

MAINSTREAMING ECOSYSTEM SERVICES FOR CLIMATE CHANGE ADAPTATION IN BANGLADESH: IMPLICATIONS FOR WEF NEXUS

NAZMUL HUQ

PHD RESEARCHER

**UNIVERSITY OF TRIER AND COLOGNE UNIVERSITY
OF APPLIED SCIENCE**

NAZMULHUQRUSSELL@GMAIL.COM

ECOSYSTEM SERVICES (ESS)

- **Benefits people obtain from ecosystems**
- **Human progress and wellbeing are vitally dependent on society's production base and capitals essentially generated through ESS**
- **Climate change adaptation and mitigation are now appeared as important contribution of ESS**

ECOSYSTEM SERVICES AND CLIMATE CHANGE ADAPTATION

Methods of ESS

- Restoring degraded natural areas
- Mangrove plantation
- Restoration of floodplains
- Climate tolerant varieties
- Protecting natural infrastructure



Benefits of ESS

- Preservation of genetic materials
- Water and water security
- Barriers to disaster
- Erosion prevention
- Conservation of biodiversity
- Drought prevention
- Regeneration of natural resources
- Empowerment of the rural poor
- Incorporation of indigenous knowledge
- Holistic approaches to development

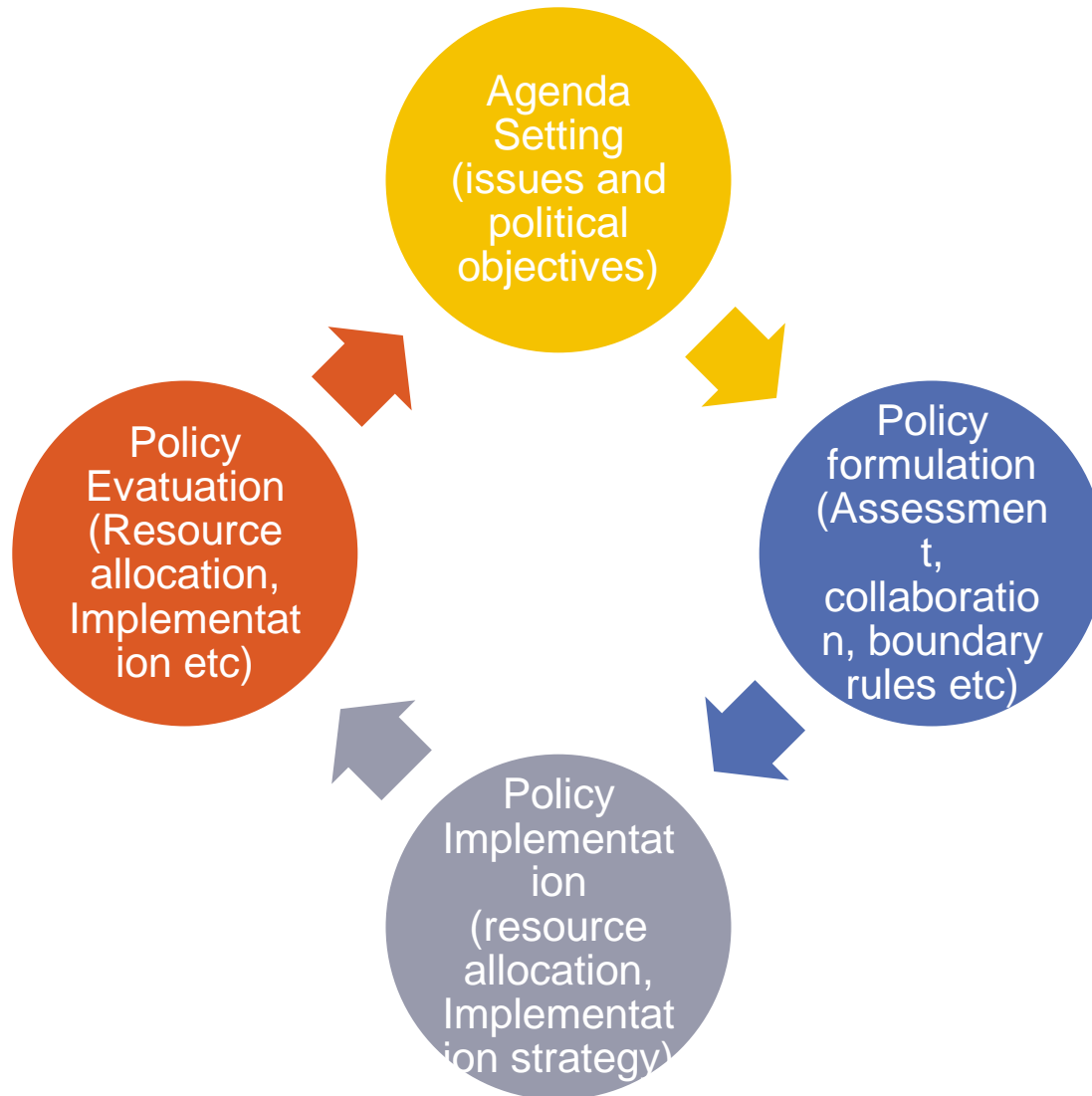
ESS AND CCA

- There are initiatives at global and national scale to ingrate ESS in CCA
- UNFCCC Durban Climate Change Conference - November 2011, SBSTA 35, UNCBD and NAPA at national scale
- Approximately 22 % of proposed NAPA projects linked with EbA
- ESS for robust societal adaptation, not only limited to ecocentricism
- ESS approaches to CCA can potentially ensure more sustainable outcomes than other adaptation approaches

MAINSTREAMING ESS APPROACH

- **Mainstreaming of ESS in adaptation and development planning foster sustainable planning and to comprehensively address the impacts of climatic extremes and variability**
- **CBD and UNFCCC encouraged parties to implement and integrate ESS into CC and development policies**
- **Mainstreaming of ESS in policies are increasingly being suggested (and happening)**
- **Little is known about the degree to which ESS is already applied in CCA and how it is integrated into existing planning and development processes**

ANALYTICAL FRAMEWORK



AGENDA SETTING: NATIONAL POLICIES

- 3 national development policies, 6th Five Year Plan (2011-2015), Perspective Plan of Bangladesh (2010-2021), and National Sustainable Development Strategy (2010-2021)
- Social forestry, improve river navigability, conserve and protect biodiversity, resilient agricultural varieties, coastal green belt and reducing soil erosion
- Regulating and provisioning services
- Livelihood, DRR and agriculture are key focus

Strategies	ESS outcome	Dimensions of ESS r		
		Livelihood	Agroecosystem	D
Conserve and protect the eco-system for biodiversity including expansion of protected areas ^{1,3}	Provisioning	++ +	++	-
Watershed management ¹	Provisioning, regulating	-	+++	-
Greater contribution of the forestry sector in the economic development including social and agro forestry ^{1, 2, 3}	Provisioning, regulating	++ +	+++	+
Facilities for eco-tourism and recreation ¹	Cultural, provisioning	++ +	-	-
Improve navigability and water discharge, and to reduce flood risks, a strategy of dredging, training and restoring the linking of rivers ^{2,3}	Regulating	++	+++	+
Readjusting crop calendar and diversifying will be strengthened and properly implemented for both rice and non-rice crops along with eco-friendly agricultural inputs ^{2, 3}	Provisioning	++ +	+++	+
Emphasize rainfed paddy cultivation such as flood tolerant Aman and drought resistant Aus cultivation ³	Provisioning	++ +	++	-
Introduce green building concept ³	Regulating	-	-	-
Preserve the wetlands and natural ecosystems in and around cities ³	Regulating	-	-	-
The flood flow zones and flood water retention areas around and inside major flood affected areas ³	Regulating	-	-	+
The surface water system should be restored by re-establishment of the links between various components of the river-floodplain ecosystem ³	Regulating, provisioning	-	++	+
An ecosystem approach should be adopted for water resources management of the country ³	Provisioning	+	++	+
The proposed Delta Plan-2100 can be entrusted to formulate a river management plan for Bangladesh in an eco-friendly manner ³	Provisioning, Regulating	+	++	+
Protection and wise use of wetland and wetland resources ³	Provisioning, Regulating		+++	-
Continue coastal greenbelt ^{1, 3}	Regulating	++	-	+
Develop other instruments for disaster risk reduction including formulation of Ecosystem based Detailed Area Planning for urban areas	Regulating	-	-	+

AGENDA SETTING: NATIONAL POLICIES

- **Bangladesh Climate Change Strategy and Action Plan (2009)**
- **151 different number of actions proposed under six major thematic areas**
- **BCCSAP recognized the role of ecosystem and natural services in climate change adaptation and resilience**
- **19 actions could be flagged out within the category ESS**
- **The actions are divided to the sectoral areas such as institutional development (5), afforestation (5), food security (3), river management (3), and ecosystem management (3)**
- **Proposed actions overlooked ESS scopes for DRR, livelihood, infrastructure and urban management**

POLICY FORMULATION: SECTORAL DEVELOPMENT

DRR

- National Disaster Management plan 2014
- 135 number of actions under 7 strategic goals of DRR
- No ESS strategies available
- Structural and institutional aspects of emergency management

Agriculture

- National Agriculture policy 2013
- 175 total proposed actions
- 10 actions on climate tolerant varieties (5), climate based agriculture (2), water resources (1) and natural resources management (2)
- Focus on Provision services

Urban

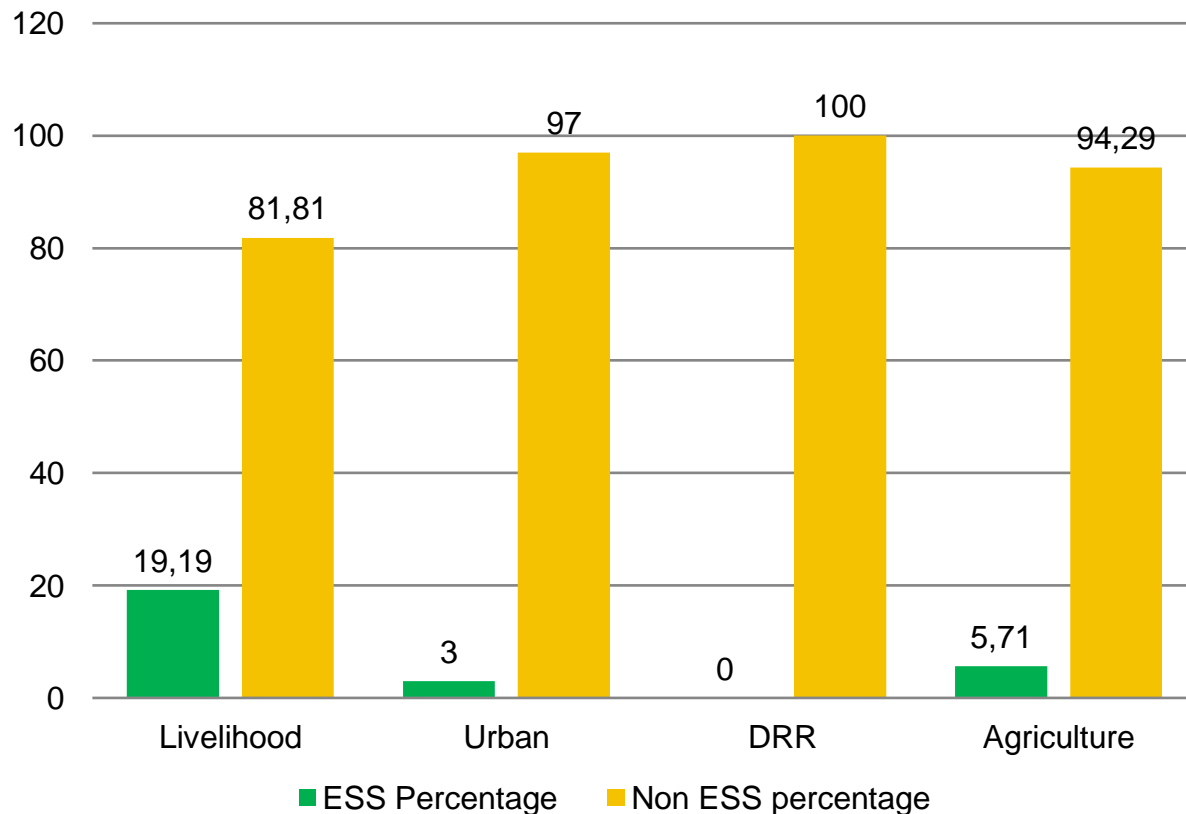
- National Urban Policy 2014
- 133 actions
- 4 actions on creating open space, restoring urban canal and measures for necessary infiltration
- Focus on cultural services
- Regulating services are also emphasized
- DRR is mentioned as a priority area

Livelihood

- 6th Five year plan (Agriculture, Forestry, Fisheries, livestock)
- 19 actions for agricultural livelihood, fisheries and food security
- Provisioning services e.g. food production is mostly emphasized
- Regulating services such as soil conservation and enhancing fertility are also underscored

POLICY FORMULATION: SECTORAL DEVELOPMENT

Percentage of ESS and Non ESS projects in different sectors



- 542 numbers of actions
- 6% of ESS approach
- Conservative sectoral adaptation actions proposed

POLICY IMPLEMENTATION: ADAPTATION PROJECTS

- **Climate Change Trust Fund (CCTF), government funded adaptation fund since 2009**
- **As of December 2015, has 329 approved projects**
- **38 projects are related to ecosystem management and ecosystem based adaptation**

Sectors	No. of Project
River Dredging	14
Forestry and REDD	8
Biodiversity	4
Crop Varieties	5
Agricultural Technology	5
Environment Management	1
Fisheries	1
Total	38

GENERAL FINDINGS

- **The term ESS is generally missing in all reviewed policies**
- **Potential of ESS for CCA is not translating from policy rhetoric to practice which ruled by structural adaptation**
- **CCA in Bangladesh is overwhelmingly viewed as a structural and technical approach**
- **Differences over adaptation priorities and understanding at national and sectoral level**
- **Bureaucratic planning and policy in Bangladesh and traditional sectoral planning**
- **Framing of CCA and ESS approaches**

IMPLICATIONS FOR WEF NEXUS

- **WEF discussions often tend to ignore ESS, livelihood, and adaptation in its context**
- **Nature and ESS are the the unseen dimensions of the nexus**
- **Governance of WEF nexus is still very much “work in progress”**
- **Pluralities of development approaches e.g. IWRM, SLA, IFM overwhelm policy making process**
- **Increasing consideration and mainstreaming of ESS can assist to achieve nexus goals**

**Thank you very much for your
attention!!**