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A Global Water Apartheid: From Revelation to Resolution

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A Global Water Apartheid: From Revelation to Resolution

*Itzhak Kornfeld**

ABSTRACT

It is well settled in international human rights law that a human right to water exists. Nevertheless, to date, there has been little scholarship about what the practical contours of the right should be. If legal tools are to benefit the world's poor and disenfranchised, they cannot be void due to the impossibility of implementation. This is the problem with the purported human right to water: it is quixotic.

This Article proposes a pragmatic solution to the potable water problem for the world's poor. The solution offered here is based on a model of privatized access to water grounded in a microfinancing paradigm that is in turn founded on a loan program incorporated into the New Deal's Rural Electrification Act. The proposed paradigm therefore sidesteps the rights-based scheme by resting upon a more concrete foundation based on measurable results (i.e., the number of the world's 2.2 billion people who lack potable water that will obtain access to water versus the number that will not).

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*"[W]hoever destroys a soul, it is considered as if he destroyed an entire world. And whoever saves a life, it is considered as if he saved an entire world."*¹

I. INTRODUCTION

In 1992, Professor Stephen McCaffrey authored a seminal article proposing a human right to water.² Since then, his efforts have

1. BABYLONIAN TALMUD, Sanhedrin 4:8 (37A) (English translation provided by Author).

2. Stephen C. McCaffrey, *A Human Right to Water: Domestic and International Implications*, 5 GEO. INT'L ENVTL. L. REV. 1, 5-8 (1992).

fostered a stream of scholarship affirming his proposed entitlement.³ Today, the existence of a human right to water is seldom challenged, and it now appears to be well rooted in international human rights law.⁴ Nevertheless, to date, there has been little scholarship about what the practical contours of that entitlement should be.

Furthermore, those international lawyers who promote the right to water generally ground their argument in the International Convention on Economic, Social and Cultural Rights.⁵ However, only 66 of the world's 199 countries are signatories to the treaty.⁶ Furthermore, even where the Convention has been ratified and found to be justiciable,⁷ it is impossible for a court to hold a state actor in

3. These noble efforts should be treated with high regard. The following documents make up the principal scholarship on the subject. See, e.g., JOHN SCANLON ET AL., *WATER AS A HUMAN RIGHT?* (2004); Robert Adler, *Freshwater: Sustaining Use by Protecting Ecosystems*, 39 ENVTL. L. REP. NEWS & ANALYSIS 10309 (2009); Joseph Dellapenna, *A Human Right to Water: An Ethical Position or a Realizable Goal?*, in *RECONCILING HUMAN EXISTENCE WITH ECOLOGICAL INTEGRITY*, 183 (Laura Westra et al. eds., 2008); Peter H. Gleick, *The Human Right to Water*, 1 WATER POL'Y 487 (1999); Amy Hardberger, *Life, Liberty, and the Pursuit of Water: Evaluating Water as a Human Right and the Duties and Obligations it Creates*, 4 NW. U. J. INT'L HUM. RTS. 331 (2005); Ling-Yee Huang, *Not Just another Drop in the Human Rights Bucket: The Legal Significance of a Codified Human Right to Water*, 20 FLA. J. INT'L L. 353 (2008); Benjamin W. Cramer, Note, *The Human Right to Information, the Environment and Information About the Environment: From the Universal Declaration to the Aarhus Convention*, 14 COMM. L. & POL'Y 73 (2009); Melina Williams, Note, *Privatization and the Human Right to Water: Challenges for the New Century*, 28 MICH. J. INT'L L. 469 (2007); see also Sumudu Atapattu, *The Right to a Healthy Life or the Right to Die Polluted?: The Emergence of a Human Right to a Healthy Environment Under International Law*, 16 TUL. ENVTL. L.J. 65, 82–83 (2002); Karen Kong, *The Right to Food: A Right-Based Approach to Hunger and Social Inequality*, 32 SUFFOLK TRANSNAT'L L. REV. 525, 536 (2009).

4. U.N. Econ. & Soc. Council [ECOSOC], Comm'n on Econ., Soc. & Cultural Rights, *General Comment No. 15: The Right to Water (Arts. 11 and 12 of the International Covenant on Economic, Social, and Cultural Rights)*, ¶ 1, U.N. Doc. E/C.12/2002/11 (Jan. 20, 2003); see also *Soc. & Econ. Rights Action Centre [SERAC] v. Nigeria*, Afr. Comm'n Human & Peoples' Rights, Comm. No. 155/96, ¶ 56 (2001); Aoife Nolan, *Addressing Economic and Social Rights Violations by Non-State Actors Through the Role of the State: A Comparison of Regional Approaches to the 'Obligation to Protect'*, 9 HUM. RTS. L. REV. 225, 241 (2009) (discussing the SERAC decision).

5. In JOOST PAUWELYN, *OPTIMAL PROTECTION OF INTERNATIONAL LAW: NAVIGATING BETWEEN EUROPEAN ABSOLUTISM AND AMERICAN VOLUNTARISM* (2008), Pauwelyn distinguishes between "rights" and "entitlements." Pauwelyn defines a right as corresponding "to just one type of entitlement (namely those protected by a so-called property rule), [noting that] the broader term entitlements was needed to avoid confusion and to encapsulate not just one but all types of entitlements." *Id.* at 5–6 n.3; International Covenant on Economic, Social and Cultural Rights, 993 U.N.T.S. 3 G.A. Res. 2200A (XXI), U.N. Doc. A/6316 (Dec. 16, 1966) [hereinafter ICESCR].

6. ICESCR, *supra* note 5.

7. See, for example, *Johannesburg v. Mazibuko* 2009 (8) SA 1 (SA) at ¶ 1 (S. Afr.), where the court upheld the right of the poor plaintiffs—residents to water in the Phiri Township in Johannesburg. The court found that Articles 11 and 12 of the ICESCR absolutely recognize the right to an adequate standard of living and continued

contempt due to its inability to provide potable water to its citizens, and refusal by a state actor to provide water has rarely been prosecuted.⁸ This is particularly true for the world's Least Developed Countries (LDCs),⁹ which cannot afford to provide their citizens with water. Moreover, national and international courts are powerless to enforce the right against any dictator who does not wish to provide his people with potable water and good sanitation.

A. *The Dilemma with the Right*

There are two fundamental problems with the "right." First, it is unenforceable.¹⁰ Indeed, it is axiomatic that there can be no right without a remedy.¹¹ In addition, as Joseph Vining observed, "[t]hat

improvement, and the right to enjoy the highest attainable standard of physical and mental health. *Id.* ¶ 17.

8. See Amy Hardberger, *Whose Job is it Anyway?: Governmental Obligations Created by the Human Right to Water*, 41 TEX. INT'L L.J. 533, 563–65 (2006) (suggesting the rarity of enforcement of water rights).

9. The Least Developed Countries (LDCs) include forty-nine of the poorest and weakest countries in the world. U.N. Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries, and Small Island Developing States [UN-OHRLLS], *Least Developed Countries—Country Profiles*, <http://www.unohrlls.org/en/ldc/related/62/> (last visited Apr. 2, 2010). For the criteria for identifying LDCs, see UN-OHRILLS, *The Criteria for the Identification of the LDCs*, 2005, <http://www.un.org/special-rep/ohrlls/ldc/ldc%20criteria.htm> (last visited Apr. 2, 2010).

In its latest triennial review of the list of LDCs in 2003, the Economic and Social Council of the United Nations used the following three criteria, as proposed by the Committee for Development Policy (CDP), for the identification of the LDCs:

- a low-income criterion, based on a three-year average estimate of the gross national income (GNI) per capita (under \$750 for inclusion, above \$900 for graduation);
- a human resource weakness criterion, involving a composite Human Assets Index (HAI) based on indicators of: (a) nutrition; (b) health; (c) education; and (d) adult literacy; and
- an economic vulnerability criterion, involving a composite Economic Vulnerability Index (EVI) based on indicators of: (a) the instability of agricultural production; (b) the instability of exports of goods and services; (c) the economic importance of non-traditional activities (share of manufacturing and modern services in GDP); (d) merchandise export concentration; and (e) the handicap of economic smallness (as measured through the population in logarithm); and the percentage of population displaced by natural disasters.

Id.

10. See Hardberger, *supra* note 8, at 563 (discussing the difficulty of enforcing water rights).

11. The Latin term for the doctrine is *ubi jus ibi remedium*. See generally, *United States v. Pena-Gonzalez*, 62 F. Supp. 2d 358, 365 (D. P.R. 1999) ("We begin with a fundamental principle of our jurisprudence, *ubi jus ibi remedium*—where there is a

which evokes no sense of obligation is not law. It is only the appearance of law."¹² Thus, the putative right is of little help or solace to those who have no access to potable water or to the millions who die annually due to its unavailability.¹³

Second, the rights scholars do not address how the issue of privatization of water utilities, especially the failure of corporate privatization and the commodification of water, should fall within the penumbra of the right.¹⁴ These issues have yet to be addressed, leaving this area of the law unsettled and burdened by practical pitfalls.

This Article proposes a legal and pragmatic solution to the problem of potable water for the world's poor and unpacks the contours of the human right to water. The solution is based on a model of privatized access to water¹⁵ grounded in a microfinancing paradigm that is in turn founded upon a loan program that was part of the New Deal's Rural Electrification Act of 1936 (REA).¹⁶ This

right there is a remedy. This axiomatic principle forms the bedrock of our system of justice."); Justice Hugh O'Flaherty, Speech, *Ubi Jus Ibi Remedium (Otherwise: "Put up the Defendant!")*, 45 Loy. L. Rev. 527, 531 (1999) ("[T]he remedial base of the common law—the law of tort—protects only specified interests. Unless one could bring one's complaint within the framework of an established category or cause of action, one had no redress at law."); Tracy A. Thomas, *Ubi Jus, Ibi Remedium: The Fundamental Right to a Remedy Under Due Process*, 41 SAN DIEGO L. REV. 1633, 1636–37 (2004) ("Stated simply: Ubi jus, ibi remedium. Where there's a right, there must be a remedy."); Heather J. Hanna & Alan G. Harding, Comment, *General Law Division: Ubi Jus Ibi Remedium—For the Violation of Every Right, There Must Be a Remedy: The Supreme Court's Refusal to Use the Bivens Remedy in Wilkie v. Robbins*, 8 WYO. L. REV. 193, 193–94 (2008) ("It is well established that [t]he very essence of civil liberty certainly consists in the right of every individual to claim the protection of the laws, whenever, he receives an injury." (quoting *Marbury v. Madison*, 5 U.S. (1 Cranch) 137, 163 (1803)).

Accordingly, "[t]here must always be an accessible forum in which a complainant has *oyer and terminer* for any" plea of wrongdoing; where such a venue is lacking or nonexistent one can not make her plea. Principles of Constitutional Construction, http://www.constitution.org/cons/prin_cons.htm (last visited Apr. 2, 2010).

12. JOSEPH VINING, FROM NEWTON'S SLEEP 34 (1995).

13. Douglas A. Kysar, *Sustainable Development and Private Global Governance*, 83 TEX. L. REV. 2109, 2166 n.169 (2005).

14. See, e.g., William Screiber, *Realizing the Right to Water in International Investment Law: An Interdisciplinary Approach to Bit Obligations*, 48 NAT. RESOURCES J. 431 (2008) (failing to address the privatization of water utilities); Violeta Petrova, Note, *At the Frontiers of the Rush for Blue Gold: Water Privatization and the Human Right to Water*, 21 BROOK. J. INT'L L. 577 (2006) (same).

15. Although, to date, privatization efforts by multi-national water companies have failed—principally because they have sought to gouge the poor—this proposal takes another approach. On the issue of corporate privatization, see discussion *infra* Part III.

16. Rural Electrification Act of 1936, Pub. L. No. 74–604, 49 Stat. 1363 (codified as amended at 7 U.S.C. § 901 (1936)). For a fuller discussion of the Rural Electrification Act, see generally Melissa A. Jamison, *Rural Electric Cooperatives: A Model for Indigenous Peoples' Permanent Sovereignty Over Their Natural Resources*, 12

model therefore sidesteps the rights-based scheme, resting upon a more concrete foundation of measurable results (i.e., the number of the world's 2.2 billion people who lack potable water that will obtain access to water versus the number that will not).

Part II provides a background for the remedy by establishing the magnitude of the problem created by a lack of clean potable water and sanitation. As part of this discussion, the Article examines the environmental burden of waterborne disease. Part III examines multinational corporations' failed efforts at privatizing water systems in the developing world. Part IV explores substitutes to privatization by corporate entities and the World Bank, including various communities' efforts to privatize water systems that they use daily and partnerships between communities and water utilities. Part V addresses the New Deal's Rural Electric Cooperatives and assesses this model's potential use in resolving the current dearth of potable water in the developing world. Finally, Part VI outlines the microcredit system and suggests how it can be implemented to meet the goal of attaining potable water for the poor.

II. A WORLD WANTING FOR CLEAN WATER

A. *The Enormity of the Problem*

"Safe drinking water, sanitation and good hygiene are fundamental to health, survival, growth and development."¹⁷ Accordingly, the World Health Organization (WHO) recently observed that "[s]afe drinking water and basic sanitation are so obviously essential to health that they risk being taken for granted."¹⁸ Unless people gain access to sources of drinking water that are clean, safe, and reliable, "[e]fforts to prevent death from diarrhea or to reduce the burden of such diseases as ascariasis, dracunculiasis, hookworm, schistosomiasis and trachoma are doomed to failure."¹⁹

The problem is so pervasive that former South African President Thabo Mbeki recently asserted that "[w]e have a duty to fight against

TULSA J. COMP. & INT'L L. 401, 440–46 (2005); Richard P. Keck, *Reevaluating the Rural Electrification Administration: A New Deal for the Taxpayer*, 16 ENVTL. L. 39 (1985).

17. WORLD HEALTH ORG. [WHO] & U.N. CHILDREN'S FUND [UNICEF], MEETING THE MDG DRINKING WATER AND SANITATION TARGET: THE URBAN AND RURAL CHALLENGE OF THE DECADE 2 (2006), available at http://www.who.int/water_sanitation_health/monitoring/jmpfinal.pdf.

18. *Id.*

19. *Id.* For more about these diseases, see Centers for Disease Control and Prevention [CDC], Parasitic Diseases—Index of Parasitic Diseases, <http://www.cdc.gov/ncidod/dpd/parasites/> (last visited Apr. 2, 2010); World Health Organization [WHO], Trachoma, <http://www.who.int/topics/trachoma/en/> (last visited Apr. 2, 2010).

domestic and global apartheid in terms of access to water.”²⁰ The United Nations (UN) similarly declared that “[o]vercoming the crisis in water and sanitation is one of the great human development challenges of the early twenty-first century. [In addition, s]uccess in addressing that challenge through a concerted national and international response would act as a catalyst for progress in *public health*.”²¹

Unfortunately, the average person in the developing world will not realize the universal availability of faucets or water piping at home “in the short—or even medium term.”²² Such persons will be bereft of safe water for the foreseeable future.²³ Of course, the burdens of polluted water, lack of access to potable water, and basic sanitation deficiencies fall on the poor.²⁴ They are not only much “less likely to have access to safe water and sanitation, but . . . also less likely to have the financial and human resources to manage the impact of this deprivation.”²⁵

Additionally, the laws and policies of many states offer scant protection for the vulnerable.²⁶ Even where laws providing state

20. Thabo Mbeki, S. Afr. President, Address at the Launch of the U.N. Development Programme 2006 Human Development Report (Nov. 9, 2006), available at <http://www.dfa.gov.za/docs/speeches/2006/mbek1109.htm>.

21. UNITED NATIONS DEVELOPMENT PROGRAMME, HUMAN DEVELOPMENT REPORT 2006—BEYOND SCARCITY: POWER, POVERTY AND THE GLOBAL WATER CRISIS1 (2006) (emphasis added).

22. WORLD HEALTH ORG. [WHO], THE RIGHT TO WATER 15 (2003), available at http://www.who.int/water_sanitation_health/rightwater/en.

23. See, e.g., United Nations Development Programme, Millennium Development Goals—Goal 7: Ensure Environmental Sustainability, <http://www.undp.org/mdg/goal7.shtml> (last visited Apr. 2, 2010) (“Target 7c: Reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation”) [hereinafter MDG Goal 7]; see also U.N. DEPT OF ECON. & SOC. AFFAIRS, MILLENNIUM DEVELOPMENT GOALS REPORT 2007, at 7 (2007) (discussing the progress towards halving, between 1990 and 2015, the proportion of people whose income is less than one dollar a day).

24. U.N. WORLD WATER ASSESSMENT PROGRAMME, THE UNITED NATIONS WORLD WATER DEVELOPMENT REPORT 3: WATER IN A CHANGING WORLD 3 (2009) (“An estimated 90% of the 3 billion people who are expected to be added to the population by 2050 will be in developing countries, many in regions where the current population does not have sustainable access to safe drinking water and adequate sanitation.”).

25. WHO, *supra* note 22, at 22.

26. See, e.g., Erik B. Bluemel, *The Implications of Formulating a Human Right to Water*, 31 *ECOLOGY L.Q.* 957, 980 (2004) (noting that the costs of water resources in South Africa are disproportionately distributed to the poor); Kirk Herbertson & David Hunter, *Sustainable Energy: Emerging Standards for Sustainable Finance of the Energy Sector*, 7 *SUSTAINABLE DEV. L. & POL'Y* 4, 4 (2007) (“[M]any energy-related projects have been scrutinized (and in some cases rejected) for their contributions to severe environmental degradation, involuntary resettlement of poor and marginalized communities, or the inequitable allocation of project benefits and costs.”); Christine A. Klein, *On Integrity: Some Considerations for Water Law*, 56 *ALA. L. REV.* 1009, 1056 (2005) (“[M]arkets, if not carefully devised and regulated, may place an inequitable

support for destitute persons do exist, they are seldom enforced.²⁷ The rural poor also have little or no access to the political process,²⁸ and yet they comprise “[s]ome 80% of those who have no access to improved sources of drinking water.”²⁹ In 2002, the WHO estimated that more than 1.1 billion people worldwide lack clean drinking water and that “2.6 billion people have no sanitation.”³⁰ The WHO also estimates that at least 1.8 million people die annually from diarrheal diseases, including cholera, with children below the age of five, mostly in developing countries, constituting 1.6 million (or 90%) of these deaths.³¹ This figure is five times the number of children who die annually from HIV/AIDS.³² Of the deaths caused by diarrheal

burden upon the poor and people of color.”); Maria Merritt, *Bioethics, Philosophy, and Global Health*, 7 YALE J. HEALTH POLY L. & ETHICS 273, 299 (2007) (“The distribution of these burdens between affluent and poor populations is tremendously inequitable.”).

27. See Hardberger, *supra* note 8, at 563.

28. See, e.g., James [Sa'ke'] Youngblood Henderson, *Dialogical Governance: A Mechanism of Constitutional Governance*, 72 SASKATCHEWAN L. REV. 29, 46 (2009) (“groups in society [that] are typically shut out of the political process—the poor, the powerless, racial minorities, accused criminals”); Amy Sinden, *In Defense of Absolutes: Combating the Politics of Power in Environmental Law*, 90 IOWA L. REV. 1405, 1468–69 (2005) (“[T]he discrete—and—insular—minorities formulation, taken literally, leaves out many of the groups that are in fact most powerless in the political process. The poor, for example, are diffuse rather than insular . . .”); David Cole, Book Review, *The Poverty of Posner's Pragmatism: Balancing Away Liberty after 9/11*, 59 STAN. L. REV. 1735, 1744 (2007) (“Constitutional law, in other words, does not leave the question of ethnic profiling to the political process, precisely because the political process has historically done such a poor job of ensuring equity for members of racial minority groups.”).

29. Likewise,

[t]he number of people without access to improved water sources in 2000 was a staggering 1.1 billion globally. The number of urban dwellers without access to these services reached 157 million, which represents an increase of 44 million over the comparable figure in 1990. The situation with global sanitation is much worse, with almost three times as many people denied even minimal sanitation facilities.

WHO, *supra* note 22, at 21–22.

30. Imogen Foulkes, *Water Access Progress 'Too Slow,'* BBC NEWS, Sept. 5, 2006, http://news.bbc.co.uk/2/hi/in_depth/5317376.stm.

31. See, e.g., World Health Organization [WHO], *Diarrhoeal Diseases*, http://www.who.int/vaccine_research/diseases/diarrhoeal/en/ (last visited Apr. 2, 2010).

Diarrhoeal diseases represent a major health problem in developing countries. . . . Conservative estimates place the global death toll from diarrhoeal diseases at about two million deaths per year (1.7–2.5 million deaths), ranking third among all causes of infectious disease deaths worldwide. Most of these deaths occur in children under five years of age.

Id.

32. *Lack of Clean Water Kills 2M Children a Year: UN Report*, ABC NEWS, Nov. 10, 2006, <http://www.abc.net.au/news/newsitems/200611/s1785310.htm>.

disease, 88% are fully ascribed to unsafe water and deficient sanitation.³³

It is for these reasons that the WHO declared in 2003 that providing water to the peoples of the developing world was an urgent priority. Similarly, the UN adopted the Millennium Development Goals,³⁴ which seek to halve the number of people who do not have access to water by 2015.³⁵ Without any financial support, however, these programs have done little.³⁶

Finally, the “[l]ack of basic sanitation indirectly inhibits the learning abilities of millions of school-aged children who are infested with intestinal worms transmitted through inadequate sanitation facilities and poor hygiene.”³⁷ It also adds to a higher rate of wasteful and unproductive time caused by adult illness and the need for parents to stay home to take care of children.³⁸ If the world’s poor are to climb out of their morass, the status quo must change. One option for those who seek to aid those in need is privatization.

III. PRIVATIZATION, MULTINATIONAL CORPORATIONS, AND THE WORLD BANK: AN UNEASY MARRIAGE

“Water privatization in the developing world has been met with public opposition and conflict, as opponents argue

33. World Health Organization [WHO], Water, Sanitation and Hygiene Links to Health—Facts and Figures Updated November 2004, http://www.who.int/water_sanitation_health/publications/facts2004/en/index.html (last visited Apr. 2, 2010). In fact, WHO Director-General Dr. Lee Jong-Wook stated:

Water and Sanitation is one of the primary drivers of public health. I often refer to it as ‘Health 101,’ which means that once we can secure access to clean water and to adequate sanitation facilities for all people, irrespective of the difference in their living conditions, a huge battle against all kinds of diseases will be won.

Id.

34. MDG Goal 7, *supra* note 23.

35. *Id.*

36. *See, e.g.*, MICHAEL CLEMENS & TODD MOSS, WHAT’S WRONG WITH THE MILLENNIUM DEVELOPMENT GOALS? 2 (2005), *available at* http://www.cgdev.org/files/3940_file_WWMGD.pdf (indicating that the Millennium Development Goals have not been achieved because of the need for more financial aid, but also asserting that there are diminishing returns to financial aid).

37. WHO & UNICEF, *supra* note 17, at 2.

38. UNICEF, Water, Sanitation, and Hygiene—Links to Health Education and Development, http://www.unicef.org/wash/index_healthandeducation.html (last visited Apr. 2, 2010) (“Poor water and sanitation exact a heavy economic cost in terms of health spending, loss of productivity and labour diversion.”).

*that water is a human right and that global corporations are exploiting the needs of the world's poor for profit.*³⁹

Privatization of water systems in developing countries has been taking place for approximately a decade and a half.⁴⁰ The reaction to this phenomenon by the world's poor is, for the most part, uniformly unfavorable.⁴¹ A number of examples from around the world provide insight into why this is the case.

A. Johannesburg, South Africa

In 1994, the World Bank required South Africa to privatize its water system as a condition to lending money to the new Mandela government.⁴² Johannesburg turned over its water utilities to Suez Lyonnaise des Eaux (Suez), the French water conglomerate.⁴³ As soon as Suez received its concession, it began installing high tech water meters.⁴⁴

This privatization backfired on the people of South Africa. "Impoverished South Africans, unable to afford to feed the meters, turned back to their little rivers of cholera for water, and the government ha[d to] cut off water services to over ten million people [following] the introduction of [these] new programs in 1996."⁴⁵ The shutoffs also occurred when the poor in townships outside of Johannesburg, such as Orange, could likewise not afford to pay their bills.⁴⁶ Eventually, Suez's contract was terminated because the water it was supplying was contaminated with diarrhea-causing bacteria.⁴⁷

39. Craig Anthony Arnold, *Water Privatization Trends in the United States: Human Rights, National Security, and Public Stewardship*, 33 WM. & MARY ENVTL. L. & POL'Y REV. 785, 798 (2009).

40. Amy K. Miller, Note, *Blue Rush: Is an International Privatization Agreement a Viable Solution for Developing Countries in the Face of an Impending World Water Crisis?*, 16 IND. INT'L & COMP. L. REV. 217, 218 (2005).

41. Arnold, *supra* note 39, at 798.

42. See Maude Barlow, *The World's Water: A Human Right or a Corporate Good?*, in WHOSE WATER IS IT? 25, 27 (Bernadette McDonald & Douglas Jehl eds., 2003) (stating that the World Bank "influenced" South Africa to privatize many of its water services).

43. *Id.* at 27.

44. *Id.*

45. *Id.* (emphasis added).

46. *Id.* at 26–27.

47. *Id.*; European Commission Aid in Sub-Saharan Africa, Opportunities for Suez?, <http://archive.corporateeurope.org/suezinafrica.html> (last visited Apr. 2, 2010).

B. Cochabamba, Bolivia

The story of Cochabamba, Bolivia, is quite similar. In 2000, under World Bank pressure, the government of President Hugo Banzer granted a forty-year franchise to a private consortium, Aguas del Tunari (owned by San Francisco-based Bechtel), to manage the municipal water system.⁴⁸ Four months into the concession, water prices mushroomed by as much as 400%.⁴⁹ The entire set up not only forced workers to expend between 25% and 30% of their incomes to pay Bechtel for water but also left 40% of Cochabamba's residents unconnected to the municipal water system.⁵⁰

As dissatisfaction grew with Bechtel, anti-privatization protests and riots exploded across the country.⁵¹ The police, sanctioned by the federal government, fought with the protesters, causing hundreds of injuries and the death of a teenager.⁵² Following this extreme response, and with over \$20 million in damage to private and public property, the government was forced to terminate the contract.⁵³ In response, Bechtel and its partners sued the Bolivian government for breach of contract, demanding \$25 million in damages.⁵⁴ But in the face of worldwide public condemnation, the consortium abandoned the suit.⁵⁵ Additionally, Bolivia's privatization disaster gave birth to the Cochabamba Declaration, a nonbinding proclamation that states in pertinent part that "[w]ater 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."⁵⁶

48. On the Cochabamba water privatization saga, see generally James Salzman, *Thirst: A Short History of Drinking Water*, 18 *YALE J. L. & HUMAN.* 94, 95–96 (2006); Timothy O'Neill, Note, *Water and Freedom: The Privatization of Water and Its Implications for Democracy and Human Rights in the Developing World*, 17 *COLO. J. INT'L ENVTL. L. & POL'Y* 357, 360 (2006); Rachel Welch, Comment, *And Not a Drop to Drink: Water Privatization, Pseudo-Sovereignty, and the Female Burden*, 15 *TUL. J. INT'L & COMP. L.* 311, 313, 315–16 (2006). For Bechtel Corporation's version of the incident, see *Bechtel Perspective on the Aguas Del Tunari Water Concession in Cochabamba, Bolivia*, BECHTEL.COM, Mar. 16, 2005, <http://www.bechtel.com/assets/files/PDF/Cochabambafacts0305.pdf>.

49. See O'Neill, *supra* note 48, at 367 (describing mushrooming water prices shortly after the concession).

50. *Id.* at 367–68; Salzman, *supra* note 48, at 94.

51. O'Neill, *supra* note 48, at 368–69.

52. *Id.* at 370.

53. *Id.* at 361, 370–71.

54. *Id.* at 371.

55. Welch, *supra* note 48, at 317.

56. Cochabamba Declaration, available at <http://www.nadir.org/nadir/initiativ/aggp/free/imf/bolivia/cochabamba.htm#declaration> (last visited Apr. 2, 2010).

C. Trade Liberalization and Water Scarcity

Vandana Shiva, the well-known Indian physicist and environmentalist, among many others, shares the sentiments of the Cochabamba Declaration. Additionally, Dr. Shiva and her colleagues and supporters assert that the World Bank's obligatory policies and the World Trade Organization's rules on trade liberalization "are creating a sweeping culture of corporate states all over the world."⁵⁷ She also charges the World Bank with playing a major role in the creation of water scarcity and with "transforming that scarcity into a market opportunity for water corporations."⁵⁸

In fact, the Bank currently has outstanding commitments for water projects in the billions of dollars. "From July 2008 to March 2009, 147 [of the Bank's] PPI [Private Participation in Infrastructure] projects reached financial or contractual closure with investment commitments . . . of US \$55 billion in 46 developing countries."⁵⁹ Many of the PPI projects are taking place in South Asia, particularly in India, where World Bank mandated privatization is widespread.⁶⁰ In fact, South Asia receives 20% of the Bank's loans.⁶¹ Nevertheless, the Bank has been widely criticized for its water project policies, many of which have damaged the environment and caused local communities to suffer gravely.⁶²

57. VANDANA SHIVA, WATER WARS: PRIVATIZATION, POLLUTION, AND PROFIT 87 (2002).

The World Bank serves the interests of water companies both through its regular loan programs to governments, which often come with conditions that explicitly require the privatization of water provision, and through its private sector arm, the International Finance Corporation, which invests in privatization projects and makes loans to companies carrying them out. Lending about \$20 billion to water supply projects over the last decade, the World Bank has been the principle financier of privatization. A year-long study by the International Consortium of Investigative Journalists, a project of the Washington-based Center for Public Integrity, released in February, 2003, found that *the majority of World Bank loans for water in the last five years have required the conversion of public systems to private as a condition for the transaction*. The performance of these companies in Europe and the developing world has been well documented: huge profits, higher prices for water, cut-offs to customers who cannot pay, little transparency in their dealings, reduced water quality, bribery, and corruption.

Maude Barlow & Tony Clarke, *Water Privatization*, GLOBAL POL'Y FORUM, Jan. 2004, <http://www.globalpolicy.org/component/content/article/209/43398.html>.

58. SHIVA, *supra* note 57, at 87.

59. WORLD BANK GROUP, ASSESSMENT OF THE IMPACT OF THE CRISIS ON NEW PPI PROJECTS—UPDATE 3, at 2 (2009), <http://ppi.worldbank.org/features/june2009/200906PPIFinancialCrisisImpact.pdf>.

60. SHIVA, *supra* note 57, at 90–91.

61. *Id.* at 87.

62. One example is a

1. New Delhi, India

The problems that India has experienced with World Bank-funded water projects are beyond the scope of this Article. However, two examples are necessary to provide a working understanding of the extent of the issue. The first is a Bank-funded project to provide water service to the city of Delhi. Newspaper accounts report that the project “seems drenched in a variety of questions. Lack of transparency in the functioning of a leading multilateral organization, favoritism for specific private sector firms, and inadequate homework done by the Delhi Jal Board (DJB) are only a few of the issues soaking the venture.”⁶³ Following a presentation by Indian NGOs about the problems to the DJB’s Chief Minister Sheila Dixit, she expressed concern about the project’s adverse impacts, including a

steep rise in tariffs, water inaccessibility to the poor, no guarantee of improvement in services or of constant water supply [and the fact that Delhi’s citizens] would also have to bear the brunt of [increased] salaries of a total of about USD 25,000 per month which have been recommended for the employees of the concerned water distribution companies.⁶⁴

Additionally, Ms. Dixit told the NGOs that the project would be placed on hold, there would be more transparency, and the project would not progress without public participation.⁶⁵ Nevertheless, “a contrary reality emerged. This caused the controversy. The DJB seems to be simply implementing the ‘orders’ of the World Bank.”⁶⁶

bank-funded water project in Pakistan [which] has led to widespread environmental harm and suffering among local communities. The project has contributed to deadly floods, and violates six of the Bank’s binding policies. These are the main conclusions of an investigation by the Inspection Panel, the World Bank’s independent investigative body.

Press Release, Int’l Rivers, Internal Investigation Shows World Bank Water Project Destroys Livelihoods in Pakistan (Oct. 25, 2006), *available at* <http://internationalrivers.org/en/south-asia/pakistan/internal-investigation-shows-world-bank-water-project-destroys-livelihoods-pakis>.

63. Varupi Jain, *Delhi Water Project Soaked in Controversy*, INDIA TOGETHER, Sept. 26, 2005, *available at* <http://www.indiatogether.org/2005/sep/gov-delwater.htm#continue>. The Delhi Jal Board, the government agency responsible for supplying potable water to the area surrounding and including Delhi, known as the National Capital Territory, was formed via an Act of the Delhi Legislative Assembly on April 6, 1998. *See generally*, Delhi Jal Board, Welcome to the Department of the Delhi Jal Board, http://www.delhi.gov.in/wps/wcm/connect/DOIT_DJB/djb/home (last visited Apr. 2, 2010).

64. Jain, *supra* note 63.

65. *Id.*

66. *Id.*

2. Tamil Nadu

The second example is the Irrigated Agriculture Modernization and Water Bodies Restoration and Management (IAMWARM) Project⁶⁷ in Tamil Nadu, a state in southern India. It bears witness to India's enormous project expenditures and the concomitant disillusionment in the outcome of these projects. It also demonstrates how these water projects ultimately affect India's environment and communal life. Located in the state's capital district, Pudukottai, the project involves tank upgrading supported by a \$556 million World Bank loan.⁶⁸

Although IAMWARM was filled with great promise, the reality is very different. The recently renovated tank bunds have developed serious cracks and have even crumbled.⁶⁹ In response,

it was clear that there was a feeling of alienation from the project, and anger among the farmer community as it directly affected their livelihoods. "I am not able to sow this year as the work undertaken on the bund and sluice gate has diverted water away from my farm," said one farmer.⁷⁰

These two examples demonstrate the problems with corporate privatization of water projects and World Bank funding. They also point to one of the grave predicaments facing the world's poor in their pursuit of potable water and proper sanitation: the commodification of water. The Article next addresses that issue within the framework of the privatization of water resources.

D. *Whisper Sweet Dollars in My Ear*

The World Bank estimates the value of potential water markets at over \$1 trillion.⁷¹ Following the collapse of the technology equities in 2000, *Fortune Magazine* recognized the water sector as an exceptionally profitable industry for investors.⁷² The World Bank's

67. See generally The World Bank, Tamil Nadu Irrigated Agriculture Modernization and Water-Bodies Restoration and Management Project—India, <http://web.worldbank.org/external/projects/main?Projectid=P090768&theSitePK=40941&pagePK=64283627&menuPK=228424&piPK=73230> (last visited Mar. 23, 2010) (serving as a repository of vital project information).

68. Bharti Patel, *I Am Warm—World Bank in India*, COUNTERCURRENTS.ORG, Jan. 21, 2009, <http://www.countercurrents.org/patel210109.htm>.

69. A bund is "an embankment used especially in India to control the flow of water." MERRIAM-WEBSTER'S ONLINE DICTIONARY (2010), <http://www.merriam-webster.com/dictionary/bund>.

70. Patel, *supra* note 68.

71. MAUDE BARLOW, *BLUE GOLD: THE GLOBAL WATER CRISIS AND THE COMMODIFICATION OF THE WORLD'S WATER SUPPLY* 23 (2001).

72. VANDANA SHIVA, *WATER WARS* 87 (2002), available at http://www.thirdworldtraveler.com/Vandana_Shiva/Water_Wars_VShiva.html.

requirement that states privatize their water delivery sectors in exchange for the Bank's loans has guaranteed huge profits for private sector companies like Suez and Bechtel.⁷³ This prospective revenue stream has apparently caused Monsanto, the former chemical giant and now huge agrochemical company, to break into the water business.⁷⁴ It recently proclaimed that because of the guaranteed returns, its investment cost opportunities will be lower and it "will be well positioned via these businesses to profit even more significantly."⁷⁵

The following example from the Philippines demonstrates the potential harm of the World Bank's privatization program. In 1997, the Philippine government, with backing from the World Bank and private investors, privatized the municipal water supply of its capital, Manila, in an effort to promote efficiency and improve service.⁷⁶ The privatization of that city's municipal water system, despite its promise, reduced

the public's access to quality water. After privatization, water became less affordable. Although water rates initially declined and services improved in the immediate aftermath of privatization, both concessionaries requested 15% tariff increases from the regulatory body within two years of the agreement. This was only the first of a series of rate increases, which eventually left rates 500-700% higher nine years after privatization. For most residents of the city, higher rates have resulted in a substantial portion of their income going to water and sewer service.⁷⁷

Critics assert that the history of corporate privatization of water utilities is dismal, and one can see why from Manila's experience. Additionally, once water and/or the system of distribution and delivery are privatized, the costs for local consumers become

73. See, e.g., Jennifer Naegele, *What is Wrong With Full-Fledged Water Privatization?*, 6 J.L. & SOC. CHALLENGES 99, 112 (2004) (discussing the annual revenues of the three major players in corporate water privatization).

74. Geoffrey Lean, *GM Giant's Plan to Cash in on World Water Crisis*, INDEPENDENT (London), Sept. 26, 1999, available at <http://www.independent.co.uk/news/gm-giants-plan-to-cash-in-on-world-water-crisis-1121825.html>.

75. *Id.* Vandana Shiva, Director of the Research Foundation for Science, Technology and Ecology, in New Delhi, India, quoted Monsanto officials as asserting, "first, we believe that discontinuities (either major policy changes or major trendline breaks in resource quality or quantity) are likely, particularly in the area of water and we will be well-positioned via these businesses to profit even more significantly when these discontinuities occur." Vandana Shiva, *World Bank WTO, and Corporate Control Over Water*, INT'L SOCIALIST REV., Aug.-Sept. 2001.

76. Sarah I. Hale, Comment, *Water Privatization in the Philippines: The Need to Implement the Human Right to Water*, 15 PAC. RIM L. & POL'Y J. 765, 768 (2006). Privatization has also taken place in cities across the globe, including Buenos Aires, Jakarta, and Nkobongo, South Africa. *Id.* at 766.

77. *Id.* at 772 (citations omitted).

prohibitive⁷⁸ and distribution networks are not upgraded.⁷⁹ A report authored by the Asian Development Bank recently identified an example of this phenomenon, finding that, as of 2004, only 58% of Manila's population was connected to the city's water system.⁸⁰ Moreover, the city's sewer service is poorly managed and in a ghastly state of affairs.⁸¹ In fact, no improvements were made to the entire distribution network during the privatized period.⁸² In 2003, a World Bank study reported that water and sewer access in Manila was among the worst in the major Asian cities, second only to Jakarta.⁸³

Nevertheless, water privatization continues unabated because "[water] privatization is a big business; revenue from the global trade in water amounts to more than US \$800 billion annually."⁸⁴ Other examples of profiteering by international corporations include World Bank-driven privatization programs in Chile, where the Bank imposed a loan condition to guarantee a 33% profit margin to the French company Suez Lyonnaise des Eaux.⁸⁵

Indeed, privatization has an even more pernicious side. It affects not only "people's democratic right to water . . . [but also] . . . the livelihoods and employment rights of those who work in municipalities and local water and sanitation systems."⁸⁶ For example, when the World Bank forced Ghana to privatize the water system of its capital city, Accra, the system's 4,500 existing employees were fired, and the private company brought in its own people.⁸⁷

78. See *id.* at 772–73 (discussing the extremely high cost of quality water).

79. See *id.* at 772 (stating that the city's figures for water connectivity are still below the United Nations' goals).

80. ASIAN DEV. BANK, WATER IN ASIAN CITIES: UTILITIES' PERFORMANCE AND CIVIL SOCIETY VIEWS 53 (Charles T. Andrews & Cesar E. Yñiguez eds., 2004).

81. Hale, *supra* note 76, at 772 (citing ASIAN DEV. BANK, *supra* note 80, at 52) ("In 2001, 93% of the city or 10 million residents lacked access to the sewer and waste system.").

82. See *id.* at 768 (stating there were "no meaningful improvements in service and access" during the privatized period).

83. *Id.* at 772–73.

84. *Id.* at 766–67.

85. BARLOW, *supra* note 71, at 29–30.

86. SHIVA, *supra* note 57, at 91.

87. See e.g., Rudolf Amenga-Etego, *Water Privatization in Ghana: Still Born or Born Deformed?* (July 7, 2003), <http://www.africafiles.org/article.asp?ID=2162&ThisURL=./western.asp&URLName=WESTERN+REGION>.

The direct impact on the workers of the Ghana Water Company Limited [GWCL] is no less traumatizing. Many have lost their jobs since the privatization began in the mid '90s. Information filtering in from Bank sources suggests that about 2900 workers will be laid off under the current management service contract deal. Discussions over severance packages have been ongoing for several years.

Id.; see also, *Ghana Goes Ahead with Controversial Water Privatisation*, AFROL NEWS, Jan. 13, 2005, http://www.afrol.com/categories/economy_development/privatisation.

As so often happens in the developing world, the employees⁸⁸ who were fired were members of Ghana's middle class and played a significant role in the local economy. Once any severance pay they may receive has been exhausted, many of the system's previous employees, now turned out and jobless, will likely descend into poverty and require government assistance to make ends meet. As a consequence of the World Bank's loans, the Ghanaian government was not only forced to pay private companies for managing Accra's water system and delivering that water at an inflated price, but it was also burdened with another obligation: supporting previously employed individuals. Moreover,

the prospect of privatisation has [already] driven up consumer water costs in Ghana. Recent IMF and World Bank loan conditions mandated a 95 percent hike in water fees in May 2001 and additional price hikes are planned. Although the minimum wage has just been raised to 5,000 cedis a day, this amount can hardly sustain the average family. (One U.S. dollar exchanges for 7,000 cedis.)⁸⁹

The poor in the developing world cannot absorb such significant increases. It is why they rebel against mammoth rate escalations for

("Nearly half the 4,600 employees of Ghana Water are likely to lose their jobs as the new private sector contractor seeks to streamline operations. However, there is financial provision within the water privatisation project to compensate those made redundant."); *GWCL to Redeploy 1,280 Workers*, GHANAWEB, Aug. 24, 2005, <http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=88700> ("About 1,280 workers of the Ghana Water Company Limited (GWCL) to be retrenched under the Private Sector Participation (PSP) in water delivery have started receiving letters informing them of their redeployment, as the multi-million-dollar programme finally gears up to take off").

88. See e.g., DAMERIA HASIBUAN, PRES. SP PDAM, JAKARTA WATER PRIVITIZATION: WORKERS CAMPAIGN TO BRING BACK WATER IN PUBLIC HANDS (2007), available at http://www.waterjustice.org/uploads/attachments/6_ADB_Water-privatisation_Jakarta_Dameria_kyoto_apr07_eng.pdf.

When first privatized in 1998, PDAM Jakarta (PAM JAYA) (a public water utility owned by the city government) has [*sic*] approximately 3,000 employees. Shortly after the privatization, 2,800 of them were seconded to the private concessionaires, Suez and Thameswater. Approximately 150 employees were still working for PDAM to supervise the service provided by the private sector.

In general, the payment difference between seconded and direct worker is 2.5 to 5 times. A manager (seconded employee) receives USD 1,200 while direct employees with the same level receive USD 2,700. At a staff level, a seconded employee (who has been working for 10 years) receive USD 160 while a new direct staff can receive USD 300).

Id.

89. Rudolf Amenga-Etego, Coalition Fights World Bank, IMF Privatization Scheme, http://www.citizen.org/cmep/Water/cmep_Water/reports/ghana/articles.cfm?ID=7740 (last visited Apr. 2, 2010).

water provisions. And it is also why corporate water companies are routinely ousted from developing states.

IV. EXPLORING ALTERNATIVES

A. *The Case for Community Privatization*

Corporate efforts at privatization of water systems have thus far been a complete and utter failure. Nevertheless, many critics of water utility privatization in Manila and elsewhere concede that, for developing countries, private capital is required.⁹⁰ These investments are needed because municipal water systems in developing countries lack the funds to extend piping and connections.⁹¹ A middle ground must be sought. For example, municipal water utilities might seek funding and operational expertise from investors who are interested more in long-term, stable opportunities and who do not expect returns greater than 5% to 6% per annum. This type of investor differs from the large corporate conglomerates that seek short-term, guaranteed high rates of return (i.e., 20% to 30% per annum) and, therefore, steeply raise rates. The Article next discusses this middle ground.

B. *Surefootedness in a Middle Ground: Alternatives to Corporate Privatization*⁹²

Nature abhors a vacuum. Within the vacuum caused by the failure of multinational corporations, a number of alternatives have developed. Two options that have succeeded in supplying potable water to the poor in Ghana and South Africa are addressed next. Both have elements of community cooperation and are based on small-scale or community-wide privatization approaches.

1. Savelugu's Partnership

The Ghanaian alternative involves the creation of a rural village's "public-community partnership." This entity was formed at

90. For a discussion of the advantages and disadvantages of privatization, see generally MARK DUMOL, *THE MANILA WATER CONCESSION: A KEY GOVERNMENT OFFICIAL'S DIARY OF THE WORLD'S LARGEST WATER PRIVATIZATION* 16–20 (2000) (addressing the advantage of privatization with regards to financing, personnel, and procurement); Jessica Budds & Gordon McGranahan, *Are the Debates on Water Privatization Missing the Point? Experiences from Africa, Asia and Latin America*, 15 *ENV'T & URBANIZATION* 87 (2003).

91. Budds & McGranahan, *supra* note 90, at 97.

92. For a discussion on privatization, see generally *id.*; O'Neill, *supra* note 48.

about the same time that the decision to privatize water in Accra was made. As Accra's post-corporate privatization period ushered in the doubling of water prices, the small town of Savelugu in northern Ghana took a decidedly different route. The town's inhabitants formed a "public-community partnership," where the community collectively buys water from the Ghana Water Company, Ltd. and takes responsibility for payment collections and minor repairs.⁹³ The community also enacted rules to protect its most vulnerable members and set the price at which water is sold to its constituents.⁹⁴ This partnership has reduced to 15% the quantity of water that is unaccounted for through poor management, as compared with Ghana's average of 50%.⁹⁵ In addition, the community has a collection and payment record of 100%, as compared to 60% in other areas that the Ghana Water Company serves.⁹⁶

2. Cato Crest's Standpipes

Another successful community-based endeavor occurred in Cato Crest, an informal settlement on the outskirts of Durban, South Africa:⁹⁷

[I]nstalling pipes for traditional, in-home water supply would have cost too much, so a system of communal standpipes and private water tanks was introduced instead. At the standpipes, everyone has access to water and pays by the bucket, and there is also an option of installing private ground tanks instead. Each month, the tank owner pays for water in advance, and each day the tank is refilled. If the tank owner cannot pay a full month in advance, his tank is not refilled, but he always has access to the standpipes.⁹⁸

The Savelugu–Ghana Water Company Partnership and Cato Crest's Standpipe systems treat water as a commons—not as a corporate commodity. The commons approach to water "ownership" fits the idea that access to potable water should be a human right. Both examples also possess elements of this Article's proposal.

93. Patrick Apoya, *Community Public Sector Partnership for the Provision of Water Services in Savelugu, Ghana* 5–6 (Commonwealth Foundation, 2003), available at <http://www.commonwealthfoundation.com/uploads/documents/ACFbo5KjI.pdf>.

94. *Id.* at 5, 18.

95. *Id.* at 14.

96. *Id.* at 1.

97. INTEGRATED REG'L INFO. NETWORKS [IRIN], *RUNNING DRY: THE HUMANITARIAN IMPACT OF THE GLOBAL WATER CRISIS 19* (2006), available at <http://www.irinnews.org/pdf/in-depth/Running-Dry-IRIN-In-Depth.pdf>.

98. *Id.*

V. A PROVEN MODEL FOR SUCCESS: THE NEW DEAL'S RURAL ELECTRIC COOPERATIVES

This Article's proposed model has its historical roots in President Franklin Delano Roosevelt's New Deal. During that era, rural communities lacked electricity because for-profit electric companies were convinced that running power lines to these potential customers was unprofitable.⁹⁹ By the 1930s, almost 90% of urban inhabitants had electricity.¹⁰⁰

However, only 10% of rural dwellers were as fortunate.¹⁰¹ Why did such a lopsided system exist? For the same reason that the poor in today's developing world do not have water: there was a market failure in the provision of electric power. "Private utility companies, who supplied electric power to most of the nation's consumers, argued that it was too expensive to string electric power lines to isolated rural farmsteads" and that, in any case, most farmers "were too poor to afford electricity."¹⁰²

The lack of available electricity in rural areas meant that their economies were exclusively and utterly dependent on agriculture.¹⁰³ Consequently, manufacturing and other businesses unrelated to farming favored urban locations where electricity was available and easily acquired.¹⁰⁴ For many years, power companies continued to disregard the rural areas of the nation—except where conditions assured easy and early profit.¹⁰⁵

President Roosevelt, however, felt that electricity was a basic necessity that had to be provided to everyone. Hence, as part the New Deal, he established a new agency, the Rural Electrification

99. George Sibley, *Government Capitalism Can Be a Very Good Thing*, HIGH COUNTRY NEWS, May 22, 2009, available at <http://www.hcn.org/wotr/government-capitalism-can-be-a-very-good-thing>.

100. See, e.g., *id.*

In 1939, residents of the towns of Gunnison and Crested Butte [Colorado] had already had electricity in their homes for almost half a century. This was true for the nation at large, where virtually every city and town of any size had electricity. . . . But only one rancher or farmer in nine had electricity.

Id.

101. *Id.*

102. TVA: Electricity for All, Rural Electrification, <http://newdeal.feri.org/tva/tva10.htm> (last visited Apr. 2, 2010) [hereinafter *Electricity for All*].

103. National Rural Electric Cooperative Association [NRECA], History of Electric Co-ops, <http://www.nreca.org/AboutUs/Co-op101/CoopHistory.htm> (last visited Apr. 2, 2010).

104. *Id.*

105. *Id.*

Administration (REA). The REA's mandate was to fund independently formed electric cooperatives in rural America.¹⁰⁶

A. *The Rural Electrification Administration: The Early Years*

Realizing that the privately owned power sector would not connect farmers to electricity, the federal government took it upon itself to solve the lack of electricity in rural America. Given the depth of the problem and his keen eye towards practical solutions, President Roosevelt proclaimed that “[e]lectricity is a modern necessity . . . and ought to be found in every . . . part of the United States.”¹⁰⁷ Therefore, one of the Roosevelt Administration's inaugural acts in its efforts to supply electric power to America's rural inhabitants was the Tennessee Valley Authority Act of 1933 (TVAA).¹⁰⁸ The Act authorized the TVA Board to construct transmission lines to serve “farms and small villages that are not otherwise supplied with electricity at reasonable rates.”¹⁰⁹

B. *The Failure of the Market and Government Intervention*

The Roosevelt Administration understood that if private utilities would not or could not supply electricity to the rural population, government would have to assume that duty. Hence, in 1933, President Roosevelt, with congressional assent, incorporated rural electrification into the Public Works Administration (PWA).¹¹⁰ The

106. See, e.g., U.S. Dept. of Agric. [USDA], Welcome to Rural Development's Electric Programs, <http://www.usda.gov/rus/electric> (last visited Apr. 2, 2010).

Providing reliable, affordable electricity is essential to the economic well-being and quality of life for all of the nation's rural residents. The Electric Programs provide leadership and capital to upgrade, expand, maintain, and replace America's vast rural electric infrastructure. Under the authority of the Rural Electrification Act of 1936, the Electric Programs make direct loans and loan guarantees to electric utilities to serve customers in rural areas.

Id.

107. Sibley, *supra* note 99 (quoting Franklin Roosevelt).

108. Tennessee Valley Authority Act of 1933, Pub. L. No. 73-17, 48 Stat. 58 (codified as amended at 16 U.S.C. § 831 (2006)); see also *id.* § 831a(g)(1)(L) (“[T]he Board shall] establish the electricity rates charged by the Corporation”); *id.* § 831i (“[a]nd in the sale of such current by the Board it shall give preference to States, counties, municipalities, and cooperative organizations of citizens or farmers, not organized or doing business for profit, but primarily for the purpose of supplying electricity to its own citizens or members”).

109. *Id.* § 831i. “[T]here is hereby created a body corporate by the name of the ‘Tennessee Valley Authority’ (hereinafter referred to as the ‘Corporation’). The Board of Directors first appointed shall be deemed the incorporator” *Id.* § 831.

110. The Public Works Administration was created by the National Industrial Recovery Act (NIRA) of 1933, Pub. L. No. 73-67, § 201(a), 48 Stat. 195 (1933). “NIRA

PWA was a part of the National Industrial Recovery Act (NIRA), which was superseded in 1936 by the REA.¹¹¹

As the REA grew, one of its first acts was the initiation, in 1937, of a lending program.¹¹² In essence, the government recognized that private utility companies would not bring electricity to rural areas and thus passed the Act to bring electricity to those areas, such as the Tennessee Valley, and it launched the lending program to make funds available to rural residents who were not connected to the grid. In a 1935 article addressing the loan program entitled "Electrifying the Countryside," Morris Cooke, the head of the REA, observed that

[i]n addition to paying for the energy he used, the farmer was expected to advance to the power company most or all of the costs of construction. Since the utility company ideas as to what constituted sound rural lines have been rather fancy, such costs were prohibitive for most farmers.¹¹³

REA's loans were thus aimed at remedying the financial onus required by private utilities before they would electrify rural areas.

"Even as late as July 1935, a group of utility company executives wrote a report in which they claimed that, in light of their earlier extensive research work, 'there are very few farms requiring electricity for major farm operations that are not now served.'"¹¹⁴ That statement ultimately would come to haunt the for-profit electric industry when the REA and the rural electric cooperatives, of which there are more than 900 today, confirmed the falsity of the view that most farms requiring electricity were being served.¹¹⁵ Rural electrification was rooted in the conviction that an affordable supply of electricity would improve the standard of living and the economic viability of the farm. Indeed, by 1939, the REA funded and helped

authorized the President to create the Public Works Administration and provided \$3.3 billion in initial funding." Steven A. Ramirez, *The Law and Macroeconomics of the New Deal at 70*, 62 MD. L. REV. 515, 554 (2003).

111. The U.S. Supreme Court struck down NIRA as unconstitutional in *A.L.A. Schechter Poultry Corp. v. United States*, on May 11, 1935. 295 U.S. 495, 542 (1935). President Roosevelt established the Rural Electrification Administration (REA) via Executive Order 7037 on the same day. Exec. Order No. 7037 (May 11, 1935). REA's duties and functions were "[t]o initiate, formulate, administer, and supervise a program of approved projects with respect to the generation, transmission, and distribution of electric energy in rural areas." *Id.*

112. See Research on the Economic Impact of Cooperatives, Rural Electric, <http://reic.uwcc.wisc.edu/electric> (last visited Apr. 2, 2010) (discussing the Electric Cooperative Corporation Act, drafted in 1937 as "a model state law for formation and operation of rural electric cooperatives," designed to help with the purchase of electric power).

113. Morris L. Cooke, *Electrifying the Countryside*, SURVEY GRAPHIC, 1935, available at <http://explorepahistory.com/odocument.php?docId=493>.

114. Wake Electric, History, <http://www.wemc.com/history.aspx> (last visited Apr. 2, 2010).

115. *Id.*

“establish 417 rural electric cooperatives, which served over 288,000 households.”¹¹⁶ Hence, the number of rural households with electricity increased to 25%, from 10% in 1933.¹¹⁷

C. *The Stimulation of Supply and Demand*

As the number of rural households with electricity increased, an interesting phenomenon took place: these farmers required more energy than city dwellers.¹¹⁸ Moreover, when rural residents finally managed to get connected to the power grid, they also began purchasing refrigerators, stoves, and other electric appliances.¹¹⁹ These sales helped spur local economies by increasing business for local merchants.¹²⁰ The demand for more electricity also served to defray some of the added costs of stringing power lines across the countryside.¹²¹

Furthermore, to help support this thriving segment of the local economy, the TVA established the Electric Home and Farm Authority (EHFA).¹²² The EHFA's mission was to extend low interest credit to farmers for the purpose of purchasing major electric appliances like electric ranges, refrigerators, and water heaters at reasonable prices.¹²³ Thus, the EHFA catalyzed an increase in the manufacture

116. Electricity for All, *supra* note 102.

117. *Id.*

118. *Id.*

119. *Id.*

120. *Id.*

121. *Id.*

122. The Electric Home and Farm Authority [EHFA], a retail sales finance company owned and operated by the United States government, was organized in 1934 in accordance with an Executive Order of the President of the United States ‘for the purpose of promoting and financing the sale of electric appliances.’ Initially a coordinate agency with the Tennessee Valley Authority, it was designed to aid in ‘developing and fostering an increased use of electric power through the double reduction of cost of electricity to the consumer and the cost of electrical appliances.’

Joseph D. Coppock, *Organization and Operations of the Electric Home and Farm Authority*, in *Government AGENCIES OF CONSUMER INSTALMENT [sic] CREDIT* 91, 93 (Joseph D. Coppock ed., 1940) (quoting Exec. Order No. 6513 (Dec. 19, 1933)). On August 1, 1935 the EHFA's jurisdiction was extended beyond the Tennessee Valley region to the entire country. *Id.* at 93–94.

123. See, e.g., Gregory B. Field, “*Electricity for All: The Electric Home and Farm Authority and the Politics of Mass Consumption, 1932–1935*,” 64 *BUS. HIST. REV.* 32, 33 (1990).

Using the TVA's mandate for the distribution of inexpensive electric power and experimenting with new methods of state intervention in the economy, Lilienthal created the Electric Home and Farm Authority (EHFA), a federal credit agency designed to subsidize and stimulate consumer purchases of

and distribution of major appliances.¹²⁴ Indeed, the program was so successful that these appliances were sold at local electric cooperatives and local power companies.¹²⁵

Over the next few decades, the number of rural cooperatives doubled and the number of consumers tripled.¹²⁶ Consequently, the number of rural consumers who were connected to and served by the rural electric system grew at an exponential rate. By 1953, over 90% of the farms across the United States were connected.¹²⁷ Today, that number has increased to above 99%.¹²⁸ After almost sixty years of lighting up rural America, the REA was abolished in 1994 in a dramatic overhaul of the Department of Agriculture that created the Rural Utilities Service (RUS) to fill the gap that the REA's elimination left.¹²⁹ Nevertheless, "[t]he electric loan programs [and the cooperatives] continue to operate, much as they did under REA."¹³⁰

One other key fact about Morris Cooke and the REA is critical to this history. The REA diverged from every other New Deal program "in that it did not involve much federal spending beyond the wages of its staff. Instead it was a loan program, a sort of 'government capitalism.' The REA extended low-interest loans and staff experts to cooperatives created by rural people who wanted electricity."¹³¹ And even after the disappearance of the background framework, cooperatives all across the nation are still producing electricity.¹³² In addition, since its inception some seventy-five years ago, the default rate on any of the funds that the federal government loaned to these cooperatives has been negligible (less than 1%).¹³³

electric appliances, primarily refrigerators, ranges, and hot water heaters. For the ambitious young director, the EHFA involved much more than selling a few iceboxes in the steamy Southeast. By increasing sales of refrigerators and other goods through the EHFA, Lienthal sought to forge a political economy of mass consumption

Id.

124. *Id.* at 36.

125. Electricity for All, *supra* note 102.

126. NRECA, *supra* note 103.

127. *Id.*

128. *Id.*

129. See 7 U.S.C.S. § 6942 (LexisNexis 2010) (establishing the Rural Utilities Service).

130. NRECA, *supra* note 103.

131. Sibley, *supra* note 99.

132. See National Rural Electric Cooperative Association [NRECA], Co-ops by the Numbers, <http://www.nreca.org/AboutUs/Co-op101/CooperativeFacts.htm> (last visited Apr. 23, 2010) ("[E]lectric cooperatives . . . deliver 10 percent of the total kilowatt hours sold in the U.S. each year").

133. See e.g., Laurence J. Malone, *Rural Electrification Administration: Market Failure in Delivering Electricity to Rural Areas Before 1930*, EH.NET ENCYCLOPEDIA, Mar. 16, 2008, <http://eh.net/encyclopedia/article/malone.electrification.administration.rural> (citing D.C. BROWN, ELECTRICITY FOR RURAL AMERICA 80 (1980)).

VI. APPLICATION TO WATER

The history of the REA demonstrates that destitute individuals can be helped out of their dire situations where assistance is provided. This means, however, that financial and expert resources must be within their reach. That is the current dilemma facing those without water. There are no available sources of capital to build the needed water infrastructure for the estimated 1.1 billion people worldwide that lack clean drinking water.¹³⁴

Furthermore, given how they are currently organized, neither the UN nor the numerous NGOs have the capital to fund construction of entire systems in the thousands of villages across the world that require potable water.¹³⁵ Moreover, the LDCs and many other underdeveloped countries do not have the funds themselves, or else many of them would have already provided utility services to their residents.¹³⁶ Similarly, international organizations such as the UN Development Programme (UNDP) have not focused their financial resources on the problem of the poor's lack of access to water and would be required to redirect funds from their current programs in order to attempt even a small-scale test project.¹³⁷ Otherwise, it is

("Monies lent through the R.E.A. were also largely repaid, as the default rate was less than one percent.")). *But cf.*, Joel A. Youngblood, Note, *Alive and Well: The Rural Electrification Act Preempts State Condemnation Law: City of Morgan City v. South Louisiana Electric Cooperative Assoc.*, 16 ENERGY L.J. 489, 490 (1995) (citing "increasingly-frequent loan defaults by cooperative borrowers."); *id.* n.7 (citing *REA Asks TVA to Help Stranded Co-ops and Consider Purchase of Big Rivers*, ELEC. UTIL. WK., Aug. 1, 1994, at 8; *Illinois Co-op to Pay Off \$ 28 Million REA Debt at 50 Cents to the Dollar*, ELEC. UTIL. WK., May 23, 1994, at 15; *N.H. Electric Co-op Emerges From Chapter 11 Bankruptcy*, ELEC. UTIL. WK., Dec. 6, 1993, at 3; *NRECA to Oppose Distribution Co-op Guarantees of REA Loans to G&Ts*, ELEC. UTIL. WK., Mar. 5, 1990, at 7).

134. Ashok J. Gadgill & Elisabeth A. Derby, *Providing Safe Drinking Water to 1.1 Billion Unserved People* 2, 8-9 (96th Annual Air & Waste Mgmt. Assoc. Conference, Working Paper No. 70492, 2003).

135. *Id.* at 2, 8, 12.

136. For a review of LDCs, see *supra* note 9 and accompanying text.

137. See e. g., United Nations Development Programme, Energy and Environment, UNDP FastFacts, *Clean Water and Sanitation for the Poor* (Jan. 3, 2003) <http://www.undp.org/water/wwf3/docs/factsheet120303E.pdf>.

Over the past decade, the United Nations Development Programme (UNDP) has managed a US\$900 million budget devoted to sustainable water development in 90 countries worldwide. The organization's presence in the field of water resource management ranges from the international to the community level . . . UNDP offers several different types of service, including: helping countries ensure that integrated water resource management is part of their national development strategies; supporting efforts to make local use and governance of water resources more effective and sustainable; building capacity for cooperative management of transboundary waters; incorporating

fair to assume that they would have spent the money (no more than \$200–\$1,000) to drill a well and lay stand pipes.¹³⁸

Likewise, national aid programs, such as the United States Agency for International Development (USAID), also appear to be uninterested in providing potable water to the forty-three nations it assists in Sub-Saharan Africa.¹³⁹

A. Raising the Capital to Drill Water Wells

Private sources of capital must be mobilized to provide loan programs similar to the REA's if potable water is to be provided to the world's poor. One vigorous and successful method of marshalling private-sourced capital that can be used to fund this type of project is

attention to gender at all levels of water governance; and Cap-Net, an international network offering information-sharing and training to build effective water resource management capacity.

Id. (emphasis added). It is of note that the UNDP budgeted \$90 million per annum for 90 countries—\$1 million per country—a tragically paltry sum. However, even this meager amount was dedicated to studies of “integrated water resource management”; “building capacity for cooperative *management*”; “*information sharing*” but not a penny for providing water to the poor. See also, Press Release, High-Level Event on Water: Interactive Dialogue (AM & PM) Sustainable Management of Water Resources Vital to Achieving Anti-Poverty Goals, U.N. Doc. GA/10925 (Mar. 22, 2010), available at <http://www.un.org/News/Press/docs/2010/ga10925.doc.htm>.

African Heads of State and Government had *shown a great political commitment* to improving the water and sanitation sectors, notably at the 2009 Second African Water Week, held in Johannesburg, where Africa's water challenges were broadly recognized as central to the continent's development agenda. However, 340 million Africans still lacked access to safe water, and 580 million lacked access to basic sanitation. Seven of every ten rural people had no access to a toilet, while 884 million people worldwide used unimproved water sources. In 2006, more than 37 per cent of global population had no access to toilets, latrines or other improved forms of sanitation.

Id. (emphasis added). While the press release mentions “great political commitment,” it gives no indication of a financial commitment.

138. In the United States, the estimated cost of drilling a properly functioning well is twelve dollars per foot. See *How Much Does It Cost To Drill A Water Well?*, FUN TIMES GUIDE TO HOME BUILDING, June 4, 2007, http://homebuilding.thefuntimesguide.com/2007/06/how_much_cost_drill_water_well.php. (noting that “cost may be more, or less [than twelve dollars per foot] dependent upon many factors”). “In countries where the average annual income is several hundred dollars a year, a well or washroom project costing \$2,250 is far beyond the reach of most people in need.” Lifewater, Donors Help the Rural Poor Afford Projects, <http://www.lifewater.ca/about/solution6.htm> (last visited Apr. 23, 2010).

139. Cf. USAID, USAID Initiatives in Africa, http://www.usaid.gov/locations/sub-saharan_africa/initiatives/ (last visited Apr. 23, 2010) (highlighting the following five programs: the Africa Education Initiative; the African Global Competitiveness Initiative; the Anti-Corruption Initiative; the Congo Basin Forest Partnership; and the Initiative to End Hunger in Africa).

the use of microloans.¹⁴⁰ This kind of capital generation has already established itself as an exceptionally robust means of pulling the poor out of poverty.¹⁴¹ Indeed, Bangladeshi economist Muhammad Yunus and his Grameen Bank won the 2006 Nobel Peace Prize for pioneering a new type of banking: microcredit.¹⁴² Professor Yunus defines microcredit, or Grameencredit, as follows:

- a) It promotes credit as a human right.
- b) Its mission is to help the poor families to help themselves to overcome poverty. It is targeted to the poor, particularly poor women.
- c) [The m]ost distinctive feature of Grameencredit is that it is not based on any collateral, or legally enforceable contracts. It is based on “trust”, not on legal procedures and system[s].
- d) It is offered for creating self-employment for income-generating activities and housing for the poor, as opposed to consumption.
- e) It was initiated as a challenge to the conventional banking which rejected the poor by classifying them to be “not creditworthy”. As a result it rejected the basic methodology of the conventional banking and created its own methodology.¹⁴³

Grameencredit’s elements have allowed Yunus and GrameenBank to “provide[] over \$2.5 billion in micro-loans” to 7.5 million Bangladeshis, with an average loan of approximately \$150 and a repayment rate of 98%, which is on par with the repayment rate for REA loans.¹⁴⁴ The Grameen Bank Project (Grameen means “rural” or

140. Cf. Kate Murphy, *Lending Talent, and Money, on a Micro Scale*, N.Y. TIMES, June 24, 2009, at B9, available at <http://www.nytimes.com/2009/06/25/business/smallbusiness/25sbiz.html> (discussing growing interest, as a result of the availability of microloans, of programs teaching poor individuals how to start their own businesses).

141. See, e.g., Robert Hockett, *Insource the Shareholding of Outsourced Employees: A Global Stock Ownership Plan*, 3 VA. L. & BUS. REV. 357, 417 n.177 (2008) (“On the benefit side, finance amounts to opportunity in the quite literal sense that it enables people through the exercise of diligence to ‘make real’ their potentially value-adding ideas. In effect, this is precisely what micro-loans, small business loans, corporate finance and venture capital finance all amount to.”); Lisa R. Pruitt, *Migration, Development, and the Promise of CEDAW for Rural Women*, 30 MICH. J. INT’L L. 707, 741 (2009) (“Women’s federations [in China] ‘coordinate with pertinent sectors to provide on-the-job training’ and they participate in disbursing micro-loans to rural women.”) (footnote omitted).

142. Molly Moore, *Mirco-Credit Pioneer Wins Peace Prize*, WASH. POST, Oct. 14, 2006, available at <http://www.washingtonpost.com/wp-dyn/content/article/2006/10/13/AR2006101300211.html>.

143. Grameen Bank, What is Microcredit, http://www.grameen-info.org/index.php?option=com_content&task=view&id=28&Itemid=108 (last visited Apr. 2, 2010).

144. Devon Roepcke, Comment, “Should I Stay or Should I Go?” Preventing Illegal Immigration by Creating Opportunity in Mexico Through Microcredit Lending, 38 CAL. W. INT’L L.J. 455, 459 n.26 (2008); Muhammad Yunus, *How Legal Steps Can Help to Pave the Way to Ending Poverty*, ABA HUM. RTS., Winter 2008, at 22, available at http://www.abanet.org/irr/hr/winter08/yunus_winter08.html.

“village” in the Bangla language) was developed with numerous objectives, including the following:

- to offer a formal banking system to poor Bangladeshi men and women;
- to eradicate local money lenders’ manipulation of poor villagers; and
- to create an opportunity for self-employment for Bangladesh’s unemployed rural poor.¹⁴⁵

The bulk (97%) of the microloans have been extended to women or to women’s enterprises.¹⁴⁶

B. *The Inner-Workings of the Microcredit System*

Grameen Bank’s loan process is an uncomplicated, no collateral, trust-based financial agreement.¹⁴⁷ It involves no legal documents—primarily because most of Grameen’s borrowers are illiterate.¹⁴⁸ Consequently, the bank employs and relies upon “positive incentives of continued access to credit and other support to ensure repayments.”¹⁴⁹ In fact, Grameen has yet to use either lawyers or the courts to force its borrowers to repay their loans.¹⁵⁰

When a likely borrower seeks a loan, she is required to establish a unit of five other borrowers from her neighborhood—or to join such a group of borrowers—and agree to meet with these other women on a weekly basis.¹⁵¹ The theory behind this grouping is quite novel. First, each member of the group must repay her individual loan before any other group member can apply for a subsequent loan.¹⁵² Second, the women must work together to ensure that each of their enterprises is successful enough so that each woman repays her individual loans while also pressuring each other to remain sufficiently profitable to repay their loans.

145. Grameen Bank, A Short History of Grameen Bank, http://www.grameen-info.org/index.php?option=com_content&task=view&id=19&Itemid=114 (last visited Apr. 2, 2010). The Bank’s other objectives are to

bring the disadvantaged, mostly the women from the poorest households, within the fold of an organizational format which they can understand and manage by themselves; and reverse the age-old vicious circle of “low income, low saving [and] low investment”, into [sic] virtuous circle of low income, injection of credit, investment, more income, more savings, more investment, more income.

Id.

146. Grameen Bank, Is Greenman Bank Different From Conventional Banks?, http://www.grameen-info.org/index.php?option=com_content&task=view&id=27&Itemid=176 (last visited Apr. 2, 2010).

147. Yunus, *supra* note 144, at 22.

148. *Id.*

149. *Id.*

150. *Id.*

151. *Id.*

152. *Id.*

“Grameen’s borrowers are also required to maintain a regular savings” account with the bank.¹⁵³ Indeed, both the bank’s borrowers and their “nonborrowing neighbors as a group have \$150 in savings for every \$100 in loans outstanding.”¹⁵⁴ Grameen’s current funds are thus composed of its poor customers’ savings.¹⁵⁵ And most importantly, the bank has been profitable for twenty-two years of its twenty-five year history,¹⁵⁶ demonstrating how successful the microcredit concept is. The next subpart addresses the issue of how to apply the microcredit system to the problem at hand.

C. Convergence

Grameen’s success with very small amounts of money demonstrates that, for North Americans or Europeans, the amount of seed money is trivial. Loaning \$100 to a villager under the conditions discussed above is almost no gamble at all. It amounts to twenty-seven cents per day over the period of one year. Matches between donor and donee can be made over the internet or via a nonprofit. “The benefactors, in many cases, are ordinary individuals inspired by a movement that is reshaping philanthropy and making it as accessible as the click of a mouse or a visit to a house party.”¹⁵⁷

For example, a recent newspaper article noted that “[a] Peruvian widow borrowed \$64 and bought a few pigs. For \$55, a villager in Ghana went into the mineral-water trade. A mother of nine in Guatemala upgraded her grocery store with \$250.”¹⁵⁸ Microcredit organizations such as NamasteDirect,¹⁵⁹ Kiva.org,¹⁶⁰ and Microcredit Summit Campaign¹⁶¹ have raised millions of dollars from hundreds of thousands of individual lenders.¹⁶²

153. Yunus, *supra* note 144, at 22.

154. *Id.*

155. *Id.*

156. *Id.*

157. Patricia Yollin, *Microcredit Movement Tackling Poverty One Tiny Loan at a Time*, S.F. CHRON., Sept. 30, 2007, at A1, available at <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2007/09/30/MN7QRSUKA.DTL>.

158. *Id.*

159. NamasteDirect, <http://www.namaste-direct.org> (last visited Apr. 2, 2010).

160. Kiva, <http://www.kiva.org> (last visited Apr. 2, 2010).

161. Microcredit Summit Campaign, <http://www.microcreditsummit.org/> (last visited Apr. 2, 2010). The three microcredit organizations named are by no means endorsed herein.

162. Kiva, for example, has risen almost \$130 million from nearly 700,000 investors since 2005. Kiva, Facts & History, <http://www.kiva.org/about/facts> (last visited Apr. 2, 2010).

D. Deploying Experts

Once sources of capital have been located, the next step is to tap the well drilling community. A corps of retired and volunteer well drillers can be assembled to teach members of a particular region how to drill wells. This learned local cadre would then fan out to other villages to impart their knowledge of boring wells.

The incentive for the various tribes and other groups to work together would be that the initial group could not have wells drilled in its village until it taught and helped at least one village or group to drill wells. This requirement would then be imposed on each subsequent group. This motivational tool is akin to Grameen Bank's requirements that each borrower not borrow until she gathers or joins a group of five and that no further loans be granted until every member of the group has repaid her loan.

This Article envisions that this system would be introduced in every LDC and soon become self-sustaining. Repayment of the loans would take place once each village had a standpipe that would provide potable water to the village. At that point, the women and children in each village who do the back-breaking work of fetching water would have more time to devote to either starting or expanding businesses and going to school. The men would be required to contribute. Additionally, since waterborne diseases would decrease dramatically as a consequence of the new supply of potable water, illnesses would also diminish significantly, thereby making the population healthier and more productive.¹⁶³

Since each village already has a governance structure (e.g., a chief or other executive leader and possibly a governing council), this structure can be employed to gather the repayment funds and decide what type(s) of businesses would best suit the village's members.¹⁶⁴ Thus, the existing institutional link between the individuals in each

163. UNICEF, Water, Sanitation and Hygiene, <http://www.unicef.org/wash/index.html> (last visited Apr. 2, 2010).

Children—and particularly girls—are denied their right to education because their schools lack private and decent sanitation facilities. Women are forced to spend large parts of their day fetching water. Poor farmers and wage earners are less productive due to illness, health systems are overwhelmed and national economies suffer.

164. See, e.g., Oran R. Young, *Rights, Rules, and Resources in World Affairs*, in *GLOBAL GOVERNANCE: DRAWING INSIGHTS FROM THE ENVIRONMENTAL EXPERIENCE* 1, 2 (Oran R. Young ed., 1997) ("Dealing with environmental concerns has also brought to our attention the need to think more systematically about institutional linkages and about the ways in which individual regimes are embedded in larger institutional structures and impinge on one another in international society.").

village and those embedded among disparate villages would drive the institutional structure for repayment and business development.

As each village begins to develop, it can then branch out to provide proper sanitation and educational opportunities for children, since children would not need to stay home to help with retrieving water and watering gardens. Additionally, village councils would be able to provide other amenities to villagers, just as rural farmers in the New Deal era were able to purchase appliances.

VII. CONCLUSION

If legal tools are to benefit the world's poor and disenfranchised, they cannot be void due to a perceived impossibility of implementation. This is the problem with the purported human right to water. It is quixotic. International lawyers thus must ferret out the means to provide those who have little or no access to potable water and proper sanitation with a suite of meaningful and workable legal options. If they do not, then paper tigers will continue to fill law reviews without ameliorating the problem.

The tools proposed here, including the use of microcredit loans and the implementation of a mechanism such as REA's loan program, will aid the 2.2 billion people in the world who lack potable water and proper sanitation. Both of these approaches have been tested across several decades, and they have proven capable of solving the problems facing the disenfranchised persons of the world.
