

Welcome

Presentation on:
Climate Change Effect in Bangladesh



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Climate Change Effects in Bangladesh

1. Climate Change

- **Anthropological (Human) activities in recent centuries such as industrialization and deforestation have led to additional changes in the earth's climate.**
- **To understand climate change we need to understand the greenhouse effect.**
- **The Greenhouse effect is the processes that occur within the earth's atmosphere that maintain the earth's temperature.**



Climate Change Effects in Bangladesh

1. Climate Change

- **Climate change is the rise in the temperature at the earth's surface due to an increase in Greenhouse gases from anthropological sources.**
- **The five components such as atmosphere, land, ocean, ice, and biosphere are collectively form the "climate system."**
- **The global climate is changing and will continue to change at rates unprecedented in recent human history, its impacts and risks associated with these changes are already felt in many communities of Bangladesh.**



Climate Change Effects in Bangladesh

1. Climate Change

- ◆ **The driving force behind weather and climate is energy from the sun, about one-third of the solar radiation that reaches Earth is reflected back.**
- ◆ **The rest is absorbed by the atmosphere and Earth's surface.**
- ◆ **The energy absorbed from solar radiation must be balanced by outgoing radiation from Earth - called terrestrial radiation.**
- ◆ **Factors known as climate-forcing agents can change the balance between the solar radiation energy absorbed by Earth and that emitted by Earth in the form of infrared radiation.**



Climate Change Effects in Bangladesh

1. Climate Change

- Except for solar radiation, the most important climate forcing agents arise from the greenhouse effect on outgoing infrared radiation.
- CO₂ emissions resulting from human activities such as fossil fuel burning and deforestation (cutting forests) are substantially increasing the atmospheric concentrations of other greenhouse gases, including carbon dioxide (CO₂), methane (CH₄), chlorofluorocarbons (CFCs), and nitrous oxides (N₂O).
- Climate change is an issue that already affects and will increasingly impact in Bangladesh.



Climate Change Effects in Bangladesh

1. Climate Change

- ⊙ **Influencing climate change is directly linked with poverty eradication.**
- ⊙ **Developing countries are the least responsible for climate change, yet the most at risk from its effects.**
- ⊙ **Ultimately, a sustainable world means a zero-emissions world, where use of non-renewable natural resources (e.g. coal and oil) has been replaced by use of renewable resources and where all waste is recycled.**



2. Climate Change Results

Direct Impacts

Temperature Increase

- ◆ **Ice cap melts leading to global sea level rise**
- ◆ **Atmosphere**
- ◆ **Land**
- ◆ **Vegetation**
- ◆ **Disasters**
- ◆ **Increased evaporation loss**



2. Climate Change Results

Changing weather patterns

- ◆ **Enhanced monsoonal rains and runoff**
- ◆ **Increased cyclone intensity**

Direct Impacts specific to Bangladesh

- ◆ **Reduced Freshwater availability**
- ◆ **Drainage congestion**
- ◆ **Disturbance of riverine and coastal morphological processes**
- ◆ **Increase intensity of disasters**



2. Climate Change Results

Indirect Impacts

- Agriculture
- Water resources
- Food Security
- Sustainable land management
- Poverty
- Human Health
- Human settlements (housing/migration)
- Infrastructure
- Coastal Zones
- Biodiversity

Climate change impact has been threatening the efforts of achieving the Millennium Development Goals (MDGs) and sustainable development.

2. Climate Change Results



Source: www.irrawaddy.org



2. Climate Change Results

Challenges

- ◆ **Economic**
- ◆ **Social**
- ◆ **Environmental**

Climate change will exacerbate all existing environmental stresses in Bangladesh if we can't take timely measures to reducing its effect.



3. How to Overcome the CCEs?

Five Focus Areas

- ❑ **Adaptation – climate change adaptation (CCA) and disaster risk reduction (DRR) agendas will affect agriculture, food security and water management in rural areas aiming at reducing vulnerability.**
- ❑ **Mitigation - increasing the use of renewable energy, and reforestation, as well as halting the rate of deforestation and regenerative ecological agriculture can provide a good mitigation tool.**



3. How to Overcome the CCEs?

Five Focus Areas

- ❑ **Technology transfer**
- ❑ **Reduction of emissions from deforestation and degradation**
- ❑ **Capacity building - it is most important to achieve people's awareness, capacity building and actions towards reducing the climate change effects**



3. How to Overcome the CCEs?

Four Cross-Cutting Areas

- Climate knowledge: science, assessment, monitoring and early warning.**
- Supporting national actions.**
- Climate-neutral.**
- Public awareness.**

3. How to Overcome the CCEs?

Others

- ◆ **Empowering women with awareness education about the environment and giving them the skills to diversify their livelihoods in an environmentally conscious way have led to significant success in effecting change.**
- ◆ **The diversification of income sources and reduction in wood-cutting will mitigate the future threat of intensified climate change and weather-related hazards such as flooding, landslides, drought and cyclone.**
- ◆ **This also contributes to climate change mitigation through better management of resources leading to tree planting, less wood cutting and more efficient fuel consumption.**

3. How to Overcome the CCEs?

Others

- ◆ **This will take place through a comprehensive, integrated approach to environmental and natural resource management geared towards improving livelihoods.**
- ◆ **Recognize women's perspectives knowledge and key implementing role were fundamental elements of ensuring a sustainable environment through better natural resource management.**
- ◆ **Increased planting of vegetation also contributed to climate change mitigation through reducing carbon emissions.**
- ◆ **Real community change and effective development must include women as planners', sources of knowledge, decision-makers and implementers.**

3. How to Overcome the CCEs?

Others

- ◆ **Without women fully taking part in decision-making, leadership and implementation, real community resilience to climate change and disasters simply cannot be achieved.**
- ◆ **Fully sustainable community-based development is involving the knowledge and energies of women, men, boys and girls.**
- ◆ **There is a need for information/advocacy, as well as for a strategy to built capacity in the media and also needed a solid and well anchored institutional framework to address climate change and to move beyond the stand alone initiatives.**



4. National Level Initiatives

- ◆ **Bangladesh signed the United Nations Framework Convention on Climate Change (UNFCCC) on 09 June 1992, ratified it on 15 April 1994 and ratified the Kyoto Protocol on 22 October 2001.**
- ◆ **The Department of Environment (DOE) under the Ministry of Environment and Forestry (MoEF) is the focal point for the UNFCCC with a view to reducing the adverse effects of climate change and coordinates climate related activities in the country.**
- ◆ **A Climate Change Cell (CCC) has established in 2004 under the Comprehensive Disaster Management Program (CDMP) of the Government to address several issues including adaptation to climate change.**



4. National Level Initiatives

- **Bangladesh has developed a Poverty Reduction Strategy (PRSP).**
- **The Government institution that exclusively deals with CCA is DoE, MoEF which provides technical support on CCA issues.**
- **Climate change is likely to increase the frequency and intensity of natural disasters in Bangladesh.**
- **The Bangladesh's National Adaptation Programme of Action (NAPA) involved to contribute towards improving adaptive capacity to threats of climate change and to reduce vulnerability of coastal communities.**



4. National Level Initiatives

Several institutions are involved in technical analysis of climate change

- ◆ **Bangladesh Meteorological Department (BMD)**
- ◆ **Flood Forecasting and Warning Center (FFWC)**
- ◆ **International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B)**
- ◆ **International Training Network (ITN) Centre**
- ◆ **Climate and Environment Geographical Information Services (CEGIS)**
- ◆ **Bangladesh Centre of Advanced Studies (BCAS)**
- ◆ **Flood Forecasting and Warning Centre of Bangladesh Water Development Board**



4. National Level Initiatives

- ◆ **The Bangladesh Red Crescent Society (BRCS) is a nationwide volunteer-based organization involved in response preparedness with a particular formal role in the Cyclone Preparedness Programme.**
- ◆ **Risk reduction initiatives are to a wide extent implemented in the field by a multitude of NGOs – local as well as international – through community-based activities.**
- ◆ **The Government and UNDP have acknowledged climate change as key area and are currently implementing mitigation as well as adaptation related projects.**



5. National Level Initiatives by the International Organizations

Screening (Survey) of Climate Change by DANIDA, DFID, SIDA, World Bank and Dutch Govt.

6. International Level Initiatives

- The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty produced at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, held in Rio de Janeiro from June 3 to 14, 1992. It entered into force on March 21, 1994.
- The Kyoto Protocol, 1997 is the world's only legally binding agreement for the reduction of greenhouse gases, which will expire in 2012.



Thank you
For Your Kind Attention