Yarmouk River: Tensions and cooperation between Syria and Jordan

<table>
<thead>
<tr>
<th>Type of conflict</th>
<th>Intensity</th>
<th>Time</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main</td>
<td>1</td>
<td>1948 – ongoing</td>
<td>Agricultural / Pastoral Land, Water</td>
</tr>
</tbody>
</table>

Conflict Summary

Jordan, located downstream of the Yarmouk River, is dependent on cooperation with its upstream neighbour Syria. Over the course of the 20th century, Jordan concluded several treaties with Syria which were however perceived by Jordanians as unbalanced.
Conceptual Model

Environmental Change
- Gradual Change in Temperature and/or Precipitation
- Power Differential

Climate Change
- Increased Water Scarcity

Intermediary Mechanisms
- Infrastructure Development

Fragility and Conflict Risks
- Livelihood Insecurity
- Change in Access/Availability of Natural Resources Inter-state Tensions

Context Factors
- Agricultural / Pastoral Land, Water
Conflict History

Since Israel's independence in 1948, multilateral cooperation over the Yarmouk River and the other transboundary rivers of the Jordan system has been hindered due to the continuous tensions between Israel and its Arab neighbours. Owing to this lack of multilateral agreement, Jordan engaged in bilateral agreements with the two other co-riparians, Syria and Israel (see Jordan and Israel: water cooperation in the Middle-East). The present case study analyses the bilateral cooperation between Jordan and Syria which Jordan agreed to since the 1950s. Due to the asymmetry of power between the co-riparians, these favour Syria. Although the intensity of the conflict has remained low, repeated violations of these agreements by Syria in terms of water-allocation have become unsustainable for Jordan. As scientists predict that fresh water resources in Jordan are likely to be reduced by 15% by 2020 due to climate change, the current status quo could further undermine security in the region (Yorke, 2013).

Conflict Background

The Yarmouk River is a tributary to the Jordan River and therefore forms part of the Jordan System, which comprises Israel, Syria, Jordan and Lebanon. The Yarmouk has its source in Syria, flows to Jordan and Israel and joins the Jordan River downstream to the Sea of Galilee. In the early 1950s, following the 1948 war which opposed Israel and its Arab neighbours, all co-riparians to the Jordan system started unilateral water-development plans. As these unilateral projects caused skirmishes amongst the countries, the US sent a mediator – Ambassador Johnston – to broker a multilateral agreement on water management. However, to date, no multilateral agreement has been signed (see Jordan and Israel: water cooperation in the Middle-East). Since 1948, Syria has refused to engage in negotiations with Israel (CESAR, 2004).

In order to manage the Yarmouk River, Jordan and Syria signed a bilateral agreement in 1953. Located downstream on both the Yarmouk and the Jordan River, Jordan is dependent on cooperation with its upstream neighbours (Brothwick, 2003).

Resolution Efforts

Signature of a bilateral agreement in 1953

Jordan and Syria reached a bilateral agreement in 1953 over the management of the Yarmouk River (Zawahri, 2010). Without specifying clear water allocation between both countries, Jordan and Syria agreed to construct several dams along the Yarmouk in order to store irrigation water and generate hydropower (Ibid.). This agreement was followed by the creation of the Syro-Jordanian Commission, which was endowed with monitoring and resolution mechanisms and with an arbitration committee to settle issues amongst the co-riparians (Ibid.).

New agreements and implications for Jordan

In 1987, the 1953 agreement was revised and a new treaty was signed (Zawahri, 2010). This new treaty was elaborated to specify aspects of the main dam of the irrigation project – the Maqarin dam, also known as Unity Dam and Wahdah dam – and also because Israel gained increased access to the Yarmouk River...
after the 1967 six-day war (Ibid.). In this treaty, Jordan was required to bear all the costs related to the dam, from planning to maintenance (Ibid.). This agreement also bound Syria to release 208 million cubic meters water per year to Jordan and allowed the former to build 25 dams on the Yarmouk system (Yorke, 2013; Turkish Review, 2014). Moreover, the agreement created a new commission – the Jordan-Syrian High Commission – with less monitoring and conflict resolution mandates than the previous Commission and deprived of any arbitration committee (Zawahri, 2010).

In 2001, a third bilateral agreement over the Yarmouk River was signed, in which the size and storage capacity of the dam were reduced (Ibid.). It was only in 2003 that Jordan and Syria reached a final agreement on a plan for the Wahdah dam at the border between Syria and Jordan and its construction started in 2004 (Oregon State University, 2008). Its construction was completed in 2005 (Haddadin, 2014).

Asymmetry of Power between the co-riparians
Despite the seemingly cooperative actions between the co-riparians through the signing of subsequent bilateral agreements, an analysis of the texts shows a significant imbalance in favour of Syria. Scholars explain that Jordan agreed to an “unfavourable water agreement” in 1987 due to the power asymmetry between Jordan and its “more powerful neighbour” (Yorke, 2013; Shami, 2014). In fact, despite its international support, Jordan does not have the leverage and lacks the strategic position to enforce the water allocation obligations Syria committed to (Yorke, 2013; Darwish et al., 2010). According to Haddadin, since 1954 Syria has only cooperated “intermittently” with Jordan, when it was in its interest (Haddadin, 2014).

Syria accused of treaty violations
In addition to the unfair treaty, scholars and newspapers have reported “persistent violations” of the bilateral agreement by Syria until today (Namrouqa, 2012; Yorke, 2013). Although the terms of the 1987 treaty entitled Syria to build 25 dams, as of today Syria has built 42 dams on the Yarmouk system (Turkish Review, 2014). The numerous pumps, which were constructed in Syria to store water from the river, have also contributed to reducing the flow (Zawahri, 2010). Even though Jordan has been asking Syria to remove its dams and wells “for years”, violations have continued (Darwish et al., 2010). Syria refused to provide Jordan with the water share agreed to in the 1987 treaty, blaming the reduction of the flow on a decrease in precipitation (Ibid.). In April 2012, Jordan’s water minister called once again “to end violations of the water-sharing agreements” (Yorke, 2013). Considering that in 1994 Jordan committed to release 25 mcm water/year from the Yarmouk to Israel, such violations put Jordan in a difficult situation.

Internal solutions to cope with water scarcity
Instead of a dispute with Syria, Jordan has been tackling the issue of scarcer water internally and through “peaceful means” (Haddadin, 2014). Jordan constructed a Water Conveyance Project from the fossil-water aquifer of Disi – in the South of Jordan – to its capital, which opened in 2013 (Shami, 2014). This project increases available resources in the country by approximately 12% (Turkish Review, 2014). In order to conduct its water projects, Jordan has been largely dependent on external assistance, such as USAID, the World Bank and Saudi Arabia (Strategic Foresight Group, 2010). In addition to this, the authorities have been fighting illegal wells to prevent illegal pumping of underground water, although Jordanian water-uses are already well below the level in other countries (Shami, 2014).
Impacts of treaty violations on the population and the environment

However, even though these solutions provide relief in the short-term, they are not sustainable in the long term. In fact, the current treaty violations by Syria have major impacts on the environment and on the population downstream. Jordan is already recognised as one of the world’s most water-deprived countries, using 70 litres water per capita and per day on average whereas the average is 120-140 litres in Syria (Ibid.). The predictions of the Jordan's Second National Communication to the UNFCCC, according to which Jordan's fresh water resources could be reduced by 15% by 2020, are likely to make the situation even more unsustainable in Jordan (Yorke, 2013).

Scarcer water availability could undermine existing agreements

In addition to the environmental emergency of the situation, a reduction in water could raise more tensions amongst the co-riparians and further undermine agreements between co-riparians. In fact, the decrease of water from the Yarmouk released by Syria to Jordan may prevent Jordan to comply with its commitments towards Israel, which could feed tensions amongst the co-riparians (Zawahri, 2010).

Recommendations

In the literature, a certain number of measures have been proposed to remedy the situation, although these could only be implemented after stability has been restored in Syria. According to a number of scholars, there is a high potential for cooperation in the Yarmouk basin (Turkish Review, 2014). Including side-issues such as trade and transport infrastructure into a deal could lead to more cooperation (Ibid.).

More cooperation could also be achieved by putting an emphasis on the mutual interest of both countries to maintain their water resources (Yorke, 2013). For instance, a better management of the river upstream by Syria could increase the water released to Jordan and enable the latter to store water downstream, which could be then used to produce hydroelectricity for Syria (Turkish Review, 2014). In fact, this is critical, since – as argued before – Syria only cooperated with Jordan when the former has an interest in it.

Besides these technical measures, it is also critical to take into account the variations in precipitation and adapt agreements accordingly. Failure to do so could lead Jordan to blame upstream Syria for a reduced flow of water, as happened in the past.

Necessity to reach a multilateral agreement amongst all co-riparians

Finally, all scholars point out the urgent need of a multilateral agreement amongst all co-riparians to the Jordan system. After the failed Johnston plan, external efforts to achieve a multilateral agreement through cooperation on water sources were once more attempted during the 1990s by the Centre for Environmental Studies and Resource Management (CESAR), which was commissioned by Norway (CESAR, 2004). To circumvent the problem that Syria and Lebanon did not want to participate in a process involving Israel, CESAR ran parallel processes for Israel, the Palestinian Authority and Jordan on the one, and Syria and Lebanon on the other hand (CESAR, 2004). An attempt to directly link the two processes failed when Israel revealed that a joint meeting had taken place (CESAR 2004), but the parallel regional studies may yet facilitate future dialogue (CESAR, 2004). Distrust between Israel and Syria is the major
factor inhibiting cooperation (Yorke, 2013). A new government in Syria after the end of the Syrian civil war may provide new opportunities for improved bi- and ultimately multilateral cooperation.

In summary, several bilateral treaties between Jordan and Syria have not enabled them to manage the Yarmouk River in a fair and sustainable way due to Jordan’s lack of leverage over Syria and the latter’s refusal to honour its treaty obligations. The civil war in Syria interrupted all negotiations over the Yarmouk River (Turkish Review, 2014). In the future, better management will depend on whether riparians agree on mutually satisfying strategies to manage the River. A lack of agreement would worsen environmental degradation and might increase tensions amongst the co-riparians of the wider Jordan system.

<table>
<thead>
<tr>
<th>Intensities &amp; Influences</th>
<th>Resolution Success</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intensities</strong></td>
<td>Reduction in geographical scope</td>
</tr>
<tr>
<td>1</td>
<td>There has been no reduction in geographical scope.</td>
</tr>
<tr>
<td>2</td>
<td>Increased capacity to address grievance in the future</td>
</tr>
<tr>
<td>3</td>
<td>The capacity to address grievances in the future has increased.</td>
</tr>
<tr>
<td>4</td>
<td>Grievance Resolution</td>
</tr>
<tr>
<td>Human Suffering</td>
<td>Grievances have been mostly ignored.</td>
</tr>
<tr>
<td><strong>Influences</strong></td>
<td>Causal Attribution of Decrease in Conflict Intensity</td>
</tr>
<tr>
<td>Environmental Influences</td>
<td>There has been no reduction in intensity</td>
</tr>
<tr>
<td>Societal Influences</td>
<td>=</td>
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</tbody>
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Diplomatic Crisis
Note of diplomatic crisis in case history, conflict purely verbal

Violent Conflict
No

Salience with nation
National

Mass displacement
None

Cross Border Mass Displacement
No
Entry Points for Resilience and Peace Building

Mediation & arbitration
In 1987 the Jordan-Syrian High Commission was created and endowed with monitoring and resolution mechanisms to settle issues amongst the co-riparian states, but was deprived of an arbitration committee. Furthermore, external efforts to achieve a multilateral agreement through cooperation on water sources were once more attempted during the 1990s by the Centre for Environmental Studies and Resource Management (CESAR). However, distrust between Israel and Syria is the major factor inhibiting cooperation.

Treaty/agreement
Jordan and Syria reached a bilateral agreement in 1953 over the management of the Yarmouk River, and was later revised in 1987. However, as a result of the asymmetry of power between the co-riparian states, these agreements favour Syria. Likewise, persistent violations of the agreement by Syria have been reported. Appealing to international courts in order to enforce Syria’s compliance could help alleviate Jordan’s grievances. In the future, better management will depend on whether the riparian states agree on mutually satisfying strategies to manage the river.

Improving infrastructure & services
In order to tackle the issue of water scarcity internally, Jordan has constructed a Water Conveyance Project, which increased the available resources in the country by approximately 12%. Jordan has been largely dependent on external assistance from USAID, the World Bank and Saudi Arabia to carry out internal water projects.

Resources and Materials

Conflict References
Jordan and Israel: Tensions and Water Cooperation in the Middle-East

References with URL
Turkish review. (2014). Benefit sharing, water and cooperation: the Jordanian case.
Yorke, V. (2013). Politics matter: Jordan's path to water security lies through political reforms and regional cooperation.

Further information