Adaptation in the context of transboundary waters: the case of Bangladesh

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ESPA Deltas: Project Aims

In Coastal Bangladesh

• To understand the present relationship between ecosystem services and human well-being and health.

• To project how these ecosystem services might evolve over the coming years and decades (up to 50 -100 years)

• To analyse how policy can influence these outcomes and promote ecosystem services and human well-being and health.

• To select robust policies that are effective across the range of uncertainty.

• Using participatory approaches.
Upstream uncertainties potentially affecting flow in the GBM delta:

Inter-linking Rivers Project (Himalayan component)

Agreement on the Teesta River: imminent?

High level of uncertainty re. future changes in temperature (conservative projection: +2°C by 2050) and precipitation patterns

Possible diversion of Brahmaputra by China for north-south Diversion projects?

World Bank-linked Development of NW-1, upstream of Farakka?

Renegotiation of the Farakka Treaty in 2026?

Accelerating hydropower Development on Ganges And Brahmaputra rivers In both India and China
Existing Transboundary Framework

- Treaty on Sharing of the Ganges at Farakka (Bangladesh / India, 1996)
- Expert Level Mechanism between China and India (data-sharing during flood season)
- Flood management treaties on Ganges tributaries – Mahakali, Gandak, Kosi (India / Nepal)
- Flood forecasting networks on the Ganges and Brahmaputra rivers, between India and Nepal, and India and Bhutan respectively
- Joint Rivers Commission (Bangladesh / India, established 1972)
- None of the basin states have ratified the UN Watercourses Convention
Challenges for adaptation in Bangladesh
– upstream factors

• Upstream management capacity in India is weak:
  – water managed at state level, rather than national
  – Union government impotent in face of states that do not wish to update existing legislation affecting water
  – Recent efforts to rationalise management of Ganges have not yet yielded results, though government priority
  – Institutional disagreements result in fragmented water resource management (e.g. between quality and quantity; surface and ground; economics v. environment)
  – Highly politicised issue (e.g. importance of farmers, political disagreements between state and Centre)

• Relationship with China

• Both India and China need to adapt to global change too
• India’s bilateral and river-specific approach to water agreements
Challenges for adaptation in Bangladesh – domestic factors

• Levels of coordination re. hydrometeorological planning and data sharing with upstream states are inadequate
  – Ability to adapt to **upstream adaptation** is therefore limited
• Quantitative Assumptions in Farakka Treaty driving annual volumetric agreement based on historic data up to 1988 – impact of non-stationarity?
• Initial National Adaptation Plan has now expired
  – No mention in 2005 version of need for improved transboundary waters coordination
  – preparation of new adaptation plan has just started, led by UNDP
• Relevant governance framework for water resource and land management is generally:
  – outdated
  – rigid but lack of detail increases scope for arbitrary decisions;
  – enforcement penetration is inadequate (e.g. with respect to informal systems); and
  – Is not capable of supporting policy
### Policy / Law Timeline in Bangladesh

<table>
<thead>
<tr>
<th>Policy</th>
<th>Year</th>
<th>Legislation</th>
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<tbody>
<tr>
<td>National Social Protection Strategy (3rd Draft)</td>
<td>2014</td>
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<td>Water Act</td>
<td>2013</td>
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<td>2012</td>
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<td>2011</td>
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<td>Sixth Five Year Plan</td>
<td>2010</td>
<td>Standing Orders on Disaster Management</td>
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<td>Perspective Plan</td>
<td>2009</td>
<td>Right to Information Act</td>
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<td>2008</td>
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<td>2007</td>
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<td>Coastal Development Strategy</td>
<td>2006</td>
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<td>National Fisheries Strategy</td>
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<td>National Food Policy</td>
<td>2004</td>
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<td>2003</td>
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<td>Population Policy</td>
<td>2002</td>
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<td>Rural Development Policy</td>
<td>2001</td>
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<td>2000</td>
<td>Environment Court Act</td>
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<td>Water Development Board Act</td>
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<td>National Water Policy</td>
<td>1999</td>
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<td>National Fisheries Policy</td>
<td>1998</td>
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<td>1997</td>
<td>Environment Conservation Rules</td>
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<td>1996</td>
<td>Ganges Water Sharing Treaty</td>
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<td>1995</td>
<td>Environment Conservation Act</td>
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<td>Protection and Conservation of Fisheries (Amendment) Act</td>
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<tr>
<td>National Forest Policy</td>
<td>1994</td>
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Chart suggests there is relatively little implementation of policy through law, for example, but that doesn’t mean there is none through e.g. infrastructure; investment; economic tools etc.
Challenges for adaptation in Bangladesh – domestic factors

• Getting legislation through legislature is very time consuming, and binary political system does not help.
• Capacity of legal, institutional and policy framework to facilitate adaptation is low in terms of adaptive governance principles:
  – Iterativity
  – Flexibility
  – Connectivity
  – Subsidiarity
Observations - reality

• Legal and institutional framework needs overhauled if policy is to be implemented and adaptability achieved
• Political situation will not enable this to happen
• Equating quantity with quality in terms of law and policy does not work
• Disaster Risk Management process took a long time, but demonstrated that cross-institutional coordination was possible, that new power structures were possible and that workable (and dynamic) combinations of primary and secondary legislation could be created
• Implementation of adaptive governance principles to workable mechanisms is understood (see e.g. IUCN Adaptive Water Governance, and more broadly Hill Clarvis, Allan, Hannah, 2014)
References and Acknowledgements


• M. Hill Clarvis, A. Allan, D. Hannah (2014), Water, resilience and the law: From general concepts and governance design principles to actionable mechanisms, Environmental Science and Policy 43 (2014) 98-110

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