Transboundary Water Governance in the Euphrates Tigris River Basin

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The current transboundary water dispute in the Euphrates-Tigris river basin was originally due to the emergence of large-scale water development projects initiated by the major riparians, namely Turkey, Syria and Iraq, in the early 1960s in competition with one another. The aim of these dam projects was to control and harness the waters of the two rivers, particularly at times of flooding and drought. At national level, other interests identified subsequently were the generation of hydropower and the provision of water for irrigation and drinking purposes. At transboundary level, however, water development projects were implemented in an uncoordinated fashion and increased the pressure on the limited supply of water in the rivers.

It cannot be denied that the overarching and chronic problem of political and social instability and confrontational political relations in the region has long had a negative effect on the sustainable management and use of transboundary water resources in the basin. The ongoing spread of ISIS across region has ended up with “non-state actors” to seize control of water resources in Syria and Iraq. Thus, ISIS is able to use water structures as a means to prevent especially Baghdad and the Shiite population inhabiting the southern part of country from accessing water. Lack of water has a negative impact on agricultural production and energy generation. Water scarcity leads to migration from the region questioning the authority and influence of the riparian countries. This article provides an overview of transboundary water relations in the Euphrates-Tigris river basin, and concludes with an analysis of pressing challenges.

Water Negotiations

As demand for water exceeded supply, the national water authorities attempted to engage in dialogue and set up ad hoc institutions for negotiations (Kibaroğlu and Scheumann 2013:279-305). In the 1960s, the three riparians entered a new phase of their relationship over water, upon Turkey’s decision to construct the Keban Dam on the Euphrates. The downstream riparians, particularly Iraq, insisted on guaranteed flows (350 m^3/s at minimum) to be released by Turkey during the impounding period. Hence, a first meeting was held in June 1964 with Turkish and Iraqi experts attending. At the end of negotiations, Turkey guaranteed to undertake all necessary measures to maintain a discharge of 350 m^3/s immediately downstream from the dam, provided that the natural flow of the river was adequate to supply this discharge. This was communicated to Syria and Iraq the same year. Moreover, during this meeting, Turkey proposed the establishment of a Joint Technical Committee (JTC), which would inspect each river to determine its average yearly discharge. The JTC would determine the irrigation needs of the three countries through joint field studies and would be authorised – by calculating the needs of the riparians for present and future projects – to prepare a statement of the main principles and procedures in order to facilitate an agreement on water rights (Kibaroğlu and Scheumann 2011:277-301).

Following this first technical meeting between Turkey and Iraq, a few more ad hoc meetings were held. Among these the most notable one – the first tri-partite negotiation – was held in Baghdad in 1965 where the three delegations exchanged technical data on the Haditha (Iraq), Tabqa (Syria) and Keban (Turkey) dams. In line with a Turkish proposal, Syria suggested that it would be beneficial to commission a JTC study of the water requirements of the irrigable lands, and subsequently to examine the possibility of covering possible shortages of water supplied by the

Euphrates by diverting a part of the Tigris River's water to the Euphrates. Iraq strongly opposed this proposal and insisted on negotiating only on the waters of the Euphrates (Kibaroğlu and Scheumann 2011).

Joint Technical Committee: An Institutional Platform at Transboundary Level

During the 1970s, delegations from the three countries gathered on several occasions to exchange information about technical issues relating to the reservoirs. No agreement was reached, and Turkey and Syria unilaterally determined the impounding programmes for their reservoirs. In the early 1980s, the Turkish development plans created a new demand for cooperation. This time Iraq proposed the formation of a permanent Joint Technical Committee. At the end of the first meeting of the Joint Economic Commission between Turkey and Iraq in 1980, a JTC was established which Syria joined in 1983, whereupon Turkey, Syria, and Iraq held sixteen meetings up to 1993 (Kibaroğlu 2002:259-260).

The mandate given to the JTC was defined as determining the methods and procedures, which would lead to a definition of a reasonable and appropriate amount of water that each country would need from both rivers. The main items on the JTC's agenda were the exchange of hydrological and meteorological data, the sharing of information on progress achieved in the construction of dams and irrigation schemes in the three countries, and the discussion of initial plans for the filling of the Karakaya and Ataturk reservoirs.

However, after sixteen meetings, the JTC could not fulfil its mandate, and the talks became deadlocked. The major issues that led to the deadlock related to both the subject and the object of negotiations: whether the Euphrates and the Tigris could be considered a single water system, or whether the discussions should be limited to the Euphrates [1]. The wording of the JTC's final objective, i.e. reaching common terminology, was also problematic: whether to formulate a proposal for the *'sharing'* of *'international rivers'*, or to achieve a trilateral regime to determine the *'utilisation of transboundary watercourses'*. Iraq and Syria consider the Euphrates an *international* river and insist on an immediate sharing agreement under which its waters would be shared on the basis of each country's stated water needs. On the other hand, Turkey regards the Euphrates and Tigris as forming a*single transboundary river basin* where the waters should be *allocated* according to the identified needs.

The JTC meetings, at which claims and counter-claims concerning the use of the rivers and the nature of customary international water law were voiced, did not make an effective contribution to the settlement of the regional water dispute. The JTC did not provide a platform for delineating the co-riparians' priorities and needs as a basis for addressing regional water problems such as shortages and contamination of regional waters as well as the severe impacts of droughts. In this respect, water use patterns and the riparians' related legislation and institutional structures never had a chance of being discussed at the JTC meetings. National management and allocation policies and water management practices within the riparian countries simply could not be debated during those negotiations (Kibaroğlu and Scheumann 2013:287).

Bilateral Treaties for Water Allocation

Although basin-wide agreement was not reached over procedures or over water quotas, in 1987 and 1990, two bilateral accords were concluded which were largely products of the then prevailing political atmosphere. They were, however, not the results of JTC negotiations, but were initiated at the highest political levels. Both are acknowledged as interim agreements by all riparians.

The Protocol of 1987 between Turkey and Syria

The Turkish-Syrian Joint Economic Commission meeting on 17 July 1987 had an important outcome regarding negotiations on the water issue. The Protocol of Economic Cooperation signed by Turkey and Syria at the end of the meeting included provisions for water. It is important to note that the Protocol was regarded as a temporary arrangement. The text of article 6 of the Protocol reads as follows:

During the filling up period of the Atatürk dam reservoir and until the final allocation of the waters of Euphrates among

the three riparian countries the Turkish side undertakes to release a yearly average of more than 500 m3/sec at the Turkish-Syrian border and in cases where monthly flow falls below the level of 500 m3/sec, the Turkish side agrees to make up the difference during the following month.

Water Allocation Agreement between Syria and Iraq: The Protocol of 1989

Syria and Iraq perceived the interruption to the flow of the Euphrates due to the impounding of the Atatürk Dam as the beginning of many such interruptions that would be the consequence of the envisaged projects within the framework of GAP. Hence, the thirteenth meeting of the JTC, held in Baghdad on 16 April 1989, provided the occasion for a bilateral accord between Syria and Iraq, according to which 58 % of the Euphrates water coming from Turkey would be released to Iraq by Syria.

Emergence of Cooperation Frameworks (1990s-onwards)

Beginning in the late 1990s, however, the opportunity for a lasting solution over the Euphrates and Tigris rivers has been an emerging trend as cooperation, mainly in the security domain, has intensified between two of its major riparian states, Turkey and Syria. It is important to note that, in 1998, Turkish-Syrian relations became very tense when Turkey threatened Syria with all appropriate measures if it continued to support the PKK, the Kurdish separatist terrorist organization. War was prevented by the mediation of Egypt and Iran. Syria decided not to risk a war and expelled the PKK leader, who was subsequently captured in February 1999. This event paved the way for the conclusion of the Turkish-Syrian Ceyhan Security Agreement in October 1998, which marked the beginning of a new era that is based on more cooperative initiatives of interest to both sides (Hürriyet 1998).

In 2008 and 2009, the governments of Turkey, Syria and Iraq embarked upon cooperative foreign policy initiatives. The political reasons behind these initiatives can be analyzed at contextual, regional, bilateral and domestic levels, the analysis of which is beyond the focus of this report (Altunışık and Martin 2011). However, the political will expressed and sealed at the highest levels has also reflected on cooperative initiatives related to transboundary water development and management in the Euphrates and Tigris region.

In this context, Turkey and Iraq signed the Joint Political Declaration on the Establishment of the High-Level Strategic Cooperation Council (HSCC) on 10 July 2008 (Rep.of Turkey MFA 2008). On the other side, a similar bilateral HSCC was created between Turkey and Syria on 22 December 2009. Broadening the scope of the cooperation agenda to take in sectors of socio-economic development, including water, and simultaneously fostering a situation of regional interdependence were in fact the main aims underlying the establishment of both the Turkish-Syrian and Turkish-Iraqi HSCCs. The comprehensive and strategic nature of the HSCCs resulted in an innovative approach to transboundary water issues in that the water and diplomatic bureaucracies were empowered to draft and sign a series of memorandum of understandings (water protocols) addressing problems associated with water development, management and use.

Among the forty eight Memorandum of Understandings (MoU) which were signed between Turkey and Iraq on 15 October 2009, one was on “water”. With that protocol the two sides agreed to exchange hydrological and meteorological information as well as exchanging expertise in these fields. Both sides also emphasized utilization and management of regional water resources in an efficient manner.

On December 23 and 24, 2009 Turkey and Syria signed fifty MoUs at the first meeting of the HSCC in Damascus including four, which are related to regional waters, namely the Euphrates, Tigris and the Orontes (Official Gazette 2011:1892).

The Memorandum of Understanding on the Tigris Waters

Turkey and Syria signed the MoU on the Tigris under which Turkey agreed that Syria could pump 1.25 BCM of water from the Tigris annually, when the flow of water is within the average (Official Gazette 2011:1759). The water withdrawals are arranged according to monthly flows, and it is indicated that pumping will be done when time and

place allows [2]. This MoU may enable Syrian authorities to expand irrigation in the north-eastern Syria by pumping water from the Tigris river, which forms the boundary between Turkey and Syria and between Syria and Iraq. From the Turkish point of view, achieving an agreement with Syria about the use of the Tigris waters is real progress in terms of developing a regional understanding on transboundary waters which includes both Euphrates and Tigris waters.

Memoranda of Understandings on Water Efficiency, Drought Management and Quality Remediation

Two more MoU signed between Turkey and Syria include issues which have only recently entered the agenda of transboundary water negotiations among the concerned technocrats and diplomats (Official Gazette 2011: 1739, 1734). In this respect, it is interesting to note that within a framework of an official agreement the parties have dealt, for the first time, with the protection of environment, management of water resources quality, and scrutinized the issues of water efficiency, drought management and flood protection in tackling with the negative impacts of climate change. As opposed to the bilateral agreement concluded in 1987 on sharing the waters of the Euphrates, these MoUs have focused on how the riparian states use, manage, protect and develop the diminishing water resources of the Euphrates and Tigris rivers. The parties no longer adopted only reserved and rigid positions about their water shares and rights, but openly discussed new and efficient methods and procedures to manage water supply and demand for agricultural, industrial and domestic uses. Hence, the issues covered in the MoUs are diversified, ranging from various ways of supply management such as cloud seeding (artificial rain) to increase precipitation, installation of early flood warning systems and flood protection measures, agricultural practices with drought resistant crops; to various ways and means of demand management such as sharing of knowledge and experience on modern irrigation techniques, prevention of water loss in domestic water supply; organization of training programs on the operation of dams and efficient utilization of water resources; sharing knowledge and technology pertaining to waste water storage and reuse of treated waste water in agriculture and industry; cooperation on the development of land use techniques to increase saving of soil water.

The general approach and the content of the MoUs also display the fact that Turkey's firsthand experience with the European Union's water policy and water management approach is broadly translated to the envisioned principles in the MoUs. Hence, the Turkish bureaucracy of the Ministry of Environment and Forestry (MoEF)[3], in particular, is interested in implementing these MoUs as, in their contention, implementation of them would be a useful practice for the implementation and extension of the new water legislation in Turkey[4]. In this respect, the 'river basin level' water management approach, which is adopted from the European Union water legislation, namely the EU Water Framework Directive (2000) would be practiced not only at the national river basins of Turkey but at the transboundary river basins such as the Euphrates and Tigris. Moreover, adopting common standards for measuring (gauging) water resources quantity and monitoring of the transboundary water quality are also one of the main objectives of the MoEF particularly as relates to their cooperation with Syria and Iraq. In this context, one of the main aims of the Turkish bureaucracy is to establish environmental quality standards and to implement polluter pays and cost recovery principles at the transboundary level as the relevant MoU stipulates (Official Gazette 2011: 1734).

Conclusion and Analysis

Political Problems

The biggest challenge now is to coordinate water resources management and establish transboundary water cooperation in the midst of current state of affairs in the region. Overarching political problems, namely the Syrian internal conflict (civil war) and the deterioration of bilateral political relations between any pair of the riparians constitute disabling political background for the implementation of efficient and equitable water policy in the Euphrates-Tigris river basin.

Institutional Deficiencies

The ratification procedures and implementation of the recent (2009) bilateral MoUs could not be achieved mainly because of strained political relations. However, even in the case of restoration of peace and stability in the region,

there would still be the danger of inadequate implementation of the MoUs in mobilizing relevant actors and actions to implement benefit sharing projects and distribute the benefits equitably. Hence, the success or the failure of possible cooperation between the riparians will be tested through the systematic analyses of the changes in the socio economic status of regional people: whether their social and economic statuses are better off in terms of increasing income levels and distribution of the benefits fairly.

Moreover, there has been an enduring problem of lack of coordination in transboundary water management in the basin. That is to say, analysis of national water policy and management demonstrate the fact that riparians have developed complex national water management systems; and there are institutional and legal incompatibilities. Hence, successful implementation of water protocols and treaties would mainly depend upon the institutional capacity of the riparians as well as proper coordination of water policy.

Furthermore, with Syria experiencing significant internal unrest and Iraq recovering from two decades of sanctions and war, water resource management capacities in both countries are considerably diminished (Michel et al. 2012). On the other hand, Turkey's water policy has been evolving since the early 1990s which shaped up in a more complex legal and organizational framework, and demonstrating only a partial progress in water resources protection and public participation in water policy-making process.

Shortcomings and Loopholes in Existing Transboundary Water Sharing Treaties

The existence of the two historical and legally binding treaties (1987 Protocol between Turkey-Syria and the 1990 Protocol between Syria and Iraq), both relating only to the Euphrates, could not be accepted as evidence of cooperation. Both were bilateral and predominantly concerned with water quantity issues. Under the framework of these bilateral treaties, the riparians could not agree on more comprehensive forms of cooperation that would adopt an integrated approach to the various aspects of water use and needs (quality, quantity, flood protection, preservation of ecosystems and prevention of accidents) and might potentially facilitate negotiations by linking water management issues. The agreements lacked effective organisational back-up, at least in the form of joint monitoring. Most critically, both treaties failed to address fluctuations in flow, meaning that they contained no clauses referring to the periods of drought and flooding which frequently occur in the basin and cause drastic changes in the flow regime, requiring urgent adjustment to the use of the rivers.

Climate Change Impacts

Future climate change projections indicate substantial reductions in the runoff of Tigris and Euphrates rivers. According to a high emissions scenario (SRES A2) simulation, the surface runoff in these basins will decrease by 23.5 percent and 28.5 percent for Euphrates and Tigris basins respectively by the end of the present century (these figures are calculated for the Turkish portions of these basins). The same simulation reveals that there will be little snow cover in the headwaters of these rivers in the late 21st century as the increase in regional temperatures will cause precipitation to fall as rain mostly (not as snow). The decreases in the surface runoff are primarily related to decreases in the precipitation, however, higher evapotranspiration rates in response to increased temperatures also play a role as they increase the water loss into the atmosphere (Bozkurt and Şen 2013).

In addition to reductions in the runoff, which has not been observed in the historical observations, the peak flows in the future hydrographs will be observed earlier (similar shifts have been already detected in historical observations). The aforementioned high emissions scenario simulation indicates that the temporal shift to earlier will be about 4-5 weeks. Needless to say, these are statistically significant shifts (Şen et al. 2011).

Both changes, i.e. runoff reduction and temporal shifts to earlier, may have important implications for the future of the basin. There will be less water available for irrigation, energy production, and domestic and industrial use. Less water in the rivers will also increase the stress on the ecosystems along the rivers. The 2008 severe drought in the basin convey important messages about what could happen in this area in the future. Such events, which could be more frequent and intense in the future, could threaten the water availability and food security, and may cause conflicts in the region (Güventürk and Şen 2014).

Notes

[1] The Turkish side regards the Euphrates and Tigris as one river system because both rivers form the Shatt al-Arab watercourse. This opinion is reinforced by the existence of the Thartar Canal, which was built by Iraq: it connects the Tigris with the Euphrates and diverts water from the Tigris to the Euphrates. This view is, so far, not shared by Iraq and Syria. With respect to these contradicting views, Article 2a of the UN Water Convention reads as follows: "'Watercourse' means a system of surface and groundwaters constituting by virtue of the physical relationship a unitary whole and normally flowing into a common terminus."

[2] In 2002, a bilateral agreement between Syria and Iraq was signed concerning the installation of a Syrian pump station on the Tigris river for irrigation purposes. The quantity of water drawn annually from the Tigris river, when the flow of water is within the average, will be 1.25 BCM with a drainage capacity proportional to the projected surface of 150,000 ha. Personal communication with the Turkish officials at the Ministry of Foreign Affairs and State Hydraulic Works (DSI, Turkish acronym), January 2010.

[3] Since June 2011, the Ministry of Environment and Forestry has been reorganized and renamed as the Ministry of Forestry and Water Affairs, Turkey.

[4] A series of laws and by- laws have been adopted in Turkey since mid 2000s, which are related to environmental protection and water quality management in domestic, agricultural and industrial sectors. This legal reorientation is basically guided by the European Union water legislation within the framework of accession partnership process.

References

"İşte Tarihi Anlaşma", *Hürriyet*, October 21, 1998 (in Turkish). (Accessed: July 15, 2015).

Kibaroglu and W. Scheumann (2013) "Evolution of Transboundary Politics in the Euphrates-Tigris River System: New Perspectives and Political Challenges," *Global Governance: A Review of Multilateralism and International Organizations* 19 pp. 279-305.

Kibaroglu and W. Scheumann (2011) "Euphrates-Tigris River System: Political Rapproachement and Transboundary Water Cooperation", in: A. Kibaroglu et al. (eds), *Turkey's Water Policy: National Frameworks and International Cooperation*, Heidelberg: Springer, pp. 277–301.

Kibaroglu (2002) *Building a Regime for the Waters of the Euphrates-Tigris River Basin* , : Boston: Kluwer Law International, pp. 259–260.

Bozkurt and Sen, O.L. (2013) "Climate change impacts in the Euphrates-Tigris Basin based on different model and scenario simulations," *Journal of Hydrology*, 480, 149-161.

Michel et al. (2012) *Water Challenges and Cooperative Response in the Middle East and North Africa* , The Saban Center at Brookings, p. 14.

Yücel, A. Güventürk, and O.L. Sen (2014) "Climate change impacts of snowmelt runoff for mountainous transboundary basins in eastern Turkey," *International Journal of Climatology*, 35(2), DOI: 10.1002/joc.3974

Altunisik and L. G. Martin (2011) "Making Sense of the Turkish Foreign Policy in the Middle East under AKP", *Turkish Studies* 12 pp. 569-587.

O.L. Sen, A. Unal, D. Bozkurt and T. Kindap (2011) "Temporal Changes in Euphrates and Tigris Discharges and Teleconnections*," Environmental Research Letters*, 6, 024012, doi:10.1088/1748-9326/6/2/024012.

Para. 1 Joint Minutes Concerning the provisional Division of the Waters of the Euphrates River (Iraq-Syria) (signed

17 April 1989).

Para. 6 Protocol on Matters Pertaining to Economic Cooperation between Turkey and the Syrian Arab Republic (signed and entered into force 17 July 1987) *UNTS* Vol. 1724 No. 30069.

The Memorandum of Understanding Between the Government of the Republic of Turkey and the Government of the Syrian Arab Republic for the Construction of a Joint Dam on the Orontes River Under the Name 'Friendship Dam', (23 December 2009) (published in Official Gazette website), on file with the author.

The Memorandum of Understanding Between the Government of the Republic of Turkey and the Government of the Syrian Arab Republic on Establishment of a Pumping Station in the Territories of Syrian Arab Republic for Water Withdrawal From the Tigris River, December 23, 2009, (published in Official Gazette website) on file with the author.

The Memorandum of Understanding between the Government of the Republic of Turkey and the Government of the Syrian Arab Republic in the Field of Efficient Utilization of Water Resources and Combating Drought (23 September 2009); Memorandum of Understanding between the Government of the Republic of Turkey and the Government of the Syrian Arab Republic in the Field of Remediation of Water Quality (23 December 2009), (published in in Official Gazette website) on file with the author.

The Republic of Turkey Ministry of Foreign Affairs (2008) "Joint Political Declaration on the Establishment of the High Level Strategic Cooperation Council between Governments of the Republic of Turkey and the Republic of Iraq". (Accessed: July 15, 2015).

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