

# **Key Adaptation Challenges and Issues**

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# Overview of Discussion

- Approaches and Methodologies
- Mainstreaming Adaptation in Policies and Programme
- Implementation of Adaptation at different levels and scale
- Inter-connectivity between local and global processes
  - Science
  - Policy
  - People
- Examples of good practices and future challenges

# Challenges

## ■ International Level

- Ensure adequate and timely finance for adaptation;
- Defining vulnerable countries and communities to address adverse impacts with equity and justice;
- Ensure resource flow for most vulnerable countries and communities;
- Address issue of “limit to adapt” – international migration and re-location
- Ensure access and development of appropriate technologies for adaptation

# Challenges

## ■ National Level

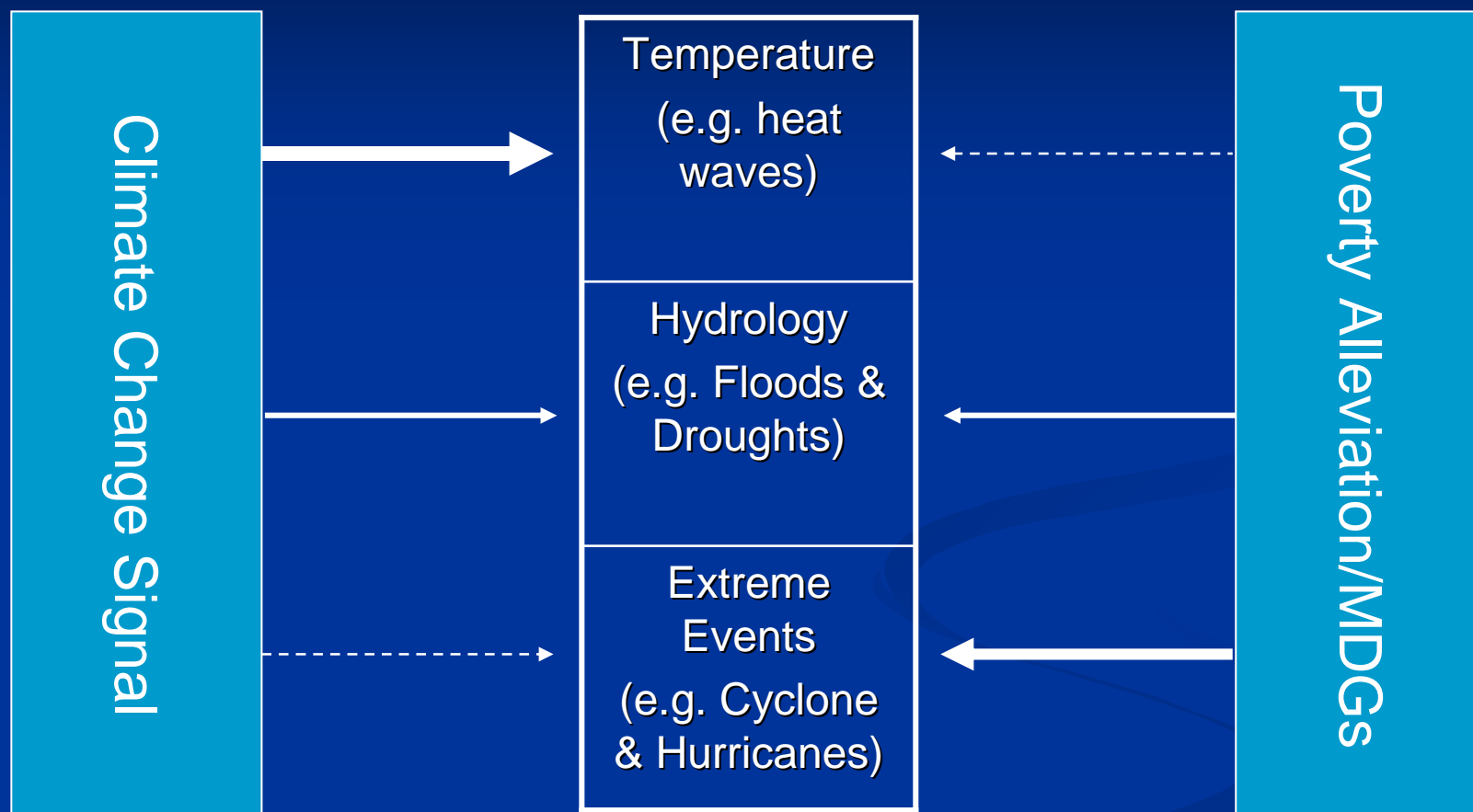
- Limited methodologies and tools to integrate climate change in designing adaptation measures for different regions, ecosystems, sectors, and communities;
- Developing adaptation strategy and action plan following globally defined guidelines and methods
- Mainstreaming adaptation into national policies and programmes
- Limited implementation of adaptation
  - Perception, Institutional, Bureaucracy, Technical, social
- Limited capacity of different stakeholders to design and implement adaptation measures and project at sectoral, ecosystem, sub-national and community level;
- Lack of financial capacity to allocate resources for climate change adaptation;
- Finding links between adaptation and development;
  - DRR, economic allocation, social mobilization,
- Demonstrating additionality in adaptation project

# Challenges

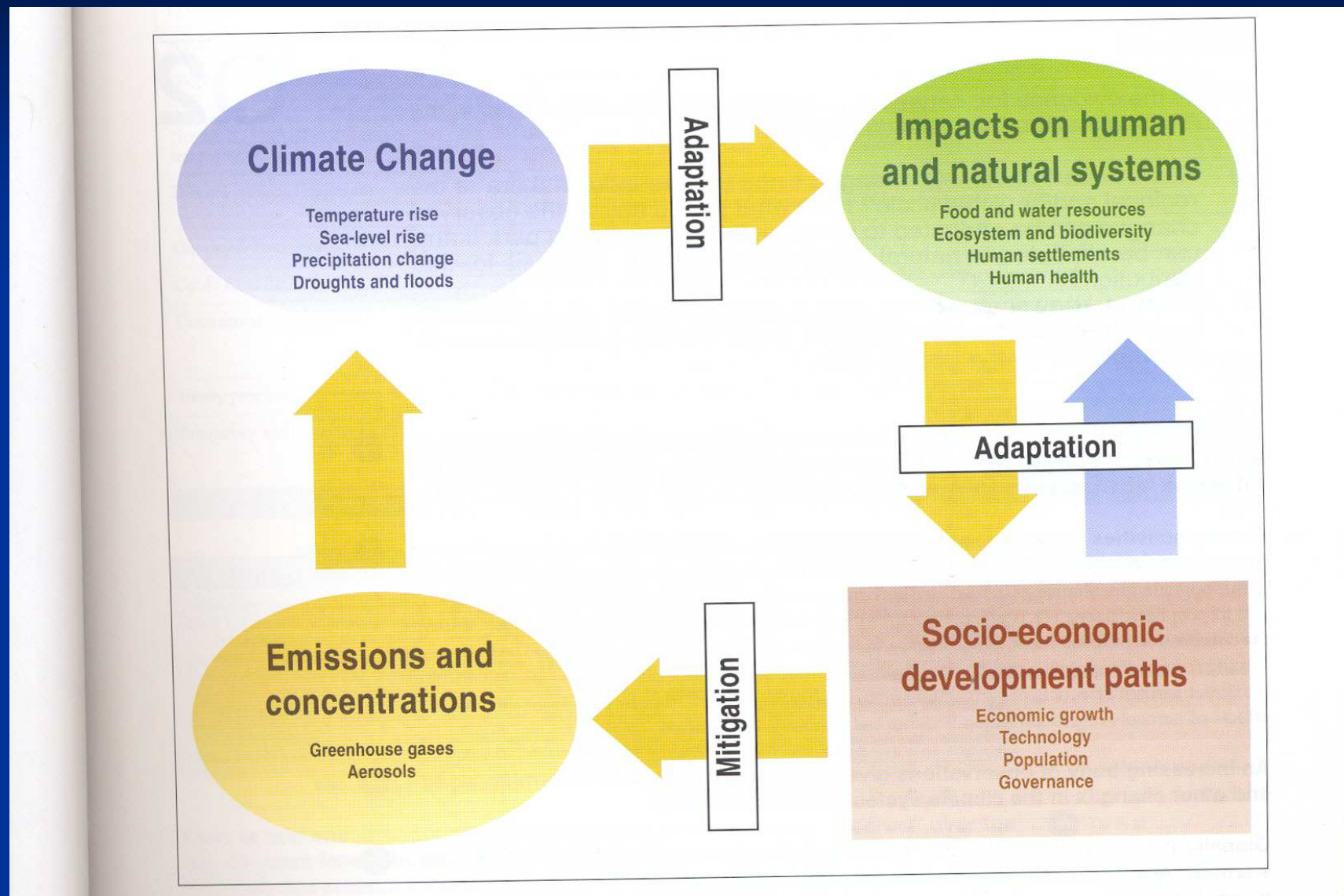
## ■ Local Level

- Lack of understanding and awareness about urgency of adaptation
- Lack of resources and institutional support
- Technological Barriers
- Ecological limits
- Maintenance of performance of natural resource base
  - Quality degradation
  - Physical loss of resources
- Limited adaptive capacity to adverse impacts that also varies by community

# Climate Change, Poverty and MDGs Linkages



# Climate Change and Development



# Climate Change and Poverty Linkages

- Climate change will hit the poor earliest and the hardest
- Because, they are in the forefront in climate disasters and various risks
- Climate change will compound the existing poverty
  - Many non-poor could be forced to be poor
  - Moderate poor may be extreme poor
- The poor has the least capacity to take shocks and adapt with adverse impacts of climate change
- Thus, poor are the most vulnerable to CC impacts and disaster risks
- How?
- $$\text{Vulnerability} = \frac{\text{Risks} \times \text{Hazards}}{\text{Capacity}}$$



## Impact-Adaptation Relationship

$$\begin{aligned} \text{Impact Event} &= \sum \int \text{Intensity of Event} \\ &\times \int \text{Baseline Conditions} \times \int \text{Adaptive Capacity} \end{aligned}$$

## Key Focus of Adaptation

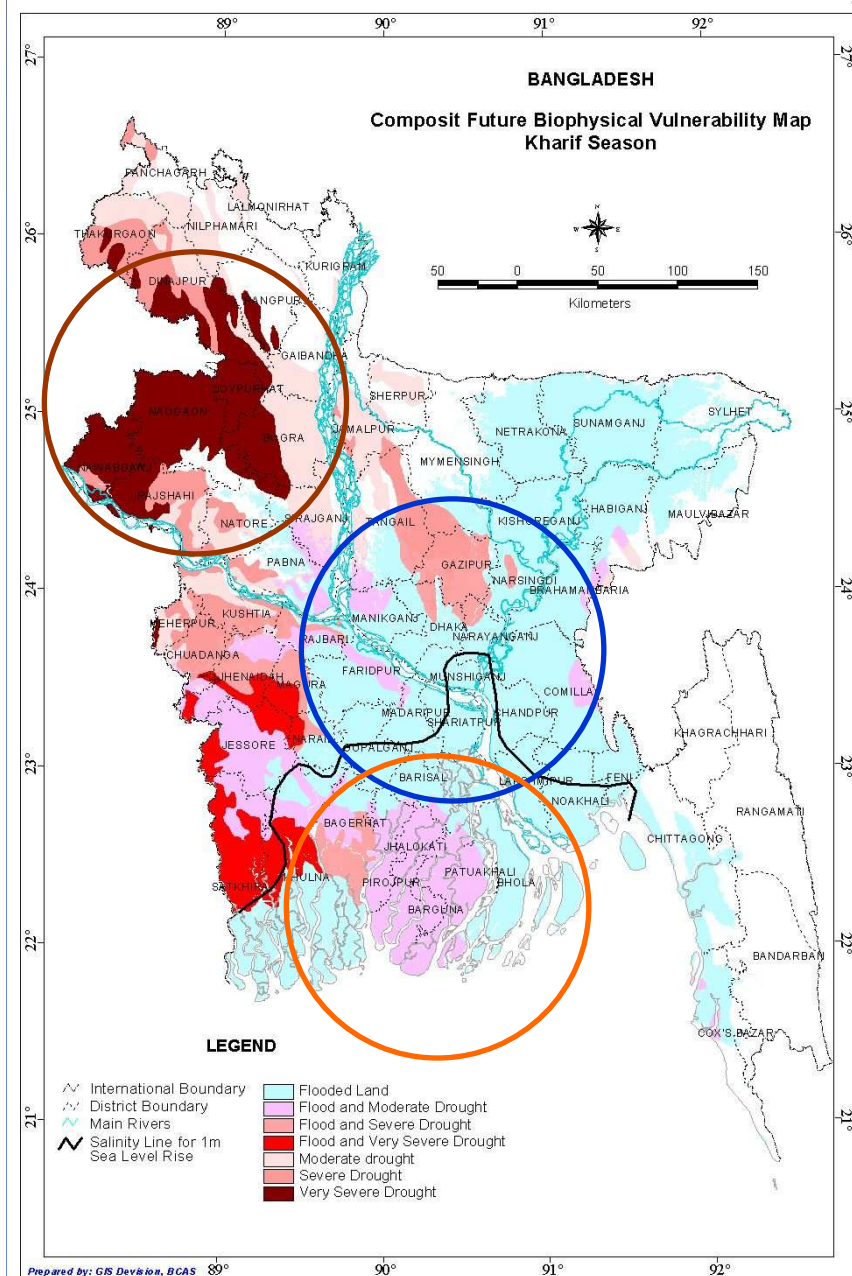
- Adaptation for Most Vulnerable Communities to ensure
  - Food Security
  - Water Security
  - Energy Security
  - Livelihood Security
  - Social Security including Human Security
- Adaptation should protect and promote livelihoods
- Adaptation should reduce risk and vulnerability from climate change including variability and extreme
- Adaptation should build resilience and adaptive capacity
- Adaptation should be synergetic to sustainable development

# Negotiations

- Enthusiasm is there, however
- Negotiating text became very messy as it contained views and submissions of all parties – focus is not there yet;
- It can be treated as complication of submissions of all parties.
- Next session in Bonn will use this text as basis for discussion without any further work by the Chair.
- Transforming Bonn 2 to text into negotiating text would be a real challenge for the Parties

# Problems varies and adjustment is necessary

- Vulnerability context and impacts varies by region;
- Vulnerabilities varies by socio-economic groups and their livelihood dependency





# Adaptation to Drought: Example



## ■ Challenges

- Same Level of Groundwater Recharge?
- Bring new technologies – crop varieties and irrigation





# Adaptation to Flood: Example



- Floating Agriculture: *Baira* (hydroponics)
- Traditionally been practicing by some communities in southern districts
- Recently this technology has been introduced in other wetland area through organized extension under environmental-developmental projects (RVCC, SEMP etc.)





# Adaptation to Salinity and Erosion: Example



## ■ Challenges

- Adequacy of action against scale of problem
- Designing infrastructure is based on historical events, need to design based on climate change projection – tools and capacity building

**Thank You**