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# Water Security and Management in Burkina Faso: How Socio-Political and Cultural Complexities Affect Development

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Water Security and Management in Burkina Faso: How Socio-Political and Cultural Complexities Affect Development

By: Megan M. Godfrey

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## **Theoretical Framework of Analysis**

For this research project, I decided to examine the main issues of water access and availability in Burkina Faso, and how the nation's culture impacted, or was impacted by, such issues. In particular, I wanted to know more about the cultural values and traditions, gender disparities, and other social factors that influence the successes or failures of water supply and managements systems. I decided to concentrate on Burkina Faso, as it is one of the poorest countries in the world that currently struggles with water scarcity and management. In addition to studying these complexities, I also wanted to look into current projects and sustainable technologies being implemented, to see the differences they were making in the life and wellbeing of the people.

## **Research Methodology**

My primary sources of information are derived from my interactive research hours; the opinions, experiences, and knowledge of the professionals I have interviewed will set the framework for this paper, as their hands-on and comprehensive understanding of water issues are unrivalled. I also used information from some of the lectures we attended at the International Environment house on climate change and migration, and how this can impact a country's culture and economy as well. In addition to the interactive research, I have used books, scholarly articles, peer-reviewed journals, and example case studies.

## **Abstract**

Burkina Faso is currently ranked as the 175<sup>th</sup> poorest country out of 177. In addition to over 50% of the population living in poverty, Burkina Faso is challenged with droughts and lack of adequate water system infrastructure. The agricultural nation is dependent on water to grow and harvest crops, as almost 80% of the farming done in the nation is for sustenance. This paper will address the role culture plays in water systems; how gender relations, and cultural practices influence water management and sanitation systems. In addition, this paper will examine how current systems in place are changing and influencing the way Burkinabé interact with each other and various ethnic groups, and how educational programs on sanitation and water are changing old cultural practices and improving overall health.

## **Acknowledgments**

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- William Carter, Senior Officer, Water, Sanitation and Emergency Health Unit (WatSan/EH) with the International Federation of Red Cross and Red Crescent Societies
- Vessela Monta, Executive Director, International Rainwater Harvesting Alliance

## IRHA with the International Environment House II

- United Nations Library Catalogues
- Bibliothèque de Genève (BGE)
- University of Oregon Online Library Catalogues
- [www.sit.edu/library](http://www.sit.edu/library) For providing me with various scholarly articles and case studies
- Green Cross International and United Nations Development Program, for assisting me with finding correspondents and recommending alternative sources to gather information from.

## Water Security and Management in Burkina Faso: How Socio-Political and Cultural Complexities Affect Development

### **Introduction**

The issue of water security, supply systems, and sanitation is becoming an increasingly popular topic in regards to development and politics. Water is a basic human need and necessity to life; contaminated, unsanitary water sources and improper waste management has contributed to the spread of countless preventable diseases and illnesses. The importance of access to water, clean water sources, and sanitation is critical and addresses all of the United Nation's major millennium development goals in some way; clean water prevents diseases related to illness and sanitation, and has a huge impact on human and child health. It also touches on issues regarding gender discrimination and female empowerment, as access to water is not gender neutral.

This paper will focus on how water management systems work, or do not work, due to social, political, and cultural complexities. Specifically, I will be focusing on the “culture economy” of Burkina Faso. “Culture economy,” a term coined by Valentina Marcuzzo and David Niemeijer, indicate the notion that a culture’s practices, habits, and lifestyles are influenced and determined by issues or events currently affecting them.<sup>1</sup> By focusing on the cultural economy of Burkina Faso, I will be examining the cultural relationship Burkinabé have with water; how society, gender roles, and politics impact water management and community water systems, as well as how reflexively, water

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<sup>1</sup> Mazzucato, Valentina, and David Niemeijer. "The Cultural Economy of Soil and Water Conservation: Burkina Faso." *Development & Change* Sep2000, Vol. 31 Issue 4, n.d. Web. 10 July 2012.

systems impact and shift cultural practices. This paper will also discuss how geopolitics, climate change, and other social complexities are all integrated within the issue of water access, behaviors, and supply. Information and experiences from the perspectives of professionals working within this field, such as Dr. Nidal Salim of the Global Institute for Water Environment and Health, William Carter of the International Federation of the Red Cross and Red Crescent Societies, and Vessela Monta of the International Rainwater Harvesting Alliance, along with many other valuable sources of information, will also be incorporated into this paper. Finally, I will conclude with how grass-roots level, sustainable technologies and practices of water sanitation, combined with macro-level policies and agendas are influencing and improving water management system development.

### **Background**

Burkina Faso, a small land-locked country in West Africa of about 16 million people, is a country that is plagued with issues ranging from high poverty rates and drought, to diarrheal disease and illiteracy. It ranks as one of the poorest nations in the world, with over 50% of the population living in poverty. Burkina Faso gained independence from French rule 5 August, 1960, and since then, has dealt with shifting powers between elected government officials and the nation's military, which has often intervened and overthrown the government in times of crisis.

Burkina Faso is a fascinatingly diverse country, with over sixty different ethnic groups and over fifty different languages. The country respects various religious preferences and has no official state religion. Burkinabé pass on their customs, traditions,

and histories orally, through story telling or song and dance. The *griots*, or official narrators of culture, are widely respected throughout the land. The Mossi, the largest ethnic group in Burkina Faso, consists of about 40% of the population. The Mossi and many of the surrounding tribes and groups place strong cultural value on four main concepts: the ancestors, the family, the land, and the respect of hierarchy. Burkina Faso is an agricultural nation, largely dependent on crop production not only for sustenance, but also for their economic wellbeing through export. Their dependency on crops and agriculture in turn, translates to an urgent reliance on water.

### *Water Management and Participation*

While the urban areas and major cities of Burkina Faso have achieved some success in improving their drinking water supply, much of the rural population still lacks adequate access to water. In 2003, Burkina Faso adopted an action plan that aimed to decentralize water sanitation and supply systems. According to a USAID report, the country also adopted an agreement known as the “General Charter of Territorial Collectives,” which was crafted to place the responsibility of water supply to rural communities into the hands of the locals. Despite these efforts, however, “conflicts between administrative, regulatory, and sanitation service delivery responsibilities were not defined.”<sup>2</sup> The idea of decentralization of water supply systems apply to simple administrative logic—that which can operate successfully at lower levels does not need the supervision or central control. In addition, decentralization of water systems “also reflects the understanding that, in matters of common concern, the appropriate and effective engagement of

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<sup>2</sup> [http://pdf.usaid.gov/pdf\\_docs/PNADO927.pdf](http://pdf.usaid.gov/pdf_docs/PNADO927.pdf)

interested parties in key decisions can improve the quality of those decisions—as well as compliance with them [...] whether at the level of a single village or stream or at a trans-national, continental scale [...]”.<sup>3</sup> Engaging community participation and endowing a sense of ownership in water structures has thus shown to increase the likelihood of successful developmental projects and initiatives, yet there remain cultural challenges with doing so in Burkina Faso.

### *Geopolitics of Burkina Faso*

Recently, on April 24<sup>th</sup>, 2012, President of Burkina Faso Blaise Compaoré signed a declaration with the Presidents of Niger and Chad. The declaration signed was in regards to water access of the Niger River, and other water sources within the Niger Basin region. Established after the UN forum on “Solidarity for Water in Niger Basin Countries,” this declaration aims to “uphold ambitious solutions to be implemented in order for Niger River water resources to be maintained and managed in a united, fair, and sustainable manner.”<sup>4</sup> In regions of water scarcity, water source areas become hotspots for potential conflict; cooperation and sound institutional framework is critical in maintaining stability and fair access to water. Water is increasingly being used as a method of political control; “without such institutional arrangements upstream and/or economically more powerful

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<sup>3</sup> [http://pdf.usaid.gov/pdf\\_docs/PNAD0927.pdf](http://pdf.usaid.gov/pdf_docs/PNAD0927.pdf)

<sup>4</sup> "Blaise Compaoré Signs Joint Declaration of Niger Basin." *Fondation Chirac*. N.p., n.d. Web. 5 July 2012. <<http://www.fondationchirac.eu/en/2012/05/blaise-compaore-president-of-burkina-faso-and-the-third-signatory-of-the-joint-declaration-of-the-niger-basin-member-countries-on-access-to-water-and-the-joint-management-of-the-basin/>>.

communities will tend to dominate and jeopardize the survival of other communities,” (330).<sup>5</sup>

Proper water management is one of the most important issues regarding water access and management. Inadequate cooperation and infrastructure result in competing uses of water, as well as overlaps in water development projects. By signing this joint management program, Burkina Faso has taken an important step in policy adaptations that will allow for dialogue and cooperation between countries seeking water access. The program focuses on “constructing shared, major hydraulic structures, thus promoting regional development and integration, as well as preserving ecosystems.”<sup>6</sup> A lack of natural water resources does have some impact on the economy of a nation. But what has shown to impact the economic development of Burkina Faso even more so than water availability, is water management. According to Abdramane Sow, a researcher working with the University of Ouagadougou’s Centre for Economic and Social Studies, “the worst fights seem to happen not where there is no water, but where it exists, as people can’t agree on how to share among them.”<sup>7</sup>

#### *Internal Social and Cultural Conflicts over Water*

Although 40% of the region of Burkina Faso is comprised of the Mossi people, the remaining 60% represent other various ethnic groups spread throughout the region. During dry seasons, rural areas in particular often experience cultural clashes near water

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<sup>5</sup> Pereira, L. S., I. Cordery, and Iacovos Iacovides. *Coping with Water Scarcity: Addressing the Challenges*. [Dordrecht]: Springer, 2009. Print.

<sup>6</sup> "Blaise Compaoré Signs Joint Declaration of Niger Basin." *Fondation Chirac*. N.p., n.d.

<sup>7</sup> "BURKINA FASO: Innovation and Education Needed to Head off Water War."

wells. The shortage of water supply stations and wells in Burkina Faso has fueled the conflicts between the different ethnic groups. In the Nakanbé region, for example, field investigators witnessed a conflict between two different ethnic groups that arrived at the same watering hole for their livestock. The field investigators determined that “cultural traditions were also at the root of some water supply problems. Where certain wells are considered sacred, the water can be restricted to such uses as preparing traditional medicines. Such restrictions mean that potable water is not available for other uses, placing additional strain on the remaining sources,”<sup>8</sup> The differences in cultural practices and beliefs of water usage between the two groups represent an internal cultural complexity in Burkina Faso. In addition, the lack of adequate pumps and wells further instigates social fighting and conflicts, as villagers are forced to wait in line for hours to fill their containers, or move to other sources of water, placing additional strain on those remaining. The International Development Research Centre, an organization supporting projects on improving local water management in Burkina Faso, explain that the some of the tensions surrounding with water access in Burkina Faso are rooted within social class norms. Karidia Sanon, an economist with the IDRC cites a moment when she witnessed the wife of a village chief, “who went to the head of the line while the other women — although resentful — said nothing.”<sup>9</sup> While Burkina Faso is a nation that values hierarchy and respect, inadequate and unequal access to water sources will continue to encourage social and cultural conflicts.

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<sup>8</sup> "BURKINA FASO: Innovation and Education Needed to Head off Water War."

<sup>9</sup> MacMillan, Neale. "Burkina Faso: Managing Conflict at the Village Handpump and Beyond." *Science in Africa* (n.d.): n. pag. *International Development Research Centre*. Web. 10 July 2012.

While social roles and hierarchies can fuel resentment and arguments, it can also reversely be used to change behavioral practices and the cultural relationship to water and sanitation. Marion Jenkins and Sandy Cairncross examine how motivations to end open defecation were encouraged as a result of rural villagers who wanted to, “affiliate with the urban elite and to express new experiences and a lifestyle acquired outside the village [...] well-being reasons included desires for greater cleanliness, health and safety, convenience and comfort, and privacy, all linked to perceptions of changes in the physical and social environment that made traditional open defecation unattractive,” (Jenkins and Cairncross, 166).

Understanding and acknowledging a culture’s values and traditions is essential when attempting to alter or improve current practices in place. Vessela Monta of the International Rainwater Harvesting Alliance explained that although rainwater harvesting is not a new practice, the organization still takes special care in acknowledging and using the traditional practices and philosophies of rainwater harvesting from locals. Mrs. Monta emphasized the importance of creating a dialogue between participants, so that traditional and cultural experience can combine with modern day expertise and advice. In their book “Coping with Water Scarcity,” Luis Santo Pereira, Ian Cordery, and Iacovos Iacovides support Monta’s claims: “professional, expert help can be enlisted to develop better water-use and capture methods but the local people need to be enlisted as the greatest source of ideas. [...] It will usually only be possible to effect changes in such practices by first getting to understand the culture and traditions that surround them and then developing a sensitive, locally adapted program of water harvesting.” (Pereira, L. S., I. Cordery, and Iacovos Iacovides, 26)

### Gender Relations

Kate Berry and Eric Mollard discuss how gender inequality influences social participation in rural water supply developments in their book “Social Participation in Water Governance.” According to their research, “the distribution of benefits in water projects may be differentiated by gender as well [...] technical expertise and funds in water infrastructure development may be accompanied by new water rights titling criteria and procedures that affect women and men differently.” Berry and Mollard go on to explain that many developmental policies are geared toward men, as they have oftentimes received more education and are more actively engaged in the community than women. “Gendered differences in how sociopolitical structures are engaged and information is exchanged are related to shifting balances of power. When faced with formidable barriers to institutions or political discourse, women tend to rely on informal forms of participation, including less established sociopolitical hierarchies and informal, inclusive networks,” (Berry & Mollard, 50)

A case study in resolving water conflict in Burkina Faso by Centre d’Etudes, de Documentation et de Recherches Economique et Sociale of the University of Ouagadougou in Burkina Faso determined that the acknowledgment of the role women play in water management was crucial to creating successful water systems. The study, which focused on the rural region of the Nakanbé Basin, conducted interviews amongst 19 different villages. According to their results, it was reported that during community discussions on water development programs, women were not consulted at all. In one interview, “a woman indicated that women in her village were not asked about the

location of a water pump even though it was up to them to fetch the water 15 km away.”

<sup>10</sup> Organizations such as GIWEH understand that the responsibility to collect water often fall on women, explaining why the organization aims to make women a priority when considering developmental projects and procedures. GIWEH, which stands for the Global Institute for Water Environment and Health, is a non-profit organization based in Geneva, Switzerland. Created in March of 2007, the organization was initiated by a group of scientists and researchers specializing in water, environment, and health. GIWEH is an institute dedicated to research, training, and networking between engineers, governments, and knowledgeable experts in order to improve water management systems and reinforce the importance and interconnectedness of our ecological environment and wellbeing. I was privileged to obtain an interview Dr. Nidal Salim, the current director of GIWEH, to discuss the organizations goals and approaches towards the development of water management systems. According to the organization’s brochure, one of the main missions of GIWEH is to “to improve socio- economic well-being beyond present levels, by moving to a multi-sectorial approach, including health and involving women.”<sup>11</sup>

Traditionally, it is the responsibility of the wife or daughter to obtain water for the families while the men work. Dr. Salim went on to explain that in many cultures, this responsibility involves women walking a great distance, up to 20 kilometers, during which they are subject to harassment, rape, and violence. Dr. Salim explained why GIWEH specifically spotlights women in regards to water management: “The vulnerability of women represents a major priority in our organization,” he stated. “Our organization works largely as an advisor to governments. We aim to educate and provide

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<sup>10</sup> [http://web.idrc.ca/en/ev-84600-201-1-DO\\_TOPIC.html](http://web.idrc.ca/en/ev-84600-201-1-DO_TOPIC.html)

<sup>11</sup> [http://www.giweh.ch/files/giweh\\_brochure.pdf](http://www.giweh.ch/files/giweh_brochure.pdf)

knowledge where we can, so that we can develop projects and goals and work with one another to accomplish them, including advising on protecting the vulnerability of women and making their needs and safety a priority in projects.”

During my interview with William Carter, Senior Officer in charge of the Water and Sanitation Unit of the IFRC, another gender related cultural issue pertaining to water and sanitation program arose. When I asked Mr. Carter about the role culture plays in water and sanitation programming, he brought up issues of privacy. For women in many countries, it can be considered inappropriate to discuss the security of bathing facilities, water points, and latrines. In particular, discussing cultural issues pertaining to water and sanitation activities during pregnancy and menstruation are considered extremely inappropriate. “Societal barriers continually restrict women’s involvement in decisions regarding sanitation improvement and water access programs, [...] understanding what is appropriate to discuss, what materials are appropriate to administer, and the male-female relationship to water points and sanitation systems are vital points of information that can have a huge impact on water programming,” (William Carter, Interview).

The IFRC is an organization that works both with national-level governments as well as grass-roots level NGOs in improving the quality of life of those living in threatening or unsanitary conditions. In addition to thoroughly understanding and respecting a country’s cultural norms and practices, the IFRC also works to engage community participation and management in all programs. “Communities already have mechanisms for managing issues of common interest and for resolving disputes. Wherever possible we should respect their strengths and work with them,” (*Global Water Sanitation Initiative*). The IFRC believes in developing both hardware and software

systems; hardware is the technical criteria, the pipes and technologies necessary. Software on the other hand, is community education and engagement; promoting dialogue and teaching locals how to use their hardware water systems. By combining these two integrated approaches, IFRC can create a more measurable and defined impact on health improvements related to water and sanitation.

### *Climate change and Migration*

There is more to the issue of water conflict than poor management and lack of cultural sensitivity. Climate change has led to the expansion of the dry, desert land. The spread of the desert has led to mass population migration, which ultimately results in communal conflicts. Climate change places the entire nation in an unstable place; internal and international conflict over resources, increased pressure on urban infrastructures and services, and undermining economic growth through disrupting production systems can be attributed to mass migration and climate change. (Brown, Climate Forced Migration)

Burkina Faso usually receives an annual rainfall of about 720 millimeters per year.<sup>12</sup>

Long dry seasons along with local hydrogeological conditions of the country play a large role in the scarcity of water. The topography and flat landscape along with environmental degradation have resulted in water stresses, as rainfall that is not properly harvested is lost into the soil. In addition, Burkina Faso is currently experiencing an annual population increase of about 3% per year. This population growth is furthering water scarcity issues;

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<sup>12</sup> "Burkina Faso - Average Precipitation in Depth (mm per Year) - Country Comparison." *Burkina Faso - Average Precipitation in Depth (mm per Year) - Country Comparison*. N.p., n.d. Web. 9 July 2012.

a rise in population means an increased demand of water in all sectors of the economy, whether agricultural, domestic, or industrial.<sup>13</sup>

When analyzing the social complexities that are affecting Burkina Faso's water supply and development systems, climate change, population growth, and migration are critical factors that must be acknowledged. The changing climate has not led to less rainfall in the region, but rather completely unpredictable rainfall patterns. It has made the dry and rainy seasons more extreme. Climate change is causing issues between local Burkinabé farmers and animal herders, who have begun to bump heads over different ideas and preferences of land usage. The cultural economy of Burkinabé is at a mercy to the weather and rainfall patterns. The amount of rain during the wet season determines not only the country's amount of accessible and harvestable water before the long dry months, but the way they interact with the remaining usable land. Clashes between agricultural and livestock professionals have increased. The cultural relationship that Burkinabé have with land is sacred; the right to land is one of the core values of Burkinabé, and disputes over territory and land usage due to climate change is a recent historical development that is having a great impact on the cultures traditions and values.

## **Conclusion**

Despite issues such as climate change and gender relations, one of the most important factors in addressing water accessibility and management systems lie with infrastructures; governments and policy makers hold the prime responsibility for developing programs

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<sup>13</sup> Roudi-Fahimi, Farzaneh, Liz Creel, and Roger-Mark De Souza. "Finding the Balance: Population and Water Scarcity in the Middle East and North Africa.

and initiatives in improving their countries water sources and access. When asked about the greatest challenges in dealing with water related projects and programs in other countries, Dr. Salim of GIWEH gave me what he believed to be the three greatest challenges: “Governance, education, and public awareness. These three themes reinforce and reflect on one another,” he explained. Without a stable or willing government, it unlikely that any plans or assignments will commence, let alone be successful.

After studying the cultural economy and societal influences on Burkina Faso and speaking to professionals working with water management and health, I have come to the conclusion that the key factors in improving water supply systems and sanitation involve; strong governance or infrastructure, cultural understanding and education, and participation. While the issue of water security and sanitation encompasses a broad range of issues and complexities, I believe it is these three factors that have the most influence in the success or failure of proposed development projects. Governance, education, and participation reinforce one another and reflect a nation’s cultural ideals, beliefs and priorities. By pursuing agendas that address and work with these three factors, I believe one can design and implement programs that find a balance between macro and micro level development while still respecting cultural norms and differences.

The three organizations I spoke with dealt with water management and sanitation projects through a multi-sectorial approach. GIWEH, IRHA, and the IFRC stressed the importance of finding a balance in their approaches to development, focusing not specifically on grass-roots level developments or the governmental policy-making level, but rather working through a multi-sectorial approach to find an agreeable middle. Vessela Monta appropriately described the relationship of a multi-sectorial approach in:

“It is crucial that authorities see the importance of rainwater harvesting in their agendas [...] We must change the vision of politicians to get results, so communities and villages can work together with their governments and reach goals. [The practice of rainwater harvesting is not new] it is an ancient wisdom and practice, and successful project development can make all the difference in the lives and well being of people.”

Culture and tradition play a crucial role in shaping the way a country reacts to developmental efforts. Undoubtedly, culture shapes human progress, and it is critical that any organization intending to implement developmental projects and programs understand the culture and social complexities of the region prior to. In doing so, NGOs and project leaders can implement educational programs that can successfully change old unhealthy behaviors and practices, such as open defecation. A thorough understanding of one’s culture and current cultural economy can

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