WATER, GEOPOLITICS, AND STATE BUILDING:
THE CASE OF ISRAEL

Nadav Morag

Middle Eastern Studies, Vol. 37, No. 3 (July 2001)

The need to control and disperse water resources has been a central facet in the development of the territorial, demographic, and economic bases of the State of Israel. During the pre-state period and early years of Israel’s existence, two major mutually interdependent processes were at work that would have critical impact – and continue to have an impact – Israel’s future.

The first process was geopolitical, and had to do with the need to provide security for the fledgling state from external threats. This included not only threats to the Israel’s existence, but also threats to the economic well being of its population and its capacity for future growth through the absorption of large segments of the Jewish Diaspora. Water issues were central to Israel’s geopolitical considerations, and the earlier British and Zionist desire to control the maximum number of possible water sources, ultimately resulted in the demarcation of what would, in 1948, become Israel’s northern and northeastern borders. The northeastern border would later be revised in 1967 in part as a result of threats to Israel’s water supply. Hence, the need to secure water resources played a crucial role in Israel’s geopolitical calculus with respect to its border with Syria.

The second process was that of state and society building. Here too, water was critical since the absorption of Jewish immigration and the creation of a Jewish demographic presence in as much of Palestine as possible was a necessary prerequisite to achieving statehood. And once the state came into being it became necessary to absorb large numbers of immigrants from Europe and the Middle East and to strengthen Israel’s demographic presence in the arid southern Negev region. This meant that water would have to be transported southwards in order to make large-scale settlement in that part of the country a reality. Water was also needed to develop Israel’s agricultural enterprises which, ideologically and economically, were of crucial importance in the pre-state and early-state period (due in part to the lack of a significant industrial base). Hence, water played a central role in the economic and demographic development of Israel and on matters relating to its borders with some of its neighbors. Frequently, geopolitical and state-building elements overlapped when it came to the water issue. Hence, spreading the population and the partial de-urbanization of Israel in the country’s early years were seen as necessary both for geopolitical and state-building reasons and were dependent to a great extent on accessibility to water. The continued need to manage and safeguard water resources, as well as the growing need for additional water, are likely to color events in Israel and its immediate region for the foreseeable future and have an important impact, as they have had thus far, on future Israeli-Syrian peace negotiations.
In order to understand the significance of the water issue on the development of Israel and on its external relations with neighboring states, we must look at the following issues:

- the geographic and topographic realities of the Jordan River basin;
- the current scope of water use with respect to the Jordan River system;
- the role of these waters in the development of the Israeli state from a demographic and geopolitical perspective;
- the history of the geopolitical dispute over control of the headwaters of the Jordan River; and
- The issue of water as a bone of contention between Israel and Syria in the context of a future peace settlement.

The Geographic and Topographic Environment

Israel’s pre-1967 eastern borders are unique in the Middle East in that they are located more or less along water lines. This is rare in the region since the other major water systems such as the Tigris and Euphrates or the Nile do not serve as borders between states (with the exception of the Shatt al-Arab). This is due to the fact that borders in the Middle East were drawn up at a relatively late stage (most after World War I) at a time when historical experience showed that water borders were highly problematic. [i] While these borders lay along water lines, they did not include within them the many of the sources of these streams and hence, the Jordan River system as a whole crosses four state boundaries: Lebanon, Syria, Israel (including the West Bank), and Jordan. The fact these states were also belligerents ensured that water would become an important issue in the conflict between Israel and the three Arab states (as well as between Syria and Jordan).

The Jordan River is fed by four major tributaries, three of which - the Dan, Hasbani, and Banias - coalesce north of Lake Tiberias (Kinneret) and one - the Yarmouk - which joins the Jordan River south of the Lake. The Hasbani, with an annual flow of 157 million cubic meters (mcm) originates on the Lebanese side of the Hermon mountain range. The Banias, which also has an annual flow of 157 mcm, originates on the Golan side of the Hermon range which, prior to 1967, was held by Syria. The Dan, with an annual flow of 258 mcm, emanates from springs within Israel’s pre-1967 borders and the waters most likely have their origin from deep within the Hermon range. Finally, the Yarmouk, with an annual flow of 400-500 mcm, originates in the Hauran Plain in Syria and then flows along the Syrian-Jordanian border, the border between the Golan Heights and Jordan, and along pre-1967 Israeli territory at Hamat Gader before joining the Jordan River some 10 kilometers south of Lake Tiberias. The Jordan River then continues to flow, in a highly meandering fashion to its final destination in the Dead Sea 400 meters below sea level. The waters that originate on the Hermon thus travel from a height of 2,200 meters above sea level to a depth of 400 meters below sea level. All this, within the scope of a distance, as the crow flies, of only some 175 kilometers. Biblical stories
notwithstanding, the entire Jordan River system is small draining a total area of some 18,300 square kilometers with a total natural discharge of around 1,500 mcm per annum. This means that the system holds fifty times less water than the Rhine, sixty-five times less water than the Nile, and 400 times less water than the Mississippi. This relatively meager water source, along with Lake Tiberias (which is fed by the upper Jordan and winter rains), provides some thirty-seven percent of the overall available water that Israel can harness (the largest single source is groundwater which provides some fifty-eight percent of Israel’s overall supply, the remaining five percent being comprised of floodwater run-offs).

Water Use in Israel

Israel’s environment is largely semi-arid ranging from the relatively green north to the Judean and Negev deserts in the south. Annual rainfall ranges from nearly 1,000 millimeters in the north to 31 millimeters in the south and is concentrated during a four-month rainy season. Only one third of Israel’s total rainfall is usable since roughly sixty percent of it evaporates and five percent flows into the sea or is too difficult to retrieve. The remaining rainfall seeps into underground aquifers on the West Bank or in the coastal strip or contributes to the Jordan River in the form of aquifers, melting snow on the Hermon, or seasonal water runoffs into the river. The overall water available annually, some 1,650 mcm, is being exploited almost completely today (Israel utilizes over 95 percent of its available water) meaning that as Israel’s population grows and it must deal with growing Palestinian and Jordanian populations that are competing for largely the same water sources including the Jordan River system, the water problem is going to become increasingly acute. It is estimated that by the turn of the century, Israel will require 1,200 mcm of water per year for its agricultural sector, 630 mcm for its municipal and household needs, and 130 mcm for its industries (in addition to some 150 mcm that will be needed by the West Bank Jewish and Arab populations).

In the past, agriculture has accounted for 75-80 percent of the total water consumption, domestic use for 15-18 percent, and industry for 4-7 percent. Hence, agriculture has always been the driving force behind the need to secure water resources. While the agricultural sector in Israel has always been relatively small (accounting, for example, for only thirteen percent of total employment), the achievement of self-sufficiency in agriculture was considered crucial not only for ideological reasons, but also because Israel’s leaders feared that the military situation might lead to a partial Arab blockade of the country that could deny Israel access to vital foodstuffs. The rural sector was also seen, in the first years of the existence of the state, as the ideal setting in which to absorb the large number of immigrants arriving in Israel and inculcating them with the agrarian values of the early Zionists. Since the agricultural sector still comprises an important and powerful interest group in Israel’s society and its political system, this will ensure that Israel will continue to give its water needs a very high priority. This is especially true in view of the fact that Israel’s population - which is expected to double
by the year 2030 - will require more irrigated areas and a more modern (and therefore more water and capital intensive) agricultural sector.

While agricultural needs continue to serve as a major factor in the Israeli water calculus, there is a growing demand for water for personal use (i.e., drinking, bathing, etc.) and industrial use which is a reflection both of rising standards of living in Israel and a burgeoning population. The Israeli Water Authority (Mekorot) estimates that by the year 2010, eighty percent of the water yield of the Israeli National Water Carrier (NWC) will be allocated for personal use. In 1964, during the NWC’s first year of operation, only twenty percent of the water passing through the system was destined for Israeli homes. [v] The industrial use of water is similarly growing at a significant pace. Despite the best efforts of Israel’s social planners, the overwhelming majority of Israel’s industry and, more importantly, its population, live in the coastal strip and Galilee regions (including the greater metropolitan Tel Aviv area). In fact, 92 percent of Israel’s residents live in this region which covers only forty percent of the state’s land. As a result, the central and northern districts of the country currently constitute one of the most densely populated regions of the world. [vi]

The Israeli construction boom of the 1990s, coupled with the massive population increase of immigrants from the former Soviet Union, has resulted in tremendous demands on local water resources such as subterranean aquifers in Israel’s coastal strip. Not only are the aquifers being depleted faster than they can be recharged by rainwater, but the covering of the soil with concrete and buildings is significantly reducing the open surface area available for rainwater penetration hence ensuring reduced aquifer recharging and the run-off of these waters to the sea. Studies undertaken by Israel’s water authority suggest that for every square kilometer in the coastal strip covered by cement or asphalt, there is a reduction of 114,000 cubic meters per year of water in the coastal groundwater reservoirs. [vii] This suggests that Israel’s indigenous water resources, even were they not to be eroded by development and urbanization, will be wholly inadequate to serve the needs of the country’s growing population and that other measures will have to be instituted on a large scale in order to maintain adequate supplies of water.

Water and State-Building in Israel

From the Zionist perspective, particularly that of the dominant socialist Labor Movement stream of Zionism, “returning to the land” provided the means by which two all-important goals could be accomplished at the same time: 1) settling and reclaiming the soil of Palestine and thus establishing the physical basis for an independent Jewish state, and 2) creating an egalitarian society of agricultural workers devoid of the inherent inequality and class barriers of European societies. Settlement and agriculture thus became the focus of the Zionist enterprise. Since the hills of Palestine were not as well suited to agriculture as its valleys, the locus of Zionist settlement became the valleys. Consequently, the new Jewish culture that was being fashioned took as its topographic
and landscape “cues” not the mountains of the Biblical Jews but rather the Huleh, Jezreel and Jordan Valleys (and later the Negev) and popular culture was imbued with images of green fields and agricultural workers with a hoe in one hand and a rifle in the other. [viii]

After some relatively unsuccessful attempts at settlement during the last two decades of the nineteenth century, it became obvious that in order to sustain a large and permanent Jewish population in Palestine, the country would have to be developed so that Jews coming from Europe, even with their heady idealism, would be able to enjoy a minimal standard of living of the kind that few of the early settlers had. This meant that increasing amounts of land would have to be utilized for agriculture in order to feed what the Zionists hoped would be a burgeoning Jewish population and this meant that Palestine needed water. Though overall rainfall was plentiful (Haifa gets about as much rain annually as London does), it was concentrated in only a few winter months. Consequently, Palestine was dependent on the Jordan River system and subterranean aquifers for its agricultural needs. Zionist nation building and state-building therefore were thus closely interwoven from the outset with the water issue.

Without access to water, there would be no large-scale agriculture and thus no economic basis for absorbing the world’s Jews in Palestine. And without settlement, the Jews would have no hope of changing the demographic balance in Palestine in their favor and hence laying the basis for a claim to sovereignty over Palestine. Water therefore was not regarded merely as another economic resource, but rather as an important vehicle for creating a new Jewish society based on kibbutzim and other forms of communal agricultural settlements. The selection of one water project over the other was not determined by economic utility, but rather on the basis of its fitting within the overall ideological worldview of the Zionists. [ix] In keeping with this view, irrigating the deserts of southern Palestine also became a national goal as part of the overall Zionist ethos of “making the desert bloom” and thus strengthening Jewish claims to Palestine on the basis of the fact that it was the Jews who were developing the country. Implicit in this approach was the message that the local Arab inhabitants could not be trusted to properly develop Palestine and hence had less legitimacy in claiming it as theirs.

In order to settle large numbers of Jews in Palestine and, equally importantly, to spread the Jewish population throughout the country, water had to be provided for irrigation. Prior to the arrival of the waves of Zionist immigration in the late nineteenth and early twentieth centuries, the small Jewish population of Palestine had resided primarily in urban locales and engaged in religious scholarship or were small merchants. Hence, the core of Jewish society in pre-Zionist Palestine (usually referred to as the Old Yishuv) was based primarily in central Palestine in the holy cities of Jerusalem and Hebron (although there were important Jewish communities in Tiberias and Safed in the north as well). The initial Zionist settlements, in keeping with their ideology, were agricultural and located in the northern part of Palestine on or near Lake Tiberias, the upper Jordan River (Huleh valley), and the Jezreel Valley. This area was chosen as the core of Zionist settlement because of its plentiful water supply.
Virtually all modern societies developed from urban core regions and expanded into peripheral rural areas and hence the urban core (London, Paris, Berlin, etc.) and the elites located therein set the social, cultural, economic, and political tone for the entire society. The periphery is dominated by the core and has little control over its own fate often treated as a kind of colony administered by officials more interested in the needs of the geographically remote core than in the desires of the periphery. In most cases, the core region also represents the germinal (or historic) core in which the combination of people and territory creates a highly powerful ideological and social locus that fashions the nation-building and state-building ideas upon which the subsequent state is constructed.

The Zionists in Palestine, in establishing a new Jewish society (the new Yishuv) circumvented the urban core of the existing Jewish society in Palestine - based on a traditional lifestyle and religious values - and established a “peripheral core” - based on Jewish nationalism and socialist ideals - in the agricultural settlements of the north. As Saul Cohen suggests:

Both myth and geopolitical reality directed attention northward. There the pioneers came to search for a landscape with some resemblance to the open, humid, grassy southern and forested western Russian milieu, rejecting the noise and squalor of Arab Jaffa and the paternalism that characterized their relation with the Jewish farm owners in the coastal Jewish colonies. Geopolitical considerations also strongly influenced this pull to the north, because the north was the source for most of Palestine’s water resources.

It was from this northern historic core that the immigrants of the second (1904-1914) and the third (1919-1923) waves of immigration (Aliyot) created the national myths and ethos, articulated the ideology, and shaped the nature of the Yishuv and its successor, the State of Israel. The values that these settlers created would later influence the allocation of resources, and the foreign and defense policies of the new state. This was true despite the fact that by the 1930s, sixty percent of the Jewish population in Mandatory Palestine lived in the three major cities: Tel Aviv, Jerusalem, and Haifa making the Yishuv much more of an urban than a rural entity.

As the New Yishuv grew, it became necessary to branch out from the northern and central areas of Palestine and increase settlement in the south, not because it was necessary to increase Palestine’s absorptive capacity - since there was still enough land available in the north for expansion - but rather due to changing geopolitical realities and the internal political situation within Palestine. By the mid-1930s, Britain was facing a rise of pro-German sentiment among its Arab subjects in the region, which was exacerbated by what was perceived as British support for the Zionists in their colonization of Palestine. To make matters worse, from the British perspective, Arab rioting erupted in 1936 and was to plunge Palestine into political and social turmoil until its suppression by the British in 1939. This violence and instability enhanced Arab
nationalist feelings and demands. Keeping in mind Arab nationalist sensitivities, the British government decided in 1937 to sponsor a commission headed by Lord Peel to study the Palestine problem and formulate policy recommendations. The Peel Commission report recommended solving the Palestine problem through the partition of Palestine into a Jewish and Arab state as well as a British enclave controlling Jerusalem with an outlet to the sea at Jaffa. The Jewish state would be restricted to those areas of Palestine where Jews had settled in significant numbers and would include the Galilee, the northern valleys, and the coastal strip. The Samarian hills, much of Judea, and the entire Negev would remain in Arab hands. While historical evidence suggests that the British government had decided not to act on the Peel Commission’s recommendations even as the commission was gathering information [xiv], the report did serve to mobilize the Zionist leadership in Palestine into asserting Jewish territorial demands in the Negev so as to have it included in the Jewish state in any possible future partition plans. Hence, the Negev, like the Arab-dominated Galilee, became active areas of Jewish settlement. Despite this policy, the Negev - with only thirty Jewish settlements and a population of some 3,000 Jews - still did not have a significant Jewish presence when Israel declared its independence in May 1948.

The Negev had known periods of sustained relatively large populations due to its importance as a crossroads between the Levant and Africa. During the Roman and Byzantine periods, the population numbered in the tens of thousands with a series of reservoirs and highly advanced - for the time - irrigation systems. [xv] These systems enabled the population to survive at what was an acceptable standard of living for the time, but far inferior to what is considered today to be a minimal standard of living in a developed society. From the seventh century onward, with the building of the Caliphate Empire, the infrastructure of the region collapsed and the Negev remained desolate and unnoticed until the British conquest of Palestine in 1917. The British viewed the Negev as important for bolstering the defenses of the Suez Canal but it was the Zionists who first tried to implement an active settlement policy there.

In order to open up the Negev to modern settlement - particularly agricultural settlement - the local wells and springs would be insufficient and hence it would be necessary to bring in water from outside the region and this meant the building of a system of canals to bring the water from northern Palestine southward. A number of plans had been advanced to achieve this goal. The idea of bringing water from the upper Jordan River to the central and southern portions of Palestine was not new. The early Zionist leaders correctly perceived the importance of moving these waters southwards in order to ensure Jewish settlement throughout Palestine. In his Altneuland, published in 1902, Theodore Herzl envisioned the use of water resources in the north for irrigating the south and the establishment of a canal to transfer waters to the Dead Sea to replenish those diverted for irrigation purposes. The differences in altitude between the Mediterranean and the lower Jordan Valley could be used, according to Herzl, to create hydroelectric power. The American land conservation expert, Walter Clay Lowdermilk was the first to develop a comprehensive plan for transferring water from the north to the south. In 1939, he proposed establishing a Jordan Valley Authority program - similar to the American Tennessee Valley Authority (TVA) - that would allow extensive irrigation
of the Negev through the transfer of Jordan River water to the south and the replenishment of the Dead Sea via a canal that would bring Mediterranean water to the lower Jordan River - while at the same time generating electricity. [xvi] Prior to the establishment of the state, the Jewish Agency invited a former senior engineer at the TVA, James B. Hayes, to prepare a more explicit plan based on Lowdermilk’s for utilizing water resources statewide. The Hayes plan not only called for a rerouting of the upper Jordan waters to the Negev and the creation of a “Med-Dead” canal, but also the transfer of waters from the Yarmouk and from the Hasbani and Litani rivers in Lebanon to Lake Tiberias in order to prevent its salinization as a result of the rerouting of the upper Jordan. This plan - except for the “Med-Dead” canal and the rerouting of the Yarmouk, Hasbani, and Litani - was eventually realized in the form of the National Water Carrier.

The United Nations partition plan of November 1947 called for the inclusion of the most of the Negev within the Jewish state much to the chagrin of both the British and the Arabs who viewed it as a natural bridge between the eastern and western parts of the Arab world. With the successful, from the Israeli perspective, conclusion of the 1948-49 Israeli War of Independence, the fledgling state had to deal with two extremely pressing issues. The first was the securing of firm and unquestioned Israeli sovereignty and control over all the territory in Israeli hands, both the territory given to it by the UN decision and additional territories such as the western Galilee, the Little Triangle region, the Jerusalem Corridor, and parts of the northern Negev - all areas that had been allocated to the stillborn Palestinian Arab state. That Israeli sovereignty, not only over areas conquered during the war but also over areas that had been allocated to it by the UN, was still in question was made clear to Israel following the war when UN mediator Count Bernadotte proposed that Israel relinquish its sovereignty over the Negev in exchange for a recognition of Israeli sovereignty over the western Galilee. The Israeli government, under the leadership of David Ben-Gurion, felt it to be extremely crucial that Israel establish demographic “facts on the ground” by settling both the Negev and areas conquered during the war with Jews so that there would be no question of Israel relinquishing its sovereignty over these areas. This policy dovetailed with the need to solve Israel’s second pressing problem, that of immigrant absorption.

As a result of the establishment of the state and the opening of its borders to Jews from abroad, the infant state was deluged with immigrants from the Middle East and Europe leaving Arab states where, in many cases, they no longer felt welcome or homes that they no longer had in Europe. This flood of immigrants was far greater than any of the immigration waves of the pre-state period. During the first four years of its existence, the Jewish population in Israel tripled as a result of immigration. This created a tremendous need for housing which required the building of new homes, especially since most of the abandoned Arab towns in the center of the country rapidly filled up with immigrants. It also offered a singular opportunity for social engineering. In fact, the plans drawn up by the Israeli authorities for redistributing the population appear to be altogether unique. [xvii]
Since Israel needed to alter the demographic balance in the peripheral areas of the country, much of the new housing was constructed in these areas. The goal was to settle Jews both in sparsely inhabited regions such as the Negev and in areas where the Israeli Arab population predominated, especially when the latter were located near Israel’s borders. Hence, Israel adopted the model of Frontier Settlement, which is characterized by the settlement of people in border and other peripheral areas for politico-military or ideological-pioneering reasons. The goal of the policy of frontier settlement was to create a security buffer between border regions and population centers. Since Israel had 1,063 km of hostile borders, this meant that a large number of such settlements would be needed. However, most of these new villages were small and they, along with existing agricultural villages that had provided the backbone of the Zionist enterprise in the early pre-state period, proved unable to solve the housing and employment problems for the bulk of the new immigrants. The authorities were eager to encourage the spreading of the population for economic reasons as well. The fledgling state was critically short of food and the agricultural sector, despite the Zionist ethos of agriculture, was badly in need of immediate development. In fact, by 1958, thirty percent of gross investment in Israel was devoted to agriculture. Overall, attempts to shift the demographic balance in areas that were predominantly Arab such as the Galilee, Little Triangle, and the Bedouin areas of the Negev, were largely unsuccessful and Jewish agricultural settlement spread mainly to areas with little or no previous Arab population such as Lakhish in the south or the northern coastal plain. Israel’s population decentralization program and crash agricultural program were ultimately fairly successful with the percentage of Israeli inhabitants living in the major cities declining from fifty-two percent in 1948 to thirty-one percent in 1957. Prime Minister David Ben-Gurion spearheaded the drive to settled the Negev with new immigrants viewing this not only as a practical solution to unpleasant questions about sovereignty and to the need to settle immigrants, but also as a way to keep the Zionist pioneering spirit alive. Yet the Negev’s lack of water still posed a serious problem and in fact precluded the option of establishing large numbers of agricultural settlements along the lines of the original cooperative settlements of the north.

As a result, the government decided to settle the Negev with a primarily urban population based in newly created cities known as Development Towns. Development towns facilitated the twin goals of population spread and security by settling citizens in peripheral areas such as border regions without allowing the existence or lack of existence of a significant water supply to dictate settlement patterns. Entire tent “towns” (mabarot) established to house new immigrants on the outskirts of Tel Aviv and other cities were relocated to these development towns in the Negev where the new immigrants were given government housing and promised jobs. Since most of the new immigrants were dependent on the government for housing, education, welfare services, and jobs, it was easier for the government to manipulate and “plan” them compared to settled veteran populations or those that arrived in the country with more capital and could settle in established urban areas. Unfortunately for the residents of these towns, the government was unsuccessful in attracting many employers to relocate their industries to peripheral areas such as the Negev with the result being that a cycle of unemployment, frustration, and poverty took hold in these regions with the commensurate problems of
social breakdown, crime, and drug abuse. The development towns of today have some of the highest rates of unemployment in the country and extremely serious social problems. The fact that Israeli governments in the 1950s directed primarily immigrants from North Africa and the Middle East to these towns compounded the feeling among many Israelis of North African or Middle Eastern background that the practices of the government were discriminatory towards them and favored Jews from Europe.

Although the decision had been made to “urbanize” the south, water would still be needed to support its growing population as well as the agricultural areas at the northernmost tip of the Negev. Hence, the water diversion scheme was still crucial and the government-owned corporation, *Tahal* (Water Planning for Israel) founded in 1952 and charged with research and water planning was given the task of planning the project which would be built, maintained, and operated by *Mekorot*, a public corporation founded in 1938. Both of these government-owned corporations are under the authority of the Israeli Water Commission (traditionally part of the Ministry of Agriculture but today under the authority of the Ministry of National Infrastructures) which oversees their activities and is responsible for determining water allocation. Work had begun on the initial stages of the project in 1953 and in 1956, the government formally authorized the building of the Carrier. Work on the NWC was completed in June 1964 with the Carrier - stretching from Lake Tiberias to Rosh Ha’ayin near Tel Aviv - covering a distance of some 130 kilometers. Associated systems of pipelines then take the water southward to their farthest extent 95 kilometers away in the central Negev at Mitzpe Ramon. The NWC, in addition to providing water for the urban communities of the Negev, enabled Israel to increase the extent of its irrigated farmland from about 30,000 hectares in 1948 to over 200,000 hectares in the late 1980s. [xxii] By 1967, fifty-seven rural settlements had been established in the Negev creating a rural population of fifty-five thousand people. Yet despite Israel’s success in transferring water to the south, the Negev still remains largely empty with only 7.7 percent of the Israeli population residing there.

The rapid development of Israel’s water resources was not only necessary in order to populate the Negev. During the early 1950s, Israel was unable to reach food production levels necessary to feed its population, in part because of the fact that certain areas did not have access to regular supplies of water. This necessitated the rationing of food from 1949 to 1952 (whereupon the rationing restrictions began to be lifted in stages). This period, known as the *Tzena*, was one in which life was drab and gray and even affluent Israelis became dependent on food parcels sent by relatives overseas. [xxiii] The widespread rationing not only had the effect of creating a large black market for rationed foodstuffs, but also the creation of a large army of bureaucrats to oversee the rationing and centralized governmental control over the economy. All economic activity in Israel became dependent on receiving governmental approval and licensing and this bureaucratic red tape acted to delay or sometimes prevent the establishment of new economic ventures, increase operating costs (and hence costs to the consumers) of existing ventures, and to deter foreign investors. [xxiv] As Israel’s balance of payments situation began to be rectified and as increasing amounts of land began to come under cultivation via irrigation and the eventual creation of the NWC, the economic situation improved thus allowing the gradual dismantling of some of the
economic restrictions. However, Israel was to continue to feel the impact of this period in the over-bureaucratization and over-centralization of its economy for decades to come.

WATER, GEOPOLITICS, AND STATE BUILDING:
THE CASE OF ISRAEL (cont...)

(Part II) cont....

Nadav Morag
*Middle Eastern Studies*, Vol. 37, No. 3 (July 2001)

*The Headwaters of the Jordan: The Geopolitics of Water*

The early Zionists recognized that in order to develop Palestine and prepare it for the absorption of millions of Jewish immigrants, water transfer schemes would not be enough. The future Jewish state would have to also ensure its control over the sources of the water in order to safeguard continuing access to this vital resource. In 1919, two years after Britain issued the Balfour Declaration, Zionist leader Chaim Weizmann wrote to Prime Minister David Lloyd George putting forth what he felt to be the “minimum requirements essential to the realization of the Jewish National Home.” These included extensive territories in the north including the valley of the Litani (in what would later become Lebanon) and the western and southern slopes of the Hermon range. While recognizing that these borders could not be justified solely on the basis of biblical claims, Weizmann suggested that these claims to territory in the north “are imperatively demanded by the requirements of modern economic life.”[25] In February of that year, the Zionists presented their demands at the Versailles peace conference emphasizing the importance of controlling the sources of Palestine’s water. Weizmann’s emphasis on the Hermon and Litani were echoed in the proposal which suggested that “the Hermon is Palestine’s real ‘Father of Waters’ and cannot be severed from it without striking at the very root of its economic life.”[26] In March 1920, Arab fighters attacked the Jewish settlements of Tel-Hai, Kfar Giladi, and Metulla killing some of the defenders and forced the evacuation of the settlements. Since this evacuation established a dangerous precedent for the Zionists and, if permanent, could have served to encourage the Arab side to repeat these measures elsewhere, the demand for their reacquisition became a rallying cry for the Zionists. Since these villages were located outside of Palestine as demarcated by the secret wartime Sykes-Picot agreement, they were reoccupied only after the French entered Damascus in July 1920 to quell Arab resistance to their rule. Once reoccupied, the Zionists demanded the inclusion of these settlements within Palestine.[27]

The British government was willing to cooperate, to a large extent, with
Zionist territorial demands because they served British interests. Setting Palestine’s borders more or less along the lines demanded by the Zionists would not only ensure control of Palestine’s water resources in the north, but important railway lines and would create more easily defensible borders. Unfortunately for the British and the Zionists, France made extensive territorial demands in the region - including Palestine itself - based on its long-standing commercial interests in the Near East. France intended, at a minimum, to assert control of those areas directly or indirectly allocated to it by the Sykes-Picot agreement, the British and Arab conquest of the Levant notwithstanding. By the time of the Versailles conference, Sykes-Picot was no longer considered acceptable by the British government. For one thing, it included Russia as a recipient of territory in the region and therefore had to be revised in light of the Russian revolution and its signing of a separate armistice with Germany in 1917. The treaty also set aside large chunks of territory in Anatolia for the wartime victors and the allies were forced to abandon their claims there as a result of the successful creation of the Turkish Republic under Ataturk. More importantly for the British, the treaty gave Palestine very meager borders excluding, for example, all of the Upper Jordan river and its headwaters which were located in the area that was supposed to be allocated to the French. Since the British were, by war’s end, in full military control of the area, they had little reason to honor Sykes-Picot. As the British General Staff suggested to the War Office in a secret memo on December 9, 1918, “it is difficult to see how any arrangement could be more objectionable from the military point of view than the Sykes-Pico Agreement of 1916, by which an enterprising and ambitious foreign power is placed on interior lines with reference to our position in the Middle East.”[28]

The Zionists, needless to say, viewed the Sykes-Picot borders as totally unacceptable and pressured the British to revise them. London also had to consider its future relations with the Arabs to whom it had promised that most of the Middle East would become a unified Arab state. Weighted against all this, was Lloyd George’s desire to maintain cooperative relations with the French and to avoid acrimony with Paris that might weaken the postwar political and military structure in Europe. These contradictory interests ensured that the negotiations on the fate of the Middle East would be tumultuous. In attempting to navigate between the contradictory interests of the French on the one hand, and the Zionists and British military leadership on the other hand, the British government eventually was able to formulate a compromise following the April 1920 San Remo conference, by which the border was set - under the Anglo-French Convention of December 1920 - to include the Dan and Banias headwaters as well as approximately half of the Golan Heights, but excluded the Hasbani, Litani, and the eastern shore of Lake Tiberias (as well as part of the Lake itself). The final stage in the setting of Palestine’s northeastern boundary occurred in March 1923 when the British signed an agreement with France by which France would get the entire Golan Heights (including the Banias headwaters) in exchange for transferring to Palestine the eastern shore of Lake Tiberias (the border would lie only ten meters from the waterline in the northeastern quadrant) and the Hamat Gader region on the Yarmouk. This area was considered important for a planned hydroelectric project to be located on the Jordan River which would use Lake Tiberias as a reservoir and under which waters from the Yarmouk were to be diverted to the Lake through the Hamat Gader and Zemach area.
southeast and south of the Lake respectively. Since the British military viewed this area as strategically significant it gave its support to the idea and the area was incorporated into Palestine. It was at this stage that the northeastern boundary was finally set.

Under the United Nations partition plan of 1947, the whole of the eastern Galilee region including Lake Tiberias, Hamat Gader, and the Huleh Valley - that is, Palestine’s northeastern border region - was allocated to the Jewish state. However, with the conclusion of Israel’s War of Independence in early 1949, and despite Israeli military successes and the conquest of the remainder of Palestine save the West Bank, East Jerusalem, and the Gaza Strip, Israel found itself with less territory in the northeast. This was because the Syrians alone, among the Arab belligerents, ended the war in occupation of territory that had been allocated to Israel. This territory consisted of three separate and noncontiguous parcels of land. The southernmost included all Israeli territory in the Hamat Gader region, and the southeastern shore of Lake Tiberias (including Ein Gev). The central parcel included a strip of land west of the border in the Huleh Valley with a salient at the B’not Ya’acov Bridge (control of this area meant control of the upper Jordan River just north of Lake Tiberias). Finally, the northernmost and smallest parcel of land was located in the region between the Dan and Banias springs (thus giving Syria the ability to physically overlook the only major headwater of the Jordan River in Israeli territory). Their strategic location astride Israel’s main water sources, ensured that control of these bits of land would be seen as important by both Israel and Syria. Under the terms of the armistice agreement between Israel and Syria, these three areas were to be considered Demilitarized Zones (DMZs) and Israel was allowed to access them strictly for non-military purposes.

As Israel recovered from its War of Independence and began the formidable task of absorbing large numbers of immigrants, the government decided to implement the Lowdermilk-Hayes scheme for diverting Jordan River waters to the Negev. The government hired the American engineer John S. Cotton to assist in the planning of the NWC. Cotton based his plan on previous diversion schemes but with some important modifications. Lake Tiberias was to serve as the chief reservoir for the NWC (rather than the Beit Nekofa valley as called for in previous plans) and a hydroelectric facility was to be built on the upper Jordan as it flows into Lake Tiberias (dropping 50m). This facility was to be located at the B’not Ya’acov bridge well within the DMZ and it was from this point that part of the water was to be diverted via the NWC to other parts of the country. This location was chosen because it lay south of the confluence of the Dan, Banias, and Hasbani headwaters and at this elevation – approximately 300 meters above Lake Tiberias – the water would be able to flow unaided southward. Part of the electricity generated in the upper Jordan’s flow down to Lake Tiberias was to be used to pump water from the Lake to the NWC when necessary. On September 2, 1953, Israel began digging the diversion canal. Syria was unwilling to countenance this project because the successful completion of the scheme would make it harder for Syria to claim sovereignty over the DMZ and because Syria was not interested in helping Israel strengthen its economic basis and its ability to attract and absorb Jewish immigrants. The Syrians therefore immediately protested to the UN Truce Supervision Organization on the
grounds that this project would alter the military status quo in the DMZ and was thus contrary to the Armistice agreements. The UN concurred with the Syrian view and ordered Israel to halt its construction activities. As a result of American threats to halt economic aid to Israel unless it obeyed the UN order, Israel agreed to suspend and eventually abandon its operations in the DMZ.[30] Being unable to divert water from the upper Jordan, Israel was forced to relocate the source of the NWC to Lake Tiberias. In 1956, Israel constructed a pumping station near the northwestern coast of the Lake (well within Israeli territory). The change in the original origin of the NWC was entirely disadvantageous for Israel because instead of being able to utilize the difference in altitude from B’not Ya’acov southward (and to create hydroelectric power as a result), water would have to be pumped uphill from the Lake Tiberias to the NWC thus necessitating the use of electricity to run the pumps. In fact, approximately eight percent of Israel’s annual electricity product is used to run these pumps. In addition, Lake Tiberias waters have a higher content of chlorides than the sweet water of the upper Jordan and hence the quality of the water that the NWC could provide the rest of the country with was also adversely affected.[31]

On January 26, 1952, the UN General Assembly passed a resolution authorizing the United Nations Refugee Works Agency (UNRWA) to carry out a program to help resettle the Arab refugees of the 1948 war via the development of the economies of the region. UNRWA hired the American engineering firm Charles T. Main, Inc. to prepare a report on possible development projects. The Main Plan provided for Israel’s use of part of the upper Jordan’s waters and the use of Lake Tiberias waters to irrigate both sides of the Jordan Valley. Israel was slated to receive 369 mcm of water annually while Jordan was to receive 774 mcm and Syria 45 mcm. In mid-1951, UNRWA ceased implementation of the project, but international interest in the issue continued to grow.

In October 1953, President Eisenhower appointed a special envoy to the region, Eric Johnston, in order to promote cooperation in the use of water resources. The Americans were convinced that if they could induce Israel and the Arab parties to cooperate on water issues, this cooperation could later be expanded to other fields and thus promote rapprochement between Israel and the Arabs. Johnston presented a modified version of the Main Plan whereby Israel would receive thirty percent of the total water, Jordan sixty-three percent, Lebanon three percent, and Syria four percent. Neither Israel nor the Arabs were happy with the plan. For Israel, it did not allow for the construction of the NWC and the channeling of water to the south of the country, it did not include the use of waters from the Litani, and it would force Israel to stop all of its water development projects until such time as it could secure Arab agreement to these projects.[32] The Arab side, not surprisingly, showed a distinct lack of enthusiasm about a project that would allocate sizeable quantities of water to Israel thus enhancing its economic development and its ability to accept more immigrants and to settle them throughout the country. These immigrants, the Arabs felt, would not only strengthen Israel militarily and economically, but also would diminish the chance that Palestinian refugees would be allowed to return to their former homes since increasing amounts of land inside Israel would be needed for housing new immigrants. Furthermore,
participation in cooperative water-management schemes with Israel would imply recognition of it and a willingness to at least partial normalization. This was something which Syria, in particular, was unwilling to fathom.[33]

Despite these problems, Johnston continued shuttling between the parties in an attempt to reach compromises and fashion an arrangement that would be more acceptable to all those involved. In the beginning of 1955, Johnston presented his Revised Unified plan which stipulated that Israel would be allowed to divert water from the upper Jordan River via the NWC to the center and south of the country. Lake Tiberias would not serve as a reservoir for the NWC and hence its waters - flowing south into the lower Jordan River - would be divided between Israel and Jordan. Jordan was to construct a canal parallel to the river that would enable it to use Jordan River waters to irrigate its side of the Jordan Valley. This revised plan called for Israel to receive thirty-three percent of the water, Jordan fifty percent, Lebanon seven percent, and Syria ten percent. Israel accepted the Revised Unified Plan and resumed work on the NWC. The Jordanians also proceeded to prepare for the construction of the East Ghor Canal, as allowed for under the plan (it was completed in 1963 and enabled the Jordanians to irrigate large portions of the eastern Jordan Valley). While the differences between Israel and the Arabs had been greatly narrowed due to Johnston’s efforts, the increase in tension along Arab-Israeli borders as a result of Fedayeen attacks, and the build-up towards the military confrontation of 1956, made implementation of the plan no longer politically feasible or desirable. Hence, the Arab League, meeting in October 1955, decided to formally veto the plan.

In January 1964, as the NWC neared completion, the Arab League decided to formulate a plan to deny Israel the ability to remove water from Lake Tiberias viewing this as a theft of Arab water that rightfully belonged to Jordan, Syria, and Lebanon. The League also authorized the creation of Palestinian commando units to sabotage the project. In fact, one of the first acts undertaken by the Syrian-supported Fatah organization under Yasser Arafat, was to plant a bomb at one of the sites along the NWC (which failed to explode). The delegates agreed to sponsor a water-diversion scheme whereby the Hasbani and Banias headwaters of the Jordan would be diverted mainly eastward into Syria (although it also called for the construction of a tunnel in Lebanon to divert part of the Hasbani to the Litani River) and from there on to the Yarmouk. Besides denying Israel access to what the Arabs felt was "their" water, the Arabs also wanted to heighten tension with Israel in order to push the latter into a military confrontation with a unified Arab World and this, in the context of a struggle between Syria and Egypt for the mantle of leadership of the Arab World.[34]

Had this scheme been successful, it would have reduced the capacity of the NWC by one-third and increased the salinity in Lake Tiberias by sixty percent. Clearly, this was unacceptable for Israel and in a series of attacks, Israel put an end to Syrian construction of diversionary canals through the use of artillery, armor, and aircraft. Syrian diversion installations were bombed for the last time in April of 1967 - only two months before the outbreak of the Six Day War. The tension on the Israeli-Syrian border - partially though not wholly as a result of Syrian diversionary activities and the Israeli military response -
significantly contributed to the outbreak of the war because it convinced the Soviet Union to pressure Nasser to threaten Israel from the south in order to ease what Moscow perceived as Israeli pressure on Syria and threats to the relatively new and pro-Moscow Ba’ath regime under Salah Jadid.

The Six Day War radically altered the water situation for Israel. Its conquest of the Golan Heights gave Israel control over the Banias and part of the Hermon Range as well as the entire coast of Lake Tiberias. Furthermore, the southern border of the Golan follows the Yarmouk and hence Israel was able to obtain control over a longer portion of the Yarmouk effectively being able to prevent Jordan from constructing a dam upstream. By the mid-1970s, PLO attacks against Israel from the western slopes of the Hermon Range in Lebanon, gave Israel the rationale to establish a security zone in the area under the control of Lebanese Christian proxies. This ensured that the waters of the Hasbani would not be diverted to the Litani. Hence, by the mid-1970s, Israel had achieved control over a significant area that the early Zionists had considered essential in order to safeguard the water supply of the future state. In the late 1970s, the United States again tried to get Israel, Jordan, and Syria to cooperate on water use, this time vis a vis the Yarmouk. The Carter Administration sent its envoy, Philip Habib, to the area and during the course of three years, he attempted to fashion an agreement. In 1979 the talks broke down and the Syrians proceeded to dam the upper tributaries of the River while Israel continued to utilize waters from the lower Yarmouk leaving Jordan with a drastically reduced water supply.\[35\] The territorial status quo on the Golan therefore, provides Israel with assured access to vital water resources as well as being strategically beneficial. Withdrawal from some or all of the Heights constitutes one of the major issues in the currently stalled Israeli-Syrian peace process and the outcome of this process will undoubtedly have important implications for Israel's future water supply.

**Water and the Israeli-Syrian Peace Process**

The Israeli-Syrian peace process involves two central and interrelated concepts, one spatial and the other temporal. The first has to do with control over territory. Syria publicly demands the return of all of the Golan to its sovereignty (as well as claiming sovereignty over the territory of the former DMZs) as the non-negotiable price to be paid for a peace treaty. Israel would like to retain control of as much of the Heights as possible, or at least military control in order to defend the eastern Galilee, control water resources, and maintain a deterrent presence some 70 km from the Syrian capital. In practice, this means that Israel aims to retain some two-thirds of the heights roughly from the watershed line to the old border and including the Hermon, Banias, Golan slopes of the upper Jordan and the Lake Tiberias shoreline, and the heights overlooking the lower Yarmouk. Clearly, these two maximalist positions cannot be maintained if the process is to continue. The second element in the peace process involves the question of trust and goodwill between the sides. As Israelis and Palestinians have been learning since the signing of the first Olso Agreement, trust and goodwill are far more central to the peace process – and the inability to sustain them far more likely to destroy it – than questions of
control over territory, demilitarization, water use, and others. Israel demands that Syria provide Israel with a "full peace" in exchange for territorial withdrawal on or from the Golan. Syria, in turn, as a result of the nature of its minority dictatorial regime, is limited in its ability to truly seek a rapprochement with Israel, because of the leadership's fears that this can create threats to its rule and weaken its legitimacy. In a climate of trust and mutual goodwill, the water issue no longer becomes central and certainly does not act as an impediment to settlement. There are a great number of cases around the world in which several states share the same water resources and in which rivers originate in the territory of one state and then flow through others. In most of these cases, disputes over water rights are not severe and are relatively easily resolved because a climate of mutual trust and goodwill exists between the riparian states. Hence, water does not constitute a security issue in the general discourse between these states. However, in situations where there is no trust or goodwill between the parties, water can be used by one or both sides as a weapon against the other and is therefore viewed as a security issue rather than an economic one. The lack of trust and goodwill creates a cycle in which neither side is willing to take risks with respect to the other and their inability to take risks to alter the situation thus enhances their mistrust and mutual suspicion.

With respect to the headwaters of the Jordan, Israel and Syria have different reasons for wanting to control them. Syria sees them and the land above and around them, not in economic terms, but rather in terms of "birthrights." For the Syrians, the land and all that it contains belongs to them and thus must be returned. Syria does not depend on these waters for its agriculture, industries, and domestic use. Israel, on the other hand, views the water as a vital resource on which the country depends. Hence, questions of water are viewed in entirely different frames of mind by the two parties. While "rights" cannot be diluted, compromised, or split, resources can. Hence, Israel has little reason to feel that, in withdrawing from the Heights, it could be sure of Syrian cooperation in the mutual use of this resource as long as the Syrians view it as inalienably theirs rather than as a resource to be jointly managed.

The debate in Israel over the costs and benefits of withdrawal from the Heights, like those over Oslo and withdrawal from southern Lebanon, are strongly influenced by domestic political considerations. Members of the old pre-state core in the Lake Tiberias and Huleh regions still exert an influence over the internal debate on the Golan which is disproportionate to their number.[36] The Golan Heights are viewed by more Israelis as vital to Israel's security and as acceptable to control (by virtue of the fact that the overwhelming majority of the Syrian population of the Heights fled before the Israeli conquest) than is the case with the West Bank and its large Palestinian population. This means that an Israeli government wanting to forge an agreement with Syria based on Israeli withdrawal, will have to deal with what is likely to be even greater domestic opposition than the Rabin government had to deal with in implementing the first phases of the Oslo Accords. For its part, Syria does not seem to be in a great hurry to re-acquire the Golan Heights at the cost of a true rapprochement with Israel since it is more convenient for the Syrian regime to remain on a "war footing" than to recognize and make peace with Israel and thus open itself up to calls for political liberalization and criticism from the detractors of peace. Hence, at this juncture, the status quo is most
likely viewed by both sides as preferable to the risks of peace. The maintenance of this status quo will ensure Israel's control over its water resources on the Golan for the time being, but it will not solve the overall regional problems of exploding populations and growing demand for more water.

Satisfactory political settlements with Syria, Lebanon, and the Palestinians will doubtless solve some problems for Israel (although they will present new challenges as well). However, peace will not solve Israel's future water problems and, in fact, will most likely exacerbate them in the near term since Israel will, as it has with Jordan, be called upon to share water with Syria and the Palestinians. The solution to this problem will probably have to come from massive infrastructure investments (in the form of waste and seawater treatment plants) and perhaps the importing of water from countries like Turkey or Egypt. Such solutions, particularly those linked to the importing of water, will hinge on the political settlement of the various Arab-Israeli conflicts. In the long term, peace in the region is likely to enhance the ability of Israel and its neighbors to obtain cost-effective supplies of water, just as it is likely to enhance Israel's access to other resources (such as Persian Gulf oil). However, this requires a willingness to risk making profound changes in the status quo, changes which Syria and Israel do not, at present, seem willing to contemplate.


[12] Saul Cohen, *The Geopolitics of Israel’s Border Question*, JCSS Study No. 7 (Tel Aviv: Jaffee Center for Strategic Studies, Tel Aviv University, 1986), p. 88. Return to article

[13] Ibid., p. 89. Return to article


[18] Efrat, p. 206. Return to article


[23] Sachar, pp. 410-411. Return to article


[27] Hillel, p. 86. Return to article

[28] cited in Garfinkle, p. 30. Return to article

[29] Biger, p. 21. Return to article


[36] Cohen, p. 94. Return to article