

ISRAEL'S TRANSBOUNDARY WATER DISPUTES

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INTRODUCTION

As water is necessary to the function of life, it is imperative to understand its role in the politically turbulent Middle East. This Comment will focus on Israel's water disputes with her neighbors and how such disputes have led to military confrontation, been partially resolved, or otherwise continue to exist. As populations in the region are expected to increase, the need for water, already in short supply, will be magnified. Thus, negotiations to settle water disputes and provide for equitable distribution of the water resources will become more contentious. This legal analysis of Israel's water disputes seeks to provide some guidance to settling these issues in Israel's future peace negotiations with Syria and Palestine.

I. ISRAEL, SYRIA AND THE GOLAN HEIGHTS

The issue regarding water does not manifest itself in the Golan Heights but in the valley below where the Jordan River flows into Lake Tiberias (also known as the Sea of Galilee).¹ The Golan Heights—captured by Israel in the 1967 war and annexed in 1981—which lies between the borders of Israel and Syria, prevents Syria from having access to the water of the Jordan River or Lake Tiberias.

The Israeli-Syrian water conflict began with the creation of several demilitarized zones (“DMZs”) along the border between Syria and Israel after Israel's 1948 war of independence. There were several immediate conflicts regarding incursions into and appropriations of the DMZs by both sides. In 1966, the United Nations reported that Israel and Syria had produced 66,000 official complaints against the other, most of which having to do with the DMZs.² The period between 1957 and 1967 saw a fierce struggle over water.³ During this period Syria initiated several water projects to divert the Jordan River which Israel attacked. The Syrian projects were likely in response to Israel's diversion of Lake Tiberias water sending it 155 miles south to the Negev Desert in 1956.⁴ These conflicts ultimately led to the 1967 war. Along with disputes over agricultural lands in the DMZs and Fatah operations which crossed the DMZs, water was the

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¹ Donald Neff, *Israel-Syria: Conflict at the Jordan River, 1949-1967*, 23 J. PALESTINE STUD. 26, 26 (Summer 1994). *Maps of the Middle East, Water Systems*, <http://www.theglobaleducationproject.org/mideast/info/maps/israel-water-systems-map.html> (last visited Feb. 16, 2010).

² Frederic C. Hof, *The Line of June 4, 1967*, 14 MIDDLE EAST INSIGHT 17, 18–19 (Sept.–Oct. 1999).

³ Neff, *supra* note 1, at 35.

⁴ *Id.* at 36.

primary issue leading up to the war.⁵ The 1967 war resulted in Israel capturing the Golan Heights. Syria attempted to recapture the Golan Heights in 1973, but Israel defended the area and retained control. Israel signed an armistice with Syria in 1974.⁶

A. Potential Peace Negotiations

The issue of the Golan Heights will be an important part of any peace treaty negotiations between Israel and Syria (the countries are still technically at a state of war). Recently, the parties have been engaged in peace treaty negotiation through Turkish mediators.⁷ The Israeli government has announced that it would be willing to withdraw from the Golan Heights as part of a comprehensive peace treaty.⁸ Israel will likely give up the Golan Heights only if the water issue is resolved in its favor. It is possible Israel will insist on a small DMZ along the eastern banks of the Jordan River and Lake Tiberias, which maintains the current allocation of water to Israel and prevents Syrian access to the water. This position will be a stumbling block to peace negotiations because the Syrians will insist on returning to the borders that existed prior to the 1967 war.

B. Strategic Concerns

Initially, the capture of the Golan Heights provided Israel with a military advantage by giving it control of an area rising 3,000 meters above sea level, looking down into Syria. However, due to spy satellite technology and weapons advancement, retaining the Golan Heights is no longer necessary for Israel's military security. In fact, the willingness to withdraw from the Golan Heights indicates that Israel believes that withdrawal can help enhance Israel's security through realization of a peace treaty with Syria, thereby eliminating a military threat from one of its neighbors. Also, a peace treaty with Syria, an ally of Iran, may help tone down some of the inflammatory rhetoric currently being espoused by Iran's president.⁹ Once the parties come to the negotiating table, the water issue may be the main obstacle that stands in the way of peace between these two countries (notwithstanding the September 2007 Israeli airstrike on a site in Syria, believed to contain a partially erected nuclear reactor¹⁰).

⁵ TOM SEGEV, 1967: ISRAEL, THE WAR, AND THE YEAR THAT TRANSFORMED THE MIDDLE EAST 192 (Jessica Cohen trans., Metropolitan Books 2007) (2005).

⁶ Timeline: Israel and Syria—Conflict and Negotiation, http://www.nytimes.com/interactive/2008/05/21/world/middleeast/20080521_MIDEAST_PRIMER.html (last visited Nov. 23, 2009) [hereinafter Timeline].

⁷ Allegra Stratton, *Assad Confirms Turkish Mediation with Israel*, GUARDIAN, April 24, 2008, available at <http://www.guardian.co.uk/world/2008/apr/24/syria.israelandthepalestinians>.

⁸ See Timeline, *supra* note 6.

⁹ Ethan Bronner, *Israel Holds Peace Talks With Syria*, N.Y. TIMES, May 22, 2008, at A1.

¹⁰ Timeline, *supra* note 6.

II. ISRAEL AND JORDAN

The Jordan River's headwaters flow from northern Israel into Lake Tiberias. Then the river flows along the border with Jordan, to the Jordan River basin where it converges with the Yarmouk River. The Jordan River basin supplies Israel, Jordan, and Syria with water. As of 2000, Syria was using 250 million cubic meters (MCM) of water per year and Jordan over 100 MCM per year.¹¹ Although the water of the Jordan River basin is of prime importance, groundwater has been utilized as major source of water for Israel and Palestine.¹² As will be seen below, the water of the Jordan River basin has been a source of dispute between Jordan and Israel.

A. *The Johnston Allocations*

In view of rising tensions in the area, the United States, in 1953, sent a special envoy, Eric Johnston, to the region to try to mediate a negotiated settlement of the Jordan River allocations.¹³ Johnston's initial proposal was based on a study prepared by Charles Main and the Tennessee Valley Authority at the request of the United Nations.¹⁴ The proposal, known as the "Main Plan," "allocated 393 Million Cubic Meters (MCM) per year to Israel, 774 MCM per year to Jordan, and 45 MCM per year to Syria."¹⁵ After negotiations, the parties agreed on a Unified Plan—known as the Johnston allocations—under which Israel was allocated 400 MCM per year, Jordan 720 MCM per year, and Syria 132 MCM per year. The technical committees from both sides (Arab and Israeli) accepted the plan, but the plan was never ratified. Although not ratified, the Johnston plan was initially adhered to by the parties.¹⁶

B. *The 1967 War*

In the 1960s, both Israel and Jordan undertook projects that would divert the waters of the Jordan River for their own use in excess of the Johnston allocations. In undertaking the East Ghor project, Jordan extended an irrigation canal from the Yarmouk River along the eastern shore of the Jordan River.¹⁷ Israel began withdrawing 320 MCM per year for its National Water Carrier plan.¹⁸ Together with border skirmishes between Israel and Syria, these events helped trigger the

¹¹ TONY ALLEN, *THE MIDDLE EAST WATER QUESTION: HYDROPOLITICS AND THE GLOBAL ECONOMY* 76 (2000).

¹² *Id.*

¹³ See Aaron T. Wolf, *Middle East Water Conflicts and Directions for Conflict Resolution*, INT'L FOOD POLICY INST. (March 1996).

¹⁴ *Id.* at 5.

¹⁵ *Id.*

¹⁶ *Id.* at 6.

¹⁷ *Id.*

¹⁸ *Id.*

1967 war.¹⁹ After the 1967 war, Israel gained territory that improved its hydraulic geopolitical position: Israel acquired two of three headwaters of the Jordan River, riparian access to the entire river, and access to the Mountain Aquifer in the West Bank.²⁰

C. *The Jordan – Israeli Peace Treaty*

On October 26, 1994, Israel and Jordan signed a peace treaty, which ended a “technical” state of war between the countries. In the preamble to the treaty, Israel and Jordan set forth a desire “to ensure lasting security for both their States and in particular to avoid threats and the use of force between them.”²¹ The settlement of the issue of shared water resources was addressed in Article 6 of the Treaty, entitled “Water” as follows:

With the view to achieving a comprehensive and lasting settlement of all the water problems between them:

1. The Parties agree mutually to recognise the rightful allocations of both of them in Jordan River and Yarmouk River waters and Araba/Arava ground water in accordance with the agreed acceptable principles, quantities and quality as set out in Annex II, which shall be fully respected and complied with.

2. The Parties, recognising the necessity to find a practical, just and agreed solution to their water problems and with the view that the subject of water can form the basis for the advancement of co-operation between them, jointly undertake to ensure that the management and development of their water resources do not, in any way, harm the water resources of the other Party.

3. The Parties recognise 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.

4. In light of paragraph 3 of this Article, with the understanding that co-operation in water-related subjects would be to the benefit of both Parties, and will help alleviate their water shortages, and that water issues along their entire boundary must be dealt with in their totality, including the possibility of trans-boundary water transfers, the Parties agree to search for ways to alleviate water shortage and to co-operate in the following fields:

a. development of existing and new water resources, increasing the water availability including co-operation on a regional

¹⁹ *Id.*

²⁰ Raed Mounir Fathallah, *Water Disputes in the Middle East: An International Law Analysis of the Israeli-Jordan Peace Accord*, 12 J. LAND USE & ENVTL. L. 119, 127 (1996).

²¹ Treaty of Peace Between the State of Israel and the Hashemite Kingdom of Jordan, Isr.-Jordan, Oct. 26, 1994, 34 I.L.M. 46 [hereinafter Treaty of Peace Between Israel and Jordan].

basis as appropriate, and minimising wastage of water resources through the chain of their uses;

- b. prevention of contamination of water resources;
- c. mutual assistance in the alleviation of water shortages;
- d. transfer of information and joint research and development in water-related subjects, and review of the potentials for enhancement of water resources development and use.

5. The implementation of both Parties' undertakings under this Article is detailed in Annex II.²²

In Article 6, and in Annex II, discussed below, the parties agree (1) to maintain allocations in accordance with Annex II; (2) to exchange technology and research regarding the development of new sources of water; (3) to create new sources of water; and (4) to jointly ensure the quality of the shared water resources. Article 6 serves to remove disputes over water resources as a source of disagreement between the parties and prevent unilateral actions that otherwise may lead to military skirmishes or full scale armed conflict. Article 6 has proved effective up until the present, as no armed conflicts over water have been reported.

D. Annex II

Annex II contains the details of the provisions agreed to above. The key provisions of the Annex are as follows:

Allocations: Israel is granted 12 MCM from the Yarmouk River during the summer period of May 15th to October 15th of each year.²³ Jordan is granted the remaining the flow.²⁴ During the winter period, October 16th to May 14th of each year Israel may pump thirteen MCM and Jordan is entitled to the remainder.²⁵ Israel may pump an additional twenty MCM from the Yarmouk during the winter period, while Jordan may pump an additional twenty MCM from the Jordan River during the summer period.²⁶ Israel is to maintain its current use of the Jordan River waters.²⁷ Jordan is entitled to an annual quantity equivalent to that of Israel provided that Jordan's use will not harm the quantity or quality of the Israeli use of the water.²⁸

Storage: The parties agree to build two storage systems with the cooperation of Israel and Jordan.²⁹ The first project is to build a diversion/storage dam on the Yarmouk River directly downstream of the Adassiya Diversion.³⁰ The purpose is to improve the diversion efficiency into the King Abdullah Canal (East Ghor

²² *Id.* at 48–49.

²³ *Id.* at 58.

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ Treaty of Peace Between Israel and Jordan, *supra* note 21, at 58.

²⁹ *Id.* at 59.

³⁰ *Id.*

Canal) of Jordan's water allocation.³¹ The second project is to build a system of water storage on the Jordan River, along the parties' common border between the confluence of the Yarmouk River and its confluence with Tirat Zvi/Wadi Yabis.³² The purpose of this second project is to allow Jordan to store its twenty MCM allocation during the summer period.³³

Water Quality and Protection: Israel and Jordan agree to protect, "within their own jurisdiction, the shared waters of the Jordan and Yarmouk Rivers and Arava/Araba groundwater, against any pollution, contamination, harm and of unauthorized withdrawals of each other's allocations."³⁴ The Joint Water Committee monitors the shared waters.³⁵ Israel and Jordan is each prohibited from disposing of untreated industrial wastewater into the Jordan and Yarmouk Rivers.³⁶

Cooperation: The parties "undertake to exchange relevant data on water resources through the Joint Water Committee."³⁷ The Committee is comprised of three members from each country.³⁸ Sub-committees may be formed, as deemed necessary and such sub-committees must include a northern sub-committee and a southern sub-committee, for the management of the mutual water resources in these sectors.³⁹

Since the signing of the peace treaty the relationship between Jordan and Israel has endured. However, one commentator has called it a "cold peace" influenced negatively by the inability of Israel to reach a two-state solution with the Palestinian Authority.⁴⁰ While Israel's water dispute with Jordan has seemingly been resolved, Israel's water disputes with the Palestinian Authority continue to be contentious.

III. ISRAEL AND PALESTINE

For the Israelis and Palestinians, the main source of concern with respect to water is the Mountain Aquifer located in the West Bank. The Mountain Aquifer lies under the West Bank and extends east to Jordan and west to the Mediterranean Sea. The Mountain Aquifer has three sub aquifers; 1) Western, 2) Eastern, and 3) North-Eastern.⁴¹ Israel uses 340 MCM per year of 362 MCM per year supply of the Western Aquifer, and the Palestinians use 22 MCM per year. The North-

³¹ *Id.*

³² *Id.*

³³ Treaty of Peace Between Israel and Jordan, *supra* note 21, at 59.

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.* at 60.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ Alia Shukri Hamzeh, *Ten-year Anniversary of Jordan-Israel Peace Treaty*, JORDAN TIMES, Oct. 26, 2004, available at <http://www.jordanembassyus.org/10262004007.htm>.

⁴¹ Uri Shamir, *The Water Agreements Between Israel and its Neighbors* (1997), [http://urishamir.wri.technion.ac.il/files/documents/1997-The Water Agreements Between Israel and its Neighbors.pdf](http://urishamir.wri.technion.ac.il/files/documents/1997-The%20Water%20Agreements%20Between%20Israel%20and%20its%20Neighbors.pdf).

Eastern Aquifer has a potential of 145 MCM per year, with Israel using 103 MCM per year and the Palestinians 42 MCM per year. The Eastern Aquifer is the least developed; of its potential 172 MCM per year output, 40 MCM per year is used by Israel, and 54 MCM per year are used by the Palestinians, with the remainder not utilized.⁴²

A. The Agreements: Declaration of Principles and Oslo II

The sharing of water resources has been an area of contention between the Israelis and the Palestinians. The issue was first addressed with the negotiation of the Declaration of Principles, established in Washington D.C. in 1993.⁴³ The Declaration of Principles called for the creation of a Palestinian Water Administration Authority, among other administrative authorities, which was intended to enable economic growth.⁴⁴ The Declaration of Principles called for further cooperation in the field of water. This was to be accomplished by utilizing experts from both sides to prepare proposals for studies and plans on water rights of each party, as well as the equitable utilization of joint water resources.⁴⁵ It is important to note here the parties' recognition of the equitable distribution of the water sources. How this developed in the subsequent years will be discussed further below.

In light of the agreement reached in the Declaration of Principles, the parties undertook to reach more comprehensive terms on the water issue, under the Oslo II agreement of 1995. In Annex III, Article 40 of Oslo II, the parties set forth their agreement on the water issue stated in part as follows:

On the basis of good-will both sides have reached the following agreement in the sphere of Water and Sewage:

Principles

1. 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.
2. Both sides recognize the necessity to develop additional water for various uses.
3. 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

⁴² The Israeli-Palestinian Interim Agreement on the West Bank and Gaza Strip, September 28, 1995, 36 I.L.M. 551, [hereinafter Oslo II].

⁴³ Declaration of Principles on Interim Self-Government Arrangements, Isr.-P.L.O., Sept. 13, 1993, 32 I.L.M. 1525 [hereinafter Declaration of Principles].

⁴⁴ *Id.* at 1530 (also calling for the establishment of the Palestinian Electric Authority, Gaza Sea Port Authority, Palestinian Development Bank, Palestinian Export Promotion Board, Palestinian Environmental Authority, and Palestinian Land Authority).

⁴⁵ *See id.* Annex III, subparagraph 1.

systems in the West Bank during the interim period, in accordance with the following principles:

a. Maintaining existing quantities of utilization from the resources, taking into consideration the quantities of additional water for the Palestinians from the Eastern Aquifer and other agreed sources in the West Bank as detailed in this Article.

b. Preventing the deterioration of water quality in water resources.

c. Using the water resources in a manner which will ensure sustainable use in the future, in quantity and quality.

d. Adjusting the utilization of the resources according to variable climatological and hydrological conditions.

e. Taking all necessary measures to prevent any harm to water resources, including those utilized by the other side.

f. Treating, reusing or properly disposing of all domestic, urban, industrial, and agricultural sewage.

g. Existing water and sewage systems shall be operated, maintained and developed in a coordinated manner, as set out in this Article.

h. Each side shall take all necessary measures to prevent any harm to the water and sewage systems in their respective areas.

i. Each side shall ensure that the provisions of this Article are applied to all resources and systems, including those privately owned or operated, in their respective areas.

Transfer of Authority

4. The Israeli side shall transfer to the Palestinian side, and the Palestinian side shall assume, powers and responsibilities in the sphere of water and sewage in the West Bank related solely to Palestinians, that are currently held by the military government and its Civil Administration, except for the issues that will be negotiated in the permanent status negotiations, in accordance with the provisions of this Article...

Additional Water

6. Both sides have agreed that the future needs of the Palestinians in the West Bank are estimated to be between 70 - 80 MCM/year.

7. In this framework, and in order to meet the immediate needs of the Palestinians in fresh water for domestic use, both sides recognize the necessity to make available to the Palestinians during the interim period a total quantity of 28.6 MCM/year, as detailed below:

a. Israeli Commitment:

(1) Additional supply to Hebron and the Bethlehem area, including the construction of the required pipeline - 1 MCM/year.

(2) Additional supply to Ramallah area - 0.5 MCM/year.

(3) Additional supply to an agreed take-off point in the Salfit area - 0.6 MCM/year.

(4) Additional supply to the Nablus area - 1 MCM/year.

(5) The drilling of an additional well in the Jenin area - 1.4 MCM/year.

(6) Additional supply to the Gaza Strip - 5 MCM/year.

(7) The capital cost of items (1) and (5) above shall be borne by Israel.

b. Palestinian Responsibility:

(1) An additional well in the Nablus area - 2.1 MCM/year.

(2) Additional supply to the Hebron, Bethlehem and Ramallah areas from the Eastern Aquifer or other agreed sources in the West Bank - 17 MCM/year.

(3) A new pipeline to convey the 5 MCM/year from the existing Israeli water system to the Gaza Strip. In the future, this quantity will come from desalination in Israel.

(4) The connecting pipeline from the Salfit take-off point to Salfit.

(5) The connection of the additional well in the Jenin area to the consumers.

(6) The remainder of the estimated quantity of the Palestinian needs mentioned in paragraph 6 above, over the quantities mentioned in this paragraph (41.4-51.4 MCM/year), shall be developed by the Palestinians from the Eastern Aquifer and other agreed sources in the West Bank. The Palestinians will have the right to utilize this amount for their needs (domestic and agricultural)

....

The Joint Water Committee

11. In order to implement their undertakings under this Article, the two sides will establish, upon the signing of this Agreement, a permanent Joint Water Committee (JWC) for the interim period, under the auspices of the CAC.

12. The function of the JWC shall be to deal with all water and sewage related issues in the West Bank including, inter alia:

a. Coordinated management of water resources.

b. Coordinated management of water and sewage systems.

c. Protection of water resources and water and sewage systems.

d. Exchange of information relating to water and sewage laws and regulations.

e. Overseeing the operation of the joint supervision and enforcement mechanism.

f. Resolution of water and sewage related disputes.

g. Cooperation in the field of water and sewage, as detailed in this Article.

h. Arrangements for water supply from one side to the other.

i. Monitoring systems. The existing regulations concerning measurement and monitoring shall remain in force until the JWC decides otherwise.

j. Other issues of mutual interest in the sphere of water and sewage.

13. The JWC shall be comprised of an equal number of representatives from each side.

14. All decisions of the JWC shall be reached by consensus, including the agenda, its procedures and other matters.

15. Detailed responsibilities and obligations of the JWC for the implementation of its functions are set out in Schedule 8.

Supervision and Enforcement Mechanism

16. Both sides recognize the necessity to establish a joint mechanism for supervision over and enforcement of their agreements in the field of water and sewage, in the West Bank.

17. For this purpose, both sides shall establish, upon the signing of this Agreement, Joint Supervision and Enforcement Teams (JSET), whose structure, role, and mode of operation is detailed in Schedule 9.⁴⁵

This provision recognizes the “water rights” of the Palestinians, unlike the water allocations set forth in the Jordan-Israeli peace treaty. These rights are expected to be negotiated and settled in the permanent status negotiations.⁴⁶ This provision states that the additional water needs of the Palestinian people will be 70 to 80 MCM per year.⁴⁷ These needs can be partially satisfied by Israel making available to the Palestinians 28.6 MCM per year from existing sources.⁴⁸ The remainder is expected to come from the Palestinian development of the Eastern Aquifer.⁴⁹ The parties agreed to set up a permanent Joint Water Committee to deal with all water and sewage issues in the West Bank.⁵⁰ The terms of the provision will be enforced by Joint Supervision and Enforcement Teams (JSET).⁵¹

B. Palestinian Water Rights After Oslo II

After Oslo II, the parties engaged in permanent status negotiations. However, the negotiations stalled after 2000 due in part to Israel’s refusal to negotiate following the onset of the second Intifada. The following is a discussion of the state of the Palestinian water situation from Oslo II to the present.

⁴⁵ Oslo II, *supra* note 42, at 625-26.

⁴⁶ *Id.* at 625.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.* at 626.

⁵⁰ *Id.*

⁵¹ *Id.*

The Joint Water Committee (JWC), a joint management concept agreed to in Oslo II, while conceptually being a significant step forward in cooperation has proved illusory in practice. The JWC merely formalized an existing discriminatory management practice. Prior to Oslo II, the water network of the Palestinians and Israeli's was integrated, and that has not changed. After Oslo II, Israel would continue to operate all the wells in the West Bank.⁵² Although the Palestinians were responsible for maintaining and operating internal systems in Palestinian towns and villages, there is no control over, or access to, the water source. Thus, Israel was free to discriminate in favor of the Israeli settlers in the West Bank.⁵³ The water situation for many Palestinians in the West Bank remains dire. Israel Allocates to itself 75% of the Mountain Aquifer even though the Aquifer is on Palestinian land. Approximately 20% of the Palestinians in the West Bank are not connected to a water network and many have to buy water on the private market.⁵⁴ A cubic meter of water is reported to cost fifteen to thirty shekels, three to six times higher than what Israeli households pay.⁵⁵ Israeli permission is necessary to dig wells on Palestinian territory, which is rarely granted. This is especially true in areas with Israeli and Palestinian inhabitants (known as "B" areas). Permission is almost never granted in the C areas, which have Israeli inhabitants only. In the A areas (Palestinian inhabitants only), there is little groundwater so seeking permission to dig a well is moot.⁵⁶ In 2008, there was a fifteen day period where there was no running water in the West Bank, while in Jenin, there was a twenty-five day period without running water.⁵⁷

The promise of an additional water source for the Palestinians from the undeveloped Eastern Aquifer has not come to fruition. After Oslo II, international funding, led by the United States Agency for International Development (USAID) poured in for development of the Eastern Aquifer. Sixteen sites for production wells were agreed upon. However, the wells proved not to yield the expected flow. It was determined that if the Eastern Aquifer were fully developed, salt water from the floor of the Jordan Valley would flow up into the lower portion of the Aquifer, possibly contaminating existing wells.⁵⁸

⁵² Jan Selby, *Joint Mismanagement: Reappraising the Oslo Water Regime*, in *WATER RESOURCES IN THE MIDDLE EAST: ISRAELI-PALESTINIAN WATER ISSUES FROM CONFLICT TO COOPERATION*, 203, 205-06 (Hillel Shuval & Hassan Dweik eds. Springer Berlin Hiedelberg, vol. 2, 2007), available at <http://www.ipcri.org/watconf/papers/jan.pdf>.

⁵³ *Id.*

⁵⁴ B'Tselem, *Palestine: Israeli Water Policies Leave West Bank Dry*, 767 GREEN LEFT WEEKLY 19, 19 (Sept. 17, 2008), available at <http://www.greenleft.org.au/2008/767/39588>.

⁵⁵ *Id.*

⁵⁶ Interview with Abeer Awaad, Media Coordinator, Palestinian Water Authority, in New York City, N.Y. (Oct. 23, 2008).

⁵⁷ Interview with Samir Aldarabi, United Nations Radio-Arabia Unit, in New York City, N.Y. (Oct. 23, 2008).

⁵⁸ Selby, *supra* note 52, at 209.

C. *The Desalination Alternative*

It has been reported that Israel has a secret plan for a desalination plant to supply drinking water to the West Bank.⁵⁹ The plan calls for seawater to be desalinated at Caesaria on the Mediterranean coast and piped across Israel to the West Bank. The plan also calls for the plant to be funded by international donors (primarily USAID).⁶⁰ Cost is an issue for the Palestinians as one cubic meter would cost about three to four shekels.⁶¹ Conceptually, this plan would alleviate the water supply problems in the West Bank. Palestinians object to this plan because it would constitute an abandonment to their claim to the water of the Mountain Aquifer.⁶² A more equitable solution may be for the desalination plant to supply Israel with water, negating the necessity to run a pipeline across Israel to the West Bank, and then reallocate resources of the Mountain Aquifer to the Palestinian people. To date, no work on the desalination plant has occurred, as Palestinian Authority, President Abbas, has refused to consent to the project.⁶³

IV. INTERNATIONAL WATER LAW

The development of international water law can help define the obligations of Israel and its neighbors in their disputes. International water law has evolved into customary law, which offers a standard to be utilized in international dispute resolution forums, such as in the International Court of Justice, or in diplomatic negotiations. The following is a description of the evolution of customary water law.

A. *The Harmon Doctrine*

The earliest water law theory was first proffered in 1906 by US Attorney General Judson Harmon, who claimed that Mexico was not entitled to water from the Rio Grande, a river which borders the United States and Mexico. The doctrine was based on the theory of absolute territorial sovereignty. Under this theory a state can use the waters on its territory without any obligation toward any riparian neighbors.⁶⁴ This theory favors upstream riparian states and is usually rejected by downstream riparian states.⁶⁵ The Harmon Doctrine eventually gave way to a concept of reasonable and equitable sharing between riparian states.

⁵⁹ Fred Pearce, *Israel Lays Claim to Palestine's Water*, NEW SCIENTIST (May 29, 2004), <http://www.newscientist.com/article/mg18224491.100-israel-lays-claim-to-palestines-water.html>.

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² Interview with Abeer Awaad, *supra* note 56.

⁶³ *Id.*

⁶⁴ Fathallah, *supra* note 20, at 138.

⁶⁵ *Id.* at 138.

B. The Helsinki Rules

The Helsinki Rules on the Uses of the Waters of International Rivers⁶⁶ was an attempt to formalize in one document the concepts that had become international customary water law. Adopted by the International Law Association in 1967, the Helsinki Rules provide “that each basin state is entitled to a reasonable and equitable share in the beneficial uses of the waters of an international drainage basin.”⁶⁷ The determination of what is a reasonable and equitable share is determined by all the relevant factors.⁶⁸ Under the Helsinki Rules the relevant factors include but are not limited to:

1. The geography of the basin, including in particular the extent of the drainage area in the territory of each basin State;
2. The hydrology of the basin, including in particular the contribution of water by each basin State;
3. The climate affecting the basin;
4. The past utilization of the waters of the basin, including in particular existing utilization;
5. The economic and social needs of each basin State;
6. The population dependent on the waters of the basin in each basin State;
7. The comparative costs of alternative means of satisfying the economic and social needs of each basin State;
8. The availability of other resources;
9. The avoidance of unnecessary waste in the utilization of waters of the basin;
10. The practicability of compensation to one or more of the co-basin States as a means of adjusting conflicts among uses; and
11. The degree to which the needs of a basin State may be satisfied, without causing substantial injury to a co-basin State.⁶⁹

The weight to be given to each factor is determined by its importance in comparison with that of other relevant factors. In determining what is a reasonable and equitable share, all relevant factors are to be considered together and a conclusion reached on the basis of the whole.⁷⁰

The Helsinki Rules establish the rules of equitable utilization and cooperation between states in settling water disputes. Also reflected in the Helsinki Rules is an incorporation of the concept that one can use the water source for their own benefit so long as they do not substantially injure another riparian state. The unofficial

⁶⁶ Int'l Law Ass'n (ILA), *Helsinki Rules on the Uses of the Waters of International Rivers*, 52 Int'l L. Ass'n Rep. Conf. (August 20, 1966) [hereinafter Helsinki Rules].

⁶⁷ *Id.* at 486.

⁶⁸ *Id.* at 488.

⁶⁹ *Id.*

⁷⁰ *Id.*

status of the International Law Association prevented enforceability of the Helsinki Rules provisions and “undermined their binding authority.”⁷¹ However, the Helsinki Rules paved the way for a binding convention to be taken up by the United Nations.

*C. The Convention on the Law of Non-Navigational Uses of International Watercourses*⁷²

Representing the culmination of the development of international water law from the Helsinki Rules to the present, the United Nations General Assembly adopted the Convention in 1997. The Watercourse Convention represents binding customary law on the member states of the United Nations. The Watercourse Convention applies to “measures of protection, preservation and management related to the uses of non-navigational water-courses.”⁷³ The Watercourse Convention embodies the principles of “Equitable and Reasonable Utilization and Participation.”⁷⁴ Article 5 of the Watercourse Convention states this principle as follows:

1. Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the watercourse.

2. Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilize the watercourse and the duty to cooperate in the protection and development thereof, as provided in the present Convention.⁷⁵

Article 5, while adopting the Helsinki Rules principle of reasonable and equitable sharing, also adds the obligation of sustainable utilization of the watercourse, thereby incorporating an environmental element to international water law. The Watercourse Convention further adopts the principle of the obligation not to cause significant harm⁷⁶ and a general obligation to cooperate.⁷⁷ In addition to Article 5, the Watercourse Convention adopts the following environmental provisions:

⁷¹ Fathalla, *supra* note 20, at 140-41.

⁷² Convention on the Law of Non-Navigational Uses of International Watercourses, May 21, 1997, 36 I.L.M. 700 (1997) [hereinafter Watercourse Convention].

⁷³ *Id.* at 704.

⁷⁴ *Id.* at 705.

⁷⁵ *Id.*

⁷⁶ *Id.* at 706.

Article 20: Protection and Preservation of Ecosystems

Watercourse States shall, individually and, where appropriate, jointly, protect and preserve the ecosystems of international watercourses.

Article 21: Prevention, Reduction and Control of Pollution

1. For the purpose of this article, "pollution of an international watercourse" means any detrimental alteration in the composition or quality of the waters of an international watercourse which results directly or indirectly from human conduct.

2. Watercourse States shall, individually and, where appropriate, jointly, prevent, reduce and control the pollution of an international watercourse that may cause significant harm to other watercourse States or to their environment, including harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse. Watercourse States shall take steps to harmonize their policies in this connection.

3. Watercourse States shall, at the request of any of them, consult with a view to arriving at mutually agreeable measures and methods to prevent, reduce and control pollution of an international watercourse, such as:

- (a) Setting joint water quality objectives and criteria;
- (b) Establishing techniques and practices to address pollution from point and non-point sources;
- (c) Establishing lists of substances the introduction of which into the waters of an international watercourse is to be prohibited, limited, investigated or monitored.⁷⁸

The environmental concerns expressed by these two articles along with the "sustainable" language in Article 5, demonstrates an environmental awareness and concern not evident at the time of the Helsinki Rules, thereby resulting in a more comprehensive agreement.

D. Application of the Watercourse Convention

Although the agreed upon allocations in the Jordan-Israel Peace Treaty predate the Watercourse Convention, the Watercourse Convention states that nothing in the agreement shall affect the rights and obligations of a state arising from an agreement in force on the date it became a party to the convention.⁷⁹ The

⁷⁷ *Id.*

⁷⁸ *Id.* at 710.

⁷⁹ *Id.* at 704.

Watercourse Convention further provides that such states may, where necessary, consider harmonizing such agreements with the basic principles of the convention.⁸⁰ Thus, the Watercourse Convention's principles may apply to the Jordan-Israel Peace Treaty.

In the use of terms section, watercourse is defined as a "system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus."⁷⁹ While it is clear from the definition that the Watercourse Convention applies to disputes along the Jordan River, it is unlikely that the Watercourse Convention would apply to the dispute regarding the Mountain Aquifer.

Jordan and Syria have ratified the Watercourse Convention, which has not been ratified by a sufficient number of countries to come into force (eighteen of a required thirty-five).⁸¹ Israel has not ratified the treaty. Syria ratified with the reservation that ratification "shall not under any circumstances be taken to imply recognition of Israel and shall not lead to its entering into relations therewith that are governed by its provisions."⁸² Israel officially objected to the Syrian reservation stating that it

is explicitly of a political nature, is incompatible with the purposes and objectives of this Convention and cannot in any way affect whatever obligations are binding upon the Syrian Arab Republic under general international treaty law or under particular conventions. The Government of the State of Israel will, in so far as concerns the substance of the matter, adopt towards the Syrian Arab Republic an attitude of complete reciprocity.⁸³

In view of their mutual animosity, the obligations of Syria and Israel to each other under the Watercourse Convention will need to be addressed as part of the process in future peace negotiations.

E. Draft Articles on the Law of Transboundary Aquifers

In August 2008, the International Law Commission of the United Nations adopted draft articles for an international framework convention on transboundary aquifers.⁸⁴ The Draft Articles are similar in scope and represent the same principles as the Convention. The Draft Articles provide for the principles of equitable and reasonable utilization of a transboundary aquifer, the obligation not to cause to

⁸⁰ *Id.*

⁸¹ See Convention on the Law of the Non-Navigational Uses of International Watercourses, U.N. Doc. A/51/49 (Status at 20-11-2008) (May 21, 1997), available at http://untreaty.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf

⁸² *Id.*

⁸³ *Id.*

⁸⁴ Int'l Law Comm'n, Drafting Committee, *Shared Natural Resources: The law of transboundary aquifers*, U.N. Doc. A/CN.4/L.724 (May 29, 2008), available at <http://www.un.org/law/ilc/> [hereinafter Draft Articles].

significant harm, and a general obligation to cooperate.⁸⁵ In addition, the Draft Articles reflect environmental concerns by requiring states to provide for the protection and preservation of ecosystems⁸⁶ and for the prevention, reduction and control of pollution.⁸⁷

V. IS INTERNATIONAL LAW BEING VIOLATED?

The Fourth Geneva Convention has been accepted as customary law by the international community. The Fourth Geneva Convention has specific provisions as to the treatment of inhabitants of an occupied territory and is applicable to Israel's occupation of the West Bank. Israel has been accused of ongoing violation of the Palestinian's international law rights in areas that may be more of a pressing human rights concern than water rights.⁸⁸ There are several articles of the Fourth Geneva Convention apply to the water rights of an occupied people.⁸⁹ An occupied people, referred to in the Fourth Geneva Convention as "protected people," are entitled in all circumstances to respect to their persons, their honor, and their family rights.⁹⁰ These fundamental human rights include water rights, as water is sacred to life. Pillage is prohibited⁹¹; pillage would include the taking of goods by force which manifests itself through the inequitable sharing of water resources located on Palestinian land. The occupying power has the duty to ensure the food and medical supplies of the occupied population.⁹² In addition, the occupying power has the obligation to ensure and maintain public health and hygiene in the occupied territory.⁹³ These two provisions require Israel to maintain adequate, accessible and affordable water supply to the Palestinian people. Israel's water policy is discriminatory because it uses 75% of the Mountain Aquifer for its own use, denies permissions to Palestinians to dig wells in promising areas, and allows a situation to exist where 20% of the West Bank population is without running water, and does not otherwise provide affordable water alternatives; therefore, Israel can be said to be in violation of the above referenced provisions of the Fourth Geneva Convention.

An argument in defense of Israel on the grounds of military necessity fails, because Israel's water policy is both disproportionate (in light of the fundamental

⁸⁵ *Id.* at 5.

⁸⁶ *Id.* at 6.

⁸⁷ *Id.* at 7.

⁸⁸ Jeff Halper, *Israeli Violations of Human Rights and International Law, From Occupied Palestine*, <http://www.fromoccupiedpalestine.org/taxonomy/term/64> (June, 2002) (International law violations are said to include humiliating and degrading treatment, brutalization of the civilian population, and destruction of property including homes); *see also* Israel: New Report Condemns Israel's Blatant Violation of International Law in West Bank, Amnesty International UK, http://amnesty.org.uk/news_details.asp?NewsID=17362 (June 2007).

⁸⁹ Convention (IV) relative to the Protection of Civilian Persons in Time of War, Geneva, Aug. 12, 1949, available at <http://www.icrc.org/ihl.nsf/FULL/380?OpenDocument>.

⁹⁰ *Id.* at art. 27.

⁹¹ *Id.* at art. 33.

⁹² *Id.* at art. 55.

⁹³ *Id.* at art. 56.

nature of water rights) and discriminatory (negatively affecting the large portion of Palestinian population who are not military opponents). Israel may also claim that it is exercising its historical riparian rights to the Mountain Aquifer. However, this argument fails to account for the “water rights” of the Palestinians established in the Oslo II agreement. These rights, which have been recognized in principle by Israel, are to be settled and established through negotiations. Also, the historical rights argument is more consistent with the Harmon Doctrine which has been disavowed by the international community and fails to account for current customary water law principles of equitable and reasonable utilization.

Also, by its inequitable sharing of Mountain Aquifer resource, Israel is violating the customary law principle of equitable sharing of resources, under the International Law Commission’s Draft Articles. Israel may argue that the Draft Articles apply to transboundary states only and that because the Palestinian Authority does not represent a “state,” the concept of equitable sharing would not apply. However, the principles of the applicable customary law provisions underlying the spirit and intent of the Draft Articles suggest the concept could and should be extended to an occupied territory that is expected to become a sovereign state.

In conclusion, Israel’s current water policies violate international law with respect to Palestinian water rights. Israel’s position on water disputes vis-à-vis Jordan and Syria are also problematic.

