

The Implications of Formulating a Human Right to Water

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*We made from water every living thing.*¹

This Comment explores the content, legal forms, and implications of recognizing an international human right to water. The concept of water as a human right developed from the recognition that treating the right to water as an economic good may result in an affordability problem for some communities, depriving them of access to water. To counter these effects, a human right to water is being developed. This human right to water, though not fully defined by existing international law or practice, has been protected as necessary to secure other human rights, such as those to health, well being, and life. Given the structure of international law, State obligations depend upon which human right a right to water is found to support or whether such a human right to water is ultimately found to be a separate and independent human right from other recognized human rights.

Whether a human right to water is ultimately established as a right subordinate to other human rights or as an independent human right, recognition of a human right to water will have far-reaching effects. This Comment analyzes legal developments in South Africa, India, and

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1. THE QUR'AN: TEXT, TRANSLATION, AND COMMENTARY (Abdullah Yusuf Ali trans., 2001).

Argentina to illustrate some of the ways in which States have implemented a legal right to water. The Comment then identifies some of the key challenges and development constraints in ensuring a right to safe water within reasonable distance for all persons. These challenges include modifying riparian and prior-appropriation systems of water rights, defining and limiting impacts upon other legal doctrines, and making economic adjustments associated with providing water to meet the “basic needs” of all persons. The Comment concludes that while recognition of a human right to water is necessary, its implementation is fraught with difficulties.

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INTRODUCTION

Water is essential to human life. Unfortunately, over one billion people in the world do not have access to even a basic water supply.² Several billion lack adequate sanitation, resulting in between fourteen and thirty thousand deaths each day related to water-borne disease and contamination.³ In addition, approximately half of the developing world's population suffers from illnesses caused by contaminated water supplies.⁴ States have historically not provided water to many poor and marginalized communities, forcing them to purchase water from street vendors or tanker trucks at prices inflated up to twelve times the price of water from municipal supply systems.⁵ Additionally, these groups often lack the financial resources to deal with the health impacts associated with poor water quality.⁶

It is within this context that some international governance regimes have called for the recognition of a right to an adequate supply of water as part of the right to an adequate standard of living.⁷ The need to

2. WORLD HEALTH ORG. (WHO), THE GLOBAL WATER SUPPLY AND SANITATION ASSESSMENT 2000, at 1.1 (2000), available at http://www.who.int/docstore/water_sanitation_health/Globassessment/GlobalTOC.htm (also noting that every fifteen seconds, a child dies from diarrhea largely due to poor sanitation and insufficient water supply) [hereinafter WATER ASSESSMENT].

3. *Id.*

4. *Id.* See *Comprehensive Assessment of the Freshwater Resources of the World: Report of the Secretary General*, U.N. ESCOR Comm'n on Sustainable Dev., 5th Sess., at 22, U.N. Doc. E/CN.17/1997/9 (1997); Asian Dev't Bank, *Water For All*, at <http://www.adb.org/Water/default.asp> (last modified Oct. 8, 2004); PETER H. GLEICK, PACIFIC INST. FOR STUDIES IN DEV., ENV'T, AND SECURITY, THE HUMAN RIGHT TO WATER 2, in 1 WATER POL'Y 487 (1999); Jaap de Visser et al., *Realising the Right of Access to Water: Pipe Dream or Watershed?* (n.d.), at http://www.communitylawcentre.org.za/ser/docs_2003/transformation/de%20Visser%20et%20al%2013%20March.doc. Water shortages threaten to increase the world population living in countries of significant water stress (defined as withdrawals of more than 20% of the countries' freshwater resources) from 34% in 1995 to 63% in 2025. Dep't for Int'l Dev., *Addressing the Water Crisis: Healthier and More Productive Lives for Poor People*, at 12 (2001), available at <http://www.dfid.gov.uk/pubs/files/tspwater.pdf> (last visited Oct. 17, 2004).

5. See WORLD HEALTH ORGANIZATION (WHO), THE RIGHT TO WATER 16 (2003) [hereinafter RIGHT TO WATER]; see also JOHN THOMPSON ET AL., INT'L INST. FOR ENV'T & DEV'T, DRAWERS OF WATER II: 30 YEARS OF CHANGE IN DOMESTIC WATER USE AND ENVIRONMENTAL HEALTH OVERVIEW (2001) (concluding that the burden of water collection continues to grow). Impoverished areas often do not have the finances to maintain water supply and sanitation systems, which can lead to degraded quality of water even where access exists. See MILLENNIUM PROJECT TASK FORCE 7 ON WATER AND SANITATION, INTERIM FULL REPORT, ACHIEVING THE MILLENNIUM DEVELOPMENT GOALS FOR WATER AND SANITATION: WHAT WILL IT TAKE, at 74 (2004) [hereinafter MILLENNIUM PROJECT INTERIM REPORT].

6. RIGHT TO WATER, *supra* note 5, at 22. Where these groups do have resources to spend on medical care to treat water-related illnesses, they spend significantly greater amounts on such treatment. *Id.* at 24. *But see* MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 47 (indicating that more urban residents lack access to improved water than rural residents).

7. *Substantive Issues Arising in the Implementation of the International Covenant on Economic, Social and Cultural Rights, General Comment No. 15*, U.N. ESCOR Comm. On

Econ., Soc. & Cultural Rights, 29th Sess., Agenda Item 3, U.N. Doc. E/C.12/2002/11 (2002) [hereinafter GC 15]. See generally Convention on the Elimination of All Forms of Discrimination Against Women, Sept. 30, 1981, 1249 U.N.T.S. 13, available at <http://www.un.org/womenwatch/daw/cedaw/cedaw.htm> (requiring States to ensure that women have the right to “enjoy adequate living conditions, particularly in relation to . . . water supply.”); Convention on the Rights of the Child, Nov. 20, 1989, 1577 U.N.T.S. 3, available at <http://www.unhchr.ch/html/menu3/b/k2crc.htm> (last visited Oct. 17, 2004) (requiring States to combat disease and malnutrition “through the provision of adequate nutritious foods and clean drinking-water”); *Convention on the Law of the Non-Navigational Uses of International Watercourses: Report of the Sixth Committee Convening as the Working Group of the Whole*, U.N. Gen. Ass., 51st Sess., Agenda Item 144, U.N. Doc. A/51/869 (1997) (“[S]pecial attention is to be paid to providing sufficient water to sustain human life, including both drinking water and water required for the production of food in order to prevent starvation.”); Convention Relative to the Treatment of Prisoners of War, art. 20, Aug. 12, 1949, 75 U.N.T.S. 287 [hereinafter Geneva Convention] (“The Detaining Power shall supply prisoners of war who are being evacuated with sufficient food and potable water, and with the necessary clothing and medical attention.”); Additional Protocol I to the Geneva Convention, art. 54, June 10, 1977, 1125 U.N.T.S. 4 (“It is prohibited to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, . . . drinking water installations and supplies and irrigation works”); Additional Protocol II, June 8, 1997, 1125 U.N.T.S. 610

([T]he following provisions shall be respected as a minimum with regard to persons deprived of their liberty for reasons related to the armed conflict, whether they are interned or detained . . . (b) the persons referred to in this paragraph shall, to the same extent as the local civilian population, be provided with food and drinking water and be afforded safeguards as regards health and hygiene and protection against the rigours of the climate and the dangers of the armed conflict);

FIRST UNITED NATIONS CONGRESS ON THE PREVENTION OF CRIME AND THE TREATMENT OF OFFENDERS, MINIMUM RULES FOR THE TREATMENT OF PRISONERS, para. 15, U.N. Doc. A/Conf/6/1, U.N. Sales No. 1956.IV.4 (1956), approved by E.S.C. Res. 663 (XXIV)(C)(I), 24th Sess., Supp. No. 1, at 11, U.N. Doc. E/3048 (1957) (“Prisoners shall be . . . provided with water and with such toilet articles as are necessary for health and cleanliness.”); UNITED NATIONS WATER CONF., REPORT OF THE UNITED NATIONS WATER CONFERENCE, MAR DEL PLATA, pmb., U.N. Doc. No. E/Conf.70/29, U.N. Sales No. E.77.II.A.12 (1977) (“All persons have a right to have access to drinking water.”); UNITED NATIONS CONF. ON ENV’T AND DEV., REPORT OF THE UNITED NATIONS CONF. ON ENV’T AND DEV., RIO DE JANEIRO, para. 3.8(p), U.N. Doc. A/CONF.151/26/Rev.1, U.N. Sales No. E.93.I.8 (1992) [hereinafter AGENDA 21] (“Governments . . . should establish measures that will directly or indirectly: (p) [p]rovide the poor with access to fresh water and sanitation”), available at <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>;

INT’L CONF. ON WATER AND THE ENV’T: DEV. ISSUES FOR THE 21ST CENTURY, THE DUBLIN STATEMENT ON WATER AND SUSTAINABLE DEV’T, princ. 4, in UNITED NATIONS, GEN. ASSEMBLY, PREPARATORY COMM. FOR THE UNITED NATIONS CONF. ON ENV’T AND DEV., PREPARATIONS FOR THE UNITED NATIONS CONF. ON ENV’T AND DEV. ON THE BASIS OF GEN. ASSEMBLY RESOLUTION 44/228 AND TAKING INTO ACCOUNT OTHER RELEVANT ASSEMBLY RESOLUTIONS: RECENT ACTIONS OF INTERGOVERNMENTAL AND OTHER BODIES OF RELEVANCE TO THE PREPARATORY PROCESS, PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE DEV., MGMT. AND USE OF WATER RESOURCES, U.N. Doc. A/CONF.151/PC/112 (1992) (“[I]t is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price. Past failure to recognize the economic value of water has led to wasteful and environmentally damaging uses of the resource. Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.”); INT’L CONF. ON POPULATION AND DEV., REPORT OF THE

increase sanitation and water supply services to poor and marginalized groups, especially the rural populations who constitute eighty percent of those without access to improved water, was recognized by the creation of the World Health Organization's International Drinking Water Supply and Sanitation Decade (1981-1990), the United Nations Millennium Conference in 2000,⁸ the Johannesburg Summit in 2002,⁹ and the Third World Water Forum in 2003.¹⁰ Although international governance regimes have begun to recognize a right to water as a means to achieve other human rights,¹¹ they have not fully considered what such a right might mean in practice for developing countries. Eibe Riedel, the Rapporteur on Water for the United Nations Committee on Economic, Cultural and Social Rights of the United Nations Economic and Social Council (ECOSOC), acknowledged this when he noted that the

INT'L CONF. ON POPULATION AND DEV., CAIRO, Ch. 2, princ. 2, at 15, U.N. Doc. A/CONF.171/13/Rev.1, Sales No. E.95.XIII.18 (1994) ("[People] have the right to an adequate standard of living for themselves and their families, including adequate food, clothing, housing, water and sanitation."); Recommendation (2001) 14 of the Committee of Ministers to Member States on the European Charter on Water Resources, paras. 5, 19, available at <https://wcm.coe.int/ViewDoc.jsp?id=231615&Lang=en>; *Promotion of the Realization of the Right to Drinking Water*, U.N. Subcomm'n on the Promotion and Protection of Human Rts., 54th Session, U.N. Doc. E/CN.4/Sub.2/RES/2002/6 (2002), available at <http://www.hri.ca/forthecord2002/documentation/subcommission/s2002-6.htm>; Commitment 2(b) of the Copenhagen Declaration on Social Development (1992), available at <http://www.visionoffice.com/socdev/wssdco-0.htm>; *New Delhi Statement*, adopted at the Global Consultation on Safe Water and Sanitation for the 1990s, New Delhi, India, Sept. 10-14, 1990, available at <http://www.gefweb.org/assembly/Eng/html/statement.htm>. See also generally El Hadji Guissé, *Relationship Between the Enjoyment of Economic, Social and Cultural Rights and the Promotion of the Realization of the Right to Drinking Water Supply and Sanitation: Preliminary Report*, U.N. ESCOR Comm'n. on Human Rts., Subcomm'n on the Promotion and Protection of Human Rts., 54th Sess., Agenda Item 4, U.N. Doc. E/CN.4/Sub.2/2002/10 (2002). For additional regional recognitions, see INT'L LAW ASS'N, THE [REVISED] INTERNATIONAL LAW ASSOCIATION RULES ON THE EQUITABLE AND SUSTAINABLE USE OF WATERS, NINTH DRAFT, art. 9 comment., at 28 (2003) [hereinafter ILA NINTH DRAFT], at <http://www.ila-hq.org/pdf/Water%20Resources/Draft%20Rules9November2003.pdf>; The Montreal Charter on Drinking and Sanitation, 1990 ("Given that access to water is a condition for survival, we affirm that all persons have the right to sufficient water supplies for meeting their essential needs."), at <http://www.i-s-w.org/en/PDF/LaChartedeMontreal.pdf>. See generally J. MARTIN WAGNER ET AL., EARTHJUSTICE, ISSUE PAPER: HUMAN RIGHTS AND THE ENVIRONMENT, MATERIALS FOR THE FIFTY-NINTH SESSION OF THE UNITED NATIONS COMMISSION ON HUMAN RIGHTS (2003).

8. WATER ASSESSMENT, *supra* note 2. The United Nations Development Programme (UNDP) Human Development Reports for 2002 and 2003 indicate that thirty two percent of countries are lagging behind the MDG targets. See MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 47-48.

9. United Nations, U.N. Johannesburg Summit 2002, at <http://www.johannesburgsummit.org> (last modified March 23, 2003).

10. Secretariat of the Third World Water Forum, Poverty and Water—Solving One Will Solve the Other (Mar. 22, 2003), available at <http://www.world.water-forum3.com> (last visited Jan. 4, 2005).

11. See Press Release, WHO, Water for Health Enshrined as a Human Right (Nov. 27, 2002) (noting comment by WHO Director-General Dr. Gro Harlem Brundtland).

Committee's analysis of a right to water addressed only impacts on individuals without considering impacts on governments.¹²

This Comment seeks to demonstrate that the recognition of a right to water will not be simple, as serious legal and technical difficulties must be overcome to implement such a right. Specifically, its main purpose is to identify some of the development challenges such a right might pose for less-developed countries. Part I of this Comment briefly introduces various international organizations' current motivation for and conception of water as a legal right. It discusses the transition from treating water as an economic good to treating it as a subordinate right, necessary to achieve fundamental rights, to the possibilities of treating it as a fundamental human right on its own. Part II discusses how South Africa, India, and Argentina, all of which have a domestic constitutional right to water, have attempted to implement a right to water. These case studies highlight some of the basic difficulties in realizing a human right to water. Part III then analyzes the legal-institutional and human-need implications for less-developed countries seeking to recognize a human right to water. It provides some case studies to illustrate the difficulties in applying a right to water to various projects. While these examples do not all involve conflicts over water, they demonstrate some likely disputes that may arise in the recognition of this right. The Comment concludes that a human right to water requires clearly defined boundaries with respect to other potentially conflicting international and domestic rights and requirements. A right to water is a valuable tool for encouraging water sharing with water-poor areas, but such a right must be carefully tailored to avoid limiting or determining otherwise organic development patterns.

I. THE THEORETICAL CONSTRUCT FOR RECOGNIZING A HUMAN RIGHT TO WATER

The international community first proposed treating water as an economic good in an attempt to ensure water resources for all by minimizing inefficiencies in the system through pricing techniques. The approach was simple: higher prices will encourage only those uses which are most valuable and will minimize waste, thereby increasing the total amount of water resources for use by households. This approach, however, can lead to inequities in supply of and access to water, particularly when the provision of water is guided by the "full cost recovery" principle. This principle, which seeks recovery of all investments related to the provision of water through the pricing of water, may price water higher than some poor and marginalized

12. Inter-Press Serv., *UN Consecrates Water as Public Good, Human Right* (Nov. 27, 2002), available at <http://www.ipsnews.net/interna.asp?idnews=14204>.

communities can afford, effectively denying them access to an adequate clean water supply necessary to meet their basic needs.

The international community has therefore begun to recognize water as a human right under the theory that a human right to water demands that States provide access to water even to those who can not afford it under the full cost recovery principle. This human right to water can be recognized as a means to achieve other rights, such as the right to life or health. It can also be conceived as an independent human right. State obligations differ depending upon how a right to water is recognized under international law. Exactly how these obligations differ has yet to play out on the international scene, but the differing State obligations demanded by the various international legal instruments under which a right to water may be categorized counsels that policymakers should take caution before deciding under which regime to locate a right to water. Whether recognized as a subordinate right necessary to achieve other human, cultural, or economic rights or as an independent human right, recognizing a right to water has far-reaching implications.

A. *Moving from Water as an Economic Good to Water as a Human Right*

Calls for recognition of a human right to water have largely resulted from a mistrust and fear of treating water as an economic good. Treating water as an economic good was designed to promote conservation and greater sustainability of water resources by making waste more expensive.¹³ However, many scholars fear that if water is perceived solely as an economic good, then access may be determined based purely upon market forces, without regard to equity or need.¹⁴

The major recognition of water as an economic good came with the Dublin Statement in 1992, which noted that “[w]ater has an economic value in all its competing uses and should be recognized as an economic good.”¹⁵ The accompanying language, often not cited by scholars who disapprove of recognizing water as an economic good, states that it is “the basic right of all human beings to have access to clean water . . . at an affordable price Managing water as an economic good is an important way of achieving efficient and equitable use, and of

13. See BELINDA U. CALAGUAS, WATERAID, *THE RIGHT TO WATER, SANITATION AND HYGIENE AND THE HUMAN RIGHTS-BASED APPROACH TO DEVELOPMENT* 12 (1999).

14. See UNICEF, *GROUNDWATER: THE INVISIBLE AND ENDANGERED RESOURCE* (1998). See also ERIC GUTIERREZ, WATERAID, *BOILING POINT: ISSUES AND PROBLEMS IN WATER SCARCITY AND SANITATION* (1999), available at <http://www.wateraid.org/other/startdownload.asp?openType=forced&documentID=533>.

15. INT'L CONF. ON WATER AND THE ENV'T: DEV. ISSUES FOR THE 21ST CENTURY, *supra* note 7, princ. 4 at 9.

encouraging conservation and protection of water resources.”¹⁶ The assurance of water at an “affordable price” recognizes that, if treated as an economic good, the supply of adequate and safe water may cost more than some impoverished communities are capable of paying. Thus, the Dublin Statement indicates that the conception of water as an economic good must be limited by the concept of water as a human right in order to ensure equitable distribution of water.¹⁷

Treating water as an economic good without limitation as is done under the principle of full cost recovery can lead to inequities. Full cost recovery means that the state or private water supplier should be able to recover the full costs of supplying water to all users. The cost recovery principle may lead to an unaffordable price of water for some, especially remote, impoverished communities, because of the enormous costs associated with ensuring clean water to such communities. Under a full cost recovery scheme involving poorer communities, water providers have an incentive to provide some base level of water at relatively lower prices to avoid political conflict with the poorer communities. However, those providers then must charge higher prices for any water used above the base level to recoup any losses incurred by providing the base level quantities. While this may appear equitable in principle, often the base level water price is unaffordable to poorer communities and often the base quantity, provided at a “reduced” price, is inadequate.¹⁸ As will be discussed below, absent a human right to water, concerns remain that the provision of water based upon the principle of full cost recovery may create pressure to make water unaffordable for some impoverished populations.¹⁹

16. *Id.*

17. See Elisabeth Türk & Markus Krajewski, *The Right to Water and Trade in Services: Assessing the Impact of GATS Negotiations on Water Regulation*, Draft Paper presented at the CAT+E Conference “Moving Forward from Cancún,” Berlin, at 3-6 (Oct. 30-31, 2003) (suggesting trade law should be interpreted narrowly to allow for the progressive realization of human rights, which require flexibility in time), at <http://www.ecologic-events.de/Cat-E/en/presentations.htm>.

18. This is made possible, in part, due to the significant collective action problems faced by impoverished communities.

19. For instance, the General Agreement on Tariffs and Trade (GATT) prohibits States from restricting exports of goods unless based upon a few limited exceptions, including critical shortages or environmental reasons. General Agreement on Tariffs and Trade, Oct. 30, 1947, art. XI(1)-(2), 55 U.N.T.S. 194 [hereinafter GATT]. The question is when water becomes a “good” for GATT purposes. A number of scholars have suggested that water becomes an international good or commodity when a State trades its natural surface water. See Robert J. Girouard, Note, *Water Export Restrictions: A Case Study of WTO Dispute Settlement Strategies and Outcomes*, 15 GEO. INT’L ENVTL. L. REV. 247 (2003); Cynthia Baumann, *Water Wars: Canada’s Upstream Battle to Ban Bulk Water Exports*, 10 MINN. J. GLOB. TRADE 109, 114 & n.35 (2001); Christopher S. Maravilla, *The Canadian Bulk Water Moratorium and its Implications for NAFTA*, 10 CURRENTS: INT’L TRADE L.J. 29, 33 (2001); Brian D. Anderson, *Selling Great Lakes Water to a Thirsty World: Legal, Policy, & Trade Considerations*, 6 BUFF. ENVTL. L.J. 215, 240

Support for a cost recovery principle comes from the argument that it is necessary to achieve a stable and financially viable water supply through privatization. Due to meager resources and the large costs involved, States may not be able to absorb the costs of providing water. Therefore, private sector involvement is arguably crucial for achieving greater access to safe water.²⁰ Indeed, international financial institutions have made privatization of water supply systems a prominent lending condition.²¹ Since private companies operate for profit, privatization entails implementation of cost recovery principles, with the attendant problems of inequity.

The well-documented Cochabamba conflict provides an example of the cost recovery principle in action.²² The basic crux of the Cochabamba conflict is simple: the Bolivian city of Cochabamba needed a stable and sufficient water supply, as less than sixty percent of the population had access to a water supply network and those that were connected did not have continuous access.²³ Private water vendors had been the predominant suppliers of water to the poor, who often lived in squatter settlements.²⁴ As part of a larger, nation-wide, privatization project prompted by pressure from international financial institutions, the Bolivian government sought private investor financing and concessions to

(1999); Jamie W. Boyd, Comment, *Canada's Position Regarding an Emerging International Fresh Water Market with Respect to the North American Free Trade Agreement*, 5 *NAFTA: L. & BUS. REV. AM.* 325, 332-35 (1999). See also Scott Philip Little, *Canada's Capacity to Control the Flow: Water Export and the North American Free Trade Agreement*, 8 *PACE INT'L L. REV.* 127, 135-36, 140-41 (1996) (arguing that a territory's natural waters should not be viewed as a tradable commodity because they are not a thing produced).

20. Third World Water Forum, Kyoto/Osaka, Japan, Summary Forum Statement, at <http://www.world.water-forum3.com/en/statement.html> (last visited Mar. 10, 2004). See also WORLD BANK, *Financing Needed Investment*, in *WORLD DEVELOPMENT REPORT 1994* (1997).

21. See Globalization Challenge Initiative (GCI), IMF and World Bank Push Water Privatization and Full Cost Recovery on Poor Countries (2001), at <http://www.citizen.org/documents/IMF-WB%20promote%20privatization.pdf>; Halifax Initiative, World Bank Fact Sheet—Water Privatization, at http://www.halifaxinitiative.org/index.php/Issues_WB_BondBoycott/535. This support of privatization, however, is by no means universal. The debate regarding privatization of water supplies occurs on two basic levels: normative and applied. The normative debate asks whether water should be considered a public resource, available for everyone's use, or a private resource available to those who either own property adjoining water. The applied debate asks whether a particular privatization approach is appropriate under the circumstances or has been properly designed.

22. See generally Erik J. Woodhouse, Note, *The "Guerra del Agua" and the Cochabamba Concession: Social Risk and Foreign Direct Investment in Public Infrastructure*, 39 *STAN. J. INT'L L.* 295 (2003); Andrew Nickson & Claudia Vargas, *The Limitations of Water Regulation: The Failure of the Cochabamba Concession in Bolivia*, 21 *BULL. OF LATIN AM. RES.* 128 (2002).

23. See S. Marvin & N. Laurie, *An Emerging Logic of Urban Water Management, Cochabamba, Bolivia*, 36 *URBAN STUD.* 341 (1999).

24. *Id.* See also A. Nickson, *Cochabamba: Victory or Fiasco?*, *INSIGHTS DEV'T RES.*, June 2001, at <http://www.id21.org>.

improve the water supply system infrastructure.²⁵ Bolivia justified privatization of the water supply by determining that water was a state-owned commodity that could be licensed to private companies for distribution.²⁶ Private, non-licensed water collection, including traditional water collection and collection of rain water, was prohibited by the new law.²⁷

Privatization of the water supply immediately increased the water prices charged to consumers.²⁸ These increases reflected unforeseen (or uncalculated) costs associated with private suppliers' selection of water sources and treatment systems that were more costly to operate than most existing means of securing water. In an effort to ensure full cost recovery, Bechtel, the private company that owned the water concession, increased the cost of water to consumers.²⁹ The World Health Organization (WHO) has determined that for water to be affordable, no more than three to five percent of an individual's income should be spent on water.³⁰ After privatization, which was touted as a savior to the crippling economic effect of street vendor prices, residents of Cochabamba were spending in excess of twenty percent of average household income on water.³¹

These cost increases resulted in violent protests in early 2000, just four months after the privatization scheme had begun.³² The Bolivian government responded to the citizen protests by terminating the privatization concession³³ and restoring government control over the water supply system in Cochabamba. While some have decried this case as an illustration of the inherent flaws of privatizing water-supply

25. Ley Marco de Capitalización, Mar. 21, 1994 (Bol.). See also K. Komives, Designing Pro-Poor Water and Sewer Concessions: Early Lessons from Bolivia (World Bank 1990), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=629179.

26. See Ley Na. 2029 de Servicios de Agua Potable y Alcantarillado Sanitario, Oct. 29, 1999.

27. See Geraldine Dalton, School of Oriental and African Studies (SOAS) Water Issues Study Group, Occasional Paper No. 37 Private Sector Finance for Water Sector Infrastructure: What Does Cochabamba Tell Us About Using this Instrument? 6 (Sept. 2001), available at <http://www.earthscape.org/p1/dag01/dag01.pdf>.

28. *Id.* at 13.

29. See *id.* at 13, 23.

30. Interview with Bronwen Morgan, Univ. of Oxford, in New York (Mar. 8, 2004). For a discussion of the Water Poverty Index, which attempts to assess poverty in relation to water resource availability, see C.A. SULLIVAN ET AL., CENTRE FOR ECOLOGY & HYDROLOGY, NATURAL ENV'T RES. COUNCIL, DERIVATION AND TESTING OF THE WATER POVERTY INDEX PHASE 1, vol. 1 (2002).

31. Dalton, *supra* note 27, at 17.

32. See *id.*

33. After two weeks of violent protests, the government agreed to end the privatization concession in Cochabamba. Bill Weinberg, Water Privatization Scheme and Coca Eradication Spark Bolivia Unrest, at <http://nativeamericas.com/sum00/sum00irw.html> (last visited Jan. 2, 2005).

systems, others have charged that its failings were in application, not in theory.³⁴ The Cochabamba Declaration that arose out of the water crisis confirms, however, that some communities consider water to be a basic human right, and not purely an economic good.³⁵

The Cochabamba case also demonstrates that treating water as an economic good, as Bolivian law did, can easily result in a desire to seek full cost recovery from every segment of the population. While subsidization of water supplies to poorer segments of society is possible under a model that treats water as an economic good, incentives to reap profits may push companies to increase the prices charged to the poorer segments of the population. As a result, subsidization of the water supply to the poor may not be as forthcoming under a model that treats water as an economic good and that relies on privatization. The Cochabamba protests make plain that prices can be raised only so much and that water is viewed by some as a human right which should be available to all regardless of ability to pay. As a result of the recognized problems with the economic good model of providing water, international organizations have begun to shift from treating water as an economic good to treating it as a social and cultural right.³⁶ The next sections discuss how a human right to water that seeks equitable distribution of water has been constructed under international law.

B. Moving from Fragmented, Subordinate Rights to Water to a Unified, Primary Human Right

Because the right to water is not recognized directly by any universal declaration of rights, under the current international framework, a right to water may be characterized one of three ways:³⁷ as (1) subordinate and necessary to achieve the primary human rights recognized directly by

34. See, e.g., Dalton, *supra* note 27.

35. See JUAN MIGUEL PICOLOTTI, RIGHTS & HUMANITY, THE RIGHT TO WATER IN ARGENTINA (2003), available at <http://www.cedha.org.ar/docs/doc175-eng.doc> (last visited Oct. 27, 2004). See also Cochabamba Declaration, Dec. 8, 2000 ("Water is a fundamental human right and a public trust to be guarded by all levels of government, therefore, it should not be commodified, privatized or traded for commercial purposes."), available at <http://www.nadir.org/nadir/initiativ/agp/free/imf/bolivia/cochabamba.htm#declaration> (also reprinted in Dalton, *supra* note 27, at App.); UNITED NATIONS DEP'T OF PUB. INFO., BACKGROUND: THE RIGHT TO WATER, Doc. No. DPI/2293F (2003) (General Comment 15 "presents a different view from decisions taken at several international water forums in the 1990s, in which water was judged to be an economic commodity.").

36. GC 15, *supra* note 7, at ¶ 11 ("Water should be treated as a social and cultural good, and not primarily as an economic good."); see generally A.E. BOYLE & M.R. ANDERSON, HUMAN RIGHTS APPROACHES TO ENVIRONMENTAL PROTECTION (1996).

37. Although a right to water may also be recognized as an independent economic or socio-cultural right, this approach has not been advocated as vociferously or appears as likely to come to fruition as an independent human right to water and therefore shall not be evaluated in this Comment.

international human rights agreements, such as the International Bill of Human Rights; (2) subordinate and necessary to achieve primary economic and socio-cultural rights recognized directly by an agreement, such as the International Covenant on Economic, Social, and Cultural Rights; or (3) as an independent human right. State obligations differ depending upon how a right to water is recognized and, if recognized as a subordinate right, which primary human, economic, or socio-cultural right it is deemed necessary to effectuate.³⁸

The right to water has traditionally been constructed as necessary to effectuate other human, economic, and socio-cultural rights, such as the right to food, health, well being, and life.³⁹ The quantity of water necessary to ensure each primary right and the obligations of States differ for each primary right. Because the right to water has traditionally only been recognized as subordinate to a primary human or socio-cultural right, the right to water has depended upon a violation of a particular primary right. The extent of the right to affordable water, and the ability to achieve this right, depend greatly upon which primary right is affected by a lack of access to affordable water. Since State obligations differ by primary right, a violation of one primary right does not necessarily mean that another primary right has been violated. This framework has resulted in a fragmented recognition of the right to water. Although, recent international doctrine suggests a shift toward treating the right to affordable water as an independent human right, it is important to understand the origin of the right to water.

There are two rights recognized by the International Bill of Human Rights that encompass a right to water: the right to life and the right to health. Fully effectuating a human right to life requires the recognition and support of the “fundamental conditions necessary to support life.”⁴⁰ The Human Rights Committee has interpreted the right to life to require States to take positive measures to support “appropriate means of subsistence.”⁴¹ Water is, without doubt, an essential component of achieving the means of subsistence, as it is necessary to produce food and other elements necessary for human survival. The amount of water supported by this right, however, ensures only the barest minimum quantity of affordable water—that necessary to support life—and therefore does not ensure water sufficient for personal consumption or even for all forms of hygiene. The right to life thus falls short of ensuring

38. Exactly how these obligations differ, however, has not been explored by scholars or practitioners.

39. Gleick, *supra* note 4, at 4.

40. *Id.* at 6.

41. *General comments adopted under article 40, paragraph 4 of the International Covenant on Civil and Political Rights*, U.N. GAOR, U.N. Comm. on Hum. Rts., U.N. Doc. No. CCPR/C/21/Rev.1 (1989).

the amount of water necessary to effectuate the right to the “highest attainable standard of health” recognized by the International Bill of Human Rights.⁴²

The right to water might also be placed as a subordinate right to that of the right to health, which requires the assurance of environmental hygiene.⁴³ In turn, ensuring environmental hygiene requires States to “prevent threats to health from unsafe and toxic water conditions,” including protection of water resources from contamination and monitoring “situations where aquatic eco-systems serve as a habitat for vectors of [insect-transmitted] diseases wherever they pose a risk to human living environments.”⁴⁴ The right to health thus ensures not only access to clean and safe water to drink, but also water to assist in the disposal and cleanup of waste and the protection of existing bodies of water from contamination.

The International Covenant on Economic, Social and Cultural Rights (ICESCR), the instrument under which ECOSOC operates, recognizes several other rights that may encompass the right to water, such as the rights to adequate housing and food,⁴⁵ both fundamental components of the right to an adequate standard of living.⁴⁶ The rights listed as emanating from the right to an adequate standard of living were not intended to establish an exclusive list. Instead, “[t]he right to water clearly falls within the category of guarantees essential for securing an

42. GC 15, *supra* note 7, at 2. While it is beyond the scope of this Comment, it should be noted that States’ and citizens’ obligation, rights, and remedies regarding securing the right to water will depend on how that right is legally defined, i.e. whether it is recognized under a specific international human rights instrument or whether it is viewed as a necessary subordinate right under general human rights principles or as an economic or socio-cultural right. *See, e.g.*, Ignacio J. Alvarez, *The Right to Water as a Human Right 7* (1999), <http://www.cedha.org.ar/docs/doc26.doc>. For a non-exhaustive list of different ways in which a right to water may be conceived, see WHO, *WATER, HEALTH AND HUMAN RIGHTS* (2001), Doc. No. WHO/WSH/WWD/TA.10, available at http://www.who.int/water_sanitation_health/en/humanrights.html.

43. GC 15, *supra* note 7, at 2. *See General Comment No. 14, The Right to the Highest Attainable Standard of Health*, U.N. ESCOR, 22nd Sess., Agenda Item 3, at 3-5, 11-13, 15, U.N. No. E/C.12/2000/4 (2000) [hereinafter GC 14]. The right to health is derived from an earlier international agreement. International Covenant on Economic, Social and Cultural Rights art. 12(1), Dec. 16, 1966, 6 I.L.M. 360, 363 [hereinafter ICESCR].

44. GC 15, *supra* note 7, at 4; GC 14, *supra* note 43, at 5.

45. GC 15, *supra* note 7, at 2. *See General Comment 4, The Right to Adequate Housing*, UN ESCOR, 6th Sess., Annex III, at 114, U.N. Doc. E/1992/23/Annexes (1991) [hereinafter GC 4]. The rights to adequate food and housing are defined in ICESCR, *supra* note 43, art. 11(1), at 363.

46. ICESCR, *supra* note 43, art. 11(1), at 363. This is also made manifest by the expansion of the mandate of the Special Rapporteur on the Right to Food of the Commission on Human Rights to include monitoring the right to water as part of the right to food. *See RIGHTS & HUMANITY, AN INTRODUCTION TO THE RIGHT TO WATER 8* (2003), available at <http://www.rightowater.org.uk> (last visited Oct. 24, 2004) [hereinafter RIGHTS & HUMANITY].

adequate standard of living, particularly since it is one of the most fundamental conditions for survival."⁴⁷

Additionally, ICESCR recognizes that affordable water is a necessary subordinate right to the right to adequate food, since a lack of affordable water can hinder the production of adequate food.⁴⁸ However, such water need not be locally provided, as food can be produced elsewhere and shipped to different areas.⁴⁹ As a result, the right to food may be highly contextual and inadequate to secure water supplies for those who raise crops for purposes other than subsistence.

The right to develop,⁵⁰ which requires "equality of opportunity for all in their access to basic resources...," may also provide a basis for the right to water.⁵¹ A right to water based on the right to develop would require that access to affordable water supplies not place a disproportionate economic or physical burden upon any particular segment of society. This access-based right to development is not explicitly covered by other human or socio-cultural rights, though it may be implied from other rights. What constitutes disproportionate impact or excessive physical burden is not yet clear from international jurisprudence related to the right to develop and other human or socio-cultural rights from which a right to equality of access to basic resources might be implied.

Other ICESCR rights have also provided a basis for the recognition of a right to water. For instance, "[w]ater is essential for securing livelihoods (right to gain a living by work) and enjoying certain cultural

47. GC 15, *supra* note 7, at 2.

48. *Id.* at 3.

49. For a discussion of these issues, see J.A. Allen, *Water in the Middle East and in Israel-Palestine: Some Local and Global Issues*, in IDENTIFICATION OF JOINT MANAGEMENT STRUCTURES FOR SHARED AQUIFERS (Marwan Haddad & Eran Feitelson eds., 1998); J. Lundqvist & Peter H. Gleick, *Sustaining Our Waters into the 21st Century*, in U.N. COMPREHENSIVE FRESHWATER ASSESSMENT (1997) (arguing that international markets for food should be "safe and stable" so that water scarce countries can find methods by which to achieve food security).

50. See Gleick, *supra* note 4, at 7-8. The right has been recognized by numerous international declarations and statements of international organizations. See, e.g., UNDP, INTEGRATING HUMAN RIGHTS WITH SUSTAINABLE DEVELOPMENT, Sales No. 98.III.B.10 (1998) (cataloging some declarations and statements calling for the right to develop).

51. G.A. Res. 128, U.N. GAOR, 41st Sess., Supp. No., at 187, U.N. Doc. A/41/925 (1986), available at <http://www.unhchr.ch/html/menu3/b/74.htm>. The United Nations has interpreted Article 8 of the Declaration on the Right to Development to include water within the rubric "basic resources." See U.N. Comm. on Econ., Soc. & Cultural Rts., The Right to Adequate Housing (Art. 11(1)): General Comment 4, ¶ 8(b), Dec. 13, 1991 ("An adequate house must contain certain facilities essential for health, security, comfort and nutrition. All beneficiaries of the right to adequate housing should have sustainable access to natural and common resources, [including] safe drinking water . . ."). See also UNITED NATIONS, THE UNITED NATIONS AND HUMAN RIGHTS 1945-1995, U.N. Blue Book Series, vol. VII (1995); World Water Day 2001, Main Instruments Relevant to the Human Right to Water, at <http://www.worldwaterday.org/2001/thematic/hrannex.html>.

practices (right to take part in cultural life).”⁵² The WHO has interpreted these rights to imply that the expropriation, pollution, or title division (when groups traditionally hold title communally) of water-related cultural sites may constitute a violation of the human right to water.⁵³ The WHO’s analysis underscores the difficulty in pursuing a segmented approach to realization of a human right to water. The rights to gain a living by work and to take part in water-related cultural life are economic and socio-cultural rights under ICESCR, which are not technically human rights. This distinction is important because the remedies available for violations of the International Bill of Human Rights and ICESCR vary significantly and ICESCR rights do not carry the same force of law that human rights instruments do.⁵⁴ Additionally, the link between ICESCR rights and the right to water are highly dependent upon circumstance, location, and economic means of subsistence, whereas the right to life is guaranteed to all human beings. Constructing a human right under such economic, social, and cultural rights doctrines could therefore provide for a rather ineffectual and inconsistently applied right to water.

Due to the difficulties associated with fragmentation of the right to water, ECOSOC has taken a holistic approach to ensuring adequate affordable water supplies necessary to realize the rights of the ICESCR.⁵⁵ This holistic approach was made explicit with ECOSOC’s General Comment 15 in November 2002, which formally recognized the right to water as an independent human right.⁵⁶ General Comments issued by

52. GC 15, *supra* note 7, at ¶ 6.

53. RIGHT TO WATER, *supra* note 5, at 21.

54. *See infra* note 64.

55. *See* Centre on Housing Rights and Evictions Right To Water Programme, The Right to Water & the International Covenant on Economic, Social and Cultural Rights 3-4, discussion draft presented at the “Right to Water” Roundtable, Nov. 14, 2002 (discussion draft) [hereinafter Roundtable].

56. *See* GC 15, *supra* note 7; *see also* Roundtable, *supra* note 55, at 4. The first major recognition of the human right to water occurred in 1995. *See* U.N. ESCOR, IMPLEMENTATION OF THE INTERNATIONAL COVENANT ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS, GENERAL COMMENT NO. 6: THE ECONOMIC, SOCIAL AND CULTURAL RIGHTS OF OLDER PERSONS, 13th Sess., at 2, 7, U.N. Doc. E/C.12/1995/16 (1995). Interestingly, since ECOSOC operates under ICESCR, it may not have the authority to conclude that access to water is a human right, since ECOSOC’s jurisdiction is limited to economic and socio-cultural rights. Despite this potential jurisdictional issue, the General Comment represents the current approach in addressing the right to water.

Since General Comments do not establish binding interpretations of ICESCR on the ratifying States Parties, some have called for incorporation of the right to water explicitly into the Universal Declaration of Human Rights or in an independent treaty. *See, e.g.*, Bär, *supra* note 42; FIRST ALTERNATIVE WORLD WATER FORUM IN FLORENCE, SPECIAL DAY FOR THE DECLARATION THAT WATER IS A HUMAN RIGHT, ROME DECLARATION: MAKING THE RIGHT TO WATER A REALITY, Dec. 10, 2003 (calling for incorporating the right to water in the Universal Declaration of Human Rights), available at http://www.cipsi.it/contrattoacqua/home/right_day.asp (last visited Oct. 29, 2004). ECOSOC NGOs, Statement Submitted to the Forty-Second Session of the Commission on Social Development, February 2004, on the Priority

ECOSOC are non-binding interpretations of ICESCR rights and obligations, but may be relied upon by various international bodies when deciding whether a State has met its obligations under ICESCR. General Comment 15 states that priority must be given to water uses that “prevent starvation and disease” and “meet the core obligations of each of the Covenant rights.”⁵⁷ However, what these core obligations require is less clear. The value of the General Comment lies in relating the right to water to various international human, economic, social, and cultural rights instruments. The General Comment, however, does little to explicate what would be required of States to ensure water supplies sufficient to satisfy their legal obligations under international law. It does, however, call for the establishment of an independent human right to water, which, if met, would discharge all of a State’s obligations under the various international instruments discussed above.⁵⁸

The recognition of a singular right which could satisfy the entirety of States’ obligations under international law should provide greater clarity and consistency in interpretation, leading to greater State compliance and clearer complainant rights to remedies. Finally and most significantly, unifying the human, economic, and socio-cultural rights to water will require a single standard of implementation to which States can be held. The human rights component of a holistic, independent right cannot legally be protected at a lower standard than that provided by international human rights instruments. Therefore, a unified implementation standard will require States to ensure, at a minimum, that the right to water is protected at a level and in a manner consistent with the human rights standard.

C. *The Meaning of a Human Right to Water*

General Comment 15, while claiming to recognize the right to water as an “independent human right,” does so only by reference to its role in the realization of other enumerated human rights.⁵⁹ Therefore, it is not clear what additional legal weight the General Comment gives to the creation of an “independent” right to water. Nevertheless, explicit recognition of a right to water attaches some specific and important State obligations, which would likely increase with the creation of an independent human right.

Theme of Improving Public Sector Effectiveness (draft) (on file with journal); *see generally* IUCN, HUMAN RIGHTS AND WATER, IUCN, WATER LAW SERIES – ISSUE 9 (n.d.).

57. GC 15, *supra* note 7, at ¶ 6. *See also* WORLD SUMMIT ON SUSTAINABLE DEV’T, JOHANNESBURG DECLARATION ON SUSTAINABLE DEVELOPMENT, PLAN OF IMPLEMENTATION, at 21, U.N. Doc. A/CONF.199/20, Plan (2000).

58. *See generally* GC 15, *supra* note 7.

59. *See* Bär, *supra* note 42, at 4.

Recognizing the right to water as a human right imposes three obligations: “obligations to respect, obligations to protect and obligations to fulfil [sic].”⁶⁰ The obligation to respect prohibits actions that undermine the right, including such activities as pollution from State-owned facilities.⁶¹ Obligations to protect the right to water require that States implement permitting procedures or other regulatory systems to control private-actor behavior that might interfere with the right to water. Control of private-actor behavior is required both when those actors are polluting as well as when they operate links in the water-supply chain.⁶² Obligations to fulfill the right to water include a responsibility to facilitate enjoyment of the right, promotion of the right through education measures, and provision of the right where individuals or groups cannot realize their right due to insufficient personal means.⁶³ As part of this obligation, General Comment 15 calls for citizen standing where access to water has been denied.⁶⁴

Utilizing human rights protections changes the terms of discourse from one of charity to one of entitlement with corresponding State obligations.⁶⁵ Categorizing a right to water as a human right means that:

- fresh water is a legal entitlement, rather than a commodity or service provided on a charitable basis;
- achieving basic and improved levels of access should be accelerated;
- the “least served” are better targeted and therefore inequalities decreased;
- communities and vulnerable groups will be empowered to take part in decision-making processes;

60. GC 15, *supra* note 7, at ¶ 9(emphasis omitted). *See also generally* WHO, 25 QUESTIONS AND ANSWERS ON HEALTH AND HUMAN RIGHTS 17 (2002), available at <http://www.who.int/hhr/en/NEW37871OMSOK.pdf> (discussing citizens’ right to health, which includes access to safe and potable water). According to WHO, a State must be aware of its roles and responsibilities in working with non-state parties in order to ensure that vulnerable populations have access to the services they need. *See id.* at 17.

61. GC 15, *supra* note 7, at ¶ 21.

62. *See id.* at ¶¶ 23-24.

63. *Id.* at ¶ 25.

64. *See* Türk & Krajewski, *supra* note 17. *See also* Linda A. Malone & Scott Pasternack, *Exercising Environmental Human Rights and Remedies in the United Nations System*, 27 WM. & MARY ENVTL. L. & POL’Y REV. 365, 376-96 (2002) (comparing the complaint procedures of the Committee on Economic, Social, and Cultural Rights with those regarding the enforcement of other human rights instruments). Interestingly, citizen standing is not generally provided for violations of ICESCR rights; ICCPR, however, does grant standing to enforce its violations. *See id.* at 377-83. *See also supra* note 42.

65. *See, e.g.*, Julia Häuserman, *Rights & Humanity, A Human Rights Approach to Development: Some Practical Implications for WaterAid’s Work*, at 7, Presentation At the Inaugural WaterAid Lecture, City University, London, Sept. 10, 1999, available at http://www.righttowater.org.uk/pdfs/wateraid_lecture.pdf.

- the means and mechanisms available in the United Nations human rights system will be used to monitor the progress of States Parties in realizing the right to water and to hold governments accountable.⁶⁶

Most importantly, though, the price and availability of water should not be solely determined by market forces, as would occur under an economic framework based on “full cost recovery.”⁶⁷ Specifically, the General Comment states that actions that interfere with an individual’s right to water based upon non-payment must first consider the individual’s ability to pay, and “[u]nder no circumstances shall an individual be deprived of the minimum essential level of water.”⁶⁸

General Comment 15 notes that a human right to water is designed to ensure water “adequate for human dignity, life and health.”⁶⁹

[t]he human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses. An adequate amount of safe water is necessary to prevent death from dehydration, to reduce the risk of water-related disease and to provide for consumption, cooking, personal and domestic hygienic requirements.⁷⁰

The adequacy of water requires that water be: (1) made available in sufficient quantity for “personal and domestic uses. . . includ[ing] drinking, personal sanitation, washing of clothes, food preparation, personal and household hygiene;”⁷¹ (2) free of health hazards and of an acceptable aesthetic for personal and domestic uses;⁷² and (3) physically and economically accessible to everyone without discrimination or danger to physical security when accessing water.⁷³

66. RIGHT TO WATER, *supra* note 5, at 9; *see also* RUCHI PANT, RIGHTS & HUMANITY, FROM COMMUNITIES’ HANDS TO MNC’S BOOTS: A CASE STUDY FROM INDIA ON RIGHT TO WATER 5 (2003), available at http://www.righttowater.org.uk/pdfs/india_cs.pdf.

67. *See* PETER H. GLEICK ET AL., THE NEW ECONOMY OF WATER: THE RISKS AND BENEFITS OF GLOBALISATION AND PRIVATIZATION OF FRESH WATER (2002) (discussing how water rates could be determined by subsidizing certain necessities and determine the rates based on a charge that reflects, for example, the highest value use of water and base allocation on democratic values, as well).

68. GC 15, *supra* note 7, at ¶ 56.

69. *Id.* at ¶ 11 (emphasis omitted).

70. *Id.* at ¶ 2.

71. *Id.* at ¶¶ 11, 12(a). *See* RIGHT TO WATER, *supra* note 5, at 13, 17-21, *citing* JAMIE BARTRAM & GUY HOWARD, WHO, DOMESTIC WATER QUANTITY, SERVICE LEVEL AND HEALTH: WHAT SHOULD BE THE GOAL FOR WATER AND HEALTH SECTORS (2002), available at http://www.who.int/water_sanitation_health/diseases/en/WSH0302.pdf. *See also* P.H. Gleick, *Basic Water Requirements for Human Activities: Meeting Basic Needs*, 21 WATER INT’L 83 (1996).

72. GC 15, *supra* note 7, at ¶ 12(b). *See* RIGHT TO WATER, *supra* note 5, at 15; WHO, GUIDELINES FOR DRINKING-WATER QUALITY (2d ed. 1993).

73. GC 15, *supra* note 7, at ¶ 12(c). *See also* General Comment No. 13, *The Right to Education*, U.N. ESCOR, 21st Sess., at 3-4, U.N. Doc. E/C.12/1999/10 (1999) (stating that

Under General Comment 15, the enjoyment of the right to water must be realized in a non-discriminatory fashion, so that “even in times of severe resource constraints, the vulnerable members of society must be protected by the adoption of relatively low-cost targeted programmes.”⁷⁴ General Comment 15 also requires that States “ensure that the allocation of water resources, and investments in water, facilitate access to water for all members of society. . . . [I]nvestments should not disproportionately favour expensive water supply services and facilities that are often accessible only to a small, privileged fraction of the population. . . .”⁷⁵

For those populations that cannot afford to purchase water, General Comment 15 requires that States provide such water.⁷⁶ States should focus on providing rural and deprived urban areas with access to water facilities in good repair.⁷⁷ Additionally, access to traditional water sources “should be protected from unlawful encroachment and pollution.”⁷⁸ However, it is not clear how these two requirements might be reconciled if they conflict. For example, it is not always obvious what “traditional sources” are or what happens when traditional water sources are necessary to supply water to other impoverished communities.

General Comment 15 places the right to water within the ICESCR, which would require the progressive realization of the right if officially adopted by a binding international instrument, in addition to the immediate obligation to take “deliberate, concrete and targeted” steps towards the full realization of the rights specified in the ICESCR.⁷⁹ Retrogressive measures, such as reducing budgetary expenditures dedicated to the provision of existing water supplies to impoverished areas, are presumed to be prohibited. They are only allowed if the State demonstrates that such measures have been adopted after full consideration of alternatives and are “duly justified by reference to the totality of the rights provided for in the Covenant in the context of the full use of the State party’s maximum available resources.”⁸⁰ However, where social services expenditures are falling and costs (such as military expenditures) are increasing, a State may be in violation of the ICESCR,

children have a right to the availability of functional schools with drinking water); GC 14, *supra* note 43, at 3. WHO and UNICEF have determined that clean water facilities or sources should be within a reasonable distance of an individual’s home. See WHO, Fact Sheet No. 112: Water and Sanitation (1996), at <http://www.lifewater.org/fact112.htm>.

74. GC 15, *supra* note 7, at ¶ 13.

75. *Id.* at ¶ 14.

76. *Id.* at ¶ 15 (“States parties have a special obligation to provide those who do not have sufficient means with the necessary water and water facilities and to prevent any discrimination on internationally prohibited grounds in the provision of water and water services.”).

77. *Id.* at ¶ 16(c).

78. *Id.*

79. *Id.* at ¶ 17.

80. *Id.* at ¶ 19.

since the State party may not be committing its maximum available resources to the supply of affordable water if the other expenditures are not justified by necessity.⁸¹ States in violation of ICESCR may be fined and ordered to adopt a specific remedial plan to address the violation.

ICESCR requires that States ensure a core minimum of Covenant rights. Placing the right to water within this rubric similarly requires that States ensure: (1) a minimum amount of water for personal and domestic use; (2) non-discriminatory treatment with respect to the availability, accessibility, and quality of water; (3) safe physical access to water facilities large enough to support its population's needs reasonably (such as distance from households and no unreasonable waiting in the access of water); (4) the creation of a national water plan and strategy; (5) monitoring of the realization of the right to water; (6) the adoption of low-cost programs to ensure the right to vulnerable and marginalized populations; and (7) measures exist to limit exposure to water-borne disease.⁸² These core obligations must be undertaken in good faith and are non-derogable.⁸³ The only caveat is that if a State is unable to meet its core obligations because of resource constraints, it will not be held in violation if it can demonstrate that it has taken every effort to realize the right.⁸⁴

The International Law Association (ILA) has similarly taken the position that international law should respect a human right to water, stating "[e]very person has a right, [enforceable against the State in which the person resides], of access to water adequate to meet that person's vital human needs."⁸⁵ ILA suggests that States should respect the rights of persons to satisfy their water needs, provide water where they cannot do so on their own, and realize the right to access water sufficient to meet individuals' vital needs.⁸⁶ ILA also notes that under customary law, "States shall not interfere with the right of access to water of persons who reside in another State."⁸⁷ ILA recognizes that the recognition of a right to basic water supplies is "perhaps the most controversial proposition" put forth by the ILA Ninth Draft Rules on the Equitable and Sustainable

81. See Häuserman, *supra* note 65, at 16.

82. See GC 15, *supra* note 7, at ¶ 37.

83. *Id.* at ¶ 40.

84. *Id.* at ¶ 41. Violations of the obligations to respect, protect, and fulfill can occur in a number of ways which need not be described here. For a non-exhaustive list, see *id.* at ¶ 44. The requirements for a national strategy are described in some detail by *id.* at ¶¶ 47, 49. Obligations of States to implement the right are discussed more generally by *id.* at 15-18.

85. ILA NINTH DRAFT, *supra* note 7, art. 9(1), at 27. While ILA cannot directly create instruments of binding international force, its Helsinki Rules (an earlier version of the Ninth Draft) and other publications have been instrumental in shaping substantive international water law.

86. *Id.* art. 9(2), at 27.

87. *Id.* art. 9(5), at 28.

Use of Waters (“Revised Rules”).⁸⁸ ILA’s Revised Rules, although quite similar to General Comment 15, note that the Rules would only obligate States to progressively realize the right, instead of imposing a “present or immediate duty to provide fully adequate and safe water supplies to all persons within their jurisdiction and control.”⁸⁹

Most States have not followed the lead of ECOSOC and ILA by recognizing a human right to water. “One of the major constraints to access to safe water supply and sanitation is a lack of political will, by which we mean a lack of political leadership or government commitment to allocate national resources to the sector or to undertake reforms necessary to attract investment to the sector.”⁹⁰ Although most States do not recognize a human right to water, a few States do, though based primarily upon domestic law. The next section will examine the experiences of South Africa, India, and Argentina in deriving and implementing a right to water.

II. IMPLEMENTING A RIGHT TO WATER: DOMESTIC EXPERIENCES

Although international human rights law has not yet created legally binding obligations on States to recognize a human right to water, it has served to pressure some States into more fully developing a human right to water. The water-stressed countries of South Africa, India, and Argentina all provide a right to water, derived from constitutions, statutes, judicial interpretations, and, in some instances, international human rights instruments. Since the right to water as conceived by the General Comment has not been fully fleshed out, no true examples exist to indicate the right’s potential effects on developing countries. Nevertheless, the experiences of South Africa, India, and Argentina offer unique lessons for the development and definition of an international right to water.

A. South Africa

The 1996 South African constitution recognizes a right to sufficient water⁹¹ and explicitly requires the consideration of international law in interpreting its Bill of Rights.⁹² South Africa, in the *Grootboom* case, has therefore interpreted its right to water in a manner similar to that

88. *Id.* art. 9 comment., at 28.

89. *Id.* art. 9 comment., at 29.

90. MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 73.

91. REP. OF S. AFR. CONST. (Act 108 of 1996) ch. II, § 27(1)(b). The State assumes an obligation to take reasonable legislative or other measures, within its available resources, to realize the right progressively. *Id.* at § 27(2).

92. *Id.* at § 39(1)(b).

recognized by General Comment 15.⁹³ The South African Commission on Human Rights indicates that the right does not oblige the State to provide free water, but requires it “to create mechanisms that enable people to have access to sufficient water.”⁹⁴ Nevertheless, the right to water in South Africa has been interpreted to require a free minimum level of water necessary for survival, above which a progressive pricing scheme is used for cost recovery.⁹⁵ The South African Department of Water Affairs and Forestry instituted such a scheme for basic water needs in December of 2000.⁹⁶

In 1994, approximately thirty-seven and a half percent of South Africa’s population, eighty percent of whom lived in rural areas, lacked access to basic water supplies.⁹⁷ The populations most suffering from a lack of access were blacks and other marginalized households.⁹⁸ South

93. Gov’t of the Rep. of S. Afr. and Others v. Grootboom and Others, 2000 (2) SA 46 (CC), (11) BCLR 1169 (SA). See SOUTH AFRICAN COMM’N ON HUMAN RTS., 3RD ECONOMIC AND SOCIAL RIGHTS REPORT 298-99, 409-10 (2003), http://www.sahrc.org.za/esr_report_1999_2000.htm [hereinafter S. AFR. CHR REPORT]. For a discussion of the *Grootboom* case, see de Visser, *supra* note 4, at 4-7, 8.

94. S. AFR. CHR REPORT, *supra* note 93, at 298.

95. See *Grootboom*, 2000 (2) SA (46) (CC) (2001), (11) BCLR 1169 (SA) (adopting a provisional decision that requires the State to provide water until the family can provide for themselves); Local Government Municipal Systems Act 32 of 2000 § 74(2) (S. Afr.) (stating that a municipality’s tariff system must provide poor households access to basic services by applying a number of tariff principles, including tariffs that charge only for the costs of maintenance and operation costs; special tariffs based on low level consumption use or other basic levels of service; or some other direct or indirect method of subsidization of tariffs). See also generally Chief Directorate: Water Services, Dep’t of Water Aff. and Forestry, South Africa, Free Basic Water: Implementation Strategy Document, version 1 (May 2001), at <http://www.dwaf.gov.za/FreeBasicWater/docs/Implementation%20Strategy%20version%202008.3.pdf>; Jaap de Visser et al., *The Free Basic Water Supply Policy*, Econ. & Soc. Rts. (ESR) Rev, vol. 3 (Community Law Centre/Socio-Economic Rights Project, Western Cape University), July 2002 (determining that a right to water requires both physical and economic access to water), available at http://www.communitylawcentre.org.za/ser/esr2002/2002july_water.php (last visited Oct. 30, 2004). See S. AFR. CHR REPORT, *supra* note 93, at 320.

Ideally, water should be free so that everyone can have access to water. Currently the right of access to water is not enjoyed by everyone because water is not delivered free of charge to all the people of South Africa. The most vulnerable amongst the sectors of the community, the unemployed, people who live in dire poverty are amongst those denied access to the right of access to water. The cause of this is due to the inability to pay for water, uncompleted, abandoned and dysfunctional projects, [*inter alia*].

Id. While the South African government recognizes free water for basic needs, “in practice the poor are excluded through projects that require connection fees and full cost recovery in tariffs.” *Id.* at 412. Despite these current failings, however, the FBW Programme and the White Paper on Basic Household Sanitation, effectively implemented, would be considered by the South African Commission on Human Rights to meet the reasonableness test of *Grootboom*. See *id.* at 403.

96. See S. AFR. CHR REPORT, *supra* note 93, at 385-86. Regulations, passed in June and July of 2001 to implement Sections 9(1) and 10(1) of the Water Services Act of 1997, provide for national standards in order to conserve and measure water and to set tariffs for water services. See *id.* at 387-88.

97. MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 116.

98. See de Visser, *supra* note 4, at 1.

Africa took enormous steps to reduce this disparity: between the introduction of the constitutional provision in 1996 and 2002, free basic water supplies were provided to approximately twenty-seven million people, or approximately sixty percent of the population.⁹⁹ It is believed that such free water supplies can be realized for the entire population by 2009.¹⁰⁰

However, South Africa's implementation of the right to water is not typical. South Africa already had substantial institutional and technical capacities to implement such a right,¹⁰¹ capacities that other countries without universal water access may lack.¹⁰² Additionally, "[t]he policy of free access to basic water was made possible by the level of economic development in South Africa. This is not applicable to less-developed countries, unless they benefit from new and creative funding from external sources."¹⁰³

The South African experience has also illustrated that higher levels of efficiency and water use increase the vulnerability of the country to drought and climate change.¹⁰⁴ By improving the efficiency of the system and eliminating systemic losses of water, many impoverished peoples who depend upon water leakages as their points of access to water are deprived of that access.¹⁰⁵ As leakages are eliminated through infrastructure upgrades, greater use, and increasing efficiencies, surface water, which regulates the ambient environment, is reduced, increasing climactic vulnerability.¹⁰⁶ Increased use of water resources could also lead to significant ecological degradation, such as desertification.¹⁰⁷ However, adoption of principles of ecological sustainability may help South Africa ensure long-term viability of water resources despite increasing efficiency and use.¹⁰⁸

99. MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 116. *See also* S. AFR. CHR REPORT, *supra* note 93, at 400.

100. MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 116.

101. *Id.*

102. *See id.* at 77-78.

103. *Id.* at 116.

104. *See id.* at 83.

105. *Id.*

106. *See id.*

107. *See generally* ANTHONY R. TURTON, SOAS WATER ISSUES GROUP, OCCASIONAL PAPER NO. 21: WATER AND SOCIAL STABILITY: THE SOUTH AFRICAN DILEMMA (1999), available at <http://www.ciaonet.org/wps/tua09/> (presented to 49th Pugwash Conference on Confronting the Challenges of the 21st Century).

108. *See generally* ANTHONY R. TURTON, THE MONOPOLIZATION OF ACCESS TO A CRITICAL NATURAL RESOURCE: THE CASE OF WATER IN SOUTH AFRICA (draft paper presented at the 14th International Congress of Anthropological and Ethnological Sciences Symposium on Resource Management Through Indigenous Socio-Cultural Practices (1998), available at <http://www.kcl.ac.uk/kis/schools/hums/geog/water/occasionalpapers/home.html>.

The implementation of ecological sustainability principles may be difficult for South Africa and less-developed countries. The South African example illustrates that overcoming “second-order scarcities,” such as the lack of adaptive and technical capacities, is crucial to ensuring an equitable distribution of water, social stability, and sustainable management of the natural resource base well into the future.¹⁰⁹ Despite being more developed than many countries, South Africa nevertheless faces significant difficulties in implementing its right to water, such as financial constraints, inadequate water sources, and local implementation limitations.¹¹⁰ Countries with greater resource constraints may thus face dire environmental degradation and ultimately social instability, due to poor management of water resources.

South Africa, as the most developed nation yet to recognize a human right to water, has had significant success in its implementation efforts. On whole, it appears that South Africa has genuinely attempted to achieve a progressive realization of its right to water, though the costs of realizing this right have not been equitably distributed among various segments of the population, with the poor disproportionately burdened by connection fees and tariff schedules designed to achieve full cost recovery.¹¹¹ Such an approach does not appear to comport with the concept of a human right to water, which demands a supply of water sufficient for basic human needs for all populations, regardless of ability to pay. As the South Africa example indicates, achieving a financially viable water infrastructure is in tension with a human rights approach to water, but the two are not mutually exclusive. As the next case studies illustrate, however, this tension is magnified in developing nations with fewer financial, technical, and other resources than does South Africa.

B. India

India has also recognized a right to water in its constitution, although the right is not stated explicitly as is done in the constitution of South Africa. The right to water is implicit, derived from the constitutional right to life,¹¹² which the Indian courts have interpreted to include the right to clean and sufficient water.¹¹³ The Indian Ministry of Water Resources has

109. TURTON, *supra* note 107.

110. S. AFR. CHR REPORT, *supra* note 93, at 303-05, 406-08. *See also* ANTHONY R. TURTON, SOAS WATER ISSUES GROUP, OCCASIONAL PAPER NO. 4: WATER DEMAND MANAGEMENT (WDM): A CASE STUDY FROM SOUTH AFRICA 13-17 (1999), available at <http://www.ciaonet.org/wps/tua01/>.

111. *See* S. AFR. CHR REPORT, *supra* note 93, at 411-12.

112. *See* INDIA CONST. art. 21 (“No person shall be deprived of his life or personal liberty except according to procedure established by law.”); *see also* PANT, *supra* note 66, at 26.

113. S.K. Garg v. State, AIR 1999 All 41 (India 1999); MC Mehta v. Union of India, AIR 1998 SC 1037 (India 1998); Subhash Kumar v. State of Bihar, AIR 1991 SC 420 (India 1991)

therefore called for the provision of water to the entire population, with drinking water having the highest priority.¹¹⁴

Despite the right to clean and sufficient water, seventeen percent of the population does not have access to water, including thirty-eight percent of urban residents.¹¹⁵ Eighty percent of children suffer from water-borne diseases, and a total of forty-four million people have illnesses related to poor water quality.¹¹⁶ In addition to these water quality issues, India also suffers from water shortage problems and is well on its way to becoming a water-stressed country. Between 1985 and 1996, the number of villages without an adequate water source increased from 750 to 65,000.¹¹⁷ These problems are caused, in significant part, by the legal system of regulating water, the pressure to develop, and urban migration.

The legal system for regulating surface and ground water in India may hamper the achievement of the human right to water implied in its constitution. Despite the implied right to water in the constitution, no Indian law establishes an explicit right to water, while some laws actually abolish pre-existing use and customary rights to water.¹¹⁸ India regulates surface water use through riparian law and a public trust doctrine, which limits the amount of usage.¹¹⁹ Riparian rights are water rights granted to owners of property adjacent to watercourses for their reasonable use, so long as their use does not interfere with either the flow of the water itself or with the use of downstream riparians. These riparian rights provide both access and quality protections to those adjoining waterways.¹²⁰ However, the Irrigation Acts place rights to watercourses in the hands of the State, superceding the rights of communities to manage their water resources under the Indian constitution.¹²¹ The State can thus divert water

(noting that the right to live includes the right to pollution-free water necessary for the full enjoyment of life); *Attakoya Thangal v. Union of India*, 1990 KLT 580 (Kerala, India 1990). See also PANT, *supra* note 66, at 13-16 (noting that although the Indian Supreme Court has been somewhat reluctant to recognize a right to water, provincial High Courts have recognized such a right).

114. MINISTRY OF WATER RESOURCES, GOVERNMENT OF INDIA, NATIONAL WATER POLICY 4-5 (2002), available at <http://wrmin.nic.in/policy/default4.htm>.

115. PANT, *supra* note 66, at 15.

116. *Id.*

117. *Id.* at 16.

118. See *id.* at 7 (“[A]dequate safe drinking water facilities should be provided to the entire population both in urban and in rural areas. Irrigation and multipurpose projects should invariably include a drinking water component, wherever there is no alternative source of drinking water. Drinking water needs of human beings and animals should be the first charge on any available water.”).

119. *Id.* at 8, 12. See Indian Easements Act § 7 (1882).

120. PANT, *supra* note 66, at 12.

121. See *id.* at 19. For a list of the various Indian Irrigation Acts, see So. Asian Consortium for Interdisciplinary Water Resources Stud., Laws Related to Irrigation, at http://www.saciwaters.org/db_irrigation_laws.htm; INDIA CONST. amends. 73, 74.

resources and otherwise obstruct traditional water sources and collection methods, a seeming violation of ICESCR. Thus, the Irrigation Acts may hamper the effective realization of the right to water for some less prosperous communities who utilize traditional methods of water collection and supply.¹²² Finally, groundwater is minimally regulated, controlled primarily by those who own the land above it.¹²³

Development pressures also undermine the right to water in India. For example, the Indian government, in need of investment within the country, actively pursues bauxite mountain-top mining, which has polluted downstream waters, forcing thousands of indigenous Adivisas to resettle and live without an adequate and safe water supply.¹²⁴ The forced resettlement has reduced the accessibility of water significantly for the Adivisas, eliminating or severely restricting previously free access to traditional water sources.¹²⁵ Finally, bauxite mining uses large quantities of water, which then become polluted and unusable for direct domestic and personal consumption.¹²⁶

Industrial activities and urban migration further undermine water rights in India. Groundwater mining for commercial purposes in India has significantly depleted water resources and polluted the remaining water, reducing rice yields and making the remaining water unfit for direct human consumption and use.¹²⁷ Similarly, textile and other industrial and commercial ventures have been charged with violating the Indian right to water through pollution and groundwater mining.¹²⁸ Additionally, large-scale migration to the cities has led New Delhi to seek greater extraction of groundwater—a feat accomplished through significant, inter-regional transfers.¹²⁹ Such transfers reduce the water supplies of those living in other districts and nearby farmlands.¹³⁰

India's water situation illustrates a number of difficult dilemmas. First, and most striking, is the potential conflict between the existing riparian regime, Indian law, and the requirements of an international

122. PANT, *supra* note 66, at 19. While Municipal Councils are empowered to manage the natural resources within their jurisdiction, such management powers appear to be subordinate to national laws such as the irrigation laws. *Id.* at 19-24.

123. *See id.* at 7.

124. *See* FINANCE INT'L & BREAD FOR THE WORLD, INVESTIGATING SOME ALLEGED VIOLATIONS OF THE HUMAN RIGHT TO WATER IN INDIA 9-10 (2004).

125. *Id.* at 10, 13.

126. *See id.* at 12-13.

127. *Id.* at 14. In this case, however, the Kerala High Court and an investigating committee found the groundwater mining operation to cause "pollution of water, depleting ground water and reducing crop yields besides causing ailments to human beings" which was used to lobby for corrective measures against the operation. *Id.* at 15. However, this action against the groundwater mining operation was not based on right to water discourse.

128. *See id.* at 17-22.

129. *Id.* at 22-25.

130. *Id.*

human right to water. To ensure that indigenous or local communities have continued access to traditional waters, the Irrigation Acts and the riparian regime may require significant overhauling. Second, is the dilemma between industrial development and water quality. The human right to adequate supplies of safe water will require the Indian government not only to ensure access to water, but also to enact environmental regulations to protect the water supply. If industrial uses pollute the water such that the only water supply within a reasonable distance from a habitation or town cannot be protected, then water may have to be transported long distances, possibly at the cost of industry, causing them to cease operations, or to relocate, assuming household uses are deemed more important than industrial uses. Third and finally, the discussion above of the groundwater mining industry highlights a dilemma that will likely surface in the near future: how to handle transfers of water from one area to another. Industry will likely lose this battle (in a perfectly competitive political environment), but since no individual has a right to have industry exist at or near her place of residence despite the right to gain a living by work, the transfers may not be particularly effective in ensuring the ICESCR's call for human dignity, adequate standard of living, or right to work.

C. Argentina

Like South Africa, Argentina has an explicit right to water in its constitution, which recognizes a right to a healthy environment.¹³¹ Similar to India, Argentinean states have dominion over the natural resources in their territories.¹³² Argentina's national water management law partly preempts state regulation.¹³³ This law, however, does little to advance the constitution's human right to water, as the terms and obligations imposed by this right remain undefined and the law deals primarily with interjurisdictional waters rather than freshwater sources wholly located within any single jurisdiction.¹³⁴

Argentina regulates most of its water under a public trust doctrine whereby waters are owned by the State, with allowances for riparian and other users.¹³⁵ Some common law ownership principles, however, have lingered or been incorporated by statute and serve to undermine the equitable realization of a right to water.¹³⁶ For instance, the Civil Code

131. CONST. ARG. ch. VI, §§ 75(22), 41(1).

132. *Id.* at § 124(2).

133. Law No. 25688, Dec. 30, 2002, Reporter, available at <http://infoleg.mecon.gov.ar/txtnorma/81032.htm>.

134. See PICCOLOTTI, *supra* note 35.

135. See COD. CIV. arts. 2340, 2341, 2350, 2367 (Arg.). See also PICCOLOTTI, *supra* note 35.

136. PICCOLOTTI, *supra* note 35.

states that “[s]treams that are born and die within a state belong in property, use and enjoyment, to the owner of it.”¹³⁷ Additionally, “[w]aters that arise in lands of individuals belong to their owners, who can freely make use of them and change their natural direction.”¹³⁸ This ownership structure, and ability to alter watercourse paths leaves riparian users highly vulnerable to upstream users and thus without a secure right to water.

Despite these legal drawbacks, Argentina has been able to provide water and sewage services to seventy-nine percent of the country.¹³⁹ Unfortunately, due to transmission and other supply costs, only thirty percent of the rural population has access to water, thirty percent lower than the Latin America and Caribbean combined average.¹⁴⁰ An attempt at privatization during the 1990s failed to service fifty percent of potential clients despite rate increases of over one hundred percent designed to recover costs not properly accounted for in the initial tariff agreement.¹⁴¹ Like in Cochabamba, this focus on cost recovery undoubtedly affected access to the water resources, given that the area of the concession contained significant numbers of impoverished persons. More interesting, however, is the focus on cost recovery in the face of constitutional provisions that require expenditures on water management, which is linked to the right to water.¹⁴² The statutory and administrative regime of Argentina has resulted in highly inequitable distributions of water supplies with disproportionate cost burdens imposed upon the urban and rural poor.

While Argentina has not sufficiently modified its legal structure to effectuate an equitable right to water, it has taken significant steps within the court system to protect the right to water. For instance, Argentinean courts have held that failure to remediate pollution of waters essential to community survival is a violation of the right to water.¹⁴³ In the *Menoris Comunidad Paynemil* case, the Argentinean courts required a company to provide 250 liters of water per day for an entire indigenous community

137. COD. CIV. art. 2350 (Arg.).

138. *Id.* art. 2367.

139. WATER ASSESSMENT, *supra* note 2, at 8.2.

140. *Id.*

141. Viviana Alonso, *Water and Sewage Privatisation Gone Sour*, Inter Press Serv., Aug. 15, 2003, available at <http://ipsnews.net/interna.asp?idnews=19693>. The privatization was undertaken pursuant to Decreto No. 23,696 (Aug. 1989).

142. See CONST. ARG. ch. II, § 41. See also Law No. 25,675, Nov. 27, 2002, REPORTER (Arg.) (General Environment Law), available at <http://infoleg.mecon.gov.ar/txtnorma/79980.htm>; Law No. 25,688 (Water Management Law).

143. See *Menoris Comunidad Paynemil's* acción de amparo, Expte. 311-CA-1997, Sala II, Cámara de Apelaciones en lo Civil, Neuquen (Arg., May 19, 1997), discussed in PICOLOTTI, *supra* note 35; CENTRE ON HOUSING RIGHTS AND EVICTIONS (COHRE), LEGAL RESOURCES FOR THE RIGHT TO WATER: INTERNATIONAL AND NATIONAL STANDARDS 110-13 (2004), available at http://www.cohre.org/downloads/water_res_8.pdf (last visited Oct. 30, 2004).

whose traditional water source was polluted by the company's operations.¹⁴⁴ This figure, however, does not seem grounded in the human right to water, since the WHO indicates that fifty to one hundred liters per person per day is sufficient for normal needs, with an absolute minimum of twenty liters per day in some circumstances.¹⁴⁵ Similar to South Africa, Argentinean courts have held that states must expedite hearings regarding suspension of access to drinking water, and that states must ensure all citizens' access to water regardless of ability to pay.¹⁴⁶ Argentinean courts have thus rather boldly detailed the contours of a human right to water, providing those rights to all community residents, regardless of whether they possess legal title to the water.¹⁴⁷

Legal decisions from the Argentinean courts, however, have done little to effect change at the legislative and administrative levels.¹⁴⁸ Distribution continues to impose costs disproportionately on the poor. Argentina's legal regime, based on a riparian scheme with minimal duties to ensure reasonable use for downstream users,¹⁴⁹ is partly to blame for this inequitable outcome, because downstream users must pay to ensure a constant water supply in times of low flow. The legal regime in Argentina also leaves resolution of most of its disputes to the courts by failing to define the terms and obligations of the right to water adequately.¹⁵⁰ This failure to clearly define the obligations resulting from the right to water resembles problems with the current status of the right to water advanced by the General Comment. Without providing clearer guidance to administrative agencies, Argentinean law fails to ensure progressive realization of the right to water or equitable distribution of the water supply, two central tenets of a human right to water.

III. BARRIERS TO THE DOMESTIC IMPLEMENTATION OF A HUMAN RIGHT TO WATER

It is widely recognized that "the lack of water... [is] one of the greatest obstacles to development."¹⁵¹ The satisfaction of basic needs is an

144. PICLOTTI, *supra* note 35.

145. BARTRAM & HOWARD, *supra* note 71, at 1.

146. *Users and Consumers in Defense v. Aguas del Gran Buenos Aires S.A.*

147. *See Colonia Valentina Norte Real "Public Defender for Minors Number 3 v. Municipal Executive Authority."*

148. The *Menoris Comunidad Paynemil* case, for instance, has not been fully implemented by the Argentinean authorities and access to water continues on a case-by-case basis through the courts rather than through legislative actions or provincial regulations, though some legislative action has occurred. *See* PICLOTTI, *supra* note 134; COHRE, *supra* note 143, at 111.

149. *See* PICLOTTI, *supra* note 33 (discussing Argentinean statutory and administrative framework regarding the right to water).

150. *See generally id.*

151. Bär, *supra* note 42, at 3. *See also* RIGHTS & HUMANITY, *supra* note 46 ("Access to sufficient, safe and affordable water is vital for human development."). For instance, African women and children alone spend forty billion hours hauling water each year, significantly

“essential element of poverty reduction; these needs are closely interrelated and comprise nutrition, health, water and sanitation, education, employment, housing, and participation in cultural and social life.”¹⁵² A lack of water is directly related to the under-development of many these human rights.¹⁵³ Despite this recognition, many major questions pertaining to implementation of a right to water remain unanswered.

Primarily, little discussion has focused on the practical implications of recognizing a right to water from the perspective of the State, which is responsible for implementing the right. Those that have considered the ramifications have done so cursorily, indicating only that recognition of a right must be limited to “‘basic needs’ for drinking, cooking, and fundamental domestic uses.”¹⁵⁴ While there appears to be agreement among scholars that the recognition of a right to water should be limited in quantity to “basic needs,” limitations on access and quality requirements are less thoroughly discussed.¹⁵⁵ Additionally, scholars have not yet analyzed in any significant detail the potential implications of recognizing even a right to water to meet the “basic needs” of the population, let alone the holistic “basic needs plus” approach advocated by ECOSOC.

Development—which is generally considered a poverty reduction strategy—is thought to be compatible with human rights norms. However, recognition of a human right to water significantly alters the development obligations of States with respect to providing access to water. ICESCR calls for a level greater than what is required for pure

draining economic productivity and education. See W.J. Cosgrove & F.R. Rijsberman, *Creating a Vision for Water, Life and the Environment*, 1 WATER POL’Y 115, 115 (1998).

152. WORLD SUMMIT FOR SOCIAL DEV’T, COPENHAGEN DECLARATION ON SOCIAL DEVELOPMENT AND PROGRAMME OF ACTION, Annex 1, at Actions pt. C.35(b), U.N. Doc. A/CONF.166/RES/1 (1995), available at <http://www.visionoffice.com/socdev/wssdpa-0.htm> (last visited Oct. 29, 2004). This was recognized by the U.N. General Assembly. *First United Nations Decade for the Eradication of Poverty*, U.N. GAOR 51st Sess., Agenda Item 96, Supp. No. 49, at 4, U.N. Doc. A/RES/51/178 (1996). See also UNEP, *Freshwater: Meeting our Goals, Sustaining Our Future*, 2003 Geo Y.B., at 44-49, at <http://www.unep.org/geo/yearbook/pdf.htm> [hereinafter UNEP].

153. Häuserman, *supra* note 65, at 10. See generally Anthony R. Turton & L. Ohlsson, *Water Scarcity and Social Stability: Towards a Deeper Understanding of the Key Concepts Needed to Manage Water Scarcity in Developing Countries* (draft, n.d.), at http://www.wca-infonet.org/cds_upload/1061982421886_scarcity.pdf. See also MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 19-33 (describing how the world can improve water resources management to help alleviate hunger, poverty, and environmental degradation).

154. Gleick, *supra* note 4.

155. But see CALAGUAS, *supra* note 13, at 11. The difficulty in determining and disagreement over what constitutes “safe” water has led to a change in terminology to “improved water,” which signifies some form of treatment or protection from contamination. See MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 37-38 (internal citation omitted). However, the definition of “improved” water is still not fully resolved. *Id.* at 38.

survival, since it calls for levels necessary to achieve adequate health and human dignity.¹⁵⁶ As described above in Part I.B, General Comment 15 consequently adopts a holistic approach, seeking to determine what uses are required for human dignity.¹⁵⁷ The following section analyzes the potential development implications of recognizing such a right to water for developing countries.

Four main areas of contention are discussed in this Part. The first expands upon ideas introduced in the Indian case study. It examines the difficulty of balancing competing rights when regions with a shortage of water must find ways to distribute the available water without violating the human, economic, or socio-cultural rights of indigenous peoples or other users of traditional water sources. An analysis of the Chilean Ralco dam project and the legal battles surrounding it illustrates the complexities of this issue.

The second problem discussed is the tension between the right to water and the right to development, especially related to the need to institute pollution controls that ensure a right to safe water. While not a case directly involving access to water, the problems in Ecuador's Oriente region develop the concepts introduced in the India case study and demonstrate the potential issues governments face when trying to balance the need to develop with the provision of basic human rights.

The third section builds upon the issues discussed in the India and Argentina case studies by analyzing some of the legal issues that countries will face as they attempt to implement the right to water, including the regulation of privatization, agriculture, and the environment, as well as antitrust and takings jurisprudence.

Finally, the last section looks briefly at the general economic hurdles to implementing this right. This section builds upon the example of South Africa and identifies some key difficulties faced by less-developed countries, including limited and irregular income streams sufficient to allow investors to recover their full costs, the difficulty in providing access to water to rural and marginalized communities, and capacity constraints faced by these countries. The section also identifies the significant social benefits expected to be achieved through greater provision of a clean water supply, ultimately concluding that greater provision of water, while costly in the short- and medium-term, is nevertheless cost-effective in the long-term.

156. See Roundtable, *supra* note 55, at 3.

157. *Id.* MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 6 (defining "access to water supply as 'access to sufficient drinking water of acceptable quality and sufficient quantity of water for hygienic purposes'").

A. Water Shortages: Inter-Regional Transfers v. Forced Resettlement

Countries facing water shortages are also the same countries behind schedule in implementing the Millennium Development Goals, goals which include halving the number of people without access to adequate supplies of safe water by 2015.¹⁵⁸ Since water sources typically are not distributed evenly by population density, water-stressed nations often have significant populations without access to water sources adequate for their needs, increasing the difficulty of implementing the right to water. For instance, approximately 65,000 Indian villages do not have access to a sufficient number of nearby water sources to satisfy the WHO Guidelines.¹⁵⁹ This inequitable distribution of water creates a dilemma accentuated by inadequate financial resources: either water sources must be brought to needy communities at great financial cost, or those communities must be relocated to the water sources. General Comment 15 does not sufficiently address how this dilemma might be resolved under a human rights regime.

Exacerbating this dilemma is the increasing problem of migration to urban areas. If a human right to water is recognized, it may significantly affect the access to adequate supplies of safe water for indigenous peoples and recent urban migrants. The increasing number of city dwellers may increase the strain on suburban and rural water resources, including those traditionally utilized by indigenous peoples. Depletion or alteration of such traditional water sources through inter-regional transfers could constitute a violation of the right to water.

The urban migration also creates a tension between the rights to water and to housing. Increasing migration to the cities is making it difficult for urban water systems to keep up with demand, as many new migrants move to squatter settlements outside water-supply and sanitation systems.¹⁶⁰ Squatter settlements create a dilemma for States because it is difficult to provide water to the settlements, while relocating the settlements would violate the squatters' right to housing. Since these settlements often lack a direct water connection and are not within a reasonable distance to a water source, the State may have an obligation to provide such settlements with water.¹⁶¹ However, the State may not wish to encourage the formation of squatter settlements and it is often extraordinarily costly to ensure adequate safe water supplies to such

158. MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 11, 87.

159. PANT, *supra* note 66, at 16.

160. RIGHT TO WATER, *supra* note 5, at 22.

161. General Comment 15 provides that “[n]o household should be denied the right to water on the grounds of their housing or land status.” GC 15, *supra* note 7, at 7. *See also* GC 4, *supra* note 45 (stating that one element of adequate housing is availability of services, materials, facilities, and infrastructure).

settlements. Therefore, the State may wish to relocate the squatters to another area either connected to the water infrastructure directly or within reasonable proximity to a water source. In many instances, it will be less costly to forcibly resettle squatters than to pipe water to the settlements. However, to forcibly resettle the squatter populations would seemingly violate the right to adequate housing, which requires the protection of existing housing, including squatter settlements, regardless of status.¹⁶² It remains unclear which ICESCR right should prevail in such a situation.

The challenges of implementing a right to water in a State with unequal water distribution do not end with the urban housing dilemma. Some regions may have significant water resources while others have insufficient water to meet industrial and often personal consumption demands. In such situations, realizing a right to water for all peoples may require a transfer of water resources from the water-rich region to the water-poor region. However, such transfers might be regulated or even prohibited under existing law.¹⁶³ Additionally, many localities do not have a sufficient tax base to obtain financing or to create and maintain a water supply infrastructure without support from the central government. Such financial transfers are highly political, as they pit locality against locality for national funds. Furthermore, such dependence upon the central government means that economic development of many localities will be at the whim of the central government, which may fund only those localities it wishes to groom into hubs of development.¹⁶⁴

This politicization surrounding water transfers can undermine the ability of localities to effectively meet their populations' needs. While the national government is primarily responsible for meeting the obligations imposed by a human right to water, localities, especially in poorer regions, may still be held liable for a failure to provide for the needs of their residents under either domestic or international law.¹⁶⁵ It is not clear how this misalignment of incentives might be resolved to satisfy the water

162. See GC 4, *supra* note 45; GC 7, ¶ 5 (forced evictions "in connection with forced population transfers, internal displacement, forced relocations in the context of armed conflict, mass exoduses and refugee movements" may constitute a violation of the right to adequate housing). See also United Nations Office of the High Comm'r for Hum. Rts., Fact Sheet No. 25: Forced Evictions and Human Rights (1996), available at <http://193.194.138.190/html/menu6/2/fs25.htm>.

163. See, e.g., Mark Kanazawa, *Origins of Common-Law Restrictions on Water Transfers: Groundwater Law in Nineteenth-Century California*, 32 J. LEGAL STUD. 153 (2003) (noting that a dramatic deterioration in groundwater conditions in Southern California around the turn of the century triggered court-mandated restrictions on voluntary transfers of water).

164. See MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 75 (recognizing the important role of local governments).

165. It may, however, be that localities are only responsible for the fulfillment prong of human rights. See de Visser, *supra* note 4, at 3.

needs of regions that the federal government deems unworthy of subsidies.¹⁶⁶

If a water transfer is authorized and infrastructure is actually built, such transfers usually occur through the alteration of natural waterways—a less costly means of transporting water long distances than piping. However, as noted above, such alterations may affect the rights of downstream users and may deplete traditional water sources of local communities and indigenous peoples. Alterations often occur with and are important justifications for the construction of hydroelectric dams. Hydroelectric power plants and dams necessary to supply continuous water to localities are prime examples of how inter-regional water transfer conflicts arise. For instance, the traditional fishing culture of indigenous Thai villagers living along the Mun River was completely altered by the construction of the Pak Mun hydroelectric plant in 1989.¹⁶⁷ The Chilean Ralco dam dispute provides another strong example where this issue is raised. While the dam in this case is a hydroelectric power plant, diversion of water supplies to other areas can occur under a number of contexts with similar implications for downstream communities.¹⁶⁸

For the past six years, the Pehuenche, a branch of the indigenous Mapuche population of Chile, and Endesa, Chile's largest electricity supplier and a subsidiary of the Spanish-controlled company Enersis, have been battling over the construction of a \$500 million, 570-megawatt dam on the Bío-Bío River, which is expected to provide eighteen percent of Chile's energy needs, including those of the capitol city, Santiago.¹⁶⁹ The dam will alter the Bío-Bío River's hydrology, causing flooding in much of the Pehuenche ancestral lands and forcing the relocation of

166. See generally FRANZ & KEEBT VON BENDA-BECKMAN, INT'L FOOD POLICY RESEARCH INST., RECOGNIZING WATER RIGHTS, in 2020 FOCUS 9 (2001), available at http://www.ifpri.org/2020/focus/focus09/focus09_12.htm (last visited Oct. 29, 2004).

167. See Douglas Nakashima, *Water and Indigenous Peoples*, Conference Report 2.4, WATER POL'Y S49-S51 (2001).

168. Any alteration of the natural flow of a watercourse can affect downstream users. Where that alteration is designed to serve as a transfer, such as in the case of dams, dikes, ditches, diversions, drains, levees, canals, reservoirs, floodwalls, or intakes for sewage or the water needs of other areas, this issue is raised.

169. Jose Alywin, *The Ralco Dam and the Pehuenche People in Chile: Lessons from an Ethno-Environmental Conflict 7*, presented at *Towards Adaptive Conflict Resolution: Lessons from Canada and Chile Conference*, Center for the Study of Global Issues, University of British Columbia (Sept. 25-27, 2002), at [http://www.historiaecologica.cl/Ralco%20\(Alywin\).pdf](http://www.historiaecologica.cl/Ralco%20(Alywin).pdf) (last visited Oct. 30, 2004). Katherine Ellison, *Nature or Power? A River Divides Chile*, Detroit Free Press, Feb. 21, 1998, available at <http://www.freep.com/news/nw/qchile21.htm>. At the time of writing, the Ralco dam was not operational, but was expected to go on-line in 2004. See Alywin, *supra* at 18; see Standard & Poor's, *Chile-Boletín: Los Resultados del Primer Semestre de 2004 de Endesa Chile no Afectan la Clasificación*, August 4, 2004, at <http://www.infobae.com/adjuntos/analisis/03/0000362.pdf> (last visited Oct. 30, 2004).

approximately 675 people.¹⁷⁰ Nine thousand acres of the potentially flooded land contain temperate rainforest,¹⁷¹ one of the most biodiverse, productive, and rare types of rainforest found on Earth.¹⁷²

The Pehuenche families filed suit in domestic and international courts arguing that the Ralco dam was being constructed in violation of the environmental permit issued in 1997, which required that indigenous lands be obtained in accordance with the Indigenous Law in order for the project to proceed.¹⁷³ When the legal and lobbying mechanisms employed by the Pehuenche did not yield justice, protests ensued. In March of 2001, a group of Pehuenche occupied the Comisión Nacional del Medio Ambiente, the Chilean environmental agency, demanding a complete halt to construction of the Ralco dam on the grounds that Endesa lacked Pehuenche consent.¹⁷⁴ This occupation resulted in a signed agreement with Endesa that promised to provide the Pehuenche with information about inspections of indigenous lands and to work with the Pehuenche families on relocation of the indigenous cemeteries that were to be flooded by the dam.¹⁷⁵

After protracted negotiations, Endesa convinced eighty-nine Pehuenche families to accept compensation and other lands.¹⁷⁶ However, four Pehuenche women refused to leave, extending negotiations over the dam for years. On September 16, 2003, the women finally agreed to leave their 103 acres of traditionally held land in exchange for \$1.2 million and

170. Alywin, *supra* note 169, at 7.

171. Jimmy Langman, *Chile dam plan: Death of a culture?*, THE MIAMI HERALD, Nov. 6, 2002, at C1.

172. See GLOBAL FOREST WATCH, WORLD RESOURCES INST., CHILE'S FRONTIER FORESTS: CONSERVING A GLOBAL TREASURE 18 (2002), available at http://www.globalforestwatch.org/english/chile/pdf/chile_report_lowrez.pdf (last visited Oct. 30, 2004).

173. EL MERCURIO, *Work at Ralco Suspended Indefinitely*, Sept. 23, 1999, available at <http://members.aol.com/mapulink2/english-2/news-45.html>. See also Mercedes Julia Huentea Beroiza et al., Interam. Comm'n on Hum. Rts., Informe No. 30/04, Petición 4617/02 (Mar. 11, 2004) (noting eventual amicable resolution of the dispute), at <http://www.cidh.org/annualrep/2004sp/chile.4617.02.htm> (last visited Oct. 30, 2004). However, the Chilean courts have effectively refused to hear the Pehuenche claims by continually postponing the case while still allowing the development of the dam to proceed. Langman, *supra* note 171. The Pehuenche took their case before the World Bank Inspection Panel, but the Inspection Panel said that the project was outside the panel's jurisdiction. INSPECTION PANEL, ANNUAL REPORT 38 (2002), available at <http://www.worldbank.org>. See also Aleta Brown, *Background on the Biobío Dams*, 12 WORLD RIVERS REV. 3 (1997), available at <http://www.irn.org/pubs/wrr/9706/biobio.html>.

174. Inge Lamberz, Friends of the Earth International, *Pehuenche Fight for Land: Ralco Dam Proceeds as Planned*, LINK, Apr./June 2001, at <http://www.foei.org/publications/ink/97/e9712.html> (last visited Oct. 31, 2004).

175. *Id.* Usually, however, such extra-legal means are quashed violently by police forces. See Alywin, *supra* note 169, at 15-16.

176. *Chile Indians End Protest Against Hydro-Power Dam*, Reuters, Sept. 19, 2003, available at <http://www.planetark.com/dailynewsstory.cfm/newsid/22293/newsDate/19-Sep-2003/story.htm>.

761 acres of non-traditional lands for themselves, along with \$450,000 and 3,000 acres for their direct families.¹⁷⁷ In addition, Endesa will provide both financial and non-financial support to the relocated Pehuenches, including housing, electricity, school buses, farming aid, and assistance in the promotion of indigenous culture.¹⁷⁸ The agreement was reached due to significant pressure from the government.¹⁷⁹ According to the Pehuenches' attorney, one of the women told President Ricardo Lagos that "her heart ached" to sign the agreement.¹⁸⁰

This battle, though not directly based on the right to water, illustrates the difficulty of implementing a right to water when such a right conflicts with development goals of the government and other rights, such as the right to livelihood.¹⁸¹ The right of the Pehuenche to remain in their traditional lands, even where they held cognizable title to the lands, was difficult to maintain in the face of greater societal needs for electricity. Imagine that other Chilean citizens' right to water required water transfers, but that those transfers in turn required flooding of the Pehuenche lands. Would the right to housing or maintenance of traditional lands overcome the right to water of other users? No sufficient answer has yet been given to the question of whether inter-regional transfers are required when other fundamental rights are impacted. While States would be required to give effect to the right to water as far as possible without impacting other ICESCR or human rights,¹⁸² how the right to water is expected to interact with conflicting fundamental rights remains unclear.

The issue of inter-regional transfers is rather complicated for both squatter settlements and indigenous peoples, both of whom often occupy lands with insecure title and inadequate housing. The dilemmas presented in this section illustrate the potential conflicts between water-rich and water-poor regions as water-poor areas such as cities continue to see burgeoning populations, requiring greater transfers from water-rich areas. In water-stressed States, even so-called "water-rich" areas may have minimal water resources and are only deemed rich in water by comparison to other areas. Diverting their resources to water-poor areas may make all areas water-moderate or water-poor. Inter-regional transfers, therefore, can create significant internal political turmoil as regions battle for central government support. The central government,

177. *Id.*

178. *Id.*

179. *Id.* (noting that the government has said the project will move forward and that the Pehuenche would be forced off their land if necessary).

180. *Id.*

181. *See, e.g.,* PICCOLOTTI, *supra* note 35 (discussing the Yacretá Hydroelectric Dam).

182. *E.g.,* GC 15, *supra* note 7, at 6, 15. On the other hand, other international instruments should not adversely impact the ability to realize a human right to water. *See id.* at 12.

on the other hand, has competing pressures of establishing hubs of development and ensuring equitable access to adequate safe water supplies.

States may seek to avoid these difficult political choices by forcibly relocating individuals from water-poor areas to water-rich areas, creating a significant tension between the right to water and other rights. These complicated issues significantly bear upon development patterns and possibilities for countries seeking to implement a human right to water and must be answered before a human right to water can be justly implemented.

B. Constrained Industrial Development

The Chilean Ralco case also illustrates the conflict between development priorities and human rights priorities. A “right to develop” may therefore simultaneously support and undermine a right to water. General Comment 15 derives a right to water primarily as a necessary subordinate right arising from primary rights enumerated in ICESCR and the International Bill of Human Rights.¹⁸³ However, the primary rights from which a right to water is implied are not necessarily equal in the amount of water which they require. For example, the right to life does not require the same amount of water as the rights to an adequate standard of living, health, or human dignity. In effect, then, General Comment 15 establishes different water rights based upon different theories of needs, but its universalist approach requires that water sufficient to meet all the core needs of the rights enumerated by ICESCR be made a priority.

General Comment 15 provides little guidance for reconciling water rights established by the various ICESCR provisions in the event that insufficient water exists to meet these different water demands.¹⁸⁴ Some authors, however, have suggested that personal and domestic uses must take priority over industrial or agro-industrial uses.¹⁸⁵ Chapter 18 of Agenda 21—the action plan resulting from the 1992 Rio Conference¹⁸⁶—calls for this approach: “in developing and using water resources, priority has to be given to the satisfaction of basic needs and the safeguarding of ecosystems. Beyond these requirements, however, water users should be

183. See above discussion at Part I.A.

184. See Roundtable, *supra* note 55, at 4.

185. See NILS ROSEMAN, FRIEDRICH EBERT FOUND., THE HUMAN RIGHT TO WATER UNDER THE CONDITIONS OF TRADE LIBERALISATION AND PRIVATISATION—A STUDY ON THE PRIVATISATION OF WATER SUPPLY AND WASTEWATER DISPOSAL IN MANILA 2 (DATE), at <http://fesportal.fes.de/pls/portal30/docs/FOLDER/WORLDWIDE/GEWERKSCHAFTEN/BE RICHTE/ROSEMANNENGLISCH.HTML>.

186. AGENDA 21, *supra* note 7, at ch. 18.

charged appropriately.”¹⁸⁷ South Africa takes this approach, prioritizing rights to basic water needs over other water rights.¹⁸⁸ Where the right to personal and domestic use of water takes priority over other water rights and needs, development patterns may be significantly affected.

Ensuring an adequate safe water supply may also require other constraints on development in order to protect water supplies from pollution. For instance, protection of catchment areas is crucial to water quality.¹⁸⁹ Ninety percent of developing country wastewater is dumped directly into rivers without treatment,¹⁹⁰ causing over fifty percent of the world’s major rivers to be “seriously depleted and polluted.”¹⁹¹ This pollution, if severe enough, can constitute a violation of the right to water. For instance, pollution of water in Nigeria was found to violate a right to food and a “satisfactory environment favorable to development” under the African Charter of Human and People’s Rights.¹⁹² To avoid such violations, pollution-control technologies or development restrictions may be necessary.

Although industry is not the largest polluter of water sources, it is the most hazardous polluter of water sources.¹⁹³ As a result, the implementation of a right to water would significantly affect industry. In Papua New Guinea, for instance, the Ok Tedi gold mine dumps over 80,000 tons of raw mining waste daily into the Ok Tedi River.¹⁹⁴ This pollution killed nearly the entire downstream fish population and permanently altered the lives of thirty to forty thousand people.¹⁹⁵ Additionally, in the United States coal extraction has caused wells and springs to dry up in Navajo and Hopi territories, significantly

187. *Id.* at ch. 18.8.

188. DFAW, White Paper on Water, princ. 10 (1997), available at <http://www.thewaterpage.com/wp3.htm> [hereinafter WHITE PAPER]. This paper is the policy of the South African government, as approved April 30, 1997.

189. UNEP, *supra* note 152, at 39.

190. ORG. FOR ECON. CO-OPERATION & DEV’T, POLICY BRIEF: IMPROVING WATER MANAGEMENT: RECENT OECD EXPERIENCE 1 (2003), available at <http://www.oecd.org/dataoecd/10/40/2499227.pdf>.

191. UNEP, WORLD COMMISSION ON WATER, GLOBAL ENVIRONMENT OUTLOOK 3, 153 (2003), available at <http://www.unep.org/geo/geo3/english/pdf.htm>.

192. See *Social and Economic Rights Action Center v. Nigeria*, Comm. No. 155/96, Afr. Comm’n on Hum. and People’s Rts. (1996), available at <http://www.umn.edu/humanrts/africa/comcases/allcases.html>; AFR. CHARTER OF HUMAN AND PEOPLE’S RIGHTS ch. I, arts. 16, 24, available at http://www.achpr.org/english/_info/charter_en.html.

193. UNEP, *supra* note 152, at 42-43.

194. Joanna Cairns & Alexis Vanderweyden, *How Does Globalisation Affect Young People’s Access to Water?*, in INT’L YOUTH PARLIAMENT & OXFAM, HIGHLY AFFECTED, RARELY CONSIDERED: THE INTERNATIONAL YOUTH PARLIAMENT COMMISSION’S REPORT ON THE IMPACTS OF GLOBALISATION ON YOUNG PEOPLE 138, 140 (James Arvanitakis ed., 2003), http://www.iyp.oxfam.org/campaign/youth_commission_report.asp.

195. See *id.*

undermining Native Americans' access to adequate water supplies.¹⁹⁶ While the United States is not a water-stressed country as a whole, such depletion of traditional water sources could constitute a violation of the right to water. An example from Ecuador indicates how recognition of a right to traditional water sources or water supplies may significantly affect development by restricting oil exploration and production.

The Huaorani are a small indigenous group living in the Oriente, a highly fertile and biodiverse region of Ecuador.¹⁹⁷ The Oriente is also home to oil reserves.¹⁹⁸ Feverish oil exploration during the past twenty years has resulted in extraction of over 1.5 billion barrels of oil and the opening up of over one million hectares of rainforest in the Oriente to development.¹⁹⁹ This development has adversely affected the Huaorani by undermining their rights to adequate supplies of safe water, earn a livelihood, and access traditional water sources, among other human, economic, and socio-cultural rights.²⁰⁰ The oil production makes agricultural practices more difficult due to segmentation of agricultural lands, reduces the quality of already nutrient-poor and fragile soils, and requires the clearing of significant areas of forest, resulting in significant desertification of many areas of the Oriente.²⁰¹ Oil development has already severely reduced game stocks for hunting, polluted water sources, and diminished crop yields.²⁰²

196. See Nakashima, *supra* note 167.

197. INTER-AM. COMM'N ON HUM. RTS., REPORT ON THE SITUATION OF HUMAN RIGHTS IN ECUADOR, ch. 10 & n.26, available at <http://www.cidh.org/countryrep/ecuador-eng/index%20-%20ecuador.htm> [hereinafter IACHR]. For a discussion of the petition, see generally JOE KANE, SAVAGES (1995); Thomas S. O'Connor, Comment, "We Are Part of Nature": Indigenous Peoples' Rights as a Basis for Environmental Protection in the Amazon Basin, 5 COLO. J. INT'L ENVTL. L. & POL'Y 193, 204-10 (1994). The Oriente region is discussed in Judith Kimerling, *Disregarding Environmental Law: Petroleum Development in Protected Natural Areas and Indigenous Homelands in the Ecuadorian Amazon*, 14 HASTINGS INT'L & COMP. L. REV. 849, 851 (1994). The Oriente encompasses thirteen million hectares of tropical rainforest and contains between nine and twelve thousand species of vascular plants, over six hundred species of birds, five hundred species of fish, and 120 species of mammals, many of which are threatened or endangered. *Id.*

198. Kimerling, *supra* note 197, at 849. See also Diane Jukofsky, *Problems & Progress in Tropical Forests*, AM. FORESTS, July-Aug. 1991, at 48.

199. See Kimerling, *supra* note 197, at 858-59, 863-64.

200. *Id.*

201. *Id.* at 861; Jennifer E. Brady, *The Huaorani Tribe of Ecuador: A Study in Self-Determination for Indigenous Peoples*, 10 HARV. HUM. RTS. J. 291, 295, 305-07 (1997).

202. See Kimerling, *supra* note 197, at 860-81. See also Brady, *supra* note 201, at 295, 297 (describing how the small amount of agricultural land to which the indigenous residents have access has been overused and how oil exploration has affected their environment and hunting conditions). Health-effects are also significant, as exposure to petrochemicals in the Oriente has been linked to higher incidence of spontaneous abortion, skin disorders, and other illnesses. See CTR. FOR ECON. & SOC. RTS. (CESR), RIGHTS VIOLATIONS IN THE ECUADORIAN AMAZON: THE HUMAN CONSEQUENCES OF OIL DEVELOPMENT 9-14 (1991) available at <http://cesr.org/health/cesr>.

Despite these negative environmental, social, and cultural impacts, oil development is incredibly important for the Ecuadorian economy.²⁰³ Ecuador has an incentive to maintain high levels of oil production, because its oil prospects have secured massive amounts of credit from international lenders.²⁰⁴ Continued oil production is now necessary to enable Ecuador to repay its enormous debt without defaulting. Since Ecuadorian industry is highly underdeveloped, oil production is the most viable solution to Ecuador's debt crisis in the short-term.

The World Bank has noted that if these trends in Ecuadorian oil development are not corrected, the Oriente will face "irreversible loss of the region's renewable and nonrenewable resources and of their potential to produce regional and national economic benefits" as well as loss of traditional cultures "as people must abandon the then resource-poor Amazon region."²⁰⁵ Continued oil exploration and development will yield inadequate safe water supplies and agricultural lands.²⁰⁶

A fully effectuated right to water would significantly constrain the exploration and production of oil resources in Ecuador. While this might be desirable from a long-term development perspective and from a larger human rights perspective, current Ecuadorian law must change significantly to effectuate a right to water. To adhere to the principles of the General Comment, oil development which impacts traditional water sources or the right to water more generally must not proceed without consultation and approval of the resident indigenous peoples, whether or not they hold official legal title to the land. Additionally, indigenous-approved relocation or development cannot undermine the right to adequate safe water for members of the indigenous group. The right to water, then, can significantly increase the costs of oil development, and by extension, other extractive industries, impeding economic development. The General Comment does little to address the potential conflict between the need to develop and the right to water, leaving the Huaorani's future uncertain.²⁰⁷

203. Kimerling, *supra* note 197, at 857.

204. *Id.* at 860.

205. JAMES F. HICKS, ET AL., THE WORLD BANK, DISCUSSION PAPER 75: ECUADOR: DEVELOPMENT ISSUES AND OPTIONS FOR THE AMAZON REGION, WDP75, at x-xi (1990), available at http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=000178830_98101903573446.

206. *See id.*

207. The General Comment addresses the converse: spending on the realization of the right to water must progressively increase where economically feasible. GC 15, *supra* note 7, at 15. However, no valuable resolution is provided for the dilemma illustrated by the Huaorani example where industrial development is crucial to raise needed capital.

C. Legal Reform

As most of the previous examples have illustrated, developing countries must enact significant legal changes in order to fully effectuate a right to water. States that use a riparian doctrine will need to significantly limit this doctrine in order to enable inter-regional water transfers. Similarly, the prior appropriation doctrine of water allocation is not compatible with a right to water, because a water rights system based upon prior appropriation is inflexible and cannot provide for the needs of late comers. In addition to these major incompatibilities, a human right to water may also impact laws and regulations relating to privatization, antitrust, agriculture, wetlands, pollution, and takings.

1. Impacts on Riparian Models of Water Allocation

Equitable access to water, especially in water-stressed countries, will likely require the gutting of most of the riparian doctrine, because most water-stressed countries will require some level of inter-regional water transfers from water-rich to water-poor areas.²⁰⁸ Riparian models of water governance require that all riparian users have a reasonable share of the water, have a vested right to the continued natural water flow, and, in times of shortage, reduce consumption equally.²⁰⁹ Water transfers will negatively affect these riparian water rights by altering the natural flow of the river and undermining rights of downstream riparians.²¹⁰

The South Africa case discussed above illustrates this issue.²¹¹ Prior to recognizing the right to water, South Africa predominantly used a riparian legal model, limited by beneficial use doctrines for the public interest.²¹² In order to distribute scarce supplies of water equitably among riparian and non-riparian users, South Africa severely restricted the riparian doctrine.²¹³ India faces a similar situation, but it has yet to modify its riparian water rights regime.

In the international context, General Comment 15 calls on States to “refrain from actions that interfere, directly or indirectly, with the enjoyment of the right to water in other countries. Any activities

208. See Andrew Allan, *A Comparison Between the Water Law Reforms in South Africa and Scotland: Can a Generic National Water Law Model Be Developed from These Examples?*, 43 NAT. RESOURCES J. 419 (2003).

209. See e.g. Janet C. Newman, *Adaptive Management: How Water Law Needs to Change*, 31 ENVTL. L. REP. 11,432 (Envtl. L. Inst.) (2001) (describing a water management scheme to cope with the uncertainties surrounding water supply in arid regions as a result of global warming).

210. See, e.g., PANT, *supra* note 66, at 12 (explaining how Indian courts have recognized riparian owners' rights to use the water of the stream that flows past their land).

211. See *infra* Part II.2.

212. See Tewari, *supra* note 4, at 22-26.

213. See Allan, *supra* note 208, at 439-42; see WHITE PAPER, *supra* note 193, princ. 4.

undertaken within the State party's jurisdiction should not deprive another country of the ability to realize the right to water for persons in their jurisdiction."²¹⁴ Additionally, "[d]epending upon the availability of resources, States should facilitate realization of the right to water in other countries, for example through provision of water resources, financial and technical assistance, and provide the necessary aid when required."²¹⁵

According to the General Comment, "[w]ater should never be used as an instrument of political and economic pressure" in international affairs.²¹⁶ While the General Comment bases this conclusion upon international humanitarian law, its strictures seem overly broad. For instance, interstate transfers of water involve negotiations for the price of delivered water and will inevitably implicate economic pressures. For example, the transfer of bulk water between Canada and the United States has generated significant political conflict over Canada's ability to prevent export of water under the North American Free Trade Agreement or the General Agreement on Trade and Services (GATS).²¹⁷

States do not have obligations to control third party behavior, but they should take steps to prevent private actors from undermining the right to water in other countries.²¹⁸ They therefore should ensure that private riparians do not undermine or manipulate the right to water in other countries. This concern is especially salient in the context of private development of hydroelectric power. For example, the country of Krygyzstan shares waters released from the Toktogul dam with downstream nations located in the Aral Sea basin.²¹⁹ However, private riparians in Krygyzstan have the right to alter the flow of the watercourse, which would also allow them to exert economic pressure on downstream nations.²²⁰ While private entities have not yet exercised their right to alter watercourses, there is a possibility that they would do so for economic gain.

Riparian rights, as traditionally constituted, are inherently damaging to the equitable distribution of affordable water. Although economic

214. GC 15, *supra* note 7, at 11. *See also* G.A. Res. 229, U.N. GAOR, 55th Sess., Supp. No. 49, at 5, 6, 10 U.N. Doc. A/Res/51/229 (1997) (establishing that riparian States should use international watercourses in an equitable and reasonable manner, prevent causing harm to other riparian states, and recognize that no use of an international watercourse has an inherent priority over other uses). The Convention has been interpreted to require downstream nations to receive free water based upon equitable and reasonable utilization requirements. *See* Gregory E. Heltzer, Note, *Stalemate in the Real Aral Sea Basin: Will Kyrgyzstan's New Water Law Bring the Downstream Nations Back to the Multilateral Bargaining Table?*, 15 *GEO. INT'L ENVTL. L. REV.* 291, 308-09 (2003).

215. GC 15, *supra* note 7, at 12.

216. *Id.* at 12.

217. *See* discussion *supra* note 19.

218. *See* GC 15, *supra* note 7, at 12.

219. *See generally* Heltzer, *supra* note 229.

220. *See id.* at 304.

interest may motivate riparians to transfer water to non-riparians in a free market system, impoverished communities may not be able to pay for these transfers. In the domestic context, less-developed countries must modify their riparian doctrine to ensure the equitable distribution of water rights among their citizens. Landowners who lose vested rights as a result of this modification may require some form of compensation. However, under most regimes, such transfers will be deemed acceptable and uncompensable.

Incorporation of the public trust doctrine into the riparian regime offers a less intrusive means of redistributing water rights. The public trust doctrine would allow reasonable use by individual riparians subject to reasonable regulation and reallocation by the government. No matter how a government chooses to modify its riparian system, it must be prepared to handle changes in investment incentives, economic disruptions, and the redistribution of wealth.

2. *Impacts on Prior Appropriation Models of Water Allocation*

While water-rich countries tend to use riparian models of water allocation, water-poor countries tend to use prior appropriation models.²²¹ The prior appropriation doctrine establishes a first-in-time, first-in-right means of allocating water.²²² Such a model is relatively inflexible and does not adapt to changing public need. As a result, this doctrine often leads to inefficient water use.²²³ By contrast, the riparian rights doctrine usually requires that upstream riparians do not unreasonably interfere with the rights of downstream riparians; hence, in times of shortage all riparians suffer equally. Prior appropriation models, however, place the burden of drought upon late comers, who are often poor and lack secure title to land.

In light of this rigidity, adaptive management strategies or significant legal reform of prior appropriation systems will be necessary to effectuate a right to water. Adaptive management strategies might include market transfers, which would allow governing bodies to achieve equitable redistribution of water in times of crisis by making water rights affordable to second- or third-priority users.²²⁴ Hence, it may be necessary for

221. See Newman, *supra* note 209, at 11,432-33. For an overview of water regimes around the world, see Vail T. Thorne, *Water Scarcity and Its Impact on Water Rights: A Real Concern for Multinational Companies?*, 33 *Envtl. L. Rep. (Envtl. L. Inst.)* 10,617 (2003). South Africa uses a combination of riparian and prior appropriation doctrines to allocate water rights, though is one primarily of riparian rights with public trust overtones. See Tewari, *supra* note 4, at 4, 22-26.

222. Newman, *supra* note 209, at 11,432.

223. *Id.*

224. See *id.* at 11,436. States' capacities to adapt vary both generally and in times of resource scarcity, and should be considered a resource in determining the impact of resource scarcity upon a realization of the right to water. See Anthony R. Turton, *Water Scarcity and Social*

countries using prior appropriation models of water allocation to overhaul their water regimes to incorporate flexible and adaptive management strategies, which may be difficult culturally, politically, and economically.

Unfortunately, adaptive management practices will be difficult to implement in less-developed countries that suffer from lower levels of technical capacity and are often beset by institutional inertia. This situation is especially acute in transitional economies where private companies and regulators are often less familiar with the dynamic nature of market forces. Instituting an adaptive management strategy that redistributes wealth in the form of water rights may also pose political difficulties. Older wealth is the typical source of political power in developing countries and may provide strong resistance to any attempts to change how water is distributed if it will harm the existing power structure. This resistance may make such change impotent or impossible for many less-developed countries with high levels of corruption.

Finally, adaptive management practices may introduce economic and development concerns by reducing certainty in water-based industries. This reduced certainty will inevitably undermine investment in water-based industries and infrastructure, since there is less information available to investors with respect to recapture of investments. Those entities that have already invested in water-based industries through privatization or other means will likely battle the implementation of an adaptive management strategy and call for clearer, more fixed rules as necessary predicates for industrial development. Given the numerous challenges to implementing adaptive management strategies and overhauling legal regimes, less-developed countries will require technical and financial assistance from international organizations, businesses, and civil society to modify their prior appropriation systems to accommodate a human right to water.

3. *Other Legal Impacts*

General Comment 15's call for implementing a human right to water requires a shift from treating water as an economic good to viewing it as a human right. Some States that do view water as an economic good charge downstream users for the cost of maintaining the infrastructure of upstream water supplies.²²⁵ General Comment 15 may have profound

Adaptive Capacity: Towards an Understanding of the Social Dynamics of Water Demand Management in Developing Countries, MEWREW Occasional Paper No. 9, School of Oriental and Afr. Stud. (1999).

225. See, e.g., Heltzer, *supra* note 229 (explaining Kyrgyzstan's implementation of an irrigation fee and recognition of water as a commodity); Alisher Khamidov, *Water Continues To Be Source of Tension in Central Asia*, EURASIANET, Oct. 23, 2001, at

impacts both on the ability of States' upstream users to charge downstream users and on the rates that they can charge. Additionally, General Comment 15 may affect antitrust laws and other regulations pertaining to the privatization of water services.

Environmental and agricultural regulations may also need to be modified. Implementation of a right to water could require new regulations for catchment areas, wetlands, forest resources, industrial emissions effluents, and other resources that affect water supplies. Since at least seventy percent of the world's water is consumed for agricultural purposes,²²⁶ ensuring a sustainable water supply will also require changes in agricultural practices and irrigation laws.²²⁷

The recognition of a right to water may also impact domestic takings jurisprudence. For instance, in the United States, vested water rights could be expropriated by the government, which may require compensation.²²⁸ Groundwater may be considered expropriable property of the landowner or may be treated as a public resource, not warranting compensation if used by the public.²²⁹ The impact of the right to water

<http://www.eurasianet.org/departments/environment/articles/eav102301.shtml> (describing the increasing tension between Kyrgyzstan, one of the main suppliers of water in Central Asia, and those States that use that water as a result of the fee); Rene Cagnat, *The Tide Turns in Central Asia*, THE UNESCO COURIER, Oct. 28, 2001, at http://www.unesco.org/courier/2001_10/uk/doss06.htm (equating water as a form of political weapon in Central Asia); Jeremy Bransten, *Kyrgyzstan/Uzbekistan: The Politics of Water*, RFE/RL NEWSLINE, Oct. 14, 1997 (quoting Duishen Mamatkhanov, Dir., Kyrgyzstan's Inst. of Hydroenergy, who stated that Kyrgyzstan seeks to treat water as "any other valuable commodity—something that can be bought and sold, for a real market price"), at <http://www.rferl.org/nca/features>.

226. RIGHT TO WATER, *supra* note 5, at 18, 21.

227. See Stephen Merrett, *The Urban Market for Farmers' Water Rights*, 52 IRRIGATION & DRAINAGE 1 (2003) (discussing the factors influencing farmers' desire to sell their water rights for household or commercial uses).

228. See generally Brian E. Gray, *The Property Right in Water*, 9 HASTINGS W.-NW. J. ENVTL. L. & POL'Y 1 (2002) (discussing takings in the context of water ownership); Kathryn M. Casey, Comment, *Water in the West: Vested Water Rights Merit Protection Under the Takings Clause*, 6 CHAP. L. REV. 305 (2003). See also Julia Muedeking, Note, *Taking the Heart of the Klamath Basin: Is it Free?*, 8 DRAKE J. AGRIC. L. 217, 226-28 (2003) (arguing that the United States government should compensate farmers in the Klamath Basin for denying them water for irrigation purposes).

229. Compare Gregory S. Alexander, *Property as a Fundamental Constitutional Right? The German Example*, 88 CORNELL L. REV. 733, 755-57 (2003) (discussing the German doctrine which holds that use of groundwater is not a compensable vested property right) with John C. Peck, *Property Rights in Groundwater—Some Lessons from the Kansas Experience*, 12 KAN. J.L. & PUB. POL'Y 493 (2003), and Debbie Shosteck, *Beyond Reserved Rights: Tribal Control over Groundwater Resources in a Cold Winters Climate*, 28 COLUM. J. ENVTL. L. 325 (2003) (illustrating how the United States recognizes use of groundwater rights as compensable property rights); see also Joseph L. Sax, *We Don't Do Groundwater: A Morsel of California Legal History*, 6 U. DENV. WATER L. REV. 269 (2003) (noting that California's groundwater is primarily governed by a prior appropriation model, except in times of drought); Tara L. Taguchi, Comment, *Whose Space Is It, Anyway?: Protecting the Public Interest in Allocating Storage Space in California's Groundwater Basins*, 32 SW. U. L. REV. 117, 121 (2003) (noting that rights to use groundwater are usufructuary and may be regulated based on concepts of "reasonable and

upon other legal regimes will depend heavily upon the extent of the right defined. For instance, a right to water as constituted by South Africa requires the provision of free basic services to all individuals. In order to provide these services, the government may need to redistribute riparian and other vested water rights and then compensate the original owners of these rights.

Under General Comment 15, a State may also need to compensate individuals for violations of their right to water. Different legal theories provide the bases for compensation for human rights violations and for compensation for an expropriation. Therefore, an individual could potentially receive compensation both for a violation of her right to water and for an expropriation of a vested water right.²³⁰ This situation might arise where the State has expropriated indigenous peoples' traditional water sources in an inter-regional water transfer. This possible double compensation scheme could have significant budgetary and regulatory effects on developing countries.

D. Government Budgetary Impacts

Many regulators expect the private sector to finance implementation of universal water access.²³¹ This expectation is often unrealistic because the provision of water on a universal basis at prices affordable for less-developed country consumers is not always financially viable or worth the risk.²³² A human right to water requires that States provide low- or no-cost water to populations that cannot afford water, so that poorer households do not carry greater water expense burdens than wealthier households.²³³ The provision of low- or no-cost water services to impoverished households makes the goal of full cost recovery more difficult, if not impossible.²³⁴ Many populations, especially rural populations in developing countries, earn money on seasonal or irregular

beneficial use" where all users have equal access to the basin's resources); David R.E. Aladjem, *Is Water Ripe for the Taking? The SWRCB's Lower Yuba River Decision and the Public Trust Doctrine*, 11 CAL. WATER L. & POL'Y REP. 261-65 (2001).

230. In South Africa, this issue might be avoided, as the right to water is not granted in perpetuity. See WHITE PAPER, *supra* note 193, princ. 3. However, the impact of vestedness as related to perpetuity is not clear.

231. See discussion *supra* note 20 and accompanying text.

232. See MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 75-76 & fig. 7.2. The risk faced by corporations seeking to establish water infrastructures is largely dependent upon local politics. See Bronwen Morgan, *Emerging Global Water Welfarism: Access to Water, Unruly Consumers and Transnational Regulation*, in CONSUMER CULTURES, GLOBAL PERSPECTIVES (Frank Trentman & John Brewer eds., forthcoming 2005).

233. GC 15, *supra* note 7, at 10.

234. See, e.g., Häuserman, *supra* note 65, at 17 (discussing how States, in order to ensure universal access to water, must develop a different market approach to cost recovery based on the poor's ability to pay).

bases and therefore cannot commit to long-term, lower-priced contracts for water services.²³⁵ States therefore face a great challenge in establishing an efficient, demand-driven, water supply system that ensures both affordability and appropriate cost recovery.²³⁶

Despite this difficulty, full cost recovery is still a major goal of many international financial institutions when making loans.²³⁷ While no country is required to accept loan conditions demanding privatization of water services under GATS, many countries continue to do so. Despite this trend, recognition of a human right to water may diminish investors' interest in improving water access, especially to impoverished or squatter communities. While this Comment does not seek to debate the desirability of privatization or public-private partnerships in the water context, it is important to recognize that cost recovery impacts will vary based upon the manner in which the industry is organized. Privatized schemes are more likely to seek full cost recovery whereas publicly funded systems are more likely to provide subsidies.

When a system seeks full cost recovery, it must decide how to value the provision of water in a culturally acceptable manner. As the Cochabamba case illustrates, where cultures view the right to water as an inherent right, full cost recovery is likely to fail. When full cost recovery is unsuccessful, water services often fall into disrepair and suffer from increased contamination of drinking water.²³⁸

Illnesses and deaths associated with water-related diseases are estimated to cost \$125 billion per year in medical expenses and reduced worker productivity.²³⁹ It has been estimated that creating the infrastructure for water services, excluding wastewater disposal, to all major urban water sectors would cost less than fifty billion dollars,²⁴⁰ and

235. RIGHT TO WATER, *supra* note 5, at 16.

236. For an example of a water tariff schedule under a right to water, see Norms and Standards in Respect of Tariffs for Water Services, 433 GOV'T GAZETTE 22,472 (S.A. 2001). For a discussion of South Africa's free water tariff schedule, see de Visser, *supra* note 4, at 11-13, 16-23.

237. For example, the International Monetary Fund (IMF) often seeks full cost recovery. See GCI, *supra* note 21; see also IMF, THIRD REVIEW UNDER THE POVERTY REDUCTION AND GROWTH FACILITY AND REQUEST FOR WAIVER OF PERFORMANCE CRITERIA (2001), available at <http://www.imf.org/external/pubs/ft/scr/2001/cr01141.pdf>.

238. See, e.g., MAUDE BARLOW, COUNCIL OF CANADIANS, BLUE GOLD: THE GLOBAL WATER CRISIS AND THE COMMODIFICATION OF THE WORLD'S WATER SUPPLY 25 (2001) (discussing the drinking water contamination of five million French people after privatization), available at http://www.canadians.org/documents/blue_gold-e.pdf.

239. D.W. PEARCE & J.J. WARFORD, WORLD WITHOUT END: ECONOMICS, ENVIRONMENT, AND SUSTAINABLE DEVELOPMENT (1993).

240. J. Christmas & C. de Rooy, *The Decade and Beyond: At a Glance*, 16 WATER INT'L 127 (1991); see Peter Rogers et al., Water for Big Cities: Big Problems, Easy Solutions?, presented at the Woodrow Wilson Center for the Comparative Urban Studies Project's Research Working Group on Urbanization, Population, the Environment, and Security (Feb. 8-9, 1999), at http://wwics.si.edu/index.cfm?topic_id=1410&fuseaction=topics.publications&doc_id=24946&gr

would therefore be cost-effective.²⁴¹ However, such estimates may not consider the full picture. Provision of water infrastructure for urban areas is far less costly per capita than provision of water to more rural areas, where distribution lines are generally longer and more difficult to maintain.²⁴² Additionally, it is more difficult to ensure the safety of individuals obtaining water from facilities in rural areas. Finally, the cost of construction of infrastructure does not include water filtration or treatment. These outlays could negate the cost effectiveness of providing water to some areas even if a water services infrastructure stimulates economic development.

Significantly, the \$125 billion figure represents the social cost associated with water-related diseases, and not the cost borne by States for implementing the requirements of a right to water. Building the necessary infrastructure for water services will almost invariably consume State funds. The lost worker productivity in terms of costs borne by States—i.e., reduced taxes—is much smaller than the \$125 billion figure, and therefore implementing a right to water may constitute a significant negative drain on the tax base. This will depend upon the distribution of

oup_id=24237. See Sir Richard Jolly, Water Supply & Sanitation Collaborative Council, Assessment of Progress Towards the WSSD Goal for Sanitation (2003), at http://www.wsscc.org/load.cfm?edit_id=277 (claiming that by using low cost technologies and methods, such as the handpump, rainwater harvesting, and utilizing volunteers for installation projects, water needs could be met for as low as \$9 billion per year between 2000-2025); Guy Hutton & Laurence Haller, Water, Sanitation and Health Protection of the Human Environment, WHO, Evaluation of the Costs and Benefits of Water and Sanitation Improvements at the Global Level 26-27 (2004), WHO/SDE/WSH/04.04 (\$1.78 to \$136 billion annually depending upon the level of intervention), http://www.who.int/entity/water_sanitation_health/en/wsh0404.pdf. A more high-end estimate is that provided by the World Water Commission which estimates that approximately \$17 billion per year, or \$170 billion over ten years, would provide universal access to water and sanitation systems and address some of the environmental damages. See Jolly, *supra*. A more middle-ground estimate comes from UNICEF, which estimates the cost of providing and ensuring water and sanitation services to be approximately \$101 billion in additional investments, or \$6.7 billion per year through 2015. See MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 53-57.

241. Gleick, *supra* note 4.

242. See generally WORLD BANK, BRIDGING TROUBLED WATERS: ASSESSING THE WATER RESOURCES STRATEGY SINCE 1993, at 25 (2001), available at [http://lnweb18.worldbank.org/OED/OEDDocLib.nsf/DocPgNmViewForJavaSearch/water_resource_strategy/\\$file/water.pdf](http://lnweb18.worldbank.org/OED/OEDDocLib.nsf/DocPgNmViewForJavaSearch/water_resource_strategy/$file/water.pdf) (noting that rural supply systems lack economies of scale); MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 59, 81 (noting the technical difficulties of supplying water to impoverished rural areas). But see Gleick, *supra* note 4 (internal citations omitted), for the assertion that provision of basic sanitation services to rural populations can be done at a much lower cost than for urban populations. Gleick, however, does not note that the centralized sewage system in urban areas may be necessary to prevent outbreak of disease in highly localized population areas, while in rural areas, prevention of disease from sewage does not require such a centralized system. Therefore, the tradeoff between urban and rural residents is not as simple as Gleick and other authors, including the authors of General Comment 15, may have their readers believe.

water deficiencies and qualities in particular States, and therefore may be cost effective for some States, while not for others.

Whether a human right is constituted as a holistic right or as a basic-needs right will significantly affect a less-developed country's resource base. While this Comment suggests that a holistic approach is more appropriate, the basic needs approach may offer the best short-term strategy for implementing the right to water. A human right to water must be progressively realized: this means that States could transition from a basic needs approach to a holistic needs approach. Also, ensuring access to water at reasonable distances with adequate safety controls will impose additional budgetary obligations on States. These costs may be unnecessary for realizing a right to water and are dependent upon many factors not within the direct control of States, such as the existence of rebels in remote regions of some countries. For small and remote settler communities, the cost of building infrastructure to achieve a full right to water may not be financially feasible.²⁴³ Defining the expanse of the right to water and its necessary and subordinate rights requires caution as the scope of the right may have significant economic impacts.²⁴⁴

Ultimately, the holistic needs approach currently endorsed by ECOSOC may be economically infeasible. Countries can still meet their obligations under the holistic needs approach by dedicating the maximum amount of available resources to providing water. However, States must assess how investing in the right to water might affect other human, economic, social, and cultural rights. Then States can properly prioritize their international obligations.

CONCLUSION

The foregoing analysis has painted a largely negative picture of the development implications of recognizing a right to water. While estimating the social benefits of implementing a right to water is difficult, those social benefits are likely to be significant. From an individual perspective, recognition of a human right to water has numerous advantages over treating water as an economic good. From a country perspective, however, the issue is clearly fraught with difficulties if such an approach limits the cost recovery capabilities of the State. Previous analyses, including General Comment 15, have studied the issue only from the individualist perspective. While those analyses have done much

243. MILLENNIUM PROJECT INTERIM REPORT, *supra* note 5, at 59, 81.

244. For instance, would a State be required to ensure the security of all traditional water sources for sedentary and nomadic indigenous populations no matter how remote? If so, would this require the stationing of police forces in the jungle to do so? This seems unreasonable, even if resources are available, yet may be required by ECOSOC's current construction of the right to water.

to justify an individual human right to water, whether as an independent or as a necessary subordinate right, further analysis is still necessary to determine the costs to States in implementing such a right. This Comment has highlighted some of these costs, which may be financial, legal, institutional, or cultural.

In the end, a human right to water should exist. Under General Comment 15, however, rights subordinate to the right to water, such as the right to collect water safely and reasonably close to one's dwelling, may prohibitively increase the cost of implementing the right to water for developing countries. The importance of these subordinate rights, as well as their relationship to the general right to water, is unclear and requires further analysis.

The obligations imposed by a human right to water also require greater clarity in light of potentially conflicting international and domestic legal structures. A better understanding of the right to water will help States coordinate their limited domestic resources to implement the right efficiently.

The costs imposed by the recognition of a right to water will depend upon the unique political, economic, and cultural circumstances of each country. These costs must be absorbed. Under a human rights regime, full cost recovery is not an option. Therefore, some costs will be borne by the State, private provider, or wealthier water consumers through subsidization programs. Implementing a right to water under General Comment 15 also introduces costs to non-water regimes, in such areas as natural resource management, takings, and resettlement. Many developing countries do not have the resources to absorb these costs and will thus require assistance from international organizations, private businesses, and civil society. In addition, significant environmental and external factors beyond State control may jeopardize the right to water. General Comment 15 calls for States to implement the right to water to the best of their ability within the confines of their available resources, but the precise contours of this standard are unclear.

Full and equitable implementation of the right to water requires clarification of the relationship of this right to other ICESCR and human rights and to other necessary subordinate water rights. The international instruments from which a human right to water and its necessary subordinate rights arise must be clearly defined so that individuals, private entities, and States all know their rights, remedies, and responsibilities.