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Whose Job Is It Anyway?: Governmental Obligations Created by the Human Right to Water

AMY HARDBERGER[†]

ABSTRACT

The importance of water is difficult to quantify, but because it is necessary for survival, it deserves recognition as a human right. Although the right to water has received considerable attention, it has not yet achieved the status of customary international law.

Amy Hardberger's article analyzes the consequences for governments if the human right to water becomes an accepted norm of international law. The article expands the traditional notion that a human right is enforceable by a citizen against her government by investigating intra-governmental responsibilities in different contexts, including times of peace and more complicated relationships, such as those created in times of conflict or belligerent occupation. Finally, the article examines available enforcement mechanisms to ensure the obligations, once established, are met.

If the right to water becomes a human right, the author argues, governments may have a responsibility to provide water beyond their borders. A state unable to meet its needs could demand assistance from a neighbor, especially in situations involving economic inequities or shared water resources. During conflict, governments would be prohibited from damaging water resources. After conflict, the belligerent would be required to protect and fulfill the water needs of the occupied state. Enforcement of these obligations could be achieved at the national or international level, or by horizontal enforcement.

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I. INTRODUCTION

The importance of water is difficult to quantify. Put most simply, it is necessary for the survival of all life on earth. Beyond drinking, it is used for cooking, hygiene, agricultural and livestock purposes.¹ Some societies also use water for religious ceremonies, exercise, diversion, and even aesthetics.² Because of its life giving and sustaining capabilities, it is difficult to imagine a substance more deserving of the designation of “human right.” This need for water to become a protected right becomes more pronounced when one realizes the percentage of people who do not have access to sufficient quantities of water.³ Despite its importance, very few international instruments recognize water as a human right.

Early human rights were written in general terms and did not explicitly define all possible implied rights. One of the basic rights represented in the initial human rights documents was the right to life.⁴ The right to life was originally read narrowly and did not include basic life necessities.⁵ The right to life is now read more broadly to include the prevention of murder, war time atrocities and measures that increase life expectancy like personal health and hygiene.⁶

Early proponents of the right to water sought to include it as naturally implicit in the right to life.⁷ More recently, groups have endeavored to establish water as a separate and individual right of citizens.⁸ Although the awareness regarding the human right to water

1. WORLD HEALTH ORG., THE RIGHT TO WATER 6 (2003), available at http://www.who.int/water_sanitation_health/en/rtwrev.pdf [hereinafter THE RIGHT TO WATER].

2. *Id.*

3. Over one billion of the world’s more than six billion people do not have available sources of clean water for drinking. *Id.* at 7. Nearly two billion additional people who have access to water for basic survival do not have enough for sufficient health and hygiene to successfully combat disease. *Id.*; Peter Gleick, *The Human Right to Water*, at 2 (1999), available at <http://www.thewaterpage.com/Human%20Right.pdf>, reprinted in 1(5) WATER POL’Y 487–503.

4. See Universal Declaration of Human Rights, G.A. Res. 217 A (III), art. 3, U.N. GAOR, 3d Sess., U.N. Doc. A/810 (Dec. 12, 1948).

5. HENRY J. STEINER & PHILIP ALSTON, INTERNATIONAL HUMAN RIGHTS IN CONTEXT: LAW, POLITICS, MORALS 734 (2d ed. 2000).

6. *Id.* This broad interpretation was expressed in General Comment No. 6 to the International Covenant on Civil and Political Rights, which noted that the right to life “cannot properly be understood in a restrictive manner” and should include “measures to reduce infant mortality and to increase life expectancy.” International Covenant on Civil and Political Rights, *General Comment No. 6: the Right to Life (art. 6)*, UN ESCOR Human Rights Commission, 16th Sess., International Human Rights Instruments, art. 5 (April 30, 1982), UN Doc HRI/GEN/1/Rev. 1, available at <http://www.unhchr.ch/tbs/doc.nsf/0/84ab9690ccd81fc7c12563ed0046fae3?OpenDocument>.

7. See John Scanlon et al., *Water as a Human Right* 18–19 (IUCN ENV’T’L POL’Y & L. PAPER NO. 51, 2004), available at <http://www.iucn.org/themes/law/pdffdocuments/EPLP51EN.pdf> (explaining that if the right to water is not a recognized fundamental right, it is nevertheless an implicit component of other rights).

8. See Convention on the Elimination of All Forms of Discrimination Against Women, G.A. Res. 34/180, art. 14(2)(h), U.N. GAOR, 34th Sess., Supp. No. 46, U.N. Doc. A/34/46 (1979), available at <http://www.un.org/womenwatch/daw/cedaw/text/econvention.htm#article14>; Convention on the Rights of the Child, G.A. Res. 44/25 annex, art. 24 (2)(c), U.N. GAOR, 44th Sess., Supp. No. 49, U.N. Doc. A/44/49 (1989).

has increased in recent times, the inclusion of water within the right to life or water as a stand alone right has not yet become customary international law.⁹

Once water has been established as a right, the parameters of that right must be defined. Reviewing existing right-to-water documents and recommendations, access is required at a minimum.¹⁰ The state must protect against any threat to existing water sources and must create a source if none is available.¹¹ The minimum requirement imposed on states by the human right to water is a “sufficient supply of safe drinking water to sustain life.”¹² For greatest protection, states should use liberal estimates for their climate to ensure basic needs are being met.¹³ The total amount of water required per capita per day is dependent on local conditions and priority of usage.¹⁴ All water supplied or accessed must be of an acceptable quality to protect public health.¹⁵

The human right to water is ineffective in a vacuum. To function properly, someone must be entitled to demand water, and someone must be obligated to provide it, once the right to water has been established and defined. Although human rights discussions are generally limited to the confines of a local government and its people, as water needs increase so will the situations implicating the need. This article is a progressive analysis of governmental obligations created if the human right to water becomes international law. Of the many relationships existing between states, the relatively simple relationship visualized between a government and its citizens is rare. This discussion is an extension to the dialogue about the human right to water in a local context.¹⁶

Part II provides a basic review of human rights, its major advances, and the treatment of human rights in international law.¹⁷ This section also chronicles the historic introduction of water becoming an individual human right.¹⁸ Understanding the basics of human rights law and its evolution is critical in recognizing the mechanisms available to develop water as a human right as well as visualizing how human rights law can be applied to provide water for people in need.¹⁹

Part III expands on the traditional notion that a human right is enforceable by a citizen against her government by investigating governmental responsibilities in a range of

9. Compare Scanlon et al., *supra* note 7, at 51 (stating that the right to water has not been clearly defined in international law) with SALMAN M.A. SALMAN & SIOBHAN MCINERNEY-LANKFORD, *THE HUMAN RIGHT TO WATER*, at ix (2004) (explaining that a human right to water exists because it is included in other recognized rights).

10. International Covenant on Economic, Social, and Cultural Rights, G.A. Res. 2200A (XXI), *opened for signature* Dec. 16, 1966, 993 U.N.T.S. 3. See U.N. ECOSOC, *General Comment No. 15 (2002): The Right to Water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)*, at para. 2, U.N. GAOR Comm. on Econ., Soc., and Cult. Rights, 29th Sess., 27 U.N. Doc. E/C.12/2002/11 (2002) [hereinafter, ICESCR Comment 15]; H.R. Con. Res. 468, 108th Cong. (2004) [hereinafter Arts. 11 and 12]; Scanlon, *supra* note 7, at 2.

11. ICESCR Comment 15, *supra* note 10, arts. 11–12, para. 2.

12. Stephen C. McCaffrey, *A Human Right to Water: Domestic and International Implications*, 5 GEO. INT’L ENVTL. L. REV. 1, 12 (1992).

13. See GUY HOWARD & JAMIE BARTRAM, WORLD HEALTH ORG., *DOMESTIC WATER QUANTITY, SERVICE LEVEL AND HEALTH 22–23*, WHO/SDE/WSH/03.02 (2003), available at http://www.who.int/water_sanitation_health/diseases/en/WSH0302.pdf.

14. See *id.* at Executive Summary.

15. ICESCR Comment 15, *supra* note 10, at arts. 11–12 & n.15.

16. See Amy Hardberger, *Life, Liberty, and the Pursuit of Water: Evaluating Water as a Human Right and the Duties and Obligations It Creates*, 4 NW. U. J. INT’L HUM. RTS. 331 (2005), available at <http://www.law.northwestern.edu/journals/JIHR/v4/n2/3>.

17. See discussion *infra* Part II.

18. See discussion *infra* Part II.

19. See discussion *infra* Part II.

situations.²⁰ This section evaluates a variety of relationships that can exist between states, starting with times of peace where economic disparity or a shared water resource exists and moving to more complicated relationships such as those created in times of conflict or by a belligerent occupier.²¹ Each of these situations is then illustrated by a case study in an attempt to demonstrate how these ideas could be applied in a real-world setting.²² Finally Part IV takes a brief look at the available enforcement mechanisms that exist to ensure the obligations, once established, are met.²³ The conclusion indicates the need for further evaluation in this area and proposes how this discussion could be expanded further to include the obligations of citizens to one another and the relationship between the citizens of one state and the government of another.

II. THE HUMAN RIGHT TO WATER

“Human rights are protected by internationally guaranteed standards that ensure the fundamental freedoms and dignity of individuals and communities.”²⁴ These rights are generally held by citizens and enforceable against the state.²⁵ Human rights are considered universal; they encompass a range of civil, cultural, economic, political, and social rights.²⁶

Human rights are sometimes codified into a government document such as the provisions and obligations included in international treaties.²⁷ An international treaty can be binding on a country in one of two ways. Ratification is an affirmative step reflecting a state’s consent and intent to be bound.²⁸ A signature can construe consent, but a more authoritative act is usually required.²⁹ Ratification, in whatever form it takes in a particular government, is the most common method of treaty adoption.³⁰

International law does not require a country to agree upon an idea for it to be bound.³¹ More frequently, rights are unwritten and function as implicit requirements of society.³²

20. See discussion *infra* Part III.

21. See discussion *infra* Part III.

22. See discussion *infra* Parts III.A.3, B.

23. See discussion *infra* Part IV.

24. THE RIGHT TO WATER, *supra* note 1, at 7. The concept of human rights was not common terminology until as recently as after World War II. J. Roland Pennock, *Rights, Natural Rights, and Human Rights—A General View*, in XXIII HUMAN RIGHTS NOMOS 1, 1 (J. Roland Pennock & John W. Chapman eds., 1981). Although many human rights can be related back to natural law, the motivation to codify these protections was to avoid future atrocities like those that occurred in Germany and later in Vietnam. *Id.* at 1, 4.

25. See THE RIGHT TO WATER, *supra* note 1, at 7.

26. *Id.*; MAURICE CRANSTON, WHAT ARE HUMAN RIGHTS?, at 7 (1973).

27. See generally *id.* at 1–7. For a sampling of such documents in early American history, see VIRGINIA BILL OF RIGHTS para. 1 (1776), available at http://www.constitution.org/bor/vir_bor.htm. This early Bill of Rights included the proclamation “that all men are by nature equally free and independent, and have certain inherent rights . . . namely the enjoyment of life and liberty, with the means of acquiring and possessing property and pursuing and obtaining happiness.” *Id.* Similar language was later seen in the United States Declaration of Independence; however, the United States Constitution does not provide for basic human needs. THE DECLARATION OF INDEPENDENCE para. 2 (U.S. 1776), available at <http://archives.gov/historical-docs/doc-content/images/declaration-of-independence.pdf> (declaring that “[all men] are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness”). The U.S. Constitution, however, does not include a provision guaranteeing basic human rights. Ann I. Park, *Human Rights and Basic Needs: Using International Human Rights Norms to Inform Constitutional Interpretation*, 34 UCLA L. REV. 1195, 1196 (1987).

28. IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 582–83 (6th ed. 2003).

29. *Id.*

30. *Id.* The United States Constitution requires the ratification of treaties by senate and congressional approval to make the treaty binding on U.S. citizens. U.S. CONST. art. II, § 2. The Constitution also requires that “[t]his Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land.” *Id.* art. VI.

31. BROWNLIE, *supra* note 28, at 6.

Non-party states can be bound by a provision in an international treaty if it rises to the level of customary law.³³ Once this level of law has been realized, it can be binding on all states whether or not they contributed to its formation.³⁴ The Vienna Convention on the Law of Treaties expands this by stating that “[i]f a new peremptory norm or general international law emerges, any existing treaty which is in conflict with that norm becomes void and terminates.”³⁵ These norms are referred to as *jus cogens*.³⁶

Establishing water as a human right is a changing process finding its foundation in a dependent human rights past and seeking an independent future. The impact and obligations created by the human right to water depends on whether water will be implicitly included in other human rights or recognized as a stand alone right.

The categorization of a right as positive or negative also determines the governmental duties imposed and defines whether a state must take affirmative steps to provide the right, or to simply guard against its deprivation. Human rights fall into two distinct categories. First, welfare rights are defined as rights which assure the provision of certain goods or services considered necessary for human well-being.³⁷ Welfare rights include economic, social, and cultural rights. They are considered a positive right because they require affirmative action by governments to create the right for their citizens.³⁸ Positive rights are the easiest to enforce because the state has recognized their existence and enforcement is often included in local law.³⁹

In contrast, liberty rights, which include the right not to be interfered with or maltreated, are generally secured through ensuring noninterference with the right.⁴⁰ Liberty rights include civil and political rights. These rights are often unwritten moral rights, which exist as implicit requirements of society, making enforcement much more difficult.⁴¹ When a government does not explicitly recognize the rights of its citizens, international law can provide a means to require their protection; however, this may not be the most efficient method of securing a right as important as water.

32. CRANSTON, *supra* note 26, at 5–6 (categorizing these types of rights as “moral rights”).

33. BROWNLIE, *supra* note 28, at 6. *See, e.g.*, Universal Declaration of Human Rights, *supra* note 4. The International Court of Justice (ICJ) applies international law to solve disputes set before it. Statute of the International Court of Justice, 1945 I.C.J., art. 38, para. 1, available at <http://www.icj-cij.org/icjwww/basicdocuments/basictext/basicstatute.htm>. The sources of international law that are binding within the court include:

- (a) international conventions, whether general or particular, establishing rules expressly recognized by the contesting States; (b) international custom, as evidence of a general practice accepted as law; (c) the general principles of law recognized by civilized nations; (d) subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.

Id. In order for the ICJ to hear disputes, a state must first accept its jurisdiction. The International Court of Justice: General Information, available at <http://www.icj-cij.org/icjwww/igeneralinformation/icjgnnot.html>. There are two requirements which evidence general acceptance: (1) state practice must be shown to be consistent with a rule; and (2) states must conform to a rule due to a sense of legal obligation or *opinio juris*. BROWNLIE, *supra* note 28, at 6–12.

34. BROWNLIE, *supra* note 28, at 6.

35. United Nations Convention on the Law of Treaties Signed at Vienna, May 23, 1969, art. 64, 1155 U.N.T.S. 331 [hereinafter Vienna Convention], available at <http://www.jus.uio.no/lm/un.law.of.treaties.convention.1969/doc>.

36. BROWNLIE, *supra* note 28, at 488–90; *see* Vienna Convention art. 64.

37. McCaffrey, *supra* note 12, at 8.

38. SALMAN & MCINERNEY-LANKFORD, *supra* note 9, at 24.

39. CRANSTON, *supra* note 26, at 5.

40. McCaffrey, *supra* note 12, at 8; SALMAN & MCINERNEY-LANKFORD, *supra* note 9, at 24.

41. CRANSTON, *supra* note 26, at 5–6.

To ensure maximum benefits and enforcement mechanisms for citizens, early discussions focused on whether water is currently included in existing rights or if it should be developed as an independent human right.⁴² Although global recognition of the need to ensure access to water is increasing, it has not reached the level of customary international law as an independent right.⁴³ This issue aside, great strides have been made in the global recognition of the basic right to water and the need to ensure widespread access; however, more work must be done.

Simply assuming that water is included in an existing human right will not create the recognition necessary to help people in need of the resource.⁴⁴ The critical role of water in the daily life of the world's population raises its importance beyond academic conjecture into action. Past environmental movements have demonstrated that shining a light directly on an issue is often the best way to bring it out of the shadows.⁴⁵ Providing rules and creating accountability through enforcement mechanisms is often the only way to ensure change. The International Union for the Conservation of Nature (IUCN) expressed it well when it stated, "[f]ormally acknowledging water as a human right, and expressing the willingness to give content and effect to this right, may be a way of encouraging the international community and governments to enhance their efforts to satisfy basic human needs"⁴⁶ Although reference to and the attempted inclusion of water as a human right has increased awareness in the international community, it has not yet reached the objective level of customary international law.⁴⁷

The first human rights treaty to explicitly mention the right to water was the 1979 Convention for the Elimination of all Forms of Discrimination against Women (CEDAW). It obligates states to "take all appropriate measures . . . [to] ensure" the right "to enjoy adequate living conditions particularly in relation to . . . water supply."⁴⁸ A second, equally important document was the 1989 Convention on the Rights of the Child, which entered into force in September 1990. The preamble to this document recognized that "childhood is entitled to special care and assistance . . . [and] children should be afforded the necessary protection and assistance"⁴⁹ To achieve these ends, states are to ensure, among other things, that an infrastructure exists to provide an accepted standard of health care.⁵⁰ A familiar edict is found in Article 6: "[s]tates Parties recognize that every child has the inherent right to life."⁵¹

Perhaps the greatest victories to date for those seeking to establish water as a human right were the 2000 and 2002 General Comments to United Nations Committee on

42. Perhaps the most prominent human right linked to water, is the right to life. Proponents argue that the right to life should be read more broadly to include the pursuit of policy and legislation to support those means as well as the more traditional protection against arbitrary deprivation of rights. If these treaties and agreements are interpreted more proactively, a government's inaction in building water systems or otherwise interfering with the delivery of water to its people would violate the right to life. See Hardberger, *supra* note 16, at 340.

43. See *id.* at 333.

44. See Scanlon, *supra* note 7, at 1; Hardberger, *supra* note 16, at 340.

45. See Scanlon, *supra* note 7, at 13 (discussing the Rio Earth Summit as an example of how academic discussions can raise excitement but not necessarily ensure implementation without sufficient governance arrangements). An example of a successful world-wide sustainability effort is the ozone depletion crisis in the late 1980s. See U.N. Development Programme, The Vienna Convention and the Montreal Protocol, U.N. Development Programme, <http://www.undp.org/montrealprotocol/montreal.htm> (last visited May 23, 2006). Joint agreements such as the Montreal Protocol, formed as a result of scientific data and media attention, created widespread participation to reduce ozone depleting gases in the atmosphere. *Id.*

46. Scanlon, *supra* note 7, at 1.

47. *Contra* SALMAN & MCINERNEY-LANKFORD, *supra* note 9, at ix.

48. Convention on the Elimination of All Forms of Discrimination Against Women, *supra* note 8, art. 14(2)(h).

49. Convention on the Rights of the Child, *supra* note 8, pmbl.

50. *Id.* art. 24.

51. *Id.* art. 6(1).

Economic, Social, and Cultural Rights.⁵² The specific enumeration of water in General Comments 14 and 15 bestowed a right to the effort that previously existed only by implication.

Though not binding, Comment 15 has several important impacts.⁵³ First, it creates strong support for water as a human right by explicitly incorporating it into the ICESCR and recognizing its existence in other documents such as CEDAW. Second, because of its level of detail, the Comment commands “considerable state responsibility and action” by extending the requirement beyond drinking water to include other uses.⁵⁴ Perhaps most importantly, in addition to defining who has the obligation, the Comment takes a major step towards defining the extent of the right regarding quantity, quality, and accessibility.⁵⁵ These documents create a solid base for establishing the right to water.

Several governments have sought to include the right to basic needs among their state policies.⁵⁶ In addition, human rights have been extensively recognized through international documents or treaties similar to those described above.⁵⁷ South Africa is one of a handful of countries to include the human right to water in the rights afforded to all citizens.⁵⁸ This right has been enforced by legislation and court decisions.⁵⁹ Local efforts and UN documents have increased recognition that the right to water needs to be established; however, more work still remains to accomplish this goal.

Establishing water as a separate human right would be significant, but many questions would still remain. Assuming it reaches this status, its mere presence as a right provides little guidance regarding the behavior it seeks to require. Official and unofficial documents have attempted to define the right to water by listing specific expectations with little consistency. An additional obstacle to understanding the right to water is the frequently seen caveat conditioning requirements on local situations.⁶⁰ Although this provides a more flexible standard, it may also provide an avenue for states to evade requirements by claiming circumstantial limitations.

Reviewing existing right-to-water documents and recommendations, states are required to provide access at a minimum.⁶¹ This must be done in a non-discriminatory

52. See The Right to the Highest Attainable Standard of Health (Article 12 of the International Covenant on Economic, Social, and Cultural Rights) para. 4, U.N. ESCOR, 22d Sess., Agenda Item 3, U.N. Doc. E/C.12/2000/4 (2000) [hereinafter ICESCR Comment 14]; ICESCR Comment 15.

53. See SALMAN & MCINERNEY-LANKFORD, *supra* note 9, at 5.

54. *Id.* at 65.

55. *Id.*

56. Louis Henkin, *International Human Rights as “Rights,”* in XXIII HUMAN RIGHTS NOMOS XXIII 257, 258–60 (J. Roland Pennock & John W. Chapman eds., 1981). Many national laws were considered to be deficient in paving the way for international human rights; however, in other locations international regulations mirror that of local law. *Id.* at 259.

57. *Id.* at 258–60. The international human rights movement encourages countries to include these obligations in their legal construct or, in the alternative, provides basic rights for people when those protected locally are insufficient. *Id.* at 259.

58. The Gambia, Ethiopia, Zambia, and Uganda also include constitutional provisions ensuring the right to clean water for their citizens. See The Right to Water, National Legislation on the Right to Water, http://www.righttowater.org.uk/code/Legislation_2.asp (last visited May 23, 2006); see S. AFR. CONST. ch. 2 § 27.

59. See *Residents of Bon Vista Mansions v. S. Metro. Local Council* (2002) (6) BCLR 625 (W); Water Services Act, Act 108 of 1997 s. 3 (S. Afr.). In India, water is not an explicit right listed in the Constitution; however, courts at the state and federal levels have interpreted the constitutional right to life to include the right to safe and sufficient water. The Right to Water, Legal Redress: The Right to Water Under the Right to Life: India, http://www.righttowater.org.uk/code/legal_3.asp (last visited May 23, 2006).

60. See, e.g., ICESCR Comment 15, *supra* note 10, para. 17.

61. Hardberger, *supra* note 16, at 346–53 (providing a detailed discussion of what is included in the right to water). See ICESCR Comment 15, *supra* note 10, para. 2; H.R. Con. Res. 468, *supra* note 10, at 2.

manner and may entail positive and negative requirements.⁶² The state must protect against any threat to existing water sources and must create a source if none is available.⁶³ If the state has the economic capacity to deliver water, they must do so. All water must be affordable to be accessible.⁶⁴ This limits the price that can be charged for water delivery and likely imposes a prohibition on discontinuation of service for economic reasons.⁶⁵

Types of use for the water must also be established. On a very basic level, a state's obligation is to ensure the sustainability of water for its people.⁶⁶ Any right to water would include drinking water; however, other included uses are less clear.⁶⁷ In addition to drinking, water is also required for human hygiene, sanitation services, and food preparation.⁶⁸ The quantity needed for hygienic purposes is variable, depending on included uses, technology, and local resources.⁶⁹ A tiered approach prioritizes use and provides governments with a structure to guide them in creating a strategy to supply water for their citizens. In this scheme, sufficient drinking and cooking water is the first goal; water for sanitation and hygiene is the next; and agricultural, industrial, and environmental water is the final obligation provided that the previous goals have been met.⁷⁰

Establishing the uses of water included in the human right to water is an important step in the development of the right, but the water must be quantified to be most useful to states. Water needs vary according to many factors including climate, lifestyle, diet, and wealth, but some minimum requirement must be established for human rights purposes.⁷¹ A lack of a water supply is a violation of the human right to water, but an expectation of unlimited access is unrealistic; therefore, the requirement must be a compromise between these two theories.⁷²

Applying the different theories of what should be included in the human right to water yields a range of total daily water needs. The survival analysis estimates average needs at fifty liters per person per day.⁷³ In contrast, South Africa's compulsory national standard is only twenty-five liters per person per day.⁷⁴ It is unclear which uses are included in that amount; however if it based on the water obligation contained in the South African Constitution, it includes drinking water and basic sanitation.⁷⁵ The WHO's domestic-use projection is even lower estimating five to 7.5 liters per capita per day depending on the user.⁷⁶ This basic access estimate is significantly lower because it only includes basic

62. ICESCR Comment 15, *supra* note 10, para. 12(c).

63. *See id.* para. 10.

64. *Id.* para. 2.

65. *See id.* para. 24; The Right to Water, *Legal Redress: The Right to Water Under the Right to Life: South Africa*, http://www.righttowater.org.uk/code/legal_2.asp.

66. McCaffrey, *supra* note 12, at 15.

67. *See id.* at 12.

68. Peter H. Gleick, *Basic Water Requirements for Human Activities: Meeting Basic Needs*, 21 WATER INT'L 83, 83 (1996). This appears most similar to the tact taken by Comment No. 15 requiring states to provide "access to the minimum essential amount of water, that is sufficient and safe for personal land domestic uses to prevent disease." ICESCR Comment 15, *supra* note 10, para. 37(a).

69. Gleick, *supra* note 68, at 85–86, 87–88.

70. *See* Howard, *supra* note 13, at 23.

71. Gleick, *supra* note 68, at 83.

72. *See* Gleick, *supra* note 3, at 8.

73. Gleick, *supra* note 68, at 83. This figure includes five liters per day for drinking, twenty liters for sanitation and hygiene, fifteen liters for bathing, and ten liters per day for cooking. *Id.* at 88.

74. Michael Kidd, *Not a Drop to Drink: Disconnection of Water Services for Non-Payment and the Right to Access of Water*, 20 S. AFRICAN J. ON HUM. RTS. 119, 122 (2004).

75. *See* S. AFR. CONST. ch. 2 § 27. This number has received criticism as inadequate for sanitation needs. Kidd, *supra* note 74, at 134.

76. Howard & Bartman, *supra* note 13, at 9. This estimate only reserves two liters for cooking and the remaining water is for drinking. *Id.* The higher estimate compensates for the increased water required by lactating mothers. *Id.*

hydration and cooking needs.⁷⁷ Including hygiene would increase this number from five to one hundred liters per capita per day depending on the location of the water source and the goals of usage.⁷⁸ Although hygiene is not part of the minimum human needs, due to its importance for health, a minimum allowance for sanitation should be included in the human right to water.⁷⁹

Providing low-quality water would vitiate the fundamental rationale that undergirds the right to water. Any quantity of water is meaningless if its quality causes it to be unfit for use or consumption.⁸⁰ Therefore, the minimum requirement imposed on states by the human right to water is a “sufficient supply of safe drinking water to sustain life.”⁸¹ As the obligations created by the right to water are further understood, the right itself will be clarified until its consistent and absolute nature raises it to the level of customary international law empowering citizens to demand fulfillment of their survival needs.

III. A GOVERNMENT’S OBLIGATIONS TO OTHER GOVERNMENTS

Many organizations believe that “[g]overnments hold the primary responsibility for ensuring the realization of human rights.”⁸² The issue is determining how far this responsibility extends. Human rights are usually defined as rights held by citizens against their state; therefore, evaluating a government’s responsibility to its neighbor does not fit easily into the human rights construct.⁸³ However, “[s]ince many countries lack the wherewithal to provide safe drinking water for their populations, it seems essential that the international community take a proactive approach to the prevention of foreseeable problems of this kind and to dealing with natural disasters such as droughts.”⁸⁴

As we move towards economic globalization, a water crisis in one area can have consequences that extend outside physical borders.⁸⁵ Therefore, if the parent government does not have the ability to satisfy the rights of their citizens, other states must help.⁸⁶ Although international law provides minimal on-point instruction regarding these situations, guidance can be gleaned from existing laws to define the responsibilities states hold toward their neighbors in times of peace or conflict.

77. *Id.* at 9. The cooking estimate is also much lower because it is based on the minimum amount of water used to cook rice, whereas the survival estimate is an average of cooking needs in developed and developing countries. *Id.*; Gleick, *supra* note 68, at 84, tbl.3.

78. Howard & Bartram, *supra* note 13, at 23.

79. Gleick, *supra* note 3, at 9.

80. THE RIGHT TO WATER, *supra* note 1, at 16.

81. McCaffrey, *supra* note 12, at 12.

82. THE RIGHT TO WATER, *supra* note 1, at 28.

83. *See, e.g., id.* at 7. Although, the primary obligations created by the human right to water are between a government and its citizens, this topic has been thoroughly explored elsewhere and does not need to be repeated here. *See Hardberger, supra* note 16, at 333–40.

84. McCaffrey, *supra* note 12, at 16.

85. *See* Jim Shultz, *Economic Globalization vs. Human Rights: Lessons from the Bolivian Water Revolt*, INDIA RESOURCE CENTER (Apr. 20, 2003), available at <http://www.indiaresource.org/issues/water/2003.lessonsfrombolivia.html> (explaining the conflict that occurred when Bolivia privatized water resources because the government could not afford to maintain the utility and water quickly became unaffordable for many individuals).

86. *See id.* (pointing out that the economic hardship of the Bolivian government forced a choice between complying with international economic institutions or protecting the human rights of their citizens).

A. *Neighboring States*

It is generally assumed that each government is responsible for maintaining the rights and providing for the needs of its own citizens. However, if a country does not have the resources to accomplish this task, this responsibility may shift and create a duty for other countries to assist. This duty can be heightened if the neighboring country has significantly fewer resources or if the two countries share a water resource. Although many surface water sources are allocated by treaties, they are frequently not adhered to, and often no official binational agreement exists to dictate groundwater allocation.⁸⁷ Without providing specific instruction, international law such as Comment 15 provides direction concerning water responsibilities between states.

First and foremost, Comment 15 requires “international cooperation and assistance [to] take joint and separate action to achieve the full realization of the right to water.”⁸⁸ Because of its broad language, this could create significant implications for neighboring states. The phrase “joint action” implies that if one state is not able to achieve its goals by separate action, the assistance of another state may be required.⁸⁹ Subsequent articles of Comment 15 clarify this duty by prohibiting interference with another state’s water supply through embargo or other political means.⁹⁰ Additionally, paragraph 34 applies more directly to these issues by requiring assistance for the realization of the right of water in other countries.⁹¹ The article specifically lists technical assistance, financial assistance, and, most importantly, the “provision of water resources.”⁹²

The dictate to aid is contingent on the availability of resources.⁹³ Presumably the article would not require a state to provide resources that are needed by its citizens, but would call for a contribution if an excess existed.⁹⁴ States are also encouraged to consider the right to water and its allocation when creating bilateral and multilateral agreements or developing treaties exclusively for those purposes.⁹⁵ The rules provided by Comment 15 outline general obligations among countries; however, more specific requirements are best understood by examining specific circumstances or locations.

1. Shared Watercourse

It is not unusual for a fresh water resource, either ground water or surface water, to be shared by two or more states. In fact, international drainage basins make up approximately forty-seven percent of the earth’s land area.⁹⁶ With so many shared water resources, it is

87. See, e.g., Stephen P. Mumme, *Minute 242 and Beyond: Challenges and Opportunities for Managing Transboundary Groundwater on the Mexico-U.S. Border*, 40 NAT. RESOURCES J. 341, 363–77 (2000) (discussing the lack of a groundwater agreement along the U.S.-Mexico border for any of the seventeen existing aquifers).

88. ICESCR Comment 15, *supra* note 10, para. 30 (applying Article 2 of the ICESCR, which requires that assistance be provided to other states to assure the realization of rights to water).

89. *Id.* para. 30.

90. *Id.* paras. 31–36.

91. *Id.* para. 34.

92. *Id.*

93. *Id.*

94. See ICESCR Comment 15, *supra* note 10, para. 34.

95. *Id.* para. 35.

96. McCaffrey, *supra* note 12, at 17 (explaining that most of these shared waters exist in Africa and Latin America). This statistic does not include the freshwater found in Antarctica. *Id.* One example of an international drainage basin is the U.S.-Mexico border, which, as referenced above, shares seventeen known aquifers as well as the Rio Grande and Colorado Rivers. Mumme, *supra* note 87, at 363–77. Another example is the Guarani aquifer, one of the largest groundwater reservoirs. It is shared by Argentina, Brazil, Paraguay and Uruguay. Michela Mileto & Roberto Kirchheim, *The Invisible Resource Transboundary Aquifers: An Opportunity for International Cooperation*, O.A.S. POL’Y SERIES NO. 3 (2004), available at http://www.oas.org/dsd/policy_series/3_eng.pdf.

important to understand the responsibility of one country to provide necessary water for a neighboring country, especially when the latter does not have the resources to provide for itself.

International documents, designed to dictate shared resource usage, provide general water duties between countries that can be applied in a human rights context. The Watercourse Convention, the International Law Association's Helsinki Rules, and its subsequent updates discuss basic responsibilities that states have. These duties would only be amplified by the human right to water. Although the physical characteristics of the water source can dictate the ways the rules are applied, some norms can be established.

International law has generally provided that states have the right to exploit their own resources, but have the responsibility not to do so with other states' resources.⁹⁷ The custom regarding shared resource situations has often resulted in one state attempting to gain control of the supply for the purpose of obtaining power over the other state.⁹⁸ Because water has unique implications, it is important that states avoid trying to "increase the power gap" by controlling the resource, and that they start cooperating with the sharing state.⁹⁹ A government must balance the needs of its domestic groups as well as the other state's interest.¹⁰⁰

Fresh water resources can be shared in a number of different ways.¹⁰¹ The Helsinki Rules and the Watercourse Convention require "equitable utilization" of the shared water source, stating that each state was entitled to an "equitable and reasonable utilization" of the water.¹⁰² The documents do not define "equitable and reasonable utilization" and instead recommend decisions be made on a case-by-case basis by taking "into account all relevant factors."¹⁰³ In practice, equitable utilization means that a user can utilize a resource so long as it does not harm another user who is using the resource equitably.¹⁰⁴

Equitable does not necessarily mean equal.¹⁰⁵ One solution would be to only allow a state access to the quantity of water directly beneath it, but this may not be the best solution depending on other surrounding circumstances.¹⁰⁶ Consideration of many factors seeks to

Many shared water resources are currently governed by bilateral or multilateral treaties; however, this is less common in areas where water shortages are more critical. Stephen C. McCaffrey, *supra* note 12, at 18.

97. See G.A. Res. 2995 art. 42, U.N. GAOR, 27th Sess., U.N. Doc A/RES/2995 (Dec. 15, 1972), available at <http://ods-dds.ny.un.org/doc>. The obligations imposed by the human right to water are not intended to prevail over sovereignty rights; however, a state's ownership of resources must yield to the prevention of harm to another state. Tony Allan, *Avoiding War Over Natural Resources: Extract from Forum: Water and War* (Nov. 1, 1998), available at <http://www.icrc.org>.

98. Eyal Benvenisti, *Collective Action in the Utilization of Shared Freshwater: The Challenges of International Water Resources Law*, 90 AM. J. INT'L LAW 384, 393 (1996).

99. *Id.*

100. *Id.*

101. See Gabriel Eckstein & Yoram Eckstein, *Hydrogeological Approach to Transboundary Ground Water Resources and International Law*, 19 AM. U. INT'L L. REV. 201, 235-248 (2003) (describing six models of shared water and possible impacts of one state's use on a neighboring state).

102. Int'l Law Ass'n, *The Helsinki Rules on the Uses of the Waters of International Rivers*, ch. 2, art. IV (1967) [hereinafter *The Helsinki Rules*], available at <http://www.internationalwaterlaw.org>.

103. *Id.* art. V. Although "equitable share" is not defined, both the Helsinki Rules and the Watercourse Convention provide a list of factors that should be considered to assist in its determination. *Id.*; Convention on the Law of Non-Navigational Uses of International Watercourses, G.A. Res. 51/229, at art. 6(1), U.N. GAOR, 51st Sess., U.N. Doc. A/RES/51/229 (May 21, 1996), available at <http://www.un.org/ga/documents/gares51/ga51-229.htm> [hereinafter *Watercourses Convention*].

104. Itzhak E. Kornfield, *A Water Solution for the Middle East Conflict*, 33 ENVTL. L. REP. 10207 (2003).

105. See *The Helsinki Rules*, *supra* note 102, arts. IV-VIII.

106. See Julio Barberis, *The Development of International Law of Transboundary Groundwater*, 31 NAT. RESOURCES J. 167, 177-78 (1991). See discussion *infra* Part III.B.

create a balance between the states.¹⁰⁷ The total benefits and detriments to a state are weighed to determine allocation quantities.¹⁰⁸ Utilization is based on the individual needs of an area.¹⁰⁹ This flexible and individual treatment of basins creates a framework to build a workable agreement.¹¹⁰

Intrinsic in equitable utilization is the need for flexibility and cooperation of users.¹¹¹ Unfortunately, cooperation in past agreements has been used to widen the power gap, not maximize the resource.¹¹² Because water is needed for survival, agreements should attempt to satisfy all of the participants' long-term needs.¹¹³ At the United Nations Mar del Plata Conference, it was recommended that "countries sharing water resources . . . should review existing and available techniques for managing shared water resources and cooperate in the establishment of programs, machinery and institutions necessary for the coordinated development of such resources."¹¹⁴

A useful starting point for cooperation is the international law principle to avoid causing harm to another state.¹¹⁵ In the context of water, harm could occur by exploitation or pollution of a shared resource.¹¹⁶ The principle of "avoiding harm" has been echoed by many international treaties and is clearly enunciated in many U.N. resolutions, International Law Association (ILA) recommendations, and International Law Commission (ILC) rules.¹¹⁷ This goal can be accomplished through open communication between the nations and notification of withdrawals.¹¹⁸ Notice of water removal by one state allows the other state to object if harm will be caused so the water is used equitably.¹¹⁹

The aforementioned discussion relates to obligations established under international law; however, Comment 15 lays similar groundwork for requirements between states under a human rights construct. Article 31 of the Comment requires that "State[] parties have to

107. See The Helsinki Rules, *supra* note 102.

108. See Barberis, *supra* note 106, at 177.

109. 5 WATER AND WATER RIGHTS 37 (Robert E. Beck, ed., 1998).

110. See Albert E. Utton, *International Water Quality Law*, in INTERNATIONAL ENVIRONMENTAL LAW 168-71 (Ludwik A. Teclaff & Albert E. Utton eds., 1974).

111. Kornfield, *supra* note 104.

112. See EYAL BENVENISTI, SHARING TRANSBOUNDARY RESOURCES: INTERNATIONAL LAW AND OPTIMAL RESOURCE USE 43-44 (2002).

113. See Benvenisti, *supra* note 98, at 399-400.

114. *Report of the United Nations Water Conference* at 10, Mar del Plata, U.N. Doc.E/Conf.70/29, at 10 (1977).

115. See Barberis, *supra* note 106, at 169-70.

116. See *id.*

117. See *id.* at 170-71. The ILA is a "major international nongovernmental organization devoted to international legal matters." Robert D. Hayton, *The Law of International Aquifers*, 22 NAT. RESOURCES J. 71, 73 (1982). The ILA is responsible for some of the earliest efforts to address shared groundwater issues. Eckstein & Eckstein, *supra* note 101, at 228. This has been accomplished through a series of conferences generating guidance rules, which are promulgated to be a fall-back for states that did not have their own rules. Robert D. Hayton, *The Law of International Aquifers*, 22 NAT. RESOURCES J. 71, 73 n.2 (1982). The best known guidance rules created by the ILA are the 1967 Helsinki Rules, which were updated by the Seoul Conference of 1986, and the most recent Berlin Rules in 2004. Because the ILA is a non-governmental organization that requires no public participation, any rules it creates by them are not considered binding international law. Melvin Woodhouse, *Is Public Participation a Rule of the Law of International Watercourses?*, 43 NAT. RESOURCES J. 137, 175 (2003). In contrast, the ILC is a group of elected members first assembled by the United Nations in 1947. Stephen C. McCaffrey, *International Organizations and the Holistic Approach to Water Problems*, 31 NAT. RESOURCES J. 139, 150 (1991). In 1970, the United Nations directed the ILC to examine non-navigational uses of watercourses with the objective of codifying a progressive level of international law, which eventually resulted in the Watercourse Convention. Hayton at 80. The ILC's guidance is slightly more binding because it is composed of member states. Jordan C. Kahn, *1997 United Nations Convention on the Law of Non-Navigational Uses of International Watercourses*, 1997 COLO. J. INT'L ENVTL. L. & POL'Y 178, 183 (1997). Articles will become binding on those states that choose to sign and ratify the Convention, which no state is required to do. *Id.* Non-signatory states may also be bound "if it [a given Article] represents customary international law." *Id.*

118. See Barberis, *supra* note 106, at 177-79.

119. See *id.*

respect the enjoyment of the right [to water] in other countries” and should “refrain from actions that interfere, directly or indirectly, with the enjoyment of the right to water in other countries.”¹²⁰ This article indicates that a downstream riparian may have a human rights claim against an upstream riparian if the downstream user was denied use and enjoyment of the water.¹²¹ This potentially creates accountability between a state and individuals outside its jurisdiction.¹²² Although the comment does not specifically make this link, it should not be discounted when read with the other intentions of the comment.¹²³

The international articles of Comment 15 also refer to the duty of one country to assist in the realization of rights of another country, presuming that a sufficient supply is present.¹²⁴ However, if a human rights claim for this issue cannot be made, an international law claim can. The Watercourse Convention does state that vital human needs are especially important in a shared watercourse situation.¹²⁵ Therefore, enforcement may occur under this article if an upper riparian denies a lower riparian of water needed for survival to a lower riparian.¹²⁶

Under any legal construct, a true recognition of the human right to water should permit a citizen to bring a human rights claim against a neighboring state for deprivation of water.¹²⁷ With these mechanisms of enforcement citizens are empowered to demand their water supply.

2. Economic Disparity

All countries do not have the same resources at their disposal. Due to these differences, one country may have the economic means to provide water for their citizens while their neighbor within close geographic proximity cannot. Money can affect regional access to water in many ways. It can pay for drilling wells, infrastructure upkeep, technology for water treatment, and enhanced or artificial recharge. Although the responsibility for water created by economic differences is a new discussion, subtle references found in international law serve as a basis for a dialogue.

Economic needs are a consideration for equitable apportionment. Article 6 of the Watercourse Convention includes social and economic needs of the state as a factor that should be considered in determining equitable and reasonable utilization.¹²⁸ Because the poor suffer from the lack of sufficient water more than any other group,¹²⁹ this factor could be significant in decisions regarding fair utilization.

Comment 15 also links economics with the right to water.¹³⁰ Article 15 states that poverty should not justify lack of services.¹³¹ Although the Comment focuses on

120. ICESCR Comment 15, *supra* note 10, para. 31.

121. Stephen C. McCaffrey, *The Human Right to Water Revisited*, in WATER AND INTERNATIONAL ECONOMIC LAW (Edith Brown Weiss et al. eds., 2004).

122. *Id.*

123. *Contra id.* (arguing that because Comment 15 does not explicitly reference any obligation regarding individuals in other countries, it did not intend to create such obligations).

124. ICESCR Comment 15, *supra* note 10, paras. 30, 34.

125. Watercourses Convention, *supra* note 103, art. 10.

126. *Id.*

127. See McCaffrey, *supra* note 12, at 20. An analogy may be drawn to humanitarian law, which permits citizens of one state to enforce their rights against the government of another.

128. Watercourses Convention, *supra* note 103.

129. See THE RIGHT TO WATER, *supra* note 1, at 22.

130. ICESCR Comment 15, *supra* note 10, para. 15.

131. See *id.*

prohibiting a state from depriving an individual of water services, the idea behind the article is to create a special claim for those lacking sufficient means.¹³² Specific financial obligations between countries are created by the statement, “States should facilitate realization of the right water in other countries, for example through . . . financial and technical assistance, and provide the necessary aid when required.”¹³³ Linking financial obligations to the international obligation to assist other states in the realization of all rights, more fortunate states should assist their less fortunate neighbors through technology transfer, utility assistance, or direct financial aid.¹³⁴

A similar idea was encouraged in General Comment 14 to the International Covenant on Economic, Social and Cultural Rights. The comment placed responsibility on the parties to assist developing countries with the realization of their goals: “For the avoidance of any doubt, the Committee wishes to emphasize that it is particularly incumbent on States parties, and other actors in a position to assist, to provide international assistance and cooperation, especially economic and technical which enables developing countries to full their core obligations. . . .”¹³⁵

The shared approach to providing water is also supported by the concept that “global problems need global solutions.”¹³⁶ “The lack of ‘extraterritoriality’ of human rights law is striking in today’s interdependent world, a world in which powerful states extend their influence, and affect individuals, in many other countries.”¹³⁷ The lack of water in one area can negatively effect the sustainable development of neighboring states.¹³⁸ Illustrations of these problems can be seen throughout the world, providing valuable information about what can be done and what should be avoided.

3. The Case of the United States and Mexico

Although water conflicts exist all over the world, the situation along the United States-Mexico border creates an ideal setting for discussing these issues and understanding the responsibilities of neighboring states.¹³⁹ Potential water disputes between the United States and Mexico began with the succession of the southwest in 1848; any boundary agreement separating the land also separates the water.¹⁴⁰ The United States and Mexico share at least seventeen groundwater aquifers and major surface water resources including the Rio Grande and Colorado rivers.¹⁴¹ Of these, only the surface water is governed by use agreements, and none of the aquifers are governed by a federal binational agreement.¹⁴² Many of these water resources have the added complication of being shared by more than one state as well as by both nations.¹⁴³

132. *Id.*

133. *Id.* para. 35.

134. *See id.* paras. 15, 30–36; *see* THE RIGHT TO WATER, *supra* note 1, at 31 (stating that states should try to ensure sufficient financial and other aid is given to countries with limited resources).

135. ICESCR Comment 14, *supra* note 52, at para. 45.

136. Scanlon, *supra* note 7, at 24.

137. McCaffrey, *supra* note 12.

138. *See* Scanlon, *supra* note 7, at 24.

139. At present, the situation along the U.S.-Mexico border has not progressed to necessitate imposition of the obligations described in this and preceding sections; however, it provides an excellent example of potential interstate conflicts.

140. G. Emlen Hall, *Historical and Physical International Boundaries in Borderlands Water Conflicts: A Commentary*, 40 NAT. RESOURCES J. 865, 866 (2000).

141. *See* Mumme, *supra* note 87, at 363–77.

142. *Id.*

143. *Id.*

Water concerns have become more confusing as water needs along the border increase.¹⁴⁴ The threat of a water crisis is particularly high due to the arid climate and increasing population.¹⁴⁵ Population estimates of border counties reach as high as twelve million residents and predictions estimate that the number will double by 2020.¹⁴⁶ With so many people needing water, the dwindling supply, due to an average annual precipitation of only 4.9 inches and frequent droughts, will result in increased water strain.¹⁴⁷

In addition to technical difficulties, several other common barriers to negotiations between the states are evident, including an excess of governmental agencies, cultural differences, language barriers, and “dramatically different forms of government and notions of politics.”¹⁴⁸ The added factor of economic differences between the countries limits technology and infrastructure, creating another potential difficulty to ensuring the needs of both states are met. Despite these obstacles, the neighboring towns of El Paso, Texas and Ciudad Juárez, Mexico provide an excellent example of what governments should do to ensure the right to water for their citizens. Evaluating the issues faced by these two nations and their potential responsibilities towards one another provides important information for similar trans-border locations.¹⁴⁹

While no law exists governing the groundwater shared by these two cities, efforts are being made to work together for sustainability.¹⁵⁰ In December 1999, the water utilities of the two cities signed a Memorandum of Understanding (MOU) designed to plan for water needs and avoid future water shortages.¹⁵¹ The agreement seeks to create a long-term use plan that considers future needs and population growth.¹⁵² The MOU obligates both parties to share groundwater data, including pumping quantities, with one another.¹⁵³ Utility repair and upgrade are also included factors.¹⁵⁴ Joint projects have been useful in understanding each city’s dependence on water sources and the development of usage plans.¹⁵⁵

Several measures have been put into place on both sides of the border to delay a water crisis.¹⁵⁶ El Paso is attempting to create sustainability through reduced usage and rerouting irrigation water for municipal-use purposes.¹⁵⁷ The city has also increased their

144. G. Emlen Hall, *Historical and Physical International Boundaries in Borderlands Water Conflicts: A Commentary*, 40 NAT. RESOURCES J. 865, 866 (2000).

145. Irasema Coronado, *Water Conflict in the Borderlands*, 7 BORDERLINES 1, 2 (July 1999), at http://americas.irc-online.org/borderlines/1999/bl57/bl57oview_body.html.

146. Vivienne Bennett & Lawrence A. Herzog, *U.S.-Mexico Borderland Water Conflicts and Institutional Change: A Commentary*, 40 NAT. RESOURCES J. 973, 973–74 (2000).

147. Jeffrey M. Klopatek et al., *Ecosystem Differences and Climate Feedbacks Along the United States-Mexico Border*, 1998, at 6, available at <http://www.scerp.org/projs/98rpts/NR-98-2a.pdf>. The United States Department of Agriculture estimates that the drought in the Rio Grande basin started in 1993 and it is currently categorized as extreme. Marilyn C. O’Leary, *The Bellagio Draft Treaty as a Tool for Solving Border Groundwater Issues*, 11 U.S.-MEX. L. J. 57, 59 (2003). “[D]rought’ means a moisture deficit bad enough to have social, environmental or economic effects.” David Miskus, *U.S. Drought Monitor*, <http://drought.unl.edu/dm/classify.htm> (last updated July 28, 2005).

148. Bennett & Herzog, *supra* note 146, at 978.

149. See Octavio E. Chavez, *Mining of Internationally Shared Aquifers: The El Paso-Juárez Case*, 40 NAT. RESOURCES J. 237 (2000).

150. See *id.* at 248–50.

151. Memorandum of Understanding (City of Juárez Utilities & El Paso Water Utilities) (Dec. 1999) (on file with author).

152. *Id.*

153. *Id.*

154. *Id.*

155. Chavez, *supra* note 149, at 248–50.

156. See O’Leary, *supra* note 147, at 57; Chavez, *supra* note 149, at 241.

157. Chavez, *supra* note 149, at 245; Rene Romo, *Border’s Future Caught Between Growth, Water Supply*, ALBUQUERQUE J., Sept. 19, 1999, para. 11, available at <http://www.adqjournal.com/2000/nm/why/6why09-19-99.htm>.

dependence on surface water.¹⁵⁸ On the other side of the border, Ciudad Juárez plans to use some of its annual Rio Bravo allocation for municipal purposes to alleviate the burden on the Rio Grande.¹⁵⁹ Juárez is also attempting to reduce water by repairing utility system infrastructure, because many of the systems are broken down.¹⁶⁰

Juarez and El Paso prove that equitable utilization does not have to mean equal. Although the majority of the Hueco Bolson aquifer lies beneath Texas, Mexico's withdrawals from the aquifer exceed those of Texas.¹⁶¹ Although usage is not equal, it is still equitable for these users due to regional issues including population demand and availability of alternative water sources.¹⁶² Federal governments should either create agreements similar to what is seen along the Mexico border or support regional agreements that serve a similar function.

A case study of this region also enables the discussion of economic inequities because of the significant fiscal disparities between the United States and Mexico.¹⁶³ Economic differences give rise to important considerations in shared water resources allocation. One way financial impacts are reflected in this area is the amount of water the United States and Mexico pump from the Hueco Bolson aquifer.¹⁶⁴ El Paso is able to be less dependent on the Hueco Bolson, in part, because the city has the capital to utilize alternative water sources and technology.¹⁶⁵ El Paso has developed a technologically advanced water treatment plant that supplements the city's water needs through enhanced recharge and gray-water practices.¹⁶⁶ However, treatment technology is extremely expensive, which impedes Mexico's ability to build similar facilities.¹⁶⁷

Due to the proximity of the two states, environmental hazards created in Mexico by a lack of infrastructure directly affect both sides of the border; therefore, the United States has a vested interest in assisting Mexico with water supply and treatment facilities.¹⁶⁸ For

158. Chavez, *supra* note 149, at 239, 245.

159. O'Leary, *supra* note 147, at 58.

160. Chavez, *supra* note 149, at 246.

161. In 2004, El Paso pumped 49,480 acre-feet from the aquifer while Ciudad Juárez pumped 119,420 acre-feet (author telephone interview with Michael Fahy, El Paso Water Utilities, El Paso, Tex., conducted on Apr. 12, 2005).

162. The current population of El Paso (city and county combined) is approximately 700,000 people, whereas estimates of the population of Ciudad Juárez range from 1.2 million to 1.4 million people. U.S. Census Bureau, *State and County Quick Facts*, <http://quickfacts.census.gov/qfd/states/48/48141.html> (last revised Jan. 12, 2006); compare *El Paso/Juárez Fact Sheet: Estimated Population January 1, 2005* (estimating the population of Ciudad Juárez at 1.2 million based on the 2000 census), <http://www.ci.el-paso.tx.us/demographics.asp> (follow "Quick Facts-El Paso, TX & Cd. Juarez, Mexico" hyperlink), with Answers.com, *Ciudad Juárez* (estimating population at 1.4 million people), <http://www.answers.com/topic/ciudad-juarez>. In addition to the difference in numbers, growth in is increasing at a much faster rate in Ciudad Juárez than El Paso. Chavez, *supra* note 149, at 237–38 (explaining population increased 63 percent in Ciudad Juárez and 34 percent in El Paso between 1980 and 1994).

163. See Central Intelligence Agency, *The World Factbook: Mexico* (stating that the average per capita income in Mexico is one-fourth that of the United States), <http://www.cia.gov/cia/publications/factbook/geos/mx.html#Econ> (last visited Apr. 27, 2006).

164. Author Telephone Interview with Michael Fahy, El Paso Water Utilities, El Paso, Tex. (Apr. 12, 2005).

165. See El Paso Water Utilities, *Water Resources: Past and Present Supplies*, http://www.epwu.org/water/water_resources.html (last visited May 23, 2006); El Paso Water Utilities, *Wastewater: Northeast—Fred Hervey Plant*, http://www.epwu.org/wastewater/fred_hervey_reclamation.html (last visited May 23, 2006).

166. See El Paso Water Utilities, *Wastewater: Northeast—Fred Hervey Plant*, *supra* note 165.

167. Ed Archuleta, *There's No Doubt, We're in a Drought! How a Large Municipality Plans to Meet Its Future Water Supply Needs*, NEW MEXICO WATER RESOURCES RESEARCH INSTITUTE, Oct. 2002, at 87 (presentation given by Mr. Archuleta, the General Manager of the El Paso Water Utilities Public Service Board, discussing the cost of building a \$60 million desalinization plant), at <http://wrrri.nmsu.edu/publish/watcon/proc47/archuleta.pdf>.

168. Int'l Boundary & Water Comm'n [IBWC], *Background of the International Border Sanitation Problem and Solutions* (discussing intermittent cross-boundary sewage flows from Mexico into the United States as a result

this reason, the International Boundary and Water Commission (IBWC) has constructed several water treatment plant proposals along the border to reduce the environmental degradation occurring along the border.¹⁶⁹ A MOU between the United States Environmental Protection Agency and Mexico's Secretariat of Environment, Natural Resources and Fisheries concerning the funding of infrastructure for water and wastewater states Mexico's financial responsibilities are contingent on availability and can vary based on the terms of each specific agreement.¹⁷⁰ At the California treatment plant, each party shares economic responsibility for construction and maintenance of the facility, but the United States will tender immediate payment, whereas Mexico is permitted to pay their share in installments over ten years.¹⁷¹ These types of agreements show why neighboring states should consider economics and shared water issues to preserve the sustainability of both countries and maintain peace between them.¹⁷² This type of cooperation is difficult due to sovereignty conflicts and notions of ownership over natural resources. These obstacles only increase when two states are experiencing political conflict.

B. Governments During Conflict

When conflict arises, questions emerge regarding the validity of existing treaties and international agreements.¹⁷³ During these times, a few sources of customary international law define the parameters that confine a state's behavior towards individuals. These sources of humanitarian law seek to provide some security to nonmilitary citizens, especially women and children, in a time defined by incivility.¹⁷⁴ These protections include guarding against the purposeful deprivation of water.¹⁷⁵ Among these resources, the

of the Mexican inability to keep up with rapidly growing waste processing), <http://www.ibwc.state.gov/html/background.html> (last visited May 23, 2006).

169. See, e.g., IBWC, *Minute 283: Conceptual Plan for the International Solution to the Border Sanitation Problem in San Diego, California/Tijuana, Baja California* (July 2, 1990) (providing for the creation of a water treatment plant on the California/Mexico border), available at <http://www.ibwc.state.gov/Files/Minutes/Minute283.pdf>. A "minute" is an agreement reached by the Commission and submitted to both governments for approval. Alberto Szekely, *How to Accommodate an Uncertain Future into Institutional Responsiveness and Planning: The Case of Mexico and the United States*, 33 NAT. RESOURCES J. 397, 398 (1993). The IBWC is the intergovernmental agency relied upon by both Mexico and the United States to monitor international boundary waters and settle disputes of its use along the 2,000 mile U.S.-Mexico border. Stephen P. Mumme & Scott T. Moore, *Agency Autonomy in Transboundary Resource Management: The United States Section of the International Boundary and Water Commission, United States and Mexico*, 30 NAT. RESOURCES J. 661, 661-62 (1990); Carlos Marin, *Bi-National Border Supply Issues From the Perspective of the IBWC*, 11 U.S.-MEX. L.J. 35, 35 (2003).

170. Memorandum of Understanding Concerning the Program of Joint Grant Contributions for Drinking Water Supply and Wastewater Infrastructure Projects for Communities in the United States-Mexico Border Area, at b (Sept. 25, 2000), available at <http://www.ibwc.state.gov/Files/Minutes/MOU304.pdf>.

171. IBWC, *Minute 283*, *supra* note 169. Similar Minutes have been signed for several other locations along the border. See, e.g., Int'l Boundary & Water Comm'n, *Minute 297: Operations and Maintenance Program and Distribution of its Costs for the International Project to Improve the Quality of the Waters of the Rio Grande at Laredo, Texas-Nuevo Laredo, Tamaulipas* (May 31, 1997), available at <http://www.ibwc.state.gov/Files/Minutes/Min297.pdf>.

172. See Scanlon, *supra* note 7, at 24.

173. See, e.g., *Techt v. Hughs*, 128 N.E. 185 (N.Y. Ct. App. 1920) (examining whether a treaty is still valid if there is a war between contracting parties).

174. Int'l Comm. of the Red Cross [ICRC], *Civilians in War* (Oct. 1, 1995), available at <http://www.icrc.org/web/eng/siteeng0.nsf/html/57JMKZ>. Humanitarian law is the class of international law aimed at protecting citizens during times of war and conflict. See *id.*

175. *Id.*

Geneva Conventions¹⁷⁶ and The Hague Convention Respecting the Law and Customs of War on Land (Hague Resolutions) are cited most often.¹⁷⁷ Any relevant customary international law would also apply.¹⁷⁸

The Geneva Convention contains “the most important rules limiting the barbarity of war. They protect people who do not take part in the fighting . . . and those who can no longer fight . . .”¹⁷⁹ Originally adopted in 1864, the Geneva Convention was updated in several areas in 1949 and two additional protocols were added in 1977.¹⁸⁰ The purpose of the convention is to prevent “grave breaches” during and after war and provide an enforcement mechanism for violations.¹⁸¹ The Hague Resolutions provide the second major source of law during conflict. Although the purpose of the first Hague conference was to discuss ways to halt the arms race, many other issues were encompassed resulting in the Hague Resolutions.¹⁸²

Humanitarian law is particularly applicable to water resources because “[c]ontaminated water and lack of water can be more deadly than a whole array of weapons.”¹⁸³ In addition to the necessity of water for physical survival, the lack of sufficient water can also have a critical impact on civilians by threatening crops and livestock and inhibiting protection against disease.¹⁸⁴ The power water holds over a society

176. For the purpose of this discussion, references to the Geneva Convention include the original 1864 convention (Geneva Convention for the Amelioration of the Condition of the Wounded in Armies in the Field), the four 1949 Conventions, and the 1979 Additional Protocols.

177. See ICRC, *Water and War: Extract from Protection of the Civilian Population in Periods of Armed Conflict: 26th International Conference of the Red Cross and Red Crescent* (Sept. 15, 1995), available at <http://www.icrc.org/Web/Eng/siteeng0.nsf/html/57JMLK>; see also Harold Dichter, *The Legal Status of Israel's Water Policies in the Occupied Territories*, 35 HARV. INT'L L.J. 565, 573 (1994).

178. See ICRC, *Customary Law Study Enhanced Legal Protection of Persons Affected by Armed Conflict* (March 17, 2005) (reporting the identification of 161 rules of customary international humanitarian law that extends treaty law and increases the protection of individuals in an armed conflict).

179. ICRC, *The Geneva Conventions: The Core of International Humanitarian Law* (Mar. 2004), available at <http://www.icrc.org/Web/Eng/siteeng0.nsf/html/genevaconventions>.

180. *Id.* (listing the subjects of the Conventions and Protocols). The original idea for the Geneva Convention was proposed in a book by Henry Dunant, who envisioned a legal basis to require countries to reduce the suffering of wounded soldiers. ICRC, *The ICRC and the Geneva Convention (1863–1864)* (Dec. 29, 2004), at <http://www.icrc.org>. The book, entitled UN SOUVENIR DE SOLFÉRINO (A MEMORY OF SOLFÉRINO), led to the creation of the Geneva Public Welfare Society (which later became the Red Cross) and the approval of the Geneva Convention under its original name, the Geneva Convention for the Amelioration of the Condition of the Wounded in Armies in the Field. *Id.*; HENRY DUNANT, A MEMORY OF SOLFÉRINO (The American Nat'l Red Cross 1959). The four additional conventions added to the Geneva Convention in 1949 are entitled 1) Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field; 2) Convention (II) for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea; 3) Convention (III) Relative to the Treatment of Prisoners of War; and 4) Convention (IV) Relative to the Protection of Civilian Persons in Time of War. The 1977 Protocols were drafted to supplement the 1949 Conventions. Jean de Preux, *The Protocols Additional to the Geneva Convention*, INT'L REV. OF THE RED CROSS NO. 320 (Oct. 31, 1997), available at <http://www.icrc.org/Web/Eng/siteeng0.nsf/iwpL1st163/3CDB6A2F3EAA0EFFC1256B66005.B01B2>. The need to supplement the existing texts was created by the emergence of long term hostilities and changes in how armed conflicts were occurring. *Id.*

181. ICRC, *supra* note 179. Grave breaches are defined differently in each of the four Geneva Conventions of 1949 and the 1977 Protocols; however, for the purpose of this paper, a general definition is “the willful killing, torture or inhuman treatment, including . . . willfully causing great suffering or serious injury to body or health . . .” Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War art. 147, Aug. 12, 1949, 75 U.N.T.S. 287, 6 U.S.T. 3516 [hereinafter Fourth Geneva Convention].

182. Hague Appeal for Peace, History/Archives, <http://www.haguepeace.org/index.php?action=history&ubAction=con> (last visited May 23, 2006). The Hague Resolutions were originally drafted in 1899 when delegates from twenty-six countries gathered at The Hague in response to an invitation from the then Russian Czar, Nicholas II. *Id.*

183. ICRC, *supra* note 174. Comment 1 notes that the right to water in times of conflict includes all requirements by which states are bound under international humanitarian law. See ICESCR Comment 15, *supra* note 10, para. 22.

184. *Id.* (explaining that the destruction of water resources can force displacement of citizens).

makes it a logical target in war; however, as international conflict law evolves, limitations are increasingly placed on the use of water as a military strategy.¹⁸⁵

Although rare, some additional international documents directly address water. The 1997 U.N. Watercourse Convention includes a provision stating, “[i]nternational watercourses and related installations, facilities and other works shall enjoy the protection accorded by the principles and rules of international law applicable in international and non-international armed conflict and shall not be used in violation of those principles and rules.”¹⁸⁶ This principle appears to refer directly to the restrictions placed by Protocol I of 1977 to the Geneva Convention (Protocol I).¹⁸⁷ Unlike previous articles that have been applied to water, Article 54 of Protocol I specifically prohibits a state to “attack, destroy, remove or render useless . . . drinking water installations and supplies and irrigation works.”¹⁸⁸ This obligation can only be overcome if the offending country can show that the act was a military imperative, but even this exception has a limitation.¹⁸⁹ The location must be situated within territory under the attacking state’s own control.¹⁹⁰ If the water resource is located in an area still within the control of the predecessor state, it should be fully protected under international law.¹⁹¹

The protection of water is also included in certain humanitarian environmental provisions, which are generally accepted by the international community.¹⁹² Environmental concerns during war are almost as old as war itself.¹⁹³ However, the increase in environmental awareness and advances in military technology have forced the reconsideration of the environmental consequences of warmongering.¹⁹⁴ At the heart of this new movement are Protocol I and 1977 Convention of the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD).¹⁹⁵

Several articles of Protocol I create protections for the environment. Article 35 states “it is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the environment.”¹⁹⁶ This obligation is further defined by Article 55, which specifically requires the protection of the natural environment against damage that would endanger the health or survival of individuals.¹⁹⁷ ENMOD is another treaty created to protect the environment during war. Similar to Protocol I, the treaty prohibits hostile use of environmental modification

185. See ICRC, *supra* note 177.

186. Watercourses Convention, *supra* note 103, art. 29.

187. Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, *opened for signature* Dec. 12, 1977, 1125 U.N.T.S. 3, art. 54 [hereinafter Victims of International Armed Conflicts]. A similar provision is seen in Article 14 of Protocol II. Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protections of Victims of Non-International Armed Conflicts art. 14, *opened for signature* Dec. 12, 1977, 16 I.L.M. 1442.

188. Victims of International Armed Conflicts, *supra* note 187, art. 54, para. 2.

189. *Id.* art. 54, para. 3.

190. *Id.* art. 54, para. 5.

191. *Id.*

192. Ameer Zemali, *The Protection of Water in Times of Armed Conflict*, INT’L REV. OF THE RED CROSS NO. 308 (Oct. 31, 1995), available at http://www.icrc.org/Web/Eng/siteeng0.nsf/iwp_List74/0324E0993060C65EC1256B66005981DE.

193. See Christopher D. Stone, *The Environment in Wartime: An Overview*, in ENVIRONMENTAL CONSEQUENCES OF WAR 16, 16 (Jay E. Austin & Carl E. Bruch eds., 2000) (citing a Biblical reference to the prohibition of fruit tree destruction during a siege).

194. *Id.*

195. Mark Perry & Ed Miles, *Environmental Warfare*, in CRIMES OF WAR: WHAT THE PUBLIC SHOULD KNOW 132, 132–33 (Roy Gutman & David Rieff eds., 1999).

196. Victims of International Armed Conflicts, *supra* note 187, art. 35.

197. *Id.* art. 55.

techniques that will cause long term damage to the environment.¹⁹⁸ Because water is an integral part of the natural environment, the corruption of natural water supplies would fall under the protection of these provisions.

In addition to the inclusion of water in environmental provisions, there are four other categories of wartime prohibitions that can be applied to water: (1) poison as a means of warfare; (2) destruction of enemy property; (3) attack on objects necessary for civilian survival; and (4) attacks on installations that contain dangerous forces.¹⁹⁹ Article 23 of the Hague Resolution prohibits the use of poison.²⁰⁰ Its general scope allows its application to the purposeful contamination of water sources.²⁰¹ Also contained in Article 23, as well as Article 53 of the Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War (Fourth Geneva Convention), is the prohibition on the destruction of enemy property “except where such destruction is rendered absolutely necessary by military operations.”²⁰² This property can include water and wastewater facilities as well as natural water sources that are considered property.

The third prohibition is particularly helpful in deterring the destruction of water resources because it protects against the targeting of “objects indispensable to the survival of the civilian population.”²⁰³ Nothing could fit this description better than water. Whether a document specifically lists water like Protocol I or just generally prohibits the destruction of a necessary object, water should be included.

Finally, attacks on works and installations containing dangerous forces are prohibited.²⁰⁴ The primary way this would affect water would be the destruction of dams or dykes.²⁰⁵ An exception is allowed if the facility is used “in regular, significant and direct support of military operations” and destruction is the only option.²⁰⁶ However, even in this situation, the attacking state is required to consider the potential of severe losses of civilian life.²⁰⁷ “[S]o long as water is a civilian object and indispensable to the survival of the population, warfare against or by means of water is utterly incompatible with the principles and rules of humanitarian law”²⁰⁸

198. Convention of the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, May 18, 1977, 31 U.S.T. 333, T.I.A.S. No. 9614, [hereinafter ENMOD]. ENMOD was written in response to the widespread use of chemicals, such as Agent Orange, during the Vietnam War. See Michael N. Schmitt, *War and the Environment: Fault Lines in the Prescriptive Landscape*, in ENVIRONMENTAL CONSEQUENCES OF WAR 87, 88 & n.6 (Jay E. Austin & Carl E. Bruch eds., 2000).

199. Zemmali, *supra* note 192.

200. Convention Respecting the Laws and Customs of War on Land art. 23 (a), annexed to Convention [No. IV] Respecting the Laws and Customs of War on Land, Oct. 18, 1907, 37 Stat. 2277.

201. *See id.*

202. *Id.* art. 23(g). Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War art. 53, Aug. 12, 1949, 75 U.N.T.S. 287, 76 U.S.T. 3516 (categorizing “extensive destruction . . . not justified by military necessity” as a “grave breach”) [hereinafter Fourth Geneva Convention].

203. Victims of International Armed Conflicts, *supra* note 187, art. 54.

204. *Id.* art. 56.

205. *Id.* art. 56, para. 1. A dam or a dyke can be used in conjunction with a power utility or as a reservoir and their destruction of either type of facility would have severe effects on regional water sources.

206. *Id.* art. 56, para. 2.

207. *Id.* art. 56, para. 3 (limiting all military operations by the requirements of Article 57, which cautions against all attacks that may cause potential losses of civilian life).

208. Zemmali, *supra* note 192. Avoiding the targeting of water resources and installations used by civilians comports with the general international law principle that armed forces are not to attack civilian populations or targets. See David P. Fidler, *War and Infectious Diseases: International Law and Public Health Consequences of Armed Conflict*, in THE ENVIRONMENTAL CONSEQUENCES OF WAR, 444, 457 (Jay E. Austin & Carl E. Bruch eds., 2000).

C. Governments After Conflict

After a conflict has drawn to a close leaving one state as the occupying government of another state, additional rules regulate the conduct of the occupier.²⁰⁹ Many of the humanitarian principles previously discussed from the Hague Resolutions and the Geneva Convention apply both to combat situations and belligerent occupiers.²¹⁰ Although these documents are the primary source, other helpful sources of humanitarian law also limit occupier behavior.²¹¹ These laws were created to protect citizens based on the assumption that the occupation will be temporary, therefore during the interim the belligerent occupier is supposed to maintain the status of the occupied territory and not exercise sovereignty over it.²¹²

The Hague Regulations, created in 1907, were the first source of codified international law to extensively deal with the situation of occupied territories. The Regulations were annexed to the 1899 Hague Resolutions.²¹³ Made up of fifty-six articles, fourteen of the Hague Regulations limit behavior pursued by a belligerent occupier.²¹⁴ The resolutions differentiate between private and public property and severely limit the right of the occupier to use, confiscate, or destroy anything that qualifies as private property.²¹⁵ As in combat situations, the resolutions prohibit the use of poison or poisonous weapons, pillaging, and the destruction of enemy property unless it is a military imperative.²¹⁶

Of the two primary sources, the Geneva Convention, specifically the Fourth Geneva Convention, provides more stringent guidelines and requirements for belligerent occupiers.²¹⁷ Several articles in this convention can be applied to water; however, the convention has been criticized for its vagueness and propensity for open-ended interpretation.²¹⁸ Perhaps the most direct rule, provided by Article 89, states that “sufficient drinking water shall be supplied to internees . . .”²¹⁹ Internees, who are being transferred,

209. An occupied territory is defined as “the sovereign territory of a State that is under the military occupation of another State at a time when a state of war exists between them.” Robbie Sabel, *The Problematic Fourth Geneva Convention: Rethinking the International Law of Occupation*, JURIST (Nov. 13, 2003), available at <http://jurist.law.pitt.edu/forum/forumnew120.php>. The occupation must meet the requirements of a “belligerent occupation” such that the sovereign state is prevented from exercising its authorities in the territory. *Id.*

210. Dichter, *supra* note 177, at 573. See B’Tselem, *The Water Crisis in the Occupied Territories* (listing specific articles of international law that bind Israel to provide sufficient water to the occupied territories), <http://www.fromoccupiedpalestine.org/node.php?id=613> (last visited Apr. 12, 2006).

211. See ICRC, *Customary Law Study Enhanced Legal Protection of Persons Affected by Armed Conflict* (March 17, 2005) (including international humanitarian law as a “major source of rules applicable in times of armed conflict”), available at <http://www.icrc.org/Web/Eng/siteeng0.nsf/iwpList74/5EE8038BB6EAA2CDC1256FC70037BEF4>.

212. Ardi Imseis, *On the Fourth Geneva Convention and the Occupied Palestinian Territory*, 44 HARV. INT’L L.J. 65, 91 (2003).

213. George Aldrich, *The Laws of War on Land*, 94 AM. J. INT’L L. 42, 42 (2000).

214. ICRC, *Water and War: Extract from Protection of the Civilian Population in Periods of Armed Conflict; 26th International Conference of the Red Cross and Red Crescent*, *supra* note 177; Imseis, *supra* note 212, at 89.

215. Dichter, *supra* note 177, at 575 (discussing articles 52 and 53 of The Hague Resolutions).

216. Convention Respecting the Laws and Customs of War on Land, *supra* note 200, arts. 23(a) & (g), 28, 47.

217. Dichter, *supra* note 177, at 578. The Fourth Geneva Convention was created as part of the expansion of the Geneva Convention that took place in 1949. Imseis, *supra* note 212, at 60–65. The primary purpose of the Fourth Geneva Convention was to define the allowable behavior of a belligerent occupier and supplement the existing Hague Regulations. See *id.* at 89. The Convention accomplishes this task by providing a bill of rights for the occupied territory and shifting attention from the ousted sovereign to the civilians who remain under occupation. *Id.* at 91.

218. See Dichter, *supra* note 177, at 578–85 (explaining the articles of the Fourth Geneva Convention that could be applied to water in the occupied territories and demonstrating their faults and ambiguities).

219. Fourth Geneva Convention, *supra* note 181, art. 89.

and prisoners of war must be provided with sufficient drinking water, with quantity and quality provisions.²²⁰ The previously discussed prohibition on the destruction of objects necessary for the survival of the civilian population, even as reprisal, assists in the protection of water resources during occupation.²²¹

As an extension of the obligations created for governments in conflict, Protocol I's Article 56 provides specific instruction for belligerent occupiers.²²² The article requires the occupying state to ensure civilian populations receive protections afforded to them by international law.²²³ Although protection of civilian property is not specifically mentioned, it can be inferred to be present from the second sentence of the paragraph, which differentiates between works, installations, and military objectives, and protects all three.²²⁴ Protocol I's Article 54, which prohibits attacks on drinking water works or installations, also applies to a belligerent occupier.²²⁵

In addition to protecting existing working water utilities, Protocol I also requires that civil defense organizations perform emergency repairs of indispensable public utilities.²²⁶ This provision takes into consideration accidental destruction of water supply systems that can occur by ensuring that they are returned to working order instead of being dismissed as collateral damage.²²⁷ This provision is particularly important in an occupation setting because it establishes an ongoing responsibility as opposed to one that is associated only with an invasion or the initial conflict.²²⁸

General Comment 15 also provides guidance in these circumstances. The international obligations described previously apply to a occupying government in the same way they would to a neighboring government.²²⁹ These articles call for full participation in the realization of the right to water as it is described in the comment, requiring the belligerent occupier to respect, protect, and fulfill the water needs of the citizens.²³⁰

In addition, Article 29 of the Watercourse Convention affords protection for "international watercourses and related installations" during conflict and applies during occupation because the article does not limit the definition of "armed conflict."²³¹ These international humanitarian principles create a construct for the protection of an individual in a time when his right might otherwise be lost, but whether these requirements are followed is often subject to interpretation.²³²

1. Israel-Palestine

The Israeli occupation of the Palestinian territories of the West Bank and Gaza Strip began as a result of the Six Day War of 1967.²³³ At that time, Israel became responsible for

220. *Id.* art. 127; Geneva Convention Relative to the Treatment of Prisoners of War, Aug. 12, 1949, 6 U.S.T. 3316, 75 U.N.T.S. 135, arts. 20, 26, 46.

221. Victims of International Armed Conflicts, *supra* note 187, art. 56, paras. 2 & 4.

222. *Id.* art. 56, para. 3.

223. *Id.*

224. *See id.*

225. *See id.* art. 54, para. 3; *see discussion supra* Part V.B.2.

226. *Id.* art. 61 (a)(xii).

227. *See* Victims of International Armed Conflicts, *supra* note 187, art. 61.

228. *See id.*

229. ICESCR Comment 15, *supra* note 10, paras. 30–36.

230. *Id.* paras. 21–29.

231. Watercourses Convention, *supra* note 103, art. 29.

232. *See, e.g.,* Imseis, *On the Fourth Geneva Convention and the Occupied Palestinian Territory*, *supra* note 212, at 69–83 (presenting arguments relating to Israeli compliance with humanitarian law when dealing with the Palestinian states).

233. *Id.* at 69.

governing these occupied territories, and water resources became public property under existing Israeli law.²³⁴ Israel has water obligations to Palestine²³⁵ as an occupied territory under international humanitarian law and under international water law because most of the water sources are shared.²³⁶

Due to climatic realities and growing population, water is one of the most difficult and severe issues surrounding the Israeli-Palestinian conflict.²³⁷ While these issues are currently pressing, water conflicts in this region are not new and have been recorded throughout time.²³⁸ In recent history, control of water resources became an issue as soon as the occupation began and remains so today.²³⁹ Despite the fact that all major accords signed by Israel and Palestine include groundwater provisions, a final solution has not been achieved.²⁴⁰ "To achieve peace, Palestinians and Israelis must share both the land and the water."²⁴¹

Israel and the occupied territories obtain their water from ground and surface water sources.²⁴² Despite the presence of water sources, issues remain because annual recharge

234. Stefan Deconinck, *Jordan River Basin: Israeli Water Policy in a Regional Context of Conflict: Prospects for Sustainable Development for Israelis and Palestinians*, Part I.2. (Dec. 2002), available at http://waternet.be/jordan_river/waterpolicy.htm. Upon the implementation of Israeli law, water rights shifted from the landowners to the Israeli Civil Administration, which placed meters on Palestinian wells and required permits to drill any additional wells. *Id.*

235. Although Palestine does not exist as a recognized state, for simplicity, this term will be used throughout this section to refer to the territories populated by Palestinians.

236. B'Tselem, *supra* note 210. One of the weaknesses in applying international law to belligerent occupation is that it does not directly concern the allocation of shared resources; therefore, both bodies of law must be evaluated. Dichter, *supra* note 177, at 586.

237. Deconinck, *supra* note 234, at Introduction (listing water as one of the five major impediments to peace, stating: "Without a sustainable solution for the water conflict, Israel and the Palestinians are heading for a disastrous water crisis in the first quarter of this century"); Dichter, *supra* note 177, at 567 (asserting that Israeli population grew four times within the first forty years after 1949 and its water use increased more than eight times). Average annual rainfall ranges from 1000 mm in the north to less than 100 mm in the south. Nation by Nation, Geography: Israel, <http://www.nationbynation.com/Israel/Geo.html> (last visited Apr. 12, 2006). Seventy percent of yearly rainfall occurs between November and March and the summer months often have no precipitation. *Id.* This is a problem because people who rely on rainwater collected in cisterns for their drinking water must find other sources during the dry months. Yehezkel Lein, *Thirsty for a Solution: The Water Crisis in the Occupied Territories and its Resolution in the Final-Status Agreement*, at 42 (2000), available at http://www.beselem.org/Download/200007_Thirsty_for_a_Solution_Eng.doc. To compound matters, rain often falls in large quantities during violent rain storms, increasing the loss of possible recharge to overland flooding. Nation by Nation, Geography: Israel. See Christina Reed, *Sharing Water in the West Bank*, GEOTIMES (2000) (reporting a rain event on October 25, 2000, when three inches of rain fell in only six hours, causing a major flood event), available at <http://www.agiweb.org/geotimes/dec00/westbank.html>.

238. See generally Peter Gleick, *Water Conflict Chronology*, Dec. 6, 2004 (listing water conflicts in the Middle East dating from 3000 BC including Old Testament accounts of water being used as a military and religious tool), <http://www.worldwater.org/conflictchronology.html>.

239. Jad Isaac, *Water and Palestinian-Israeli Peace Negotiations*, POL'Y BRIEF NO. 4 (1999) (stating one of the first orders imposed by the Israeli military was Order No. 92, issued August 15, 1967, which categorized water as a strategic resource).

240. See SHARIF S. ELMUSA, *NEGOTIATING WATER: ISRAEL AND THE PALESTINIANS* (1996), available at <http://www.ipsjps.org/html/water3.htm>. Three major agreements between Israel and Palestine are: (1) the Declaration of Principles, signed on December 1993; (2) The Cairo Agreement, signed on May 4, 1994; and (3) the Taba Agreement, signed on September 28, 1995. *Id.* Although not a bilateral agreement, Israel also passed a comprehensive long-term water plan in August 2001 which estimated future water use and presented an integrated approach that included consolidating long-term consumption, protection of natural resources, and ideas for new water sources. See Deconinck, *supra* note 234, Part I.2.

241. Reed, *supra* note 237.

242. See B'Tselem, *supra* note 210 (providing information about two main water sources: the Mountain Aquifer and the Upper Jordan River). Israel depends on the Mountain Aquifer for more than one quarter of its water supplies, and the Jordan Basin for one third. Jessica McCallin, *Making the Blooms Desert* (May 11, 2002), available at <http://www.fromoccupiedpalestine.org/node.php?id=618>.

only slightly exceeds annual combined use.²⁴³ The primary source of groundwater is the Mountain Aquifer.²⁴⁴ The aquifer slopes away from the highlands underneath confining layers in three directions: one eastward toward the Jordan Rift Valley, which lies entirely underneath the West Bank; one northeastward underneath Israel, and one westward underneath Israel proper.²⁴⁵ Its recharge waters flow underground across the armistice line, or Green Line into Israel.²⁴⁶ Almost eighty percent of the water mined from this water source is used by Israel, and the remainder supplies almost all of the running water used by Palestinians in the West Bank.²⁴⁷ This is an important statistic when comparing the population to use ratio because Palestine is limited to such a small portion of shared resource for their population.

A second aquifer, called the Coastal Aquifer, runs along the Mediterranean Sea in Israel and the Gaza Strip and is shared by the two states.²⁴⁸ Made up of two parts, this aquifer differs from the Mountain Aquifer because the recharge area is also the storage and extraction area.²⁴⁹ The important aspect of the two-part system is that the Israeli portion is not an international aquifer.²⁵⁰ The third source of water is the surface water found in the Upper Jordan Basin and its tributaries.²⁵¹ Palestine does not receive any water from this source.²⁵² Minor amounts of water are also acquired from natural springs and rainfall catchments.²⁵³

Both Israelis and Palestinians have valid concerns and arguments regarding the current water situation. Palestinian supporters argue that “maldistribution of water in Israel and the Palestinian territories reflects an unequal balance of power rather than internationally formulated agreements or international law.”²⁵⁴ Palestinians are especially troubled by Israel’s unilateral control of water resources including distribution.²⁵⁵ They feel Israel’s goal to “bloom the desolate land and convert the spacious Negev into a source of force and power” is being achieved at their expense.²⁵⁶ Specifically, Israel is accused of using more than its fair share and retaining the majority of water resources for its citizens

243. *Water and the Environment*, PALESTINE FACTS, at 276 (2004) (stating that the recharge rate of water supplies does not exceed 2634 million cubic meters (mcm) per year while use averages 2570 mcm, http://www.passia.org/index_pfacts.htm).

244. See B’Tselem, *supra* note 211. The Mountain Aquifer extends 130km, north to south stretching from Mount Carmel to Beersheva, and 35km east to west from the Dead Sea to the eastern border of the coastal strip. *Id.* It obtains its recharge from rain that falls primarily in the West Bank Mountains. *Id.* The aquifer provides one third of Israel’s total water consumption. *Id.* Yoram Eckstein & Gabriel Eckstein, *Groundwater Resources and International Law in the Middle East Peace Process*, 28 WATER INT’L 154, 154 (2003).

245. Eckstein & Eckstein, *supra* note 244, at 155.

246. Deconinck, *supra* note 234, Part I.I.

247. Lein, *supra* note 237, at 3. Per capita water use in Israel is approximately 411 cubic meters per person. Eckstein & Eckstein, *supra* note 244, at 155. In the West Bank, Israeli settlers use an average of 1143 cubic meters per person compared to an average 139 cubic meters per person used by Palestinians in the same region. *Id.*

248. Lein, *supra* note 237, at 22.

249. *Id.* at 22.

250. *Id.* at 23.

251. See B’Tselem, *supra* note 210. Water is supplied to the Upper Jordan through its tributaries, the Sea of Galilee, the Yarmuk and the lower Jordan River. *Id.*

252. Lein, *supra* note 237, at 3.

253. Lucy Mair et al., *Thirsting for Justice: Israeli Violations of the Human Right to Water in the Occupied Palestinian Territories: A Report to the 30th Session of the United Nations Committee of Economic, Social and Cultural Rights*, at 11 (2003).

254. Isaac, *supra* note 239; Office of the High Commissioner for Human Rights, *Question of the Violation of Human Rights in the Occupied Arab Territories, Including Palestine*, para. 6, U.N. COMM’N ON HUMAN RTS., RES. 2003/6 (condemning the “biased administration of water resources”), available at http://ap.ohchr.org/documents/E/CHR/resolutions/E-CN_4-RES-2003-6.doc.

255. Isaac, *supra* note 239. Critics of this allegation argue that Israel’s exercise of power over water resources is not prohibited by international law. Dichter, *supra* note 177, at 567.

256. Talal Jabari, *Waterless World*, AL-AHRAM WEEKLY (Aug. 22–28, 2002) (quoting the first Israeli Prime Minister, David Ben-Gurion), available at <http://www.fromoccupiedpalestine.org/node.php?id=612>.

instead of providing water to the occupied territories.²⁵⁷ Israel has also been charged with targeting water resources for military strikes.²⁵⁸ Palestinians believe that under international law they not only have a right to a viable water supply, but also have sovereign rights to the Eastern Aquifer resources because it is located entirely under the West Bank, as well as equitable water rights in the Western and Northeastern Aquifer because the West Bank supplies their primary source of recharge.²⁵⁹

Israel defends its water strategy by citing climate and security concerns.²⁶⁰ They argue that the primary problems are water scarcity and mismanagement of water by the Palestinian government.²⁶¹ As the occupier, Israel is responsible for ensuring long-term sustainability; this includes resource management and consideration of economic concerns.²⁶² In addition to climatic limitations, negotiations are influenced by Israel's need to consider that any future compromises could increase water demand.²⁶³ In response to current concerns, Israel has considered alternative water sources to meet the needs of the combined community and has attempted to decrease consumption.²⁶⁴ Although criticized for their methods, Israel might argue that it has endeavored to balance the application of humanitarian provisions to the West Bank and Gaza with the protection of the sustainability of the entire community.²⁶⁵ Regardless of personal opinions concerning the validity of Palestine's or Israel's position, it can be acknowledged that an agreement has not been reached and the realization of peace depends on one.²⁶⁶

An effort to solve some human rights issues in this region occurred at the 1995 Oslo Accords.²⁶⁷ Among other things, the Accords contained rules regarding free passage between territories and guidance for legal jurisdictions. The Interim Agreement increased the Palestinian Authority control over water management, allowing additional development

257. Isaac, *supra* note 239. Per capita, Palestinians use an average of only fifty liters of water a day, which is half of the World Health Organization's estimated daily requirement. Reed, *supra* note 237.

258. See, e.g., *Water Use and Distribution in the West Bank and Gaza Strip*, PALESTINE MONITOR, FROM OCCUPIED PALESTINE (detailing Israeli attacks on Palestinian water tankers to prevent them from reaching water taps), <http://www.fromoccupiedpalestine.org/node.php?id=611> (last visited March 23, 2005); Amira Hass, *25,000 Lack Water in Ramallah*, HA'ARETZ, April 2, 2002, ("Some 25,000 people in Ramallah and its environs are without water after pipe lines . . . were ruptured by Israel Defense Forces tank movement in the city . . ."), available at <http://www.fromoccupiedpalestine.org/node.php?id=617>.

259. Isaac, *supra* note 239.

260. *Id.* "The implication is that, as a water scarce county, Israel's viability depends on retaining all the water resources it now controls."

261. Dichter, *supra* note 177, at 567; *Water a Vexed Issue for Israel, Palestine*, JORDAN TIMES, July 7, 2000 (quoting the Israeli Water Commission Manager, who stated: "We allocate according to the (1993) interim agreement . . . and even twenty percent more" and stating that water shortages are due to the Palestinian refusal to adopt environmental practices); see B'Tselem, *supra* note 210 (adding that an increase in the Palestinian's standard of living has increased water demand).

262. Deconinck, *supra* note 234, at 9 (mentioning that "huge financial inputs" are necessary to cope with the water issues that face this region).

263. Reed, *supra* note 237 ("If Palestinian refugees are given the right to return to the occupied areas, demand for water will only increase.").

264. Isaac, *supra* note 239 (cataloguing possible solutions proposed by Israel, including massive desalination projects, construction of additional pipelines, "Medusa Bags" ferrying water through the Mediterranean from water-rich countries, and tugging icebergs from northern seas); Deconinck, *supra* note 234, Introduction (discussing Israel's August 2000 water strategy to decrease consumption, especially during times of drought).

265. Sabel, *supra* note 209.

266. United Nations Information System on the Question of Palestine, Committee on the Exercise of the Inalienable Rights of the Palestinian People, *Water Resources of the Occupied Palestinian Territory*, at 60 (1992), available at <http://domino.un.org/unispal.nsf/eed216406b50bf6485256ce10072f637/296ee705038ac9fc852561170067e05f!OpenDocument>.

267. Na'ama Carmi, *Oslo: Before and After: The Status of Human Rights in the Occupied Territories*, at 4 (1999) ("The Oslo Accords require both Israel and the Palestine Authority to respect human rights."), available at http://www.btselem.org/Download/199905_Oslo_Before_and_After_Eng.doc.

and pumping from shared resources.²⁶⁸ Since the signing, many human rights violations have been reduced; however, Israel still has broad powers over water, and no responsibility was given to Israel for infrastructure installation and repair in the occupied territories.²⁶⁹ Because of these shortfalls, many argue more change is still necessary. Although a further compromise between the states would be the ideal method to impose an obligation on Israel to deliver additional water to the occupied territories, existing agreements, customary international law, and the human right to water, assuming it exists, create sufficient requirements.

Under the Hague Resolutions, restrictions are contingent on the categorization of the property.²⁷⁰ It has been argued that Israel's conversion of water resources to public property without compensation amounts to a taking of private property in violation of Article 46 of the Hague Resolutions.²⁷¹ Proponents argue that the Article would also prohibit the metering of Palestinian wells and the granting of permits for Israelis to drill deeper wells while Arab extractions are further limited.²⁷² This argument is problematic because in the West Bank much of the water used within the Israeli borders was mined by Israel before it occupied this area.²⁷³ In addition, a complete shift of the shared resource back to Palestine would not solve the water shortage problems, and the Palestinian government would be forced to implement regulations.²⁷⁴

Another argument against Israel's water policy is the prohibition to change legislation. Article 43 of the Hague Resolutions does not allow the occupier to change a policy that existed before the occupation began unless it is a vital military necessity.²⁷⁵ Israel has consistently defended its water policy as a defense and security measure for its state; therefore, it is arguable that this article would not apply.²⁷⁶ A later Article would seemingly prohibit the utilization of water of the occupied territory by the occupier; however, the Article does not describe how ownership is defined and if Israel does not have a right as an occupier, they could exert a valid claim to the water as a shared resource.²⁷⁷ Article 43 provides: "The authority of the legitimate power having in fact passed into the hands of the occupant, the latter shall take all the measures in his power to restore, and ensure, as far as possible, public order and safety, while respecting, unless absolutely prevented, the laws in force in the country."

The Fourth Geneva Convention provides additional guidelines that Israel has arguably breached.²⁷⁸ Under the Convention, Israel is required to provide Palestine with suitable

268. *Id.* at 22.

269. *Id.* (explaining that any water-related project that will be within Palestinian control must be approved by Israel in the Israeli Water Committee). Additional concerns are that since the agreements, Palestinian citizens are now suffering at the hands of the Israelis and their own government without protection. Center for Economic and Social Rights, Occupied Palestinian Territories, at <http://cesr.org/palestine> (last visited May 23, 2006).

270. See Convention Respecting the Laws and Customs of War on Land, *supra* note 200, art. 46.

271. Dichter, *supra* note 177, at 579–80.

272. *Id.* at 579–80.

273. *Id.* at 580–81.

274. *Id.* at 581.

275. Convention Respecting the Laws and Customs of War on Land, *supra* note 200, art. 43. The basis of this Article is the understanding that an occupation should be temporary and laws should be preserved for the return of an independent government. Imseis, *On the Fourth Geneva Convention and the Occupied Palestinian Territory*, *supra* note 212, at 91.

276. Isaac, *supra* note 239.

277. Convention Respecting the Laws and Customs of War on Land, *supra* note 200, art. 43.

278. It should be noted that application of the Fourth Geneva Convention becomes problematic because Israel argues that Palestine does not qualify as an occupied territory and that, therefore, the Convention does not apply. Dichter, *supra* note 177, at 578. Israel argues that because no legitimate sovereign was displaced in either the West Bank or the Gaza Strip, it cannot be categorized as a belligerent occupier. Jad Isaac, Applied Research Institute-Jerusalem, Core Issues of the Palestinian-Israeli Water Dispute, available at <http://www.arij.org/pub/corissues> (last visited May 23, 2006). See Imseis, *supra* note 212, at 92–100 (providing

quantity and quality of water.²⁷⁹ The discrepancy in per capita water usage and the water shortage Palestinians experienced indicates that this has not occurred.²⁸⁰ In addition, discrimination in water distribution between Israelis and Palestinians is prohibited. Discrimination of any kind between the occupying state and the occupied territory residents is prohibited.²⁸¹ Further, the Fourth Geneva Convention prohibits the willful causing of serious injury to body or health.²⁸² Considering the connection between disease and availability of water resources, claims could be made against Israel under this article as well.²⁸³

In addition to humanitarian law, international water law principles limit Israel's sovereign right to water resources whether or not they are considered a belligerent occupier.²⁸⁴ Because these water resources are shared under the Watercourse Convention, Israel must use the water in an equitable and reasonable manner.²⁸⁵ To achieve this, they must consider the factors enumerated in the Watercourse Convention to ensure that the water is being used in a manner that is most equitable to all parties.²⁸⁶ Under Article 6, factors like past use and source of recharge would only be items for consideration and must be balanced with other information.²⁸⁷ The obligation not to cause harm also applies to the Israeli-Palestinian situation because of the shared watercourses. Under this principle, one state's use cannot cause harm to another watercourse state.²⁸⁸ It is arguable that Israel's control over the Jordan River Basin and Mountain Aquifer violates this rule.

Israel is in the difficult situation of meeting the needs of its citizens and complying with international humanitarian and water law in its water policies concerning the Occupied Palestinian Territories. While international law does not require Israel to sacrifice the needs of its state for another, Israel is required to implement an equitable and reasonable water plan.²⁸⁹ At a minimum, the basic water needs of the occupied territories must be met.²⁹⁰ To accomplish this, less of a disparity should exist between the per capita water usage between Israelis and Palestinians.²⁹¹ When water is scarce, meeting basic human

detailed legal arguments regarding whether Israel is a belligerent occupier and concluding that it should be bound by the Fourth Geneva Convention because it qualifies as a High Contracting Party).

279. See Fourth Geneva Convention, *supra* note 181, art. 55.

280. Yahezkel Lein, *Disputed Waters: Israel's Responsibility for the Water Shortage in the Occupied Territories*, Sept. 1998, at 26, available at http://www.btselem.org/Download/199809_Disputed_Waters_Eng.doc.

281. See Fourth Geneva Convention, *supra* note 181, art. 27.

282. *Id.* art. 147.

283. See THE RIGHT TO WATER, *supra* note 1, at 7.

284. Watercourses Convention, *supra* note 103, art. 5.

285. There are several reasons why the Convention may not apply to this type of aquifer. First, the aquifer has no relationship with a surface body of water, which appears to be a requirement under the Convention's definition of "watercourse." Eckstein & Eckstein, *supra* note 244, at 159. Also, the Convention only applies to states; therefore, it cannot apply to the Palestinians until they are established as a state. *Id.* at 160. Lastly, neither Israel nor the Palestinians have signed the Watercourses Convention, which is still not in force.

286. Watercourses Convention, *supra* note 103, art. 6. The Helsinki Rules also have a similar list of factors that can provide guidance; however, the rules were created as recommendations and are not binding international law. The Helsinki Rules, *supra* note 102.

287. Watercourses Convention, *supra* note 103, art. 6. Israel has been a strong proponent that past use should be considered in future negotiations. SHARIF S. ELMUSA, *NEGOTIATING WATER: ISRAEL AND PALESTINE* 24 (1996). Past use is included in the Helsinki Rules factors, but is not listed in the Watercourse Convention; however, the article does not contend to contain an exhaustive list of factors for consideration. Watercourses Convention, *supra* note 103, art. 6.

288. *Id.* art. 7.

289. See *id.* art. 5.

290. Lein, *supra* note 237, at 55.

291. See *id.* at 35 (showing gaps of up to 400 percent in per capita water use between Israel and Palestine).

needs must be superior to luxuries like lawns and swimming pools.²⁹² This requirement does not limit Israel from exploring alternative water sources or even maintaining control over water resources,²⁹³ but it does compel more water be made available to the Palestinians.²⁹⁴ This includes quantity and quality, as well as rehabilitation, construction, and maintenance of infrastructure to ensure a delivery mechanism.²⁹⁵ These goals would be obtained more efficiently through joint management.²⁹⁶ The theory of joint management is seen throughout international water law and relates strongly to cooperation. Through these mechanisms hopefully further conflict and violence can be avoided.

2. United States-Iraq

Israel is not the only region where conflict impacts water. In a little more than one decade, Iraq has suffered severe sanctions and two military attacks by American forces. These events have had severe negative effects on local infrastructure including water and waste water utilities.²⁹⁷ Water was a significant issue in the 1991 Iraq invasion when millions of people were suddenly without water due to the bombing of power stations and damage to water treatment facilities.²⁹⁸ After the attack, the United States imposed strong economic sanctions against the country that lasted almost a decade which further degraded services.²⁹⁹

On March 20, 2003, the United States and their coalition of forces again invaded Iraq in an attempt to discover weapons of mass destruction and remove Sadaam Hussein from power.³⁰⁰ On May 1, 2003, the United States declared the end of the combat phase and began efforts to put a temporary government in place and rebuild Iraq.³⁰¹ Similar to the previous invasion, many water treatment facilities were damaged culminating into a water

292. *Id.* at 42 (including both residential and industrial water in the category of basic human needs). The Watercourses Convention also states that “special regard” must be given to “vital human needs” when resolving conflicts between shared water users. Watercourses Convention, *supra* note 103, art. 10.

293. This statement is not intended to imply that Israel should remain in complete control of the regional water policy. It is simply stating that, at minimum, under international water law Israel is required to supply Palestinians with enough water to meet basic survival needs in an equitable and reasonable manner.

294. Mair, *supra* note 253, at 41–42.

295. See, e.g., ICESCR Comment 15, *supra* note 10. Many houses in the Occupied Territories do not have running water due to the utility degradation that Israel has allowed during the occupation; however this number has decreased since the 1995 Oslo II agreement. Yehezkel Lein, Not Even a Drop: The Water Crisis in Palestinian Villages Without a Water Network (2001), http://www.btselem.org/Download/200107_Not_Even_A_Drop_Eng.doc (last visited May 23, 2006). Oslo II requires the cessation of any attacks on water-related infrastructure. See Mair, *supra* note 253, at 6.

296. Oslo II, or the Taba Agreement, established a Joint Water Commission; however, the committee has not been successful in promoting Palestinians’ rights over their water resources because the committee has limited power and Israel has effective veto power over water initiatives. Mair, *supra* note 253, at 15.

297. Public Citizen, Iraq, http://www.citizen.org/cmep/Water/cmep_Water/reports/iraq (last visited May 23, 2006) (citing UNICEF reports that estimate in 2003, only nineteen percent of water treatment plants in southern and central Iraq were in good condition).

298. ICRC, *Civilians in War*, *supra* note 174.

299. Nausheen Hassan, *U.S. Involvement in the Sanctions Against Iraq: A Potential Basis for a Legal Claim by Iraqi Women?*, 11 S. CAL. REV. L. & WOMEN’S STUD. 189, 205–07 (2001) (describing the effects of economic sanctions employed by the United States against Iraq created to debilitate the repressive Saddam Hussein government by restricting the importation of basic materials). Comment 15 calls on parties to avoid imposing embargos that may prevent the supply of water to citizens. ICESCR Comment 15, *supra* note 10, para. 32.

300. *Special Report: Iraq Timeline: July 16 1979 to January 31 2004*, GUARDIAN UNLIMITED, Jan. 31, 2004, <http://www.guardian.co.uk/Iraq/page/0,12438,793802,00.html>.

301. *Id.* “Major combat operations in Iraq have ended. In the battle of Iraq, the United States and our allies have prevailed. And now our coalition is engaged in securing and reconstructing that country.” President George W. Bush, Remarks by the President from the USS Abraham Lincoln (May 1, 2003), transcript, *available at* <http://www.usembassy.sk/cis/cisen051.html>.

crisis for many Iraqi communities.³⁰² Although a local government was eventually installed, the United States military and American corporations, acting as government contractors, along with voluntary aid organizations have been very involved in rebuilding the local infrastructure.³⁰³ One of these projects is fixing and expanding water systems.³⁰⁴ Because many people view the United States as the current occupier of Iraq, questions have arisen regarding the U.S.'s responsibility towards the Iraqi citizens.³⁰⁵

The first obstacle to the discussion of obligations is determining whether America qualifies as a belligerent occupier and, therefore, bound by humanitarian law. This decision is based on whether a hostile army has authority over a territory.³⁰⁶ Although this is a factual determination, the opinion of the potential occupier can provide useful information.³⁰⁷ The language that has been used by the United States in reference to Iraq resembles the definition seen in the Fourth Geneva Convention for an occupied territory.³⁰⁸ Also, the Security Council's Resolution 1483 recognized this area as occupied and called for the occupants to pursue a new administration for Iraq.³⁰⁹ Based on the published opinions of the United States and the accepted definitions established by the Hague Resolutions and Fourth Geneva Convention, it is likely that international law would view Iraq as an occupied territory until its government becomes independent of the United States.³¹⁰

Assuming Iraq is an occupied territory, the United States must abide by humanitarian law, human rights law, international law generally, and any obligations it creates for itself. The Security Council announced the goal to promote the welfare of Iraqi citizens.³¹¹ Water is a natural part of this. Without adequate water supplies, industrial and agricultural recovery and development is not possible.³¹² This goal is also established by Article 43 of the Hague Resolutions, which requires the occupier to restore and ensure public order and life.³¹³ This is to be accomplished by the existing laws in the country, which would include international obligations.³¹⁴

According to the Geneva Convention, the utilization of the resources includes ensuring adequate supply for the occupied citizens.³¹⁵ Similar to the Israel-Palestine discussion, this requirement includes the repair of infrastructure and the continued protection of existing

302. Hassan, *supra* note 299, at 203–204.

303. Public Citizen, *supra* note 297.

304. *Id.*

305. See Eyal Benvenisti, *Water Conflicts During the Occupation of Iraq*, 97 AM. J. INT'L L. 860, 861 (2003). These discussions will refer solely to the United States when discussing the occupying territory, but it should be noted that the occupying government also includes the United Kingdom.

306. *Id.*

307. *Id.* at 861–62.

308. *Id.* at 861 (“The letter of May 8, 2003, from the permanent representatives of the United Kingdom and the United States addressed to the president of the Security Council communicates the two states’ pledge to ‘strictly abide by their obligations under international law, including those relating to the essential humanitarian needs of the people of Iraq.’”). One example is the discussion regarding management of the Iraqi oil and the occupant’s utilization of public resources as allowable under the Hague Resolutions. *Id.* at 864.

309. *Id.* at 861–63.

310. See Benvenisti, *supra* note 305, at 861–64; Yoram Dinstein, *Legislation Under Article 43 of the Hague Regulations: Belligerent Occupation and Peace Building*, at 4 (Harv. Univ. Program on Human. Pol’y & Conflict Res. Occasional Paper Series, Paper No. 1, Fall 2004), available at <http://www.hpcr.org/pdfs/OccasionalPaper1.pdf>.

311. Benvenisti, *supra* note 305, at 864.

312. *Id.* at 865.

313. Convention Respecting the Laws and Customs of War on Land, *supra* note 200, art. 43.

314. *Id.*

315. Victims of International Armed Conflicts, *supra* note 187, art. 54(3)(b).

systems.³¹⁶ In addition to meeting Iraq's water needs, the United States must also assist Iraq to comply with international riparian obligations including the Watercourse Convention.³¹⁷

Beyond the duties of occupying governments, the situation in Iraq also engenders discussions about third-party requirements. If a government has obligations as an occupying force, these obligations may persist even if work is delegated to a third party. Much of the repair work in Iraq is being completed by independent contractors who are earning large sums of money and may not be directly accountable to Iraqi citizens for their work.³¹⁸ For example, Bechtel signed a contract in 2003 which required them to repair the water infrastructure in several urban areas within a set amount of time.³¹⁹ The eighteenth-month contract that Bechtel received was ultimately valued at \$1.03 billion dollars.³²⁰ Since the contract award, Bechtel has been accused of not accomplishing the assigned tasks while continuing to bill large amounts of money to the contract.³²¹

The World Health Organization argues that the human right to water creates obligations for corporations like Bechtel.³²² One of these is to "act[] in an ethical manner towards the communities and residents that they are employed to deliver services to."³²³ Not completing the renovation of water facilities is a violation of this obligation.³²⁴ Despite this argument, Iraqis have no enforcement mechanism against Bechtel for violating human rights or humanitarian law, because it is a private corporation and not a government entity.³²⁵ However, corporations should not escape accountability when they are receiving compensation through government contracts to accomplish this important work.³²⁶

According to Comment 15, the occupying government maintains a responsibility to ensure that third parties meet their obligations towards the human right to water.³²⁷ The easiest way to do this is for the government to incorporate those goals into the contract and enforce them.³²⁸ By requiring work be completed before payment is rendered, the United States government is actually ensuring water for many Iraqi citizens.³²⁹ The Comment also

316. ICESCR Comment 15, *supra* note 10.

317. Benvenisti, *supra* note 305, at 866–67. This obligation is established by the Hague Resolution which states the occupant must "take all the measure in his power to restore, and ensure, as far as possible, public order and safety," which includes compliance with laws. Convention Respecting the Laws and Customs of War on Land, *supra* note 200, art. 43; Dinstein, *supra* note 310, at 28 (discussing the implications of Articles 43 and Article 64 of the Fourth Geneva Convention).

318. See, e.g., Public Citizen, *Bechtel's Dry Run: Iraqis Suffer Water Crisis* (2004) (discussing failures by Bechtel to meet the contract obligations to repair water systems while collecting large sums of money from a government contract), <http://www.foodandwaterwatch.org/publications/reports/bechtel-s-dry-run-iraqis-suffer-water-crisis/pdf>.

319. See *id.*

320. See *id.*

321. *Id.* at 4–8.

322. THE RIGHT TO WATER, *supra* note 1, at 32.

323. *Id.*

324. See Public Citizen, *supra* note 318, at 4–8.

325. See Scanlon, *supra* note 7, at 31–32 (comparing attempting to hold corporations liable for water violations to the ultimately unenforceable U.N. effort to establish environmental provisions for corporations that was ultimately not enforceable). Although an enforcement mechanism does not currently exist, "[i]f the international community decides to formulate a human right to water in a legally binding instrument, it also could expressly provide a corresponding duty on State and private actors alike, to protect that right." *Id.* at 32.

326. ICESCR Comment 15, *supra* note 10, paras. 23–24.

327. *Id.* para. 23. ("The obligation to protect requires State parties to prevent third parties from interfering in any way with the enjoyment of the right to water. Third parties include . . . corporations . . . acting under their authority.")

328. See *id.* para. 24. ("Where water services . . . are operated or controlled by third parties, States parties must prevent them from compromising . . . physical access to sufficient safe and acceptable water. To prevent such abuses an effective regulatory system must be established . . . which includes . . . imposition of penalties for non-compliance."); Public Citizen, *supra* note 318, at 13.

329. *Id.* at 13–14.

recommends the “imposition of penalties for non-compliance.”³³⁰ The American government also has an obligation under its own edict to set up a sustainable system in Iraq, which cannot be achieved through non-local corporations that are not completing their tasks.³³¹ The government is the appropriate entity to make corporations accountable to the local communities. Through state’s direct and indirect efforts, countries like Iraq can have a better future than their past, complete with ensured water resources.³³²

IV. ENFORCEMENT

*In spite of international treaties . . . the world is witnessing a daily catalogue of horrors and atrocities perpetrated against the very people these laws were designed to protect. These violations do not illustrate the inadequacy of the law, but rather that the rules are either not known to leaders and combatant or that they are quite simply disregarded.*³³³

Enforcement only becomes an issue when there is a failure.³³⁴ When an established standard has been ignored or violated, the concepts of coercion, retribution, and remediation are raised.³³⁵ Although discussed in a limited context, the inability to repair an injury would vitiate the purpose of instilling rights.³³⁶ Human rights are often criticized as being unenforceable; however, several national and international mechanisms exist to ensure that governments fulfill the rights of their citizens.

Perhaps the easiest implementation avenue for human rights is at the national level.³³⁷ This option is limited by the assumption that rights have been incorporated into regional legal constructs, but many rights already exist in local documents.³³⁸ Standing to bring a claim for local enforcement can occur one of two ways. The first, more obvious, approach is if the state explicitly includes the right to water in their governing documents. If the right to water is implemented locally as proposed by Comment 15, states will create “legislation, strategies and policies” to ensure that the obligation is fulfilled.³³⁹ Ideally these directives would include judicial or administrative remedies that create accountability for local governments or municipalities.³⁴⁰ Similar protocols should be included in any agreement

330. ICESCR Comment 15, *supra* note 10, para. 24.

331. See Eyal Benvenisti, *supra* note 305, at 866–67.

332. See ICESCR Comment 15, *supra* note 10, paras. 23–24.

333. ICRC, *Civilians in War*, *supra* note 174.

334. Imseis, *supra* note 212, at 122.

335. *Id.* at 122; DINAH SHELTON, REMEDIES IN INTERNATIONAL HUMAN RIGHTS LAW 38 (1999).

336. See generally Imseis, *supra* note 212, at 122.

337. SHELTON, *supra* note 336, at 57 (“Remedies for international human rights violations serve purposes similar to those of remedies in national law.”). See, e.g., Michael Kidd, *Not a Drop to Drink: Disconnection of Water Services for Non-Payment and the Right to Access of Water*, 20 S. AFR. J. HUM. RTS. 119 (2004) (describing the national groundwater supply requirements in South Africa).

338. BROWNLIE, *supra* note 28, at 542–45; see SHELTON, *supra* note 335, at 61–64 (explaining sources of remedies for human rights obligations found in national law).

339. ICESCR Comment 15, *supra* note 10, para. 46.

340. See *id.* para. 55. This can take the form of a notice requirement when a customer’s account is delinquent, warning that the water supply will be disconnected. See Lindie Niklass, *Negotiating the Rights of Access to Sufficient Water Through the Courts*, at 261, 268, Presented at the 2nd Water Research Fund for South Africa/WaterNet Symposium on Integrated Water Resources Management (held at Cape Town, South Africa on Oct. 30–31, 2001), available at <http://www.iwsd.co.zw/symposium2001/papers2/niklaas.pdf>. An individual may also have the right to a hearing to plead his financial situation and make payment arrangements accordingly. See *id.* at 268–70. The availability of and procedure for a hearing could be explained in the notice. An extreme measure would be to require the utility company to gain a court order before disabling service. See *id.* at 269–

with a third-party service provider. Regional enforcement would mirror what is seen in the South African and Indian systems.³⁴¹ In both of these countries, the right to water is included in either the constitution or the bill of rights and enforcement has been sought by citizens through the local court system.³⁴² This system of accountability gives more power to the individual to ensure the fulfillment of his right to water. The second way standing is established is through any treaties to which the state is a signatory.³⁴³ Violations of these agreements can be remedied the same way as just described. Violations of either local law or treaties are under the jurisdiction of the local court system.

If the right to water becomes an international human right, redress for a violation would be the same as for any human right.³⁴⁴ On an international level, several tribunals may be available. Tribunals such as the ICJ, the International Criminal Court (ICC), or the European Court of Justice can all hear cases regarding treaty obligations or customary international law as long as jurisdiction exists.³⁴⁵ The creation of ad hoc international criminal tribunals is another judicial alternative.³⁴⁶ Finally, forms of horizontal enforcement from other states in the form of economic pressure such as sanctions can also create a shift in conduct.³⁴⁷

Remedies may also be specified by an existing treaty to which the offending state is a party. A particular document can detail the “enforcement machinery” that must be utilized.³⁴⁸ At current, no international document creates a binding obligation for the right to water; however, if one is created, the document must be examined first to see if an enforcement structure is included.³⁴⁹ The presence of this standard does not prohibit the seeking party from pursuing other remedies under international law.³⁵⁰

A drawback to the international law approach is that, “In human rights agreements the promisee is a state, and the true beneficiary is an individual (and usually a national of the violating state),” but the individual does not have standing to bring the claim directly against a state.³⁵¹ The individual is the “incidental beneficiary” of the rights created by state parties thereby essentially removing the individual from the process.³⁵² The purpose

70. This option is time consuming and expensive and rendered unnecessary if other protocols are established and properly followed.

341. See Kidd, *supra* note 337, at 119, 120–23 (listing the South African constitutional water obligations and the subsequent implementing Water Services Act).

342. See *id.* at 123–28 (describing cases in South Africa regarding disconnection of water services).

343. BROWNLIE, *supra* note 28, at 583.

344. See Henkin, *supra* note 56, at 267 (stating that human rights obligations must be evaluated in light of the characteristics of international law).

345. Jurisdictional issues can arise in relation to any of these options because states must first submit to be bound. BROWNLIE, *supra* note 28, at 571–72, 680–82 (explaining that, in order to fall under ICC jurisdiction, a state must be a signatory to the 1998 Rome Statute; in order to fall under ICJ jurisdiction, a state must be a party to the Statute of the Court); SHELTON, *supra* note 335, at 161–62 (stating that jurisdiction in the European Court is established through European Community membership).

346. Imseis, *supra* note 212, at 132.

347. *Id.* at 133. Although some sanctions are allowed by Comment 15, trade embargoes and sanctions that would inhibit a state’s ability to provide basic resources to their people are not. ICESCR Comment 15, *supra* note 10, para. 32.

348. See Henkin, *supra* note 56, at 261.

349. *Id.* at 260–61.

350. *Id.* at 261, 277 n. 11.

351. See Henkin, *supra* note 56, at 261, 267–68. The states, as creators of the laws, are obligors. *Id.* at 267. Obligers have the duty to respect what have been designated as the “human rights” of the citizens in their jurisdiction. *Id.* This creates the state’s standing to bring a claim. *Id.* While lacking standing, individuals and NGOs can be instrumental in activating those “remedies in fact.” *Id.* at 271.

352. *Id.* at 268.

of human rights is to induce states to make them effective; not give the right to an individual at the international level.³⁵³

If water is implicated in another right, any attempt to enforce the right to water would be the same as seeking implementation of the parent right.³⁵⁴ For example, enforcement for the right to water might be sought through provisions of the Universal Declaration of Human Rights or the ICCPR which are considered customary international law.³⁵⁵ If a state has repeated violations of obligations *erga omnes*, then they are in breach of international law.³⁵⁶ These claims are made by showing a consistent pattern of violating an internationally recognized human right, like the right to life.³⁵⁷ Remedies for these types of violations can be sought even if the victims were not citizens of the perpetrating state.³⁵⁸ The concerned state can bring a claim at an agreed upon tribunal, such as the ICJ, assuming both parties have submitted to its jurisdiction.³⁵⁹

If traditional human rights enforcement mechanisms are ineffective, accountability can still be achieved in other areas of international law.³⁶⁰ In the case of shared water, the Watercourse Convention and other international law principles can be used to ensure that the water is allocated in a reasonable and equitable manner.³⁶¹ Other treaties such as CEDAW and the Convention on the Rights of a Child can also be used if the state has agreed to be bound or if the article sought to be enforced qualifies as customary international law.

Efforts to enforce duties between governments or between a state and a citizen outside its jurisdiction pose more difficulties.³⁶² In situations of conflict, the enforcement mechanism can emanate from local, humanitarian, or other sources of international law.³⁶³ Regionally, occupied citizens should first evaluate if they can pursue a claim in the local court system.³⁶⁴ Internationally, in addition to the principles described above, the Geneva Convention provides other alternatives specifically for conflict situations. Article 146 not only encourages local legislation to create internal mechanisms, but also gives jurisdiction to the national court of all other contracting parties.³⁶⁵ The presence of a bilateral

353. See Henkin, *supra* note 56, at 269. Several years ago, the Committee on Economic, Social, and Cultural Rights proposed an individual complaint mechanism for reporting ICESCR infractions. See Michael J. Dennis & David P. Stewart, *Justiciability of Economic, Social, and Cultural Rights: Should There Be an International Complaints Mechanism to Adjudicate the Rights to Food, Water, Housing, and Health?*, 98 AM. J. INT'L L. 462, 462 (2004). The proposal for this system is to create binding decisions based on legal interpretations of the ICESCR. *Id.* at 468. The right to petition "would be broadly available to any individuals or groups who themselves claim to be victims of a violation or who act on behalf of alleged victims with their knowledge and agreement." *Id.* This proposal has been under review for many years and the adoption of a new system is not likely to happen in the near future. See *id.* at 462.

354. See Universal Declaration of Human Rights, *supra* note 4.

355. McCaffrey, *supra* note 12, at 8.

356. BROWNLIE, *supra* note 28, at 537. The ICJ referred to *erga omnes* obligations in the *Barcelona Traction* case by differentiating between obligations that are created as a result of diplomatic relations between two states and rights that all states hold a legal interest in protecting. *Barcelona Traction, Light and Power Co. Ltd.* (Belg. v. Spain), 1970 ICJ 3 (Feb. 5).

357. BROWNLIE, *supra* note 28, at 537.

358. RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES § 703 cmt. b (1987).

359. *Id.* note 3.

360. McCaffrey, *supra* note 12, at 19–20.

361. Watercourses Convention, *supra* note 103, art. 6(1).

362. See discussion *supra* Part V.B.

363. See Imseis, *supra* note 212, at 122–36 (cataloging enforcement under the Fourth Geneva Convention).

364. See *id.* at 123–27 (stating the best option for enforcement in the occupied territories is the Israeli High Court); see also BROWNLIE, *supra* note 28, at 290–92 (explaining how domestic and international jurisdiction is determined).

365. Imseis, *supra* note 212, at 127; Fourth Geneva Convention, *supra* note 180, art. 146. The article grants universal jurisdiction, which "refers to the authority of domestic courts and international tribunals to prosecute

agreement to which the belligerent occupier is a party is another possible avenue.³⁶⁶ Another alternative is the appointment of Protecting Powers appointed by the party agreement or, if no agreement is made, the International Red Cross can act.³⁶⁷ The purpose of the Protecting Powers is to settle disputes between parties that involve Convention provisions; the Powers are to be informed of actions taking place in the occupied territory.³⁶⁸

Appropriate remedies for violations of the right to water can vary. A detailed discussion of what is suitable is beyond the scope of this Article; however, a few suggestions may be helpful to complete the enforcement picture. The most important goal of the right to water is to allow access; therefore, this should be included in any remedy.³⁶⁹ If water services have been disconnected, service must be reinstated. If no water gathering point exists, one must be made available; and if a water utility has been damaged as a result of conflict or mistake, it must be repaired.³⁷⁰ Beyond these requirements, victims may also be entitled to reparation or compensation as well as a guarantee that water will be available in the future.³⁷¹ The ability of a citizen or a state to seek remedies or reparations for human rights violations is a critical part of being entitled to a right.³⁷² Judicial and other remedies give strength to existing human rights and will provide the same empowerment to the human right to water in the future.

V. CONCLUSION

Water is critical to the survival of all living things, yet a large portion of the world does not have access to sufficient quantities of clean water.³⁷³ Lack of water has severe health consequences including dehydration and hygiene-related disease.³⁷⁴ One method proposed to assist people in gaining access to water is to establish water as a human right.³⁷⁵

Although water was originally argued to be included in the right to life or health, recent debates have illustrated the importance of establishing water as an independent right.³⁷⁶ Although it can be argued that water is implicit in existing rights, the absence of water in these documents creates enforcement problems.³⁷⁷ As an explicitly defined right,

certain crimes regardless of where the offense occurred, the nationality of the perpetrator, or the nationality of the victim." Mark P. Scharf & Thomas C. Fischer, *Forward to Symposium, Universal Jurisdiction: Myths, Realities, and Prospects*, 35 NEW ENG. L. REV. 227, 227 (2001).

366. See Imseis, *supra* note 212, at 125 (providing the example of the Oslo Accords between Israel and Palestine).

367. *Id.* at 128; Fourth Geneva Convention, *supra* note 181, art. 9.

368. Imseis, *supra* note 212, at 128–29. The Protecting Powers provision has not resulted in the type of authority that was envisioned by the Convention drafters and is often completely ignored by parties. *Id.* at 129.

369. See generally ICESCR Comment 15, *supra* note 10 (demonstrating the importance of the right to water by explaining all of its requirements).

370. See SHELTON, *supra* note 335, at 38–39 (“Remedies thus are designed to place an aggrieved party in the same position as he or she would have been had no injury occurred. To achieve this end by holding the wrongdoer responsible for providing the remedy . . . can . . . make the victim whole.”).

371. See ICESCR Comment 15, *supra* note 10, para. 55; SHELTON, *supra* note 335, at 38–39 (listing types of remedies that can be levied against a state, including declaratory judgments, compensation, punitive or exemplary damages, non-monetary remedies, habeas corpus, and attorney’s fees).

372. See SHELTON, *supra* note 335, at 358.

373. See THE RIGHT TO WATER, *supra* note 1, at 7.

374. See *id.*

375. See generally Gleick, *supra* note 3.

376. See generally *id.*

377. See generally *id.*

accountability and structure will be placed on states, and citizens will be afforded more rights.³⁷⁸

Once the right to water has been established and defined, one must then ascertain who is responsible for its implementation. In a general sense, governments are obligated to protect the rights of the citizens within their jurisdictions.³⁷⁹ However, in more complex situations, such as shared water or economic disparities, governments also have duties towards one another and can have an obligation to provide another government with water.³⁸⁰ Finally, states also have guidelines regarding treatment of water during and after times of conflict.³⁸¹ These obligations are defined primarily through humanitarian law and generally require that citizens of another state involved in the conflict or occupation cannot be deprived of water.³⁸²

The duty to provide water cannot lie entirely with government. As the human right to water evolves, the role of individual citizens must also play a part in the realization of these goals.³⁸³ Although this topic is rarely discussed, some ideas can be deduced from existing documents. Human rights provide a mechanism for a citizen to enforce a violation of a right against a state; however, this does not negate the responsibilities citizens have towards themselves and each other.³⁸⁴ “[I]t is important to bear in mind that human beings are responsible for themselves and their own well-being. Human rights do not automatically involve heavy government intervention or imply that individuals can unreservedly demand goods and services from the state.”³⁸⁵

Although Comment 15 does not specifically list the duties of those benefiting from the right to water, both the UDHR and ICESCR’s preambles extend obligations to individuals by stating that everyone must take progressive steps towards the realization of human rights.³⁸⁶ In the realm of water, private citizens must conserve and contribute to their access of water before attempting to levy a claim against their government.³⁸⁷

“Even if people have rights that some of their basic needs be met, it does not follow the [sic] everyone is responsible for meeting the need of everyone else.”³⁸⁸ Although the government is ultimately responsible for their citizens, individuals should share some of the responsibility.³⁸⁹ One way that citizens can contribute is to pay for their access to water.³⁹⁰

378. See, e.g., ICESCR Comment 15, *supra* note 10, at para. 17 (placing immediate obligations upon states parties to the Covenant, namely the duties to: (1) exercise the right to water without “discrimination of any kind” in accordance with Covenant art. 2, para. 2; and, (2) to take steps toward the realization of the goals outlined in Covenant arts. 11, para. 1 & 12).

379. See discussion *supra* Part III.A.

380. See discussion *supra* Part III.A.1–2.

381. See discussion *supra* Part III.B, C.

382. See discussion *supra* Part III.B, C.

383. See discussion *supra* Part IV.

384. See World Health Org., *Water, Health and Human Rights* (2001), http://www.who.int/water_sanitation_health/en/humanrights.html.

385. *Id.*

386. *Universal Declaration of Human Rights*, G.A. Res. 217 A (III), at 71, U.N. Doc. A/810 (1948). Comment 15 includes indirect obligations by stating that citizens should not violate the right to water of citizens in other countries, but the Article makes the government responsible for ensuring this does not occur. ICESCR Comment 15, *supra* note 10, para. 33.

387. See World Health Org., *supra* note 384. Salman notes that: “The issues surrounding the use and protection of water resources are complex, and responsibilities for such issues cannot be placed solely on the states.” SALMAN & MCINERNEY-LANKFORD, *supra* note 9, at 74.

388. William N. Nelson, *Human Rights and Human Obligations*, in XXIII HUMAN RIGHTS NOMOS 292, *supra* note 24.

389. SALMAN & MCINERNEY-LANKFORD, *supra* note 9, at 74.

This payment should be affordable and based on local economies; however, individual contribution is an important part of investing the citizen in their water source.³⁹¹ Another way to involve people in their water resources is by adopting participatory management.³⁹² The inclusion of the public in water decisions achieves many of the goals postulated in social as well as political rights.³⁹³ Citizens also need to be equally responsible for the protection of their water resources through conservation and safe practices.³⁹⁴ This collective action by a community empowers them to be, at least partially, in control of their water supply.

One of the important effects of a rights-based approach is the empowerment of the individual.³⁹⁵ It would be counterintuitive to assume that the government is entirely responsible for delivery and maintenance of water without any assistance from the people. To maintain individual involvement, it appears clear that citizens should be responsible for contributing to the cost of delivery or distribution and protection of the resource. However, the extent of their involvement requires further consideration. Are they also required to participate in the water amendment or distribution processes? Is their involvement required or voluntary and do any enforcement mechanisms exist that could require their participation? Other questions also remain unanswered such as the right of a citizen of one state to bring a claim against the government of another state. This paper focused primarily on the ability of one government to require the assistance of a neighboring government. However, an extension of this, if this type of human rights application is possible, may be to give a citizen standing to bring a claim on his own behalf. This outcome would be similar to the developments of war crimes tribunals making a government accountable to anyone who is injured by its actions. Although, all the details have yet to be discovered, it is clear that with citizens working together with their governments, the human right to water can be realized and reach the status of customary international law that it deserves.

390. THE RIGHT TO WATER, *supra* note 1, at 32. Monetary contributions to the water system, either through taxes or fees, will help maintain an effective system and preserve the right for the larger group. See Nelson, *supra* note 388, at 292.

391. See THE RIGHT TO WATER, *supra* note 1, at 32.

392. SALMAN & MCINERNEY-LANKFORD, *supra* note 9, at 75.

393. *Id.*

394. THE RIGHT TO WATER, *supra* note 1, at 32.

395. See *id.* at 10.