

The story of the

Yarmouk River:

From a border to a political order

Fadi Masamreh

December 2021

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By Fadi Masamreh

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Supervised by: Dr. Muna Dajani (Yarmouk Futures Programme)

Translated from Arabic by: Ahmad Barakat

Illustrations and design by: Rawand Issa

Recommended citation:

Masamreh, F. 2021 The story of the Yarmouk River: From a border to a political order. Yarmouk Futures Report. Water Diplomacy Centre, Jordan University of Science and Technology: Irbid, Jordan.

This study was developed as part of the Knowledge and Analysis Track of the Yarmouk Futures Programme (July 2019 – December 2021), a jointly supported programme by the Swiss Agency for Development and Cooperation, the Jordan University of Science and Technology, and the University of East Anglia.

The Yarmouk Futures Programme is part of the Blue Peace Middle East Initiative, a structured and dynamic network consisting of prominent institutions from partner countries in the region to enable water cooperation in the Middle East and create an institutional cooperation mechanism for the sustainable management of water resources.

For more information about the Yarmouk Futures Programme please visit: <https://wdc-just.com/publications/yarmouk-blog/>

The views expressed in this report are those of the author only and not necessarily reflect the Yarmouk Futures Programme joint partners and funders views.

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INTRODUCTION

At its broadest level, this study explores the relationship between water and people in a very particular area. Any such popular topic could be either straightforward to discuss, as people acknowledge its significance in their lives and often share similar conceptions around it, or prone to misunderstanding because of unchecked assumptions. This case is an example of the latter: while all people agree on the importance of water, its value varies widely across communities, even if they share the same water resources.

Many major narratives depict water as the origin of life. Myths, philosophy, and science agree that water is the source of existence from which all beings sprung. The Mesopotamian myths consider water the element of creation. The Babylonian myth of creation begins from water, parts of which can be found in the biblical narrative.¹ The Greek philosopher Thales made water “the principle of all things” and “all comes from water, and to water all returns”.² Science, meanwhile, considers water as home of the first organic cell.

This study explores the water-human relationship of those living in the river basin of the Yarmouk tributary of the Jordan River. Initially, it intended to interpret a changing water reality over recent decades and the impact thereof on the population. Through field research, however, it was revealed that the relationship between the population and water was more complex and involved more questions and topics that cannot be rightfully addressed within the scope of this study. Therefore, the study focuses on the Yarmouk River, the most prominent water body in the Yarmouk Basin³, as the focus of the ethnographic study to help us understand the transformations in the interactive relationship between the population and water.

¹. Al-Sawah, Firas, (1996) *The First Adventure of Mind; Study in the myth of Syria and Mesopotamia*. Al-Kalema Publishing House. 11th Edition. p. 35

². Stace, W. T., (1960) *A Critical History of Greek Philosophy*, First published in 1920. Macmillan & Co. LTD. London. p. 21.

³. The Yarmouk Basin is shared by three political entities: Jordan, Syria, and the occupied Golan Heights under Israeli control. Around 69% of basin land is in Syria, 29% in Jordan, and less than 2% under Israeli control. UEA (2019). *Hydropolitical Baseline of the Yarmouk Tributary of the Jordan River*

It is worth mentioning that the local population rarely refers to the Yarmouk River by this name, calling it instead the “Sharieat” or “Sharieat al-Manathra or al-Manadhra” to distinguish it from the Jordan River which is also called the “Sharieat” or “Grand Sharieat” The name Sharieat al-Manadhra is attributable to the Bani Mandhur tribe which lived around the Yarmouk River for an extended period.⁴ The name “Yarmouk” is derived from the Greek word for river “Hieromax.” Using the word “Sharieat” to refer to both, the Yarmouk River and the Jordan River, is indicative of their strong relationship. The former was not seen as independent from the latter but rather as its biggest and most important tributary. Thus, the separation of the two rivers can only be understood in view of the changes that led to the partitioning and reshaping of the region in the early 20th century.

As Figure 1 shows, the Yarmouk River (in blue) originates and flows mostly within Syrian territory; the remaining part forms the border line separating Jordan from Syria and from the Israeli-occupied Syrian Golan Heights. The literature on the Yarmouk River reveals a great discrepancy in determining its length, with one study indicating 40 km and another indicating 143 km. Therefore, the Yarmouk Futures Program team set out on previous research to measure the length of the river through digital elevation data. This technique showed that the river stretches for 153 km from its highest point in Jabal al-Arab to its lowest point where it confluences with the Jordan River, of which 61.5 km constitute borders.⁵

⁴. Alex Malone, *A Journey to the Yarmouk River*, Al-Mashreq Magazine, Issue 8 / 12. p. 242

⁵. UEA (2019) *Hydropolitical Baseline of the Yarmouk Tributary of the Jordan River*. Norwich: Water Security Research Centre, University of East Anglia.13. To be referenced henceforth as: UEA (2019). *Hydropolitical Baseline of the Yarmouk Tributary of the Jordan River*. This reference is one of the studies produced by the Yarmouk Futures Program team. We recommend this reference for further reading, as this study is part of the project and derives from it a significant portion of data, statistics and information about the “Yarmouk Basin,” referenced here only in general terms.



Figure 1. The Yarmouk Tributary River Basin (YF team, 2021)

In addition to being the most prominent body of surface water in the Yarmouk Basin, the Yarmouk River offers another compelling reason to make it the subject of this study: Its 20th century history embodies the intense political and social changes that have occurred in the region. Historically, the Ottoman Empire attempted to use the river to revive and reconnect its sick body (in reference to Ottoman Empire's "Sick man of Europe" label).⁶ The river was also a site for colonial tampering projects in the region and has been exploited to create historically baseless sub-identities only to advance colonial interests, hegemony and control in order to enable extreme forms of colonial looting and as Benedict Anderson noted in his influential work *Imagined Communities* that the immediate genealogy of nationalism in the developing world "should be traced to the imaginings of the colonial state".⁷ Also, the subjugation of nature was necessary to the process of domination and plunder. In later days, specifically since the mid-1940s, the river also became the site of military operations aimed at severing ties between its sides. Further, the river tells the fates of water projects that sought to exploit and commodify its waters, as well as the new relations that ensued between the region's residents and the river.

By condensing the region's history as such, the Yarmouk River is an embodiment of intense relations of capitalist alienation in region; the alienation of inhabitants from their surroundings, from each other, and from nature.⁸

The study consists of five sections, and begins with an attempt to answer two questions: To what extent and how did the human-water relationship in the Yarmouk (tributary to the Jordan River) change? What are the conditions that shaped this change? To answer the questions, the introduction outlines the conditions underlying the basin's historic development. Then, the first section identifies four historical periods over a 100-year time span throughout which the values and meanings of the river has changed in accordance with the prevalent socio-political conditions. In the second section, the study describes the colonial negotiations that transformed the Yarmouk River from a regional hub into a border line between political entities created by colonialism to serve its goals. In the third section, the river is discussed as a site for retaliation against the Israeli projects on the Jordan River, and the "river for a river" policy. The fourth section tackles the complete transformation of the Yarmouk River into a border line separating political entities in the aftermath of the Israeli occupation of the Syrian Golan Heights following the 1967 war, and the mega water projects that ensued.

⁶. Fahmy, K (2002). *All the Pasha's Men Mehmed Ali, his army and the making of modern Egypt*. The American University in Cairo Press, Cairo, New York. P. 304

⁷. Benedict A (1991). *Imagined Communities. Reflections on the Origin and Spread of Nationalism*, revised edition (London and New York: Verso,), p. 163.

⁸. For further readings about the concept of alienation please refer to: Marx, K (2017). *Estranged Labour in Economic and Philosophic Manuscripts of 1844*. Translated by Martin Milligan. Dover Publication, INC. Mineola, New York. P. 67-83.

Finally, the fifth section captures the present situation of the Yarmouk River, and how it became a taboo water body/object, while also attempting to identify the repercussions of this transformation for the surrounding communities. This section also addresses how the basin's inhabitants developed a new relationship with the river, based mainly on its commodification and exploitation of its waters for agricultural purposes primarily. Lastly, this section sheds light on al-Wehdah Dam, seeking to understand how it is perceived by the basin's inhabitants on both the Syrian and Jordanian sides.

METHODOLOGY

The study's research questions were answered through testimonies from people living in the basin as well as researcher observations – interpreted through ethnographic means. Restrictions related to the Covid-19 pandemic have had a significant impact on the implementation of this study; prompting the team to conduct the interviews remotely with a group of area residents through various means of communication. Initial visits to the area in March 2021 quickly confirmed a key methodological concern – that remote interviews would obscure many details. As a result, the researcher decided to stay in the study area (based out of Saham al-Kafarat) for several weeks in March and April 2021.

During the weeks spent in the Jordanian part of the Yarmouk Basin, dozens of conversations with the residents were conducted, exploring all aspects of their relationship with water. In an exercise of oral history, the interviewees described the relationship of their ancestors with water in the area. The study sample was representative of several generations that inhabited the area, and of many villages within the basin. Due to our inability to visit the Syrian side of the basin because of the ongoing Syrian crisis, a number of interviews were conducted with a group of Syrian men and women who originally lived in the Syrian part of the Yarmouk Basin but relocated to Jordan after the crisis broke out.

In addition to having dozens of spontaneous, yet valuable, conversations and meetings with the residents that enriched my knowledge of the history of their area and relationship with the water, I conducted methodological lengthy and in-depth interviews with 26 people (five women and 21 men), some of whom were re-interviewed as new follow-up questions later emerged. The percentage of Syrians interviewed in Jordan constituted 20% of the study sample. The interviews took place in the following villages: Jaber al-Sarhan, Malka, al-Adassiyeh, Sama al-Rousan, Huwara, al-Rafid, al-Ramtha, al-Mukhaiba al-Fawqa (al-Himmeh of Jordan), al-Mukhaiba al-Tahta, and Saham al-Kafarat. The ages of the interviewees ranged between 23 and 90 years.

THEORETICAL FOUNDATION

As of late, the world has noticeably witnessed an increasing interest in water and community issues at different levels, including academia, NGOs as well as international and local political circles. Water is a major resource affected by the climate changes that have impacted our planet intensely since the 1950s, with escalating changes brought about by capitalist production modes to human lives worldwide. This era has been designated by a group of researchers and academics as a new geological age known as "The Anthropocene."⁹, further examined from a colonial perspective by research done by Saleh and Corry, who made clear linkages to show that the Anthropocene rootedness in (settler) colonial dispossession of indigenous populations must be foregrounded.¹⁰

It is certain, from this standpoint, that water management policies cannot be researched based on hydrological knowledge and studies only. Hydrology, which emerged in the 1930s to study the distribution and movement of water both on and below the Earth's surface in isolation of human interventions¹¹, cannot explain water based in its relationship to human societies. Therefore, the study of water, exclusively from a hydrological perspective, reduces water to mere molecules of H₂O, removed from its social context in human life. This prompts us to think in terms of binaries (nature-humans), a mechanical type of thinking that represents a great inability to explain phenomena and understand their consequences.

Given the inability of hydrological studies to understand the status of water, a broader and more accurate view has been adopted in recent decades towards water as part of nature with which humans engage in a controversial relationship. This points us to the literature that views and analyses water through the hydro-social cycle concept defined as "a socio-natural process by which water and society make and remake each other over space and time."¹²

⁹. Angus, I. (2016) Facing the Anthropocene. New York: Monthly Review Press. P. 48.

¹¹. Saleh, R. and Corry, O., (2020) Displacing the Anthropocene: Colonisation, extinction and the unruliness of nature in Palestine. Environment and Planning E: Nature and Space. 1-20

¹². Linton, J. and Budds, J., (2014) The Hydrosocial Cycle: Defining and mobilizing a relational-dialectical approach to water. Geoforum 57 170-180

Linton and Budds (2014) The Hydrosocial Cycle. P. 170.

This understanding of the relationship between humans and water is based on the realization that water intrinsically encapsulates the sum of existing economic, social and political relations, through which water acquires its status. One cannot understand the changes in the Yarmouk River without understanding the colonial-political projects and changes of the late 19th century and early 20th century, and how those changes created preconditions that would determine the river's role in the lives of local communities and their relationships. As such, water does not emerge as a political subject, but rather reveals the changes that take place in the political, social and economic conditions since water is part of those conditions and organically influences and is influenced by them.

Consequently, our understanding of water is based on the fact that any change in the natural-social water cycle "entails a more complex (internal relation) process by which any change in the physical presence of water, in institutional arrangements, in discursive construction of water, or in the uses to which water are directed, has the potential to shift constellations of socio-nature towards a different set of relations."¹³ Accordingly, the large water infrastructures that the basin countries constructed have directly impacted the lives of local communities. The same holds true for the political agreements concluded between these countries.

Finally, the massive introduction of machinery as an intermediary in the otherwise direct relationship between humans and water for the purpose of multiplying man's ability to control nature has caused a "metabolic rift."¹⁴ This notion, which can be deduced from the writings of Karl Marx, indicates a relationship pattern that reproduces the humanity/nature binary. When introduced as an intermediary in the relationship between humans and nature, machines have caused significant impact on both, and created a new environmental-social relationship with nature founded on humans' domination and subjugation of nature and on the complete disregard for the impact of such exploitation, which created a hybrid social-nature."¹⁵ To fully cover the history of the Yarmouk River over a specific period, the material conditions that have defined the river, its value, and its relationship with the local inhabitants ought to be analysed. From an analytical point of view, those conditions are not static but constantly dynamic and are governed by internal synergies and correlations.

¹³. Linton and Budds (2013) The Hydrosocial Cycle. P. 174

¹⁴. Foster, John Bellamy (2000) Marx's Ecology: Materialism and Nature, New York: Monthly Review Press.

¹⁵. Swyngedouw, E., (2006) Circulations and metabolisms: (Hybrid) Natures and (Cyborg) cities, Science as Culture, 15:2, 105-121

INITIAL IMPRESSIONS: A river detached from its people

The purpose of our first visit to the area, carried out on January 23-25, 2021, was to conduct a comprehensive survey of the Yarmouk Basin area on the Jordanian side. The Yarmouk Basin is an impressive geographical area; its western part makes the greenest areas of Jordan. The Jordan Valley, which was formed by a geological rift millions of years ago, makes the surrounding mountains look imposing. The beauty, however, does not take away the strange feeling that first visitors feel as they pass along the river in 2021. Visitors can smell the water, feel the moisture in the air but are unable to see it. The numerous military signs warning against approaching the river give area visitors the feeling of being closely watched by soldiers of three armies, cameras and motion sensors and surveillance cameras. The beauty of the area becomes hostile; the idea of visitors connecting with nature seems absurd and unreasonable because everything around suggests that this nature exists only to prevent such connection.

The situation of the Yarmouk River prompts one to think about the connotations of the word "river" in Arabic, which as a noun means a stream of water but as a verb could mean "to rebuke."¹⁶ Ironically, this is one function assigned to the Yarmouk River: to deter and rebuke. One then realizes that the word "river" in this situation functions as both a noun and a verb. All the signs and surveillance devices suggest that this water body is rather a barrier separating its banks. Undoubtedly, this begs the question: has the Yarmouk River always been this natural barrier, preventing communication between the people living on either side?

The road I took in the Jordan Rift Valley, between Baqoura village and Saham village was marked by striking paradoxes throughout, raising questions as to which aspects were natural and which were political. How was this region divided in such an arbitrary way? How can a river not have two equal banks? The two banks project two entirely separate worlds, with even a kind of enmity between them. The idea of crossing to the other side of the river, which is only a few meters away, is so foolish that only those with a death wish would do it. Visitors of the Jordan Valley must pass through several military points where their vehicles are searched, and papers and purpose of their visit verified.

¹⁶The Academy of the Arabic Language (2011), *al-Mujam al-Waseet*, Cairo: al-Shorouk International Library.

Once in the village of al-Mukhaiba al-Fawqa or the Jordanian al-Himmeh as the locals call it to differentiate it from its twin, the Syrian al-Himmeh, one can see the Yarmouk River clearly, but moving beyond that is forbidden. One cannot photograph the river without great difficulty to escape the detection of the several military watchtowers in the area.

Interviewees living in the Jordanian village of al-Himmeh described the extent of changes that the area in general, and the village in particular, has experienced. The accounts provided by the residents confirm the descriptions of orientalist and travellers who visited the region in the late 19th and early 20th centuries. Both the Jordanian and Syrian al-Himmeh villages¹⁷ and the surrounding area was exceptionally dense with trees, especially palm trees and other kinds of trees and vegetables. Al-Himmeh village (both Jordanian and Syrian Himmeh) is situated on the bank of the Yarmouk River, and has hot sulphur springs, used in the past for irrigation. In the late 19th century, investment projects targeted the hot springs for their believed curative qualities,¹⁸ but have remained incomplete.¹⁹

¹⁷ Israel occupied the Syrian village of al-Himmeh in 1967 and displaced its residents. This village is located on the opposite bank of the Jordanian village of al-Himmeh. Both villages were called "al-Himmeh" [hot spring in Arabic] due to the presence of the hot sulfur water.

¹⁸ Abu al-Sha'ar, Hind (2010). *History of Transjordan in the Ottoman Era (1516-1918)*. Amman: Jordanian Ministry of Culture. P. 43

¹⁹ Undoubtedly, this area was the one that Abu Jahl referred to when he mocked the idea of "Jannah" or paradise as described by the Prophet of Islam MuHimmehd. The story reported in history books states that Abu Jahl once heard that the Prophet MuHimmehd promises a life after death in which people face two fates. Those who are not followers of the prophet will face severe punishment, while those who believe and follow him will be rewarded paradise after death. As Abu Jahl mocked these ideas, he said that MuHimmehd claims that whoever follows him will be resurrected after death and will have "Jinan [paradise] like those of Jordan." Based on their realization of the word "Jannah" which means an orchard or garden with palms and trees, the people of Mecca derived their understanding of this unperceivable place from the area located on the banks of the Jordan River.



Illustration no. 1 Transformations of the river from a meeting point to a barbed border

The second stop on our first visit after leaving the village of al-Mukhaiba al-Fawqa - the Jordanian al-Himmeh - was Saham al-Kafarat village, situated on a hilltop overlooking the Yarmouk River. This village also has a twin called Saham al-Golan. It should be noted that there are many villages with similar names in the Yarmouk Basin, shared between three different political entities today. Although the short road between the villages of al-Himmeh and Saham is only several kilometres long and should not take more than 25 minutes by car, it is impossible to travel it without a special military permit. Lacking this, we took a road passing by the village of Umm Qais, historically known as Jadara,²⁰ an elevated area overlooking Lake Tiberias with breath-taking views. The lake was once the hub for surrounding villages, including the villages of al-Himmeh, Umm Qais and Saham.

The hilltop view of the Yarmouk River from the village of Saham offers a wide and vertical view of the valley, allowing onlookers to see the river's passage in both directions. On the north-eastern side, the river passes between Syria and Jordan, and passes on its southwestern extension between the occupied Syrian Golan Heights and Jordan.

The village of Saham offers a spot from which one can see the Yarmouk River stretching north and south, overlooking the site of the Yarmouk Battle that marked one of the famous victories for Muslims in the early days of Islam. The scene from the top of that hill (looking onto the plain across in Syria) leads one to spontaneously think about the concept of "boundary" as the geography seems so consistent and seamless. The Yarmouk River appears from this distance flowing naturally and effortlessly. However, a closer look reveals a border fence, separating the consistent geography. Although one may elaborate on how those borders were forced on the region or are only an illusion, the borders have impacted the region in general and the Yarmouk River in particular, which was transformed in part into a border separating the Syrian and Jordanian sides.

The first visit provided a general perception of the study area, and the situation of the Yarmouk River. To understand this reality, one must review the river's history and explore the conditions that produced its present state. The past changes in the river as part of nature can only be understood through understanding the changes in the socio-economic structure of the region. To understand these changes, the history of the Yarmouk River in the 1830s will be presented below.

²⁰. The name, Jadara, means fortifications or the fortified city. It is one of the oldest cities in the region and was part of the Decapolis alliance. Explorations showed that the city used complex water systems to transport water from several springs and valleys nearby, including a spring of water called "Ain Turab" that remains operational until this day.

1. A HISTORICAL PERSPECTIVE

For hundreds of years, local communities in the Yarmouk Basin depended on a primitive pattern of production based on two economic activities: primarily agriculture and herding to a lesser extent. The region's inhabitants adapted socially and ecologically with their natural surroundings. Until the late 19th century, the region depended primarily on direct land exploitation through economic units that are mostly separate from each other. The households in the area constituted the producer and consumer economic unit.²¹ Agriculture, as the main economic activity, was dependent on rainwater, meaning that cultivation in the area was seasonal. Unlike the societies which lived in Mesopotamia and on the Nile River and developed different systems of irrigated agriculture, most of natural Syria's regions remained dependent on rainwater for their agriculture, while irrigated agriculture was very limited.

Seasonal rain-fed agriculture is locally called "Baal agriculture" and lands irrigated solely by rainwater are referred to as "Baal land". Mythological research helps us understand the extent of seasonal agriculture in the region's past. Thousands of years ago, the worship of "Baal," the god of clouds, rain and dew, prevailed in the greater Levant region alongside the worship of goddess Ishtar/Inanna, which symbolized earth and fertility. The worship of the god Baal shows local inhabitants' understanding of the climatic pattern prevalent in the region. The myth of Baal explains the succession of seasons, including years of fertility followed by years of drought. Therefore, the name "baal agriculture" or "baal lands" bridges the present with the past and reveals a pattern of agriculture that has been practiced over thousands of years.²²

This study does not take interest in the Yarmouk River only because it constitutes a prominent water source and an important agricultural centre in the region. The river derives its importance from the Yarmouk Basin, which was a connecting point that tied the sprawling parts of the Ottoman Empire together. One must realize that all ambitious empires recognized the importance of the Yarmouk Basin for extending their rule and control, as evidenced by those bridges built over the river, some of which dating back to the times of Greek and Roman presence in the area.

²¹. Hourani, Hani (1978) Socio-Economic Structure of Transjordan: Preludes to Distorted Development, 1921-1950. Beirut: Palestinian Books Series. p. 15-20

²². Al-Sawah, F. (1996) The First Adventure of Mind; Study in the myth of Syria and Mesopotamia. Al-Kalema Publishing House. 11th Edition. p. 345.

Al-Majame' Bridge (see Figure 2) is one of the most prominent bridges, constructed at the end of the Yarmouk River near its confluence point with the Jordan River. The Arabic name, al-Majame', means the hub and suggests that the bridge was the point where several paths and roads converged. It connects the eastern regions that extend all the way to Iraq, the northern regions of Aleppo and Damascus, and the southern regions that extend as far as the south of the Levant and into the Arabian Desert.²³



Figure 2. Jiser Al-Majame' on the Haifa Deraa Line²⁴

²³ Abu al-Sha'ar, H. (2010) History of Transjordan in the Ottoman Era (1516-1918). Amman: Jordanian Ministry of Culture. P. 409

²⁴ Picture acquired from Nabataea website: https://nabataea.net/travel/other_me_railroads/jiser-al-mujami/

The geographical importance of the Yarmouk Basin has impacted its history in general, and the Yarmouk River in particular. One can argue that the shift began to take place in the 1830s, when Muhammad Ali Pasha, the ruler of Egypt, took control of the Levant. His military campaign reached Anatolia, posing an existential threat to the Ottoman Empire, and to the growing colonial interests of European countries.²⁵ In response, the European parties met and agreed to dwarf Ali and reduce his rule to Egypt.

In turn, the Ottoman Empire wanted to re-establish its rule in the Levant and the Arabian Peninsula. Hence came the idea of constructing the Hejaz Railway.²⁶ This project was intended to restore the cohesion of the Ottoman Empire, linking its regions via a modern means of transportation capable of transporting pilgrims as well as soldiers and military equipment to impose control. The project would also reconnect the region economically to facilitate the movement of goods. The Yarmouk River emerged as a vital part of the railway project, with the road to the Mediterranean ports passing over it, especially the Haifa port, which was established as a central port for the entire region. Consequently, the Yarmouk River underwent many exploration campaigns to draft sketches on how to build the railway over it and along its sides until the shores of the Mediterranean.

The Yarmouk River was not the focus of the Ottoman Empire only. Orientalists and travellers conducted explorations to study the region and gauge its suitability as a future home for Jewish people who were not already resident in the land; a colonial settlement project that had been planned since the end of the 19th century.²⁷

Ironically, both projects that targeted the region were fundamentally contradictory: the Ottoman Empire's project to reconnect its regions, and the colonial project aimed at partitioning the region - occasionally used the same individuals. In his book, *The Land of Gilead*, orientalist traveller Laurence Oliphant explains how his mission was intended to explore the region's suitability for the resettlement of the world's Jews, and that his efforts were a service to the Jewish people and the British government. He adds that when he visited the Ottoman government to facilitate his mission as a traveller and explorer, the government tasked him with studying the geography and topography of the surrounding area of the Yarmouk River and forming a clear picture of the possibility of building a railway to link Damascus with the port of Haifa.²⁸

²⁵ Fahmy, K. (2002) *All the Pasha's Men Mehmed Ali, his army and the making of modern Egypt*. The American University in Cairo Press, Cairo, New York. P. 60

²⁶ See portion of the report submitted by the thinker, Jamal al-Din al-Afghani, in support of the railway project, in: Abu al-Sha'ar, Hind (2010) *History of Transjordan in the Ottoman Era (1516-1918)*. Amman: Jordanian Ministry of Culture. P. 419.

²⁷ Alatout, S. (2014) *From River to Border The Jordan between empire and nation-state* In *Routledge handbook of science, technology and society* / edited by Daniel Lee Kleinman and Kelly Moore. 307-331.

²⁸ Oliphant, L. (1891) *The Land of Gilead with Excursions in the Lebanon*, Blackwood and Sons, Edinburgh. P 131



Illustration no.2 Generational experiences with the Yarmouk River

1.1. The Yarmouk Basin in the Early 20th Century: The River as a Connecting Point

As mentioned earlier, the study team concluded that it was necessary to stay in the area for several weeks as a minimum to explore the layered relationship between the population and water in their natural environment. Luckily, I managed to find a house in the village of Saham near the spot overlooking the Yarmouk River. Moreover, I became a close acquaintance of our landlord, Abu al-Muthanna, a kind person, with a doctorate degree in physics from Russia. Another paradox that I will explain later. As I told Abu al-Muthanna why I chose to stay in this area, and that I was conducting a study on the relationship between the local people and water, he said that, in addition to the house I rented, he owned another piece of land on the Yarmouk River. So, I asked to interview him to clarify the current situation on the river and understand the nature of the past relationship between the river and village residents. The story of this man's family not only revealed the past and present relationship between the residents and the river, but also gave a picture of the life and nature of the communities that inhabited the area as a whole and not only the village of Saham. The story of Abu al-Muthanna revealed what the Yarmouk Basin area looked like. Below is an excerpt of his story:

We are one of the first families that lived in the village of Saham. My family is originally a Maronite Christian family from Lebanon that moved to the city of Nazareth before having to flee the city because of a trouble they got themselves into. Part of the family went to Syria, and we came to the village of Saham. My grandfather's brother, Ibrahim, was enrolled in the Turkish army. In 1913, he fought with the Turkish army in some war, and upon his return to the village, he told his family that he had converted to Islam. His brothers and sisters also converted to Islam like him. Our family name was "al-Jarayza," and after the conversion it became "al-Muslemani," which means "the one who embraced Islam". Before Sykes-Picot, people were constantly on the move, there was free trade, and families married into each other. The level of mobility between Palestine, Jordan, Syria and Lebanon was significant. For example, my grandfather used to visit Syria to buy things; they would ride their animals and cross the river to Nawa, the largest market in the villages of Daraa and nearby villages.²⁹

²⁹. Abu al-Muthanna - the village of Saham al-Kafarat. Interview conducted on March 10, 2021.

It would not be an exaggeration to say that the movement of area residents is more restricted within their surroundings than it was a hundred years ago. Although the historical evolution of capitalism correlates with the development of transportation for goods and individuals, the fact that the region was colonized and that foreign bodies were deliberately implanted to disrupt its cohesion has reversed that correlation and speed in transportation. Abu al-Muthanna was able to pursue his studies in the Soviet Union, and work in Saudi Arabia for some time, but has never been able to visit the Golan Heights, which is only hundreds of meters away. In this case, colonialism has reversed developments in the realm of transportation. While Russia may have become closer than it was a hundred years ago, a place that is only hundreds of meters away has become unreachable, as if these changes turned it into a secret and inaccessible place.

Based on Abu al-Muthanna's story, area residents were accustomed to roaming freely in the region and had more freedom to choose their places of residence. A century ago, the idea that these territories were rather one country was not a fantasy or an assumption by nationalists striving to contrive historical cohesion for their project. The river, which has become boundary, was indeed an assembly point, as evidenced by the fact that many families and tribes lived on both sides of the Yarmouk River and did not consider that there was a boundary or barrier between them. Today, the tribes are distributed between different countries, and it is not rare to find an elderly person holding Jordanian citizenship, while their sibling holds Syrian citizenship.

Abu al-Muthanna's story shows how three generations of the same family can have distinct relationships with the Yarmouk River. At times, these relationships would appear as if they were ages apart, and not separated by only several years. The unquestionable became unrealistic, and what grandfathers considered normal became unthinkable for their grandchildren.

2. 1916-1948 THE MOVING FRONTIER

In the early 20th century, a multitude of catalysts reshaped the region through colonial intervention, including the Ottoman Empire's weakness and inability to keep abreast with the capitalist progress unfolding in the industrial North, as well as the colonial ambitions in the region, which eliminated any renaissance project there. This condition coincided with the outbreak of the World War I, in which the Ottoman Empire became involved. Although the war was just starting, the Allied Powers spared no time to divide the territories of the Ottoman Empire amongst themselves; hence, the infamous Sykes-Picot Agreement, which stipulated the division of the Levant and Mesopotamia between the two most prominent colonial powers at the time, Britain and France. The agreement was the guarantor of the interests that both powers sought to establish or maintain.

Although the agreement, which was signed in 1916, is considered the historical milestone for the partitioning of the region, it was only the prelude or simply a preliminary agreement followed by rounds of negotiations and agreements that produced the region in its current form. For example, it divided the region into several separate entities whereby France controlled Syria and Lebanon, and Britain controlled Iraq and Palestine. This initial partitioning was followed by several rounds of negotiations between the two colonial powers to demarcate the borders between the nascent entities in a way that achieves and protects their colonial interests. The borders between these entities did not take their current shape until decades after the Sykes-Picot agreement. The city of Basra, for instance, was within the proposed Syrian entity, which also included the Alexandretta region at the time. France declared a state on the Syrian coast, while the creation of a state in what later became known as eastern Jordan was a British desire.

Subsequent agreements were concluded to further dissect the region without consultation with its people. Moreover, the agreement to split the region did not respect the historical relations between the indigenous communities, nor the forms of economic-environmental integration that existed between its parts, nor the interests of area residents. The Balfour Declaration, or Britain's promise of an entity in Palestine for the Jews, is a case in point.

The shaping and reshaping of the region involved changing factors and parameters. However, water was the constant element in all the formulas proposed to partition the region and emerged throughout the negotiations between France and Britain. A look at the Yarmouk Basin gives a clear picture of how the boundaries were demarcated between the proposed entities at the time, considering that the British and the French had disputes over lands in the basin.³⁰ The British wanted to extend their control to the Litani River and the Yarmouk River in its entirety, mainly because of the pressures exerted by the Zionist movement. At the San Remo conference, the French rejected the British proposal of including the Litani River in the proposed Palestinian state and decided to form committees to discuss the issue of borders between the two parties. Following this conference, Chaim Weizmann, acting on behalf of the Zionist movement, protested to the British against the draft agreement, stating that:

The draft accord France proposed not only separates Palestine from the Litani River, but also deprives Palestine from the Jordan River sources, the east coast of the Lake Taberiya and all the Yarmouk valley north of the Sykes-Picot line. I am quite sure you are aware of the expected bad future the Jewish national home would face when that proposal is carried out. You also know the great importance of the Litani River, the Jordan River with its tributaries, and the Yarmouk River for Palestine.³¹

Unsurprisingly, the Litani Basin and the Golan Heights have one of the highest rainfall rates in the region, exceeding 500 mm/year.³² This shows that controlling the fertile areas with the highest rainfall was one of the main goals that the Zionist movement attempted to achieve in the proposed partitioning schemes. Although the local population may not have realized this fact based on the scientific evidence available today, they were fully aware of it through empirical knowledge, derived from lived practical experiences. The Golan heights, for example, was the refuge for the residents of the Yarmouk Basin in dry years. Many interviewees indicated that during drought, basin residents would relocate to stay there for several months, whether to farm or raise their livestock. This is a form of ecological-social interaction, based on the local population's understanding of their surrounding environment without the need for scientific measurement tools and documentary records of rainfall rates.

In the 1950s and 1940s, people would go to the Golan Heights and cultivate the land. My maternal grandfather, Abu Rami, for example, used to go to cultivate the land in the Golan Heights.³³

³⁰. Amadouy, V. M. (1995) "The Formation of the Transjordan-Syria Boundary, 1915-32." Middle Eastern Studies 31 (3): 533-49.

³¹. UEA (2019) Hydropolitical Baseline of the Yarmouk Tributary of the Jordan River. P55.

³². UEA (2019) Hydropolitical Baseline of the Yarmouk Tributary of the Jordan River. P 18

³³. Abu al-Muthanna - the village of Saham al-Kafarat. Interview conducted on March 10, 2021.

Certainly, this local knowledge was sought by travellers and explorers who roamed the region in the 19th century and the early 20th century, many of whom were directly or indirectly connected with the Zionist movement. Detailed records were developed about the villages of the area, including their topographical location, accessibility, land quality, and water sources.³⁴ As such, knowledge became a tool for domination, enabling its possessor to scheme more clearly to achieve their ends. This explains why the residents we interviewed or wanted to interview were initially sceptical and wary of us, asking about the purpose and sponsor of the study. They were fearful of repeating past mistakes. Despite their unparalleled generosity and hospitality, the residents realize that these values should not be exploited, especially with regards to water. They recognize that water in their case is the subject of contention and domination, and that all associated knowledge is therefore an integral part of this conflict.

For several years, France and Britain continued to hold negotiations and sign agreements, attempting to attain as much of their interests as possible in every round. Up until the two colonial powers reached an agreement to demarcate their borders in 1923, their disagreement in all negotiation rounds had been about the lands and water resources of the Yarmouk Basin (See Figure 3).³⁵ One can deduce from these agreements that the borders between the countries in question were not fixed frontiers but were rather moving at the will of colonial powers. Those considered to be Syrian, Lebanese, Palestinian or Jordanian, were subject to this colonial will, negotiations and agreements. In 1931, the partition between the countries became the closest to its current form after concluding an agreement that reiterated in most part the British-French agreement signed in 1923 to demarcate the borders between the countries.

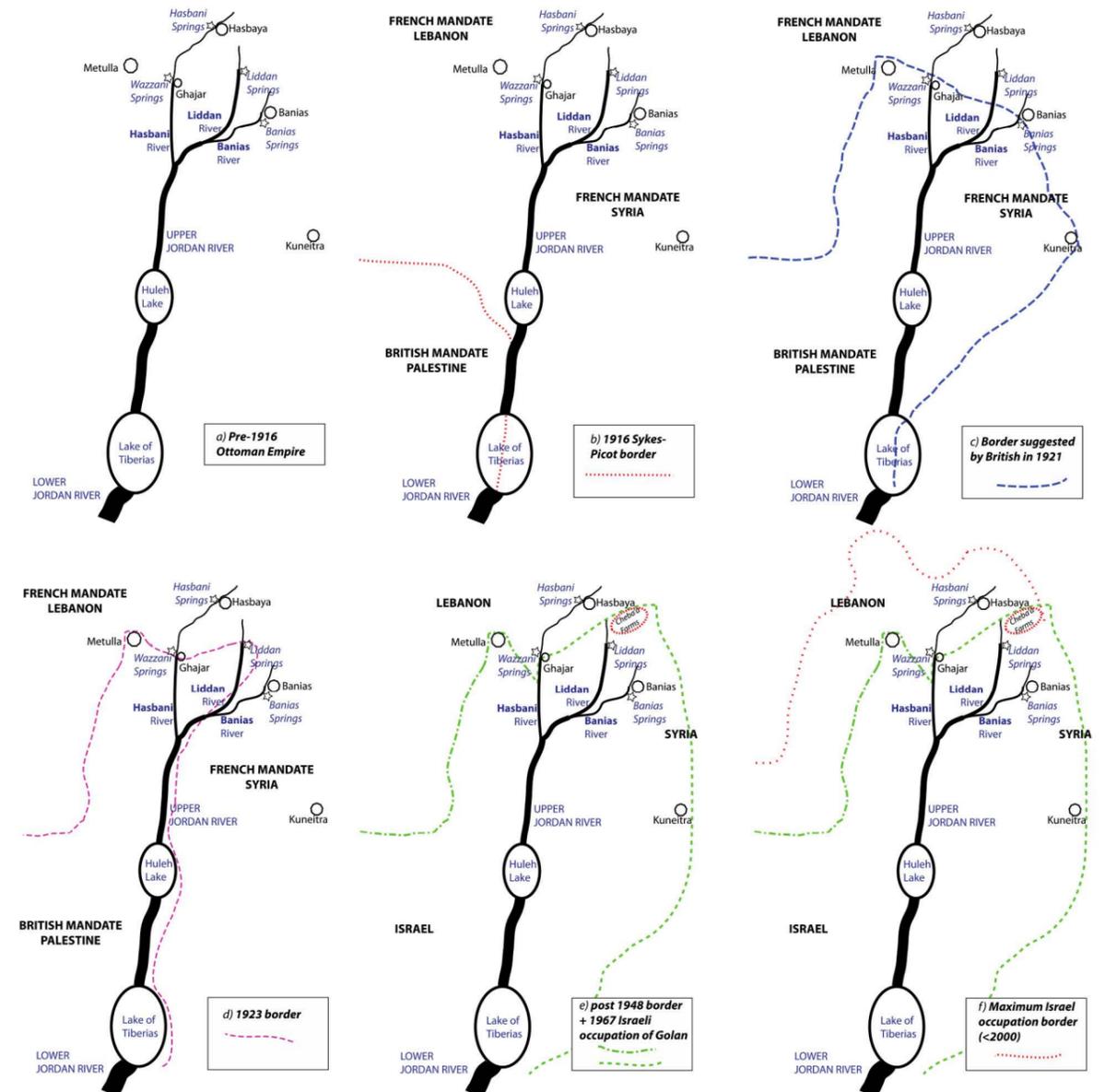


Figure 3 The shifting borders under colonial Mandate rule³⁶

³⁴. Pappé, I. (2007) *The Ethnic Cleansing of Palestine*. London, Oneworld Publication. P 28.

³⁵. Zeitoun, M., Eid-Sabbagh, K., Talhami, M. and Dajani, M., (2013) Hydro-hegemony in the Upper Jordan waterscape: control and use of the flows. *Water Alternatives*, 6(1), p.86.

³⁶. *ibid*

These borders emerged as artificial separators to serve colonial powers' objectives following rounds of negotiations and discussions, most of which did not heed any historical aspects or local population interests. On the contrary, the borders divided an otherwise historically interconnected Yarmouk Basin that had some sort of thematic coherence or unity given the reality on the ground. The borders produced new political entities, or states, as a tool for the colonial powers to safeguard and nurture their interests. Despite the new economic-political reality imposed by the colonial division, the basin's communities would maintain part of their relationship with each other and with nature. While the states that were newly created as a colonial tool for control and regulation did their job, they had not yet acquired the rigor they later did. The borders had not been firmly established by then and breaching the border barrier did not pose a fatal risk. The movement of the population between these entities had not yet been restricted.

The relations between region inhabitants were not directly affected by the consequences of the colonial partitions. It took years, or even several decades, for the separation between these parts to become a reality, sink in with the population and be part of how they defined themselves through the new divisions. Also, many social structures and economic relations continued to exist by virtue of the thematic coherence or unity that was based on complementarity amongst them. For example, our interviews showed that many residents of the villages located in the Jordanian part of the Yarmouk Basin used to go to Nawa (Syria) and Tiberias (Palestine) to sell their goods, or to buy goods that were not available in their villages. Nawa and Tiberias, in particular, were hubs for the villages of the Yarmouk Basin. It was not surprising that a resident of Huwara village would head to Tiberias to buy items that were not available in their village.

The British and the French authorities were also in agreement, to a varying degree as dictated by the political circumstances, to operate the railway that connected Daraa to Haifa to serve their interests. Britain, in particular, invested in this railway to connect it with another railway that stretched along the Palestinian coast through to the Suez Canal in Egypt. Therefore, parts of the railway continued to be operational until the Zionist armed groups decided to target it in a military operation in 1946.

Until the mid-1940s, the Yarmouk River had not constituted a barrier or an obstacle preventing interaction between region residents. They used to cross the river where the water level and the geography of the place permitted, or via the bridges that extended above it, some of which date back thousands of years. Those bridges were an expression of the thematic coherence or unity between residents of the region. The development in infrastructure at the end of the 19th century helped bolster existing ties as historical bridges were reinforced and new bridges constructed to enable the railway to cross over the valleys formed by the Jordan Valley rift. The bridges held a significant material and logistical value, reviving many

areas as destinations for region residents, including the Syrian and Jordanian villages of al-Himmeh whose sulphur water springs became a destination for visitors from various regions hoping for their believed healing ability. The armed Zionist groups that were active in the region also believed that those bridges were of great importance, and hence made them the target of their largest operation prior to the 1948 war. The carefully planned operation was militarily significant, and of great symbolic value.

2.1 The Night of the Bridges in 1946

In one of the largest operations that preceded the Arab-Israeli war, the armed Zionist group "Palmach" devised a plan called 'Operation Markolet' to blow up the bridges linking Palestine with an objective of "cutting off Israel from its Arab neighbours".³⁷ The targeted bridges were used either as paved roads or for railroad lines. The bridges were of great historical importance and a means of overcoming natural geographical obstacles. They represented historical arms, so to speak, that human societies stretched to reach out for each other. That which nature disconnects, man reconnects to create harmony between societies scattered over geographical areas.

Based on this understanding, the Night of the Bridges, or Operation Markolet, was not only a hostile act intended for the military purpose of cutting roads and restricting the local population's movement and disrupting their supplies, but also a hostile act against the ecological integrity that existed at the time. It was an act that destroyed the unity, coherence, and integration; a hostile act against history, as much as it was against geography. It signalled that the soon-to-be born entity would disconnect the geographical area, which would be referred to later as Palestine, from its historical/natural context. Although the local population did not have the knowledge or the scientific tools to determine the layers of the earth and to put forward scientific definitions such as "basin," their practical first-hand experience addressed the Yarmouk Basin as one integrated geographical unit. They knew their land and different ecosystems well; they knew which areas to resort to when conditions change. In this fashion, practical experience preceded science, and was a prerequisite for survival before scientific discoveries.

The Yarmouk Basin was a key area where several bridges connecting both banks were blown up. It is a common basic assumption that any given river has two connected banks, but the Yarmouk River became the exception when its other bank was taken by force.

³⁷. Palmach website, Operation "Markolet" ('Night of the Bridges').
<https://palmach.org.il/en/history/database/?itemId=6225>

The two banks became very different and could no longer be recognized as two banks of the same river. Nature was deformed. Certainly, the Night of the Bridges was a symbolic event that proved the power and authority of the Zionist movement's military wings, and an expression of their determination to use force to prevent all attempts to reach them. Today, passers-by can see the remains of the demolished al-Himmeh bridge as a witness to the history of the area and its transformations.

The declaration of the establishment of the state of Israel in 1948 was an extension of the colonial project in its settler colonial form that aimed to partition and control the region and represented the culmination of the colonial regional domination. It also highlights the nascent states created along the banks of the Yarmouk River as entities contributing to the separation of otherwise historically connected communities.

3. 1948-1967 THE DAM TO COUNTER THE US PROJECT

The 1948 war and the declaration of the establishment of the state of Israel constituted a new chapter of change in the region. The declaration marked the culmination of the longstanding colonial project, instituting a new equation in the region with the creation of a new entity as a fait accompli.

As a result, area residents lost their access to Lake Tiberias and the city, which provided them with a marketplace to sell their surplus products and shop for items that they could not find nearby. In this period, the Yarmouk River became a confrontation point between the Arabs and Israel. Between 1951-1956, recurrent Israeli military attacks on Syrian territory led to the displacement of the population of several villages in the area.³⁸

In addition to military confrontations, Israel constructed one of the largest and unprecedented water projects in the region in the early 1950s. To say the least, the project disrupted the ecological system and fundamentally altered the natural water cycle by draining Lake Hula that intercepted the Jordan River. The dry lakebed was transformed into agricultural lands, and the "National Water Carrier of Israel" was constructed to connect Lake Tiberias with the Negev desert through pipelines.³⁹

Water would emerge henceforth as the main subject of conflict, revealing its political worth. Up until that time, the Yarmouk River as a body of water was used by the colonial powers as "borders" between the newly founded states. However, from this point onwards, the rivers' course and water would become a target and part of the conflict in the region. In the aftermath of 1948, Israel exercised near complete control over the Jordan River. Counter projects on the Yarmouk River were implemented as a response to the Israeli projects; "a river for a river," as it were. Jordan built a water canal to exercise greater control over the Yarmouk River and reroute its waters from its historical outfall in the Jordan River.

³⁸. Morris, B. (1993) *Israel's Border Wars, 1949-1956 "Arab Infiltration, Israeli Retaliation, and the Countdown to the Suez War"*. Oxford University Press Inc., New York. pp. 363

³⁹. Dajani, M. (2020) *Thirsty water carriers: the production of uneven waterscapes in Sahl al-Battuf*. *Contemporary Levant*, 5(2), pp.97-112.

Just as the banks of the river were isolated, the waters too would be diverted. Water and everything associated with it became disputable and part of the conflict. Meanwhile, one could no longer observe the natural aspects of the region or the water cycle in isolation from those projects and ensuing political conflicts.

As Swyngedouw asserts, "The mobilization of water for different uses in different places is a conflict-ridden process and each techno-social system for organizing the flow and transformation of water (through dams, canals, pipes, and the like) shows how social power is distributed in a given society."⁴⁰ Hence, the actions that the states will take to manage or otherwise alter the course of water reveal the nature of the conflict in the region, and how relations of power and domination are distributed between the states.

The Yarmouk River and its waters were the target of successive projects. United States envoy Eric Johnston submitted a proposal to implement a project titled "Plan of Unified Development of the Jordan Valley Region" with the aim of bringing the parties together. The proposal, a mega economic project to invest in the tributaries of the Jordan River, including the Yarmouk River, was floated for the adversaries to transcend their enmity. The United States had overlooked all aspects of the Arab-Israeli conflict and focused solely on its political side. It wanted to transcend politics through economy.⁴¹ Neither nature nor humans were taken into consideration, and it was at their expense that other interests were to be achieved.

However, the conflict could not be transcended through this proposal. As a response to the American proposal, Arab regimes called for the first "Arab Summit" conference in 1964. The Yarmouk River was one of the key topics discussed. Regimes measure their success by the size and magnitude of their projects, and view nature and human societies as subjects of these projects, disregarding the actual benefit that people can reap, or any possible repercussions affecting them and their livelihoods.

Therefore, in order to challenge Israel and its control over the sources of the Jordan River, and the near-total monopoly over the management of its waters, a group of Arab states decided to construct a dam to prevent the waters of the Yarmouk River from reaching the Jordan River, and by extension Israel. Jordan and Syria only would have access to the waters.

⁴⁰. Swyngedouw, E. (2009) The Political Economy and Political Ecology of the Hydro-Social Cycle. *Journal of Contemporary Water Research & Education*, 142, 56-60. P.57

⁴¹. Alatout, S. (2011) Hydro-Imaginations and the Construction of the Political Geography of the Jordan River, The Johnston Mission, 1953-56. In *Environmental imaginaries of the Middle East and North Africa* / edited by Diana K. Davis and Edmund Burke III ; with an afterword by Timothy Mitchell. Ohio University Press series in ecology and history. 218-245. P. 220

One of the Quranic stories mentions a "just ruler" who roamed the earth east to west at some point in history and met a people suffering from the domination of another more powerful people. To end the domination and aggression, the just ruler constructed a dam separating the two sides. The word "dam" in Arabic means to prevent or block. The dam in the story stands as a barrier to injustice, and a means to serve justice. One may argue that the conditions in the region in the 20th century restored this symbolism to the dam.

The name chosen for the dam is very indicative. Khalid bin al-Walid was prominent Muslim leader who defeated the Crusaders in the early Islam. As part of the propaganda campaign, school trips were organized to the dam construction site. In one of our interviews in the village of Huwara, Mr. Hashem Gharaibeh recalled that the project was promoted through an extensive propaganda as a unity project that would ensure water supplies and respond to Israel's diversion of the Jordan River's waters. The dam was also marketed by creating jobs for area residents.

I remember when I was in school, the Khalid bin Al-Walid Dam was a new thing, and we visited the location on a school trip. They explained to us about the dam and how important it was going to be. I remember that many fellow villagers of the village of Huwara were recruited to work on the dam.⁴¹

It was decided to construct the dam on the parts parallel to the villages of Aqraba, Saham, and al-Mukhaiba al-Fawqa on the Jordanian side, and on the opposite part of the Syrian Golan Heights. For this purpose, the Jordanian government expropriated thousands of dunums from residents in return for symbolic compensation. It becomes obvious that the residents were not part of the decision-making, nor were they involved in determining the appropriate location for building the dam, or even consulted to know if they thought if the project was appropriate or not. The "greater interest" compels them to agree and succumb to the project; how could one object to a project built for the interest of the Arab nation? The residents would be the loser in all cases. The colonial projects partitioned their lands and deprived them of their natural extension, while national projects robbed their lands to set up mega projects that will not necessarily have a positive impact on them. The residents admit that this project was not something they wanted, it was rather forced onto them; who could say "No" and defy the state or decline to carry out their national duty?

Our interviews and questions about the dam revealed a surprising amount of information that the residents still possessed regarding the project.

⁴¹. Hashem Gharaibeh, village of Huwara. Interview conducted on March 07, 2021

One could feel their unspoken sorrow and grief, lamenting the loss of their expropriated lands in exchange for symbolic compensation, as well as the deception of the unity, confrontation, and victory illusion, which soon proved to be baseless, and a fantasy promoted as reality. Therefore, the area residents were displeased with the project, in the same way they were displeased when they suffered the defeat. Whereas political regimes alone reap the fruits of their victories, their defeats often befall all.

Abu Firas, a 67-year-old resident of the village of al-Mukhaiba al-Fawqa (Jordanian al-Himmeh), recalls the commencement of the dam project, saying:

I remember when they decided to build the dam. Thirteen Arab countries agreed at the League of Arab States to build the dam. But it didn't last long; the work stopped in 1967 when the war erupted. There were people from other parts of the country working on the dam. They even built houses for them. The dam was going to be huge. Not all the people were happy as some had lost their lands to the project.⁴³

Abu Firas said the project died in its infancy. In June 1967, a new war broke out in the region as Israel occupied new lands, including the Syrian Golan Heights. In the 1948 war, Israel took control over Jordan River water and sought in the 1967 war to take a share of the Yarmouk River water.

It is astonishing that the remains of the conflict can still be seen standing until this day, as a vivid reminder that the confrontation took place on this very spot. A strange thing indeed. Political regimes usually establish monuments, museums, and memorials to commemorate their victories, and invite people to acknowledge their greatness. On the contrary, the site of the supposed dam still contains evidence of destruction. One can see hollow concrete blocks on a mountain edge, which only evoke a feeling of disappointment or emptiness. The blocks were the housing units built for the Egyptian engineers brought by the Arab Contractors Company to build the dam. Although the area residents wanted to reverse the devastation and revive the location by repurposing the hollow cement blocks to be used in economic or residential projects, the local authorities have postponed issuing a decision regarding their repeated requests or simply abstained from giving a response.⁴⁴ One is forced to wonder yet again: why the evidence of devastation is left on this part of the river? Why isn't life permitted?

⁴³. Abu Firas, al-Mukhaiba al-Fawqa (Jordanian al-Himmeh). Interview conducted on March, 09.2021.

⁴⁴. Al Ghad (2015) Irbid: dormitories turned into sheep dens and demands for providing it for the needy'. <https://alghad.com/إربيد-إسكان-تحول-لذرائب-أغنام-ومطالب-بت/>



Illustration no.3 Reminiscence of Khalid Ibn il Walid Dam

A piece of machinery deployed to construct the dam still sits on site, collecting dust and growing weeds for more than half a century. Despite nature's attempt to conceal it, parts of the machine can still be seen after all those years. Those remains are remnants of the 1967 war, known as the "Naksa," after which the Yarmouk River was completely transformed into a border barrier, and Israel occupied parts of the Syrian Golan Heights. This represented a major turning point in the lives of the Yarmouk Basin residents.

4. 1967 – LATE 1980s: THE RIVER IS ISOLATED FROM ITS BANK

Since 1967, everything has changed.⁴⁵

The extensive change that took place in the region in general following the 1967 war is perhaps the single point of agreement among all the interviewees who lived the war or heard about it, echoing that "everything has changed" and nothing remained the same as before.

The aftermath of the 1967 brought significant changes in the social structure in the Yarmouk Basin. On the one hand, many people were displaced from their villages during the war and for several years afterwards out of fear of repeated Israeli attacks on the area, with some resettling in the areas to which they were displaced. The dispossession of some residents of their agricultural land in order to construct the Khaled bin al-Walid Dam cost them their source of income. Subsequently, a growing number of the population started to look for work, relying strictly on their physical strength. While the lucky ones managed to find jobs and a source of livelihood, others slipped into a life of poverty and hardship looking to survive by becoming "agricultural workers" for landowners in the area.

The biggest change in the Yarmouk Basin was the separation of the Yarmouk River's northern bank following the occupation of the Golan Heights, the historical retreat that area residents resorted to whenever natural conditions deteriorated. Interviewed residents old enough to remember indicated unanimously that they used to relocate to the Golan areas to farm and herd their livestock since that region was rich in water resources and fertile soil. The description of the Golan Heights as such may sound as an exaggeration or an expression of nostalgia, but present scientific data confirm that the Golan Heights boasts the highest rainfall rate in the Yarmouk Basin. This fact emphasizes that the practical expertise that the region's population possessed was indeed reflective of their reality even when they lacked more recent scientific evidence.

⁴⁵. Abu al-Muthanna, the village of Saham al-Kafarat. Interview conducted on March 10, 2021.

My father told me that they used to take their livestock to graze in the Golan in the spring if we had a spot since the Golan was lush. They used to take their cows and sheep and stay there. The whole family would go, including women to milk and herd the livestock. They would stay there between three and four months. Their connection with the Golan was strong, especially the villages of Kursi, Fik, and Tawfik.⁴⁶

In the latest transformation, the Yarmouk River became a borderline between neighbouring states. A period of stagnation followed, as basin countries abstained from establishing agricultural projects on the river or disturbing the balance of power between them. Although the river was a point of militarized confrontation, area residents maintained their access to the river. Residents of the villages located on the river continued to herd their livestock nearby, while male residents in particular continued their usual recreational activities such as swimming and fishing. By the late 1980s, region residents were denied access to the river and associated activities; their relationship with the river was severed.

Some people would keep their livestock by the Sharieat [Yarmouk river] to be near Yarmouk River water. They would take their livestock in the spring to the river to graze and drink and would stay there.⁴⁷

However, the changes that affected the region due to political conflicts and impacted the relationship of the population with water in general and the Yarmouk River in particular, were not the only changes. The period between the mid-1960s and mid-1980s witnessed the construction of mega projects and an obsession with water that involved many changes in groundwater infrastructure in terms of collection and conveyance.⁴⁸ There was an obsession with exploring and extracting groundwater, which had long been out of human reach until machines evolved and bolstered man's ability to exploit nature. The states sponsored this Hydraulic Mission with groundwater and even dug numerous underground wells. Unlike the Yarmouk River, groundwater was a politically uncontentious source of water for basin states. Furthermore, it offered an investment opportunity for those looking to invest their money and generate profits. Today, the extent of groundwater depletion is evident; all available data confirm that the use of groundwater exceeds by many folds the permitted limit and the replenishment rate. Such excessive groundwater exploitation is visibly evidenced in the fact that agriculture has moved from its historical locale to areas of harsh climatic conditions, where cultivation has never been pursued except with groundwater. Cultivation in such areas is a major factor in the depletion of water resources, and subjugating nature as a source for the accumulation of surplus value, with total disregard to the environmental and ecological impacts resulting from these changes.

⁴⁶. Hashim Gharaybeh, the village of Huwara. Interview conducted on March 07, 2021

⁴⁷. Ibrahim al-Tawalbah, Saham al-Kafarat. Interview conducted on March 11, 2021

⁴⁸. The data show that approximately 45% of the water pipelines that delivered water to households were constructed in the years 1970-1989. For more information, see the following report: https://openjicareport.jica.go.jp/pdf/12184818_01.pdf, Chapter III, p16.

In addition to the intensive drive to install water lines to deliver water to households as well as to explore and extract groundwater, dozens of dams were constructed during that period especially on the Syrian side. Many of which were built in the valleys that supply the Yarmouk River with water in the rainy season, which naturally impacted the level of water flowing into the river.

The infrastructure projects built to control and manage the different uses of water in a society⁴⁹ reveal how power relations are distributed within that society. The differences in water projects implemented in Jordan and Syria reveal considerable contrast between both countries. The varying extent of their ability to control water is dependent on the interplay between three factors: geographical conditions, technical choices, and politico-legal arrangements.⁵⁰ While the geographical conditions are not shaped by power centres, the other two factors are.

However, both countries have failed to consider the ecological aspects and potential long-term impact of their projects, and to engage the local population in the decision-making and planning of water projects. This not only threatens agriculture in the region, but also the ability of water resources to support human life if water resources and exploitation are not addressed in radically different ways.

One may argue that the political conditions between 1967 and the late 1980s have brought the relationship between region residents and the Yarmouk River to a standstill. It has become impossible to cross the river after as it became clear-cut political borders separating colonially created political entities that gained legitimacy and developed somewhat differentiated identities with the passage of years. The conflict with Israel as well as the various political alliances emerging in the region have widened the separation between the banks of the river, and further entrenched it as a borderline. Moreover, the joint projects that were proposed to exploit its water stagnated for several years also due to political disputes and disagreements. The value of the Yarmouk River was suspended during those years, serving as a means for deterrence and exclusion, and henceforth as a border and political order.

⁴⁹. Swyngedouw, (2009) The Political Economy and Political Ecology of the Hydro-Social Cycle.

⁵⁰. *ibid*

5. THE LATE 1980s TO THE PRESENT

By the late 1980s, the Yarmouk River matured into its current state; a body of water that one can see from afar but may not approach, a river whose 20th century history condenses the political, economic and social changes in the region. Everything about the river stands witness to the cumulative and interrelated crises of the region, proving that the study of water and water basins in light of their relationship with humans is impossible from a hydrological perspective only. A study that addresses water as an H₂O compound would strip water of its value and relationship with humans. With the advancement of knowledge, humans are increasingly attempting to control nature to further serve their purposes and goals. Therefore, the study of water from a pure hydrological standpoint is deficient. Water must only be studied from a socio-hydrological perspective that considers all economic and political structures. It is the only perspective to understand humans' relationship with nature.

To understand the present state of the Yarmouk River, one must realize the political interactions in the late 1980s when the river was a cornerstone in international relations between the political entities sharing the river. On the one hand, Jordan and Syria concluded an agreement to exploit the water of the river after decades of negotiations that were disrupted repeatedly due to political entanglements. On the other hand, Jordan was engaged in talks with Israel to reach a peace agreement, which led to the signing of the Wadi Araba (Jordan-Israel Peace) Treaty in 1994. Both political events had a fundamental impact on the Yarmouk River and its waters as well as the relationship between the residents and the river, determining the shape of their interaction from that point in time onwards as a fait accompli.

5.1. The river's transformation from a natural body of water into a taboo object

As a natural body of water, the Yarmouk River has undergone many transformations from a being part of the environment that supported human life to becoming an inapproachable forbidden body, or a "taboo."

Prior to the 1990s, the changes that affected the shape of the area were more on the river's banks rather than its water. The local population still had access to its water and was able to use it for limited purposes. However, by the late 1980s, the Jordanian army declared the Yarmouk River a closed military zone only accessible at certain locations and through several military checkpoints that searched vehicles and people alike. Unprecedented restrictions hindered access to the river as the area became fraught with military watchtowers equipped with various types of devices and equipment to monitor any movement in the area.

Two paradoxes are noticeable in the river's transformation. First, the river was not monitored, restricted, or militarized in this fashion throughout the years of the conflict with Israel, even when it was a point of engagement. So, it was peace, rather than war, after all that required military power and arms as well as denial of access to the river. Second, it was the Jordanians, rather than the Israelis, who were keener on militarization and restricting access to the river, uprooting people from their environment and natural extension.

Residents and landowners in the area say the measures are exaggerated, and that the area has been transformed from an investable place into a security concern consistent with the transformation of the river into a border. Although the river acts as border for Jordan as well as the other countries on the banks of the river, addressing the river as a security concern applies to Jordan only, according to Dr. Laith al-Rousan, a specialist in irrigation systems and the owner of multiple agricultural properties on the outskirts of the Yarmouk River. He commented on the militarization around the river on the Jordanian side, reflecting on the river's existing reality and explaining what it means to be a landowner on the river.

***Jordan's concern has always been security, border protection and smuggling prevention. I mean, on the other side, [the Israelis] grow whatever they want, and draw as much water as they want. Land cultivation requires legislation and subsidies. If security is the issue, how come the other side let their people cultivate freely. At least treat me like they treat their people. I mean, they draw water and use it, why don't we do the same, at least?*⁵¹**

This new state of the river posed many obstacles and challenges to the residents, not only in terms of agriculture but all forms of human activity in that part of the region. According to a resident from al-Himmeh village, the locals were able to swim in the river and enjoy its water in the past but are not permitted to utilize it now.

I have many memories of the river. In the past, we used to go down to the river, swim, and fish, but now we can't because it's forbidden. Even the youngsters are prohibited to go down.⁵²

To better explain the consequences of defying the prohibition, we accompanied a shepherd from the Saham village on a tour to have a first-hand experience of the difficulties that this activity entails. We stood on a hill overlooking the Yarmouk River, and the shepherd told us that in the past when water levels decreased in local springs at certain times in the summer, they would head for the river so the cattle can drink. He added that it was no longer possible after the late 1980s restrictions on accessing the river. He recalled that one day he crossed the limit towards the river.

We were taking our sheep and goats to graze but there weren't a lot of grass in the area where we usually go. So, we moved closer than usual to the Yarmouk River even though we knew it was forbidden; we had no choice because our animals had to feed. Once we approached a hill overlooking the Sharieat, the army began shooting at us, or rather at the ground beside us. Immediately, we understood and evacuated the area, ascending away from the river.⁵³

The risk of defying the orders is not worthwhile and can endanger the life of those who dare. However, area residents were determined to reconnect with their natural extension. As a response to being denied access to the river and their traditional limited activities, the residents demanded their rights and the return of their lands of which they were dispossessed in the 1960s to build the Khalid bin-al-Walid Dam. The residents argued that since the dam had not been built, the expropriated lands ought to be returned to their owners, and that since the "other side" - as locals prefer to call it instead of Israel - was utilizing the lands located on the river, why couldn't they? Eventually, the persistent pressure compelled the authorities to allow some villagers to return to farming their lands by the late 1990s.

⁵¹. Dr. Laith al-Rousan, agricultural landowner in the villages of al-Mukhaiba and al-Adassiyeh Interview conducted on April 02, 2021.

⁵². Abu Jawad, the village of al-Mukhaiba al-Fawqa (Jordanian al-Himmeh). Interview conducted on March, 09 2021.

⁵³. Mahmoud, a shepherd from Saham al-Kafarat village. Interview conducted on April 11, 2021.

The return to the lands located on the Yarmouk River was not without difficulties and layered power relations as mentioned briefly in this study. Two factors governed the return to cultivation near the river. The first was the adoption of irrigated agriculture, which was not common in the past and therefore the lands on the river were not prepared and needed to be reclaimed. Not all residents who owned land on the river could afford to raise the needed funds to hire heavy machinery to remove rocks and clear the land or purchase pumps to draw water from the river.

Of course, when the people wanted to cultivate their land, they had to prepare it first. So, they deployed bulldozers to level the land, which was full of rocks, very large ones. Not all people were able to cultivate their land since hiring bulldozers was costly, plus they had to obtain a permission from the military intelligence. But some people went through these procedures.⁵⁴

The second factor was the communities' uneven power and ability to persuade/compel the authorities. The dam project involved the expropriation of lands in three villages located on the Yarmouk River: Aqraba, Saham, and al-Mukhaiba al-Fawqa. With the absence of farmers' associations, the residents resorted to their traditional tribal or regional structures to pressure the government. While those who could financially afford to return from the people of Aqraba and Saham, the residents of al-Himmeh could not return to cultivate their lands, despite their repeated requests for permission. A resident of al-Himmeh explained as follows:

My paternal uncles and father owned about 20 dunums, but the town's people couldn't return to cultivate their land. Saham's people, however, forced their way back to cultivate their land. I mean, once they returned to their land, it became a fact on the ground. But the people here are powerless and fearful. I mean, Saham is home to big tribes that stand in solidarity with each other. But here, the people are ignorant. It is perhaps in the last 5 years that we started to have educated people and at the university level. It is only recently that we started to stand up to them. In my father's time, most people were in the Army, and when you're a military personnel, you can't have demands or partake in protests and demonstrations. We've never had a representative, for instance.⁵⁵

Despite the difficulties, the residents forced their way back to farming their lands, but with an entirely new view of the river. The river ceased to be their natural extension, and they could no longer access it to feed their livestock, fish, or swim. The river became a heavily monitored militarized body; movements are restricted, and those permitted to access the river are registered.

⁵⁴. Ibrahim al-Tawalbah, Saham al-Kafarat village Interview conducted on March 11, 2021.

⁵⁵. Abu Jawad, the village of al-Mukhaiba al-Fawqa (Jordanian al-Himmeh). Interview conducted on March, 09. 2021.

Access was limited to male adults for they can be searched and subjected to the most flagrant forms of authoritarian surveillance and control.

5.2. New river, new generation (No man ever steps in the same river twice)

Greek philosopher Heraclitus summed his worldview when he said: "for into the same river no man can enter twice", to indicate that "Nothing is ever the same, nothing remains identical from one consecutive moment to another."⁵⁶ However, in the Yarmouk River's case, change was not limited to humans and the river, but also their very relationship. Although their return to cultivation represented reconnection with the river, neither the people nor the river were the same. A new relationship between the population and the river was forged, a more intimate one in comparison with the late 1980s but one that involves more alienation towards the river as a natural body. The current relationship, especially the new generation's, with the river is not the same as the old relationship. Although the new relationship is forced on the old generation, currently engaged in farming the lands on the river, their past and memories remain part of their relationship, a component that the new generation lacks. This difference was noticeable in the interviews we conducted with residents from different generations.

A compounded relationship with the river emerged. Throughout the rivers' transformations over the past decades - from being an indistinguishable boundary, to a confrontation zone, a river isolated from its banks, a proper boundary between states, and finally a taboo - this natural body of water no longer represented an organic extension for the residents of that area, or a refuge at times of drought. All human activities in the region have become restricted and subject to unquestionable security considerations with which one must comply humiliatingly. Although some groups returned to farm their lands, that was the only activity permitted on the Yarmouk River and has been severely restricted, a condition for those wishing to return and farm their lands. Whoever wishes to cultivate their land on the river must obtain a permit from the Military Intelligence and can only access their land during weekdays and daylight hours. Females and children are prohibited from accessing this area. Only Jordanians are permitted to visit the area accompanied by the owner of a riverside land. Furthermore, landowners must move calmly on their land.

⁵⁶. Stace, W. T. (1960) A Critical History of Greek Philosophy, First published in 1920. Macmillan & Co. LTD. London. p. 74

The strangest of all, however, is that feeling the river's water is forbidden, and whoever dares to do so could expose themselves to serious consequences.

To better understand this new relationship between the residents and the river, we spoke with the younger generation. We met 25-year-old Abu Omar, who works at his father's vegetable store and helps his father and brother on their farm on the Yarmouk River. We asked Abu Omar about the different relationships that the younger and older generations of area residents have with the river. Abu Omar responded as follows:

“Surely, going to the river is very restricted; you can't just always go there. They can catch a moving cat. There are surveillance towers watching over the river that can detect the slightest move. If you run on the farm, the rapid response pickup truck can reach you in two minutes. Any abnormal movement is monitored. In the past, our families would head to the river so their livestock can graze. Recently, while we were on the farm, the water hose broke loose at the pump. So, I ran to reattach it, but the army pickup [chased me] through the farm between the trees, and even broke some on its way, because I went towards the river even though there were cameras. Our area in particular is heavily monitored. You'll have to inform the army if you observe any strange movement. Even if you owned land by the river, you're not allowed to access it. In the past, women were allowed to access the river but later denied, because they can't search women, while they can pat us down from head to toe. Also, foreign nationals aren't allowed to access the river. Jordanians can barely access it; whoever owns a farm receives a permit for five people including himself. Whether you've got 20 dunums or only three, you're permitted to bring five people including yourself. Of course, those permitted to access their lands are thoroughly searched, personal and vehicle search. Staying overnight is forbidden. By 3:30pm you need to be out. In the summer, they may extend it to 5:00pm.”

Abu Omar's account clearly indicates that the relationship with the river has become tense and thorny. There is a constant state of security tension. Everyone must remain vigilant and cautious not to take uncalculated moves in their relationship with the river. This change has had significant impact on the lives of area residents, revealing ample information about the history of the Yarmouk River in the 20th century.

Our interviews with owners of riverside lands revealed a set of conditions that determine the current and future forms of agriculture on the river. First, land investment is limited owing to the lack of clear legal ownership. As mentioned earlier, the lands being cultivated were previously expropriated by the state, and the residents' return to farming there was not based on a clear legal basis.

⁵⁷. Abu Omar, the village of Saham al-Kafarat. Interview conducted on March, 08, 2021.

They do not hold title deeds to the lands they are cultivating, but rather recognized and respected internal agreements. The transfer of land between owners is done through documents prepared by lawyers as an alternative to title deeds. Second, the plots of invested land are relatively small, ranging in size between 3 and 12 dunums per person. The last limitation hindering land investment by the river is the lack of solidly organized agricultural associations. Existing associations are more focused on marketing and generating profit for their founder(s) than serving as associations for farmers on an equal footing. This set of conditions does not support economically reliable farming or permanent farming, but rather temporary farming.

When these conditions are combined with the military rules that allow Jordanians only to access this area, one can see that this type of agriculture was meant to relieve a crisis rather than constitute a serious endeavour to establish an economic sector. This pattern has been conducive to temporary seasonal agricultural labour, which relies on laborers from the same village or the surrounding villages at most. According to Abu Omar,

Of course, we hire workers, but they're our unemployed friends, who don't work or study. My brother and father show them how to work.⁵⁸

Thus, agriculture is not a choice, but rather a non-choice, or as one may say a temporary relief for the stacked-up reserve of laborers. This pattern of intermittent and insufficient work does not allow for the accumulation of experience or functional progression in this field, and subsequently fails to contribute to the emergence of a reliable and solid economic agricultural sector.

One can observe a state of concentrated alienation amongst farm workers in that region. With the advent of statehood and land expropriations for different excuses, the descendants of those who led a self-sufficient life founded on agriculture and less so on herding became agricultural workers. Even though these two types of straightforward production activities ensured minimal yet sufficient production, the dominance of market economy created life complexities and caused most people to fall prey to market exigencies, turning them into workers leading an alienated life. They work to produce for others and lack the feeling of coherence, further alienating them from each other. In the past, when past generations were self-sufficient, they did not develop an antagonistic relationship with their production, but under the present mode of production, workers make products that do not belong to them, that they often cannot afford to buy and so enter an antagonistic relationship with their own production.

⁵⁸. Abu Omar, the village of Saham al-Kafarat. Interview conducted on March, 08, 2021.

5.2.1. The rise of the machine and the commodification of the river

Historically, seasonal rain-fed agriculture was prevalent in the Yarmouk Basin. Irrigated farming was limited to the areas near water springs. Researchers concur that irrigated agriculture advanced greatly in the Jordan Valley, including its southern part of the Yarmouk Basin, around the late 19th century. The village of al-Adassiyeh was the center of agricultural development, as the Ottoman ruler in that region brought immigrants from several places to invest and farm in that area. The Bahais' arrival in the area had a distinctive mark, as they mastered various types of the irrigation methods introduced at the time to develop the area agriculturally. It is worth noting that all travellers who passed through the area of al-Mukhaiba expressed admiration for its fertility, especially the palm trees that were widespread in that area and can be seen in old photographs. One can only lament the loss of palm trees that were uprooted for different reasons including urban expansion and tourism projects that took place in the area. This should be the subject of future studies aiming to explore the extent of ecological changes in the area.

The return to cultivating the banks of the Yarmouk River appears to resume a project that began to develop the area agriculturally more than a century ago. However, machines would become an intermediary in the relationship between humans and nature this time around. The pipelines and water pumps would be used to draw water from the river for irrigation. This new relationship is clearly expressed by the new generation of area residents.

Throughout the generations, the Yarmouk River seized to be a place where humans interacted with their natural surrounding and became a mere source of water. Whereas the militarization of the river severed the spontaneous interaction with the river, the machine turned the interaction between humans and nature into a cold relationship, based on the extent that the river can be utilized as a source of water, and mostly driven by interests and realizing the maximum surplus value.⁵⁹ It is as if the area residents decided to utilize the river as a source of water since they could not establish a direct relationship with the river as their fathers did, as Abu Omar explains:

⁵⁹. Swyngedouw, E. (2006) Circulations and metabolisms: (Hybrid) Natures and (Cyborg) cities, *Science as Culture*, 15:2, 105-121

We irrigate the trees with water from the Yarmouk River, using water pumps, most of which are Indian and Japanese-made. Irrigation consumes a lot of gasoline. Irrigation takes place between March and September, and it takes care of fertilization since we mix the fertilizers with the water. Sometimes, fertilizers are sprinkled on trees... We draw water for irrigation from the dam, and we don't pay for it... The river's level keeps changing because they control the [flow of] water at al-Wehdah Dam. Sometimes in winter, the water level rises and the current picks up speed and so can drown the trees. Small trees are hit the hardest because they can be swept away. As for big trees, the rising water levels bring mud and dirt, in which case we must clean the trees themselves and around them. On the other hand, lower water levels also create a problem for irrigation as mud and gravel are sucked along with the water and end up hurting the trees. But usually when the water is too low, they release more water from the dam.⁶⁰

One must not think that the interaction and relationship with nature, or the river in this case, is a voluntary process whereby people choose the shape of their relationship. It is rather governed by the activities that connect one with nature, "it is not the consciousness of men that determines their being, but, on the contrary, their social being that determines their consciousness."⁶¹ Tourists, for instance, do not develop the same relationship with the place they visit as the residents of that place. Hence, the changing relationship between the Yarmouk River and the successive generations in the area has been governed by their pattern of living, and the type of activities they pursue. Today, the relationship between humans and nature cannot be defined in isolation of the new intermediary, i.e. the machine, causing alienation in the relationship with nature that has long been the site of human activity, and an unbridgeable rift. It transformed our relationship with nature into cold interactions based on commodification, exploitation, and a desire to exercise further control over nature. This cold relationship was forced on the residents as one of very few choices made available to them throughout the changes that have affected the river, including changes in political and power relations that govern the region. Although the residents are the least influential actors, they can still change the shape of the region. Their interaction with the surrounding nature reflects on their living conditions and subsequently reshapes the residents themselves. Within this space, a new relationship with the Yarmouk River has emerged, its cycles of change are complementary and interconnected. For the area residents, the Yarmouk River has changed forever and became a source of water only.

⁶⁰. Abu Omar, the village of Saham al-Kafarat. Interview conducted on March, 08, 2021.

⁶¹. The Marx-Engels Reader. Second Edition. Edited by: Robert C. Tucker. W.W. Norton & Company, Inc. New York. P.4.



Illustration no. 4 Man and the Machine/ Man is the Machine

The Yarmouk River waters are observably overexploited in agriculture. Cultivation on the banks of the river relies on water as a source for accumulating surplus value, regardless of the long-term effects of this exploitation. In this context, water exploitation becomes a problem, as the exploiting parties - despite their unequal exploitation rates, desire to divert the river's water for their own benefit irrespective of the water's future, the actual need for the products produced through this exploitation, or the need of the other parties. A farmer in one location fails to consider the need of residents for drinking water in other locations. The urge to protect personal interests defeats the urgent need of other parties for this water, not to produce surplus value, but to meet a basic need for water.

The area residents became mainly invested in guava trees, and other less common fruit trees such as mango and prune trees, with the intention of exporting this profitable commodity to the Jordanian market. Cultivation on such small properties does not support the export of goods to foreign markets. The commodified form of the Yarmouk River, be it guava or mango, often reaches the Jordanian market, but not without competition from imported produce. The Jordanian farmer emerges as an easy prey and the biggest loser in this competition. Given the official establishment's failure to provide an integrated system for agricultural economy, and the fact that local agriculture is based on small properties lacking collective organization, farmers remain at the mercy of the market as they compete with importers of produce from Egypt and elsewhere, who own the upper hand in this uncontrollable competition.

By exporting the river waters to the local market in the form of fruits, the river's value as a hub or a conflict zone has ceased to exist. Its value is now defined by the profits generated through the sale of the guava and mango fruits irrigated with its water. The river is no longer owned by the basin inhabitants only, or confined to their interaction, but has become part of the market economy. Its value is determined by the price of guava in different seasons. The profit of the guava fruit embodies the relationship between area residents and the river, and the only relationship that others may have with the Yarmouk River in light of all these changes.

5.3. Al-Mukhaiba Canal and al-Adassiyeh Diversion Dam: When peace is more destructive than war

Between the end of the 1967 Arab-Israeli War and the late 1980s, the in-

terest shifted from the Yarmouk River to implementing mega water projects. Although the development of water projects was at uneven rate between Yarmouk Basin countries, their common interest was focused on extracting groundwater and reflected a state of obsession with this water resource. The basin saw hundreds of operations to drill underground wells, on both the Syrian and Jordanian sides.⁶² However, this section will address al-Mukhaiba Well that had a special impact on the inhabitants of the Yarmouk Basin in the Jordanian part.

In his book "Peace on Yarmouk" Prof. Munther Haddadin explains that al-Mukhaiba wells were dug with funding from the United States after hydrological studies confirmed the presence of water in investable quantities. The U.S. was excited for the project because it would ease the conflict over the Yarmouk River, while the Jordanian government hoped that the wells would solve the problem of providing water to Irbid Governorate, especially as no agreement with the Syrian government had been reached until then. Haddadin's description confirms residents' accounts that the digger overturned because of high water pressure when it reached a depth of 950 meters. Three water wells were drilled and produced abundant amounts of water.⁶³

“ They dug several wells in different locations in the Sharieat. The water came out hot from nine wells and cold from three smaller wells. The water pressure was too strong that it toppled the digger as the drilling bit hit the water in al-Mukhaiba area.”⁶⁴

The three wells were several meters away from the Yarmouk River. The water was too strong and flowed towards the river, raising its level. However, since the conflict was still ongoing between Jordan and Israel, the Jordanians built a 12km canal to convey the well's water to the King Abdullah Canal.

The newly built canal changed the agricultural pattern for many farmers in that area. Al-Mukhaiba Canal was built on land expropriated from farmers who used the remainder of their land to invest in crops that utilized the canal's water. They grew new crops that required more water including fruit trees such as guava and citrus trees, which needed large amounts of water compared to the vegetables they used to grow.

However, as indicated earlier, water and the availability thereof are not only dependent on its geographical location and hydrological calculations, but also on political, social and economic factors.

⁶². For more information on the proliferation of groundwater wells in the Yarmouk Basin, see UEA (2019) *Hydropolitical Baseline of the Yarmouk Tributary of the Jordan River*. P 45-47.

⁶³. Haddadin, M. (2007) *Peace on Yarmouk: Confrontations and Negotiations, 1967-2000*, p80.

⁶⁴. Ibrahim al-Tawalbah, Saham al-Kafarat. Interview conducted on March 11, 2021.

In this context, the political factors dominate all others. Shortly after the residents and farmers who owned lands in the area saw an investment opportunity in these water discoveries, the political arrangements between countries emerged as an obstacle to that desired development. In 1994, when Jordan and Israel signed the peace treaty, the farmers' investment hopes were dashed, and they lost the money invested.

The diversion of the flow from the al-Mukhaiba wells can be understood in terms of the hydro-social cycle, as Linton and Budds describe it: "the hydrosocial cycle represents the process by which alteration or manipulation of water flows and quality affect social relations and structure, which in turn affect further alteration or manipulation of water... the control of water produces certain types of social power relations and structures of governance."⁶⁵

Several annexes were added to the 1994 Wadi Araba Agreement, including Annex II on Water Related Matters. Strangely, the study team could not locate the text of this annex on any Jordanian official website despite their intensive search. The text is available in Hebrew, English and Arabic on the Israeli Ministry of Foreign Affairs' website. Indeed, this raises questions, especially considering Jordanian citizens' scepticism towards the decisions and practices of their official establishment. This suggests that not only water but also information in this case has been wasted and poorly managed. Although Annex II does not provide for the utility of water extracted from the wells, this water was diverted to flow into the Yarmouk River, suggesting that this water was included in the calculated quantities of water flowing into the river, benefiting the Israelis mostly.⁶⁶

Apparently, the political arrangements and the conclusion of an agreement with the Israelis were too important for the Jordanian representatives to engage basin residents and farmers in consultation to decide in this regard or even contemplate the potential repercussions on them. The residents and farmers were excluded from making the decisions that would affect their life and economic activity. Water became a tool to garner political sympathy and prove goodwill to the Americans and Europeans who wanted to enforce a peace suitable for them and favourable to their interests. As such, intergovernmental peace became a given in the region, while its impact on the residents became irrelevant. Considering its effects on the population, such peace appears more hostile than conflict. It appears as if political action reverses concepts, as peace and the agreement on water destroyed the investment of farmers in that area. Their invested money fell into the Yarmouk River as trivial as a dead leaf that no one cared for.

⁶⁵. Linton and Budds (2013) The Hydrosocial Cycle. P. 175.

⁶⁶. See UEA (2019) Hydropolitical Baseline of the Yarmouk Tributary of the Jordan River, p82-85, for analysis by the Yarmouk Futures team of Annex II of the Jordanian-Israeli peace treaty, showing how its provisions lack clarity to the disadvantage of Jordan and the advantage of Israel.

To better understand the situation, we conducted interviews with farmers in the area. We interviewed Dr. Laith al-Rousan, a water expert and a landowner in the area, who described his first-hand experience and how the regional changes affected him personally. His testimony enriched the study and his invitation to tour his land property enabled us to form a comprehensive view of the repercussions of regional changes in the area.

The canal has remained in existence to this day, cutting through many agricultural lands located in several villages, including al-Mukhaiba al-Fawqa and al-Mukhaiba al-Tahta through to the village of al-Adassiyeh. The canal split the lands in two sections, which several years later became three sections due to further expropriation on these lands to open a road. Currently, the canal is in a miserable state; full of rubbish, soil and rocks. It stands witness to defeat and failure, as earlier discussed. Dr. al-Rousan described to us extensively and beautifully the state of this land before peace heavily impacted the population in this area.

“In the 1980s, they dug several wells from which water gushed out, so they dug al-Mukhaiba Canal to divert the water to the King Abdullah Canal. That was before signing the peace treaty. They wanted to send the water to the King Abdullah Canal instead of letting it trickle down to the Yarmouk River and subsequently give Israel a share of it. So, they dug the canal along 12 kilometers and expropriated lands for this purpose. The canal cut through my land, so I planted citrus trees even though it was not allowed. Being near the river, that area is frequented by wild boars, so farmers were allowed to grow onions and okra; two crops that wild boars don't approach. And zucchini in some places. When they dug the canal, I planted citrus and guava trees as an investment. I drew water from the canal in violation of the rules. But my attitude along with a group of other farmers was like: do what you will! Even if you take me to jail, I want to develop my land and plant trees. The water cut through my land, for God's sake, and you don't want me to use it so the people living in the south, for example, can drink? Just let me use it! But after signing the peace accords, they diverted the water to the Yarmouk River. And we began to share it [with the Israelis]. They started to store the water in Lake Tiberias, and give us 50 million cubic meters in the summer at the start of the irrigation season. When the water supplies stopped, my trees died, at 4 years and when they were just about to bear fruit. Citrus trees require plenty of water, and the area I planted was large at 40 dunums.”

⁶⁷. Prof. Laith al-Rousan, owner of agricultural land in the villages of al-Mukhaiba and al-Adassiyeh. Interview conducted on April, 02, 2021.

Nevertheless, farmers on the banks of the Yarmouk River face even more obstacles. In addition to the incident of al-Mukhaiba wells and canal, al-Rousan's testimony helped us understand the effects of river militarization, and the subsequent restrictions and implications for farmers. His testimony further explains those ramifications but in al-Adassiyeh village located in the same area:

I own two agricultural units in the Jordan Valley, and I have several lots in al-Mukhaiba al-Fawqa and al-Mukhaiba al-Tahta. But we face resections. In al-Adassiyeh, for example, we can't enter the area after 5:00pm. And you must obtain special permits, and you're subject to violations as well. Landowners rely on what they call Dhameen or a "middleman" who would work the land and face obstacles because the land is not under their name. The Dhameen can't access the land, and the fertilizers they need to bring into the land must meet certain requirements and have special permits. Although fertilizers have explanatory labels, the army refuses to acknowledge them and demand a permit. To bring anything into the land, we wait between 1.5 to 2 hours. I have a Dahmeen, and I must be with him on time to deliver his supplies to the land because the land is in my name, and so I'm the one who has to apply for the permission. I must be present for them to let it through. Sometimes or on certain days, if it gets late, we are forced to reapply for the permit. I understand that the public interest is more important; but every time the military personnel stationed at the tunnel changes, I have to explain everything all over again, it's irritating.⁶⁸

5.4. Al-Wehdah [unity] Dam: A Hyped Project

As mentioned earlier, the period between the late 1960s and the late 1980s witnessed a boom in mega water projects in the countries sharing the Yarmouk Basin. Every government implemented dozens of projects to provide water for various uses, including for domestic and agricultural use as well as for the use of tourist facilities that multiplied at the time.

Whereas most projects are implemented to maximize access to surface and underground water resources, dams are designed to collect the maximum amount of rainwater through most effective water harvesting techniques. However, comparison across the countries of the basin reveals striking differences. Although the sky is the same, the Governments are different.

⁶⁸. Prof. Laith al-Rousan, owner of agricultural land in the villages of al-Mukhaiba and al-Adassiyeh. Interview conducted on April, 02, 2021.

While both sides have exploited groundwater extensively, dams tell a whole different story. The basin boasts a staggering number of 40 dams of varying sizes, of which 32 are located in Syria, 3 in Jordan in addition to the Syrian-Jordanian al-Wehdah Dam, and 4 dams that Israel constructed in the occupied Syrian Golan Heights.⁶⁹

The difference in the number of dams can be attributed to the Syrian interest in and view of agriculture as one economic pillar of the Syrian society, of course with keeping in mind the fact that most of the basin is in Syria. The course of water is determined and decided according to the economic-political centre of power, which in the Syrian case relied on the middle and lower class of farmers. In the 1970s to the mid-1990s, the Syrian regime implemented intensive agricultural projects in support of this segment of the population.⁷⁰ The satisfaction of this segment and the amount of support it received in the form of water projects were conducive to some sort of agricultural renaissance that has characterized the Syrian society.

⁶⁹. UEA (2019) *Hydropolitical Baseline of the Yarmouk Tributary of the Jordan River*. P 41.

⁷⁰. For more on the Syrian regime and its support for the middle and lower class of farmers, see: Hanna Batatu (1999) *Syria's Peasantry, the Descendants of Its Lesser Rural Notables, and Their Politics*. Princeton University Press.



Illustration no. 5 Women of the Yarmouk estranged from their water sources

According to Swyngedouw, "the relationship between autocratic power and hydrological systems, it has become clear that social power becomes articulated through socio-technical systems."⁷¹ Hence, dams and the other water projects explain the formation and foundation of the Syrian state. Although one may argue that these dams have detrimental effects on the hydrological cycle in the basin as per numerous studies, this was not raised as an issue during our interviews.

For the purposes of our research, we were more concerned with the impact of al-Wehdah Dam which took decades of negotiations between the Jordanian and the Syrian governments, and with the relationship between the dam and area residents. Nonetheless, the interviews offered a wider outlook on the different views held by the residents on both sides vis-à-vis these projects and facilities.

Whereas residents from the Syrian side (now residing in Jordan) expressed a degree of satisfaction with these projects and considered them crucial to the agricultural development in Syria in general, and its side of the basin in particular, their Jordanian counterparts viewed al-Wehdah Dam with disappointment, feeling that they were somehow deceived. These testimonies are based on interviews we conducted in the Jordanian village of al-Rafid, on the Syrian-Jordanian border, parts of which the Jordanian state expropriated to construct the dam.

The agreement that Jordan and Syria reached in the late 1980s best signifies the political value of water. For decades, successive Syrian and Jordanian governments negotiated to reach an agreement on the development and utilization of the Yarmouk River. However, the negotiations would either halt or face complications not owing to issues related to the river per se, but rather to intertwined political issues that directly reflected on the river and its waters. However, water remained a factor in political calculations; Although the agreement was signed in 1987, the operation of al-Wehdah Dam only begun 20 years later in 2004.

Al-Wehdah Dam poses several issues worth exploring. To begin with, its name, al-Wehdah [unity] Dam, is not reflective of reality. It is neither a symbol of unity between the two countries nor in the consciousness of the local population in the region. The dam has not achieved its desired goal, evidenced by the fact that water supply flowing into the dam since the beginning of its construction in 2004 has not come close to filling its estimated storage.⁷² Several reasons are to blame, including the unequal utilization of water by the Jordanian and Syrian sides, which their agreement further entrenched, as it did not specify the quantities of groundwater that can be extracted annually on both sides.

⁷¹. Swyngedouw, E (2009) The Political Economy and Political Ecology of the Hydro-Social Cycle. P. 59

⁷². UEA (2019) Hydropolitical Baseline of the Yarmouk Tributary of the Jordan River P 85

In other words, the agreement overlooked the hydrological link between groundwater and surface water,⁷³ rendering the quest to fill al-Wehdah Dam questionable or indeed unrealistic.

Meanwhile, al-Wehdah Dam was a source of disappointment for the local population in the Jordanian section of the basin since the state dispossessed residents of their lands to build the dam. The Jordanian government's representatives promised that the dam would solve many water problems in the area and that the residents would have more access to water for domestic and agricultural use. Nevertheless, these promises and dreams have not come true for the "true scarcity does not reside in the physical absence of water in most cases, but in the lack of monetary resources and political and economic clout."⁷⁴

The residents are fully aware of this situation and question the trajectory and measures taken by the Jordanian state to secure more water in a country considered one of poorest in terms of water resources. In support of their arguments, they draw comparisons with Syria, their natural extension which shares similar terrain. With near consensus on the fact that Jordan is more in need for water, they ask critically: why doesn't the Jordanian state build dams like Syria? In al-Rafid village, meeting Ms. Wedad Obeidat, president of the Al-Rafid Women's Association, the first women's agricultural association in Jordan was a great opportunity to depart with the stereotypical male monopoly of the public sphere and hear from a woman who believes in ending this monopoly, and promotes women's involvement in the production process, from which they were excluded. Ms. Obeidat combines traditional agricultural knowledge and access to agricultural technologies that she believes should be integrated into existing agricultural practices in the region. When asked about al-Wehdah Dam and its implications for women farmers, since part of the dam was built on lands of al-Rafid village expropriated by the state. She provided the following answer:

We say Jordan is one of the world's poorest countries in water resources. We complain about the lack of water even here in the Yarmouk Basin. Well, the Yarmouk River was a source of water to irrigate riverside lands by digging ditches only and without using water pumps. I saw this with my own eyes at my relatives'. We have a piece of land there and we know how to farm. When the agreements were signed, and Syria built several dams on the sources of the Yarmouk River, part of the river was blocked and the remaining part which feeds the al-Wehdah Dam didn't have water. Okay, where does the water go? They took the farmers' lands with dirt cheap compensation. They paid the farmers a small amount for every dunum of irrigated land. Is this justice? Of course, they took the land to build al-Wehdah Dam.-

⁷³. UEA (2019) Hydropolitical Baseline of the Yarmouk Tributary of the Jordan River P 85-90

⁷⁴. Swyngedouw, E. (2009) The Political Economy and Political Ecology of the Hydro-Social Cycle. P. 58

They hyped the project and overpromised, but we got nothing except mosquitos. They expropriated all of al-Rafid lands on the river, thousands of dunums. Okey, where does the water of al-Wehdah Dam go? Name one farmer in our area who uses water from the dam. Actually, those who still own land in that area are denied access to their lands by the army. If you visit the Jordanian-Syrian border, you'll see that the war-stricken Syrian side is lush green, while our side is a desert, why? I'd like to have an answer for this question. Al-Wehdah Dam has water, but not a single farmer can take a spoonful of it.⁷⁵

Obeidat's view not only reflects how the local population sees the dam, but also offers a wider perspective on the fate of local initiatives, which despite their limited number face great potential for failure. It is as if nature, politics and geography were robbing the inhabitants of the Jordanian part of the basin of their ability to take action and make change. This outlook is contrasted with the situation on the Syrian side. Despite lacking the tools, the people have knowledge based on experience. Obeidat said "we have land on the river, and we know," suggesting that the arguments presented by the government cannot change the solid knowledge of the local people. Obeidat's understanding falls completely in line with Swyngedouw's argument: "In fact, uneven access to or control over water is invariably the outcome of combined geographical conditions, technical choices and politico-legal arrangements and water inequalities have to be understood increasingly as the outcome of the mutually constituted interplay between these three factors."⁷⁶

Obeidat's answers were not only criticism, but rather included several practical suggestions. This shows that the area residents are not passive critics, and had they been engaged in planning and decision-making, the situation would have been different. Today, many studies emphasize the importance of integrating local populations into planning and project design to utilize their rich firsthand experiences. When asked if she thought it was possible to build dams in the area, she replied without hesitation that it was not only possible, but also easy.

In every valley you can build a dam. But the policy here dictates that the farmer must keep complaining, sell his land and move on. They talk nonstop about agriculture, but it's only lip service... I believe that the dam was supposed to support famers to improve their produce, the people hoped to have a dam and grow irrigated crops. But the situation did not turn out as such, and the dam became a burden for the people who hoped for projects, development, and agricultural advancement. The dam did nothing of this.⁷⁷

⁷⁵. Wedad Obeidat, al-Rafid Village. Interview conducted on March, 27, 2021.

⁷⁶. Swyngedouw, E (2009) The Political Economy and Political Ecology of the Hydro-Social Cycle. P. 58.

⁷⁷. Wedad Obeidat, al-Rafid Village. Interview conducted on March, 27, 2021.

Meanwhile, the scattered dams on the Syrian side of the basin show that scientific hydrological classification remain deficient to account for the current reality. The Yarmouk Basin is the ultimate example of a drainage basin shared by countries with different economic and political orientations. Despite the similar rainfall rates, the handling of rainwater on the Jordanian and Syrian sides of the Yarmouk Basin is completely different. Part of this is due to the topography and rainfall patterns and different water use patterns, but the key differences lie in state measures. While the dams on the Syrian side reflect the state's attempt to achieve the maximum rates of rainwater harvesting, the practices of the Jordanian state appear modest, and do not reflect a serious effort to improve its water situation.

This fact is confirmed by Um Loay, a Syrian woman from the village of Nawa who left for Jordan in 2014 after the outbreak of the Syrian crisis. We interviewed Um Loay in the village of al-Rafid. She told us that there was no comparison between the water situation in Syria and the current situation in Jordan. This is the general impression expressed by all Syrians who have moved to live in Jordan.

The main difference between al-Rafid and Nawa is the availability of water only. The land is fertile and not exhausted because it is not planted often, so it could give you multiples. I mean, if I wanted to grow potatoes, the land is excellent, but I'd need water. Take this valley, for example, if you only build a dam here to collect rainwater, you'll be able to irrigate vast swaths of land. We didn't spend on diesel or gasoline because the water got to us effortlessly through the pressure network. We'd just connect the hose and irrigate. We didn't pay for anything or electricity, and didn't have to install water pumps or anything. To plant, all you needed to do was connect a hose all the way to your land and plant.⁷⁸

The people are well aware of the value of dams for agriculture. In our interviews with farmers from both sides of the dam/river/border, Jordanian farmers expressed their need for dams, while farmers in Syria took their dams for granted. The difference between the approaches of both regimes becomes obvious. In Jordan, the government has not sought to rely on agriculture and subsequently has not developed the infrastructure to support the agricultural sector. The dams were not part of the infrastructure that Jordan sought to build and develop. In contrast, dams represent one of the pillars of the development process in Syria. The presence of dams in Syrian drama underlines the status of dams in the collective Syrian psyche. It is a vital topic open for discussion and critique⁷⁹ as a major source of water nationwide.

⁷⁸. Um Loay, a native of the Syrian village of Nawa and a resident of al-Rafid village since 2014. Interview conducted on March, 27&28, 2021.

⁷⁹. Omar Amiralay's documentary, A Flood in Baath Country, provides a critical view of the dam constructed on the Euphrates River. It is arguably one of the best critical and artistic productions in this regard.

The Syrians are ahead of us in agriculture because the state is geared towards reliance on agriculture and banning imports. I mean, the Syrians have embraced agriculture, but we, the Jordanians, have a fetish for the 'degree,' to hang that certificate on the wall, even if it meant that the farmer sells his land in order to send his son or daughter to college. Syria has always been ahead in agriculture. When we were still growing wheat, lentils and vetch, the Syrians were growing citrus and other fruits. Because they believe that necessity is the mother of invention, they took interest in farming.⁸⁰

It is important to emphasize that the construction of dams is one aspect of a larger context. As mentioned earlier, the fundamental difference between the Jordanian and Syrian sections of the basin is attributable to the fact that the Syrian state has adopted agricultural development, while Jordan has not. The fact that Jordan has close ties with European countries and the United States, and is their primary ally in the region, makes one assume that Jordan could capitalize on this relationship to import water solutions, but this did not happen. Meanwhile, the Syrian state has harnessed its capabilities to provide water for its agricultural sector.

The Syrian dams are part of a broader development process. In her interview, Um Loay explained how dams are used for irrigation and repeatedly mentioned the term "pressure network," a network of pipes installed to convey dam water to agricultural lands. The network is designed to be easily used by farmers. Every agricultural zone is allocated certain days to receive water. The farmers are not charged for the use of this irrigation system.

The pressure network is a network extending from a large dam built by the state with a large concrete wall. [The state] installs pumps and networks. Every two networks are 5 dunums apart. The lines are buried underground. A water pump is installed every 200 meters with outlets. So, I just connect a line and irrigate the land. The network is pressurized, so I don't need to install a water pump or pay for diesel. The pressure is strong. Every four lines are allocated four days. You bring your 4-inch hose and valve and irrigate your land, be it 10, 20, or 50 dunums. You have access to water four days a week, day and night. There is no meter, and the water is free. The water is rainwater sent by God, and the state installed lines for us to water the land. This land was dead, and the state revived it. There is more than one large dam in the area around us. Every area has one dam or more. The dams are not too large, but enough for the people to grow things. In every valley, they pour a concrete wall and then there will be water for people to use and grow things. This prompts young people to work instead of having high unemployment rates.⁸¹

⁸⁰. Wedad Obeidat, al-Rafid Village. Interview conducted on March, 27, 2021.

⁸¹. Um Loay, a native of the Syrian village of Nawa and a resident of al-Rafid village since 2014. Interview conducted on March, 27&28, 2021.

Um Loay's account projects a surreal scene for the Jordanian farmer, who cannot fathom the idea of having water to irrigate large areas of land. To illustrate, we interviewed a Jordanian farmer from al-Ramtha who rents 200 dunams annually to plant potatoes. To irrigate his crop, he installed pipelines stretching for several kilometres to an underground well that sells water to farmers. This farmer pays up to 30,000 Jordanian dinars, approximately \$45,000, annually for water and fuel. A study on groundwater concluded that the cost of water represents a large part of capital invested in agricultural projects, as water extraction and conveyance to farms require large amounts of fuel that account for most of this cost.⁸²

⁸². Al Naber, M., Molle, F. (2017) Water and sand: Is groundwater-based farming in Jordan's desert sustainable?. Groundwater for Sustainable Development. Published by Elsevier B.V.

CONCLUSION

Initially, the study set out to answer two questions: How have these communities viewed water? What determined their relationship with water? However, the wealth and complexities of details prompted the team to prioritize the main objective: to understand the relationship between the local communities in the Yarmouk Basin with the Yarmouk River in an effort to understand their broader relationship with water and nature. This study sought primarily to tell the story of the Yarmouk River through the testimonies of local communities that have witnessed the river's transformations and explain how these changes affected the relationship between and reproduced the local population and the river.

The testimonies collected in this study reveal the local communities' understanding of the changes that affected their region. Water and the Yarmouk River were particularly affected by the changes in the region between the mid-1800s and the early 1900s. During this period, the Yarmouk River was defined and introduced as a river after it was universally viewed as an inseparable part and a tributary of the Jordan River as evidenced by the fact that both rivers were referred to as the "Shariat." The separation between the two rivers and assigning an independent identity and character to the Yarmouk River was a result of colonial projects in the region and reflects the conceptions of colonial powers, which partitioned nature and local communities to advance their projects and objectives.

Under colonial control, the Yarmouk River was reproduced to serve as a barrier and borderline instead of its traditional role as a hub and connecting point between several regions. The remains of bridges connecting its banks can still be seen until this day. However, colonial interests and aspirations reproduced the Yarmouk River as a barrier to separate the areas controlled by the colonial powers. As they partitioned the region, the British and the French subjugated nature to achieve their mission. The partitioning also affected the region's natural resources that had long been considered by the local communities as one shared unit. This division dissected the region without consultation with its residents or even consideration to their interests.

The Yarmouk River and the relationship between the river and the local communities reveal the hostility of these colonial projects towards nature and the population. The testimonies documented in this study show how the residents of the region perceive the changes that have alienated

them from their surroundings. Although the colonial powers reached a settlement after decades of negotiations that included the division of water resources between those powers and transforming the Yarmouk River into a borderline, water re-emerged as a subject of conflict with the declaration of the establishment of the State of Israel. Since its inception, the nascent state has made strenuous attempts to control water resources, knowing that controlling such resources would give it an advantage in any future settlement with neighbouring countries. Israel also recognized that the Zionist project would not be completed without establishing control over water.

The Yarmouk River has not been static during these 50 years, but rather witnessed major changes, leading to considerable water disparities in the region. On the one hand, Syria and Jordan have developed an obsession with groundwater since the 1980s, digging thousands of wells on both sides of the basin. On the other hand, Syria implemented a development project heavily reliant on agriculture and supporting small and medium Syrian farmers. This policy led to the construction of many dams of different sizes, from which irrigation networks were extended to deliver water to agricultural lands. As a result, the Yarmouk River could no longer provide the amounts of water it provided in the 1950s. The construction of dams and groundwater wells helps us understand the relations between states, and their discrepant relations of power and control that they exert on local populations in direct and indirect ways. It also leads us to understand the internal dynamics that governed the course of water within these states, as well as the distribution of power relations between the different communities/classes within these countries because of the economic policies that were adopted and implemented. Syria's policy of agricultural development embraced many technical options to provide and distribute water and has benefited a large segment of farmers. The situation is different in Jordan where irrigated agriculture took the opposite trajectory, granting growing control to major investors over irrigated agriculture, indicating that Jordan's policy was geared towards accommodating larger capital that can mobilize greater resources to invest in irrigated agriculture.

The economic policies adopted in both countries over the past decades led to the reconfiguration of their socio-economic structures, which in turn changed the natural conditions that existed in the Yarmouk basin. Thousands of groundwater wells and dozens of dams were built causing wide disparities in the amounts of water available between the 1950s when the first Syrian-Jordanian water agreement was signed and 2004 when the construction of the dam commenced. Additionally, Israel introduced major changes to water resources in the Jordan River Basin, especially the diversion of the Jordan River's water to the National Water Carrier of Israel. Consequently, the entire hydrological landscape has changed considerably in comparison with the situation up until the mid-1900s.

What conclusions can we draw from the study of the Yarmouk River? How do we benefit from understanding the relationship between the local communities and the Yarmouk River? Many studies on the issue of water address the concept of water justice, sustainability of water resources, and/or the environmental imbalances resulting from water management and exploitation. Researchers and those interested in the subject can find hundreds of research papers issued by various academic institutions, non-governmental organizations, international agencies, and governmental institutions. However, most of these studies address water in isolation of its historical and material context that explains the status quo. The justification for this isolation is based on the argument that such studies are specialized in the subject of water, the environment, or some old or new academic subject and that the specialization aspect confines researchers to the scope of their study and compels them to avoid the general or comprehensive view.

Therefore, the study and understanding of water is only possible from a historical and material perspective based on the study of water as part of nature and the fact that nature is reshaped according to the capitalist production structure founded on the quest to realize the maximum surplus value and profit irrespective of the implications that may ensue and affect the future of humans and nature. Water is considered purely as a resource by which to achieve maximum surplus value. The exploitation of water in the Yarmouk Basin, especially the excessive use of groundwater, stand as a prime example of this trend of profit accumulation. Therefore, solutions and suggestions that fail to address water as a part of nature and organically link changes in water with changes in human communities will not help us understand the world and provide meaningful and comprehensive solutions to reduce the impact of inevitable future disasters.



December 2021



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