

**Tripartite National Conference on Green Jobs: the way forward
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CLIMATE CHANGE IMPACT ON EMPLOYMENT AND LABOUR MARKET

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OUTLINE OF THE PRESENTATION

- ❑ Brief overview of impact of climate change on Bangladesh
- ❑ Bangladesh governments response to climate change
- ❑ Impact of climate change on employment and labour market in Bangladesh such as
 - Job loss and job gains
 - Loss of livelihoods
 - Displacements and migration
- ❑ Current measures relating to adaptation and mitigation
- ❑ Prospects for promotion of climate change relevant green jobs in Bangladesh
- ❑ Gap/ constraints
- ❑ Way forward

BRIEF OVERVIEW ON IMPACT OF CLIMATE CHANGE IN BANGLADESH

BANGLADESH: COUNTRY CONTEXT AND VULNERABILITY

RECOGNIZED GLOBALLY AS MOST VULNERABLE TO CLIMATE CHANGE

- ❑ Deltaic landscape, 80% floodplain
- ❑ Population density very high (1045/km²)
- ❑ High level of Poverty (less than \$1 a day 29%, less than \$2 a day 84%)
- ❑ Disaster prone, people are exposed to hazards
- ❑ Natural resources based (predominantly agrarian) economy

CLIMATE CHANGE IMPACT: OBSERVED IN BANGLADESH

- ❑ Temperature extremes
- ❑ Erratic rainfall
- ❑ Increased number of severe flood
 - ❑ 45 m people are exposed to severe and moderate flood
- ❑ Increased frequency of cyclone and salinity intrusion
- ❑ More river bank and coastal erosion
- ❑ Population Vulnerable to Impact of Climate Change
 - ❑ Barind Tract: Drought
 - 5.038 million people under threat
 - ❑ Haor Basin: Flash Flood
 - 20 million population

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BANGLADESH

❑ Population Vulnerable to Impact of Climate Change

❑ Coastal Zone: SLR, Cyclone, Salinity

35.8 million (28% of total population), among these

- ⇒ 72 offshore islands with an area of 4200 km² and over 3 million people are extremely vulnerable
- ⇒ About 18 percent households of the Sundarban impact zone are dependent on Sundarban resources (shrimp fry collectors, honey collectors, golpata collectors, shell/crab collectors and medicinal plant collectors).
- ⇒ Around 0.5 million household's (family members 2.7 million) primary income source is fishing (losing working days because of rough weather in the Bay).

Over 160,000 coastal fishermen and estimated 185,000 shrimp fry collector are involved in marine fisheries.

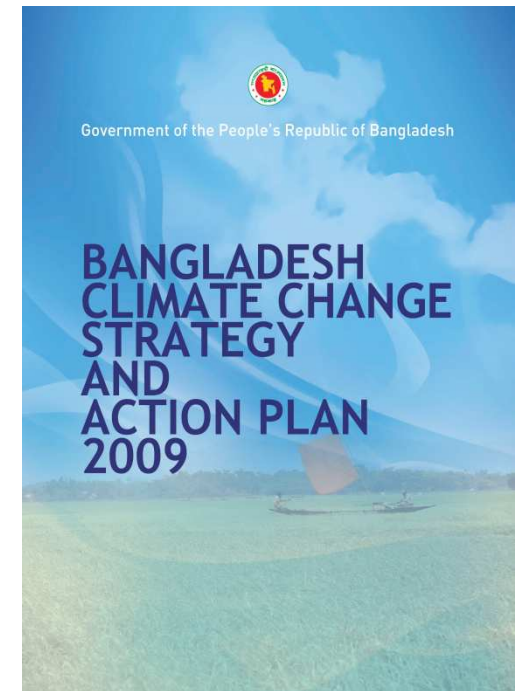
NATIONAL RESPONSES TO COMBAT THE IMPACT OF CC

- ❑ Bangladesh is active to address climate change issues
- ❑ Climate change cell (CCC) was established in the year 2004 under the Department of Environment
- ❑ CCC has been working for climate change mainstreaming, capacity building, knowledge management, modeling, awareness building and adaptation research. So far cell published 40 publications.
- ❑ Bangladesh already submitted initial national communication to the UNFCCC in the year 2002 and expected to submit its second national communication in November, 2011.
- ❑ NAPA prepared in 2005 and updated in 2009. NAPA 2009 indentified 45 programmes of action.
- ❑ Bangladesh Climate Change Strategy and Action Plan (BCCSAP) first prepared in 2008, modified and approved by the Government in 2009 with wide consultation with Government and non government sector, community based organization, development partners, experts, academia etc.
- ❑ BCCSAP – 2009 is a one of the first landmark document among the developing countries.

BCCSAP 2009

SIX THEMATIC AREAS

- ❑ Food security, social protection and health
- ❑ Comprehensive disaster management
- ❑ Infrastructure
- ❑ Research & knowledge management
- ❑ Mitigation & low carbon development
- ❑ Capacity building & institutional strengthening
 - 44 thematic programmes developed
 - Implementation of several projects initiated
 - Department of Climate Change and Climate Change Research Institute establishment is under process



CLIMATE CHANGE TRUST FUND

- ❑ Enactment of Climate Change Trust Fund Act, 2010.
- ❑ Establishment of Climate Change Trust Fund (CCTF) and Climate Change Trust Fund Board.
 - ❑ Establishment of climate change unit under the ministry of environment and forest and climate change focal point in different ministries
- ❑ Budget allocation for CCTF: US\$ 100 million for 2009-2010 and US\$ 100 million for 2010-2011 from Government's own resources. Government also allocated same amount of money for the current financial year

BANGLADESH CLIMATE CHANGE TRUST FUND

- ❑ CCTF has approved 58 government projects for implementation. An amount of Tk. around 700 crore has been allocated for these projects.
- ❑ CCTF has also approved on principle around 32 projects of NGOs. (around 25 crore taka)
- ❑ Several projects of Government and NGOs are in the process of consideration.

BANGLADESH CLIMATE CHANGE RESILIENCE FUND (BCCRF)

- ❑ Kind of multi donor trust fund
- ❑ BCCRF , signed May 2010, Managed by GoB, Trustee WB
- ❑ Objective; Implementation of BCCSAP
- ❑ Pledged amount of money is 125 m US\$
- ❑ Implementation by GO line agencies, 15-25 M USD, 3 years
- ❑ Governing council and management committee formed
- ❑ A total of 10% of the BCCRF will be channeled through PKSF for NGOs

OTHER POLICY DOCUMENTS RELATED TO CC AND GG

- ❑ The National Environment Policy, 1992
- ❑ The National Energy Policy, 1996
- ❑ Renewable Energy Policy of Bangladesh, 2008
- ❑ National Agriculture Policy -2010
- ❑ The National Conservation Strategy-2010
- ❑ National Environmental Management Action Plan
- ❑ The Environment Conservation Act (ECA), 1995 and its amendments in 2010
- ❑ The Environment Conservation Rules (ECR), 1997 and its amendments
- ❑ Solid Waste Management Rules – under preparation
- ❑ Brick Kiln Act/ Rules – under preparation

IMPACT OF CLIMATE CHANGE ON EMPLOYMENT AND LABOUR MARKET

IMPACT ON DEVELOPED COUNTRIES

- ❑ According to Kyoto protocol Annex -1 (developed) countries are legally bound to reduce GHG emission reduction.
- ❑ The employment challenge associated with the cutting GHG emissions is significant.
- ❑ Carbon intensive sectors accounts for 38% jobs across the world. Carbon cut will create job change and job loss
- ❑ Renewable energy, buildings and construction, transportation, basic industries, agriculture and forestry will be the priority area for future green job market.
- ❑ The global environmental job market projected to be doubled from US\$1,370 billion per year at present to US\$2,740 billion by 2020
- ❑ In Germany environmental technology is to grow fourfold by 2030, with subsequent employment generation
- ❑ Renewable energy generates more jobs than employment in fossil fuels. Projected investments of US\$630 billion by 2030 would translate into at least 20 million additional jobs in the renewable energy sector.
- ❑ Investments in improved energy efficiency in buildings could generate an additional 2-3.5 million green jobs in Europe and the United States alone, with the potential much higher in developing countries.

IMPACT IN DEVELOPING COUNTRIES

- ❑ Developing countries are not bound to reduce their emission reduction by Kyoto protocol
- ❑ Developing countries particularly LDCs and SIDs are vulnerable to climate change
- ❑ Lots of job loss will be due to impact of CC to agriculture, migration and tourism
- ❑ However, developing countries particularly major developing countries like China, Brazil, South Africa, India etc. are planning to follow low carbon development paths and these actions will create significant numbers of Green jobs.
- ❑ Every developing country is in the process of preparing their NAMA
- ❑ NAMA will create jobs in the field of renewable energy, buildings and construction, transportation, basic industries, waste management, agriculture and forestry sector. In recent years China invested more than doubled to the green jobs, 19% of total investment.
- ❑ Recycling and waste management employs an estimated 10 million in China and 500,000 in Brazil.
- ❑ 600,000 people in China who are already employed in solar thermal making and installing products such as solar water heaters;
- ❑ bio fuels industry in Nigeria created 200,000 jobs
- ❑ India could generate 900,000 jobs by 2025 in biomass.

BANGLADESH SCENARIO ON EMPLOYMENT AND LABOUR MARKET

IMPACT OF CLIMATE CHANGE ON LOSS OF LIVELIHOOD AND MIGRATION

Climate Driven Issue	Loss of Livelihoods (Number of people/yr)	Potential out-migration People/yr	Frequency
Erosion (in both coastal and riverine chars)	50,000 ~ 200,000	60,000	Annual
Salinity	1,200,000	10,000 ~ 15,000	Annual
Storm Surge and Rough Sea	300,000 ~ 400,000	100,000 ~ 120,000	Once in three to five years
Water Logging	350,000	30,000	Annual

IMPACT OF CLIMATE CHANGE ON JOB LOSS

- ❑ 50% of Bangladesh population still dependent on crop agriculture (BBS, 2008). Bangladesh will loss around 3% GDP in agriculture in the coming years for CC impact. Loss of job livelihood in agriculture and fisheries sector would be enormous.
- ❑ Relationship between climate change and implications of livelihood for poor people and loss of livelihood and employment are reasonably well documented (Haque, 2003)
- ❑ Proliferation of slums in urban areas is the proof of failed livelihood in rural areas (Ahmed and Neelormi, 2008)
- ❑ Damaging industrial and other infrastructure, embankments and polders creating job loss in industrial and agricultural sector
- ❑ High tech. industry and less carbon intensive industries might create job loss in future especially in labour intensive sectors

CURRENT MEASURES RELATING TO ADAPTATION

- ❑ As one of the most vulnerable country to CC government of Bangladesh mainly focus on adaptation rather than mitigation
- ❑ NAPA -2009 identified 45 adaptation projects . Out of that coastal afforestation and reforestation propjet are implemented FD
- ❑ BCCSAAP – 2009-out of 44 programmes 34 programmes are relevant to adaptation
- ❑ Government already approved around 40 projects of adaptation under BCCTF
- ❑ BCCRF also started its work for adaptation funding
- ❑ Ongoing adaptation projects mainly on development of climate resilient cultivars; maintain and repair of embankments, polders, cyclone shelters, river training and dredging , aforestation and reforestation etc.

FOLLOWING ADAPTATION PRACTICES WILL CREATE SOME JOBS/GG

- ❑ Climate resilient agriculture, fisheries, livestock and health
- ❑ River/canal/wetland de-silting
- ❑ Embankments/polders/submersible dykes/FCD/FCDI
- ❑ Urban drainage/storm sewerage
- ❑ Energy/power plants
- ❑ Ports/airports/EPZ/EZ
- ❑ Roads & Highways, Bridge/culverts
- ❑ Housing/cluster village/growth centers
- ❑ Cyclone shelter/flood shelter/killi

For doing all of these authentic data based research findings and information , capacity building and financial and technological support from developed countries

CURRENT MEASURES RELEVANT TO MITIGATION & LOW CARBON DEVELOPMENT

- ❑ Mitigation and Low carbon development is one of the thematic areas of BCCSAP-2009 where mitigation and low carbon development programmes and projects will be undertaken.
- ❑ Bangladesh Climate Change Trust allocated funds for the projects of renewable energy, improve cooking stoves, forestation and reforestation project

CDM PROJECTS

- ❑ Developing countries are now working under the purview of Clean Development Mechanism (CDM)
- ❑ Issues of sustainable development and creation of green jobs are the prerequisite for CDM projects
- ❑ CDM potential is comparatively low in Bangladesh as Natural Gas is the main source of our energy.
- ❑ Approved 9 CDM projects
 - 2 in waste sector (composting & Waste to Energy)
 - 1 in afforestation/reforestation
 - 2 in energy efficiency and (improved cook stoves & distribution of 30 million CFL)
 - 3 in renewable energy (2 Solar Home System & distribution of solar lantern in off-grid areas)
 - Improving Kiln Efficiency in brick manufacturing

GOVERNMENT INITIATIVES ON RENEWABLE ENERGY

- ❑ Government has set targets for developing renewable energy
- ❑ Resources to 5% of total power demand by 2015 and 10% by 2020.
- ❑ The total generation capacity from RE in the country is comparatively low around 50 MW. IDCOL through different NGO has already Distributed 900,000 SHS through out the country. Government is planning to raise it up to 500 MW
- ❑ PDPP has been prepared to cover 4 isolated islands under solar and wind power
- ❑ REB has taken project for Solar Irrigation System.
- ❑ 100 MW of wind power will be generated in the off-shore area of Anwara, Chittagong.

OTHER MEASURES TAKEN BY THE GOVERNMENT FOR GG CREATION

- ❑ Conversion of two stroke three wheeler into CNG
- ❑ Conversion of Motor vehicles into CNG
- ❑ Distribution of CFL valve
- ❑ Modernization of Brick Kiln
- ❑ GHGs Inventory under SNC

PROPOSED SECTORS FOR NAMA FOR CREATING GJS

- ❑ The power sector
- ❑ Transport
- ❑ Agricultural sector
- ❑ Forestry
- ❑ Waste management
- ❑ Residential/commercial
- ❑ Industry
- ❑ Renewables
- ❑ But this can be achieved only if support is provided in the context of
 - technological and institutional capacity building
 - preparation of an integrated energy and efficiency programme and implementation
 - Adequate finance

PROSPECT OF GREEN JOBS IN BANGLADESH

- ❑ In construction sector green job will increase from 1.33 million in 2009 to 2.19 million in 2020,
- ❑ Green job contribution to GDP will increase to Tk. 266740 million in 2014 and Tk. 329967 million in 2020.
- ❑ In renewable energy sector 998 people are needed for production of each MW of energy. Therefore, by 2014 and 2020, the employment size will be 74,850 and 146,706 respectively.
- ❑ In case of waste management there are about 358,112 jobs. It is revealed in a recent study in Bangladesh currently 2,806,004 peoples are involved in green or environmental jobs (ILO, 2010). These will further increase in future
- ❑ Bangladesh needs 5 billion US\$ for the implementation of its NAMA energy, industry and transport sector (SNC). These investments have the potential to create lots of green jobs.

GAP/ CONSTRAINTS

- ❑ Policy direction of CC impact on employment and labour market is not adequate
- ❑ Very limited data / information of CC impact on Labour and employment in Bangladesh.
- ❑ Under thematic area of research and knowledge management of BCCSAP there no programme to study the impact of CC on job loss, gain, green jobs etc.
- ❑ Broadly Adaptation and mitigation options were identified in the SNC and other national policy documents. Employment issues not properly addressed in those documents.
- ❑ Economics of climate change adaptation and mitigation with potential consequences on employment were not studied yet
- ❑ As BCCSAP is a living document, proper consultation should be made with employer, trade union and Ministry of Labour and Employment and other relevant stakeholder for possible update of this document.

WAY FORWARD

- ❑ As Bangladesh is one of the most vulnerable country to climate change, priority of adaptation and mitigation options should be identified immediately . Employment and green jobs issue should be considered when preparing these documents
- ❑ Financial and technological needs assessment should be done with due consideration of employment and green jobs.
- ❑ Possibility to increase green jobs in the future adaptation and mitigation measures should be properly studied
- ❑ Government, NGO, CBO, trade union and UN bodies should work coherently to find out the problems and solutions to solve the problem of climate change on labour market and employment. Ministry of Labour and Employment and Ministry of Environment and Forests could take the lead in this respect
- ❑ Climate change relevant green jobs and other green jobs should be dealt separately. (According to UNFCCC developing country particularly LDC will get financial and technological support to address the issues of climate change)

WAY FORWARD

- ❑ Bangladesh NAP, NAMA, TNA and other policy documents should be prepared by consultation with relevant stakeholders like TU, employer, government.
- ❑ Matters relating to employment, green jobs, sustainability, capacity development and institutional arrangements should be addressed while preparing National Adaptation Plan, National Appropriate Mitigation Action and Technology Needs Assessment
- ❑ Sustainable development and issue of survivality should be the priority in all policy and strategy framework .

**THANK
YOU!!!!**