

The Intersection Between Deforestation and Gender in Sudan

Introduction

In 2016, the United Nations in Sudan interviewed a middle-aged woman in the West Darfur state. Zainab Ibrahim was a firewood gatherer. To make a living, she would walk into the forests surrounding her village, Al-Kerenik, to gather firewood and then sell the wood in the market.

Being a firewood gatherer was a dangerous job, especially for a woman. Ibrahim confided that she, “suffered many bad things in the wilderness.” Another firewood gatherer from Al-Kerenik, Fatma Abbakar, confessed, “going into the forest as a woman was rife with risks. We were subjected to a lot of trouble,” (Elmadina, Suleiman, Kobbail, 2011, 78).

In Sudan, forests are important to daily life. Fuelwood is the primary source of energy and accounts for seventy percent of the country’s energy budget. A 2012 study of social forestry stakeholders found “rural people in the study area perceived forests as valuable and useful resources as they provide a range of goods and services,” (Elmadina, Suleiman, Kobbail, 2011, 78). Zainab Ibrahim and Fatma Abbakar’s stories also reveal that fuelwood is a valuable commodity, significant enough to warrant women risking their safety in order to complete the job of collecting firewood.

Fuelwood is also becoming more and more scarce due to environmental changes in Sudan as well as the unsustainable efforts made by the Sudanese in order to recover from years of social and political strife. Sudan is currently classified as a least-developed country but has been extremely committed to the development and the creation of opportunities for itself after over thirty years conflict. In July of 2011, South Sudan gained independence after years of violence with Northern Sudan, including the 2004 killings of non-Arab villagers in Darfur of which was declared genocide by then U.S. Secretary of State, Colin Powell (BBC News, 2017 2). Since South Sudan’s declaration of independence, Sudan and South Sudan have continued to struggle to create agreements on the allocation and division of resources.

Upon South Sudan’s succession, the Sudanese government experienced severe economic shocks, including the loss of oil revenue of which accounted for ninety-five percent of Sudanese exports and over half of the government’s revenue (World Bank, 1). The Sudanese government has also continued to be plagued by corrupt politicians, an ineffective government and a growing refugee crisis caused by both civil war and famine in South Sudan. Exacerbating the political crises are increasingly immediate environmental crises. In Sudan, deforestation is a symptom of the unsustainable strategies for national post-conflict recovery. The causes of Sudan’s deforestation are rooted in strategies to develop and recover after its thirty-year long conflict; however, the deforestation is contributing to political and social instability, especially among women.

Zainab Ibrahim’s story illustrates how deforestation has especially impacts women. Women are particularly vulnerable to deforestation because, in Sudan, they are often more reliant on forest resources. Women are often in charge of providing household needs, such as fuel for cooking and heat as well as gums, fruits, and leaves for medicinal and commercial purposes (Shandra, Shandra, and London, 2008, 50). As seen in Ibrahim’s story, the process and consequences of collecting these commodities, especially firewood, disproportionately falls on women. If women are unable to collect firewood, they also disproportionately suffer from the health conditions like respiratory infections associated with other forms of fuel such as dung (Shandra et.al, 2008, 52).

In the past decade, Sudan has begun to recognize the connections between women and deforestation and started to utilize women's commitment to reducing deforestation in national efforts. Social forestry is being used as a strategy to, according to Dr. Amani Abdel Rahim Kobbail of the University of Sudan, "enable both local people and the nation to obtain goods and services that improve livelihoods, without compromising long-term resource and development goals," (102). In Sudan, social forestry initiatives have targeted women in particular because of their connection and vulnerability to deforestation.

In this paper, I will explore how deforestation impacts women in Sudan and how this connection is addressed both nationally and internationally through social forestry. On a broader scale, I hope to address how vulnerable populations respond to the ramifications of climate change and how, through knowledge and empowerment, vulnerable populations can create lasting, communal initiatives against the immediate harmful effects of climate change.

Sudanese Deforestation

For the last thirty years, deforestation has become a major concern in Sudan. In 2007, deforestation was occurring at a rate of 0.84 per annum and between 1990 and 2005, Sudan lost 11.6 percent of its forest cover. If current patterns continue, the United Nations estimates Sudan's forest cover will continue to decrease by ten percent per decade (UNEP, 2007, 8). Sudan's increasing deforestation rate is concerning for the country as Sudan is so reliant upon wood; wood products from the forestry sector produce several important products, including fuelwood, timber, sawn timber, and round poles. There is limited data produced by Sudan assessing the state of deforestation and therefore, I will be using the 2007 Sudan Post-Conflict United Nations Environmental Programmes Assessment as a reliable source of data. The date of the assessment impacts the reliability of the data to an extent as South Sudan gained independence in 2011, drastically changing the political landscape of Sudan; however, the document stands as the most comprehensive public environmental review of Sudan and therefore will be recognized as the

According to the 2007 Assessment, in a 1995 FNC survey, it was estimated that Sudan annually consumed 15.77 million m³ of wood and produced 41,000 m³ of sawn timber, 1.9 million m³ of other industrial round wood, and more than 18 million m³ of firewood (UNEP, 2007, 200). The consumption of fuelwood is essential to several important Sudanese industries including charcoal and brick-making. In UN assessment, brick-making was associated with, severe localized deforestation," (UNEP, 2007, 200).

Deforestation has been hastened by Sudan's dependence on fuelwood. Fuelwood accounts for around seventy-eight percent of Sudan's energy balance, with oil contributing around eight percent. Fuelwood is used as an energy source for both the brick-making and charcoal industries as well as the primary source for household fuel (UNEP, 2007, 201). The need for fuel wood has also increased in the past two decades due to rapid population growth and lack of other energy sources (Ahmed, 2016, 3).

Agriculture has also played a major part in Sudanese deforestation. Agriculture is the largest economic sector in Sudan and eighty-three percent of the population depends on farming for their livelihoods. As farming has increasingly become more mechanized and unsustainable, it has begun to contribute more deforestation. According to Eltayeb Mey Ahmed (2016), in the Savannah Belt, about 17 million ha were converted into both mechanized and traditional agricultural spaces between 1940 and 2012 (4). There is a legal requirement in Sudan to keep at least ten percent of forests as "shelter belts;" however, the 2007 UN Environmental Programme assessment, reported these regulations have been largely ignored (201). The result has been

Stephanie Day-Goodman
December 7th, 2017

widespread forest-clearance due to an increase in unsustainable farming practices of which ignore governmental regulations.

Climate change has also increased the severity of deforestation. Rising global temperatures are partially responsible for an increase in droughts in Sudan. In the 1970s and 1980s, droughts killed off a large number of trees in the Sahel belt and many of the trees have not been recolonized. Furthermore, deforestation has caused several important environmental concerns, land and water resource degradation being the most important. Eighty-three percent of Sudanese people's livelihoods are tied to agriculture of which are being threatened as resources become scarcer. Desertification is Sudan's most threatening environmental issue and deforestation is increasing the rate of conversion of semi-desert land to desert land through soil depletion, erosion, and sand encroachment (UNEP, 2007, 63). Continued desertification will lead to further water shortages as well as decreased agricultural production. As agriculture is so important to Sudan, decreased production would severely harm both the food and economic security of Sudanese people.

As seen through the 2007 UNEP, deforestation is a major environmental issue in Sudan. Sudan is classified as a least-developed country and its recent history in conflict as well as its continued political turmoil, have forced many to make a living through unsustainable means such as brick-making and large-scale, mechanized agricultural production. I would, therefore, suggest the high rate of deforestation is a response to the tumultuous Sudanese political climate and the need for political and economic stability. As Sudan tries to move forward, the country is using unsustainable methods to achieve stability and increasing the rate of deforestation. Sudanese deforestation is also compounded by global climate change, of which is exacerbating the predicament.

Sudanese Women and Deforestation

Women in Sudan are especially vulnerable to the effects of deforestation because of the intersection of gender, political, and economic vulnerabilities. According to Sudanese scholar, Eltayeb Meh Ahmed (2016), "vulnerability, in this sense, is directly tied to both climate change and conflict, linking to marginalisation from resources, needs and services, security and adaptation, property rights, information, knowledge and decision-making," (5). Sudanese women face vulnerability on several levels, including that from the ongoing conflict, refugee crisis, economic crisis, and through climate change. All puts women's livelihoods at risk.

In the Sudan Savannah Belt, a particularly vulnerable region to the effects of climate change, Sudanese women understand the issue of deforestation and how it relates to them. In her article, "A gender justice approach to eliminating Sudan's Savannah belt's vulnerability to climate change," Ahmed extensively interviewed women in Sudan's Savannah Belt about how they experienced deforestation. Her findings suggest women in the Savannah Belt are acutely aware of how deforestation affects them and creates disadvantages for women. In 2013, Mrs. Howa from the Blue Nile said, "we live with forest and protect it... Women know more than men about the forests and environment, because we enter the forest three times per day for firewood and bring water, so we know well which tree is sick or old and where new trees suppose to be planted. Men just go to forest to make charcoal or stay at home to eat the food we cooked for them," (Ahmed, 2016, 5).

Mrs. Howa's testimony suggests how women and forests are intimately linked. Women's jobs in the household often revolve around the forest as it provides fuel, water, and medicinal and commercial plants like fruits and gums, for their households. Sudanese women are also responsible for the retrieval of wood from the forest usually putting their safety at risk for the

commodity, as seen by Zainab Ibrahim and Fatma Abbakar's stories. Deforestation also poses a health risk for wood-gathers. Deforestation has forced women to go farther and carry more in order to collect the necessary fuel. In 1997, it was estimated wood-gathering women carry loads of about seventy-five pounds on their heads, far exceeding the limits of labor set by the International Labor Organization Maximum Weight Convention (Shandra et.al, 2008, 52).

As deforestation affects women differently from men, a gendered perspective is necessary to create solutions of change in Sudan. The United Nations Environmental Program says "among men and women...biodiversity is closely connected to development, access to resources, income-generating activities, food, and essential household products. From this perspective, the disciplines of biodiversity and gender overlap, and indeed are intrinsically linked," (McGregor and Wallgren, 2016, 1). More and more, Sudanese women are recognizing their own connection to deforestation and taking steps in order to rectify the issue. Women offer a different perspective on deforestation and through their involvement, they can change the issues that most impact their lives, of which then also impact the lives of their entire households.

In Sudan, women are primarily addressing deforestation through social forestry programs. In 1986, Sudan created The Sudan Forest Policy of which, "introduced, recognized, and implemented the role of social forestry and the need for local's people's participation in forest plantation, management and protection," (Ahmed, 2016 4). Social forestry is defined by the Sudanese Social Forestry Society as "the involvement of the different sectors of the society in planning, management and protection of forests," (EISiddig and Magrid, 2003, 1). Sudanese social forestry activities include, small-scale community woodlots in common lands, often run by user groups such as schoolchildren or women, farm forestry established and managed by farmers, tree planting in compact spaces by agricultural corporations, "protective and aesthetic" planting by the government with local participation, the rehabilitation of degraded and abandoned farmlands by individuals, communities, and companies, and the cultivation of Gum Arabic trees by individuals or groups (EISiddig and Magrid, 2003,1).

As those most dependent on forest resources, women are necessary to Sudanese social forestry. Women's involvement in social forestry is necessary in order to address the issues of all local people and communities. In The Sudan Forest Policy, women were included, however, the process was not "executed or undertaken in an inclusive manner" and it is important to note that while progress has been made, there has not been a national-level commitment to the representation of women in community involvement (Ahmed, 2016, 4). Women have, however, become increasingly involved in specific social forestry initiatives since the Forest Policy (Ahmed, 2016, 4). Since 1981, women graduates have been recruited to work in forestry at headquarter and state levels. In the Savannah Belt, Ahmed (2016) reports women participate in forestry activities of "extension, training, inventory, management, planning, afforestation, utilization, and energy." (5). Women have also been integral in the production and distribution of fuel-efficient cooking stoves, agroforestry, tree nurseries, and horticulture (Ahmed, 2016, 5).

Two villages, Elain and Elrawashda, have made progressive initiatives in collaborative forest management (CFM) of which is focused upon including all groups in the community, primarily women and minorities. CFM's inclusiveness has made it a more successful initiative as it is better able to address all needs of the community. Furthermore, collaborative forest management has provided a pathway for sustainable development. In Elain and Elrawashda, CFM has made a significant positive difference in forest density and resilience.

Two international initiatives, SOS Sahel and UNSO-Ed Damer, have utilized women in reforestation efforts. Women are trained to grow trees in both communal and home nursery

Stephanie Day-Goodman
December 7th, 2017

settings, increasing their participation in their local communities (UN Forestry Department, 1). Both programs face challenges, as water supply is often limited in rural areas and while it does involve women in their communities, the programs do not directly create opportunities to work with social entities of power or engage women in important communal decisions.

These initiatives show women are essential contributors in combatting deforestation. Through Sudanese social forestry programs, women have been involved in deforestation at all community levels— nationally, regionally, locally, and personally. Sudanese women have shaped deforestation efforts to be inclusive and more holistic in their approach. While women have achieved representation in specific initiatives, there is still work to be done to create a universal inclusion of women in deforestation programs; however, the inclusion of women has saluted the importance of including entire communities on all levels of deforestation initiatives so that all issues may be more fully addressed.

It is important to note that these initiatives aim to empower communities of women and me. The goal of these initiatives in social forestry is to create an inclusive environment in which all interests are represented. Women, therefore, work alongside men to make decisions and implement changes that represent the best interests of the community as a whole rather than the interests of one party. It is recognized deforestation is a communal problem that intersects with but is not defined by gender issues.

Addressing Women’s Role in Deforestation Initiatives Domestically and Internationally

The responses to Sudanese deforestation mainly fall into three categories: domestic government and non-governmental organizations (NGOs) and large international entities, the most important being the United Nations Environmental Programme. These responses are interconnected and aim to address the issue of deforestation from communal, economic, political, and environmental standpoints.

Women have struggled to be involved in these conversations through all entities though they have voiced strongly that they would like to take a greater role in them. I previously addressed the increase of women working with social forestry programs at local level; however, women have been excluded from important conversations. Sudan is patriarchal society and has cultural norms in place that prevent women from being fully represented in discussions. For example, in Al Rahad, women are not allowed to be present at Judiya, an indigenous conflict resolution mechanism (UNEP, 2017, 1).

Ahmed suggests the Sudanese government has used a “Women in Development” (WID) approach to their work to increase gender equality in deforestation prevention programs. The “Women in Development” says women have been excluded from development and must be integrated by others in order to benefit from development. It contrasts with the “Gender and Development” (GAD) approach of which stipulates women have always participated in development but have always been unequal and unacknowledged (Ahmed, 2016, 4). Ahmed argues while the Sudanese government has used a WID approach, the way the approach plays out is closer theoretically to GAD (Ahmed, 2016, 4). The Sudanese government, therefore, creates programs in which women have to be integrated into by others, however, women remain unacknowledged and unequal within these programs. Within governmental programs, women remain extremely vulnerable to climate change, however, it appears as though they are involved in national representation initiatives.

Domestic NGOs in Sudan have been more successful in Sudan. “Zenab for Women in Development” (ZWD) was founded in 2000 and uses a multi-dimensional approach to improve the lives of women, girls, and other marginalized communities by advocating for their rights and

Stephanie Day-Goodman
December 7th, 2017

broadening their roles in the development process (Zenab for Women). ZWD's multidimensional approach aims to help women through various levels, as they recognize Sudanese women face various intersecting challenges. They work primarily in four areas: Education & Literacy, Livelihoods & Climate Change, Water & Health, and Human Rights & Peace Building. Their initiative in Livelihoods & Climate Change aims to improve women's resilience to climate change by training them in conservation farming techniques and "strengthening income generating abilities," (Zenab for Women). ZWD addresses deforestation indirectly through its sustainable agricultural initiatives and creates greater opportunities for women in their communities as well as enables them financially and socially. Empowerment is at the core of its mission and the program believes more in giving women tools for future success and stability rather than solutions. The model is, therefore, more sustainable, as women are able to involve more deeply with their communities through learned knowledge and resilience strategies. The program reaches 100,000 women in seven states. In October 2017 ZWD was awarded a Momentum for Change award in "Building Resilient Livelihoods" from the United Nations Framework for Change and representatives from ZWD were present at the COP23 conference in November 2017 in Bonn, Germany.

Outside of Sudan, several large-scale organizations have worked to address women's efforts in deforestation prevention. The most impactful has been the work of the United Nations Environmental Programme. Both organizations have made a concentrated effort to include women in their efforts against deforestation. The UN is most involved through REDD+ a program established in 2011, and according to the United Nation Framework Convention on Climate Change, aims to reduce emissions from deforestation and increase forest carbon stocks in developing nations. "emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. aiming to reduce deforestation around the world. In Sudan, REDD+ was defined as the need to, "ensure sustainable livelihood of the local community and forest management" and was adopted in 2011. The REDD+ development included consultation with local entities of whom identified gender and climate change as major concern. In the final draft, REDD+ mentions "women" thirty-four times and "gender" fifteen times (Ahmed, 2016, 6).

UN Environment also recently partnered with UN Women and the UN Development Programme to change how women are represented in climate change negotiations. The project titled, Women, Natural Resources, and Peace recognizes Sudanese women's vulnerability to climate change and aims to increase women's role in natural resource negotiations.

The UN's effort in climate change programs have been effective in creating connections between the Sudanese government and another entity, creating large-scale governmental change; however, the UN acts as an outside entity in Sudan and is less able to make an impact in small communities because they lack connections within specific communities. In the Women, Natural Resources, and Peace project, the UN combined efforts with other existing international NGOs such as the British Vetcare in order for the project to be more effective on a local level. While this is an important step, it is only a step in creating Sudanese led initiatives concerning climate change.

Conclusion

Women and deforestation connect in a myriad of ways throughout Sudan. Women are potentially the best actors against deforestation as they are largely in charge of small-scale agriculture and household energy supply in Sudan. Their close connection to deforestation has also made them disproportionately vulnerable to its effects. As Sudan moves forward in

Stephanie Day-Goodman
December 7th, 2017

development, it is important to keep women in mind. Already, women are becoming aware of the effects of climate change and taking steps to become more resilient. Supporting their efforts supports a better, more sustainable future for Sudan and creates an example for other developing nations of the importance of women as community leaders.

References

- Forestry development in Sudan. *UN Forest Program*. Retrieved from <http://www.fao.org/docrep/X5183E/X5183e06.htm>.
- Ahmed, Eltayeb Mey (2016). A gender justice approach to eliminating Sudan's Savannah belt's vulnerability to climate change. *International Journal of Climate Change Strategies and Management, Vol. 8, Issue 4*. Retrieved on <https://search-proquest-com.proxy.library.emory.edu/agricenvironm/docview/1826442885/fulltext/984FBE668E0497CPQ/1?accountid=10747>.
- Elmadina, Abdelhai M, Mahir S. Suleiman Mahir S., Kobbail, Amani A. (2011). Social Forestry Stakeholders in the Sudan: Case for Gedarof State. Retrieved from: http://sustech.edu/staff_publications/20120227201723184.pdf.
- Kobbali, Aman Abdel Rahim (2010). Collaborative Management for Sustainable Development of Natural Forests in Sudan: Case Study of Elrawashda and Elain Natural Forest Reserves. *International Journal of Social Forestry* Retrieved from http://sustech.edu/staff_publications/20120227192148285.pdf.
- Magid, Talaat D. A. and ElSiddig, ElNour (2003). *XII World Forestry Congress*, Quebec City. Social Forestry in Sudan– its current status and future potential. *XII Wild Forestry Conference*. Retrieved from <http://www.fao.org/docrep/ARTICLE/WFC/XII/0873-CI.HTM>.
- Promoting Peace in Sudan’s Conflict Zones (2016). *United Nations in Sudan*. Retrieved from <http://sd.one.un.org/content/unct/sudan/en/home/our-stories/promoting-peace-in-sudans-conflict-zones.html>.
- Shandra, John M. and Shandra, Carrie L, and Lond, Bruce (2008). Women non-governmental organizations, and deforestation: a cross-national study. *Population and Environment*. Retrieved from <https://search-proquest-com.proxy.library.emory.edu/agricenvironm/docview/208854331/C4DC518C03924F30PQ/2?accountid=10747>.
- Sudan Post-Conflict Environmental Assessment (2007). *United Nations Environment Programme*. Retrieved from https://postconflict.unep.ch/publications/UNEP_Sudan.pdf
- Sudan profile- timeline (2017). *BBC News*. Retrieved from <http://www.bbc.com/news/world-africa-14095300>.
- The World Bank in Sudan (2017). The World Bank. Retrieved from <http://www.worldbank.org/en/country/sudan/overview>
- Women as agents of peace in natural resource conflict in Sudan (2017). *United Nations Environment Programme*. Retrieved from <https://www.unenvironment.org/news-and-stories/story/women-agents-peace-natural-resource-conflict-sudan>

Stephanie Day-Goodman
December 7th, 2017

. Zenab for Women in Development (Home Page, Who we Are, and Our Impact). Retrieved from <https://www.zenab.org/>.