)

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|--|-------------|-------------------------------------|----------------------|--|---|--|
| Bilateral Development Partners | | | | | | | |
| Canada Global Affairs Canada | Environmental Rehabilitation And Improving Livelihoods In Cox's Bazar | 2018 | \$4,607,867 | Grant | United Nations Development Programme | Fishery education Agricultural development Forestry development | The project aims to secure a safe and healthy environment for the affected host community population in Cox's Bazar in Bangladesh. It aims to do so by: (1) addressing their urgent cooking fuel needs; (2) improving their economic livelihoods and food security; and (3) rehabilitating the natural resource base while preventing further environmental degradation in the region. |
| Denmark DANIDA | Thematic Programme Agriculture, Growth And Employment | 2017 - 2018 | \$25,003,529 | Grant | Government United Nations Development Programme | Agricultural policy and administrative management | Inclusive agricultural growth through better skills, organisation and market access - farmers strengthened at household, organisational and market levels. At least 50% of beneficiaries are women. |
| | Evaluation Of Agricultural Growth And Employment Programme (AGEP) Bangladesh | 2018 | \$307,292 | Grant | Central Government | Agricultural extension | To document the achievements of AGEP, analyse the outcomes and impact and prepare recommendations for the future |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|--|-------------|--|-----------------------------|----------------------------|--------------------------|--|
| Germany BMZ | Food Security Through Poverty Reduction | 2016 | \$42,623 | Grant | Donor country-based NGO | Agricultural education | |
| | Food Security Rural Households Through Promotion Ecologically Sustainable Organic Small-Scale Agriculture, Villages In Mymensingh District, Bangladesh | 2016 | \$70,731 | Grant | Donor country-based NGO | Agricultural development | Food security rural households through promotion ecologically sustainable organic small-scale agriculture, villages in Mymensingh District, Bangladesh |
| | Strengthening The Sustainable Socio-Economic Development Of The Orao Ethnic Group In Rangpur | 2016 | \$170,934 | Grant | Donor country-based NGO | Agricultural development | Strengthening the sustainable socio-economic development of the Orao ethnic group in Rangpur |
| | Promoting Food Security Through Sustainable Agriculture | 2017 | \$604,810 | Grant | Donor country-based NGO | Agricultural services | Promoting Food Security through Sustainable Agriculture |
| | Scaling Up Of Farmer-Led-Approaches For Sustainable Agriculture In Mymensingh | 2017 | \$93,047 | Grant | Donor country-based NGO | Agricultural development | Scaling up of farmer-led-approaches for sustainable agriculture in Mymensingh |
| | Strengthening Food Security And Sustainable Livelihoods For Poor Rural Farming Households In Mymensingh, Bangladesh | 2018 | \$101,815 | Grant | Donor country-based NGO | Agricultural development | Strengthening food security and sustainable livelihoods for poor rural farming households in Mymensingh, Bangladesh |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|--|-------------|--|-----------------------------|----------------------------|---------------------------------|---|
| | Strengthening Food Security Of The Ultra-Poor People In The Char Region Of Northern Bangladesh | 2018 | \$233,373 | Grant | Donor country-based NGO | Agricultural development | Strengthening food security and economic situation of poor people in the char-region in Kurigram district. |
| | Rokkhagola Village Based Sustainable Food Security Programme For The Ethnic Community In Rajshahi. | 2019 | \$142,169 | Grant | Donor country-based NGO | Agricultural development | Development of Rokkhagolas for sustainable food security and livelihood in villages of ethnic minorities in Ghodagari Upazila of Rajshahi District. |
| | Promoting Food Security Through Sustainable Agriculture In The District Jenidah, Continuation | 2019 | \$671,666 | Grant | Donor country-based NGO | Agricultural services | Promoting food security through sustainable agriculture in the district Jenidah, continuation |
| Japan JICA | Small Scale Water Resources Development Project (Phs-2) | 2017 | \$109,226,185 | Debt instrument | Recipient Government | Agricultural water resources | To increase agricultural production |
| Korea KOICA | Korea-Wfp Saemaul Zero Hunger Communities Project | 2015 | \$927,987 | Grant | World Food Programme | Agricultural development | Food for Asset, education for capacity building, asset creation through microfinance. etc. Recipient countries are Nepal, Rwanda, Bangladesh, and Tanzania. |
| | Strategies And Measures For Capacity Building In Rural Development | 2016 | \$9,093 | Grant | Donor Government | Agricultural development | Strategy of rural development and successful project case of rural village development |
| | A Training Workshop On Eco-Friendly Agricultural Technology | 2017-2018 | \$24,475 | Grant | Donor Government | Agricultural education/training | Capacity building for planning and implementing eco-friendly agricultural technology at policy and field levels, to |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|---|-------------|--|-----------------------------|-------------------------------------|---|--|
| | | | | | | | promote global network among participating countries on agricultural sector |
| | WFP Innovative Approach And Evidence Creation For Resilience Building Of Vulnerable People And Strengthening Of Sustainable | 2018 | \$4,302,931 | Grant | World Food Programme | Agricultural financial services | 1) Effective and scalable micro insurance model tested and developed for extremely poor and disaster vulnerable people and 2) Effective and scalable Forecast based Financing (FbF) model tested and developed to strengthen emergency response for the disaster affected people |
| Netherlands Ministry of Foreign Affairs of the Netherlands | Market For Women | 2015 | \$2,518,883 | Grant | International NGO | Agricultural development | Dhaka making markets work for women |
| | Proofs (Markets For The Bop) | 2017 | \$1,887,969 | Grant | Donor country-based NGO | Agricultural development | Farmers will be organised in producer groups, trained in business skills and linked to input and output markets. Private sector actors, end buyers and local companies will be brought in for long term investment and to scale up operations. |
| | Dha: Support Fund For Food Security | 2017-2019 | \$188,362 | Grant | Private sector in recipient country | Agricultural policy and administrative management | Small activities that contribute to the quality of the FNS portfolio in Bangladesh |
| | Food Systems Project Dhaka | 2018 - 2019 | \$12,519,810 | Grant | Food and Agricultural | Agricultural development | The project is focused on the generation of data, tools and approached that will support and enable food system stakeholders (producers and consumers, private and public) |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|--|-------------|--|-----------------------------|--|--------------------------|---|
| | | | | | Organisation | | to improve the performance of food value chains that better meet the needs of consumers in a long-term sustainable manner. |
| | Safe Plus Project | 2018-2019 | \$5,421,482 | Grant | Food and Agricultural Organisation | Agricultural development | The project aimed to provide much needed income to host communities which have been impacted by the social, economic and environmental impact of the influx of the Rohingya refugee population at Cox's Bazar, Bangladesh. |
| Norway | CBMSA - Community Based Management South Asia | 2015 | | Grant | Donor country-based NGO | Agricultural research | Conservation and use of biological diversity in agriculture in Bangladesh. CBMSA project code agreement partner |
| NORAD FK Norway | NOR-Integrated Community Development Program. (ICDP) | 2018-2019 | \$33,742.64 | Grant | Donor country-based NGO | Agricultural development | Community development project with focus on primary health care, income generating skill development, reduced environmental degradation, increased bio-diversity, social justice and gender equality |
| Switzerland SDC | Community-Based Sustainable Management Of Tanguar Haor | 2015 | \$541,662 | Grant | International Union for the Conservation of Nature | Agricultural development | The proposed project is the last fully-fledged phase aiming to consolidate efforts undertaken since 2006 in establishing a sustainable management system in the Ramsar wetland site of Tanguar Haor in Northern Bangladesh. |
| | | 2017 | \$522,891 | Grant | | | |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|---|-------------|--|-----------------------------|---|-----------------------|---|
| United Kingdom DFID | Foundations Call (Global Agriculture And Food Systems) | | | | University, college or other teaching institution, research institute or think-tank | Agricultural research | Collaborative research projects relevant to agriculture and food challenges in developing countries. Projects promote multidisciplinary approaches to address the challenges and develop new or enhanced research capacity and capability. |
| | Household Biomass Ash As A Fertilizer To Sustainability Improve Soil Nutrition To Enhance Rice Yields | 2018 | \$234,060 | Grant | University, college or other teaching institution, research institute or think-tank | Agricultural research | Research grant for assessing the potential of using ash waste, primarily from household cooking fuels, as fertilizer to improve rice yields in Bangladesh. Benefitting subsistence rice farmers in Bangladesh by improving the sustainability of rice yields and reducing costs through recycling of resources. |
| | Development Of Novel Blast Resistant Wheat Varieties For Bangladesh By Genome Editing | 2018 | \$221,601 | Grant | University, college or other teaching institution, research institute or think-tank | Agricultural research | Research Grant-translating knowledge from the rice blast to develop resistance to the wheat blast. The project will result in wheat cultivar improvements, to enhance crop resistance and dramatically reduce yield loss. Main beneficiaries are farmers and population of Bangladesh, together with local researchers. |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|---|-------------|--|-----------------------------|---|---|---|
| | Pathways To Prosperity For Extremely Poor People In Bangladesh- RDEL | 2019 | \$803,981 | Grant | Central Government | Agricultural development | Enable 2 million people to exit extreme poverty and access a sustained pathway to prosperity, while actively promoting public and private provision of the core services required to eradicate extreme poverty. |
| | Household Biomass Ash As A Fertilizer To Sustainability Improve Soil Nutrition To Enhance Rice Yields | 2019 | \$112,394 | Grant | University, college or other teaching institution, research institute or think-tank | Agricultural research | Research grant for assessing the potential of using ash waste, primarily from household cooking fuels, as fertilizer to improve rice yields in Bangladesh. Benefitting subsistence rice farmers in Bangladesh by improving the sustainability of rice yields and reducing costs through recycling of resources. |
| United States USAID | Global Environmental Management Support Ii (Gems Ii) - Program Design And Learning | 2015 | \$27,074 | Grant | Other | Agricultural policy and administrative management | Provide on-demand environmental compliance, management, capacity-building and sound design support to USAID's Environmental Officers, to USAID Missions and other operating units, and to their projects and programs |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|---|-------------|--|-----------------------------|------------------------------------|---|---|
| | Accelerating Development Of Abiotic Stress Tolerant Rice And Wheat - Agricultural Sector Capacity | 2016 | \$477,848 | Grant | Private sector in provider country | Agricultural development | The Accelerating Development of Abiotic Stress Tolerant Rice and Wheat activity supports Arcadia Biosciences Inc. to conduct research in conjunction with the Bangladesh Rice Research Institute (BRRI) on developing saline tolerant rice seed varieties. The goals of the activity are to increase crop productivity; improve national agriculture research capacity; and improve the national climate for the acceptance of the development, management and use of genetically modified crops. |
| | CGIAR Fund Grant With The World Bank. - Agricultural Enabling Environment | 2016 | \$5,749,611 | Grant | CGIAR Fund | Agricultural policy and administrative management | CGIAR research is dedicated to reducing rural poverty, increasing food security, improving human health and nutrition, and ensuring sustainable management of natural resources. It is carried out by 15 Centers, that are members of the CGIAR Consortium, in close collaboration with hundreds of partners, including national and regional research institutes, civil society organizations, academia, development organizations and the private sector. |
| | CGIAR Fund Grant With The World Bank. - Agricultural Sector Capacity | 2016 | \$17,654,382 | | | Agricultural development | |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|--|-------------|--|-----------------------------|------------------------------------|---|---|
| | Global Health Fellows Program Ii (GHFP-Ii) - Administration And Oversight | 2016 | \$6,316 | Grant | Donor country-based NGO | Agricultural policy and administrative management | GHFP-II, led by the Public Health Institute (PHI), helps USAID address its immediate and emerging human capital needs by developing a diverse group of global health professionals to support and sustain the effectiveness of the Agency's current and future health programs. This cadre of global health talent is motivated, technically excellent, well-supported, representative of the diversity of the American people, and committed to contributing to USAID's success in key global health priority areas. |
| | Accelerating Capacity For Monitoring And Evaluation (ACME) - Program Design And Learning | 2016 | \$1,592,828.67 | Grant | Private sector in provider country | Agricultural policy and administrative management | The primary objective of ACME is to develop and implement an M&E system that will enable EG to effectively use performance information in decision making and fulfil its performance monitoring, evaluation, reporting and information dissemination requirements. |
| | Organizational Capacity Development For USAID Local Implementing Partners In Bangladesh - Agricultural Sector Capacity | 2016 | \$1,274,262.94 | Grant | United Nations (UN) agency | Agricultural development | This project will build the capacity of local organizations in the following areas: financial management, procurement procedures, human resources policy, grants management. |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|---|-------------|--|-----------------------------|--|---|---|
| | Food Security Service Center - Program Design And Learning | 2016 | \$68,312.17 | Grant | Private sector in provider country | Agricultural policy and administrative management | The project will provide a broad range of integrated and knowledge-driven technical services to support the \$3.5 billion Feed the Future initiative to combat hunger, reduce poverty and forge long-term solutions to chronic food insecurity and under nutrition. |
| | Accelerating Capacity For Monitoring And Evaluation (ACME) | 2017 | \$637,078.92 | Grant | Private sector in provider country | Agricultural policy and administrative management Agricultural development | The primary objective of ACME is to develop and implement an M&E system that will enable EG to effectively use performance information in decision making and fulfil its performance monitoring, evaluation, reporting and information dissemination requirements. |
| | Organizational Capacity Development For USAID's Local Implementing Partners In Bangladesh | 2017 | \$165,484.38 | Grant | United Nations Office for Project Services | Agricultural development | This project will build the capacity of local organizations in the following areas: financial management, procurement procedures, human resources policy, grants management. |
| | Food Security Service Center | 2017 | \$67,769.70 | Grant | Private sector in provider country | Agricultural policy and administrative management | The project will provide a broad range of integrated and knowledge-driven technical services to support the \$3.5 billion Feed the Future initiative to combat hunger, reduce poverty and forge long-term solutions to chronic food insecurity and under nutrition. |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|---|-------------|--|-----------------------------|------------------------------------|---|---|
| | Consultative Group On International Agricultural Research (CGIAR) Fund Ii Follow-On Grant To The World Bank | 2017 | \$421,606.31 | Grant | CGIAR Fund | Agricultural development Agricultural policy and administrative management | Consultative Group on International Agricultural Research (CGIAR) Fund II follow-on grant to the World Bank |
| | Accelerating Capacity For Monitoring And Evaluation (Acme) | 2018 | \$1,017,851.58 | Grant | Private sector in provider country | Agricultural policy and administrative management | The primary objective of ACME is to develop and implement an M&E system that will enable EG to effectively use performance information in decision making and fulfil its performance monitoring, evaluation, reporting and information dissemination requirements. |
| | USAID Livestock Production For Improved Nutrition Program | 2018 | \$4,750,234 | Grant | Donor country-based NGO | Agricultural policy and administrative management | The ongoing Feed the Future Bangladesh Livestock Production for Improved Nutrition activity will continue its work to strengthen agriculture-nutrition linkages and improve food security within the Feed the Future zone. The activity includes three key components: (1) livestock productivity; (2) access of rural households to hygienic, diverse, quality food; and (3) nutrition awareness and practices. Through these components, the activity will engage with the private sector to increase livestock productivity and to improve |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|---|-------------|--|-----------------------------|----------------------------|---|---|
| | | | | | | | forage/fodder production and livestock management practices. |
| | Rice And Diversified Crops | 2019 | \$5,500,000 | Grant | Donor country-based NGO | Agricultural policy and administrative management | USAID/Bangladesh will fund the new Rice and Diversified Crops activity to improve small holder rice and rotation crop productivity and market system competitiveness. The activity will work through partnerships with the private sector and local actors to strengthen input and seed systems and expand the adoption of improved rice and rotation crop technologies. The activity will also increase market competitiveness by improving value chain efficiencies, access to finance, and post-harvest services. Finally, the activity will incentivize crop diversification with rotational crops such as value-added rice varieties, lentils, mustard, mung beans, sunflowers, and other crops with the overall objective of improved food security through systemic changes that increase rural incomes. |
| | Consultative Group On International Agricultural Research (CGIAR) Fund Ii | 2019 | \$7,107,643 | Grant | World Bank Group (WB) | Agricultural policy and administrative management | Consultative Group on International Agricultural Research (CGIAR) Fund II follow-on grant to the World Bank |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|--|---|-------------|--|-----------------------------|----------------------------|------------------------------|---|
| | Follow-On Grant To The World Bank | | | | | | |
| Multilateral Development Banks (MDBs) | | | | | | | |
| Asian Development Bank | SW Area Integrated Water Resource Planning & Mngt. Proj - Add Fin | 2015 | \$15,526,418 | Debt instrument | Recipient Government | Food crop production | |
| | Ganges Kobadak Irrigation Modernization Project | 2016 | \$234,508 | Grant | Recipient Government | Agricultural water resources | Ganges Kobadak Irrigation Modernization Project |
| | Rural Connectivity Improvement Project | 2019 | \$17,550,000 | Debt instrument | Recipient Government | Agricultural services | The proposed RCIP will improve the road network connecting the rural population to agriculture value chain development zones. Investments will be made to (i) upgrade about 1,700 kilometres (km) of rural roads to all-weather standards in 34 districts located in five divisions; (ii) improve the capacity of the rural infrastructure agency to address institutional constraints relating to rural road development; and (iii) finance enhancements to the country's rural road master plan to enable the selection of priority rural roads for |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|--|-------------|--|-----------------------------|----------------------------|---|---|
| | | | | | | | improvement using a geographic information system covering the entire country |
| World Bank International Development Association | Bangladesh Weather And Climate Services Regional Project | 2016 | \$7,066,533 | Debt instrument | Recipient Government | Agricultural policy and administrative management | |
| | Bangladesh Sustainable Coastal And Marine Fisheries | 2018 | \$199,649,632 | Debt instrument | Recipient Government | Fishery development Fishery services Fishing policy and administrative management | |
| | Sustainable Forests & Livelihoods (SUFAL) Project | 2018 | \$142,430,765 | Debt instrument | Recipient Government | Forestry policy and administrative management | |

| Fund provider & Extending agency | Project Title | Year | Commitment – (adjusted to 2019 USD) | Financial Instrument | Channel of Delivery | Sub-sector | Description |
|---|---|-------------|--|-----------------------------|---|---|--|
| | | | | | | Forestry development Forestry research | |
| Philanthropic organizations | | | | | | | |
| Bill & Melinda Gates Foundation | Evaluation Of Aquaculture In Bangladesh | 2019 | \$2,420,464. | Grant | University, college or other teaching institution, research institute or think-tank | Fishery development | to conduct an evaluation of the WorldFish aquaculture project 'Aquaculture: increasing income, diversifying diets, and empowering women in Bangladesh |
| | Transforming Rice Breeding In Bangladesh: Institutional Capacity Building | 2019 | \$3,999,920 | Grant | Recipient Government | Agricultural research | to sustainably increase the rate of genetic gain delivered in smallholder farmers' fields, in the form of nutritious, resilient, and market-preferred varieties, by the Bangladesh Rice Research Institute |
| Margaret A. Cargill Foundation | Prepared And Resilient (Par) | 2018 | \$243,012 | Grant | Donor country-based NGO | Agricultural development Agricultural financial services | Prepared and Resilient (PAR) |

ANNEX 4: ACCESS MODALITIES OF PROPOSED FUNDS

Annex 4.1: Green Climate Fund (GCF)

| Green Climate Fund (GCF) | |
|---------------------------------|--|
| Eligibility criteria | <p>Accredited entities to the GCF are eligible for support and has direct access to the fund. There are two types of GCF Accredited Entities based on access modalities: Direct Access Entities and International Access Entities. Direct Access Entities (DAE) are sub-national, national or regional organizations that need to be nominated by the NDAs or focal points. Any national organization can apply to be accredited, but they must demonstrate robust fiduciary, transparency and safeguarding standards.</p> <p>The process of accreditation is also quite lengthy and complex. However, they may be eligible to receive GCF readiness support to assist the process. International Access Entities can include United Nations agencies, multilateral development banks, international financial institutions and regional institutions. International Access Entities do not need to be nominated by developing country NDAs / focal points.</p> |
| Funding conditions | <p>GCF offers a flexible combination of grant, concessional debt, guarantees or equity instruments to leverage blended finance and crowd-in private investment for climate action in developing countries. This flexibility enables the Fund to pilot new financial structures to support green market creation. Co-financing is not mandatory and the fund can cover 100 percent of a project's costs. However it is strongly encouraged, during the assessment of the potential efficiency and effectiveness of a project proposal, the GCF does consider the amount of co-financing available.</p> <p>GCF funds in a country are channeled through the Accredited Entities or DAEs. Accredited Entities serve as the key agents in GCF's funding proposal cycle. They are responsible for presenting funding applications to GCF as well as overseeing, supervising, managing and monitoring the overall GCF-approved projects and programmes in a country. Accredited Entities do need necessarily need to act as direct implementers of funding</p> |

| Green Climate Fund (GCF) | |
|---------------------------------|--|
| | <p>proposals. Organizations in the country can become Executing Entities and implement projects on behalf of Accredited Entities by channeling funds and carrying out the funded activities. Accredited Entities however have an important role to play in the supervision of a project and act as the interface with the NDA as well as GCF.</p> <p>GCF also applies the following six (6) investment criteria⁵¹ when funding projects:</p> <ul style="list-style-type: none"> • Impact potential - Potential of the programme/project to contribute to the achievement of the fund’s objective and result areas, i.e. transformational change • Paradigm shift potential - Degree to which the proposed activity can catalyze impact beyond a one-off project or programme investment • Sustainable Development potential - Wider benefits and priorities, including environmental, social and economic co-benefits as well as gender-sensitive development impact • Responsive to recipient needs - Vulnerability and financing needs of the beneficiary country and population in the targeted group • Promote country ownership - Beneficiary country ownership of and capacity to implement a funded project or programme (policies, climate strategies and institutions) • Efficiency and Effectiveness - Economic and, if appropriate, financial soundness of the programme/project, and for mitigation specific programmes/projects, cost-effectiveness and co-financing |
| Focus sectors | The GCF finances activities to both enable and support adaptation, mitigation, technology development and transfer, capacity-building and the preparation of national reports. The GCF’s main impact areas are: ⁵² |

⁵¹ Green Climate Fund (GCF). (2014). Investment Framework. Available at: <https://www.greenclimate.fund/sites/default/files/document/gcf-b07-06.pdf>

⁵² Green Climate Fund (GCF). (2020). Updated Strategic Plan for the Green Climate Fund: 2020-2023.

| Green Climate Fund (GCF) | |
|---|---|
| | <ul style="list-style-type: none"> • Low-emission energy access and power generation • Low-emission transport • Energy efficient buildings, cities and industries • Sustainable land use and forest management • Enhanced livelihoods of the most vulnerable people, communities, and regions • Increase health and well-being, and food and water security • Resilient infrastructure • Resilient ecosystems. |
| Application Procedure (Step-by-Step) | <p>GCF has several different funding windows, with slightly different access modalities. Here, the general application procedure for availing project funding has been presented. There are a number of steps associated with the submission and appraisal of funding proposals. An interested organization willing to become an Executing Entity in Bangladesh needs to first get in touch with one of the Accredited Entities in the country. Then the following cycle is usually applied⁵³:</p> <p><i>1. Concept note submission (optional)</i></p> <ul style="list-style-type: none"> • Accredited Entities can choose to submit a concept note using the Concept Note template available on the GCF website, to the GCF Secretariat outlining basic information about a project or programme - they must do so after informing the NDA or focal point about its submission • GCF Secretariat reviews the concept note and provides preliminary feedback on whether their proposal aligns with the Fund's objectives and mandate. • If a concept note is approved, an invitation is issued to submit a complete funding proposal |

⁵³ Economic Relations Division. (2021). Applying to the Green Climate Fund from Bangladesh. Government of Bangladesh. Available at: http://nda.erd.gov.bd/files/1/Publications/NDA%20Publications/Giz_Leaflet%203.pdf

Green Climate Fund (GCF)

GCF website has a [Concept Note User's Guide](#) which provides guidance on how to develop a concept note. Concept notes for some small-scale projects that meet eligibility criteria may also be considered for the Simplified Approval Process (SAP) and can be submitted using the [SAP Concept Note template](#).

2. Full proposal submission

- Accredited Entities submit funding proposals to GCF in consultation with the NDA or focal point of a country. The [Funding Proposal Template](#) provides details on what information is required as well as guidance on how to develop the proposal.
- Funding proposals that are submitted to GCF undergo a rigorous review process and a decision is made by the GCF board whether or not to support the project.
- Funding proposals must include an Impact Assessment to ensure the project meets the Environmental and Social Standards (ESS), including gender, of the GCF. This requires extensive consultation with those who would be affected by the project, and must be published 120 days before the Board decision for category A (high risk) projects and 30 days for category B (medium risk) projects.
- To ensure country ownership, the Accredited Entity is required to submit a [no objection letter](#) issued and signed by the NDA of the relevant country associated with the funding proposal. The no objection letter should be submitted within 30 days of the proposal itself, but can be separate from the proposal.
- Upon submission, the GCF Secretariat carries out a receipt and completeness check by assessing the submitted funding proposal and the technical specifications alongside the documents that need to accompany it. At this stage, the GCF Secretariat may reach out to the Accredited Entity for additional information and provide guidance on how to strengthen the application for a more detailed review

Green Climate Fund (GCF)

3. Funding proposal assessment by GCF

- Following the initial completeness check, the GCF Secretariat undertakes a more detailed assessment of the project proposal, including assessing how the project aligns with the six [GCF Investment Criteria](#). The Secretariat also assesses compliance with GCF policies, including, but not limited to fiduciary standards, risk management, environment and social Standards (ESS), monitoring and evaluation criteria, gender policy and legal standards
- Once the proposal has passed the initial review stage, the GCF Secretariat forwards its assessment, along with the submitted proposal and supporting documents, to the Independent Technical Advisory Panel (ITAP).
- The Independent Technical Advisory Panel (ITAP) at GCF, composed of six international experts: three from developing countries and three from developed countries, assesses the funding proposals against the six GCF investment criteria.
- ITAP may provide conditions and recommendations to the funding proposal at its discretion - at this point, Accredited Entities may be requested by the ITAP to provide clarifications, while liaising with the GCF Secretariat.

4. Decision and approval from the Board

- Following review and assessment by the GCF Secretariat and the ITAP, the funding proposal package is submitted to the GCF Board.
- The package consists of the funding proposal, supporting documents, a no objection letter signed by the NDA, and summary of assessments made by the GCF Secretariat and ITAP.
- Based on the GCF Secretariat and ITAP assessments, Accredited Entities may be requested to

Green Climate Fund (GCF)

provide additional clarification about their funding proposal

- The proposal is put forward to the GCF Board and is brought up for discussion at a Board Meeting – which generally occurs three times a year – where the proposal is considered and unanimous decision is required
- The GCF Board can then choose one of three possible decisions:
 - Approve funding
 - Approve funding with the conditions and recommendations that modifications are made to funding proposal
 - Reject the funding proposal
- Once a funding proposal is approved by the GCF Board the GCF Secretariat negotiates with the Accredited Entity in order to sign a Funded Activity Agreement (FAA) which lays the groundwork for the implementation phase of the project or programme

Annex 4.2: Least Developed Countries' Fund (LDCF)

| Least Developed Countries Fund (LDCF) | |
|--|---|
| Eligibility criteria | Government entities, NGOs and CBOs in Bangladesh are all eligible to apply for funding from LDCF, but they must do so in partnership with an Implementing Agency of the GEF. GEF Agencies operational in Bangladesh include ADB, World Bank, FAO, UNDP, UNEP and UNIDO. Before project proposal submission, applicants are required to secure an endorsement from the country's GEF Operational Point in the based at the MoEFCC. |
| Funding conditions | LDCF funding is provided in the form of grants. LDCF primarily aims to finance the full cost of adaptation for NAPA projects. This means, that resources from LDCF should only be channeled towards supporting any additional cost that is incurred for facilitating adaptation components on top of Business-as-Usual (BAU) development. BAU refers to activities that would be implemented in the absence of climate change as part of economic development. LDCF expects that BAU components of a proposed project will be co-financed by the implementing entities. Since adaptation and development are closely interlinked, this principle aims to help catalyze adaptation-specific investments in the context of larger development interventions. Despite the 'additional cost' principle, standalone projects can also be funded by LDCF as long as they are exclusively targeted at adaptation, and are not linked to BAU development. |
| Focus sectors | LDCF focuses on reducing climate vulnerability in areas that are considered vital for development and livelihoods, and this includes the following key sectors: <ul style="list-style-type: none"> • Agriculture and food security • Water • Health • Disaster risk management and prevention |

| Least Developed Countries Fund (LDCF) | |
|--|---|
| | <ul style="list-style-type: none"> • Infrastructure • Fragile ecosystems <p>In addition, a key priority of LDCF is to support projects that respond to priority areas outlined in a country's NAPA. For Bangladesh, these are: i) food security; ii) energy security; iii) water security; and iv) livelihood security</p> |
| Application Procedure (Step-by-Step) | <p>Projects financed by LDCF can be broadly classified into two categories, wherein projects over USD 2 million are referred to as Full-Sized Projects (FSP), and those of USD 2 million or below are referred to as Medium-Sized Projects (MSP). The application process for MSPs is slightly more streamlined than the former. The application steps are provided below⁵⁴:</p> <p><i>For FSPs:</i></p> <ol style="list-style-type: none"> 1. Government entity, NGO or CBO interested in becoming a project proponent pursues a partnership with one of the GEF Partner Agencies operating in Bangladesh 2. The proponent develops a project concept note aligned with NAPA priorities of Bangladesh in collaboration with the GEF agency 3. Endorsement letter from the GEF Operational Focal Point in Bangladesh is secured 4. The project concept is captured in the Project Identification Form (PIF) of LDCF and submitted to the GEF Secretariat 5. The proponent may also submit a request for a Project Preparation Grant at this stage if desired 6. The PIF is initially reviewed by the GEF Secretariat against the following broad categories of criteria: <ul style="list-style-type: none"> • Adaptation benefit and additional cost argument |

⁵⁴ GEF. (2011). Accessing Resources Under the Least Developed Countries Fund. Available at: https://www.thegef.org/sites/default/files/publications/23469_LDCF_1.pdf

Least Developed Countries Fund (LDCF)

- Alignment with NAPA priorities
 - Implementation setup and non-duplication
 - Indicative budget and co-financing
7. If the PIF is deemed to have met the necessary preconditions of LDCF funding, it is forwarded to the LDCF Council within 10 business days for further review – if not, the project may either be rejected at this stage or returned to the proponents for further revisions
 8. Once a PIF is recommended by the GEF Secretariat, the LDCF council has 4 weeks to review the PIF and grant approval
 9. After a PIF has been approved by the Council, the project proponent and the GEF agency works together to develop a detailed Full Project Document (FPD) – a Project Preparation Grant (PPG) may be provided to support the process, funding for which is released following approval of PIF
 10. Preparation of the FPD is expected to be completed as soon as possible, and no later than 18 months from PIF approval date
 11. Once the FPD is developed, it is submitted to the GEF Secretariat who has 10 business days to undertake a technical review and recommend to the Council
 12. The project is then subject to final approval by the GEF Council and the GEF CEO – disbursement and implementation soon follow

For MSPs

Proponents applying for MSPs may follow the same steps as above. But they have a maximum of 12 months for the preparation and submission of the Full Project Document (FPD) following the approval of a PIF and PPG. In case of MSPs, the process can also be more simplified wherein the project proponent can straight away submit a FPD to the GEF Secretariat without having to go through the initially PIF review and approval process.

Annex 4.3: International Fund for Agricultural Development (IFAD)

| International Fund for Agricultural Development (IFAD) – Adaptation for Smallholder Agriculture Program (ASAP) | |
|---|--|
| Eligibility criteria | <p>IFAD developing Member States, which include Bangladesh, are eligible for funding support from ASAP.</p> <p>Organizations are not eligible to directly apply for or access funds from IFAD or the ASAP window. Rather, IFAD works in partnership with Recipient Country Governments who can influence and approve project proposals via the “Country Strategic Opportunities Programme” ensuring that IFAD operations aligned with government priorities. Government ministries and agencies in a country are therefore the main implementing entities of IFAD / ASAP programme. Research organizations, centers of excellence involved in rural poverty reduction, NGOs, and private sector and civil society organizations can also become implementing partners. To deliver its interventions, IFAD partners with national extension services, a range of national and international research institutes, as well as communities and Farmers’ Organizations (FOs), including women’s groups.</p> |
| Funding conditions | <p>ASAP provides only grant financing via two types of grants – i) Global and regional grants (driven by thematic and regional corporate-level strategic priorities); ii) Grants for activities implemented in specific countries (focus on strengthening institutional, implementation and policy capacities and on innovating in thematic areas).</p> <p>ASAP operates slightly differently to other funds as ASAP grants are joined with IFAD baseline investments which are implemented by government entities. The programming of ASAP funds follows the IFAD project design cycle and is fully aligned with regular IFAD procedures and safeguards. Therefore, ASAP does not employ specific application procedures like other funds (such as issuing calls for proposals) that can be accessed by NGOs or CSOs directly. Results-Based Country Strategic Opportunities Programmes (RB-COSOPs), which are jointly developed with governments, are a typical point of departure for an ASAP investment, highlighting climate change adaptation as a strategic decision for IFAD operations in a specific country.</p> |

International Fund for Agricultural Development (IFAD) – Adaptation for Smallholder Agriculture Program (ASAP)

| | |
|---|--|
| | |
| Focus sectors | <p>The activities supported in ASAP1 and ASAP 2 include:</p> <ul style="list-style-type: none"> • Policy engagement: “supporting agricultural institutions in IFAD Member States seeking to achieve international climate change commitments and national adaptation priorities • Climate risk assessment: facilitating the systematic use of climate risk information when planning investments to increase resilience • Women’s empowerment: increasing the participation of women in, and their benefits from, climate-change adaptation activities • Private-sector engagement: strengthening the participation of the private sector and farmer groups in climate change adaptation and mitigation activities • Climate services: enhancing the use of climate information for when planning investments to increase resilience • Natural resource management and governance: strengthening the participation and ownership of smallholder farmers in decision-making processes and improving technologies for the governance and management of climate-sensitive natural resources • Knowledge management: enhancing the documentation and dissemination of knowledge on approaches to climate-resilient agriculture”. |
| Application Procedure (Step-by-Step) | <p>ASAP applies the same procedures as regular IFAD investments, following the typical IFAD design cycle which consists of the following steps:</p> <ol style="list-style-type: none"> 1. Project concept: Projects concepts are created as part of the COSOP or through consultation between |

International Fund for Agricultural Development (IFAD) – Adaptation for Smallholder Agriculture Program (ASAP)

IFAD, governments and national stakeholders. They are reviewed by an Operational Strategy and Policy Guidance Committee (OSC).

2. **Detailed project design and quality enhancement:** A Project Design Report (PDR) is created and improved through a Quality enhancement (QE) process, which involves field missions and interactions with local partners and stakeholders. The QE process involves a final review by a QE panel.
3. **Executive Board review:** Every ASAP investment design is subject to review and clearance by the IFAD Executive Board, which meets three times per year.
4. **Negotiation and approval:** After the IFAD Executive Board has approved the financing, negotiations conclude between IFAD and the other parties involved in the project financing and a financing agreement is signed.
5. **Implementation:** Once the specific conditions above set by IFAD are met, the grant is declared effective and implementation begins.

Annex 4.4: Asian Development Bank (ADB)

| Asian Development Fund (ADF) | |
|-------------------------------------|--|
| Eligibility criteria | Funding is primarily channeled through relevant government agencies as well as other multilateral institutions, and is typically done in alignment with ADB's Country Partnership Strategy (CPS) as well as the Country Operations Business Plan (COBP) for a particular DMC. |
| Funding conditions | <p>The ADB's concessional assistance policy guides the allocation of concessional resources including ADF grants. Thus, the ADF falls under the ADB's performance-based allocation system in order to allocate concessional resources in a way that is fair, effective and needs-driven</p> <p><i>Climate Change Fund</i></p> <p>The fund provides financing through: grant component of investments, technical assistance (stand-alone and piggy-back or linked to loan), and direct charge. It has three components: (i) adaptation, (ii) clean energy development, and (iii) reduced emissions from deforestation and forest degradation, and improved land use management (REDD+ and land use).</p> <p>The following types of activities may qualify for the fund's support:</p> <ul style="list-style-type: none"> • Preparation of relevant strategies or action plans for DMCs • Investment in climate change mitigation or adaptation measures • Development of knowledge products and services related to climate change • Facilitating knowledge management activities, including regional conferences and workshops • Funding to off-set ADB's corporate carbon footprint |

Asian Development Fund (ADB)

Focus sectors

Climate Change Fund (CCF)

CCF has sector focus on four key areas:

- Clean energy, sustainable transportation and low-carbon urban development
- Reduced emissions from deforestation and land degradation, and improved land management
- Adaptation
- Climate finance readiness

Urban Climate Change Resilience Trust Fund (UCCRTF)

Sector focus areas include:

- Infrastructure development
- Policies and institutional interventions
- Knowledge development and capacity building
- Networking

Urban Environmental Infrastructure Fund (UEIF)

The UEIF prioritizes the following:

- Climate change mitigation and adaptation

| Asian Development Fund (ADB) | |
|---|--|
| | <ul style="list-style-type: none"> • Urban environmental transportation services • Urban environmental water and wastewater services • Urban environmental waste management • Urban heating and cooling services • Urban renewal |
| Application Procedure (Step-by-Step) | <p>There is no standard form of application for ADB assistance. Amongst other criteria, the ADB would require a project description, feasibility study, project ownership and project implementation arrangements, cost estimations and a risk analysis. NGOs cannot apply themselves, but can be involved in project implementation. The ADB has a pro-active approach towards NGOs, particularly regarding projects in vulnerable contexts.</p> <p><i>Climate Change Fund (CCF)</i></p> <p>To access the Climate Change Fund, the following steps are applied:</p> <ol style="list-style-type: none"> 1. Project proposals are submitted by ADB user departments to the Climate Change Steering Committee through the fund secretariat. 2. Project proposals are reviewed by the working groups (i.e., Adaptation and Land Use Working Group and Clean Energy Working Group) who provide the recommendations on the applications for the fund allocation to the CCSC 3. The CCSC approves the fund allocations to projects. 4. Applications are reviewed in six batches and are due on 31 January, 31 March, 31 May, 31 July, 30 September, and 30 November 5. Direct charge applications are reviewed on ongoing basis. |

Annex 4.5: United States Agency for International Development (USAID)

| United States Agency for International Development (USAID) | |
|---|---|
| Eligibility criteria | Government and non-government institutions can both apply. USAID typically posts RFP on their websites, and interested entities can get in the country mission with an interest to apply. In addition, proponents may also make unsolicited proposal submissions. |
| Funding conditions | <p>USAID provides financial assistance both grants and concessional loans.</p> <p>Funding from USAID is allocated through Acquisition and Assistance (A&A) mechanisms and are awarded through a competitive process. To solicit support for its programs, USAID typically issues a Request for Proposals (RFP) for contract, whereby it purchases technical assistance services, goods, products, or other services from a responsible party to implement a project as directed by the Agency. USAID also issues a Notice of Funding Opportunities (NOFO) for cooperative agreements and grants.</p> <p>In case of grant provision, USAID has little to no involvement in project delivery, whereas in cooperative agreements, the Agency remains substantially engaged throughout the project cycle. Contract opportunities are posted on SAM.gov. Grants and cooperative agreements are posted on Grants.gov. USAID has also set up the New Partnerships Initiative (NPI), whereby a more diverse range of partners and organizations can work with them, provide more entry points for organizations to USAID also have a variety of other grant and partnership programs.</p> <p>USAID also accepts unsolicited proposals and applications from organizations on unique, innovative or proprietary approaches for solutions to development challenges. Unsolicited proposals and applications can be received by USAID on a continuous basis for review. However, funding for USAID programs is concentrated and focused on clear objectives within program priorities and funding for unsolicited applications is limited. To ensure unsolicited applications are awarded, they must i) clearly demonstrate a unique, innovative, or proprietary program; ii) represent</p> |

| United States Agency for International Development (USAID) | |
|---|--|
| | an appropriate use of USAID funds to support or stimulate a public purpose; and iii) fit within an existing Development Objective. Even then, these are likely to be approved for funding only in highly exceptional cases. |
| Focus sectors | <p>USAID’s global strategy on climate change focuses on the following key issues:⁵⁵</p> <ul style="list-style-type: none"> • Energy: Supporting the transition to renewable energy and improving energy efficiency to reduce emissions and improve energy access. • Forests: Reducing emissions by combating deforestation and improving conservation and management of carbon-rich forests and landscapes. • Safety: Helping communities and countries better prepare for, respond to, and recover from climate-related disasters. • Food: Strengthening global food and nutrition security by advancing climate-smart agriculture and increased resilience to droughts, rising temperatures, and changing rainfall patterns. • Water: Helping people and economies deliver climate-resilient drinking water and sanitation, and manage water resources to cope with growing scarcity. And protecting our oceans by limiting climate impacts and addressing other critical threats, like ocean plastic pollution. • Air: Reducing greenhouse gas emissions and air pollutants which in turn improves public health, reduces poverty and inequality, and lessens climate change impacts. <p>USAID’s work in Bangladesh mainly encompasses the following sectors and thematic areas:</p> <ul style="list-style-type: none"> • Agriculture and Food Security • Democracy, Human Rights, and Governance • Education |

⁵⁵ <https://www.usaid.gov/climate-change>

United States Agency for International Development (USAID)

- Food, Disaster and Humanitarian Assistance
- Environment, Energy, Climate Resilience
- Gender Equality and Women's Empowerment
- Health and Nutrition

Application Procedure (Step-by-Step)

USAID programs and projects are typically designed in alignment with a Country Development Cooperation Strategy (CDCS), based on which an acquisition and assistance (A&A) plan is developed. The following steps are usually applied by USAID to disburse its interventions.

1. **Project design:** To understand challenges and the resources available to address them, USAID Missions develop an overarching [Country Development Cooperation Strategy](#) (CDCS) with substantial input from partner governments and from industry, civil society, and development partners. From the CDCS, we design projects and activities to create an Acquisition and Assistance (A&A) plan.
2. **Activity requirement:** USAID defines the expected results for distinct activities, which may be funded through an A&A award. Organizations interested in working with us submit a proposal in response to a solicitation that describes the program and explains how USAID will make its decision.
3. **Market research:** USAID conducts market research to explore different ways to achieve our development objectives and to gather information about local capacity, the participation of small business, and the feasibility of our anticipated requirements. One way we do this is through a **Request for Information (RFI)**.
4. **Solicitation:** Solicitations describe the requirement or program and explain how USAID will evaluate submissions. They can take different forms, such as a Request for Proposal (RFP), a Notice of Funding

United States Agency for International Development (USAID)

Opportunity (NOFO), an Annual Program Statement (APS), or a Broad Agency Announcement (BAA). You can find them through:

5. **Evaluation:** In each solicitation, USAID provides the criteria it will use to make an award decision (including technical and cost/price factors) and specifies each factor's relative importance. As a part of the technical proposal review, typical evaluation criteria include the following:
 - a. Past performance (does not have to be USAID past performance).
 - b. Technical approach.
 - c. Personnel.
 - d. Corporate capability.
 - e. Management plans.
6. **Negotiation:** Your organization may be contacted by a Contracting or Agreement Officer (CO/AO) if your proposal or application is being considered for an award. The CO/AO will be your organization's key point of contact for doing business with USAID. If USAID wants to negotiate with your organization before deciding whether to grant you an award, your organization should learn about our policies, which will be a part of the contract or assistance award.
7. **Award:** Once these steps are completed, USAID will make the award to the selected organization. In most cases, the organization will be invited to a post-award conference to discuss the project and review the terms and conditions of the award. In addition, throughout the implementation period, the organization may contact the Contracting or Agreement Officer's Representative (COR/AOR) designated in the award for technical guidance. All matters concerning the award itself must be directed to the Contracting or Agreement Officer.

United States Agency for International Development (USAID)

Unsolicited proposals are also accepted on a rolling basis. Typically proposals submitted should contain the following:

- **Basic Information** – This includes contact information of the offeror and other general information about a submission (date, submitted by etc.)
- **Technical Information** – This comprises of a detailed elaboration of the proposed effort including targeted objectives, methodology and anticipated results and outcomes
- **Supporting Information** – This includes proposed budget, duration and other organizational information

USAID encourages organizations to submit unsolicited applications in the form of a concept paper for initial consideration as opposed to a more lengthy detailed application. An unsolicited application concept paper should not exceed 5 pages and should contain a summarized version of the major proposal contents.

Annex 4.6: Small Grants Programme (SGP) – Global Environment Facility (GEF)

| Small Grants Programme (SGP) – Global Environment Facility (GEF) | |
|---|---|
| Eligibility criteria | Community-based organizations (CBOs), non-governmental organizations (NGOs) and grassroots organizations working closely with local, vulnerable communities in a participating country are eligible for the direct receipt of SGP grants. For projects to be considered as eligible, they must respond to one of the six (6) focal areas under GEF. |
| Funding conditions | <p>The SGP provides a maximum grant amount of USD 50,000 per project, but typically the amount averages around USD 25,000.</p> <p>In contrast to the complexity posed by most global funding facilities in accessing their resources, the SGP focuses on simplified procedures and access modalities to enable local communities to receive the funding support they need. The programme acknowledges the need to support capacity development of potential grantees to facilitate their access to funding and often provides a small grant for the proposal design and preparation phase. The programme also offers flexibility by accepting different proposal formats where applicable, such as videos, photo stories etc. instead of traditional written proposals.</p> |
| Focus sectors | <p>The SGP targets six (6) focus areas which are:</p> <ul style="list-style-type: none"> • Biodiversity • Climate change • Land degradation • Sustainable forest management • International waters • Chemicals. |
| Application | SGP typically issues Calls for Proposal (CFP) on a periodic basis. To apply for the SGP, the following steps have been |

Small Grants Programme (SGP) – Global Environment Facility (GEF)

Procedure (Step-by-Step)

outlined by the GEF:

1. A national CBO or NGO interested to become a project proponent, liaises with SGP National Coordinator to acquire project application guidelines and forms
2. The proponent develops a brief concept note document on the envisioned project with support from the National Coordinator
3. The concept note is submitted to the National Coordinator for review
4. The concept note is reviewed and pre-screened by the National Coordinator against the GEF SGP criteria and other criteria delineated in the Country Programme Strategy (CPS)
5. Once the project is deemed eligible by the National Coordinator, the proponent develops a full project proposal; proponents may receive planning grant to support the proposal development process
6. Completed project proposals are submitted by the National Coordinator to the National Steering Committee (NSC)
7. Proposals are either accepted, rejected, or reverted to the proponent with feedback for further refinement
8. Approved proposals become part of the national SGP work programme
9. Once approved, SGP grants are usually paid in three instalments: an up-front payment during the initial stage; a mid-term payment upon receipt of a satisfactory progress report; and a final payment on receipt of a satisfactory project completion and final report.

Annex 4.7: Local Climate Adaptive Living Facility (LoCAL) – UN Capital Development Fund (UNCDF)

| Local Climate Adaptive Living Facility (LoCAL) – UN Capital Development Fund (UNCDF) | |
|---|--|
| Eligibility criteria | For each country, LoCAL develops a menu of eligible investments based on climate change context and as well as local governance structures and appropriateness. For Bangladesh, investments supported by PBCRG must align with the thematic areas listed in the BCCSAP. Local governments in Bangladesh, specifically the Upazila Parishad (sub-district) are eligible for accessing PBCRG. |
| Funding conditions | <p>Minimum conditions for funding relate to the status of public financial management and good governance in targeted local government entities. Qualitative and variable measures are applied to appraise performance. The measures are used to adjust the level of funds made available to local governments when they have complied with the minimum conditions.</p> <p>LoCAL grants are disbursed as part of a local government’s regular budget envelope and can thus finance the adaptation element of larger investments, allowing for holistic responses to climate change. The funds provide an incentive for local governments to integrate adaptation and climate-proof local development. In addition, by tracking small funds allocated at the local level, LoCAL helps improve transparency.</p> |
| Focus sectors | <p>The LoCAL programme in Bangladesh has so far mobilized PBCRGs for investments across the following key sectors:</p> <ul style="list-style-type: none"> • Agriculture • Forestry • Water and sanitation • Energy |

Local Climate Adaptive Living Facility (LoCAL) – UN Capital Development Fund (UNCDF)

- Construction
- General environmental protection
- Reconstruction relief and rehabilitation
- Government and civil society engagement
- Other social and infrastructure services

While standalone agricultural projects account for 8.45% of total investments, projects in the other sectors have indirectly contributed towards facilitating adaptation in the agricultural sector.

Application Procedure (Step-by-Step)

Local governments in Bangladesh can get in touch with UNDCF LoCAL Country Coordinator to access the portfolio of PBCRG grants in the country. Once designed, delivering PBCRG grants typically involves these key steps:

1. Climate information and vulnerability and adaptation assessments are reviewed or undertaken to inform the process. Needs and capacities are assessed.
2. In a participatory manner, local governments develop local adaptation plans or programmes, integrate adaptation in their own local development planning and budgeting processes, and cost and select adaptation measures to be financed through the grant
3. Grants are disbursed to support implementation of LoCAL investments in the context of local authorities' annual planning and budgeting cycles, and selected measures are implemented
4. Performance is appraised in terms of the degree to which additional resources have been used to build resilience and promote adaptation to climate change
5. Audits are undertaken as part of the regular national process. The assessment results inform subsequent allocations, and the process provides an opportunity for capacity building

Annex 4.8: Bangladesh Climate Change Trust Fund (BCCTF)

| Bangladesh Climate Change Trust Fund (BCCTF) | |
|---|--|
| Eligibility criteria | Government ministries, divisions and departments in Bangladesh can directly apply for funding. NGOs, research organizations, universities and the private sector are also eligible for receiving funding, but they must partner with a relevant government ministry or division who will serve as the lead implementing agency. In addition, the fund also operates a small window dedicated for NGO funding under the supervision of the Palli Karma Sahayak Foundation (PKSF). Formulation and submission of projects can be done both individually and collectively, however only up to a maximum of three (3) implementing agencies are allowed per project. |
| Funding conditions | <p>Proposed projects must align with one or more of the 44 programmes underscored within the six thematic areas of the BCCSAP. Specific climate change risks and vulnerabilities addressed by the project must be explicitly defined in the proposal.</p> <p>Funds may support the implementation of a new project, but can also be channelled to finance adaptation and mitigation components of an existing development project. Duplication of ongoing and existing initiatives must be avoided. Usage of funds for the recruitment of new human resources is discouraged, and it is suggested that project implementation is carried out by existing workforce within an organization. In certain cases, consultants may be hired, but hiring of foreign consultants is prohibited.</p> <p>The total funding value permissible per project is limited to BDT 250 million (approx. USD 3 million), and the maximum duration of a proposed project should be three (3) years. Extension may be approved by the Board of Trustees in exceptional cases.</p> |
| Focus sectors | BCCTF supports implementation of projects that are in line with the 44 programmes categorized within the six (6) |

Bangladesh Climate Change Trust Fund (BCCTF)

| | |
|---|---|
| | <p>thematic areas of the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) which are as follows:</p> <ol style="list-style-type: none">1. Food security, social protection and health2. Comprehensive disaster management3. Infrastructure4. Research and knowledge management5. Mitigation and low-carbon development6. Capacity building and institutional strengthening |
| Application Procedure (Step-by-Step) | <p>To access funding from the BCCTF, the following steps are to be applied⁵⁶:</p> <ol style="list-style-type: none">1. Organizations interested in accessing funding from BCCTF must first realize a project idea that aligns with the action programmes and thematic areas outlined in the BCCSAP2. Subsequently, the organization (government departments and divisions, NGOs, private sector entities) needs to identify the relevant line ministry to act as the lead implementing agency – NGOs can also liaise and partner with PKSF as the lead partners.3. Once a partnership is formed, applicants need to formulate and develop a project idea against the Project Proposal Template accessible on the BCCTF website4. The Project Proposal needs to include the following key components:<ol style="list-style-type: none">a. Project duration and geographic coverageb. Rationale and objectivesc. Clear elaboration of climate risks and vulnerability addressed by the projectd. Proposed activities and their modalities of deliver |

⁵⁶ MoEF (2012). CCTF Project Management Guideline. Available at:

[http://www.bcct.gov.bd/sites/default/files/files/bcct.portal.gov.bd/common_document/3e2cf775_c7d1_489e_8c02_169c5055ca0e/PP%20\(1\).pdf](http://www.bcct.gov.bd/sites/default/files/files/bcct.portal.gov.bd/common_document/3e2cf775_c7d1_489e_8c02_169c5055ca0e/PP%20(1).pdf)

Bangladesh Climate Change Trust Fund (BCCTF)

- e. Year-wise and activity-wise breakdown of budget
 - f. Human resources and procurement plan
 - g. Impact of the project on poverty alleviation and socioeconomic empowerment of women and children, as applicable
 - h. Logical framework and a robust monitoring and evaluation (M&E) plan with clear indicators and means of verification, for successfully tracking project progress towards planned outputs and outcomes
5. Proposals must be prepared in Bangla – if they are in English, they must be accompanied by a translated version
 6. Prior to submission, a no-objection certificate will need to be acquired from the lead Line Ministry
 7. Once the project proposal is fully prepared with all relevant sections and supplementary documents included, the applicant may submit the complete proposal package through the participating Line Ministry / Department to the Climate Change Unit (CCU) of the MoEFCC
 8. Submission must be at least four (4) months prior to the proposed start date
 9. Following submission of the project proposal, a technical committee formed under the MoEFCC reviews the proposal and if deemed acceptable, it is forwarded to the Board of Trustees for their approval
 10. Once approved, an administrative approval order for the project is issued by the CCU – MoEFCC
 11. The line ministry then appoints a Project Director and sets up a Project Implementation Unit (PIU) for overseeing delivery over the project and ensuring targets are met
 12. To ensure smooth implementation of the project, a Project Implementation Committee (PIC) headed by the head/project director of the implementing agency and a steering committee headed by the secretary of the concerned administrative ministry may be formed
 13. Once approved, project activities must commence within 30 days of receiving approval order

Annex 4.9: Bangladesh Climate Change Trust Fund (BCCTF)

| Public Private Partnership Authority (PPP Authority) – Government of Bangladesh | |
|--|---|
| Eligibility criteria | <p>Government ministries and departments interested in delivering a public service infrastructure intervention can seek the assistance of the PPP Authority to identify suitable and relevant private sector entities to support the implementation of the intervention. Private sector entities may also do the same to partner with the public sector agency.</p> <p>In addition, private sector investors can submit unsolicited proposals for the delivery of a PPP project. However to ensure transparency, unsolicited proposals are also subject to an open and competitive procurement process.</p> |
| Funding conditions | <p>Private sector entities interested in executing public service infrastructure projects need to typically go through a single or two-stage procurement process, depending on the case. In the two-stage process, a Request for Qualification (RFQ) is first issued to interested investors. An inter-ministerial committee evaluates the qualification submissions to select the pre-qualified bidders. This is followed by issuing a Request for Proposal (RFP) to the pre-qualified bidders. The same inter-ministerial committee will complete the evaluation to recommend the preferred bidder.</p> <p>Once a partnership is formed, catalytic funds established by the Authority such as the PPPTAF and VGF can be leveraged to facilitate the implementation of said PPP project.</p> |
| Focus sectors | <p>The Policy and Strategy for Public-Private Partnership lists the following sectors for PPP mobilization in line with national development objectives:</p> <ul style="list-style-type: none"> • Roads and highways • Mass-transit • Railways |

Public Private Partnership Authority (PPP Authority) – Government of Bangladesh

| | |
|--|---|
| | <ul style="list-style-type: none"> • Ports • Airports • Electricity • Tourism • Irrigation and agricultural services • Industrial estates • Water supply and distribution • Wastewater management • Waste management • Information and communications technology • Land reclamation and dredging • Oil and gas downstream production • Mineral resources • Health • Education • Public facilities, social infrastructure and other social services • Other urban, municipal and rural projects that the Government views as priority areas for development |
| <p>Application Procedure (Step-by-Step)</p> | <p>To encourage private investor participation and innovation in PPP projects, government has permitted the submission of unsolicited proposals for the delivery of PPP projects. However, to ensure openness and transparency unsolicited proposals are also subject to an open and competitive procurement process.</p> <p>The process of making an unsolicited proposal submission typically entails the following steps:⁵⁷</p> |

⁵⁷ http://www.pppo.gov.bd/download/ppp_office/Guidelines-for-Unsolicited-Proposals-2018.pdf

Public Private Partnership Authority (PPP Authority) – Government of Bangladesh

1. The Original Proponent shall submit the Unsolicited Proposal to the Contracting Authority for review and consideration with a copy to the Applicable Line Ministry and the PPP Authority
2. The Contracting Authority may engage in discussions with the Original Proponent in order to clarify the scope of the Unsolicited Proposal and to provide guidance on the criteria that need to be met
3. If the Contracting Authority concludes that further information is required to complete its determination, then it shall inform the Original Proponent accordingly and request the submission of further information within a specified time
4. If after reviewing and assessing the Unsolicited Proposal, the determination is positive, the Contracting Authority shall put forward a formal submission along with its recommendations, if any, to the PPP Authority for processing of the Unsolicited Proposal, along with a copy to the Applicable Line Ministry
5. Where the Contracting Authority determines that the Unsolicited Proposal is not acceptable, then it shall inform the Original Proponent in writing of its conclusion with a copy to the Applicable Line Ministry and the PPP Authority
6. On receipt of the formal submission from the Contracting Authority, the PPP Authority shall assess whether or not the Unsolicited Proposal complies with the minimum information requirements set out in Article 6 above. If the PPP Authority assesses that the requirements of Article 6 have been met, then it shall inform its decision in writing to the Applicable Line Ministry and the Contracting Authority.
7. If the PPP Authority assesses that the requirements of Article 6 have not been met, then it may request the submission of further information, or reject the Unsolicited Proposal from further consideration and shall inform its decision in writing to the Applicable Line Ministry and the Contracting Authority. Based on the

Public Private Partnership Authority (PPP Authority) – Government of Bangladesh

PPP Authority's response, the Contracting Authority may request the Original Proponent for further information or may inform the Original Proponent that the Unsolicited Proposal has been rejected from further consideration. The PPP Authority may also engage in discussions with the Original Proponent in order to clarify the scope of the Unsolicited Proposal and to provide guidance on the criteria that need to be met

8. Following receipt of the PPP Authority's concurrence, the Applicable Line Ministry shall submit the proposed Project to the Approving Authority for In-Principle Approval. In its submission for In-Principle Approval it should also seek approval confirming the status of the Original Proponent as the Unsolicited Bidder on the basis of the Unsolicited Proposal and seek confirmation on the mode of competitive bidding that shall be applied to test the competitiveness of the Unsolicited Proposal.

REFERENCES

1. Ahmed, A.U., S. Haq, M. Nasreen, and A.W. Raghieb Hassan. 2015. Sectoral Inputs towards the Formulation of Seventh Five Year Plan (2016-2020): Climate Change and Disaster Management.
2. Allison, E.H., Perry, A.L., Badjeck, M.C., Neil Adger, W., Brown, K., Conway, D., Halls, A.S., Pilling, G.M., Reynolds, J.D., Andrew, N.L. & Dulvy, N.K. (2009). Vulnerability of national economies to the impacts of climate change on fisheries. *Fish and Fisheries*. 10(2), 173-196
3. Amin, M., Zhang, J., & Yang, M. (2015). Effects of climate change on the yield and cropping area of major food crops: A case of Bangladesh. *Sustainability*, 7(1), 898-915
4. Bangladesh Bank. (2020). Sustainable Finance Policy. Government of Bangladesh. Available at: <https://www.bb.org.bd/mediaroom/circulars/gbcrd/dec312020sfd05.pdf>
5. Brammer, H. (1990). Floods in Bangladesh: Geographical Background to the 1987 and 1988 Floods. *The Geographical Journal* 156 (1):12-22.
6. Economic Relations Division. (2021). Applying to the Green Climate Fund from Bangladesh. Government of Bangladesh. Available at: http://nda.erd.gov.bd/files/1/Publications/NDA%20Publications/Giz_Leaflet%203.pdf
7. FAO, F. (2017). The future of food and agriculture—Trends and challenges. Annual Report, 296
8. GEF. (2011). Accessing Resources Under the Least Developed Countries Fund. Available at: https://www.thegef.org/sites/default/files/publications/23469_LDCF_1.pdf
9. GEF. (2018). Report on the Seventh Replenishment of the GEF Trust Fund. Available at: https://www.thegef.org/sites/default/files/council-meeting-documents/GEF.A6.05.Rev_.01_Replenishment.pdf
10. GEF. (2021). Bangladesh: Country-At-A-Glance. URL: <https://www.thegef.org/country/bangladesh>. Last accessed on 07 July 2021
11. GEF. (2021). Financing Adaptation to Climate Change at the Global Environment Facility (GEF). Available at: https://www.thegef.org/sites/default/files/publications/GEF_Adaptation%20Bifold_2021_r2.pdf
12. GEF. (2021). The GEF Small Grants Programme. URL: <https://sgp.undp.org/>. Last accessed on 09 July 2021
13. General Economics Division (GED) (2009). Policy Study on the Probable Impacts of Climate Change on Poverty and Economic Growth and the Options of Coping with Adverse Effect of Climate Change in Bangladesh.
14. General Economics Division (GED). (2018). National Action Plan of Ministries/Divisions by Targets for the Implementation of SDGS. Government of Bangladesh.
15. Government of Bangladesh. (2010). Bangladesh: Strategic Program for Climate Resilience (SPCR). Available at: <https://www.climateinvestmentfunds.org/sites/default/files/PPCR%205%20SPCR%20Bangladesh%20nov2010.pdf>

16. Government of Bangladesh. (2010). THE CLIMATE CHANGE TRUST ACT, 2010 ACT NO. LVII OF 2010.
17. Green Climate Fund (2021). URL: <https://www.greenclimate.fund/>. Retrieved on 14 July 2021
18. Green Climate Fund (GCF). (2014). Investment Framework. Available at: <https://www.greenclimate.fund/sites/default/files/document/gcf-b07-06.pdf>
19. Green Climate Fund (GCF). (2020). Project Preparation Facility (PPF) Guidelines.
20. Green Climate Fund (GCF). (2020). Updated Strategic Plan for the Green Climate Fund: 2020-2023.
21. Green Climate Fund (GCF). (2021). Country Profile: Bangladesh. Available at: <https://www.greenclimate.fund/countries/bangladesh>
22. Green Climate Fund (GCF). (2021). GCF at a Glance. URL: <https://www.greenclimate.fund>. Retrieved on 12 July 2021
23. Green Climate Fund (GCF). (2021). GCF in Brief: About the Fund. Available at: https://www.greenclimate.fund/sites/default/files/document/gcf-brief-about-fund_0.pdf
24. Hammill, A., Matthew, R., & McCarter, E. (2008). Microfinance and climate change adaptation. IDS Bulletin
25. Hossain, R. (2021). First ever Green Bond in Bangladesh approved for Sajida Foundation. Sajida Foundation. URL: <https://sajidafoundation.org/first-ever-green-bond-in-bangladesh-approved-for-sajida-foundation/>. Retrieved on 12 July 2021
26. Houghton, J. T. (2001). Climate Change 2001: The Scientific Basis.
27. Intergovernmental Panel on Climate Change (IPCC). (2014). AR5 synthesis report: Climate change 2014.
28. Islam, M. A., Shitangsu, P. K., & Hassan, M. Z. (2015). Agricultural vulnerability in Bangladesh to climate change induced sea level rise and options for adaptation: a study of a coastal Upazila. Journal of Agriculture and Environment for International Development (JAEID)
29. Lázár, A. N., Clarke, D., Adams, H., Akanda, A. R., Szabo, S., Nicholls, R. J., & Moslehuddin, A. Z. M. (2015). Agricultural livelihoods in coastal Bangladesh under climate and environmental change—A model framework. Environmental Science: Processes & Impacts, 17(6), 1018-1031.
30. Ministry of Finance. (2013). National Sustainable Development Strategy (NSDS) 2010-2021. Government of Bangladesh.
31. Ministry of Finance. (2019). Climate Financing For Sustainable Development: Budget Report (2019-2020). Government of Bangladesh.
32. Ministry of Finance. (2020). Bangladesh Climate Fiscal Framework. Government of Bangladesh.
33. MoEF (2012). CCTF Project Management Guideline. Available at: [http://www.bcct.gov.bd/sites/default/files/files/bcct.portal.gov.bd/common_document/3e2cf775_c7d1_489e_8c02_169c5055ca0e/PP%20\(1\).pdf](http://www.bcct.gov.bd/sites/default/files/files/bcct.portal.gov.bd/common_document/3e2cf775_c7d1_489e_8c02_169c5055ca0e/PP%20(1).pdf)
34. MoEF. (2005). National adaptation programme of action (NAPA). Government of Bangladesh.
35. MoEF. (2009). Bangladesh Climate Change Strategy and Action Plan (BCCSAP). Government of Bangladesh

36. MOEF. (2015). Intended Nationally Determined Contributions (INDC). Government of Bangladesh.
37. MoEF. (2017). Bangladesh Country Investment Plan For Environment, Forestry And Climate Change (2016 – 2021).
38. MoEFCC (2018). Roadmap and Action Plan for Implementing Bangladesh NDC. Government of Bangladesh.
39. MoEFCC. (2020). Nationally Determined Contributions 2020 (Interim). Government of Bangladesh.
40. Public Private Partnership Authority. (2021). The PPP Technical Assistance Fund. Government of Bangladesh. Available at: <https://www.pppo.gov.bd/ppptaf.php>
41. Saini, S., Giriraj, A. (2020). INNOVATIVE INDEX-BASED AGRICULTURE INSURANCE: WHERE HOPE MEETS POSSIBILITY. CCAFS. URL: <https://ccafs.cgiar.org/news/innovative-index-based-agriculture-insurance-where-hope-meets-possibility>. Retrieved on 12 July 2021
42. Shovon, F. (2020), Cyclone Amphan: 1, 76,007-hectare agricultural land affected. Dhaka Tribune.
43. Soanes, M, Shakya, C, Walnycki, A and Greene, S. 2019. Money where it matters: designing funds for the frontier. IIED Issue Paper. IIED, London.
44. SREDA. (2015). Scaling Up Renewable Energy in Low Income Countries (SREP). Government of Bangladesh. Available at: https://www.climateinvestmentfunds.org/sites/default/files/meeting-documents/bangladesh_srep_ip_final.pdf
45. Steel, P., Islam, T. (2012). The Bangladesh Climate Public Expenditure and Institutional Review (CPEIR). UNDP.
46. UNCDF. (2019). Experiences with Performance-Based Climate Resilience Grants, 2018. Available at: <https://www.uncdf.org/article/4685/experiences-with-performance-based-climate-resilience-grants-2018>
47. United Nations (UN). (2021). Least Developed Countries Fund (LDCF). URL: <https://www.un.org/ldcportal/least-developed-countries-fund-ldcf/>. Last accessed at: 07 July 2021
48. United Nations Framework Convention on Climate Change (2020). LDC Work Programme of 2001 as updated in 2018. URL: <https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans-naps/ldc-portal/ldc-work-programme-of-2001-as-updated-in-2018>. Retrieved 14 July 2021
49. Wassmann, R., Jagadish, S.V.K., Sumfleth, K., Pathak, H., Howell, G., Ismail, A., Serraj, R., Redona, E., Singh, R. K., & Heuer, S. (2009). Regional vulnerability of climate change impacts on Asian rice production and scope for adaptation. In: Sparks, D.L. ed. *Advances in Agronomy*. Burlington, MA: Academic Press. 102, 91-133