

# Climate Change and Bangladesh: Optimization of Projects for LGED

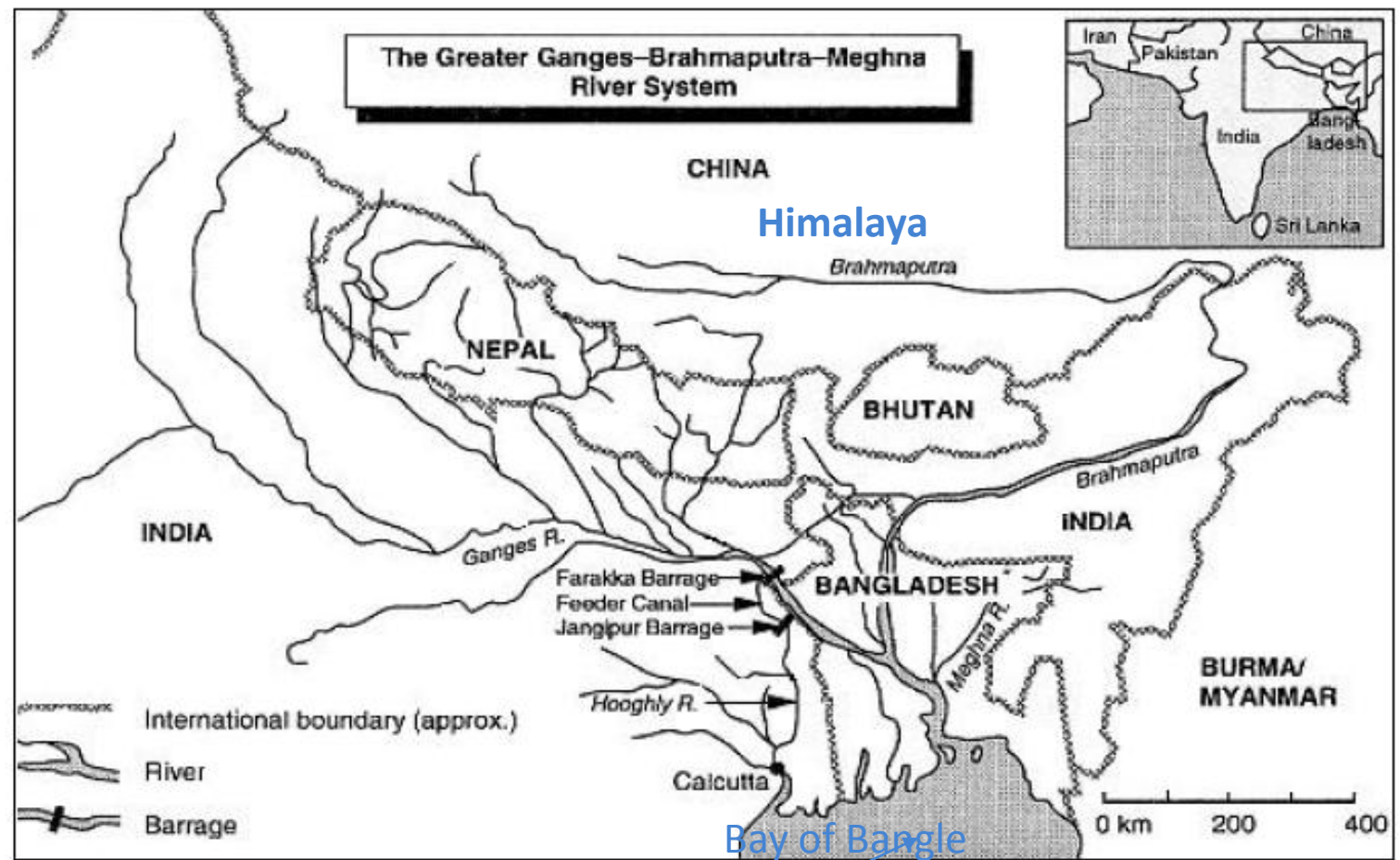


Monzur Sadeque  
Executive Engineer (Planning), LGED

# Scope of the Presentation

- LGED & Climate Change Adaptation Projects
- Unutilized & Underutilized Potentials
- Scopes of Different Sectors
- LGED's Responsibilities
- Near Future Projects





A **Sand witch** Country between the Mountain and the Sea

# Background

- The country is **lying in front of** natural disasters ; flood and cyclone storms
- Climate change impacts increasing natural disasters with other impacts like **sea level rise, salinity intrusion, draught, extreme weather, erosion, drainage congestion etc.**



# Background

- The country is **vulnerable** to climate change due to climatic, physiographic and socio economic factors like **population, low income, poor resource management** etc.
- Needs solution of present problems as well as future anticipated problems.....



# প্রথম আলো অর্থনীতি

উন্নয়নের বিষয় বাংলাদেশ

শওকত হোসেন | আপডেট: ০৩:১৫, জানুয়ারী ০১, ২০১৪ | প্রিন্ট সংস্করণ

What are the

# Risks ?

# Mainstreaming the Risks

- In 1990s- WOMEN IN DEV. (WID)
- In 2000s- Environment & Sustainable Development
- In 2010s- Climate Mainstreaming

# Climate Change Projects-LGED

Name of the Project and Estimated Cost (Crore Tk)	Financed By	Area
CDTA/ PPTA/PDA for Coastal Towns Infrastructure Improvement Project (3 projects) 48.52	ADB (Climate Investment Fund)	Amtoli, Galachipa, Pirozepur, Mathbaria, Daulatkhan, Bhola, Kalapara, Barguna
Coastal Towns Infrastructure Improvement Project 876.00	ADB (CIF)	-Same-



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# Climate Change Projects-LGED

Name of the Project & Estimated Cost (Crore Tk. )	Financed By	Area
WFP Assisted <b>Disaster Risk Reduction</b> Project (Enhancing Resilience...) 1038.00	WFP	Kurigram, Gaibandha, Sirazgonj, Pabna, Jamalpur, Lalmonirhat, Chapai, Natore, Rajshahi
Coastal Climate Resilient Infrastructure Improvement Project (CRIIP) 1230.00	ADB (CIF)	Barisal, Bhola, Pirozpur, Jhalkhati, Patuakhali, Barguna, Khulna, Bagerhat, Satkhira, Gopalganj, Sariatpur, Madaripur
Climate Adaptation Pilot Project (Follow up of RRMAIDP) 20.70	DANIDA	Amtali, Rangabali, Hatia, Ramgati Upazila

# Climate Change Projects-LGED

Name of the Project & Estimated Cost ( Crore TK.)	Financed By	Area
বাংলাদেশের নির্বাচিত উপকূলীয় বিপদাপন্ন এলাকায় জলবায়ু সহনীয় অবকাঠামো উন্নয়ন 24.98	Climate Change Trust Fund (BCCTF)	Rangunia Upazila (80%), Roazan, Chakaria, Teknaf, Companiganj, Noakhali Sadar , Bhola,
মুন্সীগঞ্জ জেলার পশ্চিম গাঁওদিয়া জামে মসজিদ হতে বেজগাঁও পূজা মন্দির সড়ক কাম বেড়িবাঁধ নির্মাণ প্রকল্প , 2.0	Climate Change Trust Fund (BCCTF)	Munsigonj District
জামালপুর জেলার ইসলামপুর উপজেলায় ইসলামপুর-গুটাইল সড়ক উন্নয়ন ও স্লোপ প্রোটেকশন	Climate Change Trust Fund (BCCTF)	Islampur Upazila; Jamalpur

# Climate Change Projects-LGED

Name of the Project & Estimated Cost ( Crore TK.)	Financed By	Area
Emergency Cyclone Rehab & Restoration Project- 2 <sup>nd</sup> Phase  200.0 Crore	Bangladesh Climate Change Resilience Fund (BCCRF)  Challenized by World Bank	Coastal Districts of Barisal & Khulna

# The GAPS .....

- Water Sector has no project
- Livelihood sector could have more projects
- One project under World Bank support is going to be launched
- Noakhali, Laxmipur, Chittagong, Cox's bazar coastal belt has got little attention yet
- Most of the Projects are Traditional; donors are searching 'OUT OF the BOX thinking'



# SOURCES of FUND

- Bangladesh Climate Change Trust Fund (BCCTF) ; LGED has only 3 projects worth 30 Crores out of 2100 Crores.
- Bangladesh Climate Change Resilient Fund (BCCRF) ; One Project , 2<sup>nd</sup> phase of ECCRRP
- Climate Investment fund ; jointly operated by World Bank, ADB, IDB, African DB etc ; 2 projects of ADB , one under preparation WB



# Bangladesh Climate change Trust Fund

# **SPECIAL FEATURES**

- **BCCTF was created under Climate Change Trust Act 2010**
  - **To implement BCCSAP 2009**
  - **To finance small-scale projects related to climate change;**
  - **Financial limit, less than 25 Crore**

# BCCTF

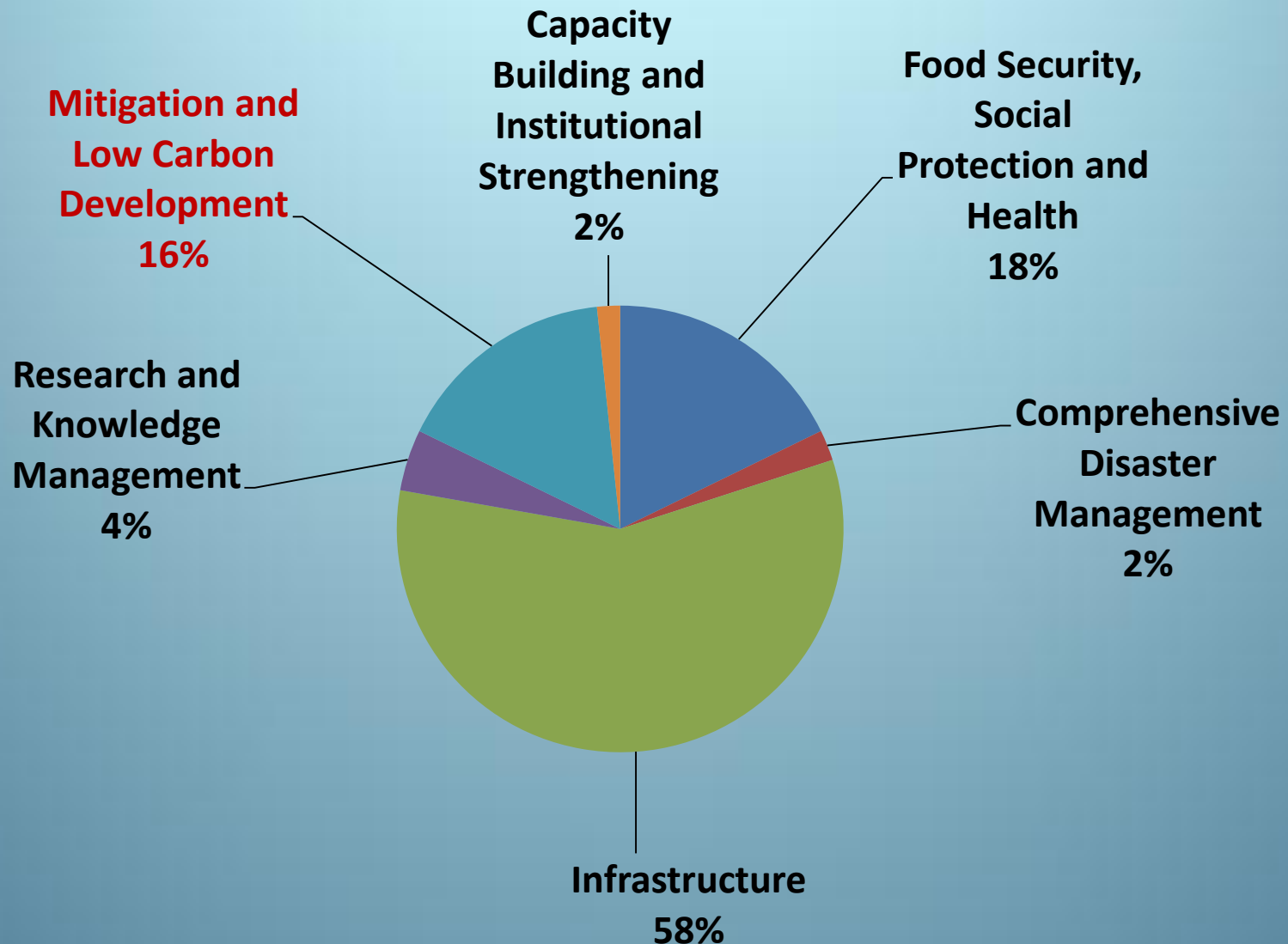
- **6 thematic areas: based on priority and urgency**
  - **Food Security, social protection and health;**
  - **Comprehensive disaster management**
  - **Infrastructure**
  - **Research and knowledge management**
  - **Mitigation and low carbon development**
  - **Capacity building and Institutional strengthening**
- **44 programmes**

# BCCTF FUND STATUS

- **US\$ 385 Million ( Around 3080 Crore) allocated during 5 fiscal years;**
  - 66% for funding projects
  - 34% reserved for responding to emergencies
- **As of October 2013**
  - 257 projects approved
  - 32 projects completed
  - 63 NGO projects
- **LGED has 3 projects worth 30 Crore**



# Thematic Area-wise Project



# NOTABLE WORKS DONE/IN PROGRESS

## Adaptation:

- **Construction, rehabilitation and repair of 142 Kilometer embankments**
- **6760 houses constructed for climate vulnerable people**
- **535 km Excavation and re-excavation of canals**
- **Protection of River Bank 122 km**
- **166 km drainage improvement in municipalities**
- **44 Water control infrastructure (regulator, sluice gate)**
- **740 deep tube wells for safe drinking water installed**
- **550 rain water reservoirs**
- **Agro-met stations in 4 upazilas**

# NOTABLE WORKS DONE / IN PROGRESS

## Mitigation:

- 143. 35 million trees planted all over the country
- **Reforestation of 4971 hectare barren forest lands**
- 12872 poor households in remote areas installed solar home systems
- 12872 poor households in remote areas installed solar home systems
- **Improved cooking stove: 528000**

# **Institutional Arrangement : BCCTF**

- **Trustee Board**
  - **Headed by Honourable Minister, MoEF**
  - **10 Ministers; 4 Secretaries; Governor, Bangladesh Bank and 2 professionals from civil society**
- **Technical Committee**

# Fund Release Procedure





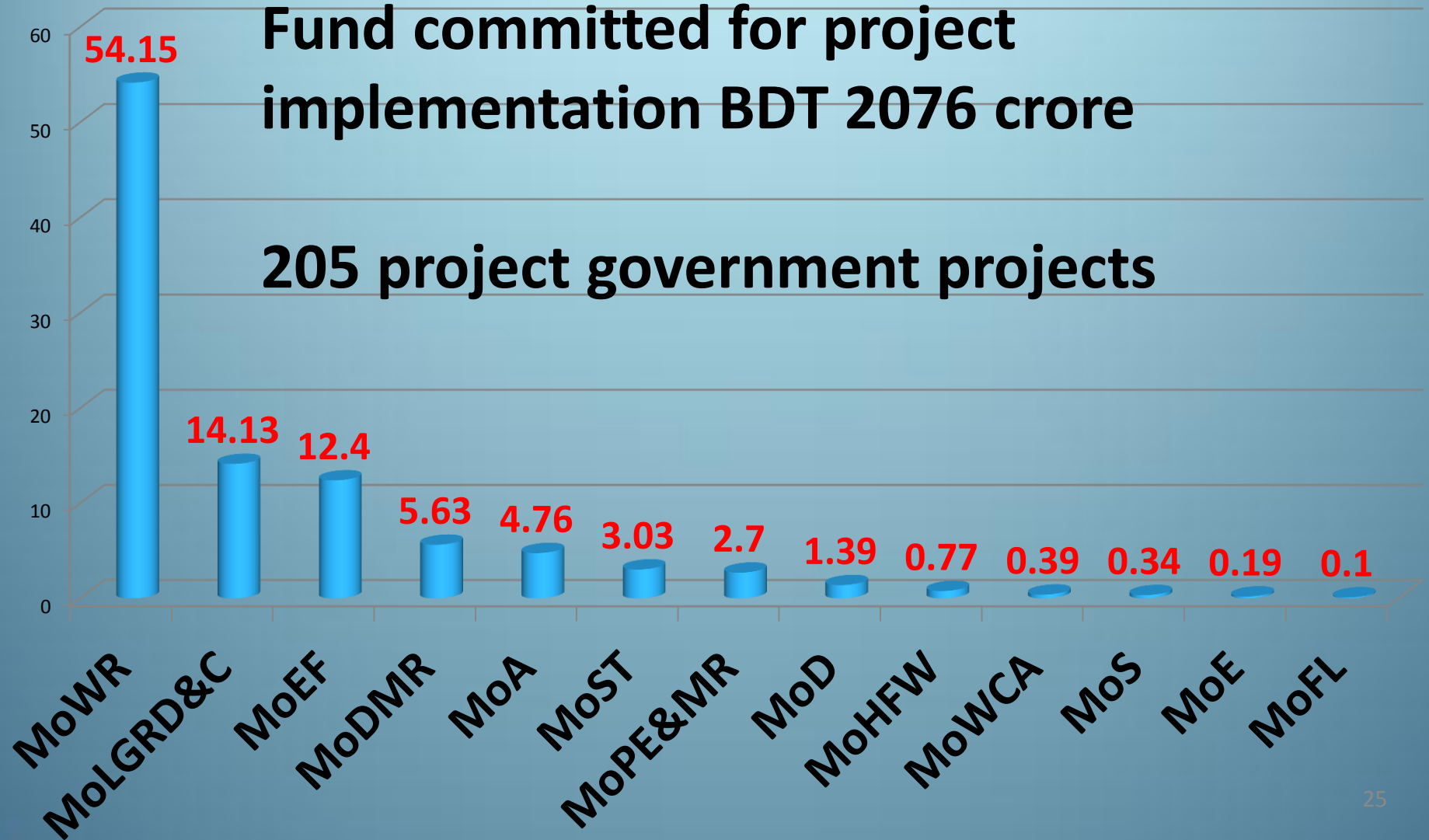
# Project Implementation

- **Line ministries are, by law, responsible for implementation through**
  - **Project Office**
  - **Project Implementation/Steering Committee**
- **Specific Guidelines for Project Management**
  - **Guideline for Government agencies**
  - **Guideline for Nongovernment organizations**
- **Procurement through existing rules**
  - **Public Procurement Rules 2008**
- **Existing relevant financial rules are mandatory**

# BCCTF Ministry wise Fund Allocation (as of November 2013)

**Fund committed for project implementation BDT 2076 crore**

**205 project government projects**





Bangladesh  
Climate Change  
Resilience Fund

# Development Partners for BCCRF

- Denmark
- EU
- Sweden
- UK
- Switzerland
- Australia
- USA



# BCCRF at a glance

- High Level Governance Structure
  - Governing Council: Headed by Honorable Minister, MoEF
  - Management Committee: headed by Secretary, MoEF
- Satisfactory performance to date
- Effective and transparent mechanism of project selection
- Projects selected from multi-sectoral line ministries
- Oversight of projects by World Bank on Fiduciary, Safeguards and Technical aspects
- Ongoing efforts to establish a secretariat within Government to enable transfer of Fund management responsibilities in the medium term
- Unique NGO window for 10% of Fund





# BCCRF Approving Authority: Governing Council

## *Members:*

- a) Minister, Ministry of Environment and Forests (**Chairperson**)
- b) Minister, Ministry of Finance
- c) Minister, Ministry of Food and Disaster Management
- d) Minister, Ministry of Foreign Affairs
- e) Minister, Ministry of Water Resource
- f) Secretary, Ministry of Environment and Forests (**Member Secretary**)
- g) Secretary, ERD, Ministry of Finance
- h) Secretary, Finance Division
- i) Secretary, Ministry of Planning
- j) Representative from Contributing Development Partners-1
- k) Representative from Contributing Development Partners-2
- l) Representative from Civil Society-1 (Nominated by the Government of Bangladesh)
- m) Representative from Civil Society-2 (Nominated by the Government of Bangladesh)
- n) Country Director of the World Bank

# BCCRF Management Committee

## *Members:*

1. Secretary, MOEF - **Chair**
2. Additional Secretary (World Bank), ERD
3. Member, Planning Commission
4. Two representatives from contributing DPs5- with one DP vote (and the other DP observer)
5. Representative from the WB
6. One Representative from civil society
7. Joint Secretary (Development), MOEF – as the designated contact point

# Projects under Implementation

- Multipurpose Cyclone Shelter Construction Project (US\$25m)
- Climate Resilient Participatory Afforestation and reforestation (US\$33.8 m)
- Community Climate Change Project (US\$ 12.5 m)
- Solar irrigation expansion (US\$25 m)

- ## Projects under Preparation

- Agricultural Adaptation in Climatic Risk Prone Areas of Bangladesh (US\$22.8 m)
- Modern Food Storage Facility (US \$25 m)
- Capacity Building Project (US \$5.5 m)

## Research Studies

- Impact of CC on Vector-borne disease (US\$0.3 m)
- Impact of CC on Urban flood (US\$0.5 m)
- Urir Char Cross Dam feasibility (US\$0.7 m)
- Adaptation in flood risk mitigation (US\$0.3 million)
- Resilience to natural hazards (US\$0.2 million)
- Spatial and temporal downscaling of climate data (US\$0.3million)

# Enhancing Disaster Preparedness

## Expected Results

- 61 new cyclone shelters; 11.5 km access roads, improvement of 30 existing cyclone shelters



## Progress

All Contracts awarded.  
Completion expected by June 2014

Local level design consultations took place

The construction of multipurpose disaster shelters have been 60% completed.

## NGOs in BCCRF



- 10% of BCCRF grants to NGOs.
- Palli Karma-Sahayak Foundation (PKSF) as coordinating agency.
- Project called community climate change project (CCCP) became effective in December 2012
- To date, has funded 11 sub-projects
- Focus on most vulnerable zones:
  - saline- affected Coastal zones;
  - flood-affected areas and Charlands;
  - drought-affected areas in Northwest.
- Promote NGO capacity building, monitoring, and dissemination of lessons learned.



# Climate Investment Funds



# Climate Investment Fund (CIF); Largest Scope

- 14 Donor countries in Management Partnership with the World Bank, ADB, African DB, IDB
- Helping 48 middle income and developing countries
- Four themes;
  - Clean Technology Fund
  - Forest Investment Program
  - Climate Resilience Program
  - Scaling up Renewable Energy Program





# Bangladesh and Climate Investment Fund (CIF)

- Among the 48 countries, more than 35 of them are of small population. So, Bangladesh should get more attention and support.
- In Clean Technology Fund, Yet no project for Bangladesh.
- In Climate Resilience Fund, LGED has two projects. RHD or BWDB has none.
- In Forest Investment Program, Forest Department of Bangladesh has 1 project.

# Potential Projects for LGED

## Plans to follow:

- National Water Management Plan, 1999
- Bangladesh Climate Change Strategy & Action Plan, 2009 (BCCSAP,2009)

# Bangladesh Climate Change Strategy & Action Plan, 2009

## Proposed Projects:

- Repair and rehabilitate existing infrastructure (e.g., coastal embankments, river embankments and drainage systems, urban drainage systems) and ensure effective operation and maintenance systems

# BCCSAP, 2009

- Plan, design and construct urgently needed new infrastructure (e.g., cyclone shelters, coastal and river embankments and water management systems; urban drainage systems, river erosion control works, flood shelters) to meet the changing conditions expected with climate change

# BCCSAP, 2009

- Undertake strategic planning of future infrastructure needs, taking into account the likely (a) future patterns of urbanisation and socio-economic development; and
- (b) **the changing hydrology of the country, because of climate change**



# BCCSAP, 2009

- Strengthen community-based adaptation programmes and establish them in each of the disaster prone parts of the country



## BCCSAP, 2009

- Formulation of land zonation for climate change adaptation in Bangladesh by Ministry of Land and Ministry of Local Government;  
( Working on LGED Upazila Plan Book for land Use Management )



# উপজেলা পরিকল্পনা বই

# ইউনিয়ন পরিকল্পনা বই

জনসংখ্যিক সারাংশ  
বাংলাদেশ



# National Water Management Plan, 2002



# Agriculture and Water Management Programmes

AW 001 Promotion of Expanded Minor Irrigation and Improved On-farm Water Management

AW 002 Improved Performance of Existing Surface Water Irrigation Schemes

AW 003 New Surface Water Irrigation Schemes

AW 005 Improved Water Management at Local Government Level

AW 007 Rationalization of Existing Inland and Coastal FCD Infrastructure

AW 008 Land Reclamation, Coastal Protection and Afforestation

# Improved Water Management at Local Government

## IWRM and its Relations to Sub-sectors



# Environment and Aquatic Resources Programmes

EA 003 National Water Quality Monitoring

EA 004 National Fisheries Master Plan

EA 005 National Fish Pass Programme

EA 007 Improved Water Management in the Haor Basins of  
the North East Region

EA 009 Improved Water Management and Salinity Control in the  
Sundarbans

# National Water Quality Monitoring



# Disaster Management Programmes

## Infrastructural development

DM 001 Cyclone Shelters and Killas

DM 002 Bari-level Cyclone Shelters

DM 003 Flood Proofing in the Charlands and Haor Basin

DM 004 National, Regional and Key Feeder Roads  
- Flood Proofing

DM 005 Railway Flood Proofing

DM 006 Supplementary Irrigation and Drought Proofing of Rural  
Water Supplies



# Main Rivers Programmes

## Infrastructural development

- MR 001 Main Rivers Studies and Research Programmes
- MR 002 Main Rivers Abstraction Projects
- MR 003 Ganges Barrage and Ancillary Works
- MR 004 Meghna Barrage and Ancillary Works
- MR 005 Brahmaputra Barrage and Ancillary Works
- MR 006 Regional River Management and Improvement

# Main Rivers Programmes

MR 007 Ganges Dependent Area Regional Surface Water  
Distribution Networks

MR 008 North East and South East Regional Surface Water  
Distribution Networks

MR 009 North Central and North West Regional Surface Water  
Distribution Networks

MR 010 Main Rivers Erosion Control at Selected Locations

MR 011 River Dredging for Navigation

MR 012 Hydropower Development and Upgrading



# Towns and Rural Areas Programmes

TR 001 Urban Arsenic Mitigation

TR 002 Rural Arsenic Mitigation

TR 004 Rural Water Supply and Distribution Systems

TR 005 Large and Small Town Sanitation and Sewerage Systems

TR 006 Rural Sanitation

TR 007 Large and Small Town Flood Protection

TR 008        Large and Small Town Storm water  
Drainage

# Institutional Development Programmes

- ID 001      Local Government Needs Assessment for Water Management
- ID 003      FCD and FCD/I Management Rationalisation
- ID 005      Local Government Capacity Building for Water Management

# Local Govt. Need Assessment & Capacity Development for Water Management



# Enabling Environment Programmes

EE 001 Support to the Preparation of New Legislation

EE 002 Field Testing of Participatory Management Models

EE 003 Water Resources Legislation - Preparation of Supporting Ordinances

EE 004 Project Preparation Procedures - Guidelines and Manuals

EE 005 Regulatory and Economic Instruments

EE 006 Field Testing and Finalization of the Guidelines for Participatory Water Management

EE 007 NWRD Improved Data Collection and Processing Facilities

# Enabling Environment Programmes

EE 008 Water Resources Management Research and Development Studies

EE 009 Water Resources Management Long Term Research and Development

EE 010 Raising Public Awareness in the Wise Use and Management of Water

EE 011 Private Sector Participation in Water Management

EE 012 Water and Environment Funds

EE 013 Alternative Financing Methods for Water Management

# Other Potential Projects within the scope of BCCSAP, NWMP

## Urban Sector

- Urban Transport Project (Low carbon emitting mass communication such as BRT) ; Mitigation or Clean Technology
- Riverine Transport Development Project (Mitigation or Clean Technology Project)
- Urban Drainage

# Potential Projects within the scope of BCCSAP, NWMP

- Rural Sector
- Construction of Jetty and Improvement of Riverine Transport (Mitigation + Adaptation)
- Cyclone Shelter connecting road maintenance



# Potential Projects within the scope of BCCSAP, NWMP

## Water Sector

- Rehabilitation/ Climate Adaptation of Water Resources structures
- Efficiency Improvement of Existing Water Resources Projects
- Capacity Development/ Water Management at Upazila level
- Canal Re-Excavation for climate adaptation



# Conclusion

- Water Sector has high potential for Projects
- Rural, Urban, Livelihood sector also has more opportunities.
- The Future of the  
**country** depends on our  
response

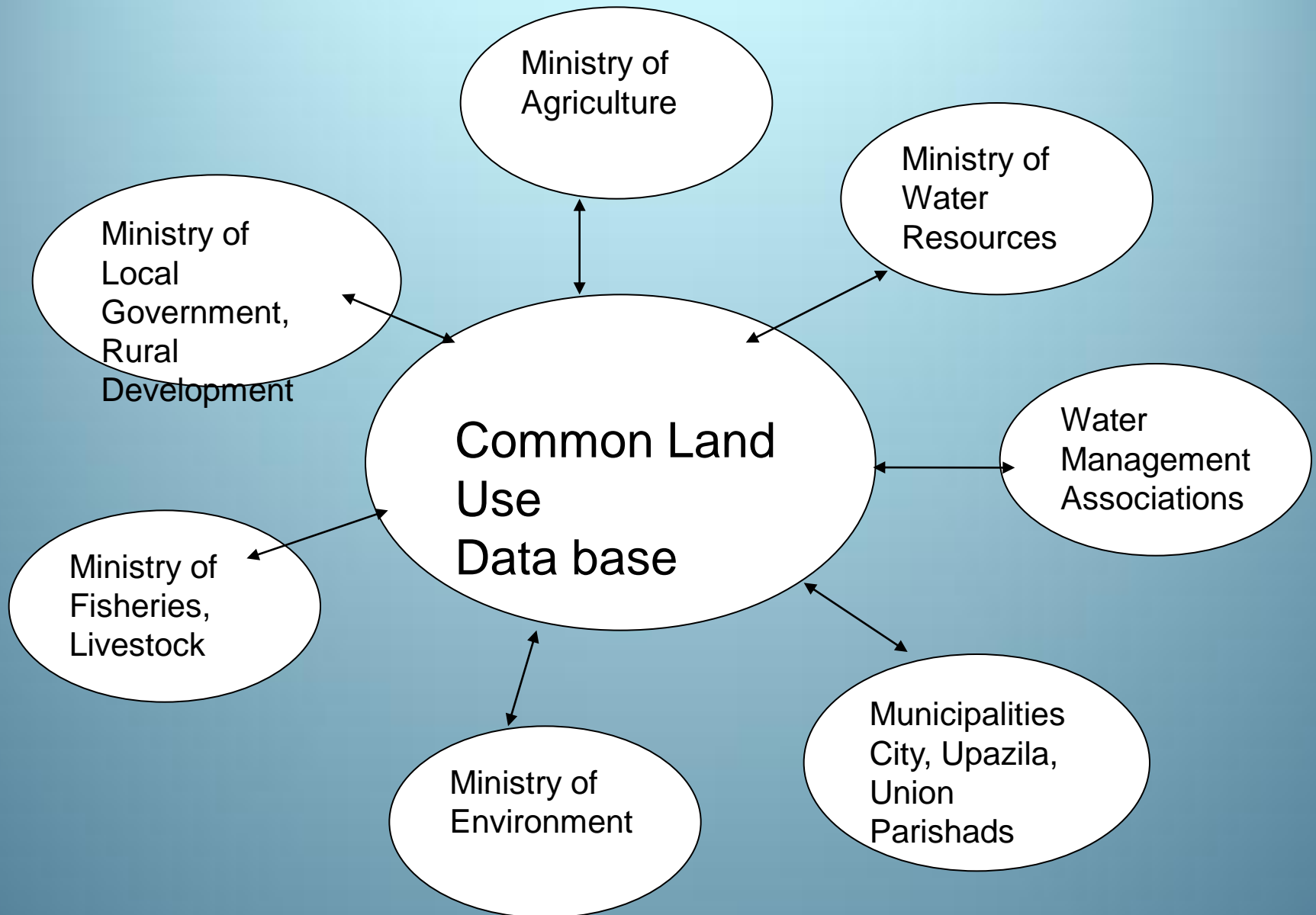
# Conclusion

## More Discussion:

- The output of PECM project of Planning Commission (Poverty, Environment & Climate Mainstreaming Project)
- Climate Change Project preparation formats
- Land Use Planning of Bangladesh & Upazila Plan Book
- Other project concept in details.

# Thank You





## Layers of database and uses

Layers of Database	User Ministry/ Agency	Remarks
Information of land, ownership, size	Ministry of Land/Ministry of Law & Justice/WMCA/Ministry of Agriculture	Ease land tax collection, land transfer, registration and judgment about ownership
Land use and cropping	WMCA/ Ministry of Agriculture/ Department of Statistics	Will help statistics and marketing
Payment of taxes/ irrigation levees	WMCA/ Ministry of Land/ Municipalities/ City etc	Ease collection of levee by WMCA and other taxes by municipalities
Record of use of pesticides/fertilizers	Ministry of Agriculture/fisheries/ Water Resources	Related agencies will be able to determine possible threats on aquatic environment
River/ Canal water quality	Ministry of Water Resources/ Local Government	Determine quality of aquatic environment & necessary response