

THE WATER AGREEMENTS BETWEEN ISRAEL AND ITS NEIGHBORS ¹

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ABSTRACT

Israel signed a Peace Treaty with Jordan in October 1994, and the Oslo II Agreement with the Palestinians in September 1995. Both address issues of water between the two parties to each agreement. The purpose of this paper is to review and discuss these water agreements, so we can draw some lessons from them.

BACKGROUND: WATER IN THE MIDDLE EAST

Information on the water resources and demands in the region can be found in many publications. For the purpose of this presentation there is no need to repeat it: while the estimates differ somewhat, there is no doubt that the water resources are already being used extensively, practically to their full natural capacity, and sometimes beyond. Some of the sources are over-utilized, namely the current annual extraction exceeds the average annual replenishment. And the forecasts all lead to the same conclusion: there is water shortage in the region.

The population in the region is growing, an ever increasing percentage of it in the cities. The standard of living is rising, and with it the per capita water consumption. The product of these two - larger population and per capita water use -- is translated into a rapidly escalating urban requirement for potable water.

Agriculture uses about two thirds of the water in the region. This percentage decreases somewhat in those places where the economy turns towards industry, but still agriculture will remain the major water user for the decades ahead. As urban consumption rises, more potable water has to be directed to the cities. Since the potential of the sources is fully utilized, this means diverting potable water from agriculture to the cities. There are two main ways to compensate for this reduction. The first, and most important over the long

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term, is improvement of water use efficiency. The other is use of reclaimed wastewaters (and other low quality waters) for irrigation. The latter is compatible with the increasing production of urban wastewater. Maintaining the viability of agriculture is desired for adequate self-sufficiency in food production, and also to support the farming community as part of the social fabric.

Collection, adequate treatment and safe disposal of wastewaters must be the responsibility of the cities. However, political, institutional, and economic constraints have created a situation in much of the region, where urban wastewater is not well managed. This results in hazards to health, water resources and environmental amenities. Reuse of treated wastewater for irrigation can contribute to the reduction of these hazards. Treatment levels must be adjusted to the sensitivity of the crop, soil, water resources, and the environment. The economics of treatment and of disposal or alternative reuse are important factors. The cost burden should be divided between the cities which produce the wastewater and the farmers who use the effluents. Other "uses" of treated effluents are flow augmentation in rivers and parks, and these too can help reduce the hazards of sewage disposal.

EARLY PROPOSALS FOR WATER AGREEMENTS IN THE REGION

Several attempts were made in the past to propose a water agreement in the region. The best known is the "Johnston Agreement", named after the US envoy Eric Johnston, who visited the region several times in the years 1953-1955. At the time his mission ended, he had proposed three somewhat different versions of an agreement, one each with Syria, Jordan and Israel, with specified allocation for each. The fundamental rationale for his proposals was agricultural use of water, calculated on the basis of arable land. Later US envoys, Armitage and Habib, made further attempts to reach an agreement on water allocations between the regional parties, but this was never successful.

Since the early 1980s, progress was made on the ground between Israel and Jordan. Meeting in the field, close to the diversion point from the Yarmouk River into the Jordanian King Abdullah Canal (KAC, earlier known as the Ghor Canal), water experts from the two sides met to consider Jordanian requests for increasing the diversion into the KAC. Trustful and solid relations developed, as Israel consented to alleviate some of the water shortage in Jordan by increasing the quantities diverted. This, however, did not change Jordan's position that it was entitled to more water from the Yarmouk, as well as from the Jordan, including from the Sea of Galilee. Jordan stood by the position that it is riparian to the entire Jordan River, from its origin, and saw Israel's diversion of water from the Sea of Galilee into its National Water Carrier as a breach of internationally accepted principles. Israel, on the other hand, maintains, as it did then, that Jordan is riparian to that portion of the Jordan along their common border, and therefore has no part in Jordan upstream from its confluence with the Yarmouk.

This was the situation when the two countries entered direct negotiations, following the Madrid procedure. Many rounds of negotiations ensued, in Washington and late in the region. In the beginning, there were two Arab Delegations to the Washington rounds: a Jordanian Delegation with Palestinian participation, and a Palestinian Delegation with Jordanian presence. This resulted from Israel's refusal at the time to recognize the Palestinians as a separate entity. Jordan delayed its agreement to the "Agenda" for the final peace talks until Israel and the Palestinians signed the Oslo I Accord, with the famous ceremony on the White House lawn, on September 13, 1992. This "Agenda" was ready a year earlier, but signed only on September 14, 1992, at the State Department in Washington. This led to intensification of the negotiations, which moved to the region, and culminated in the Peace Treaty.

The state of belligerency between the two countries came to an end with the signing of the Peace Treaty, celebrated by a colorful ceremony in the Arava/Araba Valley just north of Aqaba/Eilat, on October 26, 1994. It is a comprehensive agreement, covering all areas of concern between the two countries, including water.

The agreement on water was one of the last issues to be concluded at all night meetings in the Jordanian Palace between the water negotiators -- Dr. Munther Haddadin for Jordan and Mr. Noah Kinarti for Israel -- with His Majesty King Hussein and Prime Minister Rabin working out the last difficult points.

THE JORDAN-ISRAEL WATER AGREEMENT

General Background and the Joint Water Committee

Article 6 of the Agreement states the principles relating to water, and Annex II details the "Water Related Matters". It is important to note that the area covered south of the Sea of Galilee extends only to the confluence of the Yarmouk River with Wadi Yabis/Tirat Zvi. This is the point at which the "Green Line" met the Jordan River. South of this point is the region which belonged to the West Bank, and will be under discussion between Israel and the Palestinians. From the point of view of the Jordan-Israel Treaty, the area to the south of this point, to the region of Jericho, "does not exist". The southern area covered by the Treaty begins near the Dead Sea and extends down to Eilat/Aqaba.

The opening statement of Article 6 is: "With the view to achieving a comprehensive and lasting settlement of all the water problems between them:" -- which stresses that this is a final agreement. Still, the negotiating parties mutually recognized that it is unwise to try and fix for all times all the details. A Joint Water Committee was therefore formed [Annex II, Article VII], as a permanent institution. The JWC is charged with implementing the Agreement, and with any additional water matters which may arise subsequently.

The JWC has three members from each party, is Co-Chaired by the parties, and must reach decisions by consensus. There is no recourse to arbitration or any other third party involvement, although the parties can, if they so agree at any point in time, seek external help. The JWC obviously comes under the supervision of their respective national leaders, via the relevant Ministers.

The JWC has established two Sub-Committees: Northern and Southern. The first deals with matters relating to the Jordan and Yarmouk. The second with groundwater in the Arava/Araba.

According to paragraph 3 of Article 6: "The parties recognize that their water resources are not sufficient to meet their needs. More water should be supplied for their use through various methods, including projects of regional and international co-operation." The parties recognize that by dividing the existing sources both will still face shortage, and they not only divide the "cake" but also enlarge it, a win-win solution. This is also an appeal to the international community to help in augmenting the region's water resources, to be one of the important "fruits of peace". Regrettably, to date there are many promises from various potential donors, but not much implementation.

The areas of co-operation mentioned in Article 6 are:

- development of existing and new sources,
- prevention of contamination,
- mutual assistance in alleviation of shortages,
- sharing of information.

Water Allocations, Storage, and Quality Protection

The Agreement does not mention "water rights". It states that "The parties agree mutually to recognize the rightful allocations of both of them in Jordan River and Yarmouk River waters and Arava/Araba ground water in accordance with agreed acceptable principles, quantities and quality as set out in Annex II, which shall be fully respected and complied with." [Article 6, Para. 1]. This indicates the pragmatic approach which the parties adopted. Rather than insisting on what might be their respective "water rights", according to some set on rules -- for example the Helsinki or the ILC Rules (the latter were presented and discussed in the UN only in the last year) -- the parties agreed on water quantities, qualities, times and locations.

Israel is given specified allocations from the Yarmouk River, specified for a "summer" period (May 15 to October 15) and "winter" period (October 16 to May 14), and the rest is for Jordan. To implement these allocations, "Jordan and Israel shall cooperate to build a diversion/storage dam on the Yarmouk River directly downstream of the Adassiya Diversion/point 121." [Annex II, Article II(1)]. Preliminary work in the location where the dam is to be constructed has been ongoing, but there is still no agreement on the precise

location, design and operation, and on environmental protection.

Israel also stores in its system 20 mcm/year of winter flows in the Yarmouk, to be returned to Jordan in the summer. This is done with a pipeline, 3.2 km long,"... from the Jordan River directly upstream of the Deganya gates on the river." [Article I(2)(a)]. The pipeline was constructed by Jordan, partly on Israeli territory, at its expense, and is operated by Jordan. Jordan pays Israel the operating costs of this system, and no compensation for the value of the water itself. A recent agreement by the Israeli Minister of Infrastructure Ariel Sharon resulted in an increase of 25 mcm/year to Jordan from this source.

"Jordan is entitled to an annual quantity of (10) MCM of desalinated water from the desalination of about (20) MCM of saline springs now diverted to the Jordan River." [Article I(2)(d)]. The brine from this operation cannot be discharged into the water courses, as is the case with other low quality waters: "Jordan and Israel will each prohibit the disposal of municipal and industrial wastewater into the courses of the Yarmouk or the Jordan Rivers before they are treated to standards allowing their unrestricted agricultural uses." [Article III(3)]

Jordan is given allocations from the Jordan River: "Winter period - 16th October to 14th May of each year. Jordan is entitled to store for its use a minimum average of (20) MCM of the floods in the Jordan River south of its confluence with the Yarmouk." [Article I(2)(b)]. This is conditioned on "Israel is entitled to maintain its current uses of the Jordan River waters between its confluence with the Yarmouk and its confluence with Wadi Yabis/Tirat Zvi." [Article I(2)(c)]. Agreement on how this translates into actual quantities of water for the two sides has not been settled yet. Studies of storage on the Jordan River have not been completed yet.

According to Article I(3): "Jordan and Israel shall cooperate in finding sources for the supply to Jordan of an additional quantity of 50 MCM/yr of water of drinkable standards. To this end, the Joint Water Committee will develop, within one year from the entry into force of the Treaty, a plan for the supply to Jordan of the above mentioned additional water. This plan will be forwarded to the respective governments for discussion and decision."

This is one of the major outstanding issues, on which the parties have not reached a plan as yet, two years after the expiration of that deadline. Jordan has insisted that it is Israel's responsibility to supply this water from its sources, and has repeatedly demanded that it be supplied from the Sea of Galilee. Israel's position was that the sources for this water should be found on both sides of the border, and that Jordan should pay the full price of developing and supplying it. The recent decision by Minister Sharon to supply an additional 25 MCM/yr to Jordan from the Israeli system constitutes a deviation from this position.

Groundwater in Wadi Araba/Emek Ha'arava

This is the area between the Dead Sea and the port cities of Eilat/Aqaba."... some wells drilled and used by Israel along with their associated systems fall on the Jordanian side of the borders. These wells and systems are under Jordan's sovereignty. Israel shall retain the use of these wells and systems in the quantity and quality detailed in Appendix 1, that shall be prepared by December 31, 1994. Neither country shall take, or cause to be taken, any measure that may appreciably reduce the yields or quality of these wells and systems." [Article IV(1)].

Furthermore, "Israel may increase the abstraction rate from wells and systems in Jordan by up to 10 MCM/yr above the yields referred to in paragraph 1 above, subject to the determination by the Joint Water Committee that this undertaking is hydrogeologically feasible and does not harm existing Jordanian uses. Such increase is to be carried out within five years from the entry into force of this Treaty." [Article IV(3)].

The northern pipeline from the Jordan River in Israel to the KAC, built and operated by Jordan, and Israel's continued use and potential expansion of the groundwater use in the Jordan in the south, are quite unique in international water agreements. This inter-linking of water systems, allowing entry of one country into the territory of the other, should be viewed as an indication of mutual trust and commitment which prevailed when the agreement was negotiated and concluded.

Observations and Comments

1. The water agreement is but one part of an overall Peace Treaty. What it accomplishes for each of the parties must be viewed in this light, and not in isolation.
2. It is a permanent agreement.
3. The Agreement is pragmatic.
4. The agreement is quite complex, making it possible to present different perspectives on what it achieves for each side. This allows interested parties, on both sides, to present the agreement as either an achievement for its side or a failure.
5. Protection of water quality and of the environment is an integral part of the Agreement. And yet, there is concern that while other parts of the Agreement have strong interests behind them (water for use), the environmental interests may not have strong and specific interests to stand for them. It is therefore the role of the national authorities to make sure that the environment does not get short-changed.
6. The Agreement recognizes the need of both parties to develop additional water, not merely divide the existing sources.

7. The Agreement does not specify how shortages (in the Yarmouk and Jordan) are to be allocated between the sides. This must be dealt with by the JWC.

8. Syrian involvement in the Yarmouk is an important factor. The construction of storage reservoirs and water uses in from the Yarmouk have an critical influence on the discharge of the river remaining for Jordan and Israel.

9. An agreement between Israel and Syria is likely to have an effect on the flows of the Jordan as well. There is a potential for decreasing these quantities, but also for creative alternatives which may increase the quantities available to all parties in the Jordan basin.

10. The water agreement with Jordan may have to be adjusted when a final Israeli-Palestinian water agreement is discussed, for areas along the Jordan Valley and beyond.

THE PALESTINIAN-ISRAELI WATER AGREEMENT IN OSLO II

Oslo II is an interim agreement, signed in September 1995. It constitutes, according to the Madrid Accord, a step towards the Permanent Status Settlement. Article 40, titled "Water and Sewage", was initialed by the water negotiators -- Mr. Nabil Sherif for the Palestinians and Mr. Noah Kinarti for Israel - in the early morning hours of September 18, 1995. It was the probably the first article of the agreement to be concluded.

Water Rights and Water Allocations

While Jordan consented to discussing "water allocations", the Palestinians managed to introduce into the agreement reference to "water rights". Article 40 opens with: "Israel recognizes the Palestinian water rights in the West Bank. These will be negotiated in the permanent status negotiations and settled in the Permanent Status Agreement relating to the various water resources." [Para. 1].

Structure of the Agreement

Beyond this point, the agreement is pragmatic. It contains 25 paragraphs, grouped into the following topics:

- Principles
- Transfer of Authority
- Additional Water
- The Joint Water Committee
- Supervision and Enforcement Mechanism
- Water Purchases
- Mutual Cooperation
- Protection of Water Resources and Water and Sewage Systems
- The Gaza Strip

There are four attached "Schedules":

- Schedule 5: Joint Water Committee
- Schedule 6: Supervision and Enforcement Mechanism
- Schedule 7: Data Concerning Aquifers
- Schedule 8: The Gaza Strip

The Principles include:

- The necessity to develop additional water
- Maintaining existing uses
- Preventing deterioration of water quality
- Sustainable use of water resources
- Adjusting utilization of the sources to hydrological variability
- Treatment, reuse or proper disposal of sewage
- Preventing harm to water sources and systems of both sides

Additional Water

The Agreement states that "Both sides have agreed that the future needs of the Palestinians in the West Bank are estimated to be between 70 - 80 mcm/yr." [Para. 6]. It then details the additional water to be provided to the Palestinians "during the interim period" [Para. 7], some projects to be constructed by Israel, others by the Palestinians themselves. The total quantity specified in these projects is 28.6 mcm/yr, of which 5 mcm/yr is to Gaza from the Israeli water system [Para. 7(a)(6) and (b)(3)], 17 mcm/yr" ... to the Hebron, Bethlehem and Ramallah areas from the Eastern Aquifer or other agreed sources in the West Bank" [Para. 7(b)(2)], and the rest (6.6 mcm/yr) from a number of specified sources and systems.

The Joint Water Committee and Coordinated Management

The Joint Water Committee [Para. 11 - 15, and Schedule 5] comprises three members from each party, with Co-Chairs. It has a very broad mandate, and has to reach decisions by consensus. There is no reference to arbitration or any other form of third party involvement, although the JWC is obviously entitled to seek advice or involvement by external entities, if it so agrees.

A basic principle of the agreement is separated and coordinated management of water and sewage: "While respecting each side's powers and responsibilities in the sphere of water and sewage in their respective areas, both sides agree to coordinate the management of water and sewage resources and systems in the West Bank during the interim period..." [Para. 3]. "Coordinated" should be understood as an alternative to "joint". "Joint" would mean joint ownership and management of a resource (the extent of the joint resource must obviously be defined, for the principle to be made practical). "Coordinated" means that each side is sovereign in its own domain, but they agree that certain matters (which have to be defined, to make the agreement practical) must be managed jointly.

The Mountain Aquifer

The main water resource of concern is the Mountain Aquifer. It underlies the West Bank, extending east to the Jordan Valley and West underneath the Israeli Coastal Aquifer and into the Mediterranean Sea. It has three sub-aquifers: Western, Eastern, North-Eastern. The first is the most important to Israel. It has been using the yield of this aquifer for decades, first from springs feeding western flowing rivers, and since the 1950s through wells drilled at the foothills, within the "Green Line". Its "estimated potential" (average annual yield) is stated in Schedule 7 to be 362 MCM, of which Israel is using 340 MCM/yr and the Palestinians 22 MCM/yr. The North-Eastern Aquifer is stated to have a potential of 145 MM/yr, with 103 MCM/yr used by Israel and 42 MCM/yr by the Palestinians. The Eastern Aquifer is the least developed. Of its potential of 172 MCM/yr, 54 MCM/yr are used by Palestinians, 40 MCM/yr by Israelis, and the remaining 78 MCM/yr are yet to be developed.

The JWC is charged with balanced management of the resource. "When conditions, such as climatological or hydrological variability, dictate a reduction or enable an increase in the extraction from a resource, the JWC shall determine the changes in the extractions and in the resultant supply. These changes will be allocated between the two sides by the JWC in accordance with methods and procedures determined by it." [Schedule 5, Para. 1(d)].

A Joint Supervision and Enforcement Mechanism

Protection of water resources and of water and sewage systems is an important aspect of the Agreement [Para. 21 - 24]. A Supervision and Enforcement Mechanism is set up [Para. 16-17], with Joint Supervision and Enforcement Teams (JSETs), whose structure, tasks, responsibilities and enforcement capabilities are quite far reaching [Schedule 6]. Both sides thus express the intention to make sure that the agreement will indeed be implemented and enforced.

Observations and Comments

1. The water agreement is but one part of an overall Agreement. What it accomplishes for each of the parties must be viewed in this light, and not in isolation.
2. It is an interim agreement. As such, it has to provide an arrangement for a number of years, at least. It can be viewed as a forerunner of the permanent agreement, although not as a definitive indicator of what that agreement might be.
3. The agreement is pragmatic. However, Paragraph 1 does deal with "water rights", while postponing the definition to the negotiations on the Permanent Status.

4. Water and sewage are dealt with together, both because sewage constitutes a component of the potential resource, and because sewage endangers water resources and the environment.
5. The Agreement recognizes the need of both parties to develop additional water, not merely divide the existing sources.
6. A well defined and specific joint mechanism is set up for supervision and enforcement.
7. The water agreements between Israel and the two neighbors -- Jordan and the Palestinian Authority -- will have to be coordinated and brought in line.