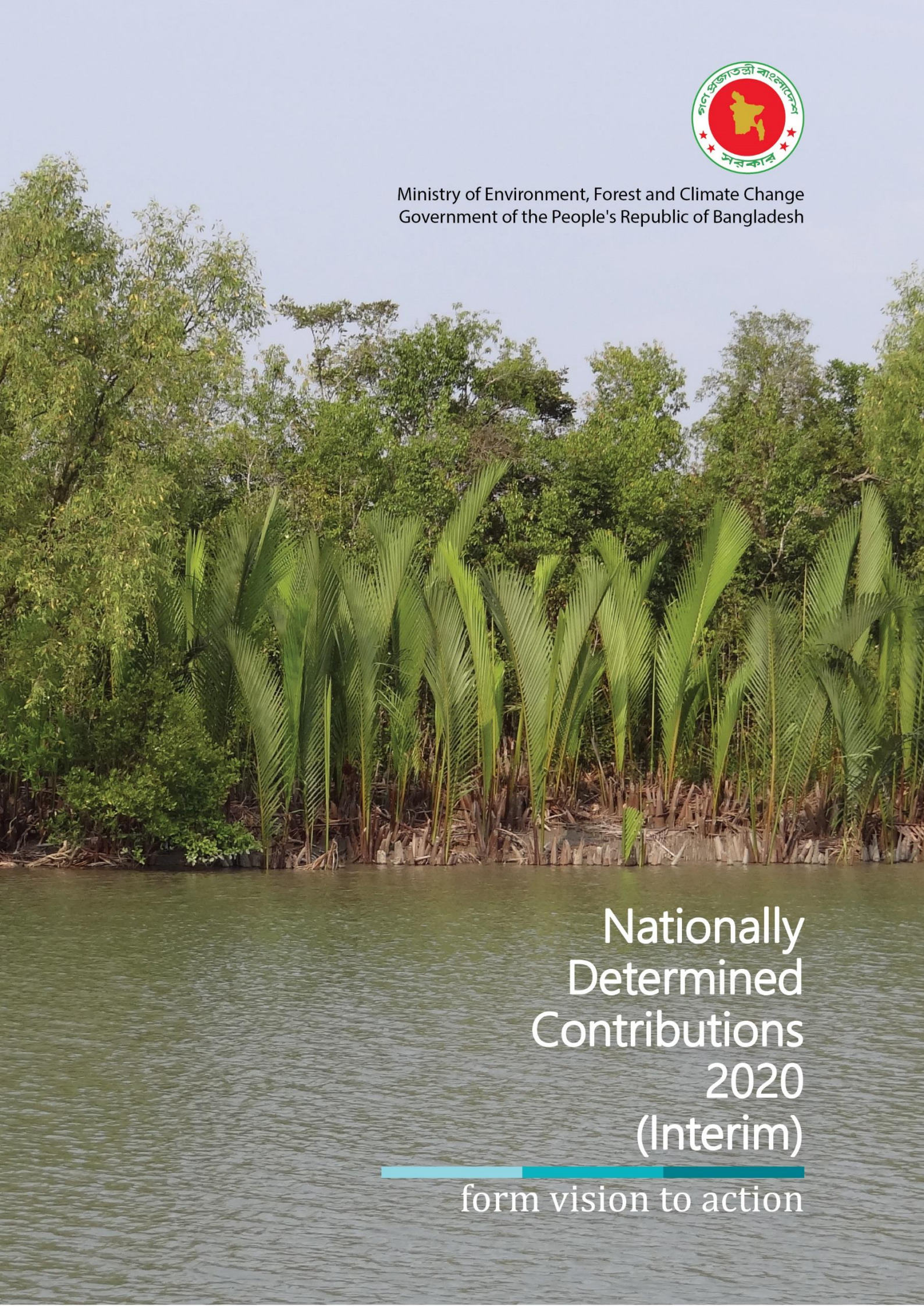

Ministry of Environment, Forest and Climate Change
Government of the People's Republic of Bangladesh

Nationally Determined Contributions 2020 (Interim)

form vision to action

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1. Introduction

This document presents an interim NDC update which will be further updated following the UNFCCC guidelines under the Paris Agreement. Bangladesh submitted its Intended Nationally Determined Contribution (INDC) to UNFCCC on 25 September 2015 with an ambitious GHG reduction target of 15% from a Business as Usual (BAU) level by 2030. Of this 5% reduction was targeted as unconditional and 10% was as conditional, i.e. contingent upon technical and financial support from the global community.

Bangladesh has always been highly susceptible to climate change and climate induced disasters due to its unique geographical setting and as such, among the two basic approaches to tackling climate change i.e. adaptation and mitigation, the focus for Bangladesh primarily lies in adaptation. However, despite being a highly climate vulnerable country, whilst contributing less than 0.35% of global emissions, Bangladesh wants to actively play its part in the global collective action to reduce future GHG emissions.

The interim NDC aims to further strengthen mitigation actions that Bangladesh may take to tackle its growing emissions and to play its role in global efforts to limit temperature rise to 2 degrees or preferably 1.5 degrees celsius above pre-industrial levels. With respect to Bangladesh's contribution to global efforts to counter climate change, the NDC calls for a number of mitigation actions that will help limit the country's GHG emissions. These mitigation actions will play a key role in realizing the move to a low-carbon, climate-resilient economy and to becoming a middle-income country whilst ensuring that it will not cross the average per capita emissions of the developing countries.

2. Recent Landmark Initiatives

The Government has prepared some key strategic policy documents to introduce more harmony into development planning process in Bangladesh. Approaches taken by the present government consists of an intricate blending of adaptation and mitigation based schemes. A set of relevant national plans and policies have already been prepared to assist the activities related to climate change actions. The landmark initiatives among them have been summarized below:

Mujib Climate Prosperity Plan up to 2030

Bangladesh has assumed the presidency of the 48-nation Climate Vulnerable Forum (CVF) and the Vulnerable Twenty (V20) Group of Finance Ministers. Honorable Prime Minister of Bangladesh H.E. Sheikh Hasina is serving as Chair of the CVF since June 2020. As Chair of the CVF, Honorable Prime Minister has launched a program in October 2020 to develop "Mujib Climate Prosperity Plan" for Bangladesh. The Plan, which will be the first of CVF plans, will be a strategic investment framework to mobilize financing, especially through international cooperation, for implementing renewable energy and climate resilience initiatives. The Plan is currently being formulated and is expected to be launched in March 2021 on the occasion of the centennial birth anniversary of the Father of the Nation, Bangabandhu Sheikh Mujibur Rahman.

National Solar Energy Roadmap, 2021-2041

The National Solar Energy Roadmap, 2021 - 2041 has been drafted to frame of a long-term vision for the nation and to set achievable capacity targets for the country's solar energy initiative as well as outlining the broader strategies required to achieve those targets. On the basis of three implementation scenarios, the Roadmap delineates a few general as well as specific and time-bound measures to achieve that target by the year 2041.

National Action Plan for Clean Cooking, 2020-2030

Bangladesh's Country Action Plan for Clean Cook Stoves 2013 (CAP 2013) focused predominantly on the removal of existing financing barriers by enabling access to capital by Small and Medium-sized Enterprises (SMEs), promoting access to climate funds, leveraging government funds to finance women-led businesses in the sector and lobbying for additional financing options from international donors at low rates. About 4.5 million improved cook stoves have been distributed already. Following its success, a new National Action Plan for Clean Cooking in Bangladesh (2020-2030) is currently being formulated.

Forest and Carbon Inventories

Bangladesh Forest Department conducted National Forest Inventory (NFI) during 2016-2019 to identify the status of forest and tree resources, carbon and biomass stock, dependency of local people on trees and forests and the ecology. Government estimated the carbon emission for Agriculture, Forestry and Other Land Use (AFOLU) sector to develop the Forest Reference Level (FRL) and submitted to the UNFCCC. To reduce the carbon emission from forestry sector, Bangladesh formulated Bangladesh National REDD+ Strategy (BNRS) and established a National Forest Monitoring System (NFMS) for periodical monitoring of tree and forest cover.

Bangladesh National Action Plan (NAP) for Reducing Short Lived Climate Pollutants (SLCPs)

The NAP-SLCPs were formulated as a direct realization of the importance of SLCPs, which led 6 countries, including Bangladesh, and the UNEP to form the Climate and Clean Air Coalition (CCAC) in February 2012 to reduce SLCPs. The expected objectives are to identify and implement the most cost-effective measures for large-scale implementation of SLCP mitigation measures. Eleven priority mitigation measures were included in Bangladesh's National SLCP Plan, six of which target major black carbon sources, and five of which target major methane sources. The full implementation of the National SLCP Plan is expected to reduce black carbon emissions by 40% and methane emission by 17% in 2030 compared to a business as usual scenarios.

Energy Efficiency and Conservation Master Plan up to 2030

Under this comprehensive plan, the government aims to lower energy intensity (national primary energy consumption per unit of GDP) in 2030 by 20% compared to the 2013 level: A total of 95 million toe (113 billion m^3 of gas equivalent) is expected to be saved during the period.

Clean Development Mechanism (CDM)/Carbon Trading

CDM potential in Bangladesh is low as the major source of energy and power generation in Bangladesh is predominately natural gas. However, Bangladesh has a modest CDM project portfolio having a significant potential to reduce emission from selected registered CDM projects, especially from natural gas leakage from transmission lines, solar home system, energy efficient brick kilns and improved cook stoves program.

Monitoring and Reducing Air Pollution

The government of Bangladesh issued a comprehensive guidelines or directives for relevant government and non-government entities with a view to controlling and reducing air pollution from

their respective activities particularly pollution from brick kilns, construction activities, vehicles, open biomass burning, industry and others. In order to address air pollution issues comprehensively, a 'Clean Air Act, 2020' has been finalized and awaiting approval.

Renewable Energy Initiatives

Bangladesh has taken up a number of initiatives to enhance the best utilization of renewable energy. One such initiative is the preparation of Renewable Energy Policy that mandates at least 10% of the total power generation to be from renewable energy sources. The intention is not only to reduce the greenhouse gas emissions, but also to ensure energy security for the nation. In this program, the private sector has been identified and emphasised as a vital partner.

Solar irrigation systems are being installed in different parts of the country. The Government has extended a re-financing scheme to finance alternative energy generation projects like small scale solar and micro grids, to improve energy access for those living in off- grid areas.

Promoting Green Technology

Bangladesh Bank established a refinance scheme for supporting environment friendly technology such as solar energy, bio-gas plants, and Effluent Treatment Plants (ETP). The initial schemes focused on only 10 products, which has increased to 50 products under 11 categories: renewable energy, energy efficiency, solid waste management, liquid waste management, alternative energy, fire burnt brick, non-fire block brick, recycling and recyclable product, ensuring safety in work environment of factories, etc. Moreover, as of now, 39 banks and 19 financial institutions have signed a participation agreement with Bangladesh Bank to avail finance from this scheme.

3. Mitigation Action

Bangladesh already aimed for an unconditional reduction of GHG emissions by 5% from Business as Usual (BAU) levels by 2030 equivalent to 12 $MtCO_2e$ in the power, transport and industry sectors. In the unconditional part of NDC, only those mitigation measures were considered which would be implemented on the basis of current local level capacity, and financed through internal resources. Contingent upon international funding and technological support, the country targeted to reduce GHG emissions in the same sectors up to 36 $MtCO_2e$ by 2030 or 15% below BAU emissions.

The mitigation scenario analysis and assessment of achievable but ambitious unconditional and conditional GHG mitigation measures by 2030 is under preparation. Enabling latest sectoral policies and guidelines along with approved projects in pipeline that are in place to support the implementation of mitigation measures are included in the unconditional part.

Within the timeframe after Paris agreement, Bangladesh has been progressing actively in mitigation related action. This has been further strengthened through the preparation of the NDC implementation Road Map. The Bangladesh National Action Plan (NAP) for Reducing SLCPs also prepared some action plans for reducing GHG emissions from SLCPs. Within 2030, some of these actions will be implemented.

Achievements

Power Sector

The Government of Bangladesh is already taking action to develop a low carbon power generation system. Bangladesh has installed around 5.8 million solar-home systems (SHSs) across the country, meaning that almost 18 million beneficiaries are getting solar electricity which is around 11% of the total population of Bangladesh. More than 4.5 million improved cook stoves (ICS) have already been distributed to rural household in order to reduce emissions from biomass burning. Around 60.6 MW

of solar has been installed on the vacant roof-tops of Government and private buildings. Nearly 1969 solar irrigation systems have been installed in different parts of the country. The Government has extended a re-financing scheme to finance alternative energy generation projects like small scale solar and micro grids, to improve energy access for those living in off-grid areas.

Transport Sector

The transport sector in Bangladesh may contribute to GHG emissions reductions in a number of ways. These can be grouped according to the 'Avoid-Shift-Improve' framework through reducing the demand and need for transport; encouraging people to switch to lower-emitting modes of transport; and improving increasing fuel and vehicle efficiency.

The Government of Bangladesh expects the transport sector to meet its unconditional GHG reduction target (9% below 'business-as-usual' emissions in 2030) through existing and planned measures to modernize the transport network and encourage greater efficiency of travel. With the implementation of some major projects in the transport sector, the contribution to emission reduction will be significant, especially implementation of several Mass Rapid Transit (MRT) and Bus Rapid Transit (BRT) in Capital Dhaka City as well as significant qualitative improvement of railway transport through introduction of energy efficient modern locomotives and expansion of rail networks. The recent implementation of the Padma Bridge will further reduce traffic congestion and emission from transport sector.

Industry Sector

The Energy Efficiency and Conservation Master Plan (EECMP), Bangladesh aims to achieve a reduction in primary energy consumption per GDP for all sectors by 15% and 21% within 2021 and 2030 respectively. It will be important for industries in Bangladesh to play a key role in this as it accounts for about 50% of national primary energy consumption. Industries in Bangladesh are massively adopting mitigation through various actions like LEED certification for green buildings, energy efficiency in lighting through introducing CFL/ LED lamps, implementing more energy efficient technology use in fertilizer and cement factories etc. Bangladesh is leading in LEED certification of commercial buildings having 95 platinum, more than 200 gold rated buildings. 7 out of the top 10 world best LEED certified factories are in Bangladesh.

Planned Actions

The government has set a target of generating 1700 MW from Utility scale solar plants and 250 MW from solar home system by 2030. Additionally, government is repowering old steam turbines to increase efficiency. Through the six registered CDM projects, approximately 118 $MtCO_2e$ will be reduced by 2030. Six million additional improved cook stoves are expected to be distributed in Bangladesh. Commercial buildings in Bangladesh have a 25% potential to reduce the GHG emission through the planned activities.

The major cities generate substantial amount of solid waste (of which 75% is bio-degradable) and they have the potential to reduce the waste by converting it to energy. Already two city corporations adopted the incineration technology to reduce waste and other two city corporation will also follow them and around 100 municipalities will establish bio-gas plant to reduce emission. These initiatives are gaining momentum and some of them will be implemented over the next few years. Bangladesh

has already ratified the Kigali Amendment and by phasing out HCFCs and HFCs, around 2.4 million tons of GHG emission will be reduced by 2030.

In transport sector, 10000 hybrid and electric vehicles are planned to be introduced, introduction of broad gauge and electric locomotives, introducing good quality fuel and Euro III and IV engines, completing all highways with four lanes, withdrawal of 86,000 unfit vehicles from the roads and introducing Lithium-ion battery in all motor cycles and cars are planned.

4. Adaptation Action

As already stated earlier, mitigation and adaptation often coexist together and quite a few adaptation actions do have mitigation co-benefits. Bangladesh Government is currently in the process of formulating the National Adaptation Plan. The NAP will be the main strategic document under the UNFCCC process including GCF in the future to implement adaptation actions in developing countries like Bangladesh. However, in its formulation such co-benefits will be identified so that the synergy between the two can fully achieved. As all such activities need to be financed and proper incentives need to be provided, the government has formulated and operationalized a Climate Fiscal Framework (CFF), providing principles and tools for climate fiscal policy-making (CFP).

The Forest Investment Plan (FIP, 2017-2022) has been developed to identify the future investment opportunities to increase the forest cover, reducing the deforestation and forest degradation, improving the livelihoods of the forest dependent people through the implementation of participatory/social forestry.

The Bangladesh Climate Change Trust Fund (BCCTF) has undertaken 789 projects with investment of 443 million USD to implement strategic actions of the prepared Bangladesh Climate Change Strategy and Action Plan in 2009. Further, the BCCSAP is in final stages of being updated now to make it more appropriate in keeping with advancement in science, technology and knowledge since its first formulation. Sector Action Plan on Environment and Climate Change has been adopted to include and mainstream the climate change adaptation into the development planning and implementation process through Annual Development Programme (ADP), where green growth development strategy envisaged as immediate action.

The Government has recently adopted the Bangladesh Delta Plan 2100, a comprehensive 100-year strategic plan aimed at attenuation of gradual sustainable development through adaptive delta management process.

5. An Enhanced NDC 2020

Bangladesh has decided on stocktaking of the mitigation measures already implemented between 2015 and 2020. Sectoral policy and guidelines are being rigorously reviewed and updated to assess and identify the plausible mitigation actions in both the unconditional and conditional contribution which will be reflected in updated NDC. Recommendations to update, amend or any policy reform necessary to enable sectors to deliver the GHG reduction mitigation target and goals are being formulated.

This updated NDC will be built on the theme of the Bangladesh Climate Change Strategy and Action Plan of emission mitigation and low carbon development and call for concentrated efforts to fulfill mitigation goals for low carbon growth while working with the global community to establish a fair and equitable post-Kyoto framework for developing countries. Bangladesh Delta Plan 2100 reaffirms Bangladesh's commitment to reducing greenhouse gas emissions from key sectors through efforts like promoting improved rice parboiling system to reduce carbon emissions and ensure energy efficiency, research on suitability of various tree species for their carbon-locking properties for designing various forestry programs as well as promoting low carbon development in waste sector.

Article 4, para 9 of the Paris Agreement calls for enhanced ambitions every five years. Adhering to that spirit for global action, and given the various necessary policies and measures undertaken over the last few years and some of them already bearing fruits, the government is expecting to enhance both unconditional and conditional contribution in the updated NDC. The exact proportions of the both conditional and unconditional will depend on three inviolate principles of maintaining a minimum 8% rate of growth, complete eradication of poverty by 2030, and food and nutrition security for all citizens. Furthermore, Bangladesh would need to put in place a workable MRV system to maintain transparency and verification of its efforts and outcomes. A fuller analysis of mitigation actions and more definitive targets based on thorough understanding of barriers and challenges may be provided and communicated to UNFCCC during the coming months.