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Water Policy, Accessibility and Water Ethics in Kenya

George M. Ogendi and Isaac M. Ong'oa*

Introduction

According to the United Nations Environmental Program (UNEP), roughly one-third of the world's population lives in countries where there is moderate to high water stress.¹ Kenya is one of the countries classified by the United Nations as chronically "water scarce."² A country is categorized as water scarce if its annual water supply is less than 1,000 cubic meters, the global standard benchmark for a country to be considered as adequately supplied with water.² Kenya's per capita water supply is less than 647 cubic meters.³ The growing human population, nearly 50% of who live below the absolute poverty line, puts increasing pressure on natural resources including freshwater.⁴ It is no surprise that one of the main

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1. United Nations Environment Programme, *Freshwater*, <http://www.unep.org/Themes/Freshwater/About/index.asp> (last accessed Jan. 31, 2008).
2. World Bank, *Towards a Water –Secure Kenya: Water Resources Sector Memorandum*, (2004), <http://www.gwpforum.org/gwp/library/securewaterkenya.pdf> (last accessed March 5, 2009).
3. *Id.*
4. UNESCO World Water Assessment Programme, *Kenya National Water Development Report* (UN-WATER/WWAP/2006/12 2006), 29,

challenges before the Kenyan government is declining quality and quantity of water.

The Kenya Water Report of 2005 shows that less than 50% of the Kenyan rural population has access to water despite the government's aggressive and ambitious Water Act of 1974, which purported to ensure availability of potable water within a reasonable distance to all households by the year 2000.⁵ Today, 30% of the urban population in Kenya's cities and towns remains unconnected to the existing water supply systems, while up to 52% of the rural population is not connected to any water supply system.⁶ A significantly large percentage of the country's population relies on alternative ways of providing for their daily water needs, mostly by collecting it from running watercourses or domestic groundwater wells, the majority of which are of impaired quality and run dry during the drier months of the year. In the last three decades, to increase accessibility to water, the government sank boreholes, constructed catchment dams and provided conveyance infrastructure.⁷ Nevertheless, water scarcity still remains the number one ranking issue among most people in Kenya today.⁸ This is partly because most of the dams and boreholes in arid and semi-arid lands (ASALs) were built without input from local communities. Little consideration was given to the cultural setting of the surrounding communities, which are mostly pastoralist communities that move from one place to another in search of pastures for their livestock.⁹ Though the projects were well-intentioned, little attention was given to the social and environmental ethics when building the dams and boreholes.¹⁰ Priority was given to immediate human needs (economic and social development) over those of future generations and ecosystems. Haphazardly built dams and weirs have not only been a cause of disease, but have also impoverished the livelihoods of fishing and

<http://unesco.org/images/0014/001488/148866e.pdf> (last accessed Jan. 31), 2008).

5. *Id.*

6. *Id.* at 2.

7. Ashington Ngigi & Daniel Macharia, Kenya Water Sector Review Paper (2006), http://www.enable.nu/publication/D_1_7_Kenya_Water_Policy_Overview.pdf (last accessed March 5, 2009).

8. *Id.*

9. *Id.*

10. Bill Derman, Ann Hellum & Pinimidzai Sithole, *Intersections of Human Rights and Customs: a Livelihood Perspective on Water Laws*, in International Workshop on African Water Laws: Plural Legislative Framework For Rural Water Management in Africa (2005), 6-1, <http://www.nri.org/projects/waterlaw/AWLworkshop/DERMAN-B.pdf> (last accessed March 5, 2009).

agricultural communities downstream of dams and weirs, particularly during the dry periods of the year. Extensive water supply systems developed in the ASALs in the 1960s drastically failed to address water scarcity in these regions, partly because the government and other key decision-makers (mainly project funders/donors) did not incorporate the societal and ethical values of the communities into their decision-making processes.

The 1974 Kenya Water Act underwent major revisions in 1999 and 2002, which mainly focused on the decentralization of water services and separating water policy formulation from regulation and services provision.¹¹ Additionally, the 2002 National Water Policy defined the government's role as regulatory and delegated water service provision to the private sector, municipalities and communities.¹² In spite of this decentralization and separation, the roles of the different actors (e.g., communities, non-governmental organizations, and private sector) involved in the water sector (users, managers, suppliers, conservationists) remain a challenge to the realization of the goal of Kenya's water policy because they are ambiguous and often conflicting.¹³ Whereas participation of all stakeholders in decision-making processes is encouraged and emphasized, few attempts have been made to incorporate ethics into water use and management. The rights of people to access water and control their environment have not been incorporated into the country's water policy.

This paper looks into Kenya's water policy, availability, scarcity, and the need to incorporate ethics into the use and management of water. We believe that an ethics-based water policy is fundamental if the Kenyan government and its people want to move beyond the growth-driven and supply-focused type of water management to one that focuses on ecosystem functions and ecological services for current and future generations. Water law and policy needs to incorporate and explicitly express human and environmental ethical considerations. The policy should also recognize water as a basic human right and embrace public participation in decision making at all levels of government for sustainability to be realized.

11. Government of Kenya, Ministry of Water and Irrigation, The Water Act (No. 8 of 2002) [hereinafter The Water Act Public Consultation]. http://www.water.go.ke/docs/national_water_resources_management_strategy_06.pdf (last accessed Aug. 29, 2008)
12. *Id.*
13. *Id.*

Water Resource Conflicts and the Need for Water Ethics in Kenya

Water ethics is a relatively new term that has been coined in the wake of deteriorating water quality and quantity in the last few decades. Water quantity has been declining due in part to human population growth and pollution caused by anthropogenic activities.¹⁴ Water ethics is multifaceted in that it spans across a number of disciplines and sectors. Ethics are a fundamental, but frequently ignored, elements of regulating water use in society. Water ethics address how individuals and societies view and interact with this unique substance from diverse perspectives, sometimes complementary, but often contradictory¹⁵. To multinational water corporations, water is a commodity that is subject to the free market and sold them to make profits; for conservationists, it is an integral component of the natural environment; to indigenous communities, water is viewed as a cultural heritage or the birthplace and backbone of their societies and belief systems.¹⁶ However, water is an absolute necessity, a basic element for life as we know it.¹⁷ It is for this reason that we propose that water ethics form the basis of all decision-making regarding the use, management and conservation of this vital resource in Kenya and worldwide.

Since water is a vital resource for every living organisms and ecosystems on planet Earth, it is no surprise that the growing disequilibrium between supply and demand of water, and its devastating effects on human prosperity, has been a factor in various conflicts around the world. "Conflict" in this case is used to designate any relationship between opposing forces, whether marked by violence or not. The word conflict not only encompasses manifest aspects of the conflict but the underlying tensions between them. Instability or conflict arising out of water related issues can occur in two forms: (1), domestic unrest caused by the inability of governments to manage water resources to meet the social, industrial and agricultural needs of its citizens; and (2), hostility between two or more countries or regions within a country leading to one party disrupting the water supply of the

14. UNESCO World Water Assessment Programme, Kenya National Water Development Report (UN-WATER/WWAP/2006/12, 2006), 29, <http://unesco.org/images/0014/001488/148866e.pdf> (last accessed Jan. 31),
15. Gabriel Eckstein, *Precious, Worthless, or Immeasurable: The Value and Ethic of Water*, Speech at the Texas Tech Law Review Symposium (November 2-4, 2005).
16. *Id.*
17. *Id.*

other. For instance, in the Middle East, control over access to scarce water resources is a major issue between the Israelis and the Palestinians, as well as their neighbors.¹⁸ In the Nile basin region, sharing of water from the Nile River and its sources, especially Lake Victoria, has been touted as a possible source of future water conflict in the region. Part of the Nile Water Agreement of 1929 states that, “[w]ithout the consent of the Egyptian government, no irrigation or hydroelectric works can be established on the tributaries of the Nile or from the lakes which it flows from (Lake Victoria is the source of the White Nile), if such works can cause a drop in water level harmful to Egypt.”¹⁹ It should be noted that when the treaty was being signed in 1929, the three East African countries that share Lake Victoria (Kenya, Tanzania and Uganda) were under British administration.²⁰ This treaty is a good example of water management policies and treaties in place that do not in any way address or reflect ethical, socio-political and economic considerations of the parties involved. Successive Nile basin governments have failed to alter the treaty to address the moral, socio-cultural, political as well as economic issues, views, and perceptions of the people in the Nile basin.

Water resource conflicts are common among Kenyans, particularly those living around Lakes Naivasha and Victoria and their catchments. In January 2005, more than fifteen people were killed, dozens injured and hundreds displaced as a result of conflict between the Kikuyu farmers and Maasai pastoralists involving access to and distribution of water from the Ewaso Kedong River in the Rift Valley province of Kenya.²¹ December through March are the dry months in the region, and therefore, there is increased competition for the available water resources.²² It is during this time that farmers need water to irrigate their crops, while pastoralists move their flocks to riparian or riverine areas in search of pastures and watering grounds for their animals.²³ In this situation, different users, including the hotel industry, farmers, the municipality, the flower industry and the Maasai pastoralists,

18. Faisal O. Al-Rfouh, *Water Cooperation Role in the Peace Process in the Middle East* (Feb. 3, 2006) (unpublished paper, on file with the Arkansas State University Middle East Studies Committee).

19. John Waterbury, *Hydropolitics of the Nile Valley* 66-67 (Syracuse; Syracuse University Press 1979).

20. *Id.*

21. Wambua Sammy, *Tussle Over Water Leaves Mai Mahiu in Ruins*, East African Standard, Jul 28, 2003.

22. *Id.*

23. *Id.*

all compete for access to the Lake Naivasha waters and its tributaries.²⁴ The water scarcity situation is exacerbated by various sources of pollution including pesticides and fertilizers from agriculture, municipal sewage, and sediments from farms and pasturelands that contribute to the impaired water quality of Lake Naivasha and streams in the watershed. Increased abstractions and riparian vegetation destruction are responsible for the declining water levels in the lake as well as in rivers that feed into the lake. Each of these competing interest groups ascribes different values and ethics to water. Their different perception towards water resources explains in part the recurrent conflicts over the resource.

Identifying these values and ethics for each stakeholder is important in resolving conflicts over water resources. The values and ethics not only depend on cultural ideals of a person or an interest group, but also on their socio-economic and political ideals and religious and societal belief systems. Understanding how various stakeholders perceive water is the key to successful utilization, management and conservation of water resources in Kenya and around the world. It is for this reason that we propose inclusion of water ethics in water management and conservation policies and legislation for Kenya. Water ethics should form the basis for all decision-making regarding the use, management and conservation of this vital resource. Government agencies should seek common ground in identifying water ethics that will lay a foundation for compromise, cooperation, and sound management of fresh water resources among all stakeholders. Among the key ethical issues relating to water use and management in both developed and developing countries are water pricing, location of waste disposal sites, professional practices, privatization, planning and management and intergenerational equity.²⁵ These issues should be discussed openly by all stakeholders in order to create a policy-framework that establishes increased water accessibility for all.

Water Use and Accessibility in Kenya

One billion people have no access to clean potable water and nearly two billion people have no access to sanitation.²⁶ Over five million deaths per year are

24. *Id.*

25. Eckstein, *supra* note 15.

26. WHO & UNICEF. *Meeting the MDG Drinking Water and Sanitation Target: A Mid-Term Assessment of Progress* (2004),

attributed to water related diseases according to World Health Organization (WHO) estimates,²⁷ so better water management can certainly contribute to the achievement of Millennium Development Goals (MDGs). Additionally, 40% of the world's food supply comes from irrigated agriculture,²⁸ and that percentage will increase as populations grow and arable land resources decrease. Agriculture is the single largest user of fresh water on the planet, and it is also the largest economic activity of the rural poor in developing countries.²⁹ Statistics from the year 2000 estimate that agriculture used 70% of the world's freshwater.³⁰ In water-scarce areas, balancing agricultural needs with the need for drinking water can be severely difficult. The U.N. estimates that two-thirds of the world's population will face severe freshwater-shortages by 2025.³¹ With 75% of the world's poor living in rural areas and relying on agriculture for at least part of their income, improved water management for agriculture can improve the livelihood of a great proportion of impoverished people.

Kenya is classified by the United Nations as a chronically "water scarce" country.³² The United Nations defines a country as water scarce if its annual water supply is less than 1,000 cubic meters,³³ the global standard benchmark for a country to be considered as adequately supplied with water Kenya's per capita water supply is less than 700 cubic meters.³⁴ The Kenya Water Report of 2005 indicated that less than 50% of the Kenyan rural population has access to potable water despite the government's aggressive and ambitious 1974 Water Act aimed at

http://www.who.int/water_sanitation_health/monitoring/jmp04.pdf (last accessed March 5, 2009)

27. WHO, *Costs and Benefits of Water and Sanitation Improvements at the Global Level* (2004), http://www.who.int/water_sanitation_health/wsh0404summary/en/index.html (last accessed March 5, 2009)
28. Centre for Science and Environment, *Down to Earth Supplement on Water Use in Industry* (Feb. 15, 2004), <http://www.cseindia.org/dte-supplement/industry20040215/agriculture.htm> (last accessed March 5, 2009).
29. *Id.*
30. *Id.*
31. Food and Agriculture Organization, *World Water Day 2007, Coping with Water Scarcity: Challenge of the Twenty-First Century* 10 (2007), <http://www.fao.org/nr/water/docs/escarcity.pdf> (last accessed Jan. 28, 2008)
32. United Nations Environment Programme, *Freshwater*, <http://www.unep.org/Themes/Freshwater/About/index.asp> (last accessed Jan. 31, 2008).
33. *Id.*
34. World Bank, *Towards a Water –Secure Kenya: Water Resources Sector Memorandum*, *supra* note 2, at 5-6.

ensuring availability of potable water within a reasonable distance to all households by the year 2000.³⁵ An additional report released by the Ministry of Water and Irrigation indicated that only 57% of households use water from sources that is considered safe and clean.³⁶ Sustainable access to safe drinking water is estimated to be approximately 60% in the urban settings and falls down to as low as 20% among the urban poor that constitute half of Kenya's urban populations.³⁷ The picture is even worse for those that live in the rural areas of the country. The Kenya Integrated Household Budget Survey (KIHBS) 2005-2006 report revealed that sustainable access to potable water in rural areas barely exceeds 40%.³⁸ There is also lack of adequate sanitation services in the country, which to a large extent can be explained by water scarcity.³⁹ Sanitation services coverage country-wide has been estimated to be approximately 50%.⁴⁰ A considerably large percentage of the country's population relies on alternative ways of providing for their daily water needs, mostly by collecting it from running watercourses or domestic groundwater wells, most of which are of poor quality and run dry during the drier months of the year.⁴¹ Living conditions in the settlements of the urban poor are appalling due to the resulting unsanitary environment. Missing sanitary installations and uncontrolled disposal of human waste pollutes the water sources from which most of the informal providers draw water.⁴² Vendors sell water of uncontrolled quality to consumers who have to spend hours to fetch it at prices that are often between five and twenty times the tariff applied on consumers with a metered water connection.⁴³ The lack of adequate access to water partly explains the rise in the number of illegal connections to the piped water distribution systems leading to 50% or more losses in the amount of water supplied.⁴⁴

35. UNESCO World Water Assessment Programme, *supra* note 4, at 15.

36. Republic of Kenya, Ministry of Water and Irrigation, Strategic Plan of the Ministry (2005) [hereinafter Strategic Plan of the Ministry] www.water.go.ke/docs/strategic_plan_ministry_of_water_irrigation.pdf (last accessed Jan. 28, 2009).

37. Central Bureau of Statistics, The 2005/06 Kenya Integrated Household Budget Survey: First Quarterly Report (2005), <http://www.cbs.go.ke/surveys/kihbs2004/pdf/KIHBS-1st%20Quarterly%20report2-Aug05.pdf> (last accessed Jan. 28, 2008)

38. *Id.*

39. *Id.*

40. *Id.*

41. UNESCO World Water Assessment Programme, *supra* note 4.

42. *Id.*

43. Government of Kenya, Ministry of Water and Irrigation, *supra* note 11, at 9.

44. *Id.*

To address the water scarcity, the Kenyan government has embarked on a number of water projects that involve rehabilitation and extension of water infrastructure to a large rural and urban population that is not connected to any water supply system.⁴⁵ To ensure access to freshwater by all Kenyans, it is estimated that the government will spend about \$4 billion dollars to develop an adequate supply of water.⁴⁶ However, it is sad to note that the government presently spends only approximately 200 Kenyan Shillings (three U.S. dollars) per person per year on water.⁴⁷ Today, less than 30% of the Kenyan population has access to safe and clean water.⁴⁸ By the year 2000, the Ministry of Water and Irrigation had developed and managed only seventy-three piped urban water systems supporting approximately one and a half million people, or 5% of the Kenyan urban population.⁴⁹ The ministry also managed 555 piped rural water supply systems serving about 5 million people, or 17% of the country's rural population.⁵⁰ The government's lack of progress in providing adequate access to water can be attributed to the 1974 Water Act, which did not effectively respond to the increasing human population and subsequent water needs.

Evolution of Kenya's Water Act and Policy (1963-1999)

Kenya's water policy at the time of its independence in 1963 placed a lot of emphasis on the participation of all stakeholders, including the Department of Water, the private sector, non-governmental organizations (NGOs), and the local people through self-help projects through the spirit of *Harambee* (*Harambee Motto*: the spirit of pooling resources together for the country's social and economic development).⁴² The policy gave control of the water resources, including water development projects, to the local communities with minimal input or control from the government during initiation, implementation and management

45. Strategic Plan of the Ministry, *supra* note 37, at 28.

46. Wambua Sammy, *Water Privatization in Kenya*, Global Issue Papers (Mar. 2004) [hereinafter Water Privatization] <http://www.boell.de/downloads/internationalepolitik/GIP8.pdf> (last accessed Jan. 28, 2008).

47. *Id.*

48. *Id.*

49. Albert Mumma, African Centre for Technology Studies, *Kenya's New Water Law: An Analysis of the Implications for the Rural Poor* (2005), 5-1 <http://www.nri.org/projects/waterlaw/AWLworkshop/MUMMA-A.pdf> (last accessed Jan. 28, 2008)

50. *Id.*

of the projects.² The focus of water management in the country was solely on the provision of water for domestic, industrial and agricultural uses. Although the intention of the water policy was good, it achieved little, owing in part to limited financial resources, lack of skilled manpower on the part of the local communities, the country's weak and flawed environmental and land policies, poor governance and limited investment in new water projects.⁵¹

The present government's institutional efforts for the management of the water sector in Kenya can be traced back to the 1974 Water Act and Chapter 372 of the Laws of Kenya. In the same year, the National Water Master Plan was launched with the primary aim of ensuring the availability of potable water to all households by the year 2000.⁵² The Master Plan aimed to achieve this objective by providing for the development of water supply systems, sinking boreholes, constructing catchment dams and providing the conveyance infrastructure in the form of pipes and furrows.⁵³ To realize said objectives, it required the government to make financial and manpower investments in water development and supply to effectively meet the needs of its people (consumers). On top of this, the government needed to play a key role in policymaking and regulation in the use of water resources countrywide. In line with the Master Plan, the Kenyan government upgraded the Department of Water Development (DWD) of the Ministry of Agriculture into a full ministry called Ministry of Water and Irrigation, which embarked on an ambitious water supply development program.⁵⁴ However, due to increased and haphazard human settlements, agriculture, and forest and wetland destruction, surface-and ground-water quality and quantity deteriorated drastically. Thus, by the late 1980s, the demand for water had outstripped its supply in not only urban but also rural areas of the country. The situation was made worse in the late 1980s and the 1990s when the Kenyan government started experiencing budgetary constraints. It became clear to the government that it

51. Brent Swallow et al., "Transvic: Improved Land Management Across the Lake Victoria Basin", in *Research Towards Intergrated Natural Resources Management* (R.R. Harwood & A.H. Kassam eds., 2003); Victor Orindi & Chris Huggins, "African Centre for Technology Studies, The Dynamic Relationship Between Property Rights," in *Water Resource Management and Poverty in the Lake Victoria Basin* (2005), <http://www.acts.or.ke/prog/energy/reports/ORINDI-V.pdf> (last accessed Jan. 28, 2008).

52. Ngigi & Macharia, *supra* note 7.

53. Ashington Ngigi & Daniel Macharia, Kenya Water Sector Review Paper (2006), http://www.enable.nu/publication/D_1_7_Kenya_Water_Policy_Overview.pdf (last accessed March 5, 2009).

54. Strategic Plan of the Ministry, *supra* note 37.

could not deliver water to all Kenyans by the year 2000 by acting alone. Attention therefore turned to finding ways of involving other stakeholders in the provision of water services in place of the government, a process that came to be popularly known in Kenya as “handing over.” There was general public agreement over the need to hand over government water supply systems, but much less agreement over what it meant for the government to hand over public water supply systems to other entities with no, or minimal, control from the government. Wide consultations among stakeholders in the water sector reached a consensus that revision of Kenya’s Water Act and Policy was the best way forward to increase water access.

A revised water policy, the National Policy on Water Resources Management and Development, came into effect in 1999 after it was adopted by Parliament as Sessional Paper No. 1 of 1999. The policy not only addressed development and management of water resources but also water conservation across the country.⁵⁵ The new policy, among other things, emphasized increased participation of local actors and the private sector in the development and management of water resources to benefit all Kenyans.⁵⁶ The full privatization of water development and supply has nevertheless been opposed on grounds that it would favor consumers with purchasing power over the economically poor in Kenya, who happen to be the majority.⁵⁷

A new Master Plan (Strategic Plan 2005-2009) was also deemed necessary to effectively address issues of water resource development and management for the people of Kenya.⁵⁸ Additional amendments and revisions targeting the 1974 Water Act resulted in the 2002 Water Act with far reaching goals and objectives. It is the hope of the Kenyan government that the new Water Act will meet the needs of its entire people in terms of water.⁵⁹

The 2002 Water Act

Because of the lack of focus on water resource management and conservation, it was necessary to revise the 1974 Water Act so as to address the rising concerns

55. Kenya Ministry of Water Resources, National Policy on Water Resources and Management (Sessional Paper no. 1, 1999)

56. *Id.*

57. Business Daily, New Water Rates Exploitative, *The Business Daily*, March 19, 2008.

58. Kenya Ministry of Water and Irrigation Strategic Plan 2005-2009. NEED MORE INFO?

59. Kenya’s New Water Law, *supra* note 7 at 41.

over declining quantity and quality of water as well as low coverage of water services. The 2002 Act,⁶⁰ given effect in 2003, emphasizes the role and active participation of local communities. It provides for the creation of Catchment Advisory Committees (CAC) to oversee the use, control, development, protection and conservation of water resources within each catchment area.⁶¹ Local communities are deemed to be well-informed on their unique water issues, and therefore, contribute immensely to decision-making and implementation of water projects in their locale.⁶² Being active participants in the decision-making process enables them to embrace the water projects as their own, and thus, makes them willing to go an extra-mile to ensure success.

Among other key elements of the Act is the requirement that local authorities form autonomous Water and Sewerage Companies (WSC) with independent Water Boards of Directors to provide services and reinvest water financial returns in service delivery improvement.⁶³ This has been an important milestone in the new Water Act. Some of the large Kenyan cities including Eldoret, Nyeri and Nairobi have taken advantage of this provision and formed WSCs that have increased distribution of water to their residents.⁶⁴ However, we should be quick to point out that according to the 2002 Water Act, water is not owned by the water companies but by the Regional Water Service Boards (RWSB).⁶⁵ The RWSBs are charged with licensing water service providers and determining standards for the provision of water to consumers. Another milestone in the 2002 Water Act is the statutory obligation of the RWSBs to promote conservation and management of water resources according to the National Water Services Strategy.⁶⁶ It is the hope of every Kenyan that the RWSBs will overcome the corrupt practices that have dogged most of the legislation and policy regulatory and enforcement agencies in the country over the past two decades.⁶⁷ By implementing and enforcing the

60. The Water Act Public Consultation, *supra* note 11, at 9.

61. *Id.*

62. *Id.*

63. *Id.*

64. Eldoret Water & Sanitation Company Limited, Company Profile & Performance 2003; Nyeri Water & Sewerage Company Limited, Company Profile & Performance 2003.

65. Kenya New Water Law *supra* note 8 at 41.

66. Republic of Kenya, Ministry of Water and Irrigation, The National Water Services Strategy, (2007), <http://www.cohre.org/store/attachments/RTWP%20-%20NWSS%20June%2007%20draft.pdf> (last accessed Jan. 28, 2008).

67. *Id.*

regulations contained in the Water Act, the confidence of all stakeholders will be won, and therefore, increase project success by engaging everyone in the process.

The Act further created the Water Resources Management Association (WRMA) whose main responsibility is to liaise with all stakeholders, including the civil society, for better regulation and management of water resources.⁶⁸ All stakeholders can participate in amending or enacting new water laws by voicing their views regarding the management and conservation of water. The new Water Act's strength is that it emphasizes a "bottom-up-approach" as opposed to the previous "top-down approach" that ignored input from the local people. The top-down approach disenfranchised the "ordinary person" who then resented all government regulations and measures that ironically were meant to improve water management and conservation.

The 2002 Water Act also provided for the creation of the Water Services Trust Fund (WSTF) to offer financial support for water projects in areas lacking adequate water services.⁶⁹ Unfortunately, to date, the WSTF has limited financial resources⁷⁰ and therefore has not lived up to its mission and purpose; the number of Kenyans without access to potable water continues to increase annually.⁷¹ The Water Act also seeks to address the shortcomings that resulted in wastage, manipulation and abuse of water sources and services. A lot of water is lost through leaking pipe systems and through illegal connections on water delivery systems in urban areas. Because of lack of enforcement, industrial, municipal and agricultural effluents are haphazardly disposed of into surface waters, posing grave dangers to unsuspecting consumers downstream from the point of discharge.

Finally, the 2002 Water Act established the Water Appeals Board (WAB) whose responsibility is to arbitrate over disputes that may arise from the implementation of the Act, such as proprietary rights.⁷² Several disputes that may arise as a result of water use can be presented to the WAB for mediation and guidance.⁷³ Among the water resource conflicts that have been at the forefront are those involving the allocation, utilization, management and conservation of Lakes

68. *Id.*

69. *Id.*

70. *Id.*

71. *Id.*

72. Phillip Olum, *Water Resource Issues and Interventions in Kenya*, http://www.itc.nl/news_events/archive/general/_doc/_0023/articles/Olum.pdf (last accessed March 5, 2009)

73. *Id.*

Naivasha and Victoria.⁷⁴ Water conflicts on Lake Naivasha involve a struggle for resources between flower farms, municipalities, hotels, Maasai pastoralists, and small-scale farmers located along the riparian corridors of rivers draining into the lake.

Water Privatization and Water Ethics

The WHO estimates that 1.1 billion people lack access to clean and safe water, and 2.6 billion lack adequate sanitation services.⁷⁵ Most of these people reside in rural communities; 70% of the world's poor live in the rural areas of developing countries.⁷⁶ Despite these startling statistics, the World Bank, IMF, regional banks, government allies and other multinational organizations continue to push water into the market system to be traded like any other public good. They advocate for privatization of water and water supply systems, as well as sanitation services in developed and developing countries.⁷⁷ Their argument in support of privatization is that it will lead to efficient delivery of water to the more than one billion people that have limited access to water and the 2.5 billion that lack adequate sanitation services.⁷⁸ While this argument is true, it fails to recognize the socio-economic and political status of the majority of the people in these developing countries. The World Bank's argument also fails to learn from its previous efforts in support of water privatization that have performed dismally or failed disastrously. For instance, the United Nation's International Drinking Water Supply and Sanitation Decade (IDWSSD), 1981-1990, did not achieve its intended goals because it was supply-driven and did not recognize the socio-economic attributes of its targeted clients.⁷⁹ The IDWSSD model also failed to focus on sustainability of the project as opposed to offering a quick-fix solution to the issue of water scarcity.⁸⁰ Many of the water supply systems failed because of financial

74. Wambua Sammy, *supra* note 21.

75. WHO & UNICEF, *supra* note 26.

76. *Id.* at 19.

77. World Bank, Towards a Water –Secure Kenya: Water Resources Sector Memorandum (2004), <http://www.gwpforum.org/gwp/library/securewaterkenya.pdf> (last accessed March 5, 2009).

78. *Id.* at 19.

79. John Briscoe & David De Ferranti, Water for Rural Communities: Helping People Help Themselves (1988), http://www-ids.worldbank.org/external/default/WDSContentServer/IW3P/IB/2000/04/05/000178830_98101911135973/Rendered/INDEX/multi_page.txt (last accessed Jan. 28, 2008).

80. *Id.*

inability and lack of technical experience among the rural people.⁸¹ Additionally, the global initiative was not able to overcome the weaker voice in policymaking that had plagued rural populations due to their poverty and their distance from policymakers. It has also become very clear that most of the multinational water corporations are not interested in investing financially in the water sector for increased access to water for the majority poor in developing nations. Observations from developing nations regarding water privatization have overwhelmingly shown that privatization is not a solution to water scarcity in these countries. Instead, it has led to increased consumer water rates, social turmoil, poor human health, weak regulation and corruption.⁸² Most of the multinational corporations such as Suez have also reported huge losses financially, and this is the reason they have been reluctant to venture into such business, particularly in developing countries.⁸³

By the year 2000, less than 50% of people in Kenya had access to clean and safe water in their households despite the government's pursuit of an aggressive water policy and Master Plan.⁸⁴ The move towards privatization and redefinition of the Kenyan government's role in the provision of water can be seen as a realization of its shortcomings and limitations. However, opposition to privatization of water services has been on the rise since the idea was first introduced in Kenya in the late 1990s.⁸⁵ A near deal between Nairobi City Council and Vivendi's subsidiary Seuceca Space/Generale de Seaux in January 2000 was nullified due to stiff opposition from the general public. It is argued that, had this transaction succeeded, the multi-national water corporation would not have undertaken any capital investment in water service delivery, but the cost of water would have increased.⁸⁶ Private multi-national water corporations make huge profits at the expense of poor consumers in developing countries such as Kenya

81. *Id.*

82. Water Privatization, *supra* note 47, at ###.

83. David Hall, Public Services International Research Unit, Water Multinational in Retreat: Suez Withdraws Investment (2003), 4, www.psir.org/reports/2003-01-W-Suez.doc (last accessed Jan 28, 2008).

84. WHO, Global Water Supply and Sanitation Assessment 2000 Report (2000), http://www.who.int/water_sanitation_health/monitoring/jmp2000.pdf (last accessed Jan. 28, 2008).

85. Anyang' Neon'(Ed.) et al, The context of Privatization in Kenya (Nairobi; Academy Science Publishers, 2000)

86. Business Daily, New Water Rates Exploitative, *The Business Daily*, Mar 19, 2008.

where there are weak regulations and enforcement.⁸⁷ A good example of how commercialization of water services fails to address the needs of the poor was revealed by a World Bank water project involving the sale of water by kiosk owners to some 2000 people along the Mombasa-Galana pipeline that resulted in a lot of financial strain on the people as they spent more than 20% of their income on water.⁸⁸ The vendors viewed water as a resource to be marketed to make profits, whereas the consumers perceive it as a basic need that should not be traded at a profit. Trading in water is or is not an ethical issue that warrants discussion depending upon who you ask: the water vendor or the water consumer. Further negative impacts of privatization of water in developing nations have been observed in South Africa where the low-income South Africans have been unable to access this vital resource due to privatization. The introduction of prepaid meters by private water companies in South-Africa caused poor people to be denied access to this vital resource.⁸⁹ Another negative ramification of privatization is the 2002 Argentine fiscal crisis that left Suez, a French multinational water corporation, with a \$500 million loss as the government refused to peg water prices to the U.S. dollar.⁹⁰ Prior to this, Suez enjoyed huge profits for about eight years at the expense of the urban poor that bore the costs of service extension.⁹¹ About 30% of the urban people were unable to settle their water and sanitation bills, and were therefore, disconnected from the water distribution system, making children and women, in particular, more vulnerable to health consequences.⁹² Suez also failed to complete sewerage infrastructure resulting in more than 95% of the Buenos Aires's sewage being dumped directly into the River Plate.⁹³

The scars of water privatization in developing countries can further be revealed by projects in Ghana that were supported by the International Monetary Fund (IMF) and World Bank. Prior to privatization, the government of Ghana practiced

87. David Hall, Public Services International Research Unit, *Water Multinational in Retreat: Suez Withdraws Investment* (2003), 4, www.psiu.org/reports/2003-01-W-Suez.doc (last accessed Jan 28, 2008).

88. *Id.*

89. *Id.*

90. *Id.*

91. *Id.*

92. Public Citizen, *Water Privatization Fiascos: Broken Promises and Social Turmoil* (2003), 2 <http://www.citizen.org/documents/privatizationfiascos.pdf> (last accessed March 5, 2009).

93. *Id.*

a needs-based policy that targeted the neediest communities in order to enable its people access to water to tackle public health issues, particularly in guinea worm prone areas.⁹⁴ The government was, however, arm-twisted by the IMF and World Bank into privatizing. As a result, French water companies Vivendi, Suez and Saur, as well as British Biwater took over the supply of water in Ghana. Like any other private company, these multi-national water corporations had to make profits. Additionally, they embarked on full cost recovery, which led to an increase in the price of water services beyond the reach of poor (low-income) Ghanaians because of their inability to pay for this vital resource that was being treated as a market commodity.⁹⁵ Deterioration in human health is witnessed in the sudden rise in the number of guinea worm infections among the poor urban and rural populations, making Ghana the second after the war-torn Sudan in prevalence of this disease.⁹⁶ It was no surprise that the increase in guinea worm infections strongly correlated to the lack of potable water among the poor communities of this country. Is it ethically or morally right for a select few to have access to this essential and life-supporting resource, when the majority of the economically poor continue to live in unhealthy conditions because of water scarcity?

Globalization and Water Ethics

Contrary to the views and positions of global economic institutions, globalization poses serious social and economic challenges to humans, particularly those that live in developing countries.⁹⁷ We argue that commercialization of water resources in Kenya as well as many other countries must pay attention to the needs of the economically and socially poor who have limited access to resources and political power. The ability and willingness to pay must be fully considered, with differentiated tariffs developed to ensure an ample supply of clean, safe water to all. It is paramount that governments, while privatizing water resources, strike a balance between attaining market efficiency and societal ethics, particularly social equity on accessibility to water by the millions of economically disadvantaged people in Kenya and elsewhere. Governments and other players in the

94. Water Privatization, *supra* note 47, at 78.

95. Public Citizen, *Water Privatization Fiascos: Broken Promises and Social Turmoil* (2003), 2 <http://www.citizen.org/documents/privatizationfiascos.pdf> (last accessed March 5, 2009).

96. Wambua Sammy, *Tussle Over Water Leaves Mai Mahiu in Ruins*, East African Standard, July 28, 2003. *supra* note 21.

97. Joseph Stiglitz, *Globalization and its Discontents* ### (2002).

management, use and conservation of water need to understand the underlying ethics and values, particularly that various stakeholders ascribe to water in their day to day lives. The views and knowledge of the stakeholders, particularly local communities, must also be considered during decision-making processes that involve the use and management of water resources. The bottom-line message is that local authorities (e.g., Catchment Area Committees in the case of Kenya) should retain control of water even under commercialization. All necessary precautionary measures must be taken to safeguard against burdening the economically disadvantaged with prohibitively expensive privatized water. All stakeholders, including the government, need to recognize that water is a basic need that is essential for any society to thrive economically, socially and politically. It is no wonder some people and interest groups advocate for water to be considered a human right that should not be commoditized.

Dams, Water Supply and Water Ethics

Population growth and socio-economic pursuits in Kenya have led to increased demand for water in several parts of the country, including the capital, Nairobi.⁹⁸ Nairobi residents draw their water from several dams constructed across rivers near and far from the city.⁹⁹ It is, however, ironic that communities living near these dams experience chronic water scarcity throughout the year.¹⁰⁰ For instance, Sasumua Dam, with a yield of 46,000 m³ loses nearly 50% of its water because of illegal connections. It is argued that many of these illegal connections are done by communities living upstream from this dam who have limited access to potable water. The local water supply projects that were owned and operated by the government have collapsed over the years leading to the increase in the number of illegal connections.¹⁰¹ As a result, the pipeline to Nairobi from the dam is dotted with illegal water connections by residents of this region.¹⁰² With residents illegally tapping into this water pipeline, one cannot fail to see the need and frustration in these people's lives. They lack water and yet there is a water

98. Wambua Sammy, *Water Privatization in Kenya*, Global Issue Papers, (Mar. 2004) <http://www.boell.de/downloads/internationalepolitik/GIP8.pdf> (last accessed Jan. 28, 2008).

99. *Id.*

100. *Id.*

101. *Id.*

102. *Id.*

pipeline running through their land. From the authors' point of view, it is immoral and ethically insensitive to transport water over long distances as the economically poor around dams continue to languish in abject poverty and poor health due to water scarcity. Communities around dams not only have limited access to clean and safe water, but also suffer from waterborne diseases like as malaria and schistosomiasis and destruction of property and loss of human lives in cases of flooding. We propose inclusion of community ethics and values in the decision-making processes regarding dam construction, water use and conservation. Embracing such an approach would lead to increased access to water by all.

Access to Land and Water Ethics

In Kenya, water, as all other natural resources, belongs to the government. Thus, statutory law, not common law, regulates access to and use of water resources.¹⁰³ Furthermore, in Kenya, as in many other places around the world, legislation and policy on water use and management do not take customary land-tenure systems into account.¹⁰⁴ Policymakers have, however, realized that the two cannot be separated, since access to water in most cases derives from access to land.¹⁰⁵ Therefore, poverty reduction policies through increased access to water and other natural resources among the poor need to incorporate existing land-tenure systems as well as land policies. Given the importance of land access, it is particularly important that the governance of such issues aims at bringing about full participation of all stakeholders, in an effort to empower them in the use and management of water resources. Access to land will, to a considerable degree, translate into improved access to water by many rural people in the country. Since most of the decisions about how to use natural resources are taken at the community-level, empowering communities to manage these resources in a watershed is a critical element of success.

Customary land and water rights are significant forms of rights in Kenya, even though they are not adequately addressed through the current water policy framework. There are presently concerns that some of the aspects of the water

103. Orindi & Huggins, *supra* note 52, at 44.

104. Albert Mumma, African Centre for Technology Studies, Kenya's New Water Law: An Analysis of the Implications for the Rural Poor (2005), 5-1 <http://www.nri.org/projects/waterlaw/AWLworkshop/MUMMA-A.pdf> (last accessed Jan. 28, 2008)

105. *Id.*

sector are being emphasized more than others, creating a barrier to the accessibility of potable water to all people in Kenya by 2025.¹⁰⁶ Legislation should therefore enable the poor access to water resources and create incentives for sustainable use through recognizing and incorporating people's needs and their traditional management systems. Traditionally, in most African communities, water is communal property, and private ownership is rarely recognized.¹⁰⁷ Therefore, if the policies do not address ethical issues with regard to access and use of the water resources then conflicts are bound to occur. These conflicts will not only be about access to and withdrawal of the water but also about the control over its management and the recognition of the respective authority of the water provider.

Great strides in freshwater use, management and conservation will be made when governments and other stakeholders begin to view water as not just a commodity in the market, but strive to understand its cultural values. Many freshwater bodies around the world have been turned into sewage dump sites due to lack of knowledge of the roles that they play in neighboring communities. Articulating the role and value of water in water policies, as well as through cultural links, will be instrumental in arousing people's awareness of the impact their activities have on water resources. When this happens, common interest groups form within local communities to address issues such as soil and water conservation, water pollution, water scarcity, fuel energy conservation, spring protection, and water tank construction.

106. *Id.*

107. *Id.*