

THE HYDROPOLITICAL FUTURE OF MESOPOTAMIA THE WATER PROBLEM IN IRAQ AND THE EFFECTS OF THE TURKISH WATER POLICY

Dr.Farzad Rostami- Department . Political Science- Razi University Dr.

Ghodrat Ahmadian-Department . Political Science – Razi University

PhD. Student : Saeed Mohammed- - Razi university:

said.mhamad@koyauniversity.org

Introduction

In light of the fragile international interactions, we assume the next conflict will be a water war. There are entrances to significant problems that may be difficult to solve in many cases. Many issues have impacted the international environment; the most pressing of which is water scarcity. The problem of water scarcity is one of the most critical problems facing human societies, which is caused by the decline in water quantities and the policies of upstream countries trying to control the amounts of water flowing to other countries. These policies are used for political and economic purposes to pressure other countries. The Arab region, particularly Iraq, is one of the regions most affected by the negative aspects of this issue, as it is heavily influenced by Turkey's decisions over the amount of water flowing into it. Turkey has exploited this issue to achieve several goals, which led to the deterioration of relations between the parties. There is a rule in the well-established diplomatic tradition that no country digs its negotiating positions in stone. In public, we find that the parties take specific positions, and there is no room for maneuver. This is due to water's fundamental economic, social, cultural, and environmental value in their communities. However, these positions may seem incomprehensible at first glance. The key to a proper understanding of the parties' concerns and positions is to distance themselves from political outbursts and their understanding of the real concerns of each party. Any sustainable solutions must address these concerns. Officials' opinions and concerns in public statements, web pages, and official publications have changed over time, but not due to debates between water specialists and other officials. This research aims at the possibility of understanding the nature of Turkey's water policy toward Iraq and how this policy can affect the life of the Iraqi individual. The water factor remains influential and present in Turkey's policy, which used it politically against other countries that benefit from it, such as Iraq, which dealt with it based on determining the amount of water flowing to it. Turkey uses water as a means of pressure on Iraq to achieve strategic gains.

1. The importance of water:

Water occupies a unique position among the various energy sources due to its ability to work continuously and renewably. It has adverse effects on the environment. If people can live without oil, they cannot do without water. Water is the essence of human interdependence in any country. It is one of the shared resources used in agriculture, industry, living and environmental purposes (Abdul-Zahra, 2000: 64). The National Water Administration promises to strike a balance between these competing groups. Furthermore, water is one of the essential resources that crosses national boundaries, and countries may implement water legislation to treat it as a national asset. However, this resource transcends political boundaries in the form of rivers, lakes, and underground water reservoirs. Transboundary waters extend hydrological interdependence across national borders. Water connects consumers in different countries through a standard system. Maintaining that interconnection is undoubtedly one of the world community's most challenging tasks in human development. Competition for water in any country may create conflicting requirements, which leads to policymakers facing options with implications for equality, human development, and poverty reduction. In this context, national institutions and legislative bodies are working to provide the necessary mechanisms to address these options. Still, it is impossible to find an equivalent institutional structure for the watercourses that flow across borders which has some repercussions. When demand for shared river water and other water resources exceeds supply, cross-border competition for shared river water and other water resources intensifies. In the absence of institutional mechanisms to respond to cross-border problems, this rivalry will likely result in violent conflict. The threat of growing competition for water across countries has sparked a polarized public debate. Some predict a future contest by 'water wars' when countries assert their competitive claims on water. Thus, water may be an element to increase the intensity of the conflict in the coming decades (UNDP, 2006: 203).

Transboundary waters often cause some tension between the communities that connect them. However, it differs from any other scarce resource in fundamental ways. It forms the core of all aspects of human society, from the environment to agriculture to industry, and it has no known alternatives. It is also a vital factor for life, like air. In addition, it represents an integral part of the production systems that work to achieve wealth and prosperity. Since water is a flowing resource and not a static entity, its use in any place is affected by its use in other locations, including other countries. Furthermore, unlike oil or coal, it is controlled exclusively for the benefit of a single country, particularly in the case of transboundary waters (UNDP, 2006: 204).

Water is scarce and diminishing, and it is not remaining within the upstream country's borders. It has constituted an important entrance to the conflict between the upstream countries and other countries that benefit from it. In most cases, upstream countries seek to exploit the water flowing from their lands to serve their interests, leading to significant water management problems and eventually igniting wars and conflicts. There is a striking similarity between perceptions of today's global water crisis and

concerns raised earlier about an impending global food crisis. In the early nineteenth century, Thomas Malthus predicted a dark future for humanity. In an article on population in his book (Population on Essay), he made his famous prediction that population growth will exceed agricultural productivity, resulting in a growing imbalance between hungry mouths and the food required to feed them. Furthermore, he hypothesizes that a scarcity of food resources will lead to recurring cycles of starvation, claiming that "the population's power far exceeds the earth's ability to provide a livelihood for many people." He concluded that "the early death will befall mankind in one way or another." The World Water Commission referred to "alarming mathematical estimates of water" as one of humanity's most significant threats in the same context. One commentator argues that water scarcity will be the primary condition affecting the lives of many in this new century, and the phenomena of shrinking lakes and vanishing rivers support the perception that the world is heading towards a Malthusian crisis (as described by Malthus). Competition over diminishing water resources will lead to domestic crises and international water wars. This reinforces the high demand for water in developing countries for agricultural purposes. Due to a lack of a proper mechanism for optimal water investment in these nations, they may consume huge amounts of water in the agricultural sector, in contrast to developed countries, which utilize water equally between agriculture and industry (UNDP, 2006: 133-136).

2. Water crises in ancient and modern Iraq:

Iraq faced severe water shortages in the 1970s. Furthermore, it is on the edge of a more acute water crisis than the last one, following Turkey's completion of the (Al Sow) project and other Tigris River dams. It is projected that Iraq's external water relations will be severely harmed as a result of several factors, including:

- **Political factor:** The Turkish side has many political reasons that make it control Turkey's eastern and southern regions. The influence on its Kurdish population is in the foreground. The villages spread throughout these rugged mountainous areas are assembled into huge settlement gatherings so that their administration can be more easily controlled. Another factor is the aggravation of the Turkish conflict with the Turkish Workers' Party in southern the part of Turkey. Because of the escalation of Kurdish political prominence in Iraq and the widening of the Kurdish tide's effects on Iraq's geographical and political map, Turkey has future visions in its ties with Iraq.
- **Population factor:** Population growth is a pressure factor on water resources. The Arab countries in general and Iraq, in particular, exceed the rate of population growth by about (3%), which is a high rate compared to the global average of 1.18% and the developed countries of 0.5%. According to studies, Iraq's per capita renewable water share will drop to (2104, 6) m³ in 2020 from around (2666) m³ in 2011 and to (1077, 7) m³ in 2012. (2050). It is worth noting that the population of Iraq amounted to about (36,936) people in 2016.

- **The environment factor** relates to the amount of rainwater and its variation in Iraq from one region to another. The normal rates range between (250-1000) mm in the areas called democratic agricultural lands. Yet, in large areas of Iraq, it is less than 250 mm, and in general, rain covers the requirements of one-third of Iraq's area in winter. This makes Iraq dependent on the irrigation system even in the rainy period due to the low and fluctuating amounts of precipitation and the amounts and distribution of rainfall. It should be noted that all rainfall rates are less than (100) mm and (100-300) mm, respectively, which is insufficient for agricultural activities and only serves to feed natural pastures. Still, rain at a rate of more than (300) mm is no longer suitable for agriculture, and the interest rate does not exceed (7.2 %) of the area of Iraq, so these levels of rain are insufficient for long-term agriculture, necessitating the continued use of water for irrigation.

3. Water demand in Iraq:

Agriculture is Iraq's most significant water consumer, accounting for 92-97 percent of total water consumption. Most agricultural lands in Iraq are located in the dry areas of the country's center and south. The area of cultivable lands is estimated to be 48 million acres, with 16 million acres in irrigated areas. Since the 1980s, around 8.747,000 acres have been planted and planned for agriculture, with 4,605 million acres in the Tigris basin and 4.142 acres in the Euphrates basin (Hassoun, 2008: 21). The irrigated area in Iraq in 1985 required 40 billion m³ of water and 45 billion m³ in 2000. We need to irrigate one hectare of farmed land, which would require (10000) thousand m³ if we used traditional methods. We need 7500 thousand m³ of water to irrigate the same area using modern technologies, and this is related to the type of cultivated plant; the more thirsty the plants are for water, the more water they require.

The future total demand for water in Iraq billion m³ / per year

Year	2010	2015	2020	2025	2030
Agricultural	40.109	43.300	46.131	49	52.910
Home	2.2	2.8	3.3	4	4.9
Industrial	1.5	2	3.2	4.2	5.3
Total	43.8	48.1	52.631	57.2	63.110

Source: Nawar Jalil Hashem: Future Prospects for Water Uses in Iraq, Journal of Arab Homeland Studies and Research, Baghdad, Al-Mustansiriya University, No. 22-23, 2007, p. 74

Home and industrial:

The demand for water in the domestic and industrial sectors increases with its expansion in response to the demand of the increasing numbers of the population. The industry needs water for the manufacturing and cooling industries and to remove the waste left by these processes. While the water demand has increased in all sectors in the Arab region, it has increased more rapidly in domestic uses. The domestic sector's

share of water is now much higher than that of the industrial sector (Population and Development Report 2003:13). In addition, the rise in living standards and consumerism leads to an increase in the demand for water in other sectors. A rise in income, for instance, leads to an increase in meat consumption, and meat production requires significant additional inputs of water. In addition, the rapid urbanization and modernization in the region push the demand for water to rise at a rate even faster than the overall population growth. People who live in urban areas tend to consume more water for domestic use than those who maintain a somewhat traditional way of life and live in rural areas. Several factors affect domestic water use, such as the distance between the house and the water source, regular access to water, family size, and people's water consumption patterns (same previous source 2003: p. 36). In Iraq, the domestic and industrial water demand volume in 1985 was (1) billion m³ for industry and 1.5 billion m³ for households. It was estimated in 1990 to be (1.28) billion m³ for households and (2.14) billion m³ for industry, but in 2000 it was predicted to be (1.83) billion m³ for residences and (0.53) billion for the industrial sector.

4. The roots of the water problem in the Middle East:

Because the Middle East is within the dry and semi-arid regions on an international scale, the region's countries rely on surface water resources (rivers) to meet their water needs, particularly in the agricultural sector. It is characterized by the scarcity of rainwater and the depletion of some other ground sources. Water has become more important in the Middle East due to the rising population and the escalation and influence of development in the region's countries. Each country provides food security for its people, making water enter the crucible of economic scarcity. The issue of water is one of the most controversial issues in the Middle East. It's not just a financial or societal problem. Nonetheless, it is a strategic issue, and specialized studies agree that the Middle East area as a whole faces a severe water shortage. Likewise, this problem has begun to dominate all others, and priority is given to each country's political and security aspects. There is also a concern that competition for water resources may cause future wars in the region since demand exceeds supply, and attempts by states to narrow and deplete it have emerged. In addition, fresh water is the main factor in developing the region's countries, especially the Arab ones, as water security is similar to food security and a matter of survival. The availability of fresh water is unevenly distributed in the Middle East, and climatic changes and rainfall amounts affect water resources. Total water demand increased tens of times during the twentieth century, new sources became increasingly scarce, and competition among water consumers increased (Tolba, 1994: 1-4).

5. The historical background of the water problem between Turkey, Iraq and Syria:

The issue of water in the Middle East is so fundamental to the creation and development of societies in ancient times that political and sociological studies explicitly establish the direct and organic relationship between life and political power in several Middle Eastern countries and communities. With the Ottoman Empire's collapse in 1918 and withdrawal from the Arab Mashreq, defining the political borders between the modernized states in the East resulted in prolonged conflicts and controversies between the victorious and mandated states, such as France, the United Kingdom, and the United States (KARL-1964).

If the process of exploiting the waters of the Tigris and Euphrates rivers did not pose any problems in the past because the two rivers were protected from source to mouth under the sovereignty of a single state (the Ottoman Empire), then the signs of a problem did not appear until after World War I. As a result, new countries formed, the first of which was Turkey, which claimed the upper course of the river, changing the nature of the Euphrates River and transforming it into the lower, which is the major part of the country. This necessitates safeguarding the interests of the state of the river's lower reaches and securing its water needs, as it will be the direct and primary victim of any water exploitation that lacks organization and coordination, particularly with the Euphrates River, which is vital to its three countries, particularly Iraq (Qais, 1993: 18). The national and political divisions combined with the realities of nature imposed on Turkey and Iraq share the river waters that flow through the lands of the two countries. This is what made the country, and it is dependent on meeting its requirements. Furthermore, due to the conflict between the two countries, development initiatives aimed at utilizing more water for irrigation or generating electric power in one of the two countries would cause unrest in the other country.

6. Economic dimensions of the water crisis in the Middle East:

A set of determinants control the economic relations between the countries of the world, some of which generally govern these relations and relate to the economic policies of the concerned parties. Some are international agreements, while others are economic and political bloc trends to which the parties to economic interactions are related, and national, political, and economic interests are at the forefront of the determinants of economic relations with the rest of the world in general (Al-Hamsh, 2012: 203). As a result, throughout the latter two decades of the twentieth century, Turkey attempted to undertake a radical shift in its strategy to reclaim the international position during the Ottoman Empire's control. Thus, it proceeded to open the doors to the global economic system, launched the market movement, and liberated the foreign trade system. The shift in the concept of industrialization was the first step in a strategic transfer from theory to reality. The process of structural rearrangement of power, which has been achieved since 1983, recorded success, the first results of which appeared in the improvement of the country's credibility in global markets (Nawfal, 2010: 13). Turkey faced the role of the World Bank, which is the financial instrument held by the major countries in the world, as a pressure factor

among the economic dimensions of the water crisis between Turkey, Syria, and Iraq. It will not fund Turkey's water projects until it can reach an agreement with Syria and Iraq on sharing and managing the Tigris and Euphrates' waters. However, the western side did not consider this matter, so it began to provide aid and loans for other sectors of the Turkish annual budget. This enabled it to establish a national fund involving both the corporate and public sectors to contribute to the initiative to develop the Tigris and Euphrates rivers' sources, which is estimated to cost more than \$30 billion. The other two river basin countries, on the other hand, do not lack the means to exert pressure on Turkey. The Alexandretta Brigade's issue, the repercussions of the Kurdish problem, and the Turkish need for oil (Ghaib, 2009: 76). The geographical reality is a problem for Turkey within the area in which the Arabs from its southern flank. On its land, it has borders with two major Arab countries, Syria and Iraq, which serve as a natural entrance to Turkey and a necessary corridor for travel to other parts of the Middle East, particularly the Arab world. Turkey also discovered that, in the last stage, its interest in the Arabs in general, and Syria and Iraq in particular, was a gateway to confrontation rather than cooperation. This is due to the historical accounts between the Arabs and the Turks and the association of Syria and Iraq with the socialist camp in earlier stages. While Turkey led the Western and Atlantic camps in the region, its problems intersect with the geographical realities represented by Syria and Iraq, such as borders, water, and the Kurds. Furthermore, the Arabs had a large role in the new Turkish strategies, which included turning foes into friends and ignoring difficulties and historical depth (Nouredine: 2012: 13). The impact of these problems that Turkey suffers from goes beyond the political aspects. Turkey has tried to integrate the Kurds into economic and political life based on Turkish conditions. As soon as this attempt failed, it resorted to violence and a policy of relentless war (Radwan, 2005: 34). Then, Turkey found that these harsh measures pushed larger sectors of the Kurdish people towards more extremism, which created favorable conditions for the PKK to attract large numbers of angry and rebellious youth (Robbins, 1993: 45). As a result, Turkey has focused on developing the Kurdish regions to reduce the economic and social backwardness that the Kurdish regions are experiencing. Therefore, it launched the Southeast Anatolia Development Project, a multi-objective development project that includes dams, electric power generation stations, and comprehensive irrigation capabilities on the Tigris and Euphrates rivers. This project aims to transform the economically backward, vast, and unstable Kurdish region into the Middle East's water reservoir. In addition, the electric energy makes the Kurdish region one of the largest plants for the production of this energy in the Middle East (Al-Majzoub, 1994: 71). As a result of the completion of the Turkish project, which deprives Syria and Iraq of the water they require via the Tigris and Euphrates rivers, water has entered the water crisis as an economic dimension. Turkey rejects the principle of sharing available water resources and instead proposes the principle of the integrated use and management of shared water resources. Turkey considers that it is not a question of ensuring or claiming sovereignty over the basin waters but rather of making decisions

about the hydraulic arrangements to ensure maximum returns for all. Rather than agreeing on a portion of the Tigris and Euphrates waters for each of the three nations, Turkey recommends achieving sectoral specialization in producing sectors. Turkey, which has the sources of the rivers expanding under its hand, must produce enough to cover the food needs of all the basin countries through intensive and large-scale irrigation. It also provides them with electric power. On the other hand, Iraq will be able to safeguard Turkey's oil supply, which is crucial to the Turkish economy (Ghaab, 2009: 84). Turkey began to declare that strengthening economic cooperation among the countries of the Middle East is one of the foundations for peace and stability in the region, as economic cooperation encourages political stability. Many problems cannot be tackled alone in a world where interdependence is the norm. In this regard, 48 agreements were signed between Turkey and Iraq covering various areas related to security, health, transportation, and energy. Also, (40) agreements were signed between Turkey and Syria, including opening the common borders and canceling the visa between the two countries (Nawfal, 2010: 101). Turkey could not have played an effective regional role without being an emerging economic power. Turkey's regional role is based on an open economy, providing nearby markets for its growing exports, and obtaining the energy needed for its growth. There are neither markets nor energy, as with the Arab countries. These countries are still fascinated by the economic renaissance that Turkey witnessed during the twenty-first century's first decade. It is an emerging economic power that achieved amazing economic results, as the annual growth rate reached (7%) between the years (2002-2008). Consequently, Turkey enjoys economic stability. It has a growing economy rapidly approaching a trillion dollars of GDP. Turkey's export capacity grew till it reached (141) billion dollars in 2008. Despite a drop in export capacity due to the global financial crisis in 2009, Turkey's position in the Group of Twenty, which replaced the Group of Eight as the world's most industrialized, was strengthened by the crisis (Al-Madani, 2010: 347). At the time, it was evident that Turkey had begun to develop its foreign economic policy, within its new strategy, by taking flexible pathways that increased the margin for maneuvering to the benefit of the Turkish economy. As a result, it served its other strategic goals: to build new alliances with Arab countries by contributing to the water quotas that allow it to transit through Syria and Iraq. As a result, it opens up a wider window on the future within the context of the new Middle East built between the countries of the area and by the will of these countries, which welcomed the new Turkish policy and took significant steps in all spheres of political and economic activity. The majority of Arab countries in regular contact with Turkey saw Turkey's decision to turn to the Arab world as opening new horizons in relations within the context of regional and worldwide transformations, allowing true partnerships to be formed for the benefit of the region's people (Al-Hamsh, 2012: 207). As a result, we can see that Turkey believes it has the strength and ability to communicate and occasionally practice what it wants to in dealing with Arab countries and regimes, owing to its strong relationships with numerous non-state actors in the region, as well

as some Arab organizations and personalities. Aside from its established role and strong connections with the Kurds and Turkmen in Syria and Iraq, the Justice and Development Party has long seen others, particularly those close to it, as greater than the ruling Arab regimes and as a major factor in the area. These beliefs stem from an excess of power and self-confidence, which occasionally encourages it to take on matters above its diplomacy and capability. And perhaps a historical role would help it reclaim its lost role in the Arab world, which has caused it to become confused, if not plain fail, on multiple occasions in Egypt, Libya, Bahrain, and Syria. Due to its excessive power, Turkey has occasionally engaged in a policy of playing on the power balances of Arab countries, interfering in the internal affairs of some Arab countries. It is due to its economic status and also because it is the source of the Tigris and Euphrates rivers. It was also keen to be a key player in oil and gas transportation projects in the Caspian Sea and Iraq, which gave it an added strength in rejecting the international character of the Tigris and Euphrates rivers. This encouraged some Turkish officials to argue that while Turkey would sell water, Arabs would also sell oil. It establishes and develops projects in southern Anatolia and builds a series of dams and irrigation systems to achieve this. Because the riparian parties in the Tigris and Euphrates do not comply with the water quotas that are sufficient to cover the water needs of each, Turkey's position on the water with Syria and Iraq has resulted in ongoing problems.

7. Motives of the Arab-Turkish conflict over water:

The history of water crises between the three countries (Turkey, Iraq, and Syria) constitutes one of the indicators of the conflict between them. The first crisis occurred in 1974 when Turkey filled the Kiban reservoir, and Syria filled the Tabqa reservoir, causing the Euphrates water flow to Iraq to stop. Another crisis erupted in 1983 when the level of the Tabqa reservoir dropped, and Syria protested against Turkey for being the cause (Al-Samarrai, 2001: 74). On the one hand, the misunderstanding between Turkey and Iraq and Syria, on the other, was reignited at the start of the year (1990), and the situation escalated into a severe confrontation when Turkey diverted the Euphrates waters to fill it. The following are the most crucial points that may lead to conflict:

1. The basin countries were unable to negotiate a comprehensive and complete formula for water division, control, and distribution and thus enhance revenues in a legally binding collective framework based on international law and the interests of all parties. There were several agreements between the three countries, but Turkey did not abide by the terms of these agreements. Turkey's positions, especially in the Euphrates River case, are embodied in not recognizing the river's international status, considering it a transboundary river. The river's waters are also solely under the control of the Turkish state, demonstrating that the Turks have no international laws distinguishing between international (international water) streams that pass through the turbulence. They believe that the Euphrates

is national water, not joint international water; thus, they are not subject to division. Turkey also considers that it has the right to absolute sovereignty over the waters of the two rivers that flow on its lands, being a national resource like oil. (Al-Majzoub, 1998: 247-248).

2. Turkey continues to build its projects on the Tigris and Euphrates rivers without considering the rights of Iraq and Syria and their shares in the quantities of water coming to them, especially the (Al-Kab) project and the (Ilisu) dam project on the Tigris River.
3. The continuation of the Turkish-Israeli collaboration was first shown in 1986, when Turkey suggested the peace pipes project and other water-transportation projects, such as the floating bags project. Another proposal is to carry water to Israel by a long pipeline that stretches from the Mediterranean Sea to Israel's beaches (Cortina, 2005: 15).

Conclusion

Means and proposals to confront the water crisis in Iraq made the ancient Iraqis contribute to managing the waters of the Tigris and Euphrates rivers. There is archaeological evidence that indicates the emergence of water laws in the countries of Mesopotamia in different eras of the development of civilized centers such as Kish (2360) BC, Ur (2100) BC, and the Sumerians. The Babylonians also contributed to developing knowledge of irrigation and water uses. One of the archaeological tablets shows the Babylonian Ur tablet possible solutions to several water issues dams, wells, and water trenches. The famous Code of Hammurabi includes water legislation to regulate irrigation and limit flood damage. Nonetheless, the question concerns Iraq's new approaches in light of the country's new water situation. Furthermore, in light of modern international relations, the belief that water supplies from outside have grown more problematic; this issue necessitates the adoption of new water resource management methods, and the study recommendations are as follows:

1. Activating the work of the joint international water technical committee among Iraq, Syria, and Turkey, which was formed in 1980 to reach a just division of water based on the international law of rivers.
2. Making the Iranian side aware of the seriousness of the effects left by the establishment of water projects that changed the course of the common rivers into the Iranian depth without consulting Iraq and explaining the danger of this to agriculture and the environment and possibly demographic effects of the migration of Iraqi tribes that live on the common borders towards the cities and towns inside Iraq.
3. Finding technical tools to ensure the quantity and quality of water in the Tigris and Euphrates Rivers, to be done by storing water during March, April, and June, when the Tigris River flows at a rate of (60-80 percent) and the Euphrates River flows at a rate of (45-80 percent). In normal conditions, the flow is not more than (10%) of

the annual rate. Construction of new dams and reservoirs and lined waterways retains water at a field level that is easy to supply and keep from being salinized.

4. Using modern irrigation methods by building a new engineering irrigation system.

Resources

1. Abd al-Zahra Shalash al-Atabi, (2000) Turkey's orientations towards the countries of the Arabian Gulf, a study in political geography) Baghdad: House of Cultural Affairs.
2. Aib, Habib (2009). Water in the Middle East: The Political Geography of Resources and Conflicts, Cairo, Egyptian Book Authority.
3. Al-Hamsh, Munir (2012) An Arab viewpoint on the reality of Arab-Turkish economic relations.
4. Al-Madani, Tawfiq (2010) The Arabs and the Challenges of the Greater Middle East, Damascus, Studies Series (13), Publications of the Arab Writers Union
5. Dominguez Cortina, (2005) Water is a vital resource and a source of conflicts at the beginning of the new millennium, a chapter from the book The struggle over water, the common heritage of humanity, Arab and African Research Center, translated by Saad Al-Taweel and Mustafa Magdy, Cairo, Madbouly Library, first edition.
6. KARL WITTFOGEL: Spotisme Oriental Editions de Minuit 1964.
7. Mostafa kamal Tolba, middle East water issue: Action and political will, in, international waters of the middle East Edited by, Asit.k. Biswas, oxford University press, 1994, p.1-4
8. Muhammad Abdul Majeed Hassoun, (2008) Iraqi Water Security, A Study in the Conduct of Negotiations and the Division of International Waters, Baghdad, House of Cultural Affairs 17, first edition.
9. Muhammad Ahmad al-Samarrai, (2001) The Euphrates River between Turkish Acquisition and Zionism's ambitions, Baghdad, Cultural Affairs House, first edition.
10. Nouredine, Muhammad Al-Arab and Turkey: Present Challenges and Bets - the future, Doha, the Arab Center for Research and Policy Studies.
11. Population and Development Report, No. 1 (2003), Water Scarcity in the Arab World, Economic Commission for Western Asia, United Nations, New York.
12. Qais Natiq Muhammad, (1993) "Turkey and the Water War", Journal of Political Science, Issue 10, Fourth Year, University of Baghdad, July.
13. Robbins, Philip (1993). Turkey and the Middle Condition, Beirut, translated by: Mikhail Najm Khoury, Cordoba House for Publishing, Documentation and Research.
14. Tariq Al-Majzoub, (1994) No One Drinks Beirut, Riyadh Al Rayes Books and Publishing Company, first edition.
15. United Nations, (2006) United Nations Development Program UNDP, Human Development Report.