

**THE RIGHT TO WATER:
ANOTHER DESERT MIRAGE**

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Introduction

It is an unquestionable human right that individuals, regardless of affiliation, race, or gender should have an unfettered access to a certain minimum amount of water for personal survival, as well as for agricultural sustenance. In the United States, water

is taken for granted. In less developed nations, marginalized populations may suffer from a lack of access to water due to political or social reasons. Their lack of access to water is a shame, but is it more than a moral failing? Is there a right to water?

The Universal Declaration of Human Rights (UDHR) provides everyone with a right to life.¹ Inherent in the right to life is a right to the ingredients necessary to maintain, grow and create life. Water is necessary to maintain that basic, unquestioned right. Several other United Nations (UN) documents further establish and define the right to water. These documents provide a foundation to assess whether Palestinians have been denied their right to water.² A careful analysis of the UN framework for the right to water and the data on present water consumption and access to water in the Occupied Palestinian Territories (OPT) demonstrates that Palestinians' water rights are being frustrated and denied by Israel and its military.

I. Background to the Crisis in the OPT

Three important characteristics of the enjoyment of the right to water are quantity, quality, and access. In the OPT, there is a crisis brewing and the foundation of that crisis is unequal and

* Chicago-Kent College of Law ('11). I would first like to thank my parents for inspiring me with their passion for knowledge and my brother, Atul, for always supporting me and protecting me. I could not have written this paper without the passionate and thoughtful teachings from Professor Dan Tarlock. I share Professor Tarlock's passion for water resource management and conservation. Lastly, I want to thank Margaux Birdsall for helping me edit this paper.

¹ Universal Declaration of Human Rights, G.A. Res. 217 (III) A, U.N. Doc. A/RES/217(III) (Dec. 10, 1948). [hereinafter UDHR].

² This paper will not cover non-state actor actions including Israeli settler activities or Palestinian terrorism. In addition, this paper will not discuss the effects of Israeli wall building and other political issues that are not instructive on the issue of how the right to water is frustrated.

insufficient access to potable water. Several factors exacerbate this crisis, including the arid climate in the OPT, unilateral water diversions counter to common law riparian rights, and an antagonistic political situation.

Palestinian Water Authority figures substantiate unequal water access issues among Palestinians living within the OPT. Palestinian consumption averages to about seventy liters a day per person.³ Seventy liters per capita per day is well below the one hundred liters recommended by the World Health Organization (WHO).⁴ Israelis, in comparison, consume nearly 300 liters of water, or three times as much as the WHO recommends.⁵ In some rural communities, Palestinians survive on twenty liters per day, or the minimum amount recommended by the WHO for emergency situation responses.⁶

In addition, Israel inequitably limits Palestinians' access to water resources. According to Amnesty International, "Israel uses more than eighty percent of the water from the Mountain Aquifer, which is the only source of potable underground water in the OPT, and uses all of the surface water available from the Jordan River."⁷ The Jordan River flows through the OPT, but Palestinians are denied any share of its waters.⁸

Approximately 200,000 West Bank Palestinians live in rural communities that have no access to running water.⁹ Even

³ Amnesty, *Troubled Waters – Palestinians Denied Fair Access to Water*, AI Index MDE 15/027/2009, at 3, Oct. 2009 [hereinafter Amnesty].

⁴ World Health Organization [WHO], GUIDELINES FOR DRINKING-WATER QUALITY 91, tbl. 5.1 (3d ed. 2011) http://www.who.int/entity/water_sanitation_health/dwq/fulltext.pdf (last visited January 31, 2011). [hereinafter *WHO Guidelines*].

⁵ *Id.*

⁶ Amnesty, *supra* note 3, at 4.

⁷ *Id.*

⁸ *Id.*

⁹ *Id.* at 3.

towns and villages that are connected to the water network have difficulty obtaining a constant source of water, often receiving piped water only once a week or as little as every few weeks.¹⁰ Water rationing is common in arid regions, but shortages are particularly harsh, and acute during the hot, dry months in Palestine due to myriad factors.¹¹ Consequently, Palestinians have to purchase additional water from mobile water tankers which deliver poor quality water at exorbitant rates.¹² As the OPT economy worsens, increasingly pricey water dominates household expenditures, totaling as much as 25% of household income for Palestinian families.¹³ In violation of a growing international consensus and body of law, Israel exacerbates Palestinian access to potable, affordable water supplies that originate within the OPT. These measures frustrate Palestinians' enjoyment of the right to water, contravening basic human rights, international treaties, protocols, and UN resolutions.

II. The Right to Water: The Ongoing Struggle from Implied to Explicit

Humans have a right to life. Life requires water. Humans have a right to water. Predictably, in the face of this simple syllogism buttressing the existence of a right to water, groups within several nations engage in actions that deprive people of their right to the necessary enjoyment of their water rights. Even now, with a General Assembly declaration on the subject, the right to water is merely an illusory right to those that need it most.

The right to water has been implied as an essential component of the right to life in a number of international

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

declarations,¹⁴ beginning with the UDHR.¹⁵ In order to address violations to human rights that, arguably, fall through the existing human rights framework, the UN has slowly and carefully defined an explicit right to water. Beginning at first with the International Covenant on Economic, Social, and Cultural Rights, the international community committed to social justice. Adding to that commitment, the International Covenant on Civil and Political Rights expanded human rights. When the Economic and Social Council of the UN General Assembly issued a General Comment, which is a UN document that interprets, but does not create, binding laws, to ICESCR, it crafted and honed a vision for the right to water. This right has been applied on nation-states through their participation in the global community and their ratification of the previously mentioned multilateral treaties, along with a host of others, that respect the right to life.

Despite lacking explicit international treaties on the right to water, there is support for the premise that Israel is purposely violating human rights laws that should be sufficient to withstand political and legal defenses. If the protections that the international community has adopted when fostering a right to water lack practical force, shame may be the only route to changing the dire water and sanitation situation facing Palestinians, especially in the Gaza Strip.

¹⁴ Naturally, there are many other aspects of international law that influence the right to water, however, the scope of this paper is limited to international law that applies to the enjoyment of rights in Palestine. For example, under the fundamental rights in the Constitution of India, Article 21 entitled “Protection of Life and Personal Liberty” states:

“No person shall be deprived of his life or personal liberty except according to procedure established by law.” CONSTITUTION OF INDIA, art. 21. This declaration reinforces the origins of the right to water and its necessary role in the full and practical enjoyment of a right to life.

¹⁵ UDHR, *supra* note 2.

A. General Comment to the Committee on Economic, Social, and Cultural Rights

The right to water did not begin in the 21st century, but 2002 marks the first time a UN body explicitly declared a right to water. In CESCR General Comment 15¹⁶, the UN Economic and Social Council's Committee on Economic, Social and Cultural Rights¹⁷ explicitly declared that the right to water is a fundamental right and outlined several legal bases for the right to water.¹⁸ The General Comment tied the right to water to the right to life and placed several obligations on State parties to ensure and enable the citizens to simultaneously realize both rights.¹⁹ WHO observes that over one billion persons lack access to a basic water supply and several billion persons do not have access to adequate sanitation, the primary cause of water contamination and diseases linked to water.²⁰

General Comment No. 15 cites to the Convention on the Elimination of All Forms of Discrimination Against Women and similar human rights conventions.²¹ Primarily, the General Comment appeals to the essential and indispensable nature of water. Article 6(1) of the International Covenant on Civil and

¹⁶ General Comment No. 15 will refer only to ICESCR General Comment No. 15.

¹⁷ In its 29th Session, the Economic and Social Council's Committee on Economic, Social and Cultural Rights dealt with substantive issues with implementing the International Covenant on Economic, Social, and Cultural Rights (ICESCR), which is the subject of *General Comment No. 15*.

¹⁸ International Covenant on Economic, Social, and Cultural Rights, Dec. 16, 1966, 993 U.N.T.S. 3.

¹⁹ Comm. on Econ., Soc., and Cultural Rights, *General Comment No. 15* U.N. Doc. E/C.12/2002/11, ¶ 1 (Jan. 20, 2003).

²⁰ WHO, *Global Water Supply and Sanitation Assessment 2000 Report*, at v, (2000), http://www.who.int/water_sanitation_health/monitoring/jmp2000.pdf (last visited May 1, 2010).

²¹ Comm. on Econ., Soc., and Cultural Rights, *supra* note 17, at ¶ 4.

Political Rights (ICCPR)²² states that the right to life “shall be protected by law” and that “no one shall be arbitrarily deprived of his life.”²³ Because water is indispensable for life, national policies that are likely to lead to diminished accessibility and affordability of water directly deprive people of life. General Comment No. 15 also lays out priorities consistent with World Summit guidelines for drinking water, the prevention of starvation, and the prevention of disease.²⁴

The General Comment further provides a framework of freedoms and entitlements.²⁵ It spells out the right to be “free from interference” in the use of this right, such as “from arbitrary disconnections or contamination of water supplies.”²⁶ Everyone is entitled to have a “system of water supply and management that provides equality of opportunity” to enjoy the right to water.²⁷ Finally, the General Comment states that there is a right to adequacy and sustainability of water “for human dignity, life and health.”²⁸

i. Three Elements Comprise the Right to Water

The crux of the right to water resides in a three-element definition for adequacy of water. First, water must be available in “sufficient and continuous [supplies] for personal and domestic uses.”²⁹ The General Comment sets the specific threshold

²² Israel signed the ICCPR on December 19, 1966 and ratified it on October 3, 1991.

http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=IV-4&chapter=4&lang=en

²³ International Covenant on Civil and Political Rights art. 6, Mar. 23, 1976, 999 U.N.T.S. 171, *available at*: <http://www2.ohchr.org/english/law/pdf/ccpr.pdf>.

²⁴ Comm. on Econ., Soc., and Cultural Rights, *supra* note 17, at ¶ 6.

²⁵ *Id.* at ¶ 10.

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.* at ¶ 11.

²⁹ *Id.* at ¶ 12(c).

quantities according to WHO guidelines, which currently recommend one hundred and two hundred liters per person per day for all water needs, including for hygiene and cooking.³⁰ Some experts claim that the WHO levels may be inadequate.³¹ For example, the WHO minimum standard for drinking water is 2.5 liters per person per day, whereas experts note that their recorded averages for minimum drinking water per person per day were between 2-4.5 liters.³² Overall, this study recommends that governments allocate at least one hundred liters of water per day per person to live with dignity and ensure life in arid regions, in line with Agenda 21 recommendations.³³

The second element of the definition of adequacy is quality, which requires that water for personal and domestic use must be safe, including from “micro-organisms, chemicals, and radiological hazards” that could harm someone’s health.³⁴ The right to quality includes that water have an “acceptable colour, odor and taste.”³⁵ Additionally, experts declare that “50 liters per person per day of clean water should now be considered a fundamental human right” because no matter the climate, 50 liters of potable water is the minimum to sustain life and health.³⁶

Availability has proven to be the lynchpin to preserving a right to water. A lack of access to water, whether it is due to physical, economic, or social impediments, impacts billions of people.³⁷

³⁰ WHO Guidelines, *supra* note 4, at 91.

³¹ P.H. Gleick, *Basic Water Requirements for Human Activities: Meeting Basic Needs*, 21 WATER INT’L 83, 84 (1996).

³² *Id.*; See also WHO Guidelines, *supra* note 4, at 91.

³³ *Id.* at 87.

³⁴ Comm. on Econ., Soc., and Cultural Rights, *supra* note 17, at ¶ 12(b).

³⁵ *Id.*

³⁶ Gleick, *supra* note 31, at 90.

³⁷ *Id.* at 85.

Problems with physical access to water are pervasive throughout developing nations. In 1990, “1.7 billion people lacked access to adequate sanitation services,” while “over 1.2 billion people lacked adequate clean drinking water.”³⁸ Since that time, the global population has increased by over 900 million.³⁹ Increasing populations are placing enormous, unsustainable burdens on watersheds. Unfortunately, this water is not distributed equally, leaving some without adequate access to quality water.⁴⁰

General Comment No. 15 defines adequate physical access for the entire population as “sufficient, safe, and acceptable water” that is “accessible within, or in the immediate vicinity, of each household, educational institution and workplace.”⁴¹ The General Comment defines adequate economic access as “water, and water facilities and services, [that] must be affordable for all” without encumbering other Covenant rights.⁴²

In the 21st century, the most pernicious obstacle to water is discrimination. The UN framework, which applies to Israel through the ICCPR and other covenants and agreements, protects “the most vulnerable or marginalized sections of the population, in law and fact [from] discrimination on any of the prohibited grounds.”⁴³ By including *de facto* as well as *de jure* discrimination, the ICESCR *General Comment No. 15* quashes loopholes and willful blindness defenses to state-sanctioned discrimination. Of specific pertinence to the case study, the General Comment requires states to “take steps to remove *de facto* discrimination,” such as when states invest in infrastructure and allocate resources in a way that tacitly discriminates.⁴⁴

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *General Comment, supra* note 17, at ¶1.

⁴¹ Comm. on Econ., Soc., and Cultural Rights, *supra* note 17, at ¶12(c)(i).

⁴² *Id.* at ¶12(c)(ii).

⁴³ *Id.* at ¶12(c)(iii).

⁴⁴ *Id.* at ¶14.

ii. Obligations for Nations Under the General
Comment

The General Comment demands that all member states party to a Covenant⁴⁵ that mentions a fundamental human right contingent to water immediately comply with the elements, especially access to water.⁴⁶ It prods states to maintain, with urgency, their “constant and continuing duty...towards the full realization of the right to water.”⁴⁷ If accused of undertaking any “retrogressive measures,” the accused state has the burden of proving that this is not the case.⁴⁸ Furthermore, each state has a duty to respect, protect, and fulfill the right to water.⁴⁹

A state’s duty to respect the right to water means that it must “refrain from interfering directly or indirectly with the enjoyment of the right to water.”⁵⁰ The definition of interference includes discrimination, the obstruction of customary or traditional arrangements, diminishing access to water, and polluting water.⁵¹ Extending international humanitarian law, the Committee notes that during armed conflicts and natural disasters, states party to Covenants are bound to protect objects indispensable to life, including access to clean, healthy water.⁵²

A state’s duty to protect requires that a state prevent third parties from interfering in any way with persons’ enjoyment of the right to water.⁵³ In this context, the definition of interference includes actions by third parties that lead to unequal access to

⁴⁵ As stated earlier, Israel is bound because it signed and ratified the ICESCR, as well as other international treaties like the ICCPR.

⁴⁶ *Id.* at ¶6.

⁴⁷ *Id.* at ¶18.

⁴⁸ *Id.* at ¶19.

⁴⁹ *Id.* at ¶20.

⁵⁰ *Id.* at ¶21.

⁵¹ *Id.*

⁵² *Id.* at ¶22.

⁵³ *Id.* at ¶23.

water, particularly in situations where water services are administered by third parties who, often due to lack of an effective regulatory system, frustrate persons' access to water.⁵⁴ The General Comment notes that during armed conflicts and natural disasters, states are bound to protect objects indispensable to life, including access to clean drinking water.⁵⁵

Finally, a state's duty to fulfill the right to water means that a state is obligated to facilitate, promote, and provide the right to water.⁵⁶ States must adopt measures to ensure that persons can realize their right to water throughout the nation, including by adopting of "a national water strategy and plan of action."⁵⁷ States must take steps to ensure that water is affordable and that water is available in sufficient quantities and quality for present and future generations, including through aggressive monitoring and management programs.⁵⁸

iii. Violations of the Right to Water

The General Comment places the burden on states to prove that they have taken all of the "necessary and feasible steps towards the realization of the right to water" for their entire population in accordance with the requirements in the General Comment.⁵⁹ Whether by acts of commission or omission, states are bound to comply or they face enforcement of the violation provisions of the particular Covenant that binds them to the General Comment.⁶⁰ The lack of direct power to punish violators mitigates the power of the document. Fortunately, the thoroughness of this foundation has provided the international

⁵⁴ *Id.*

⁵⁵ *Id.* at ¶22.

⁵⁶ *Id.* at ¶25.

⁵⁷ *Id.* at ¶26.

⁵⁸ *Id.* at ¶27-29.

⁵⁹ *Id.* at ¶40.

⁶⁰ *Id.* at art. IV.

community with enough incentive to further define the right to water through a UN General Assembly Resolution.

B. Human Rights Council Annual Report to UN General Assembly Resolution

On November 27, 2006, the Human Rights Council requested the Office of the UN High Commissioner for Human Rights (OHCHR) to prepare a report on relevant human rights obligations related to equitable access to safe drinking water and sanitation under the international human rights framework.⁶¹ The OHCHR presented a report on the right to water, taking into account written submissions from member states, intergovernmental organizations (IGOs), national human rights institutions, nongovernmental organizations (NGOs) the private sector, and other experts.⁶²

The report reviewed the legal framework and existing obligations related to equitable access to safe drinking water and sanitation.⁶³ It also spelled out the proper scope of “access to safe drinking water and sanitation,” including a clarification on the necessity of regulatory monitoring that was absent in General Comment No. 15.⁶⁴ The report also discussed issues that required further elaboration and provided recommendations for consideration by the Human Rights Council.⁶⁵

⁶¹ Human Rights Council, Decision 2/104 (Nov 27, 2006), *available at*: http://www2.ohchr.org/english/issues/water/docs/HRC_decision2-104.pdf; Annual Rep. of the U.N. High Comm’r for Human Rights and Reps. of the Office of the U.N. High Comm’r for Human Rights and the Secretary-General, A/HRC/6/3 (Aug. 16, 2007) *available at* http://www2.ohchr.org/english/issues/water/iexpert/docs/A-CHR-6-3_August07.pdf [hereinafter, Annual Report].

⁶² Annual Report, *supra* note 60, at Summary.

⁶³ *Id.*

⁶⁴ *Id.* at ¶3.

⁶⁵ *Id.*

The legal framework and obligations mirror those contained in General Comment No. 15. The OHCHR reviewed existing obligations in instruments, such as the African Charter on the Rights and Welfare of the Child and the Protocol to the African Charter on Humans and Peoples' Rights.⁶⁶ Many UN member states signed the Mar Del Plata Action Plan in 1977 which contained an explicit reference to “the right to have access to drinking water in quantities and of a quality equal to their basic needs.”⁶⁷ Subsequently, the International Covenant on Civil and Political Rights, the Human Rights Committee, and General Comment No. 15 cemented a common position with regard to the enjoyment of the right to water. The OHCHR report notes that there is a broad consensus in the human rights community that water is a human right; and the Inter-American Court of Human Rights had interpreted the right to life as “including access to conditions that guarantee a dignified life.”⁶⁸

The Report and the General Comment define water similarly and break the right into the same three elements with the same divisions for access.⁶⁹ In fact, the Report has a renewed focus on access. While attacking *de jure* and *de facto* discrimination, the Report specifically addresses regulatory holes in most States' water administration, wildly disparate physical access for marginalized areas, and increasing economic access issues.⁷⁰ The Report's identification of international obligations mirrors those in the General Comment. The ICCPR requires State parties to respect and ensure the right to life.⁷¹ Israel has ratified the ICCPR and therefore has obligations stemming from General

⁶⁶ *Id.* at ¶5(a).

⁶⁷ *Id.* at ¶5(d).

⁶⁸ *Id.* at ¶7.

⁶⁹ General Comment, *supra* note 17, at art. 2.

⁷⁰ Report, *supra* note 60, at ¶22-28.

⁷¹ ICCPR, *supra* note 23, at art. 6, ¶1.

Comment No. 15.⁷² Under the ICCPR, a state's failure to meet obligations in relation to safe and adequate drinking water is considered more serious than other deprivations of water, such as for hygiene or cooking.⁷³ Israel has also ratified the ICESCR and is therefore obliged to respect, protect, and fulfill the right to an adequate standard of living and the right to health, as interpreted by General Comment No. 15.

In the Report, the UN High Commissioner for Human Rights states that "international human rights law entails clear obligations...that States ensure everyone's access to a sufficient amount of safe drinking water for personal and domestic uses"⁷⁴ Throughout the Report, the High Commissioner highlights CESCR General Comment No. 15 for its ideas and particularly its national strategy on water and sanitation.⁷⁵

The entire Report attempts to refute the notion that there is no right to water. The OHCHR discusses several obligations for member states and whether physical, economic, and non-discriminatory access obligations are being met.⁷⁶ Each facet of the Report emphasizes the right to water and several obligations that exist as part of the comprehensive human rights Covenant framework.⁷⁷ Overall, the Report borrows heavily from CESCR General Comment No. 15. It shares the same elements to achieve a right to water, similar conclusions about obligations and implicit origins to a right to water. The OHCHR notes similar explicit rights that rely on water.⁷⁸ The OHCHR Report is a comprehensive statement from the international community about

⁷² SRINI SITARAMAN, STATE PARTICIPATION IN INTERNATIONAL TREATY REGIMES 106 (2009).

⁷³ Report, *supra* note 60, at ¶34.

⁷⁴ *Id.* at ¶47.

⁷⁵ *Id.* at ¶50-51.

⁷⁶ *Id.* at ¶22-29.

⁷⁷ *Id.* at ¶30-35.

⁷⁸ *Id.* at ¶40.

the status of the enjoyment of the right to water and how to remedy violations of that right.

C. United Nations General Assembly Resolution on Transboundary Aquifers

While many credit the General Assembly with pushing for clearly defined international law on transboundary aquifers, it was the International Law Commission that was entrusted with the unenviable task of crafting that law.⁷⁹ The International Law Commission (ILC) was established in 1948 for the “promotion of the progressive development of international law and its codification.”⁸⁰ On November 17, 2008, the ILC issued draft articles of the law on transboundary aquifers⁸¹ to the Sixth Committee of the UN.⁸² On January 15, 2009, the General Assembly adopted the ILC’s draft resolution on transboundary aquifers.⁸³ These modifications may help millions of people access previously out of reach water supplies.

i. From Permanent Sovereignty Over Natural Resources to Information Sharing and Collective Action and Preservation

The Preamble of the General Assembly Resolution on the Law of Transboundary Aquifers recalls General Assembly Resolution 1803 from December 14, 1962, which declared permanent sovereignty over all natural resources within a nation.⁸⁴ Disputes over transboundary aquifer use are examples of a

⁷⁹ Statute of the International Law Commission, G.A. Res. 174 (II), U.N. Doc. A/174 (II), at art. 1.1 (Nov. 17, 1947).

⁸⁰ *Id.*

⁸¹ Underground water sources located across different States.

⁸² <http://www.un.org/en/ga/sixth/63/ILC.shtml>

⁸³ The law of transboundary aquifers, G.A. Res. 63/124, U.N. Doc. A/RES/63/124, at art. 2 (Jan. 15, 2009) [hereinafter *Transboundary Aquifers*].

⁸⁴ *Id.* at preamble

“tragedy of the commons.” Each well is analogous to the addition of an animal onto a pasture with a finite carrying capacity. This Resolution aims to provide a framework where each well owner, or shepherd, has an equal opportunity and expectation to get the bare minimum to live a healthy life. The ILC navigates sovereignty issues through a common sense cooperative approach to resource management.

The Resolution lays out the general principles of the law of transboundary aquifers and pays brief attention to sovereignty before discussing equitable and reasonable utilizations of transboundary aquifers.⁸⁵ The Resolution attempts to clearly articulate basic resource management practices. For example, it asks that states strive to maximize “the long-term benefits derived from the use of water” and demands that they “not utilize a recharging transboundary aquifer or aquifer system at a level that would prevent continuance of its effective functioning.”⁸⁶ Article 5 of the Resolution spells out several factors relevant to determining the proper utilization allocation, including population, present and future social and economic needs, the geology of the aquifer, its formation and recharge rate, the availability and feasibility of alternative water access, current and potential utilization of the aquifer, and the role the aquifer plays in the broader ecosystem.⁸⁷

ii. Obligations Under the Resolution

Using CECSR General Comment No. 15, the Resolution obliges Aquifer States not to cause significant harm to aquifers by undertaking other activities on or in the aquifer, and to take “all appropriate measures to prevent the causing of significant harm through that aquifer to other aquifer States or other States” where

⁸⁵ *Id.* at art. 3-5.

⁸⁶ *Id.* at art. 4(b) and (d).

⁸⁷ *Id.* at art. 5.

discharges may occur.⁸⁸ Fundamental to the general viability of the Resolution is an obligation to cooperate.⁸⁹ Joint mechanisms of cooperation are a cornerstone of the Resolution's framework on managing transboundary aquifers to promote the enjoyment of the right to water.

In order to cooperate in regulating their competing uses, States must regularly share data and information on the status of their usage and the aquifer itself.⁹⁰ States must employ their best efforts and "tak[e] into account current practices and standards" when generating geological, hydrogeological, hydrological, meteorological, and ecological reports.⁹¹ Weighing down on absolute sovereignty, Aquifer States can request that other States produce these reports if a regular report has not been conducted.⁹² The Resolution encourages other supplemental and focused bilateral and regional agreements.

iii. Protection, Preservation and Management

Aquifer States must undertake "all appropriate measures to protect and preserve ecosystems within, or dependent upon, their transboundary aquifers or aquifer systems."⁹³ Measures include identifying recharge and discharge zones for all transboundary aquifers and fairly apportioning those zones between borders.⁹⁴ Consistent with this "good neighbor" resolution, States must monitor for pollution and collaborate with international organizations if they cannot sustain monitoring or maintenance operations by themselves.⁹⁵ If one State is planning any activity or

⁸⁸ *Id.* at art. 6, ¶¶ 1-2.

⁸⁹ *Id.* at art. 7.

⁹⁰ *Id.* at art. 8, ¶ 1.

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.* at art. 10.

⁹⁴ *Id.*

⁹⁵ *Id.* at art. 12-14.

event that may adversely impact the transboundary aquifer, it must assess and inform the adversely affected States through an environmental impact assessment and notices.⁹⁶

The Resolution treats two situations differently: emergency situations and times of armed conflict. All nations, not only Aquifer States, are obligated to protect aquifers, facilities, and other water works through Covenants, principles and rules of international law “applicable in international and non-international armed conflict, and [such water works] shall not be used in violation of those principles and rules.”⁹⁷ An emergency is defined as “a situation resulting suddenly from natural causes or from human conduct” that affects or poses an imminent threat of serious harm to a relevant aquifer.⁹⁸ In emergency situations, there are obligations to inform neighbors, to immediately take practicable measures where strictly necessary, even in violation of Articles 4 and 6, and to cooperate with other Aquifer States affected by the emergency situation.⁹⁹

*D. General Assembly Resolution Declaring an Explicit
Right to Water*

On July 26, 2010, the Sixth Committee boldly declared a universal right to water.¹⁰⁰ Perhaps recognizing the obvious synthesis of international law, sensing the customary nature of the right, or just tired of dancing around a declaration, the body distributed a resolution that contained three paragraphs after a lengthy recitation of the laws buttressing the declaration.¹⁰¹ After it recalls a series of international documents, including the ones described above, it

⁹⁶ *Id.* at art. 15.

⁹⁷ *Id.* at art. 18.

⁹⁸ *Id.* at art. 17, ¶ 1.

⁹⁹ *Id.* at art. 17, ¶¶ 2-4.

¹⁰⁰ The Human Right to Water and Sanitation, U.N. Doc. A/64/L.63/Rev.1, at ¶1 (July 26, 2010) [hereinafter Right to Water].

¹⁰¹ *See generally id.*

reaffirms the human rights component and links it to the international consensus seen at world forums and declarations, such as the Millennium Development Goals.¹⁰² As this paper advocates, the Sixth Committee declares a right to "safe and clean drinking water and sanitation as a human right", agreeing that this right "is essential for the full enjoyment of life and all human rights."¹⁰³ Meekly aware of their lack of power, the body calls upon those with the financial resources to ameliorate the suffering to take action.¹⁰⁴ Finally, the body welcomes efforts by the Human Rights Council to fully establish the critical nature of the issue and others who seek to quench thirst. Because this document was issued shortly after this paper was finished, we will have to wait to see how it will impact the realization of the right to water. A more substantial and forceful declaration in an international treaty would cement this right and provide international accountability.¹⁰⁵

III. The Palestinian Water Situation: A Case Study in Denial of the Enjoyment of the Right to Water

Palestine is an arid region that borders the Mediterranean Sea, extending east to the Jordan River.¹⁰⁶ With the term "Palestine" and its historical associations aside, the region as it is known today exists within the military control of the nation of Israel.¹⁰⁷ Palestine is an occupied territory, split into two geographic regions.¹⁰⁸ The western strip, along the coast of the Mediterranean, is the Gaza Strip.¹⁰⁹ It is a 28-mile by 5-mile strip

¹⁰² *Id.* at recitation ¶¶6-8.

¹⁰³ *Id.* at ¶1.

¹⁰⁴ *Id.* at ¶2.

¹⁰⁵ *Id.* at ¶3.

¹⁰⁶ BARUCH KIMMERLING & JOEL S. MIGDAL, *THE PALESTINIAN PEOPLE: A HISTORY* 4-5 (Harvard Univ. Press 2003).

¹⁰⁷ *Id.* at 375.

¹⁰⁸ *Id.* at 242 (map 6, "Israel and Occupied Territories of the West Bank and Gaza Strip").

¹⁰⁹ *Id.*

of densely populated land that borders Egypt.¹¹⁰ Seventy-five percent of Gaza's Palestinian population is housed within eight refugee camps.¹¹¹ The eastern portion of the Palestinian Territories is the West Bank, which borders Jordan and the Jordan River.¹¹²

The origin of the crisis cannot be pinpointed to one significant period or event. UN Resolution 181 partitioned the British Controlled territory of Palestine and created the State of Israel.¹¹³ It mandates "access for both States and for the City of Jerusalem on a non-discriminatory basis to water and power facilities."¹¹⁴ This operative clause is pertinent to a discussion about Israel's interference with Palestinian water rights. It is the starting point for a basis in international law for Israel's violations of Palestinian human rights, especially with regard to the enjoyment of the right to water.

Israel must not only refrain from taking actions that violate this right or undermine the Palestinian population's opportunity to realize the right, but must also protect the Palestinian population from interference by third parties in their enjoyment of the right to water. Israel must take deliberate, concrete and targeted steps to ensure that this right is fulfilled and fully realized.

Under international law, Israel, as the occupying power in the OPT, has well-defined responsibilities to respect the Palestinians' human right to water.¹¹⁵ The Fourth Geneva Convention imposes obligations on an occupying power in relation to the inhabitants of the occupied territory.¹¹⁶ These inhabitants

¹¹⁰ *Id.* at 227.

¹¹¹ *Id.* at 227-28.

¹¹² *Id.* at 242 (map 6, "Israel and Occupied Territories of the West Bank and Gaza Strip").

¹¹³ See G.A. Res. 181(II), U.N. Doc. A/181(II) (Nov. 29, 1947).

¹¹⁴ *Id.* at ch.4, art. D, ¶2(e).

¹¹⁵ Amnesty, *supra* note 3, at 85.

¹¹⁶ See generally Resolutions of the Diplomatic Conference, art. 6, 75 U.N.T.S. 21, Aug. 12, 1949 [hereinafter Fourth Geneva Convention].

are entitled to special protection and humane treatment by the occupying power.¹¹⁷ This means Israel must ensure that law and order is maintained and that basic necessities are provided for.¹¹⁸ This obligation includes ensuring access to water.

As delineated by the United Nations General Assembly and Human Rights Council, there are two sets of complementary legal frameworks that apply to the conduct of an occupying power with effective control over another territory: international human rights law and international humanitarian law.¹¹⁹ International law on the management and regulation of transboundary ground water sources is particularly relevant.

A. *Making the Case for Palestine: A Terrible Situation That Encompasses Violations of the Right to All Major Aspects of Water*

There are several factors that make Palestine an arid, developing nation. Based on a 1997 census taken by the Palestinian Central Bureau of Statistics, there are approximately 3.6 million people living in Palestine, with 2.3 million in the West Bank and 1.5 million in the Gaza Strip.¹²⁰ With an already dense population, population growth is placing further stress on the water resources in Palestine.¹²¹ Population growth in the OPT is at 3.2

¹¹⁷ *Id.*

¹¹⁸ According to Article 55, Israel “has the duty of ensuring the food and medical supplies of the population; it should, in particular, bring in the necessary foodstuffs, medical stores and other articles if the resources of the occupied territory are inadequate.”

¹¹⁹ See generally Amnesty, *supra* note 3, at 85.

¹²⁰ *Id.*

¹²¹ See UNCTAD, *Public Utilities in the West Bank and Gaza*, UNCTAD/ECDC/SEU/2, 49, (21 October 1994), available at <http://www.unctad.org/en/docs/poecdcsud2.en.pdf>.

percent.¹²² This leads to increasing municipal demand and also agricultural demand for water because many Palestinians still depend on the agricultural sector for their income generation.¹²³ Meeting the the increasing industrial demand for water is necessary to to support economic development within Palestine.¹²⁴ More than 70 percent of the Palestinian population live in an urban environment while nearly 30 percent live in camps.¹²⁵

The Oslo II Accords (Oslo II), the interim agreement that Israel and the Palestinian Authority signed in 1995, contains the most recent understanding on water rights. The terms of Oslo II mandated that Israel relinquish its stranglehold on water.¹²⁶ In reality, the agreement did not significantly change the scope of the Israeli control over the water resources. However, the agreement does explicitly recognize Palestinian water resources rights, leaving the specific nature of those rights for a permanent status agreement.¹²⁷

i. Palestinian Water Authority

Established by Presidential Resolution No. 90 in 1995, the Palestinian Water Authority (PWA) is the central public authority in the water sector for the OPT.¹²⁸ As the main regulatory body for water resources management and infrastructure planning in the

¹²² UN Data, Country Profile: Occupied Palestinian Territory, <http://data.un.org/CountryProfile.aspx?crName=Occupied%20Palestinian%20Territory>

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ Interim Agreement on the West Bank and the Gaza Strip, art. 40, ISR-PLO, September 28, 1995, [hereinafter Oslo II].

¹²⁷ *Id.*

¹²⁸ ASIT K. BISWAS, WATER AS A HUMAN RIGHT FOR THE MIDDLE EAST AND NORTH AFRICA 112 (2008); *See* Presidential Resolution No. (90) of 1995 concerning the establishment of the Palestinian Water Authority (PWA).

OPT,¹²⁹ the PWA manages available water resources in Palestine to maintain a consistent water supply and sets standards and technical specifications for proper water quality.¹³⁰ It administers licenses for projects that exploit water resources and acts as the international water presence for NGOs and donors.¹³¹ According to a 2009 World Bank report, the PWA has a robust institutional framework.¹³²

However, the PWA lacks sufficient resources to fully implement necessary infrastructure projects. Furthermore, “the institutional framework is still suffering from significant overlaps in roles and responsibilities” and “the investment and regulatory frameworks are still works in progress.”¹³³ Currently, the PWA must act as both regulator and as the utility itself.¹³⁴ It is attempting to build capacity to distance and eliminate itself from the utility role and focus on regulating and representing Palestinian interests and rights in bilateral and regional negotiations.¹³⁵

¹²⁹ *Id.* (citing Resolution No. (66) of 1997 concerning the internal regulations of the Palestinian Water Authority (PWA)).

¹³⁰ World Bank, *West Bank and Gaza: Wastewater Treatment and Reuse Policy Note*, 9, (June 2004) available at

<http://siteresources.worldbank.org/INTUWM/Resources/westbank.pdf>.

¹³¹ *Id.*

¹³² See generally World Bank, *West Bank and Gaza Assessment of Restrictions on Palestinian Water Sector Development*, Report No. 47657-GZ (April 2009) available at http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2009/06/30/000333037_20090630003234/Rendered/PDF/476570SR0P11511nsReport18Apr2009111.pdf

¹³³ Amnesty, *supra* note 3, at 12. The quote is not from this source. Need correct citation.

¹³⁴ U.N. Econ. & Soc. Comm’n for Western Asia. [ESCWA], *EGM on the Production of Statistics on Natural Resources and Environment*, ¶ 17, U.N. Doc. E/CN.4/Sub.2/AC.5/1999/WP.6 (June 5-7, 2007) (prepared by Ahmed S. Al Yaqoubi). available at

<http://www.escwa.un.org/divisions/events/Countrypapers/5june07Palestine.pdf>.

¹³⁵ *Id.*

1. Administering the Water Infrastructure: The West Bank Water Department

Per Article 40 of Oslo II, the Israeli Civil Authority relinquished direct control over water infrastructure in the West Bank to the West Bank Water Department (WBWD).¹³⁶ The West Bank Water Department is a governmental body of the Palestinian National Authority and is charged with operating and maintaining bulk water facilities.¹³⁷ These include thirteen wells, six booster stations and twelve reservoirs with a capacity of more than 500 cubic meters.¹³⁸

Unfortunately, as is common in Palestine, the WBWD does not have adequate funding for its budget.¹³⁹ Despite Oslo II, these facilities are still monitored by the Israeli water authority, Mekorot.¹⁴⁰ In fact, Mekorot is performing most of the operating procedures and maintenance activities that WBWD should do, but is unable to carry out.¹⁴¹

WBWD buys its water from Mekorot and other Israeli water suppliers for a fixed price set by the Joint Water Committee (JWC).¹⁴² WBWD then provides bulk water to Israeli settlements within their jurisdiction at JWC prices.¹⁴³ WBWD also provides water to Palestinian users. WBWD has the responsibility to tap new wells and to extend and maintain the existing infrastructure.¹⁴⁴ They abdicate that responsibility to Mekorot, which maintains the infrastructure. WBWD conducts meter readings for Palestinians

¹³⁶ Oslo II, *supra* note 114, at art. 40.

¹³⁷ UNCTAD, *supra* note 109, at 21.

¹³⁸ BISWAS, *supra* note 122, at 113.

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ *Id.*

while allowing Mekorot to enter settlements to conduct readings.¹⁴⁵

2. Municipalities and Village Councils

Apart from the PWA and WBWD, local municipalities and village councils are ultimately responsible for supplying water to their people.¹⁴⁶ They achieve this by either getting the water from WBWD or from an independent well.¹⁴⁷ Some municipally-owned water utilities, such as the Jerusalem Water Undertaking, are exempted from WBWD and PWA control.¹⁴⁸ They, along with a sewage service, are responsible for water supply and sewage collection for Ramallah, Al-Bireh, Bethlehem, Beit Sahur, Beit Jala, and other surrounding villages.¹⁴⁹

The structure of Palestine's water bureaucracy is unwieldy and is exacerbating an already tenuous situation. Ultimately, the situation has improved since the PWA took control, but work still remains to achieve compliance with international standards.¹⁵⁰ As discussed below, full realization of the enjoyment of the right to water in Palestine depends on a host of institutional, national, and international players.¹⁵¹ The inefficiency of one underfunded organization does not explain the depth to which fundamental rights are impinged in Palestine.

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.* at 114.

¹⁴⁹ *Id.*

¹⁵⁰ World Bank, *supra* note 119 (or 121), at 23.

¹⁵¹ *Id.*

B. Major Water Features

i. The West Bank

1. Surface Water Features

Aside from the Dead Sea, the most prominent surface water feature in the West Bank is the Jordan River. Currently, despite having riparian borders with the Jordan River, Palestinians are denied the right to an equitable share of water from the Jordan River. Palestinians in the West Bank therefore rely on groundwater for their survival, despite their proximity to the Jordan River.¹⁵²

The Jordan River runs along Lebanon and Syria and flows through Israeli, Palestinian and Jordanian lands.¹⁵³ The natural flow of the Jordan River at the entrance to the Dead Sea is around 1485 to 1671 million cubic meters of water per year.¹⁵⁴ Currently, Israel is the greatest user of the Jordan River water, using about 58.7 percent of the total flow.¹⁵⁵ Israel transfers 420 million cubic meters of surface water per year through the National Water Carrier from Upper Jordan to the Negev.¹⁵⁶ This quantity merely supplements local consumption in the Tiberias Basin and the Huleh Valley.¹⁵⁷ In total, Israeli consumption exceeds the annual discharge of the tributaries to the Jordan River.¹⁵⁸ Jordan uses 23.4 percent of the flow, Syria uses 11 percent and Lebanon uses 0.3 percent.¹⁵⁹

¹⁵² ESCWA, *supra* note 127, at ¶ 1.

¹⁵³ *Id.*

¹⁵⁴ *Id.* at ¶ 1.2.

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

2. Groundwater: The Only Available Resource

Because they are denied access to the Jordan River, Palestinians in the West Bank rely on groundwater for survival and economic growth.¹⁶⁰ Fortunately, the West Bank spans more than three groundwater basins, collectively known as the Mountain Aquifer Basin.¹⁶¹ These include the Eastern Aquifer Basin, the Western Aquifer Basin and the Northeastern Aquifer Basin.¹⁶² Each of these basins has a unique geology and unique stresses. The Western Aquifer has the greatest ability to recharge, but each aquifer is vital to Palestinian access to water. Table One lists the recharge rates for each basin.¹⁶³

Table 1: Basin Recharge

Aquifer Basin	Million m³ of water per year
Eastern	100-172
Northeastern	130-220
Western	335-450
Total	565-822

a. The Eastern Aquifer Basin

Recharge and discharge of the Eastern Aquifer Basin (EAB) is restricted to the West Bank.¹⁶⁴ It covers the eastern half of the West Bank area, from the Jordan River to the mountains where most of the rainfall and recharge occurs.¹⁶⁵ According to the PWA, the “eastward dip of the eastern flank of the West Bank conducts most of the infiltrating water towards the Jordan Valley and the Dead Sea by gravity.”¹⁶⁶ Unknown quantities of this

¹⁶⁰ Amnesty, *supra* note 3, at 85.

¹⁶¹ ESCWA, *supra* note 127, at ¶1.

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.* at ¶1.1.1.

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

groundwater are diverted to the Jordan Valley and the remainder emerges as endogenous springs.¹⁶⁷ The highest amount of well pumping occurs in Israeli settlement wells near the main fault in the Jordan Rift Valley.¹⁶⁸

b. The North Eastern Aquifer Basin

The North Eastern Aquifer Basin "extends from the area south of Nablus towards the north, beyond the borders of the West Bank."¹⁶⁹ The smallest of the three basins, it naturally has the least ability to recharge its reservoir.¹⁷⁰ The Basin's area is "about square kilometers of which 1053 square kilometers lie within the West Bank and 371 square kilometers lie within Israel."¹⁷¹

c. Western Aquifer Basin

The Western Aquifer Basin is the largest groundwater basin in the OPT.¹⁷² This basin includes "the western part of the West Bank Mountains and extends to the coastal areas, as well as from the north central mountains area to Hebron Mountain in the south."¹⁷³ The Western Aquifer Basin consists of two main aquifers, an upper and lower aquifer, each with average thicknesses between six hundred and 900 meters.¹⁷⁴

ii. Gaza Strip

The water situation in the Gaza Strip is particularly dire.¹⁷⁵ Demand greatly exceeds water supply and the water that is

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ ESCWA, *supra* note 127, at ¶1.1.2.

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² *Id.* at ¶1.1.3.

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ *Id.* at ¶1.2. Amnesty, *supra* note 3, at 29?

provided is polluted.¹⁷⁶ The Coastal Aquifer, the only source of water for the area, is being mined.¹⁷⁷ About 70% of the total pumped water is used for agricultural purposes.¹⁷⁸ Unfortunately, due to the population growth of settlers, Israeli users, and Gaza's own residents, the problem is expected to grow. Therefore, the production of additional water through desalination facilities is paramount.

1. Surface Water Resources

The surface water system in the Gaza Strip consists of wadis, or dry river beds that only flood during very short periods, with the exception of Wadi Gaza.¹⁷⁹ Wadi Gaza is the major wadi in the Gaza Strip with an estimated average annual flow of 20 to 30 million cubic meters of water per year.¹⁸⁰

Unfortunately, most of the water from Wadi Gaza, which originates in the Hebron mountains in the West Bank and flows southeast through Israel into Gaza, is diverted into a dam in Israel, just before it reaches Gaza.¹⁸¹ Due to the Israeli practices, only a small volume of water, if any, from the huge floods may reach the Gaza Strip.¹⁸² Two other insignificant wadis in the Gaza Strip, Wadi El Salqa in the south and Wadi Beit Hanon in the north, are almost always dry.¹⁸³

¹⁷⁶ Amnesty, *supra* note 3, at 25.

¹⁷⁷ *Id.* at 10.

¹⁷⁸ ESCWA, *supra* note 127, at ¶1.2.

¹⁷⁹ *Id.* at ¶2.1

¹⁸⁰ *Id.*

¹⁸¹ Amnesty, *supra* note 3, at 11.

¹⁸² *Id.*

¹⁸³ *Id.*

2. Groundwater Resources

Since surface water resources in Gaza are intercepted by Israel before they can be captured, Palestinians in Gaza rely on the Coastal Aquifer to survive. The Coastal Aquifer lies underneath Gaza and part of Israel.¹⁸⁴ The major source of new groundwater in the aquifer is rainfall. Unfortunately, as Gaza is in a true arid climate, rainfall is sporadic and varies from about 40 centimeters per year in the north to about 20 centimeters per year in the south.¹⁸⁵ The lateral inflow into the aquifer is limited by Israeli capture before it can permeate into the aquifer.¹⁸⁶ As a result, the total freshwater recharge at present is limited to between 55 and 65 million cubic meters of water per year, or between 20 and 125 million cubic meters of water per year less than what is extracted.¹⁸⁷

C. Restrictions on Access to Water: Economic, Physical, and Otherwise

i. Background

Israel has imposed restrictions on Palestinians' access to water supplies in the OPT through the control of water resources and land, as well as restrictions on the movement of people and goods. These restrictions make it excessively difficult for Palestinians to access their water resources and to develop and maintain the water and sanitation infrastructure.¹⁸⁸

Furthermore, Israeli authorities utilize a complex permit system to mete out *de jure* discrimination for water-related projects

¹⁸⁴ *Id.* at 10.

¹⁸⁵ ESCWA, *supra* note 127, at ¶2.1.

¹⁸⁶ *Id.*

¹⁸⁷ *Id.*

¹⁸⁸ Amnesty, *supra* note 3, at 4-5.

in the OPT.¹⁸⁹ This harmful system has delayed the implementation of much needed water and sanitation projects, created additional, unnecessary costs, and, in many cases, prevented such projects.¹⁹⁰

During decades of occupation of the Palestinian territories, Israel has overexploited Palestinian water resources, neglected the water and sanitation infrastructure in the OPT, and used the OPT as a dumping ground for its waste, thereby causing damage to the groundwater resources and the environment.¹⁹¹ Urgent measures are therefore needed to ensure that adequate water supplies are available. Israeli policies and practices in the OPT, notably the unlawful destruction and appropriation of property and the imposition of restrictions which impede the Palestinians' enjoyment of the right to water in the OPT, violate Israel's obligations under both human rights and humanitarian law.¹⁹²

Israel has failed to fulfill its obligations to Palestinians as an occupying power.¹⁹³ As a result of this willing failure, the burden of dealing with these challenges has fallen to the Palestinian Authority (PA), the PWA, and local service providers.¹⁹⁴ Yet, the Israeli authorities continue to obstruct Palestinian and international efforts to improve access to water in the OPT.¹⁹⁵

Taking measures into their own hands, some Palestinians have resorted to drilling unlicensed wells to stave off disease and

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ *See generally* Resolutions of the Diplomatic Conference, art. 6, 75 U.N.T.S. 21, Aug. 12, 1949.

¹⁹⁴ *Id.*

¹⁹⁵ Amnesty, AI Index MDE 15/027/2009 TROUBLED WATERS – PALESTINIANS DENIED FAIR ACCESS TO WATER 3, 4 (2009).

to meet their families' basic needs.¹⁹⁶ Others have connected to the water network illegally and have stopped paying their water bills.¹⁹⁷ These practices have further compounded the problem by undermining the economic viability and authority of the PWA, which has proved to be unable or unwilling to stop such practices.¹⁹⁸ Israeli restrictions on Palestinian water access and development have hindered the Palestinian's ability to grow economically, secure a healthy minimum amount of water, and enjoy the other benefits that flow from the enjoyment of the right to water¹⁹⁹.

ii. Availability By Aquifer

1. Eastern Aquifer Basin

The Eastern Aquifer Basin lies entirely within Palestine. Its sustainable yield is between fifty and seventy million cubic meters of water per year and Palestinians pump only 18.8 million cubic meters of water per year from 197 abstraction wells.²⁰⁰ On the other hand, Israelis, despite lacking international rights from land ownership, pump 36.7 million cubic meters of water per year from only thirty-eight wells.²⁰¹

Palestinians control sixty-six fresh water springs that yield, on average, 39.9 million cubic meters of water per year.²⁰² However, individually, each of these springs has a low discharge rate.²⁰³ Palestinians control few of the strong springs located in the Jordan Valley area.²⁰⁴ Israel, however, controls strong springs

¹⁹⁶ *Id.*

¹⁹⁷ *Id.*

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ ESCWA, *supra* note 127, at ¶1.1.1.

²⁰¹ *Id.*

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ *Id.*

totaling over 88.5 million cubic meters of water per year of discharge from the Eastern Aquifer Basin.²⁰⁵ The Israeli springs, though, are mainly brackish-to-hyper saline springs along the Dead Sea.²⁰⁶ While Palestinians in the West Bank lack sufficient water volumes, their water is of adequate quality.²⁰⁷ The distribution scheme for water provides adequate supply to some areas of the West Bank, but those areas that rely solely on weak springs are in danger from fluctuations and interference with recharge.²⁰⁸

2. Northeastern Aquifer Basin (NEAB)

The NEAB is used equally by Palestinians in the West Bank and Israelis. The proportion of use is unfair, however, because most of the recharge originates within the West Bank.²⁰⁹ The total, long-term average recharge from rainfall that reaches the groundwater body is approximately 165 million cubic meters of water per year.²¹⁰ Currently, about 24.9 million cubic meters of water per year of this recharge is abstracted by wells, while the remainder flows to the Gilboa area to the north and the Jordan Valley to the east.²¹¹

Inside the West Bank, eighty-five Palestinian wells pump around 11.5 million cubic meters of water per year, while only nine Israeli wells pump 13.4 million cubic meters of water per year (based on the average for the period from 1980 to 2004).²¹² Seventy-four Palestinian springs in the West Bank discharge fourteen million cubic meters of water per year, while Israeli

²⁰⁵ *Id.*

²⁰⁶ *Id.*

²⁰⁷ *Id.*

²⁰⁸ ESCWA, *supra* note 127, at ¶1.1.1.

²⁰⁹ *Id.* at ¶1.1.2.

²¹⁰ *Id.*

²¹¹ *Id.*

²¹² *Id.*

springs discharge more than seventy-five million cubic meters of water per year.²¹³

3. Western Aquifer Basin (WAB)

The WAB receives around 400 to 440 million cubic meters of water per year in annual recharge from the mountains of the West Bank.²¹⁴ Israel, using wells along the West Bank border, abstracts approximately 338 million cubic meters of water per year.²¹⁵ Continued pumping at the current levels will collapse this aquifer in the southern zone and affect the central and northern zones of this aquifer.²¹⁶

Palestinians have a marginal share in groundwater pumping from this basin because their 151 wells run at the relatively low average pumping rate of 20.9 million cubic meters of water per year, or as low as six percent of the Israeli volumes.²¹⁷ Israel has more than 500 wells just inside and along its borders with the West Bank, in addition to five abstraction wells within the West Bank.²¹⁸

4. Coastal Aquifer

With no other source of water, Palestinians in Gaza have resorted to mining over the Coastal Aquifer by as much as 80 to 100 million cubic meters of water per year, or twice the aquifer's yearly sustainable yield.²¹⁹ As a direct result of mining of the aquifer, there has been a progressive deterioration in the quality of the water supply.²²⁰ The over-exploitation has also poisoned the

²¹³ *Id.*

²¹⁴ *Id.* at ¶1.1.3.

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ *Id.*

²¹⁸ *Id.*

²¹⁹ Amnesty, *supra* note 3, at 11.

²²⁰ *Id.*

water supply, with sewage being sucked into the aquifer due to pumping.²²¹ Today, according to Amnesty International, ninety to ninety-five percent of Gaza's water is polluted and unfit for human consumption.²²²

D. Pervasive Access Issues

i. Systematic Israeli Interference With Palestinian Human Rights

The extent to which Israel curtails Palestinians' access to water has been noted by Secretary-Generals of the UN.²²³ Indeed, some of the comments by government and private officials are appalling when compared to the suffering faced by those whose basic fundamental rights are denied.²²⁴

²²¹ *Id.*

²²² *Id.*

²²³ As noted by the UN Secretary-General in 1992: "The general settlement policy of confiscating land and imposing restrictions on water resources has meant that a large proportion of the population that would normally have earned a living by traditional agriculture have gradually begun to seek employment in Israel as unskilled workers because of the lack of jobs in the territories. This appears to be partially responsible for the economic dependence of the occupied Palestinian and other Arab territories on Israel, particularly as regards agricultural produce." The Secretary-General, U.N. Doc. A/47/294, E/1992/84 REPORT OF THE SECRETARY-GENERAL ON THE QUESTION OF PALESTINE, ¶ 5(1992), available at <http://unispal.un.org/UNISPAL.nsf/361eea1cc08301c485256cf600606959/b67f568df56362c0852571250076384a?OpenDocument>.

²²⁴ In a response to the April 2009 World Bank report, Noah Kinarti, who headed the Israeli water team during the negotiations for the Oslo Accords and is now chief adviser to the Head of the Israeli Water Authority, recently told the Israeli daily *Haaretz*: "Liars... they [the Palestinians in the West Bank] have enough water to drink... There are water tankers in Amman and Damascus, too. That's how they do things. In the interim agreement they were given at least 70 to 80 million m³ of water [a year] from the eastern aquifer. They did nothing. They want us to bring them water and to live at our expense.... We let them dig [wells] in the eastern aquifer; there is water there, so let them dig, God damn it."

On August 15, 1967, Israel issued Military Order 92 which granted complete authority over all water related issues in the OPT to the Israeli army.²²⁵ Shortly thereafter, on November 19, 1967, Military Order 158 stipulated that Palestinians must obtain a permit from the Israeli army before constructing any new water installation.²²⁶ It further required the confiscation of any water installation or resource built without a permit.²²⁷

Unfortunately, these orders were one of a procession of restrictive actions by Israel. On December 19, 1968, using Military Order 291, Israel annulled all land and water-related arrangements which existed prior to Israel's occupation of the West Bank.²²⁸ These and other Israeli Military Orders remain in force today in the OPT and apply only to Palestinians.²²⁹ They do not apply to Israeli settlers in the OPT who are subject to Israeli civilian law.²³⁰ The disparity in enforcement, pervasive restrictions on access to water, and *de jure* discrimination fly in the face of Israel's obligations under prior agreements and international law, including the ICESCR, the ICCPR, and the UDHR.

Under the Israeli military regime imposed in the OPT, Palestinians cannot drill new wells or repair existing ones.²³¹ They are prohibited from carrying out any other water-related projects such as laying pipes, networks, and reservoirs to wells, springs and

Why aren't they digging? For no reason, because it's easier to cry. They want to be miserable" Yotam Feldman & Uri Blau, *A Dry and Thirsty Land*, HAARETZ, Aug. 13, 2009 at 1, available at <http://haaretz.com/hasen/spages/1107419.html>.

²²⁵ Amnesty, *supra* note 36, at 11-12.

²²⁶ *Id.* at 12.

²²⁷ *Id.*

²²⁸ *Id.*

²²⁹ *Id.*

²³⁰ *Id.*

²³¹ *Id.*

rainwater cisterns.²³² These orders are *ipso facto* violations of Israel's obligations under international law, especially since Israel is an occupying force.²³³

In theory, Palestinians could obtain permits for drilling or rehabilitating wells through a lengthy and complicated bureaucratic process. However, most applications for water-related permits are rejected.²³⁴ Much like the discrimination faced by Chinese launderers in California over a century ago, the bureaucratic machinery of the state simply operates to discriminate.²³⁵ Only thirteen permits were granted from 1967 to 1996 after the PWA was established.²³⁶ All thirteen projects were for simple domestic use and failed to adequately address a growing population, drying wells, and loss due to thirty years of disrepair.²³⁷

The Israeli blockade of Gaza has exacerbated an already dire water situation. On September 3, 2009, the UN Office for the Coordination of Humanitarian Affairs (OCHA) chided Israel for blocking "equipment and supplies needed for the construction, maintenance and operation of water and sanitation facilities...leading to the gradual deterioration of these essential services."²³⁸ Further, OCHA noted that the "destruction caused during the Israeli military offensive in 2008/2009 exacerbated an already critical situation, leaving some services and facilities on the brink of collapse."²³⁹

²³² *Id.*

²³³ See generally Fourth Geneva Convention, *supra* note 109.

²³⁴ Amnesty, *supra* note 3, at 12.

²³⁵ *Yick Wo v. Hopkins*, 118 U.S. 356, 368 (1886).

²³⁶ Amnesty, *supra* note 3, at 12.

²³⁷ *Id.*

²³⁸ *Id.*

²³⁹ OCHAOPT, available at http://www.ochaopt.org/documents/hc_aida_statement_gaza_watsan_20090803_english.pdf).

OCHA called on Israel “to take immediate steps to ensure the entry into Gaza of construction and repair materials necessary to respond to the water and sanitation crisis that exists in the Gaza Strip.”²⁴⁰ The actions of the Israeli government have frustrated the Palestinian’s rights under international law to the enjoyment of the right to water. In Gaza, Israeli actions affect the Palestinian’s quality of water and their basic sanitary needs. The situation in Palestine triggers the entire web of international law on the right to water, illustrating how violations of these customary laws directly affect the enjoyment of basic human rights like the right to water.

ii. Creation of Physical Access Issues

The Mountain Aquifer is a transboundary aquifer, lying under both Israel and the West Bank.²⁴¹ It is the sole remaining water resource for the Palestinians in the West Bank and remains one of the most important groundwater resources for Israel.²⁴²

Since Israel occupied the West Bank in 1967, it has prevented Palestinians from physically accessing the Jordan River despite their having riparian water rights stemming from their physical connection to the Jordan River.²⁴³ This water supply could lessen the extreme pressure on the Mountain Aquifer system and protect it for future generations from the ill effects of groundwater mining.²⁴⁴ The World Bank, in a 2009 report, concluded that ²⁴⁵ the Israeli Water Authority’s breach of the

²⁴⁰ *Id.*

²⁴¹ Amnesty, *supra* note 3, at 14.

²⁴² *Id.*

²⁴³ *Id.*

²⁴⁴ *Id.*

²⁴⁵ “World Bank, the Israeli Water Authority has used its role as de facto regulator to prevent Palestinian drilling in the Western Aquifer, despite growing demand from Palestinian consumers and whilst increasing its own off take from the aquifer above agreed levels.” World Bank, Report No. 47657-GZ WEST BANK AND GAZA ASSESSMENT OF RESTRICTIONS ON PALESTINIAN WATER SECTOR DEVELOPMENT vii (2009).

tenants of the Oslo Accords and other international agreements creates both physical and economic impediments to water access within the OPT.²⁴⁶

In 1953, the UN issued a report on the yearly flow of the Jordan River, finding that water quality was good and total water availability was a robust 1.25 billion cubic meters flow of water per year into the West Bank.²⁴⁷ Today, Israel diverts the Jordan River upstream into the Sea of Galilee to supply up to 700 million cubic meters of water per year for Israel.²⁴⁸ In addition, Jordan diverts the flow of the Jordan River's tributaries within its territory, as do Syria and Lebanon further upstream.²⁴⁹

As a consequence of these subsequent reallocations and redirections of the Jordan River, the yearly flow into the West Bank is a trickle of highly salinated water that is heavily contaminated by untreated Israeli sewage.²⁵⁰

Palestinians increasingly rely on dwindling resources, while Israel has the Sea of Galilee and the Coastal Aquifer that it continues to exploit.²⁵¹ Despite the glaring asymmetry in access, Israel limits the amount of water annually available to Palestinians from the Mountain Aquifer to no more than twenty percent of its total yield.²⁵² Further compounding matters, Israel has continued to consistently over-extract water for its own usage far in excess of the aquifer's yearly sustainable yield.²⁵³ Moreover, much of Israel's over-extraction is from the Western Aquifer, which

²⁴⁶ “[T]he IDF destroyed an unlicensed village water supply well that villagers were drilling because they had run out of all alternatives for access to safe water at a reasonable cost.” *Id.* at 13.

²⁴⁷ Amnesty, *supra* note 3, at 4.

²⁴⁸ *Id.* at 9.

²⁴⁹ ESCWA, *supra* note 127, at ¶1.2.

²⁵⁰ Amnesty, *supra* note 3, at 14-15.

²⁵¹ *Id.*

²⁵² *Id.*

²⁵³ *Id.*

provides both the largest quantity and the best quality of all the shared groundwater resources in Israel and the OPT.²⁵⁴

The World Bank estimated Israel's extraction from the Western Aquifer in 1999 at 591.6 million cubic meters of water per year - that is, 174.6 million cubic meters more water per year than their Oslo Accord allotment of 229.6 million cubic meters of water per year.²⁵⁵ Even the amount allotted in the Oslo Accords would exceed the aquifer's yearly sustainable yield. This excess clearly violates the Resolution on Transboundary Aquifers provision on management because the Israeli over-extraction reduced the aquifer's current yield and future reserves, and has caused potentially serious damage to the quality of the water supply for both Israelis and Palestinians.²⁵⁶ Indeed, the Israeli Ministry of Environmental Protection acknowledged that "overexploitation may lead to a rapid rate of saline water infiltration from surrounding saline water sources."²⁵⁷ Furthermore, the World Bank has concluded that Israel is in violation of its Oslo II commitments.²⁵⁸

iii. Creation of Economic Access Issues

In addition to unlawfully restricting physical access to water, the Israeli military has engaged in a concerted effort to economically alienate Palestinians from water. For example, Military Order No. 1039, issued on January 5, 1983, prevented Palestinians from growing crops, in order to "protect natural

²⁵⁴ *Id.*

²⁵⁵ *Id.* at 12.

²⁵⁶ G.A. Res., *supra* note 69, at art. 4.

²⁵⁷ Amnesty, *supra* note 3, at 9; *See also*

http://www.sviva.gov.il/Environment/bin/en.jsp?enPage=e_BlankPage&enDisplay=view&enDispWhat=Object&enDispWho=Articals^12060&enZone=Quality_Water.

²⁵⁸ World Bank, Report No. 47657-GZ WEST BANK AND GAZA ASSESSMENT OF RESTRICTIONS ON PALESTINIAN WATER SECTOR DEVELOPMENT vii (2009).

resources,” including water.²⁵⁹ There are numerous anecdotal stories of Israeli tactics that crippled finances, as well as a family’s ability to survive.²⁶⁰ From smashed rainwater cisterns to cemented-in wells, Israeli policies and restrictions have served to restrict agricultural and industrial development and have thereby seriously hampered Palestinian social and economic development.²⁶¹ According to the World Bank, “the cost to the economy of foregone opportunity in irrigated agriculture is significant, with upper bound preliminary estimates that could be as high as 10% of GDP and 110,000 jobs.”²⁶²

The end result of Israeli policy is that Palestinians must buy fifty million cubic meters of water per year that either Israel unlawfully extracted from the Mountain Aquifer or that Palestinians could have extracted if they were not prevented from doing so by the military presence or hostile and competing uses, including infiltration and mining of aquifers.²⁶³ Currently, this amount of water is not enough to match the increase in population in the West Bank or the competition from growing settlement communities that are exempted from the laws that apply to surrounding Palestinian communities.²⁶⁴

There are many negative externalities generated from Israeli interference with basic freedoms, including freedom of

²⁵⁹ *Id.*

²⁶⁰ *Id.* at 1.

²⁶¹ *Id.* at 15.

²⁶² *Id.* at 15 (citing World Bank, ASSESSMENT OF RESTRICTIONS ON PALESTINIAN WATER SECTOR DEVELOPMENT (2009), available at <http://siteresources.worldbank.org/INTWESTBANKGAZA/Resources/WaterRestrictionsReport18Apr2009.pdf>); World Bank, THE ECONOMIC EFFECTS OF RESTRICTED ACCESS TO LAND IN THE WEST BANK (2008), available at <http://siteresources.worldbank.org/INTWESTBANKGAZA/Resources/EconomicEffectsofRestrictedAccessstoLandintheWestBankOct.21.08.pdf>.

²⁶³ Amnesty, *supra* note 3, at 10.

²⁶⁴ *Id.*

movement. Tanker-delivered water has become increasingly expensive in recent years, particularly in rural areas, because of the long detours that water tankers must make due to a variety of factors in Israel's control, including restrictions on Palestinian movement on main roads and army checkpoints that choke movement and discourage commercial trade, like water deliveries.²⁶⁵ As a result, journeys take up to ten times longer than a direct route, adding significantly to fuel costs and vehicle maintenance costs from tankers having to travel on bad roads.²⁶⁶

Tanker-delivered water is expensive.²⁶⁷ Moreover, during stressful times, the price of water increases, exacerbating water access issues and humanitarian tensions.²⁶⁸ As Palestinian unemployment skyrockets due to Israeli closure regimes, Palestinian families spend a third of their income on water.²⁶⁹ Many families wish to grow food for household consumption or to augment their income, but they are unable to do so because they cannot afford to buy enough water to cultivate crops or to keep livestock alive.²⁷⁰

In 2008, the total amount of water available to Palestinians fell to a mere 135 million cubic meters of water per year.²⁷¹ This figure, divided among millions of Palestinians is not enough to meet the minimum WHO recommendations.²⁷² Moreover, nearly a third of the water is lost in leaks along the way.²⁷³ Palestinians cannot maintain their infrastructure due to the restrictions on movement and other obstacles imposed by Israel, including the requirement that permits be obtained from the Israeli army for even

²⁶⁵ *Id.*

²⁶⁶ *Id.*

²⁶⁷ *Id.* at 37.

²⁶⁸ *Id.* at 24.

²⁶⁹ *Id.* at 38.

²⁷⁰ *Id.*

²⁷¹ *Id.* at 10.

²⁷² *WHO Guidelines, supra* note 4, at 3.

²⁷³ *Amnesty, supra* note 3, at 10.

small development projects.²⁷⁴ Therefore, Palestinians have access to an average of no more than sixty to seventy liters per capita per day and some survive on as little as ten to twenty liters per capita per day.²⁷⁵

E. Sanitation Crisis

All combined, the international legal protections have failed Palestinians.²⁷⁶ The water situation in Gaza is dire. The Coastal Aquifer, Gaza's sole fresh water resource, is polluted by the infiltration of raw sewage from cesspits and sewage collection ponds.²⁷⁷ It is further polluted by seawater infiltration, as a result of aquifer mining, which is itself contaminated by daily sewage discharges into the sea near the coast.²⁷⁸ The pollution is so great that infants are commonly born blue in Gaza due to nitrates and other chemical pollutants in the water that pregnant women drink.²⁷⁹

²⁷⁴ *Id.*

²⁷⁵ *Id.*

²⁷⁶ While this section mainly focuses on Gaza, which has pervasive and acute sanitation problems, the West Bank also has economic and sanitation problems stemming from Israeli actions that contravene international law. For example, following an Israeli military incursion into the West Bank, the WHO and UNRWA reported: "Military activities have also caused serious damage to the camps' water and sewerage networks, increasing the risk of disease outbreaks due to cross contamination. In evidence, an outbreak of *Shigella sonnei* took place in Balata [refugee] camp, Nablus area in the West Bank, during July 2002 due to cross-contamination of water and sewerage networks. A total of 667 cases were reported, mainly children below 16 years of age." UNEP, DESK STUDY ON THE ENVIRONMENT IN THE OPT 29 (2003), available at <http://postconflict.unep.ch/publications/INF-31-WebOPT.pdf>.

²⁷⁷ *Id.*

²⁷⁸ *Id.*

²⁷⁹ "The pollution of groundwater is contributing to two main types of water contamination in the Gaza Strip. First, and most importantly, it is causing the nitrate levels in the groundwater to increase. In most parts of the Gaza Strip, especially around areas of intensive sewage infiltration, the nitrate level in groundwater is far above the WHO accepted guideline of 50 mg/litre.... Second, because the water abstracted now is high in salt, the sewage is also very

While the average amount of water available to each inhabitant of Gaza slightly exceeds the average amount available in the West Bank, more than ninety percent of the water extracted from the aquifer in Gaza is contaminated and unfit for human consumption.²⁸⁰ Waterborne diseases are common. The Department of Health for the UN Relief and Works Agency, which administers the OPT for the UN, reported in February 2009 that: “[w]atery diarrhoea as well as acute bloody diarrhoea remain the major causes of morbidity among reportable infectious diseases in the refugee population of the Gaza Strip.”²⁸¹

Israeli actions, apart from disproportionate use of water and physically preventing access to necessary and legal water reserves, are creating sanitary crises throughout Gaza and the West Bank. For example, during an incursion into Rafah, the southernmost and poorest town in the Gaza Strip, in late January and early February 2003, Israeli forces demolished forty-six houses, partially destroyed twenty-three others and destroyed two public wells which provided drinking water for half of the town’s 120,000 residents.²⁸² On January 30, 2004, Well No. 144, known as the “Canada Well” because it had been built with funding from the Canadian government in the late 1990s, and Well No. 103T were destroyed.²⁸³ They were among 102 wells in the Gaza Strip that the Israeli army destroyed between July 2002 and March 2003.²⁸⁴ There have been similar reports of well destruction throughout the

saline and hence infiltrating sewage only adds to the salinity of the aquifer. It has been well known and well documented for decades that higher levels of nitrates in drinking water can induce methemoglobinaemia in young children.”
*Id.*²⁷⁹ *Id.* citing United Nations Environment Programme, UNEP, THE ENVIRONMENTAL ASSESSMENT OF THE GAZA STRIP FOLLOWING THE ESCALATION OF HOSTILITIES IN DECEMBER 2008 – JANUARY 2009 page? (2009)

²⁸⁰ *Id.* at 11.

²⁸¹ *Id.* at 25.

²⁸² *Id.* at 60.

²⁸³ *Id.*

²⁸⁴ *Id.*

OPT, that have resulted in serious health issues for vulnerable populations.²⁸⁵

Conclusion

From its creation through a UN General Assembly Resolution until the present, Israel has been obligated to provide equal access to water for Palestinians.²⁸⁶ Israel has thumbed its nose at the international bodies that not only created it, but also supported its growth. The values that moved the international community to create the nation of Israel are under attack.

Millions of Palestinians are under tremendous and growing pressure for a resource that is the essence of life.²⁸⁷ Compliance with the spirit of a right is never enough to preserve its power. If the right to water is to continue its growth, it must be enforced when a nation blatantly ignores its obligations whenever convenient. There is no question among the international

²⁸⁵ In a needs-assessment report prepared shortly after the incursion UN aid agencies reported: "In the aftermath of the May incursions, public health degenerated as a consequence of damage to water and sewage networks and overcrowded facilities. The Ministry of Health clinic in Tal es Sultan reported that during 1-17 May, 848 children – around 50 per day – were brought to the clinic suffering from ailments including diarrhea and skin diseases. The clinic was then closed for three days. Between 22 and 31 May, when the clinic reopened, 1363 children – 151 per day – were brought to the clinic. The increased caseload is clearly a consequence of cramped, unsanitary conditions prevailing since the incursions. IDF operations also resulted in substantial damage to water and sanitation infrastructure, the electricity network and roads in Rafah. Crops, greenhouses, water irrigation systems and farm equipment were also destroyed or damaged." *Id.* at 60 citing UNRWA OCHA, RAFAH HUMANITARIAN NEEDS ASSESSMENT page? (2004), available at [http://domino.un.org/UNISPAL.NSF/db942872b9eae454852560f6005a76fb/a18a8d06071986f385256ee7005dbac8/\\$FILE/UNRWA_OCHA_ReportRafahLACC0604.pdf](http://domino.un.org/UNISPAL.NSF/db942872b9eae454852560f6005a76fb/a18a8d06071986f385256ee7005dbac8/$FILE/UNRWA_OCHA_ReportRafahLACC0604.pdf).

²⁸⁶ See G.A. Res. 181(II), at 4, U.N. Doc. A/181(II) (Nov. 29, 1947).

²⁸⁷ World Bank, Report No. 47657-GZ WEST BANK AND GAZA ASSESSMENT OF RESTRICTIONS ON PALESTINIAN WATER SECTOR DEVELOPMENT vi (2009).

community that Israel is violating Palestinian rights to water, the only question is whether this right to water is an illusion to those that most need it but cannot enforce it on their own.