Conflict Factsheet

India and Bangladesh Conflict Over the Ganges River

<table>
<thead>
<tr>
<th>Type of conflict</th>
<th>Intensity</th>
<th>Conflict Locality</th>
<th>Time</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main</td>
<td>2</td>
<td>Southern Asia</td>
<td>1957 – ongoing</td>
<td>Fish, Agricultural / Pastoral Land, Water</td>
</tr>
</tbody>
</table>

Countries
India, Bangladesh

Conflict Summary
The construction of the Farakka Barrage in India along the Ganges has created water stress in Bangladesh by exacerbating the dry season and increasing the likelihood of flooding. The two countries have engaged in various levels of negotiations but have not yet agreed upon a solution to augment the Ganges to meet the needs of both states, particularly in the context of changing climate conditions.
Conceptual Model

**Climate Change**
- Gradual Change in Temperature and/or Precipitation

**Social and Economic Drivers**
- Infrastructure Development
- Pollution / Environmental Degradation

**Environmental Change**
- Increased Water Scarcity

**Intermediary Mechanisms**
- Change in Access / Availability of Natural Resources
- Interstate Tensions
- Livelihood Insecurity
- Public Health Risks
- Decline in Fish Stocks

**Fragility and Conflict Risks**
- Displacements / Migration

**Context Factors**
- Water-stressed Area
- History of Conflict
- Power Differential

Fish, Agricultural / Pastoral Land, Water
Conflict History

In 1961, India released plans to build the Farakka Barrage seventeen kilometres upstream from the border of Bangladesh. The purpose of the barrage was to divert water from the Ganges in order to reduce silt build up in Calcutta Port. Diversion of water from the Ganges had severe consequences on water availability downstream in Bangladesh. Changing rainfall and water use patterns upstream in Nepal have since further exacerbated water stress along the Ganges, leading to the inequitable distribution of water based on the requirements of the 1996 treaty. Diplomatic relations regarding water cooperation remain contentious.

Indo-Bangladesh Joint Rivers Commission
India and Bangladesh established the Indo-Bangladesh Joint Rivers Commission in 1972, following Bangladesh Independence in 1971 (Wolf & Newton, 2014). In 1974, it was realised during periods of low flow, that there would not be enough water in the Ganges to be diverted by the barrage without having severe impacts on water access in Bangladesh. Both sides agreed that the Ganges should be augmented to meet the needs of both states but the decision should be handed over to the Joint Rivers Commission.

Adverse impacts of the barrage operation
In 1975 during negotiations, India activated the barrage at full capacity (Wolf & Newton, 2014). The resulting adverse impacts felt in Bangladesh from reduced river flow included: degradation of surface and groundwater, degraded fisheries, increased salinity, and contaminated/reduced water supplies, which began to affect public health (Wolf, 1998).

Regulation of water distribution
In 1977, the Ganges Waters Agreement was negotiated, which regulated water distribution for five years. It was not until 1996 that a formal treaty was signed. The treaty is known as the Ganges Water-Sharing Treaty and regulates water distribution from Farakka Barrage over a thirty year period (Thomas, 2012). However, the basis of this agreement was framed on average water flow at the Farakka site between 1949 and 1988 (Wolf & Newton, 2014). Since the agreement, climate change impacts on rainfall, combined with increased uses of water for agriculture and hydro-power in the upper Ganges in Nepal, have changed water levels, thus, effecting the distribution of water according to the requirements of the 1996 treaty.

Bangladesh’s critical situation
This has worked in both directions, to deprive Bangladesh of water in the dry season and to increase flooding during the wet season (Thomas, 2012). Bangladesh is widely recognised as a state most vulnerable to climate change as it is low-lying and is traditionally prone to extreme wet and dry seasons (Thomas, 2012). With climate change comes greater seasonal variations in precipitation patterns and glacial melting, which affects the livelihoods of millions of farmers dependent on the Ganges (Thomas, 2012). The Farakka Barrage has caused a multitude of environmental and social consequences, including the increased likelihood of flooding during monsoon seasons and the mass influx of environmental refugees into India. Refugee flows have also created secondary conflict in India, particularly in the region of Assam (Gugoff, 2011; Wolf, 1998) (see Assam violence in India).

India has been criticised for using the 1996 treaty to solidify the status quo; neglecting to consider the differences in dependency on the Ganges (Hanasz, 2014). India has also continued to use the Farakka
Barrage at levels agreed upon in 1996, despite the detrimental effects this has had on the livelihoods of farmers in Bangladesh; causing floods during monsoon season and exacerbating drought in the dry season. Consequently, water disputes have become a source for anti-Indian political groups, such as the Bangladesh Nationalist Party (BNP).

**Resolution Efforts**

Decisions regarding the Ganges were excluded from the auspice of the Commission. There has been both international and bilateral attempts at solving the Ganges water dispute.

**Bangladesh's formal complaint**

After rounds of failed negotiations in 1976 with the Joint Rivers Commission, Bangladesh filed a formal complaint against India at the United Nations General Assembly. The UN General Assembly adopted a consensus, which encouraged India and Bangladesh to meet at a ministerial level to resolve the conflict. Negotiations followed, which culminated in the signing of the Ganges Waters Agreement in 1977. However, this was only temporary and after it expired in 1982, the need to amend the agreement to adapt to water levels in the dry season became apparent.

**Memorandum of Understanding**

Two Memorandums of Understanding were signed in 1982 and 1985 respectively. Both focused on short term regulation of water flow during the dry season only. Ministerial meetings continued in 1992, however the interests of both parties could not be reconciled. Bangladesh again attempted to internationalise the dispute by raising the topic at the Commonwealth Summit in 1993 and again at the UN General Assembly in 1995 (Rahaman, 2009). In 1996 a formal treaty was adopted, however, it was not a comprehensive approach.

**Lack of a whole-of basin approach**

Neither the treaty, nor any prior arrangement, considers the uppermost riparian state of Nepal. Although attempts were made in 1986 by Indian and Bangladeshi experts to include Nepal in water sharing negotiations, these consultations failed because the benefits of Nepal's participation in water storage and diversion could not be made clear (Rahaman, 2009). The 1996 treaty, nor any prior short term arrangements, do not take a whole-of basin approach and ignores the effects of upstream uses on water availability. Bangladesh continues to encourage Nepal's inclusion in questions concerning the Ganges, however, India has been focusing more on the actual deliverables in the form of bilateral arrangements (Jayaram, 2013).

**An ambiguous treaty**

Furthermore, the 1996 treaty lacks distinct dispute resolution guidelines (Hanasz, 2014). The 1996 treaty does attribute authority to the JRC to resolve conflicts. The JRC simply acts as a consultation body (Rahaman, 2006). The treaty is also ambiguous, stating that neither party shall inflict harm on the other through their use of the river, without defining what is considered “harm” (Thomas, 2012).
### Intensities & Influences

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<td><strong>INTENSITIES</strong></td>
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<td>Human Suffering</td>
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<td><strong>INFLUENCES</strong></td>
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<td>Environmental Influences</td>
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<td>Societal Influences</td>
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**Diplomatic Crisis**
Note of diplomatic crisis in case history, conflict purely verbal

**Violent Conflict**
No

**Mass displacement**
None

**Cross Border Mass Displacement**
Less than 100,000 and less than 10% of the population are displaced across borders.

### Resolution Success

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<td><strong>Resolve of displacement problems</strong></td>
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<td>Displacement continues to cause discontent and/or other problems.</td>
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<td><strong>Reduction in geographical scope</strong></td>
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<td>There has been no reduction in geographical scope.</td>
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<td><strong>Increased capacity to address grievance in the future</strong></td>
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<td>The capacity to address grievances in the future has increased.</td>
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<td><strong>Grievance Resolution</strong></td>
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<td>Grievances have been mostly addressed.</td>
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<td><strong>Causal Attribution of Decrease in Conflict Intensity</strong></td>
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<td>There has been no reduction in intensity</td>
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Conflict Resolution Strategies

INSTITUTIONAL SOLUTIONS TO REDUCE CONFLICT

- **Increased coordination**
  - The strategy is present, but only attempted weakly

- **Reduction in conflict potential of scarcity through better management institutions**
  - The strategy is an important part of the conflict resolution process

ECONOMIC AND TECHNOLOGICAL ADAPTATION

- **Reduction in scarcity through (adoption of) technological innovation**
  - This strategy is applicable because the scarcity of clean water could be alleviated by technological innovation, as demonstrated by Wolf, 1998.

- **Shift of livelihood bases**
  - This strategy is applicable because fishing, agricultural and pastoral livelihoods are being threatened by the water stress, as illustrated by Wolf, 1998.

THIRD PARTY TOOLS

- **Peacemaking / Mediation**
  - This strategy is applicable because there is a (limited) willingness of India and Bangladesh to solve the conflict, as illustrated by previous agreements and negotiations.

Resources and Materials

References with URL

Gugoff, C. (2011). Climate Change and Conflict in Migration from Bangladesh to Assam (India)