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# Jerry Cans and Gender: The Necessity of Women's Inclusion in Clean Water Development Work

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JERRY CANS AND GENDER:  
THE NECESSITY OF WOMEN'S INCLUSION IN CLEAN WATER  
DEVELOPMENT WORK

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This Project Thesis, directed and approved by the candidate's committee, has been accepted by the Honors College of Abilene Christian University in partial fulfillment of the requirements for the distinction

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## ABSTRACT

In light of a changing climate, access to clean, safe water has never been more important. However, development work in the clean water sector can often leave women on the sidelines. This thesis seeks to establish the importance of including women at all levels of clean water development work. The underlying philosophies of human rights and feminism are particularly relevant to this work and are expounded upon in the first portion of the paper. This section is followed by a literature review, which synthesizes some of the major obstacles that women face in the area of water access, particularly in light of climate change. Next, a case study is offered from my own experience working in Ghana in the summer of 2017. This is followed by a section detailing some of the reasons to include women in the development process. Finally, a few salient “ways forward” are offered as best methods from the literature and confirmations of what I observed during my time in Ghana.

## INTRODUCTION

*Day 1 – I wish I had brought a lighter, more portable suitcase.*

In the summer of 2017, I had the opportunity to spend a few weeks in Ghana. I was there as an intern with Saha Global, an NGO dedicated to providing access to clean water to rural people in the northern region of Ghana. Saha Global partners with nearby villages in the area surrounding Tamale—the capital city of the northern region—to set up clean water businesses. These businesses are run by a few local village women, chosen by the village chief. Every summer and winter, Saha invites university students to partner with them in the Global Leadership Program. I was accepted into the program as a sophomore. I was particularly excited for this opportunity, as it combines two of my greatest passions: environmental sustainability and women’s empowerment. Upon arrival, we went through an orientation process, wherein we learned important cultural practices and some basic Dagbani—the main language spoken in the northern region. Afterwards, I was assigned to a team of three other university students and one translator. We worked in the village of Kpachaa, making initial contact with the chief and village elders, training the selected entrepreneurs, and educating the community about safe water practices. The entire implementation process took about two weeks, but I was deeply impacted. While there, I began to ask the questions that have informed this project, which takes as its starting point the things I observed while working with Saha Global in Ghana.

One of the primary obstacles I faced when I went to Ghana was my own idea of what it would look like to do development work. Perhaps as a result of being embedded in a Christian university context, I have come to see development as a kind of service to the “least of these.” But what I found when I stepped off the VIP bus in Tamale was that I

was the “least of these.” I was the least culturally sensitive, the least familiar with the local ecology, and the least competent person in the village of Kpachaa. About halfway through the trip, I and a few other “field representatives” (this was the title given to us by Saha) began to question why we were even there. If we were not essential to the implementation process, what was the point in being there? The best answer I could come up with was that I was there as a learner. This thesis project was largely prompted by my own reflection upon a piece of advice that a Ghanaian professor gave to us on the first day of our trip:

*Day 1 - I loved what Aunt<sup>1</sup> Essie said about our “posture” during our time here. We are not philanthropists or rescuers doing community service. We are students, entering a foreign cultural context and learning through service.*

Saha Global is intentional in seeking out local women to run their water businesses. Locals are the best equipped to make a difference in their community. Particularly women—who, by and large, are in charge of water collection worldwide—are essential to developing community clean water solutions. Working with Ayi, Asana, and Amina—the three entrepreneurs for Kpachaa—taught me the importance of inclusive development processes. These three women had such strength and resilience. They had cultural know-how, knowledge of the local ecology, and the determination to work for the health of their children. They were the experts; we were the students. All they lacked was access to the tools with which to improve their families’ lives. The purpose of this project is to explore how including women such as these is essential to sustainable development work, particularly in the arena of clean water and particularly in light of climate change.

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<sup>1</sup> In Ghana, “Aunt” is often used as a title of respect for women older than you

This paper first seeks to explore the philosophical underpinnings relevant to work in the clean water sector, with a special focus on empowering women. Next, it will illuminate the unique burden that climate change places upon women. It will then offer an analysis of the Saha method for providing clean water to rural communities. Finally, the paper will offer alternative paths forward in the development of effective approaches to the issues surrounding women's access to water in light of climate change. Throughout the paper I have inserted direct quotes from my 2017 travel journal.

## **PHILOSOPHY: CLEAN WATER & WOMEN'S EMPOWERMENT**

*Day 1 – When first entering a diff. cultural context, observe FIRST + ask questions.*

*1<sup>st</sup> protocol when entering a home is to offer water. Next you summarize your journey & why you're there verbally. People inquire about everything; they really want to know how you are.*

*Day 6 – Water = universal human right*

### Safe Drinking Water as a Human Right

Human Dignity is a slippery philosophical concept, but one that is normative within and foundational to the international discussion of human rights. In the wake of the Second World War, the 1948 Universal Declaration of Human Rights was written among the chaos of a shaken international legal and geopolitical climate, “when the need for a unifying moral principle was acute.”<sup>2</sup> Human dignity can be understood broadly as a universal, inalienable, and unconditional value of human beings, which is closely related to their personhood, exercise of autonomy, and their ability to pursue human flourishing.

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<sup>2</sup> Stephen Riley and Gerhard Bos, “Human Dignity,” Internet Encyclopedia of Philosophy, accessed 28 November 2018, <https://www.iep.utm.edu/hum-dign/>.

For the purposes of this paper, it is primarily important to understand that human dignity is the underlying principle of contemporary understandings of universal human rights.

In an article calling for the government of Brazil to guarantee universal access to potable water, Celso Maran de Oliveira argues that water is a human right. This position is corroborated by resolution 64/292 of the United Nations General Assembly. This resolution, passed in 2010, states that access to clean water and sanitation are human rights because they are “essential to the realisation of all human rights.”<sup>3</sup> According to this resolution, water must be sufficient, safe, acceptable, physically accessible, and affordable.<sup>4</sup> An additional resolution, passed in 2016, declared March 22, 2018 through March 22, 2028 to be the International Decade for Action, “Water for Sustainable Development.” This resolution describes water as “indispensable for human development, health and wellbeing.”<sup>5</sup> Although these UN commitments refer broadly to water and sanitation, Oliveira argues primarily for the right of access to safe drinking water, as this particular type of access has direct and indirect impacts on a person’s physical health. Having access to safe drinking water is foundational to the exercise of all other human rights. In this sense, it is what might be referred to as a basic human right. All the same, procuring safe drinking water is an economic crisis that millions of people in developing countries face on a daily basis. Some scholars argue that the commodifying water is wrong, since it is a basic human right, essential to all life. Thus, it ought not to be

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<sup>3</sup> UN Department of Economic and Social Affairs, “International Decade for Action ‘WATER FOR LIFE’ 2005-2015,” UN, accessed 28 November 2018, [http://www.un.org/waterforlifedecade/human\\_right\\_to\\_water.shtml](http://www.un.org/waterforlifedecade/human_right_to_water.shtml).

<sup>4</sup> UN, “WATER FOR LIFE.”

<sup>5</sup> UN General Assembly, “Resolution 71/222. International Decade for Action, ‘Water for Sustainable Development’, 2018–2028,” 7 February 2017, <https://undocs.org/A/RES/71/222>.

subject to the whims of the market, which might allow it to become inaccessible to lower-income (particularly rural) people.

In the context of the global free market system, the UN places the burden of providing clean water on individual countries. The UN allows this responsibility to be achieved through “progressive realization.” This means that a country is required to do the best it can with the resources available, making continual advances in the area of clean water. It does not mean that water has to be free. There are no sanctions for those countries which fail to provide adequate clean water to their citizens.

The capabilities approach is a more specific way to get at the idea of basic human rights in the context of development work. Amartya Sen and Martha Nussbaum are perhaps the most notable philosophers of the capabilities approach. Nussbaum contends that there are certain universal “capabilities” that all people ought to have the right to pursue. The capabilities approach addresses certain functionings and capabilities as part of a person’s well-being. Functionings refer to what people do. Capabilities refer to “a person's real freedoms or opportunities to achieve functionings.”<sup>6</sup> The Stanford Encyclopedia of Philosophy clarifies the concept well: “The distinction between functionings and capabilities is between the realized and the effectively possible....”<sup>7</sup> In other words, functionings are the things that we do, while capabilities are the things that we are able to do. The capabilities approach also distinguishes between means and ends. “For the capability approach, the ultimate ends of interpersonal comparisons are people's capabilities.”<sup>8</sup> Thus, capability scholars value things like policy and economic growth

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<sup>6</sup> Robeyns, “Capability Approach.”

<sup>7</sup> Robeyns, “Capability Approach.”

<sup>8</sup> Robeyns, “Capability Approach.”

and NGO projects only insofar as these things contribute to the expansion of people's capabilities, which is the telos of this kind of progress.

Another important aspect of the capabilities approach is whether or not people can turn their immediate belongings and means into beings and doings. This idea is "captured with the term 'conversion factor': the degree in which a person can transform a resource into a functioning."<sup>9</sup> Conversion factors can be typified into three categories: personal, social, and environmental. In the context of rural, northern Ghana, village women primarily lack environmental conversion factors. Regional water treatment is not feasible in rural northern Ghana; as a developing country, it is unable to finance the infrastructure that a regional water treatment center would require.<sup>10</sup> Village women thus do not possess the functioning of providing safe drinking water to their families because they lack the initial capital for adequate water-cleaning technology, as well as training on how to use it.

The capabilities approach is particularly useful in conversations regarding poverty and development. It offers a clear way to delineate a standard of well-being in the form of basic capabilities, which "refer to the freedom to do some basic things considered necessary for survival and to avoid or escape poverty or other serious deprivations."<sup>11</sup> According to this definition, it becomes clear that access to safe drinking water is a basic capability necessary to human well-being.

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<sup>9</sup> Robeyns, "Capability Approach."

<sup>10</sup> Saha Global 2017 Summer Water Global Leadership Handbook

<sup>11</sup> Robeyns, "Capability Approach."

## Feminism

*Day 1 - “Gender expectations are black & white (very binary).”*

In the words of Chimamanda Ngozi Adichie, a feminist is “a person who believes in the social, political, and economic equality of the sexes.”<sup>12</sup> Feminism is simultaneously a philosophy and an increasingly globalized social justice movement with political implications. It “seeks justice for women and the end of sexism in all forms.”<sup>13</sup> In truth, there are a great many distinct “feminisms.” Thus, accurately articulating a “feminist philosophy” is difficult, since it would be wrong to think of feminism as a monolithic philosophical concept. For the purposes of this paper, I will choose to focus on the ideas of intersectional feminism, sustainable feminism, and ecofeminism since they have particular relevance to women, clean water development work, and climate change.

Intersectionality first came onto the philosophical scene in 1989, when Kimberlé Crenshaw critiqued white American feminists’ efforts to capture the experiences of all women. Intersectionality recognizes the multiplicity of factors that form the basis of an individual’s identity: e.g. race, class, sexual orientation. In the apt words of A.E. Kings, “While intersectionality was first used to describe the particular experiences of black women; it was further developed as an analytic tool by feminists, hoping to address and resolve the most fundamental and contentious of concerns within feminist scholarship—i.e. the existence of differences between women.”<sup>14</sup> Intersectionality is a helpful tool for understanding the inherent complexity of development work, especially as it concerns

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<sup>12</sup> Chimamanda Ngozi Adichie, “We should all be feminists,” (TED Talk presented at TEDxEuston, London, UK, December 2012), [https://www.ted.com/talks/chimamanda\\_ngozi\\_adichie\\_we\\_should\\_all\\_be\\_feminists](https://www.ted.com/talks/chimamanda_ngozi_adichie_we_should_all_be_feminists)

<sup>13</sup> Noëlle McAfee, “Feminist Philosophy,” The Stanford Encyclopedia of Philosophy, 28 June 2018, <https://plato.stanford.edu/entries/feminist-philosophy/>.

<sup>14</sup> A.E. Kings, “Intersectionality and the Changing Face of Ecofeminism,” *Ethics & the Environment* 22, no. 1 (Spring 2017): 64.

women's empowerment. It is indeed important to understand that women's position in rural northern Ghana is, by and large, a disadvantaged one.<sup>15</sup> However, it is additionally important to understand the multiple factors that go into that disadvantage. Women in northern Ghana are disadvantaged not only by their culture—which is decidedly patriarchal—but also by their location, since the patterns of development established during British colonial rule largely neglected the northern regions. According to Kings, “Reflecting upon one's position, especially when speaking from a point of privilege, helps to avoid the unintentional marginalization of other groups or identities.”<sup>16</sup> A decidedly Western version of feminism and female empowerment might marginalize the very women that an NGO seeks to empower.

Ecofeminism has a particular relevance to the topic of women and water. When it was first coined by Françoise d'Eaubonne, ecofeminism “referred generically to a wide variety of “women-nature” connections.”<sup>17</sup> Ecofeminism draws comparison between the oppression of women and the domination of the environment. Additionally, it offers a critique of Western philosophy, which was largely written by men. The Western philosophical canon tends toward hierarchy—particularly, a hierarchy which places men on the top and women on the bottom; it also places rational humans on the top and the rest of nature on the bottom. Ecofeminist philosophers have recognized the ways in which English has animalized women and feminized nature:

Women are referred to pejoratively as dogs, cats, catty, pussycats, pussies, pets, bunnies, dumb bunnies, cows, sows, foxes, chicks, bitches, beavers, old bats, old hens, old crows, queen bees, cheetahs, vixen, serpents, bird-brains, hare-brains, elephants, and whales... Mother Nature (not Father

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<sup>15</sup> Michael O'Neal Campbell, *The Political Ecology of Agricultural History in Ghana*, (Hauppauge, NY: Nova Science Publishers, 2013): 91, EBSCO

<sup>16</sup> Kings, “Intersectionality,” 64.

<sup>17</sup> Stanford Encyclopedia of Philosophy

Nature) is raped, mastered, controlled, conquered, mined; her (not his) secrets are penetrated, and her womb (men don't have one) is put into the service of the man of science (not woman of science, or simply scientist). Virgin timber is felled, cut down. Fertile (not potent) soil is tilled, and land that lies fallow is useless or barren, like a woman unable to conceive a child.<sup>18</sup>

This sort of language is used in patriarchal cultural contexts to justify the exploitation of both women and nature. There are two major streams of ecofeminist thought: essentialism and social constructivism. The essentialist argues that women are, by nature, more connected to the environment due to their ability to bear children (i.e. fertility). Thus, women are more qualified to speak on behalf of nature. The social constructivist argument builds upon “Marxist and social feminist literature to show how women’s position in society (as, for example, carers of children and other vulnerable family members, domestic workers, and low paid/status workers) [was] derived from prevailing social and economic structures, which exposed them to a particular set of environmental incivilities.”<sup>19</sup> The social constructivist ecofeminist argues that, because women and the environment have suffered from the same oppressive social and economic structures, women are better equipped to speak on nature’s behalf. Ecofeminist philosophers—both essentialist and social constructivist—believe that women’s flourishing and nature’s flourishing are linked. This connection—whether a result of nature or nurture—places women in a unique position to be active participants in the clean water process.

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<sup>18</sup> Stanford Encyclopedia of Philosophy

<sup>19</sup> Susan Buckingham, “Ecofeminism in the twenty-first century.” *The Geographical Journal* 170, no. 2 (June 2004): 147.

## WOMEN'S UNIQUE BURDEN

### Women and Climate Change

*Day 3 – Question: does climate contribute to poverty?*

Climate change affects different people differently. The developing world is more vulnerable to the adverse effects of climate change.<sup>20</sup> Because of increasing use of water across multiple sectors—including agriculture, power generation, industry, and domestic use—water scarcity is a looming problem that poses a particular threat to rural people.<sup>21</sup> As this competition increases, so do pre-existing inequalities. This makes people more vulnerable to the negative effects of climate change.

Vulnerability can be defined broadly as the extent to which a person or community “is susceptible to sustaining damage from climate change.”<sup>22</sup> Notably, women face increased vulnerability to climate change because of pre-existing gender inequalities. Worldwide—but particularly in the countries most affected by climate change—women still tend to hold inferior societal positions, due to gender practices or structures. Moreover, climate change accentuates gender inequalities. According to Margaret Alston,

...climate change is not happening in a vacuum, but is one of a number of trends including globalization, rising world population, conflict, economic crisis and unpredictable policies that shape individual and community responses, and, in the context of this article, also enhance gender inequalities. It is therefore critical that adaptive responses address both the ecological and social systems and the inherent inequalities within global communities.<sup>23</sup>

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<sup>20</sup> Robina Wahaj and Maria Hartl, “Gender and Water. Securing Water for Improved Rural Livelihoods: The Multiple-uses System Approach,” *Rome, IFAD* (November 2012): 2.

<sup>21</sup> Wahaj and Hartl, “Multiple-uses Approach,” 2.

<sup>22</sup> Denton, “Climate Change Vulnerability,” 14.

<sup>23</sup> Margaret Alston, “Women and Adaptation,” *WIREs Climate Change* 4, no. 5 (2013): 2.

Fatma Denton argues that “[u]nequal power relations between women and men lead to their differential access to environmental resources and opportunities for income diversification, entailing that environmental vulnerability, and indeed security, affect women and men differently.”<sup>24</sup> In the face of increasing water shortages, women are at a distinct disadvantage. Krishnaraj argues “we are at a time in history when we are facing a crisis of shrinking water resources, mainly due to overexploitation. When water becomes a scarce good, the more privileged inevitably find ways to maintain access.”<sup>25</sup>

Connected to facing obstacles to water access, women also face challenges in their ability to use resources to better their own livelihoods. Defining adaptation as “the ability to genuinely transform structure, functioning and organization drawing on strategies that are long-term sustainable actions,”<sup>26</sup> Alston asserts that women have a more difficult time adapting to the impacts of climate change due to uneven power relations, lack of control over resources, and low levels of institutional support.<sup>27</sup> At the same time, women are in a disadvantaged position to mitigate the effects of climate change on their lives. In their article “Women and Water Management in Times of Climate Change: Participatory and Inclusive Processes,” Figueiredo and Perkins write that “[s]ocially vulnerable people, and women in particular, are disproportionately affected by global climate change because of their geographic location and gendered socioeconomic roles, yet they are least equipped to deal with its impacts due to their disadvantaged economic and political position.”<sup>28</sup> There are a few key challenges that

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<sup>24</sup> Denton, “Climate Change Vulnerability,” 17.

<sup>25</sup> Krishnaraj, “Women and Water,” 37.

<sup>26</sup> Alston, “Women and Adaptation,” 4.

<sup>27</sup> Alston, 2.

<sup>28</sup> Patricia Figueiredo and Patricia Perkins, “Women and Water Management in Times of Climate Change: Participatory and Inclusive Processes,” *Journal of Cleaner Production* 60, no. 1 (December 2013): 188.

increase women's vulnerability to climate change, including issues of land ownership, policy representation, and the commodification of water.

### *Land Ownership*

One of the key obstacles to women's access to water in light of climate change is the reality that many women in the world still do not have land-owning rights. This is particularly true of rural women: "Patrilineal inheritance practices have dominated global agricultural resource ownership, leaving women's chief point of entry to farming to be marriage."<sup>29</sup> In the words of Alston, Clarke, and Whittenbury, this contributes to farming women's "invisibility" in climate change decisions.<sup>30</sup> While these three scholars primarily study the dynamics of farming in developed countries such as Australia, their assessment is applicable to the work of rural women the world over. Despite the fact that they rely on the land for survival, women have little to no say in how to manage water resources, because they do not have land-owning rights. This power dynamic contributes to women's reduced capacity to adapt to climate change; Makina and Moyo suggest: "Research indicates that where circumstances are similar between women and men, women are generally more disadvantaged, due to limited access to and control over resources."<sup>31</sup> Because "[p]roperty is power,"<sup>32</sup> women's input is often overlooked in places where they cannot own land. However, as will be seen in the next section, this is not a phenomenon localized to the developing world.

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<sup>29</sup> Margaret Alston, Josephine Clarke, and Kerri Whittenbury "Contemporary Feminist Analysis of Australian Farm Women in the Context of Climate Changes," *Social Sciences* 7, no. 2 (2018): 2.

<sup>30</sup> Alston, Clarke, and Whittenbury, "Contemporary Feminist Analysis," 2.

<sup>31</sup> Anesu Makina and Theresa Moyo, "Mind the Gap: Institutional Considerations for Gender-Inclusive Climate Change Policy in Sub-Saharan Africa," *Local Environment* 21, no. 10 (October 2016): 1188.

<sup>32</sup> Alston, Clarke, and Whittenbury, "Contemporary Feminist Analysis," 3.

### Women's Representation in Climate Change Decisions

*Day 9 – The plan was to leave GILLBT around 7:30 or 8:00 this morning. However, as I am quickly discovering, plans rarely work out here for one reason or another... Our village contact called to let us know that the community meeting would be pushed back to 3. We arrived shortly after 3 and had a meeting with 20 (or so) men of the village. None of the women were included, which really bummed me out.*

In general, women and smaller/poorer countries don't have a potent voice in the current global climate negotiations. However, these are precisely the populations that are most adversely affected by climate change. By and large, women have been woefully underrepresented in international decision-making bodies. This lack of representation applies to international bodies responsible for climate change policy as well. According to Johannes Kruse:

In 1995, at the first UNFCCC negotiation session in Berlin, only around 18 percent of all delegates sent by parties to the convention were women. This number has risen over the years, and women constituted about 31 percent of all state delegates at COP-17 in Durban. The general upward trend, however, masks a wide variation across countries: At the climate negotiations in Durban, there were both delegations that did not include any woman and delegations in which women made up more than 40 percent of the delegates.<sup>33</sup>

Kruse goes on to argue that there are key factors that affect women's representation in climate change decisions at the global level. He notes that a country's degree of political gender equality and level of development have substantive effects on whether women represent their countries in international climate change policy-making. He also points out that cultural factors can influence whether it is considered appropriate for women to act in a representative capacity on behalf of their country. This dearth of female voices means that women's concerns have historically not been effectively

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<sup>33</sup> Kruse, Johannes, "Women's Representation in the UN Climate Change Negotiations: A Quantitative Analysis of State Delegations, 1995-2011," 350.

addressed by climate change policy. Fatma Denton argues "...women are for the most part not well-represented in environmental policy formulation. The climate debate is perpetuating the under-valuation and misunderstanding of women's contribution to environmental management."<sup>34</sup> This undervaluation in turn weakens the efficacy of climate change interventions aimed at water. Furthermore, it has led to more deeply entrenched gender inequality: "The lack of women in decision making has resulted in global understandings of climate issues being insensitive to gendered nuances and the policies, practices, and programs adopted having the unintended consequence of cementing gender inequalities and supporting women's inequitable access to resources and aid."<sup>35</sup> According to Makina, Anesu, and Moyo, "[e]nvironmental decisions and actions are ensconced within gendered power and political relations, which in turn shape both the social and ecological outcomes of any interventions... Remedying the gender imbalance is challenging due to the paucity of women's input in national, regional and global environmental frameworks."<sup>36</sup>

While I was in Ghana, I saw hierarchical power structures; I watched as women were shut out of decision-making; I witnessed young girls lift burdens on their shoulders that they shouldn't have had to carry. Unbeknownst to me at the time, I was starting to come to some of the same conclusions about women's disadvantage that the above literature review has laid out. Fortunately, I was working with an NGO that addressed these difficulties constructively, in a way that truly empowered the women we worked with.

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<sup>34</sup> Denton, "Climate Change Vulnerability," 12.

<sup>35</sup> Alston, "Women and Adaptation," 6.

<sup>36</sup> Makina and Moyo, "Mind the Gap," 1187.

## CASE STUDY: SAHA'S METHOD

*Day 18 – The day began at 6:00 am, when the team left GILLBT... Monitoring was a long, tedious, repetitive process. We went from household to household, labeling buckets, taking samples, and asking questions from 8:00-1:00. It was exhausting, but we stuck with it. And there were small victories throughout the day; like when buckets were half-empty & it was clear a household was drinking the treated water; or when people were able to explain why drinking dugout water is unsafe; or when Jaleel pointed out that a tiny baby would grow up with access to clean drinking water as a given in her life. These moments are what make the work we're doing here worthwhile.*

Regional water treatment centers and pipe systems like what exist in developed countries are simply not feasible in rural Ghana. There are a variety of household water treatments available, such as household chlorination, BioSand filters, and ceramic water filters.<sup>37</sup> However, these solutions require an initial investment of capital, which most individuals living as subsistence farmers lack. Additionally, they require that each individual be trained in the water treatment process. Unfortunately, many of these readily available water treatment solutions never get to the people who really need them. A variety of community-level treatments are available, such as UV systems, boreholes, covered wells, and rainwater harvesting. The benefit of community-level treatment is that it is handled centrally by a few well-trained individuals. The risk of error in the initial treatment process is thus greatly reduced.<sup>38</sup> What is unique about Saha's model for clean water is that they have "combined low-cost, simple technologies with an innovative community-level water treatment model that can be adapted to the needs of any community."<sup>39</sup> In northern Ghana, if someone lives outside the city limits, they most

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<sup>37</sup> Saha Handbook, "Household Water Treatments: Core Technologies."

<sup>38</sup> Saha Handbook, "Community-Level Treatment: Pros and Cons."

<sup>39</sup> Saha Handbook, "Meeting Local Needs."

likely do not have access to an improved drinking water source. The government will dig dugouts deeper, but it does not provide clean water solutions. One can purchase small plastic bags of clean “sachet water” on the bustling streets of the capital of Tamale; however, these small bags go for 20 pesewas each, an enormous sum for a subsistence farmer. Aside from surface water, rural villages have no other real choice for water.

So, what does Saha do? They first scout to find villages which have access to surface water but lack effective treatments. Once a village is determined to be a good candidate for a Saha business, initial contact is made with the chief and village elders. If all goes well, implementation teams propose the business to the council of village leaders. If the village leaders agree to partner with Saha, they choose three or four women from the village to run the enterprise. Next, the implementation team builds the water treatment center and trains the entrepreneurs in the water treatment process, safe storage container assembly, and money management. Then the implementation team distributes one safe storage container to each of the households in the village. As they distribute, they explain—via a translator—what the water business is, why clean water is important to health, and how to keep water from being re-contaminated. Once all of the safe storage containers have been distributed and the water in the treatment center tests clean, they host an opening day for the business, often accompanied by celebration. But the work doesn’t end there.

### Sustainability

As outlined in their handbook, Saha has identified five key success factors that contribute to their efficacy as an NGO. The first is economic sustainability. Once the water treatment center and equipment are in place, the costs of operation are very low. So

low, in fact, that the entrepreneurs will actually be able to pay for them with the profits from the water treatment center. It is essential that Saha does not pay the women entrepreneurs. If they did so, it would make the business dependent on outside money. As it is, the Saha businesses are financially self-sufficient. The water is sold by the 20-liter safe storage container. A full container costs 20 pesewas (there are 100 pesewas in one Ghanaian cedi). To put that in perspective, single “sachet” water—often sold on the streets of the city in a sandwich-sized plastic bag—costs the same amount. The women use the money to buy all necessary supplies (i.e. alum, chlorine tabs, replacement spigots) for the business; the remainder of the money is for them to keep.

The second success factor is logistical sustainability. Saha purposefully designed the water treatment process to be very low-tech, so that technical skill for mechanical repairs is unnecessary. The women can purchase alum from local markets, and the drums, Poly tank, metal stand, and safe storage containers are all locally sourced from the city of Tamale. Broken spigots are easily fixed, and Saha sells the chlorine tablets to the entrepreneurs at an affordable price.

Social sustainability is the third key factor in Saha’s success. As defined by the Saha Global Leadership Program Handbook, social sustainability “[b]uilds on the established behaviors and preferences of individuals, families, and communities.”<sup>40</sup> Saha is very conscious of the cultural practices of villages in the northern region. All Saha translators and monitors are local Ghanaians who speak Dagbani. All Field Representatives are trained to be sensitive to cultural preferences such as modesty, hand shaking, polite greetings, and physical positions of respect. Women’s roles in these

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<sup>40</sup> Saha Handbook, “Key Success Factors.”

villages are primarily domestic: most women work in their households while the men go out to the farms. Thus, it is predominantly women and older girls who do the water collection work for their families. Saha recognizes this cultural gender dynamic, and, instead of overturning it with western feminist ideals, works within it to truly empower women. They employ a woman-centric approach that exemplifies Bulbeck's idea of sustainable feminism. For example, all of the field reps on our trip respected cultural mores by wearing modest clothing that covered our shoulders and knees while working in the villages. We didn't hand out contraceptives or preach to the village women that they were inherently equal to their husbands. We didn't critique their polygamous practices. We weren't there to upset the social order and "liberate" the women of the village from their cultural role; we were simply there to provide access that would allow them to exercise their capabilities more fully.

Furthermore, it is essential to social sustainability that one recognize the intersectional dynamics at play. These rural village women are different from the Western women who started Saha Global and from the field representatives who intern with the Global Leadership Program. To illustrate this point, an anecdote seems appropriate: All three of the women with whom my team worked in the village of Kpachaa were breast-feeding while fasting for the month of Ramadan. This is an experience to which I—as a white, childless, Christian woman from the US—cannot relate. Considering factors of intersectionality is particularly important to the work of Western NGOs, as there exist cultural understandings of gender in rural, northern Ghana that we ought to be careful not to simply dismiss as backwards. Although I might balk at the idea of being subject to a husband, Amina, Asana, and Ayi—the local women with

whom my team and I worked—might not view their situation as one of subjugation. It is essential that Saha Global employees and volunteers not act based on Western understandings of female empowerment but contextualize those understandings to empower women where they are in Ghana.

The fourth dimension of sustainability is that of market appeal. It is a priority for Saha to affirm the inherent human dignity of all people in the communities where their businesses are present. One of the ways they do this is by seriously considering the preferences villagers have when it comes to the appearance and taste of the water in the treatment center. Some people in the northern region prefer water that tastes quite strongly of chlorine and/or alum, because it tastes like “city” water. Aware of such inclinations, monitors regularly ask members of the community about the taste of the water and make recommendations to the entrepreneurs about treatment processes accordingly. During our team’s safe storage distribution day, our translator, Jaleel, would take note of which color container people preferred, offering them a different color if they didn’t like the one handed to them. People are more likely to use the water treatment center if they have agency in the process.

In the study referenced earlier, Bulbeck recognizes that a sustainable feminism approach requires continuous adjustment: “The process by which aid donors listen carefully to the expressed needs of aid recipients, tailoring their projects in the process, will always be provisional and endlessly revised in the light of experience and outcomes.”<sup>41</sup> It is precisely this sort of continuous adjustment that Saha implements in their long-term monitoring process, which is the fifth—and arguably most essential—key

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<sup>41</sup> Bulbeck, “Hailing the Authentic Other,” 70.

to their sustainability. Once a clean water business is set up, Saha monitors visit the village regularly to check in with the entrepreneurs, chief and village elders, and other community members. They ask the women entrepreneurs questions about how the business is going: “How are sales? How often do people come to buy water?... Are you making a profit at the center?”<sup>42</sup> The monitor also visits at least six households to check whether the safe storage container is being used and to take water samples. Saha then uses this information to improve upon their implementation process.

Oftentimes, with these clean water businesses, it is not the technology that breaks down, but the social systems. One issue that our team encountered while monitoring a previously implemented Saha business is that people are sometimes suspicious of the treated water. When we talked to a group of Fulani, who are nomadic herding people that often live on the outskirts of villages, they told us that they wouldn’t drink the Saha-treated water because they thought it was laced with birth control. Saha’s water treatment process is only effective if people use it. It is therefore incredibly important to maintain relationships with these communities and continuously troubleshoot to address issues, whether they be technical or social. Monitoring also provides helpful qualitative data about the tangible effects of the treatment center. Saha monitors often receive reports of improved health in children. The monitoring process—which continues for at least five years after a business is implemented—is the reason why 100% of Saha Global water treatment centers are still open today.

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<sup>42</sup> Saha Handbook, “Monitoring: The Key to Sustainability.”

## WHY INCLUDE WOMEN? LESSONS FROM THE LITERATURE AND THE SAHA GLOBAL CASE

### Women have Agency

*Day 12 – Let me just take a moment to emphasize the badassery of these mothers. ALL of them are currently nursing babies. They are all fasting for Ramadan. They are still completing all of the labor for their households every day. AND they're taking hours of their days to come scoop dugout water and learn how to run a business for their community. These women are incredible.*

Globally, women and girls tend to be the ones in charge of water collection for their families. In her article “Women and Water: Issues of Gender, Caste, Class and Institutions,” Maithreyi Krishnaraj writes “[w]omen’s responsibility for carrying and using water exemplify universal patriarchy, which results in certain structural and symbolic inequality between men and women.”<sup>43</sup> Often, they have to walk long distances to get access to this water. This process takes time and exposes women to gender-based violence. In 2007, the Intergovernmental Panel on Climate Change reported that climate change will increase the levels and instances of water stress in some African countries. As a result, “Many women in developing countries travel great distances to find water, so climate change will make their daily lives even more difficult.”<sup>44</sup>

In light of this reality, women are key stakeholders when it comes to issues of water access. They have a vested interest in improving water access, since long treks for water leave them more vulnerable to gender-based violence. Additionally, women have a particular interest in proper sanitation, due to the effects menstruation can have on their ability to fully participate in education. Denton points out “It has been well documented that rural women in particular play a key role in environmental and natural resource

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<sup>43</sup> Maithreyi Krishnaraj, “Women and Water: Issues of Gender, Caste, Class and Institutions,” *Economic and Political Weekly* 46, no. 18 (Spring 2011): 37.

<sup>44</sup> Figueiredo and Perkins, “Women and Water Management,” 189.

management. Women's active involvement in agriculture, and their dependence on biomass energy, makes them key stakeholders in effective environmental management.”<sup>45</sup> It is important that we not simply view women as victims of climate change; women are in a position to be game-changers when it comes to the negative effects of climate change. Margaret Alston puts it well when she writes:

If policies and programs attend only to ecological and economic systems ignoring existing and embedded inequalities, then transformative change is not possible. What makes this so much more disturbing is that women’s knowledge, experience, and energy have the capacity to build positive adaptations, extend local level knowledge, and address community empowerment. Women are not victims in this space, but they are rendered vulnerable through existing social customs, caring, and reproductive capacity.<sup>46</sup>

It is essential to recognize the capacities that women possess for transformative change. Recognizing human dignity means one ought not to simply categorize someone as a victim of their surrounding circumstances but look beyond their vulnerability to see their potential for self-empowerment. The women Saha works with in rural northern Ghana do not lack motivation to provide clean water for their families; on the contrary, they are very concerned with this matter. What they do lack is access to resources and decision-making power.

#### Women have Particular Knowledge

*Day 11 – I keep returning to Aunt Essie’s advice to view these 3 weeks as a service learning opportunity. After the frustration/distress I’ve felt concerning the importance of my being here over the past few days, I’ve realized that my own discomfort is rooted in arrogance. I thought this trip was going to be about basically doing a service project for a needy community. I thought we would be providing a remote, rural village with clean drinking water. But this trip is really more about interacting with & learning from the community, with a way of life vastly different from our own. And it is also about service*

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<sup>45</sup> Denton, “Climate Change Vulnerability,” 11.

<sup>46</sup> Alston, “Women and Adaptation,” 6.

*& clean drinking water. But we're really just delivering the the [sic] technology with which they can provide clean drinking water for themselves.*

Worldwide, women are—by and large—the people in charge of water collection and managing natural resources. These jobs are connected with traditional gender roles that place them in the domestic sphere. Figueiredo and Perkins argue that these traditional roles actually give women unique knowledge about local ecological factors that are incredibly important to water development projects.<sup>47</sup> This knowledge must be shared at the local, national, and international levels “for reasons of both justice and efficiency.”<sup>48</sup> However, if women are excluded from decision-making processes, we lose valuable insight. Alston reinforces this idea:

With further attention to adaptation knowledge development, women’s traditional knowledge and practices have the capacity to add enormous value to the development of new technologies to address climate challenges. It is therefore critical that gender-based analysis be a fundamental aspect of research in this area, not only to tabulate gendered outcomes but also to anticipate likely gendered vulnerabilities.<sup>49</sup>

## **WAYS FORWARD**

In looking at a wide berth of research regarding best methods of development work, several key strategies arose as significant. The following “ways forward” are but a few positive paths to improve clean water development work. The three I have chosen to touch on are mainstreaming gender as a relevant issue, empowering the community to make decisions on its own behalf, and focusing on women’s capacity building (as opposed to implementing a decidedly western feminist vision of women’s empowerment).

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<sup>47</sup> Figueiredo and Perkins, “Women and Water Management,” 189.

<sup>48</sup> Figueiredo and Perkins, 192.

<sup>49</sup> Alston, “Women and Adaptation,” 4.

### Gender Mainstreaming

*Day 10 – “Shortly after arriving in Kpachaa, a group of women & children had gathered to watch the painting process. Alyssa tried to offer her paintbrush to the kids, but they were too timid to participate. While Alyssa & Ian continued painting, Laura, Jaleel, and I held a brief meeting with the women of the village to explain our game plan/what the water business entails... I was really glad to have the women involved.”*

On my team’s second day in the village of Kpachaa, we held a community meeting with the chief and around twenty men. I was dismayed that none of the women were included, because I felt strongly that they were necessary to the success of the water business. I didn’t know much, but I knew that it was the women who were in charge of collecting water for their households. How could a clean water business be successful if its primary future customers were cut out of the informative process?

When doing development work in the area of clean water, it is imperative that any approach involves gender mainstreaming. Gender mainstreaming is the process by which “gender” issues (usually a euphemism for issues that affect women) are brought front and center in the development of policy and projects. According to the Gender and Water Alliance and UNDP:

Without specific attention to gender issues and initiatives, projects can reinforce inequalities between women and men and even increase gender disparities. Although many initiatives are thought to be ‘gender neutral’, this is rarely the case. Projects and programmes often bring new resources (training, tools, technology, etc.). Whether someone is male or female can influence whether he or she can take advantage of these opportunities. Programmes need to enable both women and men to benefit equally from water initiatives.<sup>50</sup>

My discomfort in holding an all-male meeting was not simply cultural insensitivity: the literature is clear in its recognition of gender mainstreaming as an

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<sup>50</sup> Gender and Water Alliance and UNDP, “Resource Guide,” 15.

essential next step for clean water development work. Even though a development project might bring new technology and innovation, it is only helpful insofar as people of any gender are able to access and utilize those things. If women are marginalized in a community, it is imperative that any development project introduced to that community is intentional in its inclusion of women. Otherwise, women will not have equal access to the tools that might help them improve their livelihoods. Thus, “[a] focus on gender equality is essential to positive adaptation”<sup>51</sup> to the water issues that arise due to climate change.

### Community-based Approaches

It is important that the community in which development work is being done is able to define their own water needs and vulnerabilities to climate change. There is no one-size-fits-all approach when it comes to effectively implementing clean water solutions because every community faces unique water challenges and has access to different resources. In the villages that Saha Global builds water treatment centers in, there are a variety of different water sources and each community has unique preferences. The participation of the community is essential to ensuring that people use the treated water. Figueiredo and Perkins maintain that “[C]ommunity-based, ‘people-centred’ approaches to climate change are needed in order to develop adaptation strategies which address social and gender inequalities and allow women to serve as active agents of change in their communities.”<sup>52</sup>

We must recognize and address the many interactions between climate change and existing gender inequalities, in order to reduce the likelihood that the livelihoods of already vulnerable and marginalized people will be significantly worsened by climate change... Starting in local communities,

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<sup>51</sup> Alston, “Women and Adaptation,” 5.

<sup>52</sup> Figueiredo and Perkins, “Women and Water Management,” 192.

with women's leadership, and communicating with others who are also facing similar challenges, is a promising way forward<sup>53</sup>

### Woman-based Approaches

In her book chapter, "Sustainable Feminisms," Chilla Bulbeck calls for Western NGOs to adopt culturally contextualized, women-based approaches, as opposed to Western feminist agendas.<sup>54</sup> In the realm of development work, there is a gendered divide in terms of how projects are implemented. The ones that are "for women" tend to be smaller scale and require a proof of "worthiness" in order for women to demonstrate that they deserve to receive aid.<sup>55</sup> Bulbeck critiques this unequal dynamic between donor and aid recipient, arguing that it "often echoes the inequality of imperialism."<sup>56</sup> As an alternative, she presents the idea of "sustainable feminisms." According to sustainable feminism, women in the developing world ought to be given access to development projects and support, not because they are morally virtuous or worthy, but simply because they are equal human beings. Furthermore, Western NGOs must recognize that their philosophical framework for understanding feminism as an individual rights'-based approach is simply not culturally relevant in many parts of the developing world. A truly sustainable feminism doesn't look like the importation of western feminist ideals (e.g. equal rights legislation, gender equity education, "my body, my choice"). Instead, it looks like working diligently to employ "appropriate strategies which shift women's agendas further into the centers of power and resource allocation."<sup>57</sup>

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<sup>53</sup> Figueiredo and Perkins, "Women and Water Management," 193-94.

<sup>54</sup> Chilla Bulbeck, "Hailing the "Authentic Other": Constructing the Third World Woman as a Recipient in Donor NGO Agendas," In *Sustainable Feminisms*, edited by Sonita Sarker, (Amsterdam: JAI Press, 2007), EBSCO.

<sup>55</sup> Bulbeck, 60.

<sup>56</sup> Bulbeck, 65.

<sup>57</sup> Bulbeck, 69.

Woman-based approaches involve listening to the perspectives, hopes, and desires of individual women. Not only is it important to put women's unique vulnerabilities and needs front and center, it is also important to respect their agency and their particular knowledge of the water resources in their communities. In light of this particular knowledge, clean water development projects ought to make every effort to include local women in the decision-making process. Margaret Alston reinforces this idea:

With further attention to adaptation knowledge development, women's traditional knowledge and practices have the capacity to add enormous value to the development of new technologies to address climate challenges. It is therefore critical that gender-based analysis be a fundamental aspect of research in this area, not only to tabulate gendered outcomes but also to anticipate likely gendered vulnerabilities.<sup>58</sup>

## CONCLUSION

This paper has presented in brief some of the pertinent issues surrounding clean water access in light of climate change. As an internationally recognized fundamental human right, water is foundational to human well-being. It is imperative that development work in this sector recognizes the unique contributions of women and relies upon their particular knowledge in order to provide access to clean water for all people, not just those who already benefit from existing inequalities. Additionally, this paper has tentatively offered gender mainstreaming, community-based approaches, and women-based approaches as key to the future of water development work.

One morning while I was working in the village of Kpachaa, I had an epiphany. I noticed a woman pouring dugout water through a sieve. It seems obvious now, but I hadn't yet realized at the time that the women in the village had already been trying to give their families clean water: they used sieves, sifted out sediments, and boiled drinking

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<sup>58</sup> Alston, "Women and Adaptation," 4.

water. They wanted their children to be healthy, and they were doing what any other mother would do in similar circumstances. Still, this was not enough to truly clean the contaminated dugout water and make it safe to drink. Similarly, attempting to conduct development work in the area of clean water without intentionally involving women is just as fruitless as pouring dugout water through a sieve.

## Bibliography

- Adichie, Chimamanda Ngozi. "We should all be feminists." TED Talk presented at TEDxEuston, London, UK, December 2012.  
[https://www.ted.com/talks/chimamanda\\_ngozi\\_adichie\\_we\\_should\\_all\\_be\\_feminists](https://www.ted.com/talks/chimamanda_ngozi_adichie_we_should_all_be_feminists).
- Alston, Margaret. "Women and Adaptation." *WIREs Climate Change* 4 no. 5 (2013): 351–358. doi: 10.1002/wcc.232
- Alston, Margaret, Josephine Clarke, and Kerri Whittenbury. "Contemporary Feminist Analysis of Australian Farm Women in the Context of Climate Changes." *Social Sciences* 7 no. 2 (2018). doi:10.3390/socsci7020016.
- Buckingham, Susan. "Ecofeminism in the twenty-first century." *The Geographical Journal* 170, no. 2 (June 2004): 146-54.
- Bulbeck, Chilla. "Hailing the "Authentic Other": Constructing the Third World Woman as a Recipient in Donor NGO Agendas." In *Sustainable Feminisms*, edited by Sonita Sarker, 59-73. Amsterdam: JAI Press, 2007.  
[http://web.a.ebscohost.com/ehost/detail?sid=02ee534b-0c4f-4e0f-a73e-8553240e625f%40sdc-v-sessmgr04&ppid=pp\\_59&vid=0&format=EB#AN=195470&db=nlebk](http://web.a.ebscohost.com/ehost/detail?sid=02ee534b-0c4f-4e0f-a73e-8553240e625f%40sdc-v-sessmgr04&ppid=pp_59&vid=0&format=EB#AN=195470&db=nlebk).
- Campbell, Michael O'Neal. *The Political Ecology of Agricultural History in Ghana*. Hauppauge, NY: Nova Science Publishers, 2013.  
<http://ezproxy.acu.edu:2052/login.aspx?direct=true&AuthType=sso&db=nlebk&AN=581735&site=eds-live&scope=site&custid=s8479690>.
- Denton, Fatma. "Climate Change Vulnerability, Impacts, and Adaptation: Why Does Gender Matter?" *Gender and Development* 10, no. 2 (2002): 10-20.  
<https://www.jstor.org/stable/4030569>
- ESCR-Net, "Progressive Realisation and Non-regression," <https://www.escr-net.org/resources/progressive-realisation-and-non-regression>
- Figueiredo, Patricia and Patricia E. Perkins. "Women and Water Management in Times of Climate Change: Participatory and Inclusive Processes" *Journal of Cleaner Production* 60, no. 1 (December 2013): 188-94.
- Gender and Water Alliance and UNDP. "Resource Guide: Mainstreaming Gender in Water Management." Version 2.1, November 2006.
- Kings, A.E. "Intersectionality and the Changing Face of Ecofeminism." *Ethics & the Environment* 22, no. 1 (Spring 2017): 63-87.

- Krishnaraj, Maithreyi. "Women and Water: Issues of Gender, Caste, Class and Institutions" *Economic and Political Weekly* 46, no. 18 (Spring 2011): 37-39.
- Kruse, Johannes. "Women's Representation in the UN Climate Change Negotiations: A Quantitative Analysis of State Delegations, 1995–2011." *International Environmental Agreements: Politics, Law and Economics*, no. 4 (2014): 349-70. doi:10.1007/s10784-014-9245-6.
- Makina, Anesu, and Theresa Moyo. "Mind the Gap: Institutional Considerations for Gender-Inclusive Climate Change Policy in Sub-Saharan Africa." *Local Environment* 21, no. 10 (October 2016): 1185–97. doi:10.1080/13549839.2016.1189407.
- McAfee, Noëlle. "Feminist Philosophy." The Stanford Encyclopedia of Philosophy. 28 June 2018. <https://plato.stanford.edu/entries/feminist-philosophy/>.
- Riley, Stephen and Gerhard Bos, "Human Dignity." Internet Encyclopedia of Philosophy. Accessed 28 November 2018. <https://www.iep.utm.edu/hum-dign/>.
- Robeyns, Ingrid. "The Capability Approach." The Stanford Encyclopedia of Philosophy. Last modified 3 October 2016. <https://plato.stanford.edu/entries/capability-approach/>.
- Saha Global 2017 Summer Water Global Leadership Handbook.
- Stanford Encyclopedia of Philosophy, "Feminist Environmental Philosophy."
- United Nations Department of Economic and Social Affairs. "International Decade for Action 'WATER FOR LIFE' 2005-2015." UN. Accessed 28 November 2018. [http://www.un.org/waterforlifedecade/human\\_right\\_to\\_water.shtml](http://www.un.org/waterforlifedecade/human_right_to_water.shtml).
- UN General Assembly. "Resolution 71/222. International Decade for Action, 'Water for Sustainable Development', 2018–2028." 7 February 2017. <https://undocs.org/A/RES/71/222>.
- Wahaj, Robina and Maria Hartl, "Gender and water. Securing water for improved rural livelihoods: The multiple-uses system approach," Rome, IFAD