

Views of Bangladesh on Climate Change and its possible Security Implications

Introduction:

Bangladesh is recognized worldwide as one of the most vulnerable countries to the impacts of global warming and climate change. This is due to its unique geographic location, dominance of floodplains, low elevation from the sea, high population density, high levels of poverty, and overwhelming dependence on nature, its resources and services. The country has a history of extreme climatic events claiming millions of lives and destroying past development gains. Variability in rainfall pattern, combined with increased snow melt from the Himalayas, and temperature extremes are resulting in crop damage and failure, preventing farmers and those dependent from meaningful earning opportunities. In a changing climate the pattern of impacts are eroding our assets, investment and future. This stands for families, communities and the state. Global warming and climate change threatens settlements and the number of people displaced from their land due to riverbank erosion, permanent inundation and sea level rise which are increasing rapidly every year. Resources and efforts of government and people are quickly drained addressing the impact of one event when another hazard strikes. Impacts of global warming and climate change have the potential to challenge our development efforts, human security and the future.

Observed changes in climate trends, variability and extreme events and their impact

Bangladesh is already experiencing the adverse impacts of global warming and climate change. The following impacts have been observed. Summers are becoming hotter, monsoon irregular, untimely rainfall, heavy rainfall over short period causing water logging and landslides, very little rainfall in dry period, increased river flow and inundation during monsoon, increased frequency, intensity and recurrence of floods, crop damage due to flash floods and monsoon floods, crop failure due to drought, prolonged cold spell, salinity intrusion along the coast leading to scarcity of potable water and redundancy of prevailing crop practices, coastal erosion, riverbank erosion, deaths due to extreme heat and extreme cold, increasing mortality, morbidity, prevalence and outbreak of dengue, malaria, cholera and diarrhea, etc.

Climate change impacts are already adding significant stress to our physical and environmental resources, our human ability, and economic activities. IPCC in its AR4 described with high confidence climatic anomalies and their impacts on Bangladesh. Climate risks for Bangladesh are as follows:

Environmental Impacts	Socio-economic Resources & Sectors affected
Changes in rainfall patterns Increased frequency and severity of: Floods Droughts Storms Heat waves Changes in growing seasons and regions Changes in water quality and quantity Sea level rise Glacial melt	Water resources Agriculture and forestry Food security Human health Infrastructure (e.g. transport) Settlements: displacement of inhabitants and loss of livelihood Coastal management Industry and energy Disaster response & recovery plans

A major concern for Bangladesh are climate change victims who are increasing in number every day and must seek refuge due to loss of their homes, land, settlement to river erosion, coastal erosion, and permanent inundation.

The number of families and villages who lose their homes permanently to rivers every year are perhaps one of the highest in Bangladesh. It has been reported that many of the slum dwellers in the metropolitan areas are the victims of riverbank erosion.

Climate change and Security issue

The security in the context refers to both 'freedom from want' aspects of human security (e.g. livelihood security, food security, health security, water security and environmental security) and 'freedom from fear' aspects (e.g. personal security, asset security, political security and tenure security)

The climate change in Bangladesh creates insecurities for food, water, life, property, settlement, livelihood assets, livelihoods and others. Climatic impacts reduce securities directly and indirectly. Environmental degradation, degradation of land resources ultimately reduces food securities, health securities etc and at the same time increases conflicts over resources and livelihood persuasions. Following are limited elaborations of insecure domains;

Food security: Loss of crop due to flood, storm surge, cyclone, and drought are increasing every year. Salinity and permanent inundation are also limiting crop production.

Water scarcity: Reduced precipitation, prolonged dry season and drought are resulting scarcity of drinking water. Contamination of fresh water resources with saline water are reported in the coastal aquifer.

Loss of property and life: An increasing number of people are suffering damage or loss to their property and some time life. Increased cyclone, storm surges, floods, river bank erosion destroys and damage peoples properties including land, house, cattle, and other livelihood assets and living essentials. Frequent disasters increases damage and loss by many folds.

Land degradation and loss: Following the climate change, the river bank and costal erosion are increasing at alarming rate. According to IPCC findings a 45 cm sea-level rise will inundate almost 10.9% of our territory and will displace 5.5 million population of our coastal regions. Salinity intrusion into the country side reached 100km and degrades land resources. Land use for farming, shrimp and other uses in the declining context generates conflicts.

Loss of livelihoods: Land loss and degradation, scarcity of water, floods, and other hazards reduces livelihood opportunities. The rough sea limits fishing opportunities. Health hazards, malnutrition, access to services prior, during and after disasters reduces working days and opportunities.

Insecurity of women: Women and disadvantaged groups are suffering more during disasters as they don't receive warning in time and women has to take care of their children, elderly and disabled.

Displacement: People compelled to move from their land to other places raises conflicts for resources where they move. Most migrants end up in urban slums, particularly in Dhaka (capital), and there is some evidence that this constant influx of people is contributing to rising crime and insecurity in these areas.