


# Formulation of the Bangladesh National Action Programme for Adaptation to climate change

Water, Coastal area, Natural disasters & Health component



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# Background

History shows that temperature is in a rising trend over the decade, which is leading toward climate changes and environmental variability in Bangladesh.

The consequences are:

- Environmental degradation (shock, trend, and fluctuation)
- Global Warming (glacial melting, rise of sea level, etc)

This largely affects the water sector by quality and quantity to support human life and habitat for eco-system

- Impact on livelihoods (less opportunity, loss of income, etc)

GoB considers climate change issues to be the integral part of the National development plan to reduce vulnerability by mainstreaming adaptation to climate change, particularly extreme events.

Thus there is a need for an Adaptation Plan to Climate change

# Objectives and Outputs

## Objectives:

- Formulation of National Adaptation Program of Action
- Development of a country wide program (immediate and urgent need) for this sub-sector through consultation process in accordance with NAPA guidelines

## Output:

- A document on National Adaptation Program of Action in Water, coastal area, natural disasters and health


# Sectoral Working Groups

- The sectoral working groups are:


Sector	Coordinator	SWG members
Agriculture, Fisheries & Livestock	BARC	DAE, DOF, BRRRI, BMD, DOL
Forestry, Biodiversity and Land Use	IUCN	DOF, BMDA, DOE, SRDI
Water, Coastal Area, Natural Disaster and Health	WARPO	BWDB, DMB, NIPSOM, SPARRSO, BMD, BCAS, CSD
Livelihood, Gender, Local Governance and Food Security	BIDS	DU (Soil & Env), BUP, FEJB, GBS
Industry and Infrastructure	DOE	BOI, BUET (civil), BCAS, LGED
Institutional and Policy Issues	BCAS	IUCN, BCAS, North South University

# Members of Water, Coastal area, Natural disaster and Health

1. Dr. Nilufa Islam Coordinator, PSO, WARPO	9. Mr. GJN Murshed SSO (Socio-Economic), WARPO
2. Mr. Md. Akram Hossain Member Director, BMD	10. Mr. Saiful Alam SSO (Water Resources), WARPO
3. Mr. Abul Kalam PSO, SPARRSO	11. Mr. Khalilur Rahman Executive Director, BUP
4. Professor Sk. Akhter Ahmed Occupational Health, NIPSOM	12. Mr. Ahmadul Hassan Technical Advisor, CEGIS
5. Begum Shahanara Khaton Deputy Director, DMB	13. Mr. S.M. Mahbubur Rahman Principle Specialist and Head, WRP Division, IWM
6. Mr. Md. Abdul Latif Miah Executive Engineer, BWDB	14. Dr. Rezaur Rahman Associate Professor, IWFM, BUET
7. Mr. Mozaharul Alam/Mr. Golam Rabbani, Research Fellow, BCAS	15. Mr. Md. Ekram Ullah Member Secretary, SSO (Fisheries), WARPO
8. Mr. Mahfuz Ullah Secretary General, CSD	

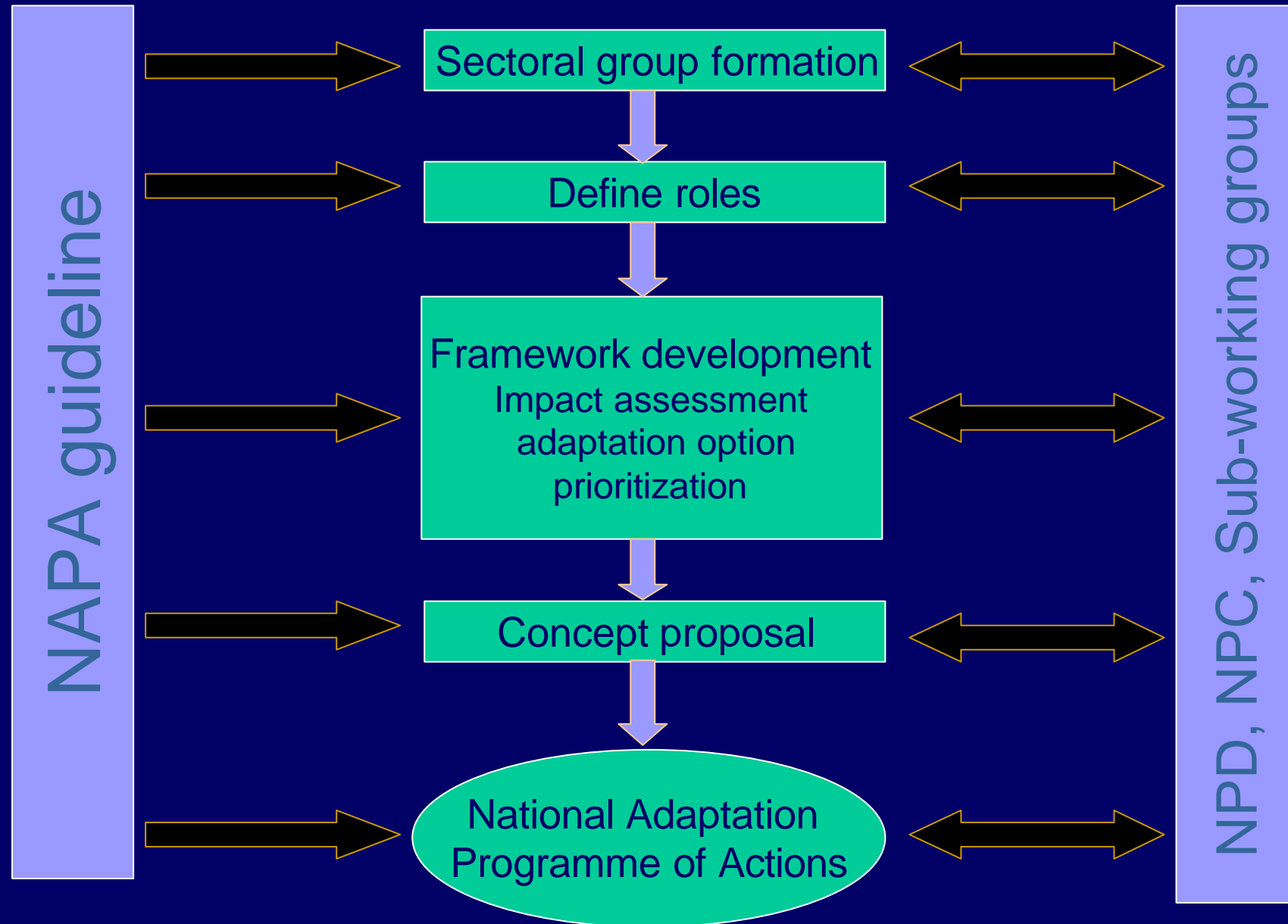


# Tasks of Water, Coastal Area, Natural disaster and Health sector



- Communicate with NPD, NPC and other sub-working groups
- Develop Framework to assess the possible impacts, vulnerability and adaptation options
- Incorporate feedback from stakeholders
- Prepare adaptation projects using developed screening criteria for facilitating sustainable developments
- Provide inputs to NAPA through sub-working group co-coordinators

# Activity diagram



## Framework in accordance with NAPA guideline for Water, Coastal area, Disaster and health sector

Climate Elements	Physical changes	Possible impacts	Exposed sectors	Possible Adaptation Measures	Intervention priority (1-10)
Change in Temperature					
Heavy Rainfall					
Less rainfall					
Sea Surface Temperature					

## Framework in accordance with NAPA guideline for Water, Coastal area, Disaster and health sector

Climate Elements	Physical changes	Possible impacts	Exposed sectors	Possible Adaptation Measures	Intervention priority (1-10)
Change in Temperature	Increase in Temp.	<ul style="list-style-type: none"> <li>- Increased Evaporation</li> <li>--lowering of physical capabilities</li> <li>--increased water demand</li> <li>--increased pumping costs</li> <li>--heat stress increased for slum areas</li> </ul>	Water, Health	Reservoir, Afforestation	
	Ultra-violet radiation	<ul style="list-style-type: none"> <li>-Increased skin cancer</li> <li>-accelerate eye cataracts</li> <li>-reduced immune system</li> </ul>	Health		

## Framework in accordance with NAPA guideline for Water, Coastal area, Disaster and health sector

Climate Elements	Physical changes	Possible impacts	Exposed sectors	Possible Adaptation Measures	Intervention priority (1-10)
Heavy rainfall	Flood (magnitude and intensity)	-increased water logging, drainage congestion -loss in income and GDP  -increased livestock disease	Water, Disaster  Disaster and others	Improve drainage management structures (re-excav of channels),	
	Sedimentation and erosion	-navigation disruption -water management structure operation will be vulnerable -loss of infrastructure	Water	Dredging	
	Environment	-encourage vector borne disease (Malaria, dengue..)	Health	Public awareness, medical outreach programmes	

## Framework in accordance with NAPA guideline for Water, Coastal area, Disaster and health sector

Climate Elements	Physical changes	Possible impacts	Exposed sectors	Possible Adaptation Measures	Intervention priority (1-10)
Less rainfall	Drought (magnitude and intensity)	<ul style="list-style-type: none"> <li>-loss of crop production</li> <li>-increased unemployment</li> <li>-internal migration will increase</li> <li>-increased child malnutrition</li> <li>-desertification</li> </ul>	Agriculture, Water, Disaster, Health	Reservoir Afforestation	
	Low flow	<ul style="list-style-type: none"> <li>-navigation disruption</li> <li>-fish migration disruption</li> <li>-less availability of Irrigation water</li> </ul>	Water, Agriculture	Barrage, Dredging	
	Environment	<ul style="list-style-type: none"> <li>-increased water pollution</li> <li>-increase in salinity (GW,SW)</li> </ul>	Water, Health	Public awareness, medical outreach programmes	

## Framework in accordance with NAPA guideline for Water, Coastal area, Disaster and health sector

Climate Elements	Physical changes	Possible impacts	Exposed sectors	Possible Adaptation Measures	Intervention priority (1-10)
Sea Surface Temperature	Sea level rise	Prolonged flooding Increase in salinity intrusion Change in land use Loss of beach area	Water, Tourism		

# Activity Schedule

Activities	Time
Formation of Sub Working Group	September 2004
Inception Report <ul style="list-style-type: none"><li>■ ToR for Sub-working group</li><li>■ Framework developed</li><li>■ Outline prepared</li></ul>	October 2004
Interim Report	November 2004
Consultation Workshop	January 2005
Draft Sectoral Report	May 2005
Consultation Workshop	June 2005
Final Report	June 2005

# Outline of Inception Report

## Chapter 1 Introduction and background.....

- 1.1 Problem Statement.....
- 1.2 Objectives and outputs.....
- 1.3 Target Beneficiaries.....
- 1.4 Approach.....
- 1.5 Team 3.....
- 1.6 Scope of the report.....

## Chapter 2 Project scope and design.....

- 2.1 Formulation of sectoral coordination group.....
- 2.2 Role of partners of sectoral group.....

## Chapter 3 Assessing and characterizing current vulnerability and future climate risk.....

- 3.1 Current and future climate risk.....
- 3.2 Development of framework on vulnerability and adaptation relevant to Bangladesh.....
- 3.3 Participatory assessment of vulnerability to current climate variability and extreme weather events.....
- 3.4 Adaptation barriers and opportunities.....

## Chapter 4 Developing an adaptation strategy.....

- 4.1 Climate change adaptation strategies.....
- 4.2 Formulation of adaptation options strategy.....

## Chapter 5 Overall Work Plan.....

- 5.1 Operational system.....
- 5.2 Activity Schedule.....
- 5.3 Costing.....
- 5.4 Linkage with other program.....



Thank You