

Jordan River Basin

GEOGRAPHY, CLIMATE AND POPULATION

The Jordan River Basin is a transboundary basin with a total area of about 18 500 km² of which 40 percent is located in Jordan, 37 percent in Israel, 10 percent in the Syrian Arab Republic, 9 percent in the West Bank, and 4 percent in Lebanon (Lehner *et al*, 2008) (Table 1 and Figure 1). The headwater of the 250 km long Jordan River originates from three rivers, the Dan, the Baniyas and the Hasbani, which merge at a point 5 km south of the northern Israeli border then flow south through the Hula Valley to join Lake Tiberias. With the outflow of the Jordan River from Lake Tiberias, the Lower Jordan River receives the water from its main tributary, the Yarmouk River. The Yarmouk River originates in Jordan, then forms the border between Jordan and the Syrian Arab Republic and then between Jordan and Israel, before flowing into the Lower Jordan River. The river then continues flowing south, forming the border between Israel and the West Bank to the west and Jordan to the east and finally ends in the Dead Sea (Green Cross Denmark, 2006).

Ecosystems in the region are extremely diverse, ranging from sub-humid Mediterranean environments to arid climates across very small distances. Climate projections for the eastern Mediterranean indicate future aridification (GLOWA, 2007). The average annual precipitation in the basin is estimated at 380 mm, although it varies all along the basin area (New *et al*, 2002). The Upper Basin, north of Lake Tiberias, has an annual precipitation of up to 1 400 mm, while the Lower Jordan Basin has an average annual precipitation rate of 100 mm only at its southern end. The largest part of the fertile land in the basin is located in Jordan and the West Bank, along the eastern and western banks of the Jordan River and the side wadis, in an area with annual rainfall of less than 350 mm. Other portions of the catchment area in the Syrian Arab Republic and Israel enjoy higher annual rainfall, more than 500 mm per year (Venot *et al*, 2006). The average annual temperature of the entire Jordan River Basin is around 18 °C. The average temperature of the Jordan River Basin in January is 9 °C, although it can drop to 5 °C in the coldest places. In August, the average temperature of the Jordan River Basin reaches 26 °C, rising to 30 °C in the hottest places (New *et al*, 2002).

WATER RESOURCES

The Upper Jordan River Basin, north of Lake Tiberias, contributes the vast majority of the water while the Lower Jordan River Basin, which represents 40 percent of the entire Jordan River Basin, makes a much smaller contribution (Venot *et al*, 2006). The

TABLE 1
Country areas in the Jordan River Basin

Basin	Area		Countries or territories included	Area of country in basin (km ²)	As % of total area of the basin	As % of total area of the country
	km ²	% of the Middle East				
Jordan	18 500	0.28	Jordan	7 470	40.4	8.4
			Israel	6 830	36.9	32.9
			Syrian Arab Republic	1 910	10.3	1.0
			West Bank	1 620	8.8	28.7
			Lebanon	670	3.6	6.4

FIGURE 1
Jordan river basin



Legend

- International boundary
- Armistice demarcation line
- Administrative boundary
- Capital, town
- River basin
- Lake
- Salt pan
- River, intermittent river
- Canal
- Dam
- Zone of irrigation development
- Irrigation scheme

0 5 10 20 30 km
Albers Equal Area Projection, WGS 1984

FAO - AQUASTAT, 2009

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Yarmouk River, which is the main water course in this latter part of the Valley, joins the Jordan River in an area partly occupied by Israel. During the summer, most side streams dry up completely and capturing the winter floodwaters is one of the most critical aspects of water resources management in the Jordan River Basin. If these waters are not diverted or stored, they flow directly to the Dead Sea (Green Cross Italy, 2006).

The total natural discharge of the basin is subject to extreme seasonal and annual variations. In February, for example, the river may carry as much as 40 percent of its total annual flow, but in each of the summer and autumn months, when water is most needed, it carries only 3–4 percent of its annual discharge. In drought periods like 1987–91 the water discharge of the Jordan River Basin can be reduced by up to 40 percent over the whole year (Libiszewski, 1995). The annual flow entering Israel corresponding to the Jordan Basin includes 138 million m³ from Lebanon (Hasbani River), 125 million m³ from the Syrian Arab Republic and 20 million m³ from the West Bank. The natural annual flow of the Yarmouk River from the Syrian Arab Republic to Jordan is estimated at 400 million m³. However, the total actual flow at present is much lower as a result of the drought and upstream Syrian development works done in the 1980s. The Yarmouk River is the main source of water for the King Abdullah Canal (KAC), the backbone of development in the Jordan Valley. A main tributary of the Jordan River in Jordan, controlled by the King Talal Dam and also feeding the KAC, is the Zarqa River. There are also 6–10 small rivers, called “Side Wadis”, going from the mountains in Jordan to the Jordan Valley.

Surface water accounts for 35 percent of the existing water resources in the basin, groundwater aquifers account for 56 percent of the resources, while reused wastewater and other non-conventional sources of water represent around 9 percent. The surface water of the Jordan River Basin is the main surface water resource available for relatively stable use in the region. It is the major source of water for Israel and Jordan and also supports the many aquifers in both countries, extending the reliance on the river (Green Cross Italy, 2006). The three main aquifers in the system are west of the Jordan River and are central to the water supply of Israel, Jordan and the Occupied Palestinian Territories: the western (or mountain) aquifer, the northeastern aquifer, and the eastern aquifer.

The region has one of the lowest per capita water resources worldwide, well below the typical absolute water scarcity threshold of 500 m³/year per capita, except for Lebanon (Table 2). Moreover, water demand continues to increase rapidly due to high population growth rates and economic development (GLOWA, 2007).

WATER QUALITY

Due to the continuous drop in water levels in Lake Tiberias since 1996, in 2001 regulations in Israel lowered the minimum “red line” from 213 m below sea level to minus 215.5 m. The risks associated with reduced water levels are enormous: ecosystem instability and deterioration of water quality, damage to nature and landscape assets, receding shorelines and adverse impacts on tourism and recreation. Salinity in the lake has been alleviated by diverting several major saline inputs at the northwest shore of the lake into a “salt water canal” leading to the southern Jordan River. This canal removes about 70 000 tonnes of salt (and 20 million m³ of water) from the lake each year. The salt water canal is also used to remove treated sewage from Tiberias and other local authorities along the western

TABLE 2
Internal and total actual renewable water resources per capita in 2006 in m³/year

Country or Territory	Internal renewable water resources	Total actual renewable water resources
Israel	110	261
Jordan	119	164
Lebanon	1 184	1 110
Occupied Palestinian Territory	209	215
Syrian Arab Republic	367	865

shoreline away from Lake Tiberias and into the Lower Jordan River. In the catchment area, a concerted effort has been made to lower the nutrient load by changing agricultural and irrigation practices, by cutting back the acreage of commercial fishponds and by introducing new management techniques. Sewage treatment plants have been improved and a new drainage network that recycles most of the polluted water within the watershed has been constructed. Around the lake, public and private beaches and recreation areas with appropriate sanitary facilities have been developed. Pollution and sewage from settlements and fishponds near the shores are treated and diverted from the lake.

Much of Amman's wastewater treated effluent is discharged in the Zarqa River and is impounded by the King Talal Dam, where it gets blended with fresh floodwater and is subsequently released for irrigation use in the Jordan Valley. The increased supply of water to Jordan's cities came about at the expense of spring flows discharging into such streams as the Zarqa River, Wadi Shueib, Wadi Karak, Wadi Kufrinja and Wadi Arab. The flow of freshwater in these streams has been reduced as a result of increased pumping from the aquifers, and the flow has been replaced with the effluent of treatment plants, a process that has transformed the ecological balance over time.

WATER-RELATED DEVELOPMENT IN THE BASIN

The total area equipped for irrigation in the Jordan River Basin is estimated at 100 000–150 000 ha, of which approximately 32 percent in Jordan, 31 percent in Israel, 30 percent in the Syrian Arab Republic, 5 percent in the West Bank, and 2 percent in Lebanon. Agricultural water withdrawal is approximately 1.2 km³.

In Jordan, intensive irrigation projects have been implemented since 1958, when the Government decided to divert part of the Yarmouk River water and constructed the East Ghor Canal (later named King Abdullah Canal or KAC). The King Talal Dam on the Zarqa River also diverts the water into the KAC. The canal was 70 km long in 1961 and was extended three times between 1969 and 1987 to reach a total length of 110.5 km. The construction of dams on the side wadis and the diversion of the flows from other wadis have allowed the development of irrigation over a large area. At the same time, wells have been drilled in the Jordan Valley to abstract groundwater, not only for domestic purposes but also for irrigation. Irrigation projects from surface water resources are mainly located in the Jordan River Valley (JRV) and the side wadis linked with the Jordan River Basin. Irrigation schemes in the JRV have been constructed, rehabilitated, operated and maintained by the government. In the first projects in the north, concrete-lined canals were constructed equipped with all irrigation structures to convey and distribute irrigation water on volumetric basis. Additional irrigation schemes were constructed during the 1970s and 1980s following the extension of the KAC, and through the construction of dams, and diversion of side wadis springs and streams. From the 1990s onwards the open canal irrigation schemes were converted to pressurized irrigation systems.

Israel has constructed the Cross Israel Water Carrier, which starts at the northern end of Lake Tiberias and diverts water via massive pipelines across the Jezreel Valley and south along the coastal plain, terminating in Beersheba. Across Israel, the government has built smaller pipelines radiating out over the farmland to bring water for irrigation. The entire system, completed in 1964, forms a water grid, easily controlled and measured.

In the West Bank, localized irrigation systems are used to irrigate vegetables. A small percentage of vegetables is still irrigated by traditional methods, as well as the majority of citrus trees. Farmers usually use plastic lined pools to store their shares of fresh spring water and mix them with brackish well water. Then water is pumped and applied through trickle irrigation systems. From nearly all wells water is pumped into steel pipes which convey the water to the irrigation systems directly in the farms. As

TABLE 3
Large dams in the Jordan River Basin

Country	Name	Nearest city	River	Year	Height (m)	Capacity (million m ³)	Main use*
Jordan	King Talal	Jarash	Zarqa River	1987	108	75	I, F, H, N
	Karamah	Al-Balqa (J)	Wadi Al Mallaha	1998	45	53	I, F, R
	Wadi Arab	Irbid	Wadi Arab	1986	84	20	I, W, F, N, R
	Shurabil Bin Hasna	Irbid	Wadi Ziglab	1967	48	4	I, W, F
	Kafrein	Al-Balqa	Wadi Kafrein	1997	37	9	I, F, R, O
	Shueib	Al-Balqa	Wadi Shueib	1969	32	2	I, F, O
Jordan and Syrian Arab Republic	Wadha (Unity)	Irbid (J) Dara (S)	Yarmouk River	2007	87	110	I, W, F, O H
Total						273	

* I = irrigation; H = Hydropower; W = Water Supply; F = Flood protection; R = recreation; N = Navigation; O = Other

the pumping costs are high, the cost per unit water is high and thus farmers need to improve distribution and conveyance efficiency through the use of pipes.

In the Syrian Arab Republic surface irrigation is the prevailing irrigation system. Basin irrigation is the predominant technique used in surface irrigation and most of the irrigated wheat and barley are irrigated by this method. Irrigation field efficiency is reportedly to be in general below 60 percent.

Table 3 shows the large dams in the Jordan River Basin, i.e. dams with a height of more than 15 metres or with a height of 5–15 metres and a reservoir capacity larger than 3 million m³ according to the International Commission on Large Dams (ICOLD).

TRANSBOUNDARY WATER ISSUES

While the idea of developing a water sharing strategy for the whole basin was recognized as early as 1913, when the Franjeh Plan was proposed, and 1955, when the Johnston Plan was devised, not one single plan has been completely adhered to. The Franjeh Plan was intended for the irrigation of the Jordan Valley, to generate hydropower and to transfer Yarmouk River flow (100 million m³) to Lake Tiberias (Sofer *et al.*, 1999). The Johnston Plan called for the allocation of 55 percent of available water in the basin to Jordan, 36 percent to Israel, and 9 percent to the Syrian Arab Republic and Lebanon. However, it was never signed by the countries involved.

In 1951, Jordan announced its plan to divert part of the Yarmouk River via the East Ghor Canal to irrigate the East Ghor area of the Jordan Valley. In response, Israel began the construction of its National Water Carrier (NWC) in 1953. In 1964, the NWC opened and began diverting water from the Jordan River Valley. This diversion led to the Arab Summit of 1964, where a plan was devised to begin diverting the headwater of the Jordan River to the Syrian Arab Republic and Jordan. From 1965 to 1967 Israel attacked these construction projects in the Syrian Arab Republic and along with other factors this conflict escalated into the Six Day War in 1967 when Israel completely destroyed the Syrian diversion project and took control of the Golan Heights, the West Bank, and the Gaza Strip. This gave Israel control of the Jordan River's headwater and of significant groundwater resources. The most recent direct water-related conflict occurred in 1969 when Israel attacked Jordan's East Ghor Canal due to suspicions that Jordan was diverting excess amounts of water (Green Cross Italy, 2006). Later on, Israel and Jordan acquiesced to the apportionment contained in the non-ratified 1955 Johnston Plan for sharing the Jordan River Basin's water (Milich and Varady, 1998). In 1978, Israel invaded Lebanon, giving Israel temporary control of the Wazzani spring/stream feeding the Jordan River (Attili *et al.*, after 2003).

Inter-Arab conflicts have also often arisen, but have only been small-scale low-level conflicts. The terms of the 1987 agreement between the Syrian Arab Republic

and Jordan defined the Syrian share of the Yarmouk and limited the Syrian Arab Republic to building 25 dams with a holding capacity of 156 million m³. To date, the Syrian Arab Republic has built 37 dams on the four recharge wadis of the Yarmouk River with a total holding capacity of 211 million m³ (i.e. 55 million m³ in violation of the agreement). The Syrian Arab Republic's continuous well drilling in the Yarmouk Basin negatively impacts the base flow in the river, reducing it by approximately 30 percent (Green Cross Italy, 2006). The Wadha (Unity) Dam on the Yarmouk River was included in the agreement, with a height of 100 m and a storage capacity of 225 million m³. Jordan would receive 75 percent of the water stored and the Syrian Arab Republic would receive all of the hydropower generated. In 2003 the height of the dam was reduced to 87 m and the storage capacity became 110 million m³. The dam was completed in 2007.

Since the start of the Peace Process in the early 1990s, bilateral agreements and common principles have been signed between Israel and Jordan and Israel and the Palestinian Authority, but no multilateral plan or agreement has been negotiated and even the bilateral ones have been put under pressure and frequently violated in times of natural or political crisis.

In July 1994, Israel and Jordan signed The Washington Declaration and negotiated the Treaty of Peace, signed in October 1994. The treaty spells out allocations for both the Yarmouk and Jordan rivers and calls for joint efforts to prevent water pollution. This peace treaty established the Israel–Jordan Joint Water Committee (IJJWC), comprised of three members from each country. The Committee was tasked to seek experts and advisors as required, and form specialized subcommittees with technical tasks assigned. The two countries undertook to exchange relevant data on water resources through the IJJWC and also agreed to cooperate in developing plans for purposes of increasing water supplies and improving water use efficiency. It also specified the volumes of water to be used, stored, and transferred by and to each country during a “summer” and a “winter” season (Milich and Varady, 1998). Jordan is entitled to store 20 million m³ of the Upper Jordan winter flow on the Israeli side (in Lake Tiberias) and get it back during the summer months. Jordan can build a dam on the Yarmouk downstream of the diversion point of Yarmouk water to the KAC. Jordan can also build a dam of 20 million m³ capacity on the Jordan River and on its reach south of Lake Tiberias on the border between Jordan and Israel. Because Israel is to provide only 50 million m³/year of additional water to Jordan, insufficient to allow the Jordanians to cover their annual deficit, the two countries have agreed to cooperate in finding sources to supply Jordan with an additional quantity of 50 million m³/year of water of drinkable standards, within one year from the entry into force of the treaty. To protect the shared water of the Jordan and Yarmouk rivers against any pollution or harm, each country is to jointly monitor the quality of water along their boundary, building monitoring stations to be operated under the guidance of the IJJWC. Israel and Jordan are each to prohibit the disposal of municipal and industrial wastewater into the Yarmouk or Jordan River before treatment to standards allowing unrestricted agricultural use (Milich and Varady, 1998).

Interpretation of several terms of the treaty has at times had an uneven history. On the positive side is the June 1995 completion of a pipeline making the physical connection between the Jordan River immediately south of its exit from Lake Tiberias and the King Abdullah Canal in Jordan. Moreover, the provision of the additional 50 million m³/year that Israel promised to Jordan went ahead on schedule. However, the article which calls for cooperation so that Jordan acquires 50 million m³ more per year led to a “mini crisis” between the two countries in May 1997. At the heart of the dispute was Jordan's demand for an immediate transfer of 50 million m³, which was to have been obtained by the construction of two internationally financed dams in Jordan. However, neither Jordan nor Israel was successful in obtaining the necessary financing.

Finally, Israel agreed to supply Jordan with 25 million m³ of water per year for three years as an interim solution, until the desalination plant is erected.

Recent dialogue and peace treaties have led to increased cooperation regarding the development of future water resources projects. For instance, the 1994 and 1997 Israel–Jordan agreements led to discussions on the possibility of building a canal from the Red Sea to the Dead Sea to produce desalinated water with hydropower. It should be mentioned, however, that in their fervour to reach an accord, apparently both the Jordanians and the Israelis negotiated without coordinating their moves with the relevant ministries. Therefore, important issues remain open or vague and conflicts have arisen as a result. For example, in 1999, due to drought Israel decided to reduce the quantity of water piped to Jordan by 60 percent, which caused a sharp response from that country. Disputes of such nature are not unexpected in the future. However, the peace agreements have had the benefit of restricting such conflicts to political rather than military solutions. The fact that the Joint Water Commission for Israel and the Palestinian Authority have continued to meet to discuss critical issues even during the current period of hostilities illustrates the progress that has already been made (Green Cross Italy, 2006).

More than 30 years of Israeli occupation of the West Bank and Gaza Strip have been accompanied with a series of laws and practices targeting Palestinian land and water resources. In 1993, the “Declaration of Principles on Interim Self-Government Arrangements” was signed between Palestinians and Israelis, which called for Palestinian autonomy and the removal of Israeli military forces from Gaza and Jericho. Among other issues, this bilateral agreement called for the creation of a Palestinian Water Administration Authority and cooperation in the field of water, including a Water Development Programme prepared by experts from both sides, which will also specify the mode of cooperation in the management of water resources in the Occupied Palestinian Territory. Between 1993 and 1995, Israeli and Palestinian representatives negotiated to broaden the provisional agreement to encompass the greater West Bank territory. In September, 1995, the “Israeli-Palestinian Interim Agreement on the West Bank and the Gaza Strip”, commonly referred to as “Oslo II”, was signed. The question of water rights was one of the most difficult to negotiate, with a final agreement postponed for inclusion in the negotiations regarding final status arrangements. However tremendous compromise was achieved between the two sides: Israel recognized the Palestinian water rights – during the interim period a quantity of 70–80 million m³ should be made available to the Palestinians – and a Joint Water Committee was established to manage cooperatively West Bank water and to develop new supplies. This Committee also supervises joint patrols to investigate illegal water withdrawals. No territory whatsoever was identified as being necessary for Israeli annexation due to access to water resources (Wolf, 1996). In 2003, the Roadmap for Peace, developed by the United States, in cooperation with the Russian Federation, the European Union, and the United Nations (the Quartet), was presented to Israel and the Palestinian Authority to seek a final and comprehensive settlement of the Israel–Palestinian conflict.

The basis for Israeli–Syrian negotiations is the premise of an exchange of the Golan Heights for peace (Wolf, 1996). In 1967 Israel seized the Golan Heights from the Syrian Arab Republic during the six-day war. The Golan Heights control the main water sources of Israel. Israel’s only lake and its main source of freshwater, supplying the country with a third of its water, is fed from the Golan Heights. Conquered in 1967, they have been under Israeli law, jurisdiction, and administration since 1981, which, however, has not been recognized by the United Nations Security Council. The crux of the territorial dispute is the question of which boundaries Israel would withdraw to; the boundaries between Israel and the Syrian Arab Republic have included the international boundary between the British and French mandates from 1923, the

Armistice Line from 1949 and the cease fire lines from 1967 and 1974. The Syrian position has been to insist on a return to the borders of 1967, while Israel refers to the boundaries of 1923. The only distinction between the two lines is the inclusion or exclusion of the three small areas with access to the Jordan and Yarmouk rivers (Wolf, 1996). In 2008, negotiations between Israel and the Syrian Arab Republic started with the objective to solve the conflict of the Golan Heights.

In 2002, the water resources of the Hasbani Basin became a source of mounting tensions between Lebanon and Israel, when Lebanon announced the construction of a new pumping station at the Wazzani springs. The springs feed the Hasbani River, which rises in the south of Lebanon and crosses the frontier ('Blue Line') to feed the Jordan River and subsequently the Sea of Galilee, which is used as Israel's main reservoir. The pumping station was completed in October 2002. Its purpose was to provide drinking and irrigation water to some 60 villages on the Lebanese side of the Blue Line. The Israelis complained about the lack of prior consultation whereas the Lebanese contended that the project was consistent with the 1955 Johnston Plan on the water resources of the region.

In 2004 and 2005 Jordan got only around 119 and 92 million m³/year from the Yarmouk River and from Lake Tiberias respectively. This is only around 10 percent of the total flow of the Upper Jordan and Yarmouk rivers. It is also much less than the water share from these two basins proposed by the Johnston plan through his negotiations in 1950s.

In 2007, Jordan and the Syrian Arab Republic agreed to expedite the implementation of agreements signed between the two countries, especially with regards to shared water in the Yarmouk River Basin. They also agreed to continue a study on the Yarmouk River Basin based on previous studies. Currently, the Joint Jordanian–Syrian Higher Committee is discussing how to make use of the Yarmouk River Basin water and how to protect Yarmouk water against depletion. Talks will also include preparations for winter and storage at the Wadha (Unity) Dam in the Yarmouk River.

Table 4 shows the main historical events in the Jordan River Basin.

TABLE 4
Chronology of major events in the Jordan River Basin

Year	Plans/projects /treaties/conflicts	Countries & territories involved	Main aspects
1913	Franjeh Plan	Ottoman Commission	Irrigation of the Jordan Valley, transferring Yarmouk River flows to Lake Tiberias, generating electricity.
1951	Jordan announced Plan	Jordan	Jordan Plan to divert part of the Yarmouk river via the East Ghor canal.
1953	Israel began construction of the National Water Carrier (NWC)	Israel	Resulting in military skirmishes between Israel and the Syrian Arab Republic.
1955	Johnston Plan	USA. Riparian countries	Allocation of water: 55% for Jordan, 36% for Israel, 9% each to the Syrian Arab Republic and Lebanon. Not signed because Arab riparian countries insisted the USA was not impartial.
1964	The NWC opened and began diverting water from the Jordan River Valley	Israel	This diversion led to the Arab Summit of 1964.
1964	Arab Summit	Arab League	A plan was devised to begin diverting the headwaters of the Jordan River to the Syrian Arab Republic and Jordan.
1965–1967	Israel attacked construction projects in the Syrian Arab Republic	Israel, Syrian Arab Republic	This conflict, along with other factors escalated in the Six Day War in 1967.
1967	Six Day War	Egypt, Israel, Jordan, Syrian Arab Republic, Occupied Palestinian Territory	Israel destroyed the Syrian diversion project and took control of the Golan Heights, the West Bank and the Gaza Strip. Palestinian irrigation pumps on the Jordan River were destroyed or confiscated after the Six Day War and Palestinians were not allowed to use Jordan River water. Israel introduced quotas on existing Palestinian irrigation wells and did not allow any new ones.
1969	Israel attacked Jordan's East Ghor Canal	Israel and Jordan	Because of suspicions that Jordan was diverting excess amounts of water. Later on, Israel and Jordan acquiesced to the apportionment contained in the non-ratified Johnston Plan.
1978	Israel's invasion of Lebanon	Israel and Lebanon	Giving Israel temporary control of the Wazzani spring/stream feeding the Jordan.
1987	Syrian Arab Republic and Jordan agreement	Syrian Arab Republic and Jordan	Defined the Syrian share of the Yarmouk and limited the Syrian Arab Republic to 25 dams with a capacity of 156 million m ³ . The Wadha (Unity) Dam was included.
1993	Declaration of Principles on Interim Self-Government Arrangements	Israel, Occupied Palestinian Territory	Called for Palestinian autonomy. Creation of the Palestinian Water Administration Authority. Water Development Programme.
1994	Washington Declaration and Treaty of Peace	Israel and Jordan	Israel and Jordan signed The Washington Declaration, ending the state of belligerency and negotiated the Treaty of Peace. Allocations for Yarmouk and Jordan rivers and efforts to prevent water pollution.
1995	Israeli-Palestinian Interim Agreement on the West Bank and the Gaza Strip (Oslo II)	Israel, the West Bank, and the Gaza Strip	Israel recognized Palestinian water rights (during the interim period a quantity of 70–80 million m ³ to be made available to the Palestinians). A Joint Water Committee was established to cooperatively manage West Bank water and to develop new supplies.
1996	Israel tries to begin talks on water resources with the Syrians	Israel and Syrian Arab Republic	Syrian Arab Republic refuses because of the conflict concerning the Golan Heights.
1999	Israel reduces the quantity of water piped to Jordan by 60 percent	Israel and Jordan	Due to drought. This reduction caused a sharp response from Jordan.
2002	The Wazzani Conflict	Israel, Lebanon	Lebanon announced the construction of a new pumping station at the Wazzani springs causing tension between Israel and Lebanon.
2003	Roadmap for Peace	Israel, Occupied Palestinian Territory, The Quarter	Purpose: to end of the Israel-Palestinian conflict.
2007	Jordan and Syrian Arab Republic agreements	Jordan and Syrian Arab Republic	Implementation of agreements signed between the two countries, especially with regard to shared water in the Yarmouk river basin.
2008	Negotiations between Israel and the Syrian Arab Republic	Israel and Syrian Arab Republic	Negotiations are taking place in order to resolve the the Golan Heights conflict.

