



# Conceptualizing Effective and Efficient Adaptation Policies to Climate Change in Bangladesh

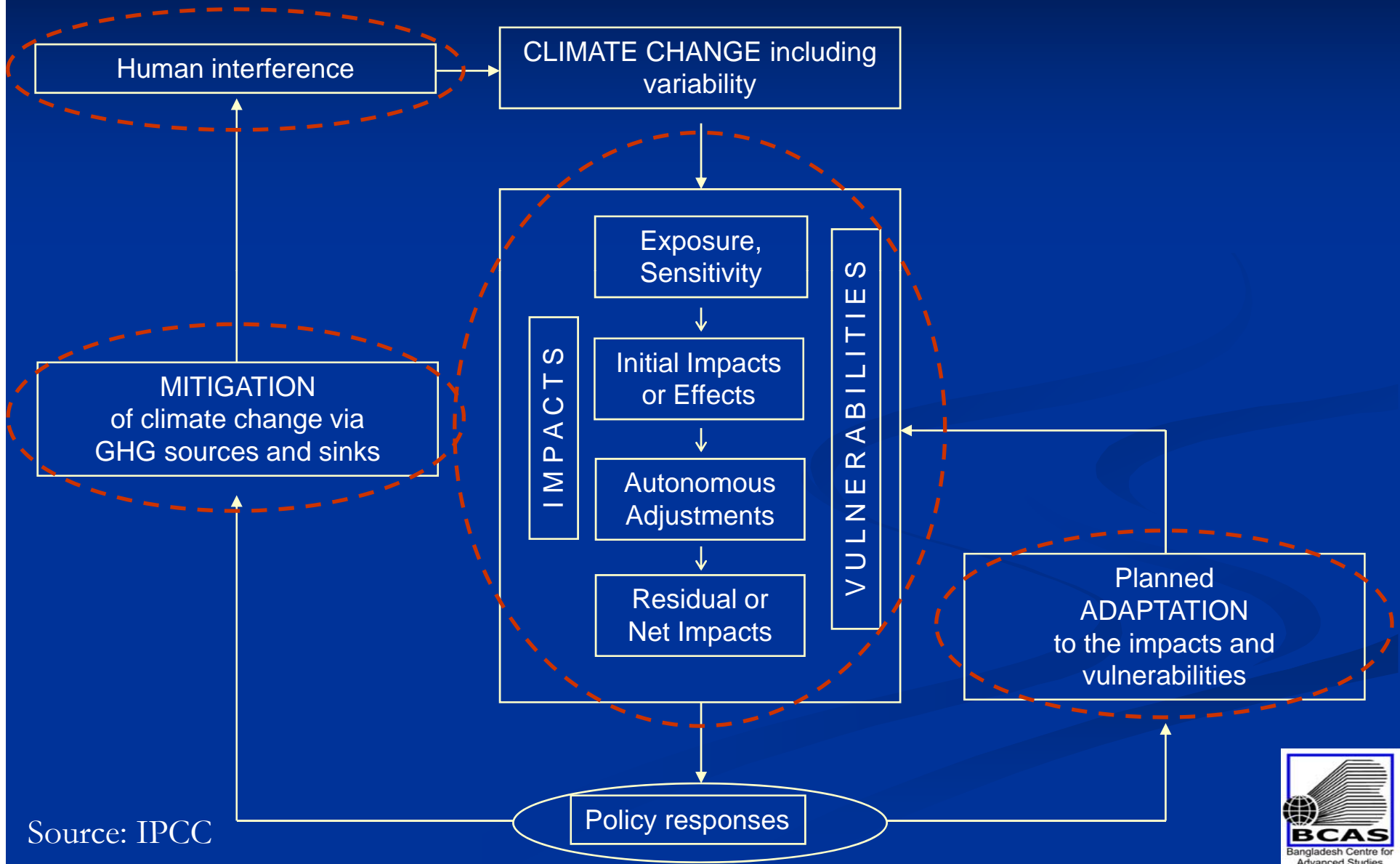
## Climate Change Adaptation Research in Bangladesh

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# Adaptation

- **Adjustment** in natural or human systems in response to actual or expected climate stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation and autonomous and planned adaptation. (IPCC, 2001)

# Climate Change: Mitigation and Adaptation



Source: IPCC

# Adaptation by Systems and Types

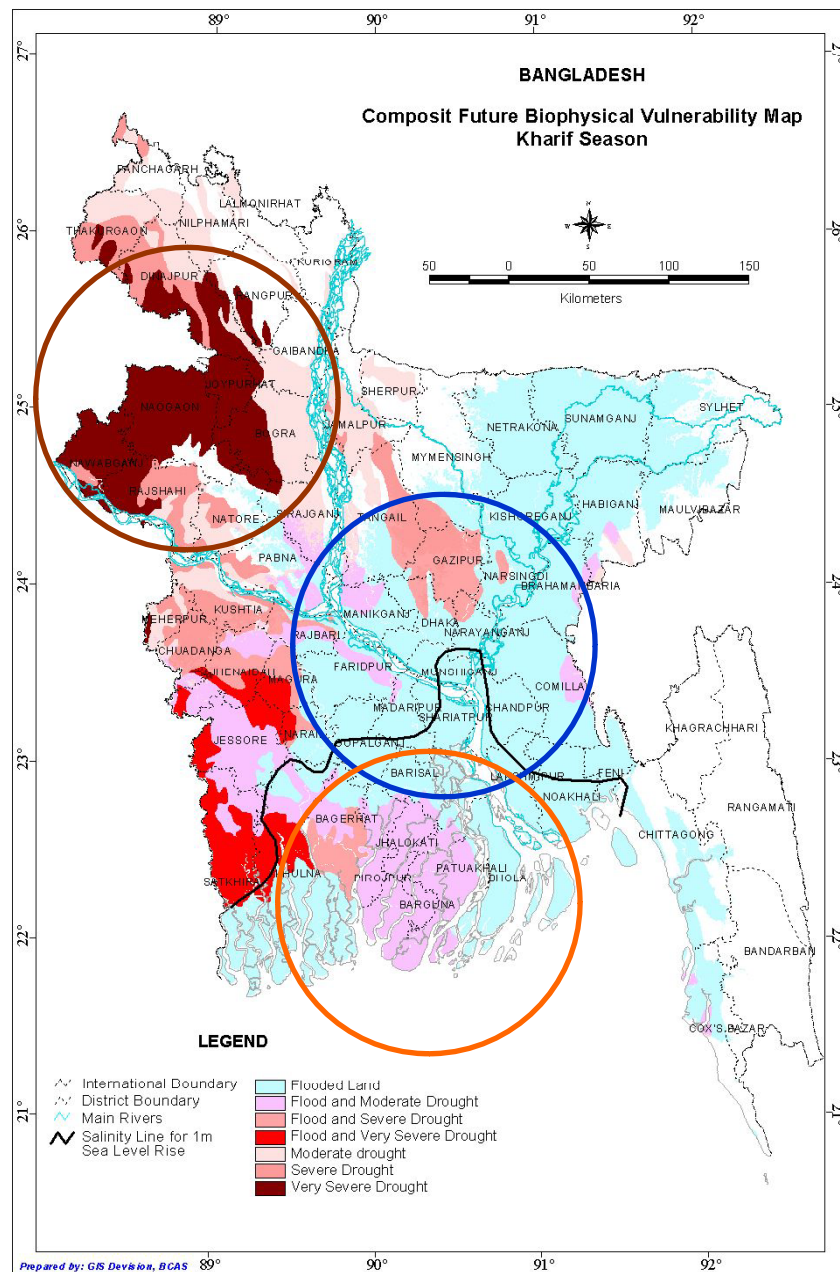
		Anticipatory	Reactive
Natural Systems		X	<ul style="list-style-type: none"> <li>· Changes in length of growing season</li> <li>· Changes in ecosystem composition</li> <li>· Wetland migration</li> </ul>
	Private	<ul style="list-style-type: none"> <li>· Purchase of insurance</li> <li>· Construction of house on stilts</li> <li>· Redesign of oil-rigs</li> </ul>	<ul style="list-style-type: none"> <li>· Changes in farm practices</li> <li>· Changes in insurance premiums</li> <li>· Purchase of air-conditioning</li> </ul>
Human Systems	Public	<ul style="list-style-type: none"> <li>· Early-warning systems</li> <li>· New building codes, design standards</li> <li>· Incentives for relocation</li> </ul>	<ul style="list-style-type: none"> <li>· Compensatory payments, subsidies</li> <li>· Enforcement of building codes</li> <li>· Beach nourishment</li> </ul>

Source: IPCC



# Problems varies and adjustment is necessary

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



# Issues Related to Climate Change and Security

- ❖ Food Security
  - ❖ Availability
  - ❖ Affordability
  - ❖ Access
- ❖ Water
  - ❖ Availability (Quantity and Quality)
  - ❖ Human health
  - ❖ Ecosystem and Biodiversity
- ❖ Migration
  - ❖ Within and Outside

# Current Climate Change Adaptation Research in Bangladesh

- Study and Research on Identification of Adaptation Options
  - A number of national level impacts, vulnerability, and adaptation including National Adaptation Programme of Action (NAPA)
  - Several research on sectors and regions – agriculture, coastal, etc
- Examples, Identification of adaptation options in NAPA
  - Physical intervention type – Coastal afforestation,
  - Research types – variety development – drought and salinity,
  - Knowledge generation types – ecosystem based coping
  - Policy and institutional types (enabling environment)



# Current Climate Change Adaptation Research in Bangladesh

- Example of adaptation for agriculture sector
  - Crop and agricultural adjustment – identification and demonstration
  - Irrigation – issue is future availability of water to serve the same area, technological intervention
  - Innovative practices – coastal, floodplain, drought prone
- Example of adaptation for water sector
  - Mostly infrastructural intervention – embankment and drainage management
  - Participation of community in management and maintenance



# Current Climate Change Adaptation Research in Bangladesh

- Action Research – livelihood and disaster risk reduction
  - RVCC (coastal), FAO (drought), BCAS-CARITAS (drought and coastal), GUK (flood and char land), Climate Change Cell with partners
  - New Action Research – ecosystem and livelihoods, IIED, BCAS with local partners
- Policy Research – Integration and mainstreaming
  - Capacity building, policy brief, tool development
- Knowledge Generation and Gap Filling
  - Climate Change Cell – present phase and next phase
  - Awareness raising
  - Mainstreaming



# Current Climate Change Adaptation Research in Bangladesh

## ■ Next Step

- Understand autonomous versus planned adaptation;
- Advantages and disadvantages from the social, environmental, and economic perspectives;
- Economic costs and benefits of implementing adaptation option;
- Challenges to implementation and ensuring adoption by rural communities;
- Uncertainties and risks associated with effective implementation;
- Effectiveness of each adaptation option against scale of the problem;
- Identification of knowledge gaps that need to be filled to ensure effective implementation.



**Thank You**

