2007

International Water Disputes: How to Prevent a War over the Nile River

Lee A. Laudicina
Loyola University Chicago, School of Law

Follow this and additional works at: http://lawecommons.luc.edu/lucilr
Part of the International Law Commons

Recommended Citation
Available at: http://lawecommons.luc.edu/lucilr/vol4/iss2/4

This Student Article is brought to you for free and open access by LAW eCommons. It has been accepted for inclusion in Loyola University Chicago International Law Review by an authorized administrator of LAW eCommons. For more information, please contact law-library@luc.edu.
INTERNATIONAL WATER DISPUTES: HOW TO PREVENT A WAR OVER THE NILE RIVER

Lee A. Laudicina†

The next war will be over water, not politics.
Boutros Boutros-Ghali

I. Introduction

One out of every three people lacks access to an adequate supply of water, and with significant population increases, urbanization, pollution, and global warming, the problem is rapidly intensifying. While the global population has tripled in the last century, water consumption has increased over six-fold. Thus, because the world has only a fixed amount of water, geopolitical, social, and health concerns are escalating. As the demand for water on a worldwide basis doubles every twenty-one years, 35% of the global population is projected to suffer from water scarcity or water stress by 2025. Such shortages cause 3.4 million people to die from water-related illnesses each year.

United Nations figures suggest there are nearly 300 potential water conflicts around the world. Because more than two billion people in the world lack access to clean drinking water, tensions are most acute in developing countries, where the little water resources that are available are often polluted or squandered. Additionally, more than “90% of all future population increases will take

† Lee Laudicina is a Juris Doctor candidate at Loyola University Chicago School of Law, 2008. He received a Bachelor of Arts from the University of Michigan, 2005.


5 Id. at 807–8. Water scarcity is one thousand cubic meters or less of fresh water available to each person per year. Water stress is between one thousand and seventeen thousand cubic meters of fresh water available to each person per year. Id. at 807.


7 Id.


9 Looming Source of World Conflict, supra note 6.
place in the developing world." Many, therefore, recognize the Nile Basin as the most likely spot for a war over water; former Secretary-General of the United Nations, Boutros Boutros-Ghali, said the next war in Northern Africa would be over the waters of the Nile. Because population rates are among the highest in the world, each African country shares at least one river basin with a neighboring nation. With the ten Nile Basin countries continuing to disagree over its use, the region must develop a system of water use based upon transnational cooperation in order to ensure future political stability.

Despite the global concern over water scarcity, infrastructural and political barriers have historically blocked international transboundary agreements across the globe from producing effective systems of water management. Recent negotiations between the United States and Mexico, however, peacefully ended a fifty year struggle over the shared waters of the Rio Grande River. While it has yet to be seen if the recent progress will solve the region's long-term water problems, it exposed methods of cooperation that can be used to foster international agreement in Northern Africa.

This article will examine the negotiations between the United States and Mexico as a basis for suggesting a method of transboundary cooperation to ease intensifying conflicts over water use in Northern Africa. Even if the current water shortage does not cause outright warfare in the near future, "it already causes enough violence and conflict within [African] nations to threaten social and political stability." Part II of this paper will analyze the effectiveness of the negotiations between the United States and Mexico. Part III will introduce the water problems in Northern Africa, specifically along the Nile River. It will then examine the current status of international cooperation efforts and explain the possible consequences that will result without a change of strategy. Part IV will introduce and critique two proposed solutions to global water scarcity: treating access to water as a basic human right, and privatizing the water supply by making water an economic good. Part V will compare the situation between the United States and Mexico to that of the Nile River Basin and explain why each requires a unique solution. It will then combine aspects from the United States-Mexico dispute, the privatization model, and the human rights approach to pro-

---

10 McCaffrey, supra note 4, at 805 (quoting Stephen McCaffrey, Water, Politics and International Law, in Water in Crisis, 105 (Peter H. Gleick ed., 1993)).


12 Pipes, supra note 1.


pose an optimal framework for a successful water management plan in Northern Africa based on common interests, transnational institutions, private funding, and minimal standards of water allocation and quality.

Although the current setting in the Nile River Basin may likely cause military conflict, effective planning and cooperation can mold future water issues through effective peacemaking and diplomatic efforts.

II. The United States—Mexico Water Dispute

The United States and Mexico signed a treaty in 1944 to share the waters of the Rio Grande, which provides drinking water for over thirteen million people. Under the terms of the treaty, the United States gains access to one-third of the water flowing into the Rio Grande, equaling a minimum of 350,000 acre-feet annually. In return, Mexico receives 1.5 million acre-feet of water per year from the Colorado River. Putting this number into context, economists estimate that each acre-foot of irrigation water used in the border region is worth about $652 to the local economy. With such profound economic importance, the 1944 treaty stipulated that, "if Mexico cannot deliver the required minimum for a five-year accounting cycle because of extraordinary drought or serious accident to the water infrastructure... Mexico must make up the deficit during the following five-year cycle." The treaty also created the International Boundary and Water Commission ("IBWC") to oversee the distribution of water between nations.

Up until the 1990s, Mexico was able to satisfy its internal needs as well as its obligations under the treaty because of a water surplus. However, during recent years, Mexico has not upheld its end of the agreement. Mexico began to fall behind on water deliveries to the United States in 1992, and a decade later, it owed the United States roughly 450 billion gallons of water. Severe droughts in 2000 and 2001, paired with over exploitation of water resources, severely de-
International Water Disputes

pleted the Rio Grande. The shortage was so severe that in February 2001 the Rio Grande stopped reaching the Gulf of Mexico for the first time in nearly 500 years because sand banks and plant growth blocked its lessened flow.

Debate over which country should have access to the dwindling water supply has become a source of mounting tension between federal and state governments. With thirty-eight Mexican cities facing severe water shortages, Mexico blamed one of its worst droughts in fifty years for failing to meet the treaty’s demands. However, American farmers alleged that Mexico was unjustly using water to increase its own agricultural production.

In August 2001, a Mexican agricultural union filed suit in a Mexican court to stop repayment of the water, claiming they were not left with enough water for themselves. Similarly, American farmers brought suit against Mexico under the North America Free Trade Agreement ("NAFTA"), seeking $500 million for damages and crop losses.

Mexico owed the United States over 1 million acre-feet of water from the 1992–1997 period, plus an additional 300,000 acre-feet from the 1997–2002 period. The 1944 treaty specifies that Mexico can defer water payments to the following five-year period if there is a condition of "extraordinary drought," but the treaty does not define "extraordinary drought." This omission effectively leaves "the determination [of who gets the water] in the hands of the upstream party when negotiators for the two countries are unable to agree." Such ambiguity has fueled debate over the true extent of the drought and ignited criticism of the treaty. Like many columnists across the United States who have called for revision of the treaty, Ruben Navarette of the Dallas Morning News wrote, "[t]he 1944 Treaty was tainted from the beginning."


Treat, supra note 25.

Kelly, Solis & Kourous, supra note 17.

Treat, supra note 25.

Kelly, Solis & Kourous, supra note 17.

Mexico’s Water Debt, supra note 16, at 5.

Id. at 6.


Kelly, Solis & Kourous, supra note 17.

Id.


Id.

Id.
Despite inherent flaws, the 1944 treaty is binding and the possibility of entering into an alternate treaty is highly unlikely. Professor Stephen P. Mumme explains that the treaty is “practically immutable, as difficult to change in its text as any international agreement to which the United States is a party.”

While the treaty’s text has never been modified, it has produced over 300 minutes—official statements of meaning and intent adopted by the IBWC. Without a system of strategic planning for management of water resources, the treaty relies on an ad-hoc approach to problem solving. The treaty also fails to set rules to manage droughts continuing beyond a two-cycle interval (ten years or more). Although the IBWC has authority to interpret the treaty to solve such problems of ambiguity, the treaty does not explain the specific role the commission should take in interpreting the hydrological data it collects. Thus, the IBWC monitors water flows and shares information, but because the authority to interpret data remains with the governments of the United States and Mexico, its power of enforcement is circumscribed and international agreements are subject to the difficulties of political diplomacy.

While the treaty has only produced one drought-related minute in the past forty years, there have been three such minutes since 1995. Even though the recent drought was substantial, demand for water continues to grow, making it hard to determine how much of the shortage results from decreased rains.

Minutes 307 and 308 are responses to the United States’ demands that Mexico repay its deficit (estimated at 1.4 million acre-feet in 2001). In Minute 307, Mexico agreed to give the United States 600,000 acre-feet of water in the coming months or to adopt other methods to meet its obligation under the treaty. Minute 307 also committed the governments to “work jointly to identify measures of cooperation on drought management.” When Mexico failed to deliver the 600,000 acre-feet by the time stipulated in Minute 307, the two governments agreed on Minute 308, committing Mexico to provide the United States with 90,000 acre-feet of water. Minute 308 also provides that the governments must

---

39 Id.
40 Id. (noting that altering the treaty would affect domestic water law in a number of states, as well as impact half a dozen interstate compacts).
41 Id. at 3 (noting that the minutes were adopted in meetings of the IBWC and signed by representatives from the United States and Mexico).
42 Id. at 2, 3.
43 Id. at 4.
44 Id.
45 Id.
46 Id. at 5 (noting that there was a drought-related minute passed in 1952).
47 Id.
48 Id.
49 Id.
50 Id.
51 Id.
International Water Disputes

ask international funding agencies to help finance conservation projects in Mexico and must also increase data exchanges on water flows between the nations.\textsuperscript{52}

Abundant rains in 2003 and 2004 allowed Mexico to reduce its debt to the United States to below 800,000 acre-feet and temporarily quieted dissatisfied farmers on both sides of the border,\textsuperscript{53} but environmental groups assert that alleviating the immediate water shortage will do little to solve the border region’s long-term water problems.\textsuperscript{54} According to a recent study by the Universidad Nacional Autonoma de Mexico (“UNAM”), Mexico’s cities lose almost 40% of their water “as a result of leaks and faulty equipment. In some cities, half the water is lost due to such problems.”\textsuperscript{55}

Nevertheless, the recent treaty minutes represent significant progress toward solving such problems and fostering international cooperation. The minute procedure has turned out to be “a flexible mechanism of binational cooperation, allowing for the application, extension, elaboration, and modification of the treaty’s provisions.”\textsuperscript{56} Further, the United States and Mexico, in the last decade, have recognized the need to create sustainable water management plans, pursue international financing, increase data sharing, strengthen the IBWC, and to develop a forum for binational cooperation.\textsuperscript{57}

While abundant rains and positive agreements have tamed the United States—Mexico conflict for now, without increased cooperation around the globe, similar future conflicts will escalate much further.

III. Water Problems of the Nile Basin

The Nile River, the world’s longest river, runs through much of Africa, yet 36\% of Africa’s population lacks access to clean drinking water.\textsuperscript{58} The Nile Basin, home to 160 million people,\textsuperscript{59} suffers from “poverty, [political] instability, rapid population growth, environmental degradation and frequent natural disasters.”\textsuperscript{60} Such problems have made international agreement concerning water use very difficult.

The waters of the Nile are shared by ten countries—Kenya, Burundi, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Rwanda, Sudan, Tanzania,
International Water Disputes

and Uganda—four of which are among the world’s ten poorest states. The 1929 Nile Basin Treaty, revised in 1959, regulates the use of the Nile waters today. The treaty pits Egypt and Sudan against the other riparian nations by prohibiting the other eight countries from undertaking any project that may cause a drop in Egypt or Sudan’s water level without getting permission from both Egypt and Sudan first.

Tension over the Nile started in colonial times when nations with colonial representation (Sudan and Egypt) were able to exploit the resources of the other Basin nations. At the beginning of the twentieth century, a world cotton shortage led Egypt (under British rule) to focus on producing cotton, which requires constant irrigation and high levels of water. The Nile Projects Commission, comprising representatives from India, the United Kingdom, and the United States, was formed in 1920 to compile estimates of each of the Basin states’ water needs. By the end of World War I, Egypt recognized the need to create a formal agreement on water allocation before further advancing any regional development plans. The 1929 Treaty ensued, giving most of the Nile’s water to Egypt. Sudan later convinced Egypt that its population was 50% larger than estimated in 1929 and the two countries adjusted the water allocations accordingly by revising the treaty in 1959.

The Nile produces an estimated seventy-four BCM (billion cubic meters) of water annually for distribution among Basin nations. Under the 1959 agreement, Egypt receives fifty-five and a half BCM per year and Sudan receives eighteen and a half BCM per year. Egypt and Sudan estimated that the combined needs of all other riparian nations would not exceed one or two BCM per year. The treaty specified that if any other nation wanted to make a claim for more water, it would have to be approved by a unified Egyptian-Sudanese position. Egypt also reserved the right to unilaterally begin any Nile-related project

63 Id. at 1.
64 Id.
66 Id.
67 Id.
68 Id.
69 Id.
71 Id.
72 Id.
73 Id.
74 Id.
International Water Disputes

without the consent of the other riparian nations. Despite the glaring inequities, the other basin nations have adhered to the allocations of the treaty until present day, and no other riparian nation has exercised a legal claim to the waters distributed under the 1959 treaty.

However, the other riparian nations have expressed dissatisfaction with their current access to Nile waters. Ethiopia, for example, one of the world’s poorest nations, accounts for more than 75% of the water flowing into the Nile, but consumes less than 1% of the Nile’s water. Since 1957, Ethiopia has spoken of pursuing unilateral water development and has recently announced plans to use Nile water for irrigation. Similarly, Tanzania is formulating a $27.6 billion project to construct a pipeline which extracts drinking water from the Nile. Further, since its independence, the Kenyan government has stated publicly that it does not recognize the treaty. Despite such dissatisfaction, the treaty has remained intact because Egypt has made it known that it will consider any attempt to violate the treaty as an act of war.

In renouncing the treaty, Tanzania’s Minister of Water Resources, Edward Lowasa, explained its inequitable underpinnings by saying, “the treaties have been entered into without the consent of the people of the region. The British had no mandate to sign treaties with Egypt on our behalf.” As outrage spread throughout Northern Africa, the East African press printed editorials chronicling the injustice of the treaty as a “colonial relic.”

However, Egypt’s Minister of Water and Irrigation, Mahmoud Abu-Zeid, exclaimed that “any unilateral change in the 1929 Nile Basin Treaty would be a breach of international law.” Even though all the riparian nations did not ratify the treaty, Abu-Zeid’s claim has merit because non-party states are bound by a provision in an international treaty when it rises to the level of international customary law (as the Nile Basin Treaty has). As a result, for change to be effec-

76 Hobbs, * supra* note 58.
77 See Nkrumah, * supra* note 75.
78 * The Nile Waters Agreement*, * supra* note 70; Mulama * supra* note 62 (providing that 80% of Ethiopians live under the poverty line of a dollar a day).
79 Foulds, * supra* note 65.
81 Nkrumah, * supra* note 75.
83 See Majtenyi, * supra* note 61.
84 Nkrumah, * supra* note 75.
86 * Id.*

242 Loyola University Chicago International Law Review Volume 4, Issue 2
tive, it must be agreed upon collectively with all the riparian nations, including Egypt and Sudan.

Recognizing the need for collective action, the Nile nations took a historic step by establishing the Nile Basin Initiative ("NBI") in February 1999. The program was designed "to achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources." The NBI created the Nile Council of Ministers ("Nile-COM"), comprising water ministers from all of the riparian countries, as its highest decision-making body. The Nile-COM released a statement declaring, "[w]e all believe that by moving together to major joint development, we can look forward to peace and prosperity and not backwards to dispute and conflict." However, the NBI is only a transitional arrangement designed to foster communication until a permanent framework is in place. While the NBI is a great step toward diplomacy, until a permanent water management program is created, conflict will continue to escalate.

The NBI did not establish specific goals or deadlines for progress; it focused more on building trust. The World Bank Senior Water Advisor, David Grey, stated that the NBI's goal is to negotiate a legal framework for establishing and discussing development projects, but such progress has "yet to be attained in its seven years of existence." Accordingly, the NBI has many critics, including Mekonen Loulseged, head of the Ethiopian Ministry of Water Resources’ Design Department, who stated that, "[u]ntil the agreement of 1959 is null and void, cooperation will be unsustainable." Journalist Gamal Nkrumah added that, "the gap between the NBI’s aims and means leaves the body ineffective and unconvincing."

For the NBI to reach its goal, the Nile region must have greater political stability. Achieving stability includes ending civil wars and border disputes. Contributing to the current instability are "recent or ongoing armed conflicts in at least four, and between two of the [stakeholder countries]." As a result of the present political environment, Jo Raisin, a consultant with the United States Agency for International Development, stated that "the projects of the NBI will

---

88 Nile Basin Initiative: Overview, supra note 60.
89 Id.
90 O’Regan, supra note 85.
91 Id.
92 Nile Basin Initiative: Overview, supra note 60.
93 O’Regan, supra note 85.
94 Id.
95 Foulds, supra note 65.
96 Nkrumah, supra note 75.
97 Id.
98 Id.
99 Foulds, supra note 65 (remembering that Sudan is suffering from a period of civil war and its government allegedly organized efforts to overthrow Egypt’s president, Hosni Mubarak).
International Water Disputes

take at least twenty years to implement.”100 Such instability has already lead to unilateral actions which threaten the effectiveness of the NBI, such as the irrigation plans in Ethiopia and the pipeline construction in Tanzania. Kenyan politician Samson Ojiayo encouraged Kenya to take water for itself because a “war on one nation means war on all.”101 A source close to the Tanzanian government who refused to be named added, “[w]e cannot sit and wait while we can save our people from famine.”102 Such sentiments illustrate the increasing probability of a water war in Northern Africa.

Other problems in the area include recurrent droughts, conflicts of interest stemming from ethnic rivalries,103 and severe pollution.104 For example, Lake Victoria, the Nile’s major source, “has become the toilet for East Africa. People are doing all sorts of things in the lake—including urinating [and] passing stools.”105 While the NBI has much work left to do, “if countries sharing the waterway are able to rise above the history, the poverty, and the conflict that threatens cooperative engagement, the pay-off may be significant economic development and regional peace.”106

Today, the 1929 treaty continues to govern the Nile Basin as customary international law. The NBI represents a momentous step of collective action, but without effective enforcement mechanisms in place, it will not prevent conflict. Despite international discussions beginning to form, Egypt still controls the water supply, tensions remain high, and faced with extreme poverty, disease and drought, other Basin nations are beginning to take unilateral actions to violate of the treaty.

IV. Proposed Solutions to International Water Disputes

There are two main approaches to solving problems of transboundary water allocation: privatizing the water supply and recognizing a human right to water. This section will briefly explain each method and then show why neither solution would be effective in Northern Africa.

A. The Privatization of Water

In an effort to bring economic improvements to developing countries, some governments have begun to treat water as a commodity by privatizing water sys-

100 Id.
101 Mulama supra note 62 (Samson Ojiayo is a Coordinator of Bunge la Wananchi [Parliament of the People]).
102 Id.
103 Foulds, supra note 65.
104 Hobbs, supra note 58.
105 Id. (quoting Rosemary Rop of Maji na Ufanisi [Water and Development], a non-governmental organization in Kenya).
106 O’Regan, supra note 85.
International Water Disputes

tem.\textsuperscript{107} Under the privatization approach, governments solicit private companies “to take over the management, operation, and sometimes even the ownership of the public water sector.”\textsuperscript{108} The system’s proponents, such as the World Bank, claim that privatization provides incentives for countries to preserve water resources and promotes efficiency in services.\textsuperscript{109}

Privatization would give individuals who have a direct personal stake in the enterprise the power to make decisions regarding the price of water.\textsuperscript{110} It also has the potential for quick results because the private sector can more easily obtain capital than the public sector.\textsuperscript{111} Such access to capital would be especially useful in poor nations that do not have the necessary funding to improve flawed infrastructures.

However, privatization has brought fervent opposition. In March 2006, thousands of people marched through Mexico City protesting water privatization; it was the first time an environmental issue had mobilized so many people.\textsuperscript{112} Many fear that “profit-driven companies will be reluctant to serve the poor”\textsuperscript{113} and will take advantage of gratuitous price increases.\textsuperscript{114} Water sold as a commodity is often only affordable to the privileged and can deepen inequalities between the rich and poor.\textsuperscript{115}

Recent privatization projects have not been successful, even in poor, developing nations.\textsuperscript{116} In Latin America, for example, “private concessions have exacerbated inequities in access to water by focusing services in lucrative urban zones and ignoring areas where the need is worst.”\textsuperscript{117} Experts have also declared one of the world’s largest privatization efforts, taking place in the Philippines, a failure because of substantial increases in water rates, water losses due to inadequate infrastructure, and insufficient private funding to maintain programs for the urban poor.\textsuperscript{118}

Nile Basin nations cannot afford the risk of increased civil protest or violence. The director of the International Relations Center Americas Program, Laura Carlson, exclaimed, “[t]he privatization model for water use and distribution has failed to deliver. It’s time to make room for new, more democratic, alterna-

\textsuperscript{108} Id. at 218.
\textsuperscript{109} Id. at 229.
\textsuperscript{110} Id. at 234–35.
\textsuperscript{111} Id. at 233.
\textsuperscript{112} Carlsen supra note 8.
\textsuperscript{113} Id. at 219.
\textsuperscript{114} Id. at 235.
\textsuperscript{116} Miller, supra note 107, at 219.
\textsuperscript{117} Carlsen, supra note 8.
\textsuperscript{118} Miller supra note 107, at 220.
International Water Disputes

tives.”119 Globally, public opinion is strongly against private-sector management of water resources,120 and people more often view water as a basic human right that should not be managed by private companies.121

B. Water as a Human Right

It is hard to imagine many things more deserving of human right status than access to water; life cannot exist without water. Yet, human rights are a relatively new and rapidly expanding source of international law.122 Human rights are “the freedoms, immunities, and benefits that, according to modern values (especially at an international level), all human beings should be able to claim as a matter of right in the society in which they live.”123 Such human rights are protected by international standards that ensure fundamental freedoms and are normally held by citizens and enforced against their nation of citizenship.124

Human rights are divided into two categories: welfare rights and liberty rights.125 Welfare rights are those rights necessary to assure the availability of goods or services vital to human well-being.126 They are positive rights because the state must take affirmative action to ensure welfare rights exist for its citizens.127 Such rights include economic, cultural, and social rights.128 Liberty rights are those which the government cannot interfere with, such as civil, political, and moral rights.129 Liberty rights are negative rights because the state is only required to refrain from interfering with them; there is no duty for the state to actively provide liberty rights.130

Currently, international law does not explicitly recognize the right to water as a human right. If there is to be such a right, it must either be inferred from existing rights or created as a right in itself.131 Inferring the right is a realistic possibility because the dependency on water to survive closely parallels rights already considered customary in international law. If inferred from the right to life, the right to water would become a liberty right and governments would only be obligated to prevent interference with access; there would be no obligation to

119 Carlsen, supra note 8.
120 Id. at 1.
121 Id.
123 BLACK’S LAW DICTIONARY 712 (7th ed. 1999).
124 Government Obligations, supra note 87, at 536.
125 Id. at 537.
126 Id.
127 Id.
128 Id.
129 Id.
130 Id.
International Water Disputes

provide a minimal amount of water to citizens. Another option arises through Article 25 of the Universal Declaration of Human Rights, which proclaims that everyone has "the right to a standard of living adequate for the health and well-being of himself and of his family, including food." Such a standard of living could not be maintained without access to a minimal level of clean water. If included under the right to a standard of living, the right to water would become a welfare right, giving the state a positive duty to provide access for its citizens. While an inadequate water supply would then seemingly constitute a violation of the right to water, an expectation of unlimited access is not realistic, so international law would have to create a middle ground. A solution could require states to deliver a minimum allowance of water to citizens, but only if they have the economic ability to do so.

With a welfare right to water, the question arises whether neighboring states have the obligation to assist nations which do not have the capability of providing an adequate amount of water to their citizens. It is generally accepted in international law that a state can exploit its own resources, but cannot exploit the resources of other states. Fair resource sharing can be achieved by following the doctrine of equitable utilization which allows a nation to "utilize a resource as long as it does not harm another user who is using the resource equitably." In administering water as a human right, "it seems clear that a state's "right" to receive water from a co-riparian state would not require more from the co-riparian than that it use the international watercourse in an equitable and reasonable manner." However, equitable utilization sets a vague standard of what is considered "equitable" and how to determine whether a state is "economically capable" of providing minimum levels of water. Such ambiguities will prove especially difficult to enforce in Northern Africa, where nations are plagued by political instability, tension, and contrasting cultures.

If created as its own individual right, access to water would likely become a welfare right, just as other social rights. While the right to water has not reached status as international customary law, textual support has increased recognition of the right to water and several nations, including South Africa and Ethiopia, have already begun to recognize a human right to water. In 2002,

---

132 See Hardberger, supra note 122, at 344, 336.
133 Hardberger, supra note 122, at 337; McCaffrey, supra note 131, at 1 (Article 25 was adopted by the United Nations General Assembly in 1948).
134 McCaffrey, supra note 131, at 8.
135 Government Obligations, supra note 87, at 540.
136 Id. at 543.
137 Id. (equitable utilization does not mean that neighboring states have to have equal access to water. It simply means each state should be able to provide at least a minimal standard).
138 McCaffrey, supra note 131, at 23.
139 Hardberger, supra note 122, at 354.
140 Government Obligations, supra note 87, at 539.
Comment 15 of the International Covenant of Economic, Social, and Cultural Rights ("ICESCR") recognized water as a separate right. The comment states:

The 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.

This definition is significant because it mentions the quantity, quality, and accessibility to water; not just a general need for drinking water. While Comment 15 is not binding per se, it is intended to clarify rights given in the covenant, and provides strong support for establishing water as a human right by raising levels of social and political awareness.

However, recognizing water as a human right is not the best mechanism for bringing a timely solution to the problems of the Nile River Basin. Establishing a human right to water is purported to help reduce poverty by raising the living standard, but there is no guarantee of such a result. While the right to food, for instance, is recognized as a human right, widespread famine still exists. Furthermore, the unstable and impoverished nations of the Nile Basin would have extreme difficulty enforcing claims of deprived water access; especially claims regarding co-riparian nations. In countries that currently recognize water as a human right, like South Africa, the local courts adjudicate accountability in situations of misuse. However, such an enforcement mechanism would be ineffective against co-riparian nations as questions of jurisdiction, and the responsibilities neighboring states owe one another are yet to be definitively answered. Moreover, most Nile Basin countries suffer from dysfunctional judicial systems and most judges are unable to adjudicate water disputes effectively because government administrative institutions often undermine the independence of judiciary systems. While a human right to water may eventually become customary international law, with rapidly diminishing resources, increasing poverty, and continuing political instability, the riparian nations of the Nile Basin cannot wait until that time comes.

141 Hardberger, supra note 122, at 348.
142 Id.
143 Id.
144 Id. at 349.
145 Id. at 338.
146 Id. at 336.
147 Government Obligations, supra note 87, at 564.
148 Okaru-Bisant, supra note 13, at 336.
V. A Solution for the Nile Basin

The general contention among international practitioners and commentators is that it is not possible to establish a generic model of water law applicable to all nations. Yet, great progress can be made in the Nile Basin if the riparian nations supplement the NBI by extracting features from the recent United States—Mexico negotiations, the privatization model, and the human rights model. To prevent future conflict, Basin nations should focus on their common interests and develop a central institution backed by private funding that has the power to enforce agreements, which maintain flexible standards of water allocation and quality.

There are a number of reasons why the current decision-making body in Northern Africa, the Nile-COM, cannot merely mimic the United States—Mexico agreements. First, abundant rains were arguably the most influential factor enabling Mexico to satisfy the United States' demands for repayment. In the Nile Basin, however, drought conditions have not subsided in recent years. Furthermore, the United States and Mexico are allies and much more politically stable than the ten riparian nations of Northern Africa. Also, the 1944 treaty was ratified by both North American countries; the 1959 agreement, however, did not include eight of the riparian nations. Ten poverty-stricken nations desperate for resources with a long history of political instability will have much more difficulty reaching a compromise than the United States and Mexico.

As allies, each of whom has other sources of water, the United States and Mexico allow for water debt forgiveness in a given year if repaid as soon as possible. Such a trusting agreement is highly unlikely among the historic rivals of the Nile Basin. Moreover, while the 1944 treaty created the IBWC, the Nile-COM, created by the 1959 agreement, is an ineffective counterpart as a mechanism to enforce the treaty's provisions and foster co-riparian cooperation.

Yet, the recent negotiations between the United States and Mexico do have positive aspects which can help the Nile Basin, as well as shortcomings which can be improved upon in future Nile negotiations. First, and most importantly, Minutes 307 and 308 show an interest of increased collaboration for both countries and illustrate diplomatic compromise as a means to tame tensions over international water. Expressing such a common interest has been the greatest success of the NBI and such efforts must continue to expand. NBI Executive Director Meraji Msuya recognized the accomplishment in saying, "there has been..."
tremendous achievement [since the formation of the NBI]. People are now talk-
ing openly about the Nile . . . not like it was ten to fifteen years ago when no one
could talk about it.”

The IBWC also exposes two important features of an effective transboundary
water agreement: the importance of sharing data and the need to establish an
enforcement institution. The Nile nations must commit to more extensive data-
sharing methods than the United States and Mexico did with the IBWC, which
left the responsibility of data interpretation to individual governments. This
will be especially difficult in Northern Africa “because most basin countries lack
the capacity to share environmental and scientific data on the shared water use
and development initiatives.” Since the IBWC was not fully effective in mon-
itoring shortages in binational rivers, Nile nations must develop a similar institu-
tion that has extensive powers to share data and enforce water allotments.

A major problem across most international water agreements is that “apart
from the force of public opinion, there is no effective monitoring and compliance
system to ensure that obligations assumed under treaties are enforced within na-
tional boundaries.” Most riparian nations have also had trouble enforcing in-
ternational agreements because they have not clearly defined their water
boundaries. The creation of a central institution similar to the IBWC, but with
powers to interpret data, enforce agreements, and define boundaries, would be a
significant step toward not only reaching an agreement today, but also toward
ensuring the success of future agreements.

When creating such an institution, Basin nations should follow recent trends in
environmental border management that favor greater public participation. A
major weakness of the 1944 treaty is that it contains no provision for public
consultation, relations, or participation. International politics professor Ste-
phen P. Mumme noted, “[a]s originally conceived, then, the IBWC was to be a
secretive, hierarchical, and otherwise narrow body . . . [with an] exclusivist, priv-
ileged approach to border water management.” Nile nations could avoid such
downfall by creating a representative body to assess progress toward stated

---

155 Mulama, supra note 62.
156 Mumme, supra note 36.
157 Okaru-Bisant, supra note 13, at 343 (nations lack the capacity to share information because of
infrastructural shortcomings).
158 Mumme, supra note 36.
159 Okaru-Bisant, supra note 13, at 350.
160 Id.
161 Id. at 357–58 (“Problems in the available institutional and legal frameworks at the regional level
further demonstrate the need to strengthen the enforcement of available laws and enhance both the sound-
ness and performance of existing institutions”).
162 Mumme, supra note 36.
163 Id.
164 Id.
goals and strategies. Such active public participation "is required to maintain the legitimacy and strength of regulatory and management bodies." Nations of the Nile Basin should also look to most other African river basins which have entered into regional agreements using inter-governmental structures. Every international river basin in Southern Africa already has a commission in place or one currently being developed. The Tri-partite Permanent Technical Commission, established by South Africa, Mozambique, and Swaziland, is an example of such an institution that has proven successful.

When creating such a transboundary institution, co-riparian nations should prescribe minimal standards for water allocation and quality. In doing so, countries can look to international human rights vocabulary without having to adopt water as a human right. A stated purpose to provide a minimal standard of both quality and quantity of water to all nations for reasonable use, which allows for decent human subsistence and the prevention health concerns, would improve upon the current vague standard of equitable utilization. A potential agreement must also leave room for future growth. Nile water flows are often deceptive, and demands can frequently change due to such factors as population growth. Adopting a flexible definition of "reasonable use" will be more easily subject to future change than the 1959 agreement which allocates specific BCMs of water to each riparian country.

As proponents for the privatization model profess, funding will be a major hurdle for the poverty-stricken basin nations. While avoiding the risk of deepening inequalities inherent in the full scale privatization model, North African countries should take advantage of the model's aggressive funding procedures. Adopting a large-scale effort to attract finances from abroad is a fundamental necessity for poor nations. By building international trust and identifying similar interests with other nations, obtaining such funds is a realistic goal. Looking at the United States and Mexico for example, "due to the proximity of the two states, environmental hazards created in Mexico by a lack of infrastructure directly affect both sides of the border; therefore, the United States has a vested interest in assisting Mexico with water supply and treatment facilities." With so many interdependent nations on the Nile amid serious drought, pollution, and

---

165 Allan, supra note 149, at 486.
166 Id.
167 Okaru-Bisant, supra note 13, at 358.
168 Hobbs, supra note 58.
169 Id.
170 Id.
172 Id. at 12.
173 O'Regan, supra note 85.
174 Government Obligations, supra note 87, at 548.
poverty concerns, the NBI can appeal to similar international interests. By mid
2004, the NBI had already raised $130 million from donors.\footnote{175}

The solutions proposed herein will allow the Nile Basin to effectively deal
with problems of population growth, urbanization, poverty, political instability,
and pollution. Flexible standards designed to evolve with time are apt to accom-
modate shifting population and urbanization trends. Increased international fund-
ing will supplement insufficient infrastructural budgets and minimum standards
of quality will raise the level of life at the poverty line and reduce pollution.
Lastly, by strengthening binational forums and implementing an inter-govern-
mental institution with the power to enforce agreements, cooperative efforts will
ultimately alleviate political instability by fostering trust and communication
throughout the region.

VI. Conclusion

Although conflict over the Nile waters may likely escalate to warfare, if man-
aged correctly, the international water shortage can serve as a pathway to peace.\footnote{176} By coming together, countries can build trust and prevent conflict.\footnote{177} The Nile nations must use water as a negotiating tool, which offers communica-
tion and common interests in the midst of crisis.\footnote{178}

The NBI is a monumental step, but there is much more work to be done. Despite recent increased communications, relations between Egypt and Kenya hit
a low during a meeting of the Nile-COM in December 2006 when “Kenya’s
Minister of Water Resources, Marha Karua, stormed out of the talks after dis-
agreements about sharing of the Nile’s resources, an action that was termed a
‘declaration of war’ by her Egyptian counterpart, Mahmoud Abu-Zeid.”\footnote{179}

The recent negotiations between the United States and Mexico have shown
that implementing an inter-governmental institution designed to share data and
enforce future agreements will enable co-riparian nations to begin paving a path
to peace. Negotiations must involve active public participation and flexible stan-
dards which evolve as demands change. The NBI must also continue focused
efforts to attract international investors and foster international communication.

Joint development of the Nile’s resources creates an opportunity to institu-
tionalize cooperation in a win-win situation for Basin nations plagued by a history of
warfare. Yet, despite recent progress, failure of the NBI would generate even
greater mistrust and suspicion among co-riparian nations, thus making the risk of
armed conflict even more probable.\footnote{170} Recognizing the gravity of the situation,
the Minister of Water Affairs and Forestry in South Africa, Ronnie Kasrils, said,

\footnote{175}{O’Regan, supra note 85.}
\footnote{176}{Geoffrey D. Dabelko, Water Can Be a Pathway to Peace, Not War, GLOBAL POL’Y FORUM, June
\footnote{177}{Id.}
\footnote{178}{Id.}
\footnote{179}{Id.}
\footnote{180}{Mulama, supra note 62.}
\footnote{180}{Foulds, supra note 65.}
International Water Disputes

"[b]ut I state very clearly—we can deliver clean drinking water and adequate sanitation to the people of the world IF WE TRULY WANT TO, IF WE HAVE THE POLITICAL WILL TO DO SO."\textsuperscript{181} With the need for change in the international spotlight, the time for action is now and the nations of the Nile River must focus on their common interests by looking to other transboundary water disputes and proposed solutions for effective methods of fostering collective action.

The recent United States–Mexico agreements illustrate the importance of a trans-national water management system with the power to enforce agreements through a centralized institution. Further, the water quality standards of the human rights model provide a strategy to prevent disease and decrease pollution. Finally, the methodology of the privatization model creates a means to generate the necessary funding to produce a lasting effect. Thus, implementing an international system of collective action based upon each of these principles has the potential not only to prevent war in Northern Africa, but also to promote peace and provide water to the citizens of one of the most over-populated and impoverished regions in the world.

\textsuperscript{181} Allan, \textit{supra} note 149, at 487.