

Strategic Analysis Paper

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Water Governance in the Tigris-Euphrates Basin

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Key Points

- The states that share the water resources of the Tigris-Euphrates Basin have come close to creating a water sharing agreement in the past, but narrow self-interest derailed the project.
- Current regional political crises were caused, in part, by heightened food and water insecurity that could be avoided by closer water management.
- Closer management of transboundary water resources could help avoid future socio-political volatility and foster more amicable relations between regional riparians.
- Low levels of goodwill between the three riparian states, and the uncertain political future of the region, suggest that a basin-wide agreement on managing transboundary surface water resources is unlikely in the near future.

Summary

Turkey, Syria and Iraq depend on the Tigris-Euphrates river system for their food and water security. Both rivers have contributed to interstate tension and hostility, and the region is yet to agree on a water-sharing mechanism that could lead to more amicable relations. As the region is currently undergoing a period of political turmoil, it is unlikely that an agreement will be forthcoming in the near future. As water has long been a source of tension between the three countries of the Tigris-Euphrates Basin, an agreement on the sharing of water resources will be a vital component in any effort designed to ensure long-term regional stability.

Analysis

The headwaters of the Tigris and Euphrates rivers are located in Turkey and join in southern Iraq to form the Shatt al-Arab River before flowing into the Persian Gulf. The Euphrates begins in the eastern Turkish highlands and flows into Syria where it is joined by two other tributaries that also originate in Turkey. About 90 per cent of the water flowing in the Euphrates comes from Turkey, most of the remaining ten per cent originates in Syria and a very limited amount is added in Iraq.

The Tigris also begins in eastern Turkey and flows a short distance through Syria before entering Iraq. Turkey, Iraq and Iran contribute [40, 51 and nine per cent](#), respectively, of the water entering the Tigris River. Due to tributaries from the Zagros Mountains in Iran, the Tigris River carries more water than the Euphrates River. These tributaries are fed by snowmelt in the spring and rainfall in summer and autumn. Extensive irrigation and diversification canals in Iraq remove [70-80 per cent](#) of the water in the river before it joins with the Euphrates.

Turkey reportedly utilises about [41 per cent](#) of the water resources in its territory, allowing the rest to flow downstream to Syria, which loses 60 per cent of its water resources to leaky infrastructure. By the time the rivers reach Iraq a large portion of the water has been consumed. The two lower riparians claim that Turkey uses too much of the region's water, however, their management of water resources is hardly exemplary.

Artificial management of the region's surface water resources is necessary due to environmental conditions. Flow rates in the Tigris and Euphrates rivers fluctuate considerably between seasons and years. Prior to the construction of diversion canals and dams, the rivers were infamous for their floods and droughts. Due to the variation in flow, irrigation would be difficult without some form of management and all countries lying along the course of the waterways have built dams and diversion canals for this reason.

As it lies closest to the headwaters of both watercourses, Turkey has a distinct geographical advantage. The South-east Anatolia Project (*Güneydogu Anadolu Projesi, GAP*), which involves the construction of dams and water diversion tunnels, has caused consternation among downstream riparians since the 1960s. The first Turkish dam project on the Euphrates began in the 1960s. Almost 600 dams have been built since then, with another 200 in various stages of construction. As the majority of the region's water originates in Turkey, Ankara believes that it alone has the power to determine how the resource is allocated. Iraq, on the other hand, argues that it has historical rights to a guaranteed share of the water in the basin. The power asymmetry between the regional states has led to divergent views that are difficult to reconcile peacefully.

Between 1975 and 1991, the three riparians threatened each other militarily on three separate occasions. Naturally, negotiations over water sharing were interrupted by these volatile interstate relations. Conflict has thus far been avoided through the efforts of external mediators. In the past, Saudi Arabia and the Soviet Union have intervened and tensions were reduced before they escalated to conflict. Currently, however, there appear to be no international or regional powers that are willing or able to encourage the states

that rely on the Tigris-Euphrates Basin to resolve transboundary water issues. Efforts to more closely manage the shared water resources of the region will need to come from the three states that share the waterways. If past attempts to create a regional water sharing agreement are anything to go by, however, the potential for a trilateral mechanism does not look strong.

Past Attempts at Transboundary Water Co-operation

The earliest attempt to form a transboundary water sharing agreement in the basin dates back to 1946. At this time, Turkey and Iraq agreed that regional water management depended on the regulation of water flow in Turkish source areas. Turkey promised to monitor the Tigris and Euphrates within its territory and share data with Baghdad.

In 1966 Iraq and Syria launched a technical study on the effect of dams in Syria. A year later they held talks on the division of water from the Euphrates River and agreed to mutually agreeable terms on the exploitation of the river's waters. By May 1975, however, the bilateral relationship had frayed, due to a disagreement caused by the Syrian acceptance of the Yom Kippur War ceasefire. Syria closed its airspace to Iraqi flights and both countries transferred troops to their shared border. Third-party mediation from Saudi Arabia led to an agreement between Damascus and Baghdad that ended hostilities. The terms of the agreement were never made public, but [Iraqi officials privately stated](#) that one of the conditions allowed Syria to use 40 per cent of the water from the Euphrates River within its borders while allowing the remaining 60 per cent to flow into Iraq.

In 1980 a Joint Technical Committee on Regional Waters was established between Turkey and Iraq, Syria later joined in 1982. Part of the agreement saw Ankara informally guarantee a minimum flow of 15.75 billion cubic metres of water per year into Syria from the Euphrates. The promise was formalised in 1987, when the Turkish Prime Minister, Turgut Özal, signed an agreement that guaranteed a minimum flow of 500 cubic metres per second across the border into Syria.

The agreement was called into question in 1989, however, when Özal threatened to cut water supplies to Syria if it did not curb its support for Kurdish activities. At the time, Syria was accused of not doing enough to counter the influence of Kurds that were allegedly operating out of guerrilla bases in Syrian-occupied areas of Lebanon. Officials from the Turkish Government later argued that Özal's comments were designed for a domestic audience and Turkey would never use water as a political weapon against Syria or Iraq.

In November 1989, the Joint Technical Committee on Regional Waters met. The three riparians held discussions to deal with a planned reduction in flow into Syria and Iraq as a consequence of Turkey diverting the Euphrates to begin filling the Atatürk Dam. A Turkish official at the discussions stated that 'Turkey has no international legal obligation in this respect and there are no established principles regarding cross-border waters ... But the talks are an indication of Turkey's goodwill.' Syrian and Iraqi officials were concerned that reduced water flow would have affect food production. The Syrians were also worried about the effect on the Euphrates Dam, a power and irrigation project located in the north-east of

the country. Unconcerned by these fears, Ankara announced in December 1989 that it would reduce the flow of water in the Euphrates for one month beginning in January 1990.

Turkish representatives explained that a reduction in water flow was unlikely to cause problems in Syria and Iraq. A Turkish official suggested that 'At no time will water be cut off totally. Syria will still have water from tributaries below the dam.' Another Turkish source claimed that Iraqi dams were full and Syria, despite suffering from drought, would still get more than the agreed amount of water from Turkey. Government officials stated that the flow of water into Syria was increased from 500 cubic metres per second to 750 cubic metres per second to help the two lower riparians prepare for the reduction in water flow. Despite these efforts to placate Syria and Iraq the filling of the Atatürk Dam was a diplomatic disaster that destroyed whatever goodwill had developed between the three countries.

Syria and Iraq protested heavily, claiming that Ankara had failed to give them adequate time to prepare for the reduced water flow. Damascus also blamed Turkey for electricity cuts and water shortages that occurred over the 30 days of reduced water flow. Clearer communication between the three states and greater sensitivity from Turkey could help avoid some of the tension associated with the development of the region.

Water Insecurity: A Contributing Factor to the Current Political Instability

The problems associated with a lack of a transboundary water sharing agreement have become apparent in recent years. Between 2007 and 2010, Syria and Iraq experienced the [most devastating three-year drought](#) on record. Climate change could make severe drought, like that of 2007-10, two to three times more likely to occur. Long-term trends suggest that the region is becoming drier as rainfall levels have [declined since 1940](#). While Turkey did not cause the regional drought, its geographical position and historical intransigence fuelled speculation in Syria and Iraq that their woes were caused, at least in part, by Ankara's development agenda.

Syria was able to maintain cereal self-sufficiency for over a decade and export surplus wheat to Jordan and Egypt. Between the mid-1980s and 2000, the government [sponsored the expansion of farmland](#), from about 600,000 hectares to 1.2 million hectares. This expansion was made possible, in part, by doubling the number of groundwater wells that extracted water for irrigation. Many of the wells were overused, however, leading the water table to fall by more than 40 metres between 1984 and 2010 in some parts of the country. When the drought began in 2006, many Syrian farmers turned to groundwater reserves for irrigation. Many found that the wells had dried up or become too saline to use safely. Two year later, in 2008, the government reduced diesel subsidies, raising the price of the fuel from seven Syrian pounds (\$0.05) per litre to 25 pounds (\$0.16) per litre. For many farmers, who were already facing reduced crop yields, rising fuel prices placed further strain on their farm operations.

By the time of the Arab Spring, in 2011, the drought had reportedly led to the displacement of 1.5 million people in Syria. Most of these people [moved from rural to urban areas](#) that were already overwhelmed by an influx of Iraqi and Palestinian refugees. These stresses,

along with poor policy choices by the government, contributed to the protests that eventually metastasised into the current regional violence.

The Syrian and Iraqi states have been undermined by the turmoil that has swept the region and it is possible that these entities will not survive the conflict. Since 2011, Syria has been split into four broad zones controlled by the government, opposition militias, Kurdish forces and the Islamic State (IS). Iraq is similarly split between Sunni and Shia groups, the government and IS. Both states could fragment, perhaps along ethnic or religious lines. If this fragmentation occurs, it is likely that regional co-operation will prove even more challenging to initiate and sustain.

Heightened water insecurity arguably played a role in provoking the current unrest in the region. While most of this insecurity was arguably caused by poor domestic water management policies in Syria and Iraq, Turkey has also been blamed. Addressing disputes that arise from poor regional water allocation policies will be necessary if a long-term solution to regional turbulence is to be successful. Given the widespread conflict, poor governance and uncertain political future of the region, however, it is unlikely that co-operation between the riparians of the Tigris-Euphrates Basin will be forthcoming in the near future.

Conclusion

Syria and Iraq, as the two lower riparians, are heavily reliant on Turkish goodwill as almost all of their surface water supply is derived from the Tigris or Euphrates rivers. Turkish officials, however, maintain that neither watercourse is an international river until it crosses the border into Syria and Iraq. This stance leads Ankara to believe that it alone has the right to determine how domestic water resources are to be used. It could moderate its position as its own security is likely to be better served by more effectively sharing its water resources with the countries downstream. On the other hand, as Syria and Iraq are likely to be significantly weakened by years of civil war, Turkey might utilise this opportunity to further cement its control over the region's water resources. Either way, the water resources of the Tigris-Euphrates Basin are likely to continue to play a role in regional relations.

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