

THE MIDDLE EASTERN WATER CRISIS AND TURKEY

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Introduction

Water is the most essential component for human survival. Only used for agriculture and daily necessities in the past centuries, both its amounts and areas of use have become quite different nowadays. Today, in parallel with the changing needs and the increasing world population, water utilization has increased considerably. On the other hand, the number of water-related crises has increased seriously due to unevenly distributed water resources throughout the world. The needs in energy generation and agricultural production currently oblige states to establish new policies on water. Such policies are adopted in a peaceful and compromising manner in some regions, but within an atmosphere of conflict in others.

Despite high water potential, dispersed water resources concentrated in certain regions and river basins shared by many countries as their main water resources have an impact on relations between the countries of the Middle East. The Euphrates, Tigris, Orontes, Jordan and Nile are the most important water resources in our region, where there are many cross-boundary rivers.

We start our series of reports, in which all these basins will be examined, with the rivers directly concerned with our country Turkey. In this study, the hydrological characteristics of the Euphrates and Tigris as well as the Orontes River Basin, to which Turkey is a riparian, will be elaborated in the context of all disputes thus far and Syria's contradictory conflicting policies, in particular.

Euphrates-Tigris River Basin

1. Hydrological Characteristics of the Basin

The Euphrates originates in Turkey and is formed of two major tributaries, the Murat rising from Ağrı Diyadin and the Karasu rising from Erzurum Dumludağ. It flows 971km across the Karasu and 1,263km across the Murat before entering the Syrian territory. The river basin covers a total area of 101,000km² in Turkey. The Euphrates, which originates in Turkey and flows across Syria before entering the Iraqi territory to join the Tigris, is 2,780km long.^[1]

While Turkey contributes 31.58bn m³ and Syria contributes 4bn m³ to the Euphrates, Iraq's contribution to the runoff is nil. Nevertheless, Turkey's consumption target is 18.42bn m³, while Syria's is 11.50bn m³ and Iraq's is 23bn m³.^[2] Turkey's consumption target is around 35%, although its contribution is about 88-90%. The consumption targets of Syria and Iraq, which are not in parallel with their contribution, and Iraq's claim of the highest amount without any contribution in particular, are one of the main causes of water-based problems that arise between these two countries and between Turkey and them also.

As for the Tigris, it originates in Lake Hazar in Elazığ. It is formed by several tributaries, namely the Ambar, the Kuru, the Pamuk, the Batman and the Garzan. It flows 30km across

the border between Turkey and Iraq, and then enters the Iraqi territory. The Hezil and the Greater Zap which originate in Turkey flow into the Tigris in Iraq. Moreover, the Tigris which joins the Al-Adhaim, the Diyala and the Lesser Zab in Iraq is 1,900km long. 523km of the Tigris lies in Turkey.

Turkey has 12% of the Tigris Basin, while 54% of it lies in Iraq, 0.2% in Syria, and 34% in Iran.^[3] Turkey contributes 25.24bn m³ and Iraq contributes 23.43bn m³, while Syria's contribution to the runoff is nil. Nevertheless, Turkey's consumption target is 6.87bn m³, Iraq's 45bn m³ and Syria's 2.60bn m³. The consumption target of Iraq, which has a river basin area of 253,000km²^[4] and contributes 48% of the annual flow, is more than Turkey whose contribution rate is higher. Syria makes no contribution to it, but has also made a claim on the Tigris, even if it is a small amount. As mentioned above, such incompatible and uneven demands are the basis for the problems in the region.

The Tigris joins the Euphrates near the city of Kurna in southern Iraq to form the Shatt Al-Arab. The Shatt Al-Arab, which is 179km long, empties into the Persian Gulf.^[5]

The annual discharge of the Euphrates and Tigris rivers together is almost the same as the Nile's.

2. Differences in the Opinions of Riparian States on the Basin

The main problem in bilateral relations between Turkey on the one side as an upstream country, and Syria and Iraq on the other side as downstream countries, arises from how they define the basin. Turkey defines the concerned waters as "cross-boundary" while Syria and Iraq define them as "transboundary rivers". This difference in definition is not only a conceptual approach, but also an important problem between these countries in terms of its legal consequences.

Cross-boundary waters are rivers that originate in a country and flow across the territory of two or more countries, for which no single country or partner countries can claim sovereignty. Such waters cannot be "shared", but are "allocated". As the concept of cross-boundary is not often used in today's literature, the concept of transboundary rivers is often used for all of the rivers that are located in the territory of more than two countries. In fact, the word "transboundary" refers to the fact that

the concerned watercourse is of particular concern to more than one country. However, the concept is used as a basis for the legitimacy of a system close to common sovereignty as it is perceived as “internationalization” by riparian states.^[6]

Transboundary rivers are under the sovereignty of two or more states and sometimes form a boundary. The sovereignty of these rivers is determined by separating them at the deepest point called the thalveg.^[7] The concept of transboundary rivers was first used by the International Permanent Court of Justice in the Oder case of 1929. Geography and navigation were taken into consideration in this definition, and no second definition was required in this period. However, in the second half of the 20th century, with the increasing use of different modern needs (energy, etc.), rivers began to be used for purposes other than navigation, and therefore this definition fell short of including all the elements needed.

Due to the inability of the then rules of international law to meet expectations, many international meetings were held to find solutions. The International Institute of Law’s 1961 Salzburg Resolution on the Use of International Non-Maritime Waters and 1979 Athens Resolution on the Pollution of Rivers and Lakes, the International Law Association’s 1966 Helsinki Rules on the Uses of the Waters of International Rivers and 1982 Montreal Rules on Water Pollution in International Drainage Basins are some of the studies that have been conducted by independent legal entities on this subject. The 1966 Helsinki Rules set forth the principle of “equitable” and “reasonable” utilization, provided that certain criteria were provided for the utilization of waters between riparian states.^[8]

There are also other documents adopted as a result of studies on the issue, such as the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the UN Convention on the Law of the Non-Navigational Uses of International Watercourses adopted by the UN General Assembly in 1997, both of which are still valid. The former decrees that cross-boundary water resources should be managed by a commission of riparian states in the basin, and that the upstream country should receive the approval of

the downstream countries for any project which will be put into practice on the concerned waters. The latter was adopted by the General Assembly of the UN by 103 votes to 3 (one of these votes being Turkey’s) with 27 abstentions. The convention, which requires the approval of 35 countries to enter into force, has currently been ratified by only 15. It stipulates the principle of “equitable” and “reasonable” utilization as set out in the Helsinki Rules and also imposes an obligation not to cause significant harm to other parties.^[9]

Despite these conventions, the general rules governing the rights and sovereignty limits of riparian states have not been settled, and the settlement of disputes has been left to any agreement to be concluded between two or more watercourse states.

Article 33, Paragraph 1 of the UN Charter stipulates: “The parties to any dispute, the continuance of which is likely to endanger the maintenance of international peace and security, shall, first of all, seek a solution by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice.”^[10] Peaceful settlement of disputes has become jus cogens in international law, but the country concerned cannot be compelled to settle the dispute judicially or politically, unless it expressly states or it is an obligation arising from an agreement in force.^[11]

As a result of the studies on water allocation, four basic doctrines have emerged:

1. *The Doctrine of Absolute Territorial Sovereignty (the Harmon Doctrine):* This doctrine first emerged in 1895 as the US legal opinion issued with regards to allocation of the waters of the Rio Grande between USA and Mexico. Under this doctrine, the absolute sovereignty over water belongs to the upstream country. Therefore, it is the one that has mostly been adopted by upstream countries. It fell out of favor in subsequent years.
2. *The Doctrine of Absolute Territorial Integrity:* In direct contrast to the Harmon Doctrine, this doctrine has received support among downstream countries. It rules that

a country in the basin cannot engage in activities that affect the quantity or quality of natural flow to another riparian state.

3. *The Doctrine of Prior Appropriation:* This principle historically favors the state that puts the water to use first; however, it also decrees that the concerned state must protect the rights of downstream countries.
4. *The Doctrine of Equitable, Reasonable and Optimum Utilization:* According to Lipper, an American lawyer, the principle of equitable utilization is defined as follows: “Equitable utilization of cross-boundary waters is the allocation of waters between riparian states in such a manner so as to provide maximum utility and cause minimum harm to each riparian state with their different economic and social needs.”^[12] Here, water allocation between riparian states does not mean the equal distribution of the waters of a transboundary river between riparian states, but rather having equal rights in the equitable and reasonable utilization of river waters.

There is no agreement in international law to which the Republic of Turkey is a party that can impose obligations on it with regard to the management of waters. Likewise, Turkey’s opinion is that there has not yet been an agreement which deals with all aspects of the water issue, and that the international water law is still in its formation stage. Up until today, Turkey has opted for cooperation based solutions in its practice regarding water allocation between riparian states. It has adopted the Doctrine of Equitable, Reasonable and Optimum Utilization and has been advocating the principle of avoiding causing any “significant harm” to other riparian states.^[13]

Iraq and Syria, on the other hand, have developed a discourse that is close to the Doctrine of Absolute Territorial Integrity or the Doctrine of Prior Appropriation. These two riparian states totally ignore the sovereignty rights of Turkey as an upstream country, asserting that no project that would affect the natural river flow should be carried out. Moreover, the use of the Euphrates

and Tigris for thousands of years to revive Mesopotamian lands and irrigate vast agricultural lands and the irrigation facilities established for this purpose leads Iraq and Syria to argue that they have “acquired rights” relating to their “ancestral irrigation” from the Euphrates and Tigris rivers. This opinion based on historical priority rights is similar to the Doctrine of Prior Appropriation.

Another fundamental dispute arises from Turkey’s interpretation of the waters of the Euphrates and Tigris as “two rivers, one basin” while Syria and Iraq’s interpretation is based on “two rivers, two basins”. The Euphrates and Tigris rivers come close to each other several times in their flows along the basin, and in places it is impossible to distinguish which river is irrigating the agricultural land. Likewise, the two rivers converge naturally in Iraq to form the Shatt Al-Arab watercourse. However, the two rivers also converge into a man-made canal, the Tharthar Canal, connecting the two rivers in Iraq. Also, the water of the Tigris can be utilized in some areas that are normally irrigated by the Euphrates. Syria has opposed Turkey’s “two rivers, one basin” policy to avoid making the Orontes an issue of negotiation between Syria and Turkey and also to be able to have a claim on the waters of the Tigris, while Iraq has done the same to benefit from the Euphrates even if it has no contribution to the river.

During studies conducted by the Joint Technical Committee established in 1984 in accordance with the Doctrine of Equitable, Reasonable and Optimum Utilization, the most realistic solution with regard to the basin was presented to the riparian states by Turkey with a “three-stage plan for the utilization of the waters of the Euphrates-Tigris basin”. The stages of the plan were as follows:

1. Determining the utilizable water potential of the three riparian states.
2. Determining the quantity of irrigable lands in the three riparian states.
3. Using this data to reasonably allocate the waters.

At this point, the accuracy of the data shared by riparian states is of primary importance to ensure

realistic and equitable distribution. However, there have been conflicts in the data shared by Syria and Iraq, especially during the 1980s when the three-stage plan was proposed.

Looking at the above data on irrigation areas, it can be seen that during the 1980s, while the negotiations were ongoing, the difference between the measurements shared by Syria and Iraq on the one hand, and other people or institutions on the other, was too high to be ignored.

The Turkish Ministry of Foreign Affairs has addressed two important aspects of the three-stage plan:

1. The Euphrates and the Tigris have to be considered together as forming one single transboundary watercourse system. The two rivers not only converge at their natural confluence, the Shatt Al-Arab waterway, but also at a man-made canal, the Tharthar Canal, connecting the two rivers in Iraq. Therefore, it is understood that irrigation water for some areas currently fed by the Euphrates may also be supplied from the Tigris, and that all existing and future agricultural water uses need not necessarily be derived from the Euphrates.
2. There is currently too much discrepancy from country to country between the data collection and evaluation studies and this cannot serve as a basis for a healthy comparison. To ensure cooperation, it is necessary to carry out the inventory work on water and soil resources jointly.^[14]

Syria and Iraq have rejected Turkey's "three-stage plan" as a solution and proposed a solution through a "mathematical formula" as follows:

3. Historical Process 1960-1980

Geopolitically, Turkey, Syria and Iraq, the beneficiaries of the Euphrates-Tigris basin, have faced periodically increasing conflicts of interest from past to present. Although ideological conflicts and security issues of the Cold War era have

1. Each riparian state will notify the other riparian states of its demands on each river separately.
2. The capacities of both rivers in each riparian state shall be calculated separately.
3. If the total demand for water declared by the three riparians exceeds the total supply of a given river, the exceeding amount will be deducted proportionally from the demand of each riparian state.

Continuous fluctuations in the annual flow and variation in the annual discharge based on where the measurement is made have raised doubts about the accuracy of data to be calculated. Moreover, as mentioned above, Syria and Iraq's intent to act in "good faith" with regard to data sharing is also disputable. The "mathematical formula" being advocated by the downstream states, Syria and Iraq, is in contradiction with the principle of equitable and reasonable utilization, as well as the principles laid down in international documents.

Turkey's main approaches:

- Cross-Boundary Waters
- Two Rivers, One Basin
- Doctrine of Equitable and Reasonable Utilization
- Three-Stage Plan

Syria and Iraq's main approaches:

- Transboundary Waters
- Two Rivers, Two Basins
- Doctrine of Absolute Territorial Integrity, Doctrine of Prior Appropriation
- Mathematical Formula

led to tensions between these countries, water has always come to the forefront as the major problem. Nevertheless, disputes over water are multidimensional and have been connected with different causes of conflict from time to time. This

has widened the scope of conflict and made the problem more complicated and difficult to solve.

In 1921, the first agreement on water-related issues was made between Turkey and Syria regarding the waters of the Kuveik used by both countries while Syria was under French mandate. Several agreements made in 1926, 1930 and 1939 provided temporary solutions for the use of the Kuveik. After Syria gained its independence in 1946, some negotiations on water-related issues took place with the new administration that came to power.^[15]

The Turkish-Iraq Friendship Agreement of 1946 was the first agreement that addressed water issues between Turkey and Iraq. Protocol No. 1 of the Agreement was dedicated to the control of the waters of the Euphrates and Tigris rivers. What should be pointed out in the agreement is the statement that “Constructing flood protection facilities on the tributaries of the Euphrates and Tigris rivers is important for Iraq to regulate the flow in order to prevent the risk of flood during water intake and annual floods.”^[16] Thus, it was stated that the dams to be constructed on the rivers would have favorable outcomes for both countries, but when this possibility was put into practice by Turkey, disputes arose as Iraq’s attitude was in contrary to this view.

Until the 1950s, the waters of the Euphrates and Tigris rivers were used for irrigation to the extent that resources were available, and the quantity of water in this period did not lead to any dispute among the three riparian states in any way as it was enough for each riparian state. However, with increasing populations, irrigation water needs increased, the need for water emerged in the industrial sector, and power generation from water accelerated.

In 1954, the establishment of the State Hydraulic Works (DSI) for the protection, development and management of water resources in Turkey and Syria’s plan for a project on the Orontes on the opposite side of the border were indications of the unsettled times to come in the following years.

The first important steps in this direction were the construction of the Keban Dam by Turkey, commenced in 1964 with the loan support of the West^[17], and the construction of the Tabqa (Assed) Dam by Syria commenced in 1966, mainly with the help of the Soviet Union. The Keban Dam built for power generation is also an important project to combat drought seasons with low rainfall that affect agricultural products as irrigation water needs cannot be met, and for the prevention of floods caused by the spring thaw that melts the snow and ice in rivers or heavy rainfall.

For example, the Big Iraq Flood of 1946, caused loss of life and damage to property with an area of 90,650km² submerged under water due to overflowing rivers. During the years 1958-1962 and 1970-1975, droughts in Syria and Iraq caused a sharp decrease in agricultural production.^[18] In this respect, a dam serves as a reservoir that prevent floods by storing excess water falling in heavy rainfall periods in large storage facilities and then reduces the adverse effects of drought by discharging this water during low rain seasons. In 1989, which was a very dry year, 20.8bn m³ of water would have flowed from the border without the Keban Dam, however it increased by 4.7bn m³ to 25.7bn m³ thanks to the storage system of the dam.^[19]

In 1965, Iraq proposed a joint meeting with Turkey and Syria in order to regulate the use of the rivers. However, the meeting could not be held when Syria rejected Turkey’s opinion that all the rivers which are of particular concern to the three riparian states had to be evaluated together. The intention behind Turkey’s demand was also to discuss the sharing of the waters of the Orontes. However, Syria did not accept any claim made by Turkey on the Orontes, which passes through Syria and flows into the Mediterranean in the Turkish province of Hatay, since Syria has always regarded Hatay as its own land.

This irresolvable problem came to the fore again on August 31, 1966 upon Turkey’s request for a loan from the International Development Association (IDA) for the Keban Dam. This was due to the

IDA's preliminary condition that to receive the \$40 million loan, Turkey would have to agree to terms with the Iraqi and Syrian governments on the amount of water to be released during the first filling stage. In the protocol made between Turkey and the IDA for the loan, the amount of water to be released during the filling stage was determined as 350m³/s. Negotiations were later made with the Iraqi and Syrian governments, and Turkey increased the minimum flow to 400m³/s and then to 450m³/s.

After the Keban Dam was completed in 1974, Turkey's declaration that it would release an amount of water lower than it was committed to release during the filling stage was appealed by Iraq and Syria. The problem was resolved when Turkey released an amount of water greater than it was committed to release, although it was not the amount they demanded.^[20]

The Tabqa Dam was commenced in 1966 and completed in 1975, when the subsequently filling process began. However, the fact that the dam was constructed by the Soviet Union led to an ideological tension under the Cold War conditions, as well as technical difficulties. As a matter of fact, the dam was technically constructed as if it were a dam built on a Siberian river, at a rather high level. Thus, much more water was needed to generate electricity. The filling of this dam by Syria, storing an amount of water greater than expected, caused a sharp decrease in downstream flow and the quantity of water entering Iraq. Analyzes carried out in the mid-1960s showed that agricultural land irrigation in Iraq was about 10 times higher than that in Turkey and five times higher than that in Syria.^[21] Therefore, this decrease in the quantity of water became a vital problem for Iraq. Feeling uncomfortable about the situation, Iraq even started to collect troops to wage war against Syria, and the tension continued until the problem was solved through the mediation of Saudi Arabia and the Soviet Union. Despite being the largest dam in Syria, the Tabqa Dam failed to provide the expected efficiency due to technical faults and the lack of available water capacity. Nevertheless, the dam is in a strategic position

in controlling the water entering Iraq and is at an important location for Turkey.

Immediately after the construction of the Keban Dam, Turkey began constructing the Karakaya Dam in 1974 and finished the project in 1987. Turkey applied for a loan from the World Bank for funding, but the bank set a preliminary condition that Turkey had to reach an agreement with the downstream states, Iraq and Syria, according to international customary law^[22]. Turkey did not accept this condition based on its argument that it has sovereignty rights on the basin arising from its classification as cross-boundary and withdrew its loan request completing the project with its own resources.

When Turkey started to fill the dam in the autumn of 1977, it reduced the river flow of the Euphrates. Hence, Turkey faced Iraqi and Syrian objections and some sanctions as well. On November 20, 1977, Iraq suspended the oil flow from the Kirkuk-Yumurtalik oil pipeline on the grounds of Turkey's \$330 million debt. During negotiations regarding Turkey's oil debts, Iraq imposed a condition on Turkey not to reduce the flow of the Euphrates, making it clear why the oil flow had been suspended. After Turkey gave its assurance of this, an agreement was signed between the two countries in August 1978. In the agreement, water related issues were not addressed, and it was stated that Turkey would pay the debts by barter trade of wheat. Following the signing of the agreement, however, the statement of the then Energy Minister Deniz Baykal that "a joint commission would be established to determine Iraq's water needs and no side would suffer" once again revealed the fundamental problem.^[23]

As with the Keban Dam, the Karakaya Dam built for power generation has had positive outcomes for the countries in the region in regulating basin waters. Accordingly, as a result of negotiations with Iraqi and Syrian technicians, it was decided that Turkey would release 500m³/s of water until a final agreement was made on the water allocation.

On the other hand, agricultural irrigation projects planned for the Atatürk Dam, the construction of

which began in 1980, would be ensured through the Urfa Tunnels which started to be constructed in 1977.^[24] Turkey's successive projects on the Euphrates-Tigris basin attracted the attention of regional players, in particular Syria and Iraq, and demands for allocation of the waters began to be expressed loudly.

Of Turkey's successive projects that drew the attention of other countries in the region, the project that made the most waves was the Southeastern Anatolia Project (GAP)^[25]. The program launched in the 1970s to develop the region's land and water resources, accelerated in the 1980s. The most comprehensive and costly project in the history of the Turkish Republic, GAP covers nine provinces in total including Adıyaman, Batman, Diyarbakır, Gaziantep, Kilis, Mardin, Siirt, Şanlıurfa and Şırnak located in the Euphrates-Tigris basin and the Upper Mesopotamian plains. These provinces account for as much as nearly 10.7% of Turkey in terms of land and population. Incorporating 22 dams, 19 hydroelectric power projects and an irrigation investment covering an area of 1.8 million hectares, it was constructed to provide irrigation and hydroelectric power. The total installed capacity was planned to be 7476 MW and the annual energy generation 27 billion kWh.

The master plan, which was prepared in 1989, expanded the scope of the project to the fields of transportation, education, health, agriculture, industry and infrastructure, and consequently it became a regional development project. With the canals, storage facilities, etc. to be built on the one hand and social studies on the other, the long-term project was based on the philosophy of "sustainable humanitarian development".

The main goal is to transform inter-regional inequality in favor of the region using local resources, as well as the participation of public and private institutions, and the people of the region in particular. Thus, the income level and quality of life for local communities will increase, injustices in the region's development will decrease, employment opportunities will increase, qualified workers who have to emigrate from the region will be able to

return to their homeland, and locals will not have to move seasonally to find work. The social policies of GAP, which is basically an economic project, are evaluated on the basis of three principles:

1. Participation; ensuring the local people's participation in the process.
2. Equality and justice in development.
3. Development of human resources; ensuring access to resources and institutions that will ensure a minimum standard of living.^[26]

A total of 13 hydroelectric power plants were built from the beginning of GAP's construction to 2015. Thanks to these power plants, the electricity generation capacity of the region has increased to 20.6 billion kWh, and 416.2 billion kWh of electricity was generated in total by the end of 2015. The monetary value of this energy is \$25 billion.

19 dams were constructed under the project. Mainly intended to meet the irrigation water needs of the region, dams were built first to store water, and then main canals were constructed to transmit the water to cultivated areas, and lastly irrigation networks were dug out to distribute the water to the fields. By the end of 2015, 474,528 hectares of land had been irrigated, meaning that 45% of the irrigation target was achieved.

Some data about the project is as follows:

- The labor force participation rate in the region increased from 34% in 2007 to 42.2% in 2015. Correspondingly, the rate of employment in the region increased from 28.3% in 2007 to 35.2% in 2015.
- Export figures have increased significantly. Regional exports, which amounted to \$3.3 billion in 2007, reached \$8.8 billion in 2015. The region's share of Turkey's overall exports increased from 3.1% to 6.1%. During this period, the export rate of Turkey increased by 34%, while the export rate of the region increased by 168%.
- New universities were established in the region and the enrollment rate increased.

- The number of hospitals in the region increased and the capacities of existing hospitals were improved.

- Transportation means also increased; motorways were developed, and new airports and terminals were built.^[27]

3.1. 1980-1990

Iraq, another riparian state in the region, was engaged in a war with Iran from 1980-1988 distracting its attention away from the allocation of waters, so all developments in the region took place between Turkey and Syria during this period. However, since the 1980s, the water issue between Turkey and Syria has been associated with terrorism, and this process grew more tense during the 1990s and has continued in this way into the present. During this period when Syria was using the PKK as a trump card against Turkey, technical and diplomatic efforts continued despite all problems.

A Joint Economic Committee Protocol was signed between Turkey and Iraq in 1980 as a mechanism “to decide on the method by which the equitable and reasonable amount of water needed for each riparian from cross-boundary waters is identified”, and the Joint Technical Committee was duly established. The committee, which held its first meeting in 1982, continued to work with the participation of Iraq in 1983 until its sixteenth and last meeting in 1992. In the first years of the negotiations, short-term issues, such as the construction status of the facilities, and the exchange of hydrological and meteorological data were discussed.

The first proposal for the settlement of long-term core issues was presented to the committee by Turkey in 1984. The proposal entitled “The Three-Stage Plan for Utilization of the Transboundary Watercourses of the Euphrates-Tigris Basin” included technical engineering work removed from political disputes, such as water resources, the quantity of irrigable lands, and opportunities for water transfer from the Tigris to the Euphrates, based on the fact that the Euphrates and the Tigris make up a single transboundary river system. However, as mentioned above, the negotiations continued until 1990, but without any positive results due to differences in the opinions of the

riparian states regarding main points. One of the key reasons for the lack of any result is that the data shared by the riparian states did not reflect the truth. As a matter of fact, Syria and Iraq’s intention was to ensure more water entered their territories despite their lower contribution rates by showing the actual quantity of irrigation lands to be much higher than they actually are.

During the 1980s, two major crises occurred between the riparian states Syria, Iraq, and Turkey. These crises mainly revolved around Turkey’s water development project, the Southeastern Anatolia Project (GAP), and the Atatürk Dam to be built as part of the implementation of GAP. Regarding GAP, Syria and Iraq accused Turkey of increasing the salinity content rate by polluting the water, reducing the quantity of water flowing to the riparian states, and causing the riparian states to suffer due to the damage to their agricultural lands. Turkey denied these accusations, emphasizing that it was benefiting the riparian states by supplying water from the dams during drought periods and preventing floods in periods of heavy rainfall.

In fact, the real reasons behind Iraq and Syria’s dissatisfaction about the amount of water released by Turkey were not Turkey’s planned projects, but rather the infertile lands, and the old and insufficient irrigation techniques of these two countries. In particular, the highly saline soil of Iraq is one of the important factors that increases water needs. Of course, as it is a downstream state, the salt and alluviums in the water released by Turkey increase before entering its territory, and this water cannot be retreated due to the land structure; however, ahead of all of these comes the high saline content of the Iraqi soil itself. In his article, Erik Eckholm used the phrase “... shining as if snow just fell on the land” to describe the lands of Southern Iraq.^[28]

In March 1986, the then Syrian Prime Minister Abdul Rauf al-Kasm paid a visit to Ankara and, in

his press declaration, said, “If Turkey reduces our water due to GAP, Syria will respond with all the means it has.” Despite al-Kasm’s declaration, it is possible to say that the bilateral talks went well as four different committees were set up following the negotiations for cooperation in the following areas: international issues, border security, water and electricity, trade and the economy.^[29]

On July 17, 1987, Turgut Özal, the then Prime Minister of Turkey, paid an official visit to Syria while the studies of the Joint Technical Committee were still ongoing. During the visit, a security protocol and an economic cooperation protocol were signed. Article 6 of The Protocol on Economic Cooperation between the Republic of Turkey and the Syrian Arab Republic stipulates that, “Turkey shall guarantee a minimum flow of the Euphrates River of 500m³/s during the filling of the reservoir of the Atatürk Dam and in the final allocation of the water of the Euphrates between the three countries. Turkey agrees to make up the difference in the following month in cases where the monthly flow falls below 500m³/s.” Moreover, under this protocol, other decisions were taken, for example the two parties would work together with Iraq on the allocation of the waters of the Euphrates-Tigris, and both parties would accelerate the work of the Joint Technical Committee.

Before the Atatürk Dam was filled, in 1990 Turkey released 768m³/s for about a month and a half

in accordance with its commitment of 500m³/s, as stipulated in Article 6 of the protocol signed. Moreover, Turkey notified Iraqi and Syrian technicians in advance about the filling period. The filling period was set from January 13- February 12, 1990. As a matter of fact, a minimum amount of water is required for irrigation during this period. Nevertheless, Syria and Iraq sought ways to bring this regional problem to the attention of international platforms and turn public opinion against Turkey through groundless allegations, such as “Turkey interrupted the water flow and changed the bed of the Euphrates as an act deliberately aimed to deprive its neighbors of water^[30].”

Turkey has referred to this document in all its practices, acknowledging that the 1987 Protocol is the latest legislation to be followed on water allocation. Turkey has always abided by the committed amount of water to be released, even though climate change sometimes makes this difficult to do. However, Syria and Iraq claim that the 1987 Protocol only applies to the Atatürk Dam and that a new agreement on water allocation should be made based on a minimum of 700m³/s of water committed to release.

So far, there has been no new agreement on the issue. Moreover, a new agreement is not foreseen in the near future due to reasons such as the ongoing war in Syria and terrorist organizations in Iraq.

3.1.1. The Link between Water and Security

After Iraq went to war with Iran in 1980 it was unable to come up with any project related to the allocation of the waters of the Euphrates-Tigris or play an active role in the negotiations for eight years, as any initiative to settle the water dispute was no longer a primary issue. Although the Iran-Iraq War ended in 1988, the First Gulf War, which broke out after the Iraqi occupation of Kuwait in 1990, contributed to tension in the region. During this period, the PKK benefited from the war and sought ways to launch a new offensive against Turkey by trying to develop communication channels with the Kurdish groups,

whose influence had expanded in northern Iraq, Masoud Barzani’s Kurdistan Democratic Party (KDP) and Jalal Talabani’s Patriotic Union of Kurdistan (PUK).^[31] At around that time, when the PKK began to lose its presence in Turkey, Syria embraced the organization and helped staff it, allowing it to shift its power against Turkey without entering into any armed conflict by using the PKK as a screen.

During the 1980s, Syria, which refused to discuss the Orontes issue, ensured that the Tigris and the Euphrates in particular remained on the

agenda, strongly opposing all of Turkey's water installations and demanding unrealistic amounts of water. In fact, Syria was always playing the terror card against Turkey whenever their relations were tense. At this point, it is important to note that Syria not only supported the PKK, but also the Armenian ASALA organization in its bloody attacks on Turkey, as well as other leftist terrorist organizations fleeing Turkey. During the 1970s and 1980s, in particular, the ASALA terrorist organization plotted 27 assassinations against Turkish diplomats in four continents, which claimed over 34 lives, left dozens of people wounded and had repercussions around the world.^[32]

Syria's support for opposition Kurdish groups in Iraq along with the PKK brought the governments of Ankara and Baghdad closer. On December 19, 1980, a cooperation was established in the oil, irrigation and transportation sectors through an agreement signed between Turkey and Iraq. Also, from August 10-12, 1981, the Iraqi deputy Prime Minister, Taha Ramadan, paid a visit to Turkey and signed a trade agreement by which it was agreed that Turkey would allow the exchange of oil from Iraq in return for imported Turkish products. Thus, Iraq became the second biggest importer of Turkish shipments after Germany.^[33]

The main problem between the military government of Turkey, which came into power after the 1980 Turkish Coup, and the Syrian government was that Syria became a home to those engaged in terrorist activities in Turkey. On the occasion of the visit of the Syrian Minister of Justice to Ankara from June 15-19, 1981, although an Agreement on Extradition and Mutual Legal Assistance in Criminal Matters was signed, Syria refused to extradite persons demanded by Turkey as they were regarded as political refugees.

3.2. 1990-2002

The 1990s began with turmoil in the region. In 1990, Iraq occupied Kuwait and did not end the occupation despite an international economic embargo. It then faced the intervention of a broad military coalition under the leadership

Despite the problems with Syria, Turkey signed the Border Security and Cooperation Agreement with Iraq at around that time (1983). This decreed that both countries could go in "hot pursuit" of criminals within the borders of the other, providing prior notice. Thus, Turkey built the legal grounds for its operations in northern Iraq.^[34]

Pursuing a strategy of cooperation, Turkey proposed a joint war on terror to Syria through a letter addressed to Syrian President Hafez Assad by the then President Kenan Evren in 1984. Afterwards, on March 5, 1985, the Border Security Protocol was signed between the two countries in Damascus. But such cooperation initiatives did not last for long. As a matter of fact, any issue which had been a matter of cooperation for a period was then used as a trump card when an immediate crisis arose.

Here, in light of all these facts, it can be understood why the then Prime Minister Turgut Özal issued the statement: "We will cut off the water flow if Syria helps the PKK."^[35] Following this statement, Özal paid an official visit to Syria with a large delegation composed of ministers and members of the Turkish National Intelligence Service (MIT) and signed two agreements: one to provide security against terrorist activities, and one for economic purposes addressing water-related issues.

In 1989, when Turkey and the PKK mutually sharpened their discourse, the two confronted each other. Özal expressed his suspicion that with its hostile manner Syria was not complying with the 1987 Protocol and declared that if Syria did not comply with the protocol and continued to support the terrorist organization, Turkey could abandon its commitment to release 500m³/s of water without complying with the second protocol.^[36]

of the US Army in 1991. The quick succession of the Iranian War, the occupation of Kuwait and the First Gulf War, along with US efforts to establish a Kurdish state within its lands, all took their toll on Iraq. Moreover, this period

became even more complicated with the Second Gulf War in 2003.

In 1991, the disintegration of the USSR, long-time strategic ally to Syria, led to Syria's search for new partners in the region. During this period, Turkey was not a priority option for Syria, although it was in need of establishing a cooperation with Turkey in the context of water and security issues. As a matter of fact, there were still basic disagreements to resolve regarding the allocation of the waters of the Euphrates-Tigris, and reconciliation could not be achieved. Another factor that made the situation even worse in terms of relations between the two countries was Turkey's positive relations with Israel, which were elevated to the level of strategic cooperation.

The 1990s started with high tensions regarding the allocation of the waters of the Euphrates-Tigris. The filling of the Atatürk Dam, the construction of which began in that year, was perceived as a threat to the future by Iraq and Syria, and the news caused a big stir. They even tried to change public opinion and made groundless allegations that Turkey had interrupted the water flow and aimed to deprive its neighbors of water.

During the Joint Technical Committee meeting held in Baghdad on April 16, 1990, Iraq and Syria signed a bilateral agreement. Under this agreement, it was agreed to allocate 58% of the Euphrates originating in Turkey to Iraq, and 42% to Syria. This agreement, which addressed the Euphrates and the Tigris, was also inadequate in that Turkey was not involved and basic issues were ignored with the focus put too much on the amounts of water to be shared.^[37]

Another notable development during the 1990s was the effort to integrate the water of the Euphrates into the water issue between Israel and Syria. Syria announced that if Turkey released more water from the Euphrates, it would allocate more water to Israel, one of the countries in the region with the greatest water scarcity issues. This proposal addressing two separate river basins without any hydrological connection was not accepted by Turkey.

In the fall of 1991, the Middle East Peace Conference was held in Madrid, with Syria and Turkey both in attendance. Along with many topics, the water issue or a possible water crisis was addressed in the conference.^[38]

In 1991, the negotiations between the Turkish Foreign Minister Kurtcebe Alptemüçin and the Syrian President addressed three main issues: the situation in Iraq, shared utilization of regional waters, and border security.^[39] During this period, the two countries took a common stance towards the fact that the people of Iraq would decide the country's fate in the post-war period and that Turkey's border security had to be ensured, but they could not find a solution for the basic disagreements on the water issue.

In those days, Turkey was conducting cross-border operations in northern Iraq on the one hand and initiatives to prevent Syria from supporting PKK on the other. On this topic, in April 1992, İsmet Sezgin, Turkish Minister of the Interior, paid a visit to Damascus with many files proving that Syria was supporting the PKK. While Turkey warned Syria to comply with the 1987 Protocol, Syria claimed that it was not providing sanctuary to Abdullah Öcalan, but that he might be in the Bekaa Valley where its authority was limited. On April 17, 1992, a security protocol was signed between Turkey and Syria. Given the official reports of both parties, it seems that the protocol was interpreted differently by each. While Syria emphasizes that the negotiations addressed only simple border issues and no commitment was made, Turkey states that serious issues were addressed, such as the war on terror.^[40]

In August 1992, Turkish Foreign Minister Hikmet Çetin declared that Turkey would ensure that the flow of the Euphrates to Syria would be in the amount agreed beforehand, as long as Syria acted in compliance with the protocol. Thus, the allocation of water and security issues were once again addressed together. In the months that followed, Turkey warned Syria to act more diligently, stating that Syria was using terrorism as a trump card against water, but that Syria would not be able to

solve the water issue without Turkey. Following declarations of the Prime Minister Süleyman Demirel to this effect, Syria took a tougher line. Syria accused Turkey of violating international law, revoking their rights and failing to cooperate.

From the 1990s onward, Syria intensified its efforts to sway international public opinion on water allocation, and finally these tense relations were brought to the agenda of the Arab League. The Syrian government, which asked the Arab League to put pressure on Turkey, raised the issue of Hatay through allegations that Hatay is not Turkish territory. Thus, in the issue on water allocation, different conflicts were resurfaced to wear Turkey down.

In 1995, with the support of eight major countries in the region, including Saudi Arabia and Egypt, Syria issued Turkey a notice, in which it stated that bilateral talks had to start immediately, that it was suffering due to the dams constructed by Turkey as the waters were polluted, and that Turkey was violating international law. Afterwards, the Damascus Declaration on a fair share of the water from the Euphrates was issued by seven Arab countries in Damascus, the capital of Syria. This declaration also criticized the Birecik Dam, which Turkey had recently started to construct. The fact that Turkey-Israel relations gained momentum in a positive direction during this period became an enabling factor for Syria to convince the Arab countries to act against Turkey, something that the Arab League later reported it was uncomfortable about.^[41]

During this period, attempts were made to push the issue of the allocation of the waters of the Euphrates and Tigris, which is a regional problem with particular concern to riparian countries, not only onto the agenda of the Arab League but also onto the global agenda. As Syria and Iraq regarded the problem as the sharing of “international waters”, they loudly expressed their claim that the issue had to be settled by the International Court of Justice.

These efforts also received partial support from Western countries. For example, on December 11, 1999, regarding the Ilisu Dam^[42] constructed

in 1997, the British Foreign Secretary said in a statement to the press; “This dam will destroy the Kurdish civilization. Turkey will threaten Middle Eastern countries to deprive them of water, and water wars will begin in the Middle East. The construction of the dam will be an obstacle to Kurdish autonomy.” The British Trade Minister Stephen Byers and Deputy Prime Minister John Prescott made similar statements, expressing that the construction of the dam had to be stopped. The German government also gave the task of preventing the construction of the Ilisu Dam to a non-governmental organization. Switzerland, which had funded the construction of the dam, announced in early 2002 that it was withdrawing from the project.

This is not the first time Turkey has faced such efforts to prevent the construction of the Ilisu Dam, one after the other. For example, MP Kevin McNamara made a speech about the GAP in the British Parliament, saying; “The United Kingdom Defense Forum has issued a warning on the topic of the GAP, as follows: The GAP is one of the region’s most dangerous time bombs. It has not yet exploded as a problem because the project has not reached its full potential of development. But by its completion date in 2010, it will become the most dangerous explosion due to the clash of vital interests that it will ignite. Thus, it will also have implications for our security interests both in terms of the security of the West and the future of Turkey as a member of NATO and a potential member of the EU. The United Kingdom’s support for the project (...) is foolishness.”^[43] This discourse by the West gave an ethnic dimension to the issue of the allocation of the waters of the Euphrates-Tigris and, consequently, adversely affected Turkey’s struggle with the PKK as a NATO country.

In 1996, after its relations with Syria became ever more strained, Turkey issued a notice to Syria as follows: “Turkey has the right to take any and all measures against Syria as long as it shelters the PKK and gives sanctuary to Öcalan, and Turkey will use its right when it deems appropriate.”^[44] Although it took a more determined and tougher

approach in its struggle with the PKK terrorist organization and issued this notice to Syria, no progress was made and Turkey was left dissatisfied. Ground Forces Commander General Atilla Ateş paid a visit to Hatay's Reyhanlı district, located on the Syrian border, with a large delegation and said; "As the Turkish state, we are trying to establish good relations with our neighbors. Despite our good intentions and efforts, some of our neighbors, let me say it out loud, Syria in particular, are misinterpreting our good intentions. Turkey got involved in terrorism because of those supporting the bandit known as Apo. Turkey has made every effort to ensure good relations. If Turkey does not get the response it expects, it will have the right to take all precautions necessary. Our patience is nearing an end."^[45] Even without the sharpened discourse, the subsequent declarations of President Demirel and Chief of the General Staff Hüseyin Kıvrıkoğlu to this effect and troops amassing along the border made it clear that the diplomatic process was over and that a military process was about to begin.

Syria decided to extradite Abdullah Öcalan on October 9 through the mediation of Egyptian President Hosni Mubarak and the Iranian Foreign Minister. Öcalan, whose asylum request was rejected by Greece, Russia and Italy, finally went to Kenya where he was arrested on February 15, 1999 by a joint US-Turkish operation, before being brought to Turkey.^[46] Following this concrete step, Turkey and Syria came together in Adana to sign the Adana Security Protocol on October 20, 1998.

3.3. From 2002 to the Present

Although the 2000s started positively for Turkey, Syria and Iraq regarding the water issue, political developments in the Middle East once again became the focus of the international community due to the attacks of September 11 in 2001. Efforts to legitimize an American-led intervention in Iraq under the anti-terror rhetoric of the USA became the number one global agenda. In 2003, the USA invaded Iraq and, consequently, the collapse of Iraq began. Still suffering the damages to the economy, infrastructure and other losses caused

Through this agreement economic, social, scientific, cultural, and commercial, etc. cooperation was achieved between the two countries. In the following years, the parties continued their efforts to build mutual trust despite evident cautions.

After the death of Syrian President Hafez al-Assad in 2000, the next president was also important in terms of Syria-Turkey relations. Indeed, Hafez al-Assad's brother, Rifaat al-Assad, had been known in the past for his direct relationship with the PKK, and his presidency could lead to a new crisis. Eventually, Bashar al-Assad, who was educated abroad and regarded as more moderate, was elected as unopposed President of Syria. During this period, the Turkish President Ahmet Necdet Sezer's presence at the funeral of Hafez al-Assad was another indication of positive relations.

In 2001, negotiations began between the GAP Regional Development Administration, the Syrian General Organization for Land Resources (GOLD) and the Syrian Ministry of Irrigation. Eventually, a Joint Declaration was signed between the GOLD and GAP administrations on August 23, 2001. The declaration stipulates cooperation in many fields, such as training, mutual exchange of experts, technological exchanges and joint projects. Then, in 2002, a document containing the codes of practice for cooperation in said fields was signed. Thus, the GAP, which had always been subject to conflict, began to be mentioned as a point of development between the two countries for the first time.^[47]

by the First Gulf War and the continuation of the economic embargo, the invasion only served to deepen the crisis in the country. Dams, pumping stations, canals, seawater treatment facilities and wastewater treatment facilities were all destroyed during the bombardments. The contamination of drinking water with sewage water due to the damaged water treatment plants, and the lack of spare parts and expert personnel caused serious damage to public health. Due to the destruction of the treatment plants, the need for clean water

increased day by day and a great water-related humanitarian crisis occurred in the country.

After the US-led invasion of Iraq, only 33 of 177 treatment plants remained intact.^[48] According to the 2007 data, only 17% of wastewater could be treated to be released to the rivers. In particular, childhood diseases in the country seriously increased due to water quality problems. According to the UN's 2010 data, 41 out of every 1,000 children in Iraq died before their fifth birthday because of waterborne diseases. This ratio, which is almost half the world average, continued at the same level for a long time.^[49]

The USA which invaded Iraq on the grounds that Saddam had nuclear weapons, confiscated most of Iraq's oil wells and dragged the region into chaos. Although oil is usually regarded as the main issue in this case, water is another important dimension of the problem. As a matter of fact, in the 2003 intervention, also referred to as the "Second Gulf War", some opinions supporting the idea that the water resources of Iraq should be put under "protection" were also expressed. Moreover, Pelletier, a political analyst at the CIA, even stated that through the Iraq intervention the USA must gain control of the water resources along with oil resources in order to shape the region.^[50]

In those years, despite Syrian efforts to find channels by which to communicate with the USA, the USA continued to pursue the policy of "containment" by considering Syria in the category of "rogue states". During the 2000s, the Damascus administration became isolated in the region and so improved its relations with Ankara.

Turkey's ruling Justice and Development Party (AKP), which came into power in 2002, declared that it would build a foreign policy based on principles such as "zero problems with neighbors" and "regional peace". As a result, Turkey's interest in the Middle East has increased on a peaceful basis. Syria's isolation and it being subjected to policies similar to that of Iraq pushed Turkey and Syria closer, and this political intimacy facilitated the establishment of a cooperation alliance for the allocation of waters.

At the end of July 2003, in an official visit to Turkey, Syria's Prime Minister Mustafa Miro declared, "We believe that a dialogue based on mutual trust and friendship will solve - and as we see it is solving at present - this problem in an environment where friendly relations between the two countries are dominant above and beyond all the framework agreements made regarding the cross-boundary waters." This was an indication that the problems would be solved peacefully in the new era.^[51] The following year, Syrian President Bashar al-Assad also paid an official visit to Turkey. It was the first time in the history of independent Syria that a Syrian president had visited Turkey.

On December 22, 2004, a "Free Trade Agreement" was signed between Turkey and Syria. In this Syria acknowledged that Hatay is Turkish territory, consequently giving way to discussions on the Orontes River between the parties. Prime Minister Recep Tayyip Erdoğan, who was in Syria at the time, had a meeting with the Syrian Prime Minister Otri and signaled his cooperation on the issue, promising technical assistance in a joint project on the Orontes River.

The Joint Technical Committee, which came to a halt in 1992, was re-activated with a meeting in Syria from May 7-11, 2007. The negotiations continued in the following years and a meeting was held in Turkey in 2009. During these meetings, many issues, including water use, were addressed, bilateral and trilateral negotiations were held, and a number of protocols were signed.

One of 48 Memorandums of Understanding (MoU) signed between Turkey and Iraq on October 15, 2009 is the document addressing the water issue under the title "Memorandum of Understanding in the Field of Water". Negotiations where cooperation came to the fore were carried out between the Ministry of Environment and Forestry on behalf of Turkey and the Ministry of Water Resources on behalf of Iraq.

The protocol addressed many issues, such as identifying the actual status of water resources in

the Euphrates-Tigris in terms of meteorological and hydrological conditions, developing mechanisms for the elimination of problems that may arise during arid periods, exchanging and evaluating results of national studies for planning the use of water resources, ensuring coordination and cooperation with Syria on these issues, establishing a joint database that would include Syria to gather meteorological and hydrological data together, mitigating drinking water losses, carrying out joint studies for the provision of healthy water, and organizing training programs on water-related issues.^[52]

On December 23-24, 2009, a total of 50 MoUs were signed between Turkey and Syria. Two of these were very important in terms of water politics. In accordance with these Turkey and Syria were to build a joint dam on the Orontes River called the “Friendship Dam”. The purpose of this dam was to provide water to irrigate 10,000 hectares in Syria and 20,000 hectares in Turkey, as well as to produce hydropower for both parties. Both countries celebrated the laying down of the dam’s foundation stone in February 2011. But afterwards, the political demonstrations that started in Syria in March 2011 soon turned into an uprising, and the country was dragged into the ongoing civil war. With the beginning of the war, dozens of joint projects, such as the dam in question, were canceled.

Another Memorandum of Understanding was on the “Establishment of a Pumping Station in the Territories of the Syrian Arab Republic for Water Withdrawal from the Tigris River”. To the extent possible and at such a time permitted by the flow of the river, Syria could draw up to 1,025,000,000 cubic meters of water per year from the Tigris. As a result of the Tigris River Irrigation Project, Syria needed to withdraw water from the river. While Turkey asserted that negotiations would encompass the Tigris and Euphrates waters together as per its “two rivers, one basin” argument, Iraq and Syria opposed this. For the first time since the signing of the protocol, Syria’s demands from the Tigris River were discussed and this meant that an attitude closer to the “two rivers, one basin” argument was adopted.^[53]

Even though it does not seem directly associated to the process, the fact that Turkey sees water allocation as an effective part of its EU accession process has helped determine the course of Turkey-Syrian relations. Turkey started negotiations on its accession to the EU in 2005 and began addressing water-related issues under the general topic of the environment. The EU’s Water Framework Directive (WFD), which is considered to be the main document of the EU water legislation, imposes an “obligation” to ensure cooperation between EU member states in work on river basin management plans. The Directive emphasizes the need for co-ordination work even in non-member EU states.^[54]

However, since the Arab Spring that began in late 2010 in Tunisia spread to Syria, all agreements regarding water allocation seem to have been put aside. Along the Euphrates river basin, political, economic and military control of the Syrian regime has been completely overtaken by different groups, and hence no relevant party has remained for Turkey to contact with regards to the water issue. Similarly, the sectarian motivated war, which began after the US-led invasion of Iraq, has pushed Iraq-related water debates to one side. In parallel to the deterioration of relations between Turkey and Iraq, the two countries had tense relations that constantly escalated until the Prime Minister Binali Yıldırım’s visit to Iraq in January 2017.^[55] While the allocation of waters has lost its primary importance during such a time when relations are continually based on security priorities, many discussions have been intertwined.

Since 2014, the water issue in the basin has begun to be directly associated with illegal organizations. Daesh, which first occupied Raqqa, where Syria’s important oil reserves are located, has taken control of many dams by occupying the cities surrounding the Euphrates-Tigris rivers over the course of time. After gaining control of the region, Daesh based its priorities on finding “energy, finance and water” resources and tried to monopolize the control of the water. According to many experts, Daesh has chosen Mesopotamia, the land between the Euphrates and the Tigris which

has been the center of many different civilizations, to exert dominance in such a manner and show that it is aware of the strategic importance of water.^[56]

Daesh basically uses water in three ways against the conflicting parties.^[57] First, it brings the vital functions of the region to a halt, rendering water pipes and electricity cables unusable. In 2014, the terrorist group worried the people of the region by gaining temporary control of the Mosul Dam. With good reason: half of Iraq's electricity and the water needs of the Kurdish region are met by this dam. Having seized the Ramadi Dam on the Euphrates River in 2015, Daesh reduced the quantity of water released to the Euphrates region and caused water problems in five cities.^[58]

The second method it uses is to open dam shutters completely in order to cause flooding, or to completely close them in order to destroy agriculture and deprive the people in the region of water. Having seized Fallujah in 2014, Daesh opened the dam shutters, causing flooding in the area and forcing 60,000 people to flee the region. Another method used by the organization is to make water resources unusable by polluting or poisoning them.

Daesh has also kept up its threats to blow up the Tabqa Dam in order to protect Raqqa from military forces gaining ground in the region. If Daesh blows up the dam, it is stated that all villages to the south of the river will be submerged, and the number of deaths will increase due to drought and famine.^[59] However, although Daesh seized the control of the Mosul Dam for a short period in 2015, the dam is under the control of the Peshmerga forces at present. Taking the Mosul Dam back from the group is considered to be "prevention of a disaster of epic proportions". Indeed, it is estimated that if the dam is blown up Mosul could be submerged 20m and Baghdad 5m below water, leading to one million deaths. Another important point about the Mosul Dam is that it is constructed on a foundation

Orontes River Basin

The Orontes River formed by the Rasel-Ayn and the al-Labwa originating in the Bekaa Valley between the Lebanon and the Anti-Lebanon

of soluble gypsum. This means the dissolution of rocks as soon as water comes into contact with it. After the US-led invasion, reinforcement works were initiated and it was planned to construct the Badush Dam downstream of Mosul Dam. Plans for this construction actually began in the 1990s, however, they were halted in 2003 due to the intervention of the USA. Due to recent developments, construction works have not been able to be continued and the problems with the foundation of the dam have increased the risk of it collapsing.^[60]

On the other hand, it should be emphasized that if Daesh is backed into a corner, it may resort to any action that will cause calamity; this means that it could use water as a weapon of mass destruction by destroying all the dams on the Euphrates and Tigris rivers.^[61]

Turkey launched operation "Euphrates Shield" (Turkish: *Fırat Kalkanı Harekâtı*) on the grounds that 21 of its civilians had been killed by bullets and mortar fired across the border by Daesh from the Syrian territory, while its final limit had been violated by the YPG (People's Protection Unit), the military wing of the PYD, who refused to withdraw east of the Euphrates.

It is clear that the US policy of establishing a Kurdish state in the Iraq-Syrian region and its realization of this through PKK-affiliated groups is not acceptable for Ankara. Hence, during the operation launched on August 24, 2016 Turkey took action to combat the plan to form a "PKK corridor" on the border and by March 2017 had taken control of an area of 1,200m² extending to the city of al-Bab. Code named Euphrates Shield due to Turkey's sensitivity over there being "no Western presence in the Euphrates", Turkish Armed Forces acted together with the Free Syrian Army to push Daesh and the PYD/PKK from the region.

Mountains, flows in a northerly direction for 35km and enters Syria. In Syria, it passes the cities of Hama and Homs and crosses the Al-



Ghab Plain. It then follows the border between Syria and Turkey, starting near the village of Etun (Zambakiye).

The river has important functions for Syria, such as feeding Lake Hama, irrigating the Al-Ghab Plain and meeting the water needs of Hama.

The Orontes follows the Turkey-Syria border for 22km and then enters Turkey. Here it is reached by its tributaries; the Karasu, Afrin, Karadere and Defne. It flows 88km in Turkey and finally discharges in the Mediterranean Sea from the plain of Amik.

Its total length is about 248km, of which 40km lies in Lebanon, 120km in Syria and 88km in Turkey.^[62]

The average annual flow of the river is estimated to be 2.4 billion m³, of which Turkey's contribution is 1.17 billion m³.^[63]

The river's catchment area covers 26,530km² of which approximately 65% is in Syria and 23% in Turkey.

While many rivers in the region flow from north to south, the Orontes River flows from south to north; that's why it is named "Asi", which means rebellious. Lebanon and Syria are upstream riparian states while Turkey is a downstream riparian. Unlike the Euphrates-Tigris basin, Turkey, which is a downstream riparian in the Orontes Basin, did not benefit from the Orontes for many years due to its utilization by upstream riparian states. Up until the 2000s, other riparian states were reluctant to discuss any issue on the utilization of the river.

There is no agreement signed between the three riparian states concerning the sharing of the waters of the Orontes River, and all negotiations on this issue have been carried out bilaterally as Syria-Lebanon, or Syria-Turkey.

For a Middle Eastern country, Lebanon is rich in water resources in terms of national and trans-boundary rivers. However, its geographic and topographic structure makes it difficult to utilize and store its water. Moreover, the civil war that erupted during the 1970s made it difficult for

Lebanon to establish any policy for water resources, and also resulted in it losing dominance in negotiations on the sharing of the waters with riparian states. Despite being an upstream riparian, Lebanon has exhibited a lack of willpower to protect its interests against Syria in the sharing of the waters of the Orontes River. This is something that was often criticized by opposition parties in the Lebanese parliament.^[64]

In the 1950s, Syria began to create projects for the utilization and development of water resources and made its first serious contact with Lebanon on this issue in 1962. First, a Common Technical Committee was set up to ensure 100 million cm³ of water would be allocated to Lebanon annually.

In 1972, the first agreement between Lebanon and Syria concerning the basin was made, but this agreement did not come into force due to the political instability in Lebanon. According to this agreement, Lebanon would be entitled to 80 billion cm³ of water from the Orontes River.

On September 20, 1994, Lebanon and Syria then concluded the Bilateral Agreement Concerning the Usage and Sharing of the Waters of the Orontes. The agreement is deficient from the very beginning as Turkey is not taken into consideration as a riparian. The total annual discharge rate of the river was considered to be 403-420 million m³/year, of which the Lebanese share was estimated to be 80 million m³/year, and the remaining was left to Syria.

If this figure falls below 400 million m³, it is decided that Lebanon's share will be lowered, relative to the reduction in flow. The fact that there is no note concerning the increase of the flow in these articles, which are obviously unfair, indicates that Syria has acted unilaterally. The obligation imposed on Lebanon to notify Syria if it needs to build any facility on the river and the fact that the quantity of water to be used by Lebanon in those facilities will be reduced from its 80 million m³ of use are other issues that draw attention within the agreement.

Despite Turkey's periodic objections to the agreement, it is possible to say that Syria has taken the

monopoly of the river. This is due to the fact that Lebanon's water needs are lower on the one hand, while the Syrian government has more power than the Lebanese government on the other.^[65]

However, the main disagreement over the basin is between Syria and Turkey. In 1939, during the French colonization of the Syrian Arab Republic, France and Turkey signed The Final Protocol to Determine the Syria-Hatay Border Limitation. Article 3 of the Protocol stipulates that: "The thalweg of the Karasu and Afrin as well as the Orontes River, which are shown in the attached map, are considered to be the border, and equitable utilization of the waters in any case by both parties along the concerned border is taken as a basis." The article in question indicates that the substance of the treaty is based on the principle of "equity".^[66]

However, Syria, which declared its freedom in 1946, has neither agreed to the provisions of the agreement, nor the fact that Hatay is part of Turkish territory. Syria's attitude is contrary to the principle stated in Article 11 of the Vienna Convention of 1978; "A succession of States does not as such affect a boundary established by a treaty; or obligations and rights established by a treaty and relating to the regime of a boundary."^[67] Moreover, that Hatay is part of Turkish territory is a fact recognized by all actors in the international arena.

Therefore, the Orontes River has the status of "cross-boundary water". However, with the confidence gained by the oppression of Lebanon, Syria acts as if the status of the river is "national water", and develops projects accordingly.

The Homs-Hama canal systems, as well as the Ghab and Roudji irrigation networks are supplied from the Orontes. Water is stored in the reservoirs of the Zeita Dam built near Homs in 1998, the Qattaneh Dam built in the Roman period and then rebuilt in the French period, and the Rastan dams built near the city of Rastan in 1960 to provide irrigation and drinking water.

In addition, an oil refinery built near Lake Qattaneh in 1957, fertilizer production facilities

built on the western side of the lake and olive oil factories located in a region close to the border of Turkey have made utilization of the already very limited river waters more problematic.^[68] Turkey has developed many projects in order to prevent pollution in this region.^[69]

During the 1950s, Syria gave great weight to water policies and applied to the World Bank to obtain funding for the Al-Ghab Project. The bank approved the loan, on the condition that Syria would not draw more water from Lebanon and would reach a consensus with Turkey. Turkey directed its objections against this project using some arguments, such as the fact that Syria would deviate the Afrin. However, bilateral talks ended without positive results.

Unable to get loans from the World Bank, Syria began different projects on the river. In 1962, a cooperation agreement was signed with the Dutch company NEDECO, and a project involving two dams, two large drainage canals and some agricultural canals was completed between 1955-1967 with the support of Bulgarian, Yugoslavian and Italian companies, along with the Soviet Union. During this process, in a conference between Turkey and Syria, Turkey offered a draft protocol that would be favorable for both sides, but all Turkey's rights were ignored and the projects continued.

The Zeyzoun and Zeita dams are important dams built on the basin. Zeyzoun Dam collapsed in 2002. As a result, 70 million m³ of water was released and 22 Syrians lost their lives. Agricultural lands both in Turkey and Syria were also ruined.^[70]

As of the 2000s, Syria and Turkey improved their relations. The Free Trade Agreement signed in 2004 defined and recognized the boundaries of the two states, and Syria then acknowledged Turkey's sovereignty in the province of Hatay. Thus, a process of negotiation and consensus over the Orontes that includes Turkey began for the first time.

In the following process, the two administrations remained in contact through mutual formal visits

by senior government officials. In 2004, the then Prime Minister Recep Tayyip Erdoğan had a meeting with Syrian Prime Minister Otri. Here, cooperation was recommended and technical assistance was promised if a dam was to be built on the Orontes River.

In 2009, Turkey and Syria signed the High Level Strategic Cooperation Council Agreement and agreed to build a joint dam on the Orontes River called the “Friendship Dam”.

The costs of the dam were to be met by Syria and Turkey, and hydropower was to be produced

for both countries. The purpose of this dam was to provide water to irrigate 20,000 hectares in Turkey and 10,000 hectares in Syria. Its foundation stone was laid on February 6, 2011 with the prime ministers and some ministers in attendance.

However, shortly after the foundation of the dam was laid, uprisings began in Syria. During this period, Turkish government officials called for Bashar al-Assad to usher in reforms, but relations between the two countries collapsed upon his bloody suppression of the uprisings.

Syria’s Conflicting Hydro-Politics

Syria is a riparian state to the Euphrates and Orontes, Turkey’s cross-boundary rivers. It also has claims on the Tigris. It is an upstream riparian to the Orontes River, while it is a downstream riparian to the Euphrates-Tigris basin.

From 1946, when it proclaimed its independence, Syria followed an unstable water policy based on its status as a downstream or upstream riparian state, something it continued until 2011 when the civil war began.

The conflicting hydro-politics of Syria are clearly observed in its differentiating tendency with regard to the four main doctrines in international law for the sharing of waters.

In the Euphrates-Tigris basin, Syria seems to be adopting a doctrine closer to “Absolute Territorial Integrity” which envisages that a country cannot interfere with the natural flow of a watercourse in other countries and “Prior Appropriation” which emphasizes the priority of the country that historically used the water first. These two doctrines – the doctrine of “absolute territorial integrity” in particular – are in favor of downstream countries.

But when it comes to the Orontes River basin, Syria’s attitude is closer to the doctrine of “Absolute Territorial Sovereignty” (the Harmon Doctrine), according to which water resources are put at the disposal of the upstream riparian.

Syria, which accuses Turkey of polluting the waters and depriving her neighbors of the water in the Euphrates-Tigris basin, is acting contrary to the principles of the international literature, such as “no significant harm” and “equitable utilization”, by causing serious pollution in the Orontes River, which flows into the Mediterranean within the Turkish territory.

Syria has criticized Turkey’s new projects developed on the Euphrates and Tigris rivers and demanded the release of more water. On the other hand, it has shared neither information, nor water with Turkey as it has not acknowledged that Turkey is a party to the issue, despite being a riparian to the Orontes River.

In short, Syria has not followed a stable policy over the sharing of waters, and it has always had tense relations with Turkey. The new administration that is formed after peace returns to Syria will need to follow more stable and peaceful policies for the sharing of water resources.

Conclusion

Two thirds of the Earth is covered in water, but about 97% of this is saline. Only 3% of Earth's water is freshwater. Rapid population increase focused on some particular areas and the many different uses of water are indicative that we will need much more water in the future.

The argument that wars would be waged over water resources rather than oil and natural gas in the future was first raised in the 1990s and has been high on the global agenda ever since. Although water conflicts are unlikely to occur in the near future, the sharing of water resources will continue to be an important issue in current political conflicts.

In addition to this, discussions on the use of water resources, arising from factors such as climate change and economic development, will be an important topic in the long-term. In particular, the allocation of rivers, which have an indisputably vital importance in terms of energy generation and agricultural production, will be one of the critical issues impacting many political negotiations in the Middle East in the coming period.

Besides energy generation, water is also vital in terms of drinking water and agricultural production.

If it wants to give the international community a message that says "Count me in" in its targets for 2023, Turkey does not have the luxury to hold off from adopting water resources policies that will come to the fore in its regional developments.

Unresolved political crises in Syria and Iraq have narrowed down the elbowroom where, at least for today, cooperation is possible in terms of water. However, in any circumstances, water allocation will be a priority. Therefore, all opportunities for amicable negotiations must be established as soon as reconciliation is achieved in the region.

Past experience shows that confrontational methods where negotiations are not made are to the detriment of all riparian states as they have brought instability to the region. Therefore, in all cases, policy makers should appropriate cooperative methods, provided that they do not ignore the interests of their own country.



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