

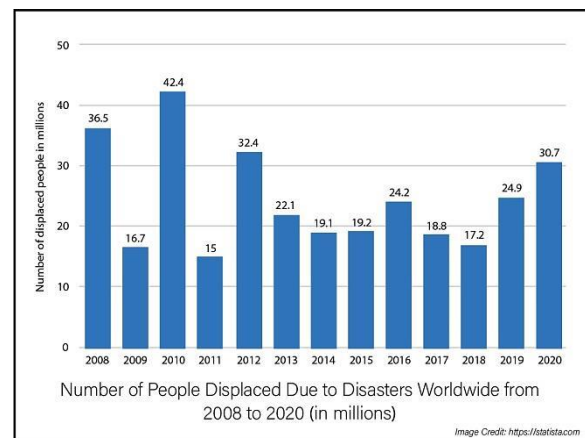
# Building a Climate Resilient Bangladesh Based on Knowledge Driven Initiatives

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## Introduction

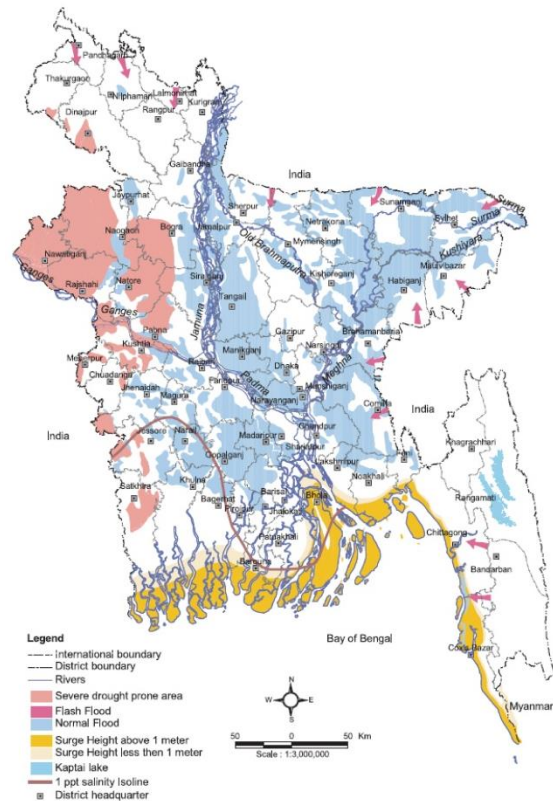
Climate change is the most talked about topic worldwide right at this moment. The world is much aware of the heinous effect of climate change. We often say that it destroys biodiversity, livelihoods, infrastructure and communities, forcing people to move from their homes, towns and even countries. But what we don't say is that we are the root cause for this misfortune and has jeopardized our only planet. In 2020 alone, extreme weather-related disasters displaced around 30.7 million people. Last few years, the world has seen several environmental catastrophes which forecast a furious future awaits ahead. A recent joint British-American study found that the intensity of cyclones, hurricanes and typhoons will increase in the next century due to global warming. Extreme hot weather is being experienced in many countries of the world. Eastern Canada, the Caucasus region, Southern California, Sydney and Algeria have faced record high temperatures. Wildfires in California, Greece, Turkey and other places are



the kinds of dystopian weather events, often happening simultaneously due to climate change. Bangladesh is on the frontline of these impacts. 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, the dominance of floodplains, low sea elevation, high population density, poverty and overwhelming dependence on nature, its resources and services. We need to be prepared to face the worst environmental phenomena in future. Hence, knowledge-driven initiatives, including knowledge enhancement and vulnerability assessment should get priority. Subsequently, developing an action plan and aligning all national plans/goals and infrastructure development to build a climate-resilient Bangladesh is the only solution that we have now.

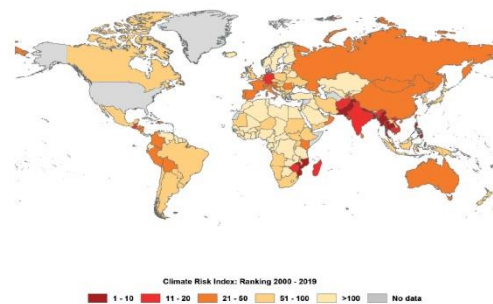
### Impacts of Climate Change in Bangladesh

Our country has a history of extreme climatic events claiming millions of lives and destroying past development gains. Inconsistency in rainfall pattern, combined with increased temperature and drought, snowmelt from the Himalayas causing flash flood often results crop damage, famine, loss of property and many other problems making people unemployed. Climate change is causing our property and asset loss, ruining our investment and future. Millions of people are losing their settlement every year and are being displaced due to riverbank erosion, permanent inundation, saltwater intrusion and sea-level rise due to this global warming and climate change. Causes of climate change, including global warming, sea-level rise and other phenomena, have the potential to the security of the entire human race, challenge to the development efforts in the coming days.



### Propelling Prosperity by Adaptation to Climate Change

The economic development pace of Bangladesh in the last decade has been well appreciated worldwide. The impressive track record of GDP growth and poverty reduction made us one of the fastest-growing economies in the world. Bangladesh has been scheduled to graduate from LDC status in 2026 by UN which is another milestone for the county. The Government of Bangladesh has set all the Perspective Plans (PP2021 & PP2041) and goals to become a middle-income country by 2030 and a developed country by 2041. However, these plans may get obstructed or delayed as we are highly vulnerable to the impacts of climate change. In the Global Climate Risk Index, Bangladesh falls in the high-risk zone. Identifying these susceptibilities, mitigation and adaptation measures, mechanisms, and best practices are being incorporated at the national



level, The country has shown its utmost political will to give priority to climate change matters and included formally by renaming Environment and Forest Ministry as Ministry of Environment, Forest and Climate Change Ministry in 2018.

### Components of Climate Resilience

The Intergovernmental Panel on Climate Change (IPCC) defines resilience as “the capacity of social, economic, and environmental systems to cope with a hazardous event or trend or



disturbance, responding or reorganizing in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation” (IPCC 2014). Attributes of building climate resilience is a wide range of studied matter. There are different models suggested for building climate resilience. However, a study carried out by BRAC suggested four major components for the resilience-building process. These are adaptive capacity, anticipatory capacity, absorptive capacity and transformation. Each of these components has multiple sub-components which contribute to enhancing resilience. At present, the significance of work regarding climate resilience has concentrated on action to be taken to sustain current schemes and constructions. The widely accepted components are absorptive, adaptive, and transformative, which all contribute to resilience work. A framework to achieve

climate resilience clearly shows the significance of learning and knowledge-basing as the core underpinning factor.

### **Enhancing the Knowledge Base to Face the Extremities**

Strengthening the knowledge base will be the critical factor to adequately respond to the rising risks and extremities of climate change. Identifying the knowledge gap areas will help to build a mechanism to cope with the challenges. So, assessing the vulnerability and developing an action plan with local requirements will aid to deal with future climate change uncertainties and climate variability impacts.

### **Climate Vulnerability Assessment.**

Details of vulnerability assessment nationwide and focusing sectorial impacts need to be assessed, The government has already taken steps to form a Nationwide Climate Vulnerability Assessment (NCVA). The NCVA may serve as an instrument to share and compile the latest data to get a clear perspective to develop a local action plan for a particular area.

### **Developing Action Plan.**

The Climate Change Action Plan aims to advance the climate change aspects with a resilient approach, which pursues the country's sustainable development. In the Action Plan, the nationwide approach is considered to mitigate the loss and damage of biodiversity, ecosystem and communities, combining disaster risk reduction and management (including emergency preparedness and response) and climate change adaptation approaches. UNFCCC climate risk management interventions or measures essential to drive climate resilience efforts and investments by all actors include:

- > Climate risk and vulnerability assessments, disclosure and monitoring
- > Early warning systems and early action
- > Preparedness: contingency plans/emergency response
- > Climate risk governance and capacity-building
- > Nature-based solutions used to reduce risks across sectors
- > Climate-proofing infrastructure and services
- > Risk transfer: insurance and social protection
- > Sharing of knowledge and best practices on climate risk management
- > Volume, quality and access of public and private finance

### **Policy Promulgation to Achieve Climate Resilience**

Response to climate change will definitely require structural transformations. These processes require a variety of analysis of climate response strategies. Considering the uncertainty in future climate change, optimum solutions are challenging to design. So, a wide range of policies is required to adapt. Decision-making tools can help make a comprehensive range of decisions of risks and uncertainties. Finally, validation of plans and aligning the climate knowledge to government plans will help to build a climate-resilient Bangladesh.

### **Validation of Plans, Reviews and Assessment by Scientists and Policymakers.**

This cycle involves learning from the research and knowledge gap and then put into the implementation phase after proper validation by scientists, policymakers and concerned

government bodies. This analysis stresses the need for further research and action to bridge these gaps and overcome the identified barriers through a multi-stakeholder process in a coordinated and collaborative manner. This process also improves our understanding and builds capacity to advance adaptation for climate resilience.

### **Aligning Climate Knowledge to Major Government Plans.**

Proper education is vital to endorse climate change actions. It aids to understand and addressing the extremities of climate-induced disasters. It empowers people with the knowledge, skillset, principles required to act as agents of change. Bangladesh already has the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) developed in 2008 and amended in 2009. Another important climate policy document is the Nationally Determined Contributions (NDCs) (2015) which was submitted to UNFCCC. Consequentially, the 6th FYP (2011-2015) and the 7th FYP (2016-2020) have given the specific emphasis on addressing climate change and building climate resilience. The Bangladesh government recently approved the Bangladesh Delta Plan 2100 (BDP 2100) with the aspiration of achieving a safe, climate-resilient and prosperous Delta by 2100.

In the process of setting up national plans and policies to tackle climate risks, Bangladesh has gained extensive experience in adapting to climate change. This trend must continue with newer innovations, technologies and updating policies at all levels, Climate-based policies need to be implemented strictly. The problem with climate change impact is that its effects are not readily visible. Therefore, care needs to be taken by the leadership to maintain compliance over decades to preserve set standards, restrictions and measures.

### **Conclusion**

Bangladesh is at the forefront of the most immediate impacts of global climate change and is geared to achieve climate resilience to sustain the development and security of the people. However, achieving a broad range of climate resilience requires widespread diversification and transformation of almost all sectors of governance, economy, infrastructure and social services. On top of that, climate actions often require making hard choices about immediate financial or societal impacts. This phenomenon was evident at recent COP26 too, where each country has agreed or disagreed based on their interest but looked for a common ground to curb global impact. There lies the importance of knowledge-driven policymaking on climate resilience, Building a knowledge base on climate action should not be limited to institutional learning, academic research and formal recommendations. Instead, in Bangladesh, we need to measure the impact of learning on a scale of policymaking and implementation impact. Climate action is complex and presents a plethora of problems in a developing nation like Bangladesh. But we need to keep in mind that the impact of climate change is inevitable, global and too large to mitigate. Only through the climate knowledge-driven initiatives, together we can build a climate-resilient Bangladesh.

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