Reframing the Tigris-Euphrates Basin Water Dispute

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INTRODUCTION
The Middle East is one of the most arid areas in the world, and water resources have been the center of many disputes between countries in the region. The Tigris-Euphrates water allocation dispute has been one of the most hotly contested issues among Turkey, Syria, and Iraq. The construction of dams by Turkey and the diversion of much of the water for agricultural purposes by that country has been a cause of water disputes with Syria and consequently Iraq. The role of international law has not been a helpful one, given that Turkey has not signed on to the 1997 United Nations Watercourse Management Treaty, and because the riparians have constantly invoked conflicting principles of trans-boundary water management. Therefore, experts have argued that a tri-lateral agreement among the three countries on the allocation of water quantities is the solution. Numerous rounds of negotiation, however, have been unsuccessful and there is currently no tri-lateral agreement on the shared use of the Tigris-Euphrates water resources. This paper will examine ways to improve three aspects of the negotiation, which may help overcome the stalemate. These include the evaluation of Turkey’s real BATNA (best alternative to a negotiated agreement), the agreement on a suitable mediating body, and how to increase the negotiations pie.

OVERVIEW OF THE DISPUTE
The Tigris and Euphrates are two of the longest and most famous rivers in the world. Both rise in the high mountains of northeastern Anatolia and flow down through Turkey, Syria, and Iraq and eventually join to form the Shatt Al-Arab for around 200 km before they flow into the Persian Gulf (called the Arabian Gulf by Arabs). The rivers provide drinking water and water for agricultural activity in Turkey, Syria, and Iraq. Turkey contributes some 70 percent of the water in the Tigris-Euphrates basin. Iran also contributes to the basin, 9.7 to 11.2 cubic kilometers a year flow to the Tigris River through its Iranian tributaries in the north. It also contributes 20 to 24.8 cubic kilometers of water to the Shatt al-Arab (called Arvand Rood by Iranians) waterway, which unites the Tigris and the Euphrates, through the Karoon River. Iran contributes some 21 percent of all water into the system, second to Turkey. Syria and Iraq both contribute only a small amount of water. Iraq contributes no water to the Euphrates and some 2.8-6.6 cubic kilometers of water to the Tigris system. The two Arab states share a contribution amounting to no more than 9 percent of all the water in the system, with most of the water being contributed by Iran (Turkish Ministry of Foreign Affairs).

The Southeastern Anatolia Development Project (GAP in Turkish) is an ambitious development project that plans to harness the waters of the Euphrates and the Tigris rivers for energy production by constructing 22 dams and 19 hydroelectric power plants. There are
also plans to use immense tunnels to divert the waters of the basin into the Harran field, where 1.7 million hectares of land are waiting to be irrigated. The larger mission of the GAP is to develop Southeastern Turkey, a predominantly Kurdish region long ignored by the Turkish government. Southeast Anatolia is the least developed region of the country. There are large economic and social disparities between this region and the rest of Turkey. For instance, per capita income in the region is 47 percent lower than the per capita income of Turkey as a whole (GAP RDA 1995). The project seeks to improve the stability of that area by providing the Kurdish minority with a thriving agricultural economy. (Kaya 1997)

Not surprisingly, the project has created a great deal of resentment in Syria and Iraq, the other riparians of the basin. Syria claims that up to 770,000 hectares of its land could be irrigated with water from the Euphrates. Iraq has an even larger irrigable area. Iraq, however, could tap the waters of the Tigris by using the Tharthar canal, which links the Euphrates and the Tigris. This would of course incur massive investment costs, which the Iraqis are eager to avoid (Altindilek 1997).

Given current trends, these three countries, particularly Iraq, face an immense water shortage in the next two decades. Table 1 shows the projected demand, according to three different studies, of Euphrates water by 2020 in million cubic meters (MCM) of water per year.

<table>
<thead>
<tr>
<th>Country</th>
<th>Source: Kolans</th>
<th>Source: Kilot</th>
<th>Source: Altindilek</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>21,600</td>
<td>21,500</td>
<td>14,500</td>
</tr>
<tr>
<td>Syria</td>
<td>11,995</td>
<td>13,400</td>
<td>5,500</td>
</tr>
<tr>
<td>Iraq</td>
<td>17,000</td>
<td>16,000</td>
<td>15,500</td>
</tr>
<tr>
<td>Total Demand</td>
<td>50,595</td>
<td>50,900</td>
<td>35,500</td>
</tr>
<tr>
<td>Available Water</td>
<td>32,720</td>
<td>31,000</td>
<td>31,600</td>
</tr>
<tr>
<td>Water Shortage</td>
<td>17,875</td>
<td>19,900</td>
<td>3,820</td>
</tr>
</tbody>
</table>

Source: Altindilek 1997.

THE ROLE OF INTERNATIONAL LAW

As in most water disputes, international law cannot help to decisively resolve this dispute. Turkey has not signed the 1997 UN Convention on Non-Navigational Uses of International Watercourses in Helsinki, and the riparians have constantly invoked conflicting principles of trans-boundary water management. Upstream riparians often claim the "doctrine of absolute sovereignty," also known as the Harmon Doctrine. This principle argues that a state has absolute rights to water flowing through its territory. This has never been accepted as a principle of international law and does not help the upstream country's case. The downstream riparians often claim historical rights of usage, which are also rarely accepted in international law (Lazerson 1993).

The principle stated in the UN International Watercourse is that of "equitable utilization without causing appreciable harm." The principle of equitable utilization are grounded in the "doctrine of limited territorial sovereignty" and integrity within a given river basin. Under this principle, a basin state's sovereign rights to the waters of international rivers within or adjoining its territory are limited by the corresponding sovereign rights of other basin riparians. A state may thus utilize the water to the extent that this use does not interfere with the reasonable utilization of other basin states. The relationship between "reasonable and equitable use" and the obligation not to cause "significant harm" is a balance between the upstream and downstream arguments mentioned above. However, there is no prioritization of one over the other. (The relevant articles in the UN convention are attached in the Appendix.) Not surprisingly, Turkey has advocated that the emphasis between the two principles be on "equitable utilization," while Syria and Iraq have pushed for emphasis on "no significant harm," which is effectively the equivalent of the doctrine of historic rights in protecting pre-existing use. Hence, international law cannot allocate the waters of the Euphrates and Tigris. Nonetheless, law provides a basis for negotiation. For that reason, this paper focuses on trilateral negotiations among the three countries.

EXISTING AGREEMENTS

The most important institutional forum for these three countries is the Joint Technical Committee (JTC), a body originally set up in 1980 for discussing water issues between Turkey and Iraq. Syria joined in 1983. Since 1983, Turkey, Syria, and Iraq have held sixteen ministerial and official meetings of the JTC (Altindilek 1997).

Water issues were included in a section of a protocol signed by Turkey and Syria on July 17, 1987. This commits Turkey to releasing a monthly average of 500 cubic meters of water a second to Syria. The section provides that:....during the filling period of the Atatürk Dam Reservoir and until the final allocation of the waters of the Euphrates among the riparian countries, the Turkish side undertakes to release a yearly average of more than 500 cubic meters a second at the Turkish/Syrian border and in cases where the monthly flow falls below the level of 500 cubic meters, the Turkish side agrees to make up the difference during the following month (Turkish Ministry of Foreign Affairs 1987).

Since this protocol was signed, the three countries have reached no additional major agreement on water allocations and ownership issues.

NEGOTIATING AN AGREEMENT ON TIGRIS-EUPHRATES WATER RESOURCE MANAGEMENT

In the preceding sections, I provided an overview of the dispute and its legal context. The following sections will try to explore ways to overcome obstacles to a negotiated agreement between the three countries.

There are three important challenges in creating a successful negotiation for the Tigris-Euphrates water dispute, that is applicable to most disputes. They are:

- understanding the consequences of not reaching an agreement,
- finding a suitable mediator, and
- increasing the negotiations pie
Other obstacles exist that must be resolved during the negotiation process. They include the difficulty of establishing objective negotiations criteria, scientific uncertainty, inventory uncertainty, and monitoring and enforcement issues. The three major challenges listed above were chosen because if any of them is missing, no agreement may ever be reached.

UNDERSTANDING THE CONSEQUENCES OF NOT REACHING AN AGREEMENT

In order to bring parties to the table to reach an agreement, the different parties must understand the consequences of not coming to agreement. Often parties underestimate these consequences or don’t consider them within appropriate boundaries. Therefore, an important part of breaking the negotiation stalemate is a realistic evaluation of BATNAs on all sides. When talking about water, Turkey, Syria, and Iraq cannot ignore the extent of interactions they have as neighbors on other political and economic issues, which are affected by how the water dispute is settled. Given that Turkey is the bottleneck, it is imperative to evaluate its real BATNA. At this time, the fact that Iraq and Syria have set aside their differences on the Euphrates issue means they seem to have similar interests in increasing the quantity of water that flows into Syria and consequently Iraq. The focus on this section however will be Turkey’s BATNA.

The Value of the Water in Dispute

While the water shortage, specifically in the case of Iraq, seems to be a serious issue, it is important to realize that water scarcity is measured in terms of cost-effective supply quantities, not total water availability. (If for no other reason, the availability of seawater desalination means that there is abundant water for the world as a whole and for any country that has a seacoast, which is true for both Syria and Iraq. But, of course, seawater desalination is expensive, even without the transportation and distribution costs. In addition, conveyance facilities to locations far from the sea may be non-existent or themselves expensive.) Water scarcity is thus a matter of cost and value, not merely of quantity. Second, the value of water and also its scarcity will be different in different locations.

This way of thinking implies that water and water disputes can be monetized and analyzed in terms of economics, taking full account of the social or national value of water that may exceed private value. Taking this approach illuminates the true size of the water problem, which will often not be very large. Along with technological innovation in water evaporation prevention and irrigation measures, converting the value of water to actual dollars can ensure that all parties benefit by cooperating in water trading and by linking water trade to other trade issues. Because trade in water permits is voluntary, both the buyer and the seller of water permits gain from such transactions. The buyer receives water that it values more highly than the money given up to buy it; the seller receives money that it values more highly than the water it gives up in the sale. Much of Turkey’s irrigation use of the Tigris is economically not feasible, with subsidized agriculture being used more as a way to keep the oppressed Kurdish population bordering Syria content (Beaumont 1978). If Turkey were to sell water to Syria, its consumption would decrease dramatically, decreasing the shortage of water resources predicted for the year 2020 and beyond.

As Fisher (2002) argues, the greatest benefits from cooperation may not be monetary, however. The parties to a water agreement would have much to gain from an arrangement of trade in water permits, because water quantity allocations that appear adequate at one time may not be so at other times. With growing populations and economies, fixed water quantities can become woefully inappropriate and, if not properly readjusted, can produce hardship. Also, the prospect of additional income through water trading may increase spending in the conservation of water, which could lead to adequate amounts of water for all countries under different socioeconomic circumstances.

Additionally, focusing on value will also incorporate issues such as water quality into the negotiations. Water that is more saline or polluted produces less yields and is therefore less valuable economically. Once water value is deemed more important than quantity, efforts could be made to negotiate on water quality issues, focusing on the water’s irrigation value.

Cost of Water to Syria and Iraq

Based on the above-mentioned protocol, which has been mostly honored by Turkey, 15,700 MCM of water per year flow into Syria and will continue to do so, even without any additional agreement. Currently, there is no agreement between Iraq and Syria on the amount of water flowing from Syria into Iraq. In the past, given the lack of high-capacity regulatory dams in Syria, an estimated 7,700 MCM to 10,000 MCM has flowed into Iraq in different years. Based on the different estimates, the maximum shortage that Syria can experience therefore can be 7,000 MCM/yr, while Iraq could face a shortage of up to 17,000 MCM/yr in 2020. Figure 1 shows the maximum cost that would be incurred by Syria and Iraq, with different water prices, if they were to procure the water required to overcome their shortage from a different source.

Figure 1: Cost of Water for Syria and Iraq*

*If they were to pay for the maximum water shortage they would experience in 2020
Value of Contested Water for Turkey

Table 2 shows the economic irrigation value of water to Turkey in the GAP project.

<table>
<thead>
<tr>
<th>Table 2. Added Value from 60,000 Hectares of Land Opened to Irrigation in The Sanliurfa-Harran Plain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to irrigation (USD)</td>
</tr>
<tr>
<td>Agricultural Income</td>
</tr>
<tr>
<td>Agricultural value added</td>
</tr>
</tbody>
</table>

Source: GAP RAD (1998)

Based on the plan that the GAP would irrigate 1.7 million hectares of land when the project is completed, it is possible to calculate the maximum value of water to Turkey. Taking into account the figures in Table 2, the entire project would provide for more than U.S. $1.73 billion in added economic value. Given that more than $32 billion will be spent for the entire project and assuming a 100-year project lifetime, this would result in an annual U.S. $1.4 billion (even assuming a zero percent discount rate) of added value per year when compared to the case when the water flowed freely. The project when completed would consume between 14,000-21,000 MCMs per year of water, depending on irrigation efficiency. This places the value of water to Turkey at seven to 10 cents per cubic meter. Given that Turkey has currently agreed to 500 m3/sec flowing into Syria, the value of not agreeing to 700 m3/sec, and sticking instead to 500 m3/sec will be in the range of $440 million and $630 million a year.

Economic Trade

There is a strong relation between trade development and the water dispute among the three countries. BATNAS should be redefined to incorporate the consequences of not reaching an agreement on the water dispute. The level of trade between Syria and Turkey hit $1 billion in 2003. According to Syrian officials, this could increase to $5 billion to $7 billion per annum if the disagreements over the Euphrates were resolved.

With regard to Turkish trade relations with Iraq, Turkish officials have indicated that the Persian Gulf crisis and the international trade sanctions imposed on Iraq caused losses to Turkey estimated at U.S. $100 billion for the past 12 years (Turkish Times 2002). In addition, the sanctions on Iraq have adversely affected social life in the region. Therefore, any further economic and political unrest in areas near Turkish borders could be extremely costly to Turkey. Additionally, Turkey is looking to cash in on reconstruction contracts in Iraq. With gradual transition of power to Iraqi officials, Turkey will have to show signs of good will toward Iraq to obtain the blessing of the Iraqi governing council for such projects, which are valued in the billions.

Outside the three countries, the role of U.S. aid to Turkey should not be neglected. Given that the U.S. is currently in charge of running Iraq, it is interested in having economic stability in problematic areas of Iraq, through which the Euphrates flows. Turkey’s inflexibility on the GAP and the Euphrates water issue could result in cuts in aid flowing from Washington, at $1 billion for 2004, which could amount to $8.5 billion in grants and loan guarantees by 2006 (Associated Press 2004) at a time when Turkey’s economy is still in deep recession. While it is hard to quantify security concerns in terms of monetary impact, it is noteworthy that Turkey’s normally U.S. $10 billion to $12 billion tourism industry has often seen 50 to 60 percent reductions in income during periods of frequent Kurdish militia attacks (Turkish Tourism Agency 1998).

Security Issues

The Kurdish Worker’s Party (Partiya Karkeren Kurdistan, also known as the PKK) remains Turkey’s number one national enemy. The “Kurdish problem” has been seen as the main motivation behind the GAP. In addition, many of the human rights issues associated with the handling of PKK members and the Kurdish population have been named as reasons for delaying Turkey’s entry into the European Union, a privilege that Turkey has been pushing for in the last two decades. While having no control over the flow of water from Turkey, Syria still possesses many pressure cards vis-à-vis Turkey. It maintains close ties with many forces in the Turkish opposition, including the PKK and other secular and Islamic groups. Not surprisingly, there appears to be a pattern of cross-border PKK activity coincident with decreases in the flow of water from Turkey to Syria (Franconia 1999). PKK attacks are currently limited or non-existent, but new Islamist terrorist groups have started terrorizing Turkey and could be strategically supported (or at least tolerated) by secular Syria to pressure Turkey.

The resulting border tensions have led Syria and Turkey to mutual threats of military action, with the most recent standoff over the PKK in 1998, when Turkey threatened “to remove the terrorist threat at its root,” pointing to PKK training grounds near Damascus. Essentially, given that military action is not the most desirable and effective way to stop Syria from supporting opposition groups, settling the water disputes could go a long way in reducing the presence of PKK camps in Syria. On the other hand, both Syria and Turkey are concerned with an autonomous Kurdistan in northern Iraq, a concern shared by the Iranians as well. The presence of an autonomous Kurdish state could encourage their own Kurdish populations to rebel, they fear, and is thus undesirable. Therefore, Turkey and Syria seem highly unlikely to do anything that would further destabilize Iraq and lead to its disintegration.

BATNA Summary for Turkey

An assessment of Turkey’s BATNA summary is shown in Table 3.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Consequence of Not Reaching an Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disputed Water Value for Irrigation</td>
<td>+$440-650 million per year</td>
</tr>
<tr>
<td>Economic Trade with Iraq and Syria</td>
<td>-$8000 to -$80000 million per year</td>
</tr>
<tr>
<td>Potential Impact on U.S. Aid</td>
<td>Up to -$800 million</td>
</tr>
<tr>
<td>Potential Impact on Tourism</td>
<td>Up to -$5,000 million</td>
</tr>
<tr>
<td>Qualitative impacts</td>
<td>Increased insecurity in Kurdish area, regional instability, potential delay of EU membership</td>
</tr>
</tbody>
</table>

*in terms of monetary and other consequences
Finding a Suitable Mediator

Since the Soviets helped resolve water dispute escalation between Iraq and Syria in the 1960s and 1970s, international bodies have done little in practice to enter the dispute as mediators. While the United States could hypothetically function as a mediator between Iraq and Turkey, it would not be considered neutral by Syria. This may be different if U.S. forces occupied Syria anytime soon. In that case, the U.S. would only need to dictate the quotas and negotiations would be unnecessary. For now, I will assume that this will not happen in the foreseeable future.

Instead, the most likely candidate for mediation may be the Water Cooperation Facility (WCF). The WCF is a UNESCO/World Water Council (WWC) initiative established in 2003 that links these two bodies with the Permanent Court of Arbitration (PCA) and the Universities Partnerships for Transboundary Waters. At this stage, however, the WCF serves as an information provider only and does not engage in mediation. It is also unclear how the WCF could enter the dispute and what channels it could use for funding the mediation efforts. Still, with its scientific capacity, arbitration expertise, and organizational neutrality, it has the best chance of breaking the impasse. The Euphrates-Tigris water dispute may offer the organization an excellent opportunity to begin mediation activities.

Increasing the Negotiations Pie

The key to eventual agreement on water issues between Turkey, Iraq, and Syria could well be to bring the Tigris firmly into the overall picture by linking the Tigris to the Euphrates. Combining the waters of the Euphrates and the Tigris would make it possible for all three countries to go ahead with their irrigation plans along the Euphrates river. However, issues of sovereignty and the attitude of “not giving away what is ours” have been major obstacles to alternative forms of water management in the region.

Iraq and Syria could also negotiate to buy electricity from Turkey, if the disputed water is used for hydroelectricity and not for irrigation. In this way, Iraq and Syria wouldn’t need to expand their power systems, while they would gain more water for irrigation.

An innovative idea proposed to expand the negotiations pie has been the idea of “Virtual Water.” The idea is that Syria and Iraq, which both need the water for food production, could buy or barter food from Turkey, which has greater agricultural capacity. In return, Turkey would purchase other goods from Syria and Iraq. This would save immense irrigation costs and solve the issue of salinity and environmental degradation in Iraq and Syria and also enable them to divert investments toward industrialization. Any such agreement would provide Iraq and Syria with food security and add the dimension of virtual water to negotiations (Nahrain Institute 1998).

Another important way to reduce the water shortage in the basin is to reduce water demand for irrigation. This could be achieved with better irrigation technologies. Turkey could offer to help Iraq and Syria modernize their irrigation technologies, thus reducing their dependency on the disputed water.

The role of the mediator in helping parties increase the negotiations pie is also an important factor in the success or failure of the negotiations.

OTHER ISSUES AND CHALLENGES

While the above recommendations may improve the chances of a more successful negotiation process, there are still many challenges to be overcome. For one, any agreement between the three countries cannot be totally independent from other countries in the region. The issue of the Jordan basin water dispute is closely related to the solution of the Tigris-Euphrates conflict, and any changes to the flow of the Tigris and Euphrates may affect other countries such as Iran and, to a lesser extent, Saudi Arabia. Success in the negotiations requires trust among the countries, which is hard to come by given their common history. A full trading scheme may not be possible within the current political climate, with Iraq in a state of flux and the uncertainty of Syria’s political future. The Syrians have also threatened to link any water negotiation to the withdrawal of Israel from the Golan Heights, which is rich in water resources. The challenge of “sovereignty” in the region is also daunting. On the positive side, some of these issues may be addressed by suspending the question of ownership rights initially (as in the Jordan river case) and focusing instead on annual allocations, the strengthening of trilateral scientific institutions, and the development of objective criteria for negotiation.

CONCLUSION

This paper provides an overview of the Tigris-Euphrates basin water dispute among Turkey, Iraq, and Syria. It argues that international law has not been entirely helpful in solving the issue, and emphasizes the importance of trilateral agreements for the entire basin. Among the important issues, it argues for a broader definition of BATNAs to include economic and security issues. It also examines the importance of mediating bodies and the importance of increasing the negotiations pie. It concludes that many of the issues in the dispute are closely linked to other disputes in the region and that an integrative approach may be required to address the dispute adequately.

REFERENCES


APPENDIX: EQUITABLE UTILIZATION ARTICLES IN THE UN CONVENTION ON NON-NAVIGATIONAL USES OF INTERNATIONAL WATERCOURSES

Article 5: Equitable and reasonable utilization and participation

1. Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the watercourse.

2. Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilize the watercourse and the duty to cooperate in the protection and development thereof, as provided in the present Convention.

Article 7: Obligation not to cause significant harm

1. Watercourse States shall, in utilizing an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse States.

2. Where significant harm nevertheless is caused to another watercourse State, the State whose use causes such harm shall, in the absence of agreement to such use, take all appropriate measures, having due regard for the provisions of Articles 5 and 6, in consultation with the affected State, to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation.

Article 10: Relationship between different kinds of use

1. In the absence of agreement or custom to the contrary, no use of an international watercourse enjoys inherent priority over other uses.

2. In the event of a conflict between uses of an international watercourse, it shall be resolved with reference to the principles and factors set out in Articles 5 to 7, with special regard being given to the requirements of vital human needs.