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Andrew R. Malone

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WATER NOW: THE IMPACT OF ISRAEL’S SECURITY FENCE ON PALESTINIAN WATER RIGHTS AND AGRICULTURE IN THE WEST BANK

Andrew R. Malone†

I. Introduction‡

A. The Importance of Water

Water is one of the Middle East’s scarcest resources, and arguably the most valuable. It is crucial to both the life and livelihoods of people, yet in the West Bank, there exists a severe shortage of water for many Palestinian villagers. Israel’s increased security measures during the al Aqsa Intifada have heightened the water shortage. One Palestinian woman’s testimonial reveals the drastic plight of many who struggle to find water. Izdahar Muhammad Sh’aban al-Jenazreh (“Izdahar”) of the village of Hadab al-Fawwar, in the Hebron District of the West Bank, relates: “I have ten children. My husband used to work in Israel, but now, due to the al-Aqsa intifada, he is unemployed . . . The village is hooked up to a water network that is thirty years old . . . not a drop of water flows through the system.”

Izdahar’s family was too poor to dig a cistern in which to catch rainwater, so her husband and children fetched water from springs a kilometer away. Since the Intifada, Izdahar herself has gone to the springs, four times a day, totaling four hours of work that tire her out: “(g)oing there is very tiring and leaves me less time to take care of my children and the house.” Such hardships are not unusual in the West Bank villages, for “(f)ew residents buy water from the tankers, which is expensive.”

† A.B., Kenyon College (2001); J.D. Candidate, Case Western Reserve University School of Law (2005). I would like to thank Dean Hiram E. Chodosh for his guidance and assistance on this Note, and Professor Amos Guiora and Jonathan S. Becker for their knowledgeable insights and comments. I would also like to thank the entire editorial staff for their hard work in preparing this Note for publication. Finally, I would like to thank my parents and siblings for their constant support.

‡ The empirical research and data in this Note is current as of the date of its writing, Mar. 15, 2004.


2 Id.

3 Id.

4 Id.
shower once a week and use an outdoor toilet; and "the problem of getting water taught us how important it is to save every drop."\(^5\)

In Israel and the West Bank, water spills out into every aspect of life. Approximately 679 million cubic meters of water from the West Bank are allotted each year to the Israelis and Palestinians,\(^6\) and the proportions allocated to the Israelis and the Palestinians are not equal.\(^7\) The Interim Agreement signed by Israel and the Palestinian Authority on September 28, 1995 allocated 28.9% of the yearly West Bank water resources to the Palestinians, and 71.1% of the water resources to Israel.\(^8\) For instance, on average, Israeli settlers in the West Bank consume four times the water per day as do the Palestinians living in the West Bank.\(^9\) The average daily consumption by Palestinians such as Izdahar of 18.5 gallons falls short of the World Health Organization's minimum recommendation of 26.5 gallons of sanitary water per day, and far below the average daily consumption of water for Israeli West Bank settler use: seventy-four gallons per person.\(^10\) The disparity of water consumption between the Palestinians and Israelis is even more striking when one considers statistics on daily water consumption for everything but agricultural use. According to B’Tselem’s July 2001 report Not Even a Drop, these include household,\(^11\) urban,\(^12\) and industrial uses.\(^13\) The report indicates that the average Palestinian in the West Bank consumes sixty liters of water per day, while the average per

\(^5\) Id.

\(^6\) THE IMPACT OF ISRAEL’S SEPARATION BARRIER ON AFFECTED WEST BANK COMMUNITIES, REPORT OF THE MISSION TO THE HUMANITARIAN AND EMERGENCY POLICY GROUP (HEPG) OF THE LOCAL AID COORDINATION COMMITTEE (LACC), 52 (MAY 4, 2003) [hereinafter THE IMPACT OF ISRAEL’S SEPARATION BARRIER ON AFFECTED WEST BANK COMMUNITIES].

\(^7\) The West Bank's water is largely derived from groundwater (or aquifers). The three primary aquifers in the West Bank - the Western, Eastern, and Northeastern aquifers - produce around 600-660 Mm\(^3\) per year, of which the Palestinians use 115-123 Mm\(^3\), the Israelis use the remainder. Bader Ali Ahmad Abu Zahra, Water Crisis in Palestine, 136 DESALINATION 93, 94 (2000).

\(^8\) supra note 6 at 51.


\(^10\) Id.


\(^12\) Id. at 2 ("watering green areas, filling public swimming pools, and supplying water to hospitals, businesses, and hotels").

\(^13\) Id. ("of various kinds that consumes water, primarily in the chemicals, food and drink, building, and textile industries").
capita consumption of water in Israel proper and the West Bank settlements is 350 liters per day.\(^\text{14}\) This lack of water practically incapacitates poorer Palestinian families, as it did to Izdahar's family. If such disparity of consumption of water persists in the coming decades, and the Security Fence remains, the water crisis will grow unmanageable. Indeed, the West Bank water resources will not likely prove capable of sustaining the predicted rise in the West Bank Palestinian population.\(^\text{15}\)

At the same time, the issue of borders looms large in the West Bank. With the Israeli and Palestinian peace process stymied for so long by the deadly stalemate of the al Aqsa Intifada,\(^\text{16}\) the recent entente agreed upon by Israeli Prime Minister Ariel Sharon and newly elected Palestinian Authority President Mahmoud Abbas\(^\text{17}\) now inspires much discussion over what the borders between Israel and a projected Palestinian state would be. The de facto border of any Palestinian state may not follow the Green Line, which has been the Armistice Line between Israel and the Palestinian West Bank since 1949, rather, in reality the Security Fence that Israel is building in the West Bank may double as the border. Since the Palestinian Authority has not stemmed the effectiveness of Palestinian militant factions, the Israeli Government is threatening to take unilateral actions if the United States-backed "road map" completely fails.\(^\text{18}\) These political and military actions would include moving some West Bank settlements, withdrawing the military ("IDF") from some towns in the West Bank, and drawing a clear border between Israel and the West Bank.\(^\text{19}\) The border is likely to

\(^{14}\) Id.

\(^{15}\) See discussion infra Part II.B. Israel's Security Fence: Justifications and Contours.

\(^{16}\) See discussion infra Part II.B. Israel's Security Fence: Justifications and Contours.

\(^{17}\) The ceasefire declared on Feb. 8, 2005, at Sharm el Sheik in Egypt.

\(^{18}\) Reuters, Arafat: Sharon Is Not Serious About Peace, Jan. 6, 2004; On Jan. 5, 2004, Israeli Prime Minister Ariel Sharon made a speech to the Likud Party's Central Committee, in which he said that if the Palestinian Authority effectively ends terrorism, then the State of Israel would cooperate in helping form a Palestinian state. However, Sharon warned that if the Palestinian violence is not curtailed, Israel will physically separate itself from the Palestinians, until violence ceases. Sharon's threat is known as his "disengagement plan." It is widely speculated that the security separation line will follow the West Bank Security Fence. Greg Myre, Sharon Jeered as He Talks of Giving Up Settlements, N.Y. TIMES Jan. 6, 2004, at http://www.nytimes.com/2004/01/06/intemational/middleeast/06MIDE.html.

become the electrified Security Fence, which is designed to seal off the West Bank from Israel, thereby keeping out Islamic militants.\textsuperscript{20}

If the Israeli Government makes the Security Fence the de facto border, it will exacerbate the already thorny issue of water rights in the West Bank. For within the 13.5\% of the Palestinian West Bank that Israel has appropriated to erect the Fence, lies some of the most fertile West Bank agricultural land, as well as at least thirty valuable agricultural and communal wells which irrigate that land.\textsuperscript{21} Further, there is a lack of clean and healthy water that is reaching West Bank villages that are adversely affected by the Fence. Given the enmity that the Security Fence’s impact on water and land is fostering in Palestinian West Bank communities,\textsuperscript{22} the Israeli Government should attempt to resolve the water issue now, for the sake of its future security.\textsuperscript{23}

If Israel does not strike a deal with the Palestinian Authority for the West Bank communities to share in the distribution of water, the lack of water allocated to these West Bank communities will likely motivate further insurrection against Israelis. If and when the Palestinians do achieve statehood, after negotiations the aquifers on the West Bank side of

\textsuperscript{20} See Myre, supra note 18.


\textsuperscript{22} Such anger is shown by recent (Dec. 27, 2003) protests by several thousand Palestinians and foreign activists in the West Bank town of Qalqilya, against the construction of the Fence. See Reuters, Arafat: Sharon Is Not Serious About Peace, Jan. 6, 2004 (Palestinians think the Fence is a land grab); James Bennet, Overnight, a Towering Divide Rises in Jerusalem, N.Y. Times, Jan. 12, 2004 (citing the unpopularity of the Jerusalem portion of the Fence with Palestinian East Jerusalem residents); United Nations Office for the Coordination of Humanitarian Affairs, Occupied Palestinian Territory, Preliminary analysis by OCHA reveals that the planned new Wall will have severe humanitarian consequences for more than 680,000 Palestinians in the West Bank –well beyond the impact of the current Wall, Dec. 15, 2003 (noting that the land affected by the Fence is some of the most fertile in all of the West Bank).

\textsuperscript{23} Incidentally, the world has taken an interest in the Fence, and the United Nations asked The International Court of Justice (“ICJ”) to issue an advisory opinion on the legality of the Fence, which it did. Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, 2004 I.C.J. 131 (July 9) (recommending by a vote of fourteen to one that Israel should tear down the Fence because its construction violates international law). Israel’s position is that the ICJ did not take a fair and balanced approach to the issue, and now Israel emphasizes that since it is only an advisory opinion, the ICJ ruling has no binding effect.
the Fence that supply water to the Israeli side will likely belong to that new State, and Israel will no longer have access to the crucial West Bank water source. For their part, the West Bank Palestinians will only have complete autonomy over the West Bank water if Israel recognizes a Palestinian state in the West Bank. An effective peace plan, therefore, will help to resolve the West Bank water issue.

B. Water And Agriculture On The West Bank

The Mountain aquifers in the Northwestern West Bank constitute the largest water source in the West Bank and all of Israel. The erection of Israel's Security Fence, which juts into the West Bank to protect key Israeli settlements and to prevent infiltration of suicide bombers into Israel, should not technically change the allocation of water from the three aquifers under the 1995 Interim Agreement. It is likely, though, that due to the general lack of water in the Middle East, the control of the Mountain aquifer water will prove a sticking point in future peace negotiations.

Construction of the Security Fence, which impinges upon Palestinian West Bank territory, will also appropriate for Israel many of the most productive agricultural artesian wells in the West Bank, which were previously used to irrigate Palestinian crops. The erection of the Security Fence on Palestinian West Bank territory and the concomitant blow to Palestinian control of West Bank water will undoubtedly ruin Palestinian farming in the region.

C. Roadmap For This Note

In light of the new Israeli Security Fence as a possible permanent border, and its effect on agriculture and water rights, this Note argues that Israel should seek an alternate security solution. Section II will describe the West Bank aquifers, the Security Fence, and the applicable international law. Section III will evaluate the negative impact that the Security Fence will have on the equitable control of the West Bank aquifers and agricultural wells. The Security Fence will not only seriously impair the hope of equitable distribution of water rights in the West Bank in the near future, but it will also deliver an irreversibly crippling blow to Palestinian agriculture in the West Bank. An unbalanced water regime in the West Bank will have a significant effect on sustainable peace. Section IV will

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25 The Impact of Israel's Separation Barrier on Affected West Bank Communities, supra note 6, at 56.
26 See id. at 14.
advance and evaluate several proposals for averting the water crisis exacerbated by the Fence.

II. War and Water

In modern times, the West Bank, the heart of the proposed Palestinian state, has been the focus of bitter water allocation disputes.\(^{27}\) Israel emerged from the 1967 Six Day War in the position of the upstream riparian owner\(^{28}\) of the Jordan River Basin, and also gained control over the groundwater basins in the West Bank.\(^{29}\) Thus, from 1967 until the present day, Israel has maintained control of the West Bank and all of its groundwater. Indeed, control of groundwater is essentially control of Palestinian water, since groundwater is the primary source of Palestinian water.\(^{30}\)

A. The West Bank Aquifers

The West Bank’s Mountain aquifer, which Israel has controlled since 1967, provides one-third of the water that Israel consumes.\(^{31}\) The bounteous Mountain aquifer in the Northern highlands of the West Bank is part of the Jordan River Basin system.\(^{32}\) Three primary aquifers comprise the West Bank Mountain aquifer system: the Western, Northeastern, and Eastern aquifers.\(^{33}\) The Western aquifer, located within both the West Bank

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\(^{27}\) Even since ancient times, water has been highly prized in the Middle East. Passages about water figure prominently in both the Old Testament and the Koran. In fact, the word water (mayim) is used directly 580 times in the Hebrew Bible, and indirectly used even more often, in references to rivers and wells. See Daniel Hillel, Rivers of Eden, The Struggle for Water and the Quest for Peace in the Middle East 26 (1994). The considerably shorter Koran uses the word water (ma’) sixty times, fifty of which reference rivers. Id. at 26.

\(^{28}\) A riparian owner or proprietor is a landowner whose property borders a stream or river. Riparian rights are rights of landowners whose property borders on a body of water or watercourse. Landowners have the right to reasonably use the water. Black’s Law Dictionary 1328 (7th ed. 1999).

\(^{29}\) Miriam Lowi & Jay Rothman, Arabs and Israelis: The Jordan River, in Culture and Negotiation The Resolution of Water Disputes 162 (Guy Olivier Faure & Jeffrey Z. Rubin, eds., 1993). Israel then drew from the West Bank around one-quarter of its water. Id.

\(^{30}\) Abu Zahra, supra note 7 at 94.


\(^{32}\) See Appendix A, Water Map of Israel and the Territories, supra note 24.

\(^{33}\) Abu Zahra, supra note 7, at 94.
and Israel, draws on water from the West Bank Mountains, while the Northeastern aquifer is located solely in the West Bank, near Nablus and Jenin. The Eastern aquifer, contained within the West Bank, accounts for 90% of the springs in the area, but is still largely unexplored.

Aquifers are comprised of water passing below ground, and are distinctly separate from surface water. The groundwater is stored in either an unconfined aquifer, which is commonly referred to as a watertable, or in confined aquifers, known as artesian aquifers or wells. The first phase of the Israeli Security Fence will appropriate or effectively isolate at least thirty of these agricultural artesian wells from Palestinian West Bank farmers.

B. Israel’s Security Fence: Justifications And Contours

Due to security concerns arising from the advent of the suicide bomber in the al Aqsa Intifada, Israel began building a “Security Fence” around the West Bank in June 2002. One can immediately tell from the controversy surrounding the name of this new fence, that its construction is politically charged. The Israeli Government insists on calling its new structure the “Security Fence,” while Palestinians and the international media refer to it as a “Wall” or “Separation Barrier.” Through careful semantic planning, the Israeli Government hopes to stop people from equating the Fence with a permanently divisive edifice such as the Berlin Wall. Indeed, the Israeli Government claims that the Fence is only a temporary structure meant to protect Israel from suicide attacks on innocent people.

34 See Appendix A, Water Map of Israel and the Territories, supra note 24.

35 Abu Zahra, supra note 7, at 94.

36 Id. at 95.

37 WILLIAM GOLDFARB, WATER LAW 19 (1988). The groundwater is commonly referred to as ‘percolating water,’ meaning it comes from precipitation into the soil, water from streams or irrigation, or artificial recharge methods. Id.

38 Id.

39 The water from artesian wells, which is able to rise to the surface through internal hydrostatic pressure, is most efficiently reached by drilling through thick rock or strata.

40 The most salient feature of the current, or al Aqsa Intifada, is the Palestinian suicide bomber. See discussion infra Part II.B. However, the Palestinians charge that Israel’s real purpose for erecting the Fence is not to defend against suicide bombers; rather it is a mere pretext for a “land grab” in the West Bank. See 2 Palestinians Killed During Protests of West Bank Barrier, ASSOCIATED PRESS, Feb. 26, 2004, [hereinafter 2 Palestinians Killed] at http://www.nytimes.com/aponline/international/AP-Israel-Palestinians.html.

Yet, to the 600,000 to 700,000 Palestinians affected by it, Israeli "doves," and to spectators across the globe, the Fence seems decidedly permanent, as well as inimical to the achievement of a lasting peace. Some may ask why the situation in Israel and the West Bank has come to this, and why Israel feels the need to erect a seemingly permanent barrier in the West Bank, thereby further alienating the resident Palestinians and ostensibly jeopardizing any hope of achieving even a tenuous peace that would enable Israel to exist outside the menacing shadow of the suicide bomber. The grim statistics of the al Aqsa Intifada explain the need for the Security Fence. Since September 29, 2000, when Ariel Sharon visited the al Aqsa mosque in Jerusalem and the Palestinians subsequently began the violent resistance known as the al Aqsa Intifada, there have been a total of 22,406 attacks against Israel in the West Bank, Gaza Strip, and Israel itself. A total of 972 Israelis have died since September 2000, 445 of those from suicide bombs. The suicide bomber has altered the political dynamics of the region. Faced with repeated horrific bombings in public buses, cafes, malls, and at checkpoints, the Israelis decided to attempt to preempt the efforts of the Palestinian militant groups who equip, train, and inspire the suicide bombers.

The stated aim of the Security Fence is to stop suicide bombers from infiltrating from the Palestinian West Bank into the Jewish settlements, Jerusalem, and Israel proper, though Palestinians see the Fence as an outright land grab. The Israeli Defense Force ("IDF") will monitor every gate of the fence, so they can control who enters Israel. The Fence is a

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42 See United Nations Office for the Coordination of Humanitarian Affairs, Occupied Palestinian Territory, New Wall Projections (Nov. 8, 2003) [hereinafter New Wall Projections].

43 See Pope Condemns 'Terrorism,' Criticizes Israel Fence, REUTERS, Nov. 16, 2003 (explaining the criticism of the Fence by Pope John Paul II: "The construction of a wall between the Israeli people and the Palestinian people is seen by many as a new obstacle on the road to peaceful cohabitation. . . . In fact, the Holy Land does not need walls but bridges."); see also Clashes in West Bank, N.Y. TIMES, Dec. 28, 2003, Late Edition, at 10(1) (recounting demonstrations against the Fence in the town of Qalqilya by both Palestinians and foreigners).


46 These militant groups include Hamas, Islamic Jihad, the Al Aqsa Martyr’s Brigade and Hizzbullah. This Note will not specifically discuss whether these militant groups are wielders of terror, freedom fighters, or some perverse mixture of both. It is enough to note here that this debate only intensifies the different viewpoints of the parties.
highly effective, albeit restrictive, way of eliminating attacks by Palestinian militants coming from the West Bank. Although the number of suicide attacks on Israel has declined by around 90% since the erection of the Fence, it remains unproven whether the Fence can completely stop Palestinian militant attacks on Israel.

The Security Fence, according to the Israeli Government (Ministry of Defence – Seam Zone Authority) Maps published on October 23, 2003, will span more than four hundred miles, or 638 km (including Jerusalem) through the West Bank. As of March 2004, more than 120 miles of the Fence were completed in the Northwest West Bank and near Jerusalem. Each mile of the Fence costs around $4 million, and the total cost of the Fence is estimated at more than $1.3 billion. Formed out of trenches, concrete walls, sundry obstacles, and an electronic fence that will warn the IDF every time someone attempts to cross it, the Fence is the most impenetrable security barrier ever constructed in Israel. To the west of the Fence lie three roads: "a trace road, intended to reveal the footprints of a person who crossed the fence, a patrol road, and an armored vehicles road." Immediately to the east is a service road protected by barbed wire, then further east is a trench intended to stop attempts at ‘running’ through the Fence. On average, the Fence will be 60 meters wide, but that width will fluctuate up to 100 meters. In certain areas, especially where the Fence adheres to the Green Line, there are “depth barriers,” which are not fences per se, but rather deep trenches with barbed wire, designed to restrict

48 See UN Map, Enclaves and Closed Areas between the Wall and the Green Line, supra note 21.
52 BEHIND THE BARRIER, supra note 41, at 6.
54 BEHIND THE BARRIER, supra note 41, at 6.
55 Id.
The Fence provides access to points beyond, via gates, including some twenty-six "agricultural gates." According to a recent New York Times article, the barrier will completely surround twelve Palestinian communities, granting the residents of those communities access to the outside world only through gates manned by the IDF. According to a recent report by the United Nations Office for the Coordination of Humanitarian Affairs, the Fence will follow the border of the 1949 Green Line, the ostensible border of Israel and the West Bank, for only 11 percent of the Green Line’s entire 315 km span. The Fence, in fact, in some areas encroaches six to seven kilometers into the West Bank.

A recent UN report estimates that Israel’s Security Fence will effectively appropriate 13.5% or 191,000 acres of the West Bank, much of it fertile land, on which some 189,000 Palestinians live. Breaking down further the affected population and land, the UN estimates that of the 191,000 acres between the Fence and the original Green Line, 152,000 of those acres lie within a “closed” area, 39,000 acres within an “enclave” area, and ultimately 21,000 acres within a “depth barrier.”

A total of 20,000 Palestinians from fifty-nine communities will fall within the “closed” areas between the Security Fence and the Green Line, 169,000 Palestinians from forty-one communities will fall within the enclaves, meaning the Fence will completely surround them; while the Fence will also ultimately place 101,000 Palestinians from nineteen communities in “depth barriers.”

These numbers do not include the Israeli settler population. Additionally, the report estimates that the Fence would effectively disrupt the lives of somewhere around 400,000 Palestinians living east of the Fence, who would need to pass through the Fence to reach their farmlands, jobs, and basic services. Thus, based on the UN report of December 15,
2003, the Security Fence will affect a total of around 674,000 people, or 30% of the Palestinians in the West Bank.66

C. The Legal Framework Of The Dispute

The international law that governs Israel and the Occupied Palestinian Territories is both conflicting and insufficient. Statehood theories and common law cross-border international water allocation theories can apply, but in the end, the law of Occupied Territories is more appropriate for the issue of borders and water in the West Bank.

1. The Law of Occupied Territories

Since the West Bank is currently an Occupied Territory67 with Israel as the occupying power and the Palestinians the occupied people, the law of Occupied Territories is especially relevant to the Security Fence’s impact on Palestinian water and agricultural rights. The binding authority for the law of Occupying Powers is predicated on the 1907 Hague Convention Respecting the Laws and Customs of War (“Hague Convention”).68 The Hague Convention provides legal guidelines for an occupying power to follow. Over time, the Hague Convention has become customary international law that the international community, including Israel, believes applicable to the West Bank even though Palestine is not currently a recognized State.69

Israel is arguably violating key provisions of the Hague Convention and is thus violating international law. Article 46 of the Hague Convention provides that an occupying power is obligated to refrain from confiscating private property.70 In its construction of the Security Fence, Israel is

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66 Id.; See also Myre, supra note 49; Haaretz, supra note 60; BBC NEWS, Israel barrier ‘brings hardship,’ Israel’s West Bank security barrier will cause serious human suffering, the UN has said in a report, Nov. 11, 2003, available at http://news.bbc.co.uk/2/hi/middle_east/3260855.stm.)

67 See Hague Convention Respecting the Laws and Customs of War on Land, Section III Military Authority Over the Territory of the Hostile State, at http://www.yale.edu/lawweb/avalon/lawofwar/hague04.htm (“Territory is considered occupied when it is actually placed under the authority of the hostile army”).


70 Hague Convention Respecting the Laws and Customs of War on Land, Oct. 18, 1907, art. 46, 36 Stat. at 2306-07, in Id., at 575.
violating this provision because it is confiscating West Bank land that is private Palestinian property.\textsuperscript{71}

Similarly, Israel may be in violation of Article 55 of the Hague Convention. Article 55 of the Hague Convention provides that the occupying power is the "administrator and usufructuary of . . . real estate, forests, and agricultural estates belonging to the hostile State, and situated in the occupied country."\textsuperscript{72} Thus, the occupying power can reap the benefits from lands owned by the State, but not from privately-owned land. Most of the land confiscated in order to build the Fence is private Palestinian farmland, and some is land that contains essential, privately-owned\textsuperscript{73} agricultural wells. Thus, Israel's confiscation of West Bank agricultural land and agricultural wells violates the Hague Convention. This confiscation of land and water will have a devastating effect on the Palestinian West Bank agricultural economy.

2. Statehood

Whether or not Palestine becomes a State also affects the legality of the Fence and the allocation of water. The Palestinians of the West Bank will have the right to use the water of the West Bank without restrictions only if they achieve the creation of a Palestinian State recognized by Israel. An independent Palestinian State in the West Bank would benefit the Palestinian people in a practical way. As a sovereign State, its bargaining power for West Bank water and farming issues could rise to a level closer to that of Israel. Palestinians today feel that if a Palestinian State controlled the West Bank aquifers, then it could allocate more water to its villages than the Israelis are now doing.\textsuperscript{74}

The differences between how the Israelis and Palestinians want to control and allocate the West Bank water is striking. The Palestinians claim through full sovereignty almost all of the surface and groundwater of

\textsuperscript{71} The Israeli Government has set aside $22 million as compensation for those Palestinians unable to use their land because of the Security Fence. Jewish Virtual Library, \textit{Fact Sheets #24: Israel's Security Fence (Updated July 14, 2004)}, at 3.


\textsuperscript{73} Most of these wells are privately owned, and some are communal. None are part of the Palestinian Water Authority network. \textit{THE IMPACT OF ISRAEL'S SEPARATION BARRIER ON AFFECTED WEST BANK COMMUNITIES}, supra note 6, at 52.

the West Bank. Their claim is predicated upon the Johnston Plan of 1955, when Jordan was the sovereign ruler of the Palestinians. The United States-sponsored Johnston plan provided in part, for the distribution of the River Jordan’s water to the riparian States, including Israel and Jordan. At the time, the riparian States did not fully embrace the plan, although in the peace negotiations of the 1990’s, the plan experienced a revival of sorts.

The Israelis claim the West Bank water based on historical rights. Israel’s dependence on the West Bank aquifers has now evolved to the point where the aquifers supply Israeli coastal cities including Tel Aviv, as well as Jerusalem. Israeli water experts believe that if a peace settlement hands the Palestinians control of the West Bank aquifers, the water is likely to become polluted, a situation which would in turn eventually pollute the various rivers coursing into Israel proper.

3. Cross-Border Theories

Cross-border theories of international water law are also instructive on the question of West Bank water rights.

a. Three Theories Of International Water Law

Two theories of water rights between adjoining States have given way to a third, more equitable and conciliatory theory of sovereignty over water. Upstream States with a drainage basin system prefer the theory of absolute territorial sovereignty, known as the Harmon Doctrine. Under this doctrine, the upstream State can use the rivers or waters within its territory, without heeding the water rights of any downstream riparian States. If Palestine were a State, it would likely claim the right to the West Bank aquifers, which flow from the lower Jordan River, on the basis of this theory.

75 ARNON SOFFER, RIVERS OF FIRE, THE CONFLICT OVER WATER IN THE MIDDLE EAST, 191 (Murray Rosovsky & Nina Copaken trans., 1999). Including the Gaza Strip, the Palestinians claim between 500 and 560 million m$^3$ of water, as well as 150-200 million m$^3$ of the Jordan River. Id.

76 SOFFER, at 191.

77 SOFFER, at 158-60.

78 SOFFER, supra note 75, at 191.

79 A city of around 2 million people, including the suburbs. Id.

80 Id.

81 Id.

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Absolute territorial sovereignty, however, is disfavored in international law, since in neglecting the rights of downstream riparian States it does not peacefully or equitably resolve riparian conflicts.\(^83\)

Downstream riparian States prefer the theory of absolute integrity of the watercourse,\(^84\) whereby upper riparian States cannot harm or affect the quality of waters they share with downstream riparian States.\(^85\) Yet absolute integrity of the watercourse inequitably allocates rights to the international waterway, presumably because it does not specify the rights of control, and it too is disfavored in international law.\(^86\)

The third and more equitable theory of international water rights is the doctrine of restricted sovereignty, under which States explicitly recognize that each riparian State has a right to access and use the shared water.\(^87\) Restricted sovereignty is now the dominant theory for disputes between riparian States. It reflects the current state of customary international law.\(^88\) The theory of restricted sovereignty led to the established rule of the equitable utilization or allocation of shared water, which is integral to the present-day Israeli-Palestinian water conflict, given the fact that Israel claims the West Bank Aquifers as a primary water source.\(^89\)

b. International Agreements

Codified international law is sparse in the area of international watercourses; however, existing water rights agreements give a framework for the present debate. The earliest evidence of a customary law of international watercourses is the International Law Association’s (“ILA”) well-respected 1966 Helsinki Rules on the Uses of the Waters of


\(^{84}\) A watercourse is a “body of water flowing in a reasonably definite channel with bed and banks.” *BLACK’S LAW DICTIONARY* 1585 (7th ed. 1999).


\(^{86}\) *Id.*


\(^{88}\) The International Court of Justice (“ICJ”) applied restricted sovereignty in the case of the Gabčikovo-Nagymaros Project (Hung. v. Slovk.), 1997 I.C.J. 92 (Sept. 25); *See also* PHILIPPE SANDS, *PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW* I 348 (1995) (discussing the Lake Lanoux Arbitration with France and Spain as parties).

\(^{89}\) Fathallah, *supra* note 82, at 135; *see also* B’TSELEM, *THIRSTY FOR A SOLUTION, THE WATER CRISIS IN THE OCCUPIED TERRITORIES AND ITS RESOLUTION IN THE FINAL-STATUS AGREEMENT*, 52, (Jerusalem, July 2000) [hereinafter B’TSELEM, *THIRSTY FOR A SOLUTION*].
International Rivers ("Helsinki Rules"). Article IV of the Helsinki Rules contains the first recitation of the doctrine of the equitable use of international water: "each basin State is entitled within its territory, to a reasonable and equitable share in the beneficial uses of the waters of an international drainage basin." However, since the ILA has no binding authority, the Helsinki Rules have not proved particularly helpful in international disputes, and they are not considered customary international law.

More recently, in 1997 the United Nations General Assembly approved the Convention on the Law of the Non-Navigational Uses of International Watercourses ("UN Convention"). The UN passed the Convention; however, it is not yet in effect because not enough States have ratified it, including Israel, who abstained in the General Assembly vote.

Israel, however, still must honor the Convention because the primary principles are generally regarded as customary international law, and therefore apply even to States that have not yet ratified the Convention.

Article 6 of the 1997 UN Convention implements the doctrine of restricted sovereignty in its list of factors to consider when determining the relative rights of States that share an international watercourse. The Israelis and Palestinians each emphasize a different factor from the

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91 Id. at art. IV.
92 See NICO SCHRIJVER, SOVEREIGNTY OVER NATURAL RESOURCES, BALANCING RIGHTS AND DUTIES, 130, (1997).
94 B'TSELEM, THIRSTY FOR A SOLUTION, supra note 89, at 51.
95 Customary international law typically exists in the form of international conventions, international custom or general practices accepted by law, general principles of law that are recognized by civilized nations, judicial decisions, or respected academic opinions. Statute of the International Court of Justice, June 26, 1945, art. 38, 59 Stat. 1055, T.S. No. 993, 3 Bevans 1179.
96 Id. For support for the idea that the Convention is now regarded as customary international law see International Court of Justice, 1997, pars. 85, 147 (http://www.icj-cij.org/icjwwidocket/ihshjudgement/ihsh_ijudgement_970925_frame.htm).
97 The factors are: 1. The natural features of the shared watercourse; 2. the social and economic needs of the watercourse states; 3. the population dependent on the watercourse in each watercourse state; 4. the effects of the use of the watercourses in one watercourse state on other watercourse states; 5. existing and potential uses of the watercourse; 6. conservation, protection, and development of the water resources of the watercourse and the costs of measures taken to that effect; 7. the availability of alternatives to a particular planned or existing use. See B'TSELEM, THIRSTY FOR A SOLUTION, supra note 89, at 52.
Convention to argue that equitable use of the West Bank water should favor their solution. As evidence of the fact that the Convention is customary law, Israel has applied the Convention. It interprets factor 5 of the Convention, which cites "existing and potential uses of the watercourse," as meaning that the Mountain aquifer of the West Bank must be divided according to past historical uses.\(^9\) The Palestinians counter that these past uses were conducted with force under a period of occupation; therefore, they should not prevail over the potential uses of the Mountain aquifer.\(^9\)

The Palestinians, for their part, cite the first factor, "the natural features of the shared watercourse," in an attempt to rely on the theory of absolute territorial sovereignty, which proposes that the amount of water in the aquifer from each of the States determines the apportionment rights.\(^10\) If this theory were indeed applied, then the Palestinians would claim around 90% of the Mountain aquifer.\(^10\) However, absolute territorial sovereignty has never been applied in international law, and the Convention supports the equity, or restricted sovereignty principle. Hence, the Palestinian argument would likely falter. The conflicting Israeli and Palestinian interpretations of the Treaty demonstrate that the applicable customary international law does not solve the West Bank water problem.

c. West Bank Aquifers as International Waterways

An often overlooked yet essential element of the water issue in the West Bank is that two of the three aquifers, the Western and Northeastern, are international waterways, since they are located in both Israel and the West Bank.\(^10\) The Eastern aquifer, on the other hand, is considered endogenous, or completely within the borders of the West Bank.\(^10\) If the West Bank becomes part of a sovereign Palestinian state, then under the first principle of the law of international rivers, the Palestinian state would have the right to use its water.\(^10\) This right to use the water of the three

\(^9\) Id. at 53.
\(^9\) Id. at 53; id. at n. 193.
\(^10\) Id. at 53.
\(^10\) Id.

\(^10\) If one considers the West Bank an independent entity from Israel. See Palestine Liberation Organization Negotiations Affairs Department, Permanent Status Issues: Water. http://www.nad-plo.org/permanent/water.html.

\(^10\) Id.; see also Palestine Liberation Organization Negotiations Affairs Department, Lexicon of International Legal and Technical Terms and Phrases Relevant to Water, (5 Nov. 1999).

\(^10\) SOFFER, supra note 75, at 9, 11.
West Bank aquifers would not preclude the Palestinians from sharing the water with their downstream riparian neighbors the Israelis.\(^{105}\)

The current system of water apportionment in the West Bank violates the third and fourth principles of the Helsinki Principles law of international rivers, which provide that all of the basin States may share equally in using and exploiting the available water for various purposes,\(^{106}\) and that sovereign States may only use the river basin's water in a just and equitable manner.\(^{107}\) Hence, Israel is not equitably allocating water in the West Bank.

### III. Fencing Water

There exists no commanding principle to resolve international water disputes under the law of Occupation or generally between nations. This state of uncertainty is particularly troubling in the Middle East. Now that Israel has chosen to combat terrorism by erecting the Fence, the solution to the allocation of the West Bank water has grown in importance and complexity. If the Security Fence eventually becomes the de facto border between Israel and the West Bank, then the sharing of water under and across that border will be one necessary issue to resolve. Even if the Fence is not the ultimate border, for the time being it is a major disruption of the Palestinian West Bank water and agricultural system. The Fence enrages West Bank Palestinians, who have had to cede some of their most fertile farmland and wells to the IDF and the Security Fence. This land and water dispute is a civil rights and humanitarian problem which the parties themselves must address.

The Fence's effect on water is counterproductive to the Israeli Government's goal of security. Even if only temporary, the Fence's appropriation of West Bank property and of well water from the West Bank's Western aquifer is inciting the West Bank Palestinians to protest and violence. At first, these protests over the Fence were nonviolent and included Israeli demonstrators, which is a rarity for the Israeli-Palestinian conflict.\(^{108}\) It appears now, however, that especially in the Jerusalem region, the protests have turned violent, with Palestinian youths throwing

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\(^{105}\) Id. at 12, citing the second section of the 1966 Helsinki Accords on Water Issues.

\(^{106}\) SOFFER, supra note 75, at 10.

\(^{107}\) Id.

stones at the Fence's construction workers, Palestinian farmers scuffling with IDF soldiers, and IDF soldiers shooting and sometimes killing the protesters.\textsuperscript{109} With their travel and their access to farmland greatly restricted by the Fence, and with less water for their crops and for daily use, Palestinian anger towards Israeli occupation policies has increased.

A. The Security Fence And Its Impact On West Bank Water Resources

Israel's new Security Fence takes a marked step backward for the equitable use of the region's limited water. By some accounts, Phase I of the Fence now appropriates twenty-nine artesian wells (which produce 3 million cubic meters of water), as well as a number of smaller wells used purely for drinking by West Bank villagers such as Izdahar.\textsuperscript{110} A recent Palestinian Water Authority report states that the first phase of the Fence alone will probably affect more than thirty groundwater wells.\textsuperscript{111} It is estimated that the Security Fence will result in a 16.5% reduction in the amount of the West Bank's Western aquifer to which the Palestinians will have access.\textsuperscript{112} Further, as of October 2003, construction of the Security Fence has destroyed around 37 km of West Bank water pipes, and 80,000 olive and citrus trees, which are valuable West Bank agricultural commodities.\textsuperscript{113} Thus, given the reduction in Palestinian West Bank water resources and agriculture effectuated by the Security Fence, the permanence of the Fence will prove pivotal for meaningful water management solutions, let alone a lasting dialogue regarding water and peace between the two parties.

\textsuperscript{109} 2 Palestinians Killed, supra note 40 (protests against the Fence in Bidou, Beit Surik, and Beit Iksa, villages that are just to the northwest of Jerusalem, ended with Israeli soldiers killing two Palestinians and wounding forty-two).

\textsuperscript{110} Applied Research Institute - Jerusalem (ARIJ), 7.5 Implications of the Segregation Wall in its Phase I on water resources. (Source: Database ARIJ, 2003) [hereinafter Implications of the Segregation Wall in its Phase I on water resources].

\textsuperscript{111} PALESTINIAN WATER AUTHORITY (PWA) WATER AND SANITATION, HYGIENE (WASH) MONITORING PROJECT (WEST BANK AND GAZA STRIP) IMPACT OF THE CURRENT CRISIS TECHNICAL REPORT #7, IN COOPERATION WITH THE PALESTINIAN ENVIRONMENTAL NGOs NETWORK (PENGON), 10 (Mar. 2003).

\textsuperscript{112} Implications of the Segregation Wall in its Phase I on water resources, supra note 110, at 61.

\textsuperscript{113} Special Report Israel's security barrier, THE ECONOMIST, Oct. 11, 2003, at 27.
1. The Fence and the West Bank Aquifers

The Security Fence will have a deleterious effect on Israeli-Palestinian equitable distribution of the West Bank aquifers. The Fence enables Israel to continue its policy of ignoring the applicable international law on watercourses. The erection of the Security Fence also appropriates for Israel part of the Mountain aquifer that lies east of the Green Line, leaving valuable artesian wells in the control of Israel. Such action violates the prevailing doctrine on the law of international watercourses: restricted sovereignty. Instead of sharing the Mountain aquifer with the West Bank Palestinians, whether it intended to or not, Israel appears to have launched a policy of confiscating Mountain aquifer agricultural wells.

2. The Fence and Available Water

The Fence’s impact on artesian wells in the West Bank will worsen the humanitarian crisis in the West Bank. The loss of West Bank artesian wells due to the Security Fence will exacerbate the current shortage of clean water. The status of healthy water in Palestinian villages in the West Bank during the current Intifada has been a cause for concern. B’Tselem documented as of June 2001 that 218 West Bank towns and villages and their approximately 197,000 residents are not part of Israel’s network of running water.\(^\text{114}\) This number is around ten percent of the West Bank Palestinian population.\(^\text{115}\) Thus, these West Bank residents are forced to utilize alternative water sources, namely springs and wells, rainfall, and water purchased from water tankers and then stored in tanks.\(^\text{116}\) Many Palestinians in the West Bank are accustomed to collecting rainfall on their roofs, and then storing it in cisterns for summertime use.\(^\text{117}\) As for obtaining water from the West Bank’s 114 springs, these springs are not monitored for their water quality, and they are often at low levels.\(^\text{118}\) In the recent drought year of 1999, some of these domestic springs completely dried up.\(^\text{119}\) Thus, at times West Bank villagers are left without reliable and healthy water.

Water tankers frequently supply water for these communities deprived of water. However, the tanker water remains unreliable in a number of

\(^{114}\) B’TSELEM, NOT EVEN A DROP, supra note 11, at 1, 4.

\(^{115}\) Id. at 4.

\(^{116}\) Id. at 5.

\(^{117}\) Id.; See also DIANE RAINES WARD, WATER WARS, DROUGHT, FLOOD, FOLLY, AND THE POLITICS OF THIRST 189 (2002).

\(^{118}\) B’TSELEM, NOT EVEN A DROP, supra note 11, at 5.

\(^{119}\) Id.
Palestinians purchase much of the water from private Palestinian agricultural wells, and therefore no water quality oversight board regulates the water. Often, market forces set the price of the tanker water exorbitantly higher than normal. Thus, residents of the communities with no access to the water infrastructure purchase water at high prices, and since many Palestinians have lost their source of income since the outbreak of the al Aqsa Intifada, tanker water accounts for a proportionally larger share of their available income.

The physical separation brought about by the Fence will greatly inconvenience those Palestinians not connected to the water network. Most of the 274,000 Palestinians whom the Fence will directly affect will have to travel further for their water, pay an exorbitant price, or go without water for longer periods of time. By contrast, the Fence does not affect Israel’s water network at all. In fact, now that some of the Western aquifer lies to the west of the Security Fence, Israel will presumably tap more of the West Bank groundwater for Israeli uses. Such an apportionment of water between Israel and the West Bank is far from equitable. Under such dire circumstances, Palestinians will inevitably have less water for bathing, washing clothes, cooking, and even drinking.

Such a lack of basic sanitation is also evident in Palestinians’ restricted access to hospitals since the increased security measures brought on by the Fence. From September 2000, the IDF has restricted the movement of Palestinians in the West Bank through an elaborate checkpoint system. The delays endemic to these checkpoints cause Palestinians to seek health services elsewhere. Those Palestinians residing in “enclaves” and “closed” areas pass through the gates within the Fence only when approved by the IDF soldiers, who have difficulty differentiating the innocent from terrorists. As a result, the Fence severely restricts the villagers’ ability to reach necessary health services. Further, the Fence has contributed to a

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120 Id. at 5-6
121 Id. at 6.
122 Id.
123 Often these are pregnant women denied access to hospitals. Twenty-nine newborns died at checkpoints between Sept. 2000 and Dec. 2002. OCCUPIED PALESTINIAN TERRITORY 2004, CONSOLIDATED APPEALS PROCESS, UNITED NATIONS, at 18 [hereinafter OCCUPIED PALESTINIAN TERRITORY 2004].
124 Id. The Fence has had the additional effect of reducing the mobility of women in the West Bank. Since women are generally forbidden to travel unaccompanied at night, the checkpoint system of the Fence denies direct access to neighboring villages. As a result, Palestinian girls have begun to marry at an earlier age, so their fathers won’t have to worry about sending them off to University, where they would have to navigate the Fence’s checkpoints. THE IMPACT OF ISRAEL’S SEPARATION BARRIER ON AFFECTED WEST BANK COMMUNITIES, supra, note 6, at 17; see also OCCUPIED PALESTINIAN TERRITORY 2004, supra note 123 at 12 (“The gender impact of the Wall”).
reduction in the amount and quality of water from tankers between 2002 and 2003.\textsuperscript{125} As a result, incidents of diarrhea in children under the age of five have increased to 17.1%.\textsuperscript{126} It appears that the restriction of clean water directly relates to a rise in potential disease in the West Bank.

3. The Fence’s Impact on Palestinian West Bank Water and Agriculture

The Fence will have its most harmful effect on Palestinian agriculture and agricultural wells in the West Bank. As previously noted, the Fence confiscates valuable Palestinian property, including farmland and agricultural artesian wells. Such confiscation of private property directly violates the Hague Convention, which Israel recognizes as applicable in the West Bank.

\textsuperscript{125} OCCUPIED PALESTINIAN TERRITORY 2004, supra note 123, at 19.

\textsuperscript{126} Id. at 20.
Table 1: The Security Fence's Impact on wells and agriculture

Prior to the Fence, Palestinian farmland in the West Bank was exceedingly dry: according to one source, less than four percent of the farms were irrigated.\textsuperscript{127} The Fence will further dry out Palestinian West Bank farmland, by isolating and or confiscating at least thirty of the wells used for irrigation. It just so happens that the Fence is isolating some of the "most productive" West Bank farmland which has an abundant water supply from agricultural wells.\textsuperscript{128} The land that the Fence uses also

\textsuperscript{127} WARD, supra note 117, at 189.

\textsuperscript{128} B'TSELEM, BEHIND THE BARRIER, supra note 41, at 15.
contains some of the West Bank's most productive wells.\textsuperscript{129} The Fence has hindered access to these private and communal wells, which are used mostly for agricultural purposes.\textsuperscript{130} Essentially, the Security Fence greatly reduces the supply of irrigation water that is available to West Bank Palestinians.\textsuperscript{131} The very fact that the Fence cuts across West Bank farmland necessitates significant damage to the preexisting water and irrigation network in the area.\textsuperscript{132} Although various contractors have attempted to restore the water network,\textsuperscript{133} by affecting the water network and agricultural wells the Fence has effectively eliminated a reliable irrigation system for the nearby Palestinian farmland.

According to B'Tselem, Palestinian West Bank farmers obtain 60% of the water they use for irrigation from springs, and the remaining 40% from privately-owned wells.\textsuperscript{134} During Phase I of the Fence, Israel appropriated at least thirty of these agricultural wells, chiefly in the areas of Qalqilya and Tulkarm, where the Fence severely encroaches upon Palestinian land.\textsuperscript{135} However, a close study of two United Nations maps, one of the water sources in the West Bank and the other entitled “Enclaves and Closed Areas between the Wall and the Green Line” reveals that probably the Fence will affect far more than thirty agricultural wells in those two districts.\textsuperscript{136}

b. Agriculture

Agriculture is an important aspect of the Palestinian economy, comprising around 7% of the GDP of the Occupied Territories, and consuming 62% of all Palestinian water.\textsuperscript{137} Agriculture is particularly important to three Western West Bank communities that are significantly affected by the Fence: Jenin, Tulkarm, and Qalqilya.\textsuperscript{138} These three

\begin{thebibliography}{9}
\bibitem{129} The Impact of Israel’s Separation Barrier on Affected West Bank Communities, \textit{supra} note 6, at 14; see Appendix C.
\bibitem{130} The Impact of Israel’s Separation Barrier on Affected West Bank Communities, \textit{supra} note 6, at 14.
\bibitem{131} Id.
\bibitem{132} Id.
\bibitem{133} Id. at 16 (reporting that some individual contractors protect and replace water pipes affected by the Fence).
\bibitem{134} B’Tselem, Thirsty for a Solution, \textit{supra} note 89, at 40.
\bibitem{135} WaSH Technical Report # 7, at 10-11 (Mar. 2003); see also Occupied Palestinian Territory 2004, \textit{supra} note 123, at 12 (citing “some 30 Palestinian communal water wells” lost to the Fence).
\bibitem{136} See Appendix B, Water Sources in the West Bank, \textit{supra} note 21; See UN Map, Enclaves and Closed Areas between the Wall and the Green Line, \textit{supra} note 21.
\bibitem{137} B’Tselem, Thirsty for a Solution, \textit{supra} note 89, at 40.
\bibitem{138} B’Tselem, Behind the Barrier, \textit{supra} note 41, at 15-16.
\end{thebibliography}
districts boast the highest percentage of land used for farming in all of the West Bank, "with 59% in Tulkarm, 50% in Jenin, and 46% in Qalqilya," measured against an average of 24.5% of a district’s land used for farming. Together they comprise 37% of West Bank farmland, and in the year 2000 they accounted for "$220 million in agricultural output," or 45.1% of the West Bank’s total agricultural output. The farmland in these three districts accounts for 43% of the agricultural jobs in the West Bank, though the total population of the three districts adds up to only 25% of the West Bank population.

As vital as the farmland of Jenin, Tulkarm, and Qalqilya is to the West Bank agricultural economy, the Security Fence will separate many of the Palestinian farmers in these districts from their farmland. The West Bank communities will lie on the eastern side of the Fence, while their fertile farmland will lie on the western side of the Fence. The total number of West Bank residents separated from their fields is not small: 6,000 Jenin District residents, 37,600 Tulkarm District residents, and 11,600 Qalqilya District residents, as well as 16,800 Jerusalem District residents. The completed Stage I of the Fence will contain some twenty-six agricultural gates, through which West Bank farmers with "special permits" can access their fields to the west of the Fence. Despite the provision of agricultural gates, the Fence will render Palestinian farmers "dependent on Israel’s security system when they want to cross the barrier from either side." Since the Security Fence physically separates the West Bank farmers from their fields, and since the IDF controls which Palestinians to allow from the east to the west of the Fence, there are insufficient regulations in place to prevent adverse effects on the West Bank agricultural economy.

Though the agricultural gates provide access to the farms to the west of the Fence, the very presence of the Fence will reduce agricultural profits for the West Bank farmers. The Fence will likely slow the supply of farm machines, seeds, and fertilizer to the farms west of the Fence, since the IDF will not grant other West Bank Palestinians easy access to these farmlands. The cost of transporting materials to the farmlands will rise

139 Id. at 16.
140 THE IMPACT OF ISRAEL’S SEPARATION BARRIER ON AFFECTED WEST BANK COMMUNITIES, supra note 6, at 22.
141 Id.
142 B’TSELEM, BEHIND THE BARRIER supra note 41, at 16.
143 Id.
144 Id. at 10.
145 Id.
146 Id. at 7, 12.
147 Id. at 13.
148 Id. at 15.
due to the Fence, while the farmers' cost of transporting the crops back to the West Bank to sell them will also rise. In short, the Fence will cripple the farming economy of the Palestinian West Bank.

B. Political Justification For Israel's Security Fence

Despite the stultifying impact the Fence will have on West Bank water rights and Palestinian agriculture, and on the peace process itself, the Security Fence is ostensibly the Israeli Government's reaction to some very legitimate concerns. After enduring scores of deadly suicide bombings during this now four year al Aqsa Intifida, the Israelis are faced with serious safety issues. Stuck in the midst of a "catch-22" situation, if they take all aspects of security into their own hands, they will likely incur the continued wrath of the Palestinian militant suicide bombers, yet if they tear down the Security Fence and defer the responsibility of containing the suicide bombers to the Palestinian Authority, they abdicate their security. It is a fact that Yasser Arafat and the Palestinian Authority did not successfully rein in militant groups such as Hamas and Islamic Jihad; the newly elected president of the Palestinian Authority, Mahmoud Abbas, has yet to prove that he can tame these now formidable organizations.

Given the political realities of Palestinian armed attacks upon Israeli soldiers and civilians, Israel has the right to self-defense under Article 51 of the U.N. Charter. Self-defense in the instant case entails mitigating and ideally eliminating carnage from suicide attacks. An essential question is whether the Fence is a proportionate means of attaining security. This Note argues that when one considers the negative impact the Fence will have on Palestinian West Bank water rights and agricultural economy, it is evident that Israel should employ different means by which to achieve security, or at least move the Fence to shadow the Green Line. The Fence's intrusion upon Palestinian water and agricultural rights does not render the Palestinians a more willing partner for peace. In no way does this Note advocate the employment of suicide attack strategy against Israel.

149 Id. at 15.

150 U.N. CHARTER, art. 51 ("Nothing in the present Charter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member of the United Nations, until the Security Council has taken the measures necessary to maintain international peace and security").

151 For more information on determining whether a nation has legally used self-defense, see THOMAS M. FRANCK, RECOURSE TO FORCE: STATE ACTION AGAINST THREATS AND ARMED ATTACKS (2002). Franck states that Israel's preemptive attack on the armed forces of neighboring Arab states in 1967 was generally considered legal self-defense because a threat was imminent, and the response was proportionate. Id. Israel's 1981 air strike on an Iraqi nuclear plant, however, was generally considered an illegal use of preemptive self-defense, because the threat was not imminent, and the response was not proportionate. Id.
However, before the Fence was built, Israel had a better chance of reaching an agreement with the Palestinians than they do now that it encircles a smaller and more arid West Bank.

C. Squandering A Vital Opportunity For Peace

The Fence exacerbates an already dire water situation in the West Bank. Water is a vital issue for the final peace negotiations, and with the Fence, Israel makes a mistake by burdening the Palestinians even more. The Israeli Government cannot expect that its policy of keeping Palestinians from their water and agricultural lands via a virtually impassable Fence will do anything to benefit the peace process. In the face of such hardships, the Palestinians cannot approach negotiations on an equal footing with Israel. An equitable distribution of water, or an improved water pricing system, would further the peace negotiations. Israel should not wait until the final peace solution. It should desist from building the Fence or move it closer to the Green Line, and rectify the water situation.

IV. Political Solutions To The Security Fence And The West Bank Water Crisis

Since the Security Fence appropriates Palestinian West Bank wells and farmland, thereby harming Israel’s reputation in the world community, Israel should pursue political solutions to the Fence and the water problem. These solutions could include a water market approach, a system of free access to water, and a trusteeship for the West Bank and its water, as well as the current mainstream political proposals such as the Road Map and the Geneva Accord.

Israel is in the midst of several joint-water projects with Jordan and the Palestinian Authority, and its official stance is that once the peace process is well under way, it will implement further joint projects with the Palestinian Authority. However, the water issue will factor preeminently in any final peace negotiations. As the Middle East water expert Sharif

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152 Indeed, the Israeli Supreme Court heard the grievances of Palestinians affected by the Fence in the area near Jerusalem and recently ruled that although building the Security Fence complies with international law, and despite the fact that the Government’s motives were based on security and not politics, the Government must move the Fence near Jerusalem so as to reduce the burden on Palestinians. H.C.J. 2056/04, Beit Sourik Village Council v. Israel (June 30, 2004); see also Jewish Virtual Library, Fact Sheets #24: Israel’s Security Fence (Updated July 14, 2004), at 3.

Elmusa noted in an interview with Diane Raines Ward, “the stronger riparians will compromise only to the extent they wish. But you will not have a peace agreement without a water agreement. This is where International Law is important.” Thus, an equitable and legal water solution in the West Bank is inextricably linked to the success of the peace process.

A. Comparative Solutions

Examining international responses to water crises brings to light possible solutions to the Israeli-Palestinian crisis. For example, South Africa and Australia, both arid countries like Israel and Palestine, boast some of the world’s most successful water policies.

1. Australian Market Approach

Australia has recently evenly distributed its water resources by emphasizing water pricing and trading in the marketplace. The different Australian states engage in water trading with one another, and the supply and demand of the water market thus ensures that all areas of the country have an adequate water supply. If, someday, the Palestinians have their own sovereign State, then the Australian water market model could prove helpful to the Palestinian Government. Assuming that statehood will grant the Palestinians sovereignty over natural resources, the Palestinian State would control the Mountain Aquifer, which provides most of the water to the Northern West Bank, and much of the water Israel uses. Israel would then have to strike some water allocation deal with the new State, or suffer the economic burden of using a more extensive method of bringing water to Israel. Perhaps a Palestinian State could trade water from the West Bank’s Mountain aquifer to Israel. The water trading system would boost the Palestinian economy, and to some extent would even the balance of power between the two countries. However, such an Israeli-Palestinian water market would possibly prove dangerous to the Palestinians. Due to the current vast differences in wealth between Israel and the Palestinians,

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154 WARD, supra note 117, at 191.
156 Id.
157 Such as overland water pipe systems, and desalination.
the Palestinians would run the risk of not being able to compete on equal footing in the water market.

2. South African Free Access

South Africa's water situation is similar to the Middle East water landscape. Under apartheid, the white minority dominated the country's water resources, at the expense of the black minority. The apartheid regime used the allocation of water in rural areas as a political weapon. In the West Bank, the Israeli Government has the upper hand over the Palestinians in terms of military and political might. Israel has used that regional preeminence to siphon off increasing amounts of water from the Jordan River, thereby leveraging that control of the water resources to win more concessions from the Palestinians at the peace table.

One way that the South African Government healed the wounds from water disputes of the apartheid regime era, was to make the water system much more affordable for the rural poor. The government has implemented a program where the first twenty-five litres of water per day per person are completely free. If the Israeli Government implemented such a generous solution in the West Bank, and supplied daily a certain amount of free water to Palestinian villages and homes connected to the water system, then the Palestinian evaluation of Israel's intentions as to the water supply would undoubtedly turn more favorable.

B. A Trusteeship for West Bank Water

One possible solution to the West Bank water problem is to place control of the aquifers in the hands of a disinterested, third party trusteeship. The trustee would then ensure the equitable allocation of water between the Israelis and the West Bank Palestinians. One theory suggests that the United Nations Environment Program ("UNEP") should act as a trusteeship committee and manage the Jordan River Basin. Here, UNEP would manage the water of the Jordan River Basin under the public trust doctrine, which provides that the trustee holds the property and natural resources in question subject to a public trust for the benefit of the citizens; the trustee is legally bound to protect the property and natural resources.

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160 Id.
161 Id. at 13-14.
163 Id. at 314.
However, this particular trusteeship model may work for the greater Jordan River Basin, but it might not work for the specific West Bank water issues. The trusteeship would probably have to be voluntary, and it is not likely that both Israel and the Palestinians would renounce their autonomy on the West Bank and place the administration of such a vital resource as water in the hands of a third party. Under Article 77 of the U.N. Charter, a United Nations international trusteeship system would apply if the territories of the trusteeship were “voluntarily placed under the system by states responsible for their administration.” Israel in particular would probably not acquiesce to placing the West Bank territories under the supervision of the United Nations.

Another Palestine trusteeship theory proposes a United States-led trusteeship that holds the Palestinian territories in trust for the Palestinians until the birth of a self-sustaining Palestinian democracy. The U.N. Security Council would support the trusteeship with a resolution. The trusteeship would run into security problems, however. The IDF, Hamas, and Islamic Jihad would likely chafe under the reins of a United States security force. Yet, a trusteeship for the West Bank addressing the problem of equitable water use would provide a relatively smooth transition from the al Aqsa Intifada to a two State solution.

C. Prospects For A Political Solution In The West Bank

At the time of this writing, hope for a viable political and economic situation in the West Bank is bleak. Israel’s Security Fence necessitates that grim prognosis. In its attempt to prevent suicide attacks, Israel has reduced its chances of gaining security assurances from the Palestinian Authority. Palestinians see the Security Fence as a land grab, an egregious affront to their sovereignty and basic human rights. If the Palestinians secure an agreement with Israel concerning the West Bank, they will insist on the moving or dismantling of the Security Fence. Until that time, Palestinians only see the Fence as a highly visible and humiliating emblem of Israeli occupation.

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164 Id. at 328.
165 U.N. CHARTER art. 77, para. 1(c).
166 Martin Indyk, A Trusteeship for Palestine?, FOREIGN AFFAIRS, May/June 2003, at 54-5.
167 Id. at 55-6.
168 Id. at 59.
1. The Road Map

Since the “Quartet” of the United States, the European Union, Russia, and the United Nations announced the “Road Map” for peace on June 24, 2002, both the Israelis and Palestinians have failed to meet the deadlines set in the document. Israel’s reluctance to dismantle West Bank settlements and the failure of the Palestinian Authority to rein in the militant groups has effectively derailed the Road Map. Prime Minister Sharon of Israel has recently warned that unless the Road Map peace process produces significant results, Israel will disengage from the West Bank and the Road Map, and withdraw to the new political and security border of the Fence. If somehow the parties implement the Road Map, they would presumably resolve the West Bank water issue by 2005 and Phase III: Permanent Status Agreement and End of the Israeli-Palestinian Conflict. It appears, though, that the Permanent Status Agreement and a solution to the water issue remain in the distant future.

2. The Geneva Accord

The unofficial agreement between former Israeli and Palestinian negotiators, known as the Geneva Accord, is more promising than the Road Map. If Israeli and Palestinian public opinion back this plan, seeing it as a way out of the current static and desperate situation, then perhaps the official negotiators will take notice and reach an accord. In that case, the agreement should attempt to resolve the water crisis in the West Bank. Israel should find an alternative security solution and at least move the Security Fence closer to the Green Line.

V. Conclusion

A solution to the worsening water crisis between the Israelis and Palestinians would be a catalyst for the floundering peace process. The Israeli Government should realize that the Fence’s harmful effect on West Bank agriculture and water rights is reducing the likelihood of legitimate

169 Mr. Sharon’s government has started to dismantle a few settlement outposts, though monitoring organizations claim that more than fifty of these outposts now exist. Greg Myre, Sharon Hints Israel Might Alter Route of West Bank Barrier, N.Y. TIMES, Jan. 19, 2004 at A8.


peace negotiations. Israel should now fully explore political solutions which would eliminate or significantly alter the route of the Fence.

Given the length and severity of the al Aqsa Intifada, the water issue is increasing in political importance. As the Fence appropriates especially fertile Palestinian West Bank land, and as West Bank villagers suffer from an extreme lack of clean water, Palestinian rancor towards Israel grows incrementally. Such hatred renders Palestinian public opinion less likely to support a peaceable two-state solution. By pursuing policies such as the Security Fence, Israel may fulfill its own prophecy that the Palestinians will not stop at statehood, but will continue fighting Israel until Israel ceases to exist. In order to avoid such extremes, the Israeli Government should consider how to reinvent itself in the eyes of Palestinians. If Israel makes some concessions to the Palestinians in addition to pulling out of Gaza, such as on water in the West Bank, perhaps it will secure political capital for itself, which it can then expend during negotiations to better ensure a lasting and relatively peaceful two-state solution.

To preserve the hope for peace, Israel should utilize an alternative way to achieve security from suicide bomb attacks. One obvious alternative is building the Fence on or almost on the Green Line. That Fence would not prompt Palestinians to accuse Israel of a land grab, and it would not disrupt the irrigation of valuable West Bank farmland. As the Fence stands now, however, it is in violation of The Hague Convention and the law of Occupied Territories, since it encroaches upon West Bank land, appropriating agricultural wells and farmland. If the Fence becomes the de facto border between Israel and the West Bank, that border will violate the Hague Convention. Even if the Fence is dismantled someday, the question of borders in the West Bank will remain pressing, so the two parties should start to seek a resolution of the borders issue that fairly solves West Bank water issues. Other political options include market-based and free access approaches to water, a trusteeship for the West Bank and its water, the Geneva Accords, and the disintegrating Road Map. All of these options would allocate West Bank water more equitably than does the Security Fence solution.

Indeed, Israel should abandon the current route of the Security Fence and desist from ruining West Bank agricultural wells and farmlands. Instead of placing the Fence where only security demands it, Israel should pay heed to the wider problem of West Bank water. If the Palestinians get their State, control of the West Bank aquifers will rest entirely with the Palestinian Government. Israel will then lose access to the West Bank aquifers, and have a serious water crisis on its hands. Therefore, Israel should rectify the West Bank water problem now.
Appendix A: Water Map of Israel and the Territories

Legend

- Groundwater flow
- Groundwater divide
- Israeli National Water Carrier
- Armistice Demarcation Line, 1949
- Syria-Israel Cease Fire Line, 1967
- Palestinian Territory Occupied by Israel (June 1967)

Mediterranean Sea
Appendix B: Water Sources in the West Bank

Map shows and data:
Palestinian Hydrology Group, Oct. 2003
Data compilation and cartography
Reconnaissance Information Center, Oct. 18, 2002.

Legend:
- Water sources
- Agricultural
- Industrial
- Domestic
- Other uses
- Artesian
- Springs
- Settlements
- Larger Cities
- Large towns
- Smaller towns
- Villages