

Final Report

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About the Author

Beth Timmers was the 2013 Research Award Recipient in Agriculture and Food Security. She is a multidisciplinary social scientist with a background in Economics and International Development Studies. Beth will begin her PhD in Environmental and Resource Studies at the University of Waterloo in September 2014.

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Abstract

Small-scale fisheries in Uganda are significant for the income and food security of the rural poor, and vulnerable to external drivers of change. Participation in small-scale fisheries tends to be highly segregated by gender. This project complements ongoing research on the vulnerability of fisheries production on Uganda's small lakes, with an analysis of gender relations within the fish value chain. This research contributes a case of transformative gender research to illuminate the underlying cause of gender inequality within the value chain for fish from Lake Wamala, Central Uganda. The research results also contribute a more comprehensive understanding of social dynamics influencing the fishery to a partner organization's development programming.

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Gender Relations in Lake Wamala's fishery, Central Uganda

Introduction

The following sections of this report present contextual background to Uganda's small-scale fisheries and the pilot project this research seeks to complement, with Uganda's National Fisheries Resources Research Institute. This project relates to the broader field of gender research in agricultural development; the report gives an overview of the state of this field, situating itself as a response to current research gaps analyzing the underlying causes of gender inequality.

An integrated value chain analysis is used to illustrate the diverse activities involved in production and reproduction of the value chain for fish from Lake Wamala. This method also reveals distinct gender norms that influence men's and women's activity in the value chain. Norms related to value chain activities are described, along with the mechanisms that support their reproduction in day-to-day life.

This research contributes to a knowledge gap on gender relations in small-scale fisheries, and generates a more comprehensive understanding of gendered activity in the fishery to develop more effective development programming.

The Research Problem

Uganda has an estimated 165 lakes covering 18% of its surface (Ssebisubi 2011). Fish are caught from five major lakes, surrounding small lakes and riparian systems. Small-scale fisheries are defined as a "[multi-use] dynamic and evolving sector employing labour intensive harvesting, processing and distribution technologies to exploit marine and inland water fishery resources" (FAO 2004). In Uganda, these fisheries are artisanal, with non-motorized boats, small fishing units and poor access to services.

Small-scale, inland fisheries contribute significantly to food and income security in developing countries (Bene et al. 2006; FAO 2005; Allison 2011). In Uganda, fish contribute up to 50% of household protein intake and fisheries provide employment to approximately 1.2 million people (MoFPED 2004; Ssebisubi 2011). Ugandan fisheries are particularly vulnerable to climate change and variability (Ministry of Water and Environment (MWE) 2007; USAID 2013). The country's high population growth rate (3.2%), paired with Ugandans' preference for fish for protein implies increased pressure on fisheries.

Uganda's National Fisheries Resources Research Institute (NaFIRRI) aims to address the vulnerability of small-scale fisheries with the pilot project 'Addressing Impacts of Climate Variability and Change on Riparian and Aquatic Ecosystems', gathering data on climate variability and change, and plausible

adaptation options for vulnerable communities around Lake Wamala, in Mityana, Central Region. NaFIRRI piloted this project in 2011 (Ogutu-Ohwayo et al. 2013).

Thus far, NaFIRRI's analysis confirms the United Nations Framework Convention on Climate Change's predictions for the East African region: climate parameters varied according to seasonal patterns, with temperatures increasing 0.2-0.3 C and a corresponding increase in rainfall in the last three decades of the 20th century. From 1984 to 2008, Lake Wamala has decreased to approximately half its size, and subsequently increased, though not to its original size. This is displayed with aerial images in Figure 1. These changes in climate are related to shifting aquatic productivity processes, including fishery composition and yield. Those reliant on the fishery have adapted in various ways, ranging from livelihood diversification to cultivating wetlands.

NaFIRRI aims to link their research to develop adaptation options for fishery-dependent communities,

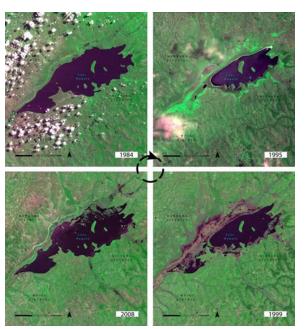


Figure 1: Aerial view of Lake Wamala, 1984-2008

Source: UNEP Atlas

increase awareness, and influence policy and governance systems that can address climate issues. NaFIRRI is now developing adaptation strategies for those affected by climate change, with plans to scale research to Uganda's larger lakes. Their work links fisheries' biological parameters with socioeconomics.

An integral component of the fishery's socioeconomic context includes existing gender relations. Participation in small-scale fisheries tends to be significantly gendered (see Kabahenda and Husken (2009) and Geheb et al. (2008) for examples from East Africa, and Kleiber et al. 2014 for a comprehensive literature review on this topic). However, there is a lack of research conducted on the underlying causes of this; gender considerations generally take the form of descriptive and sexdisaggregated data (Weeratunge et al. 2010; Kleiber et al. 2014). The objectives of the research conducted for this report relate to such research gaps.

Objectives

The objectives of this project are twofold:

This project tests a methodology for transformative gender research. It gathers evidence to support the hypothesis that an analysis of gender relations can lead to the development of improved programming or interventions.

This project contributes a gender analysis to NaFIRRI's pilot project, Addressing Impacts of Climate Variability and Change on Riparian and Aquatic Ecosystems, Fisheries and Livelihoods. The pilot project seeks

to develop innovative solutions for vulnerable ecosystems that contribute significantly to rural livelihoods in Uganda. This research contributes to an understanding of gender relations that govern the diverse activities in the fish value chain.

Research Questions

Women and men tend to be associated with particular prescribed activities related to fisheries in East Africa, dependent upon local culture and customs. Women are assumed to be actively involved in the informal processing and sale of fish, and increasingly involved in low value fish capture and processing. Alternatively, men are associated with the production of higher value fish. Rigid gender roles across the value chain imply that any intervention aimed at improving the sustainability of the fishery will affect women and men differently. However, there is a lack of data on gender roles and norms in small scale fisheries. This project seeks to investigate generalizations associated with small scale fisheries to reveal complex gender relations.

- 1. What are women's and men's roles in the value chain for fish from Lake Wamala, Central Region, Uganda?
- 2. Through which mechanisms are these roles maintained? For example, what gender relations within a household and on a broader societal level maintain the prescribed roles of men and women involved in the fishery?
- 3. How can the information gathered in 1 and 2 contribute to NaFIRRI's development of adaptations within the boundaries of their program?

An understanding of the roles of men and women in the fishery will determine the actual position of men and women along the value chain, evaluating the position of women, rather than assuming their roles and disadvantage. Answering the first question also provides contextual information about fishing activity in the area. This directly contributes to Objective 1.

Question 2 informs why men and women tend to participate in certain roles along the fish value chain. The goal of investigating this is to build the case for gender analysis in value chain research; understanding intrahousehold dynamics and the broader socio economic context informs more effective interventions.

The data gathered in Question 1 and 2 can provide insight into any proposed intervention within the fishery to reduce vulnerability (the goal of the pilot project). Question 3 involves linking NaFIRRI's research on potential adaptation strategies to the complex realities of women and men participating in the value chain. This also contributes to both Research Objectives, to inform and support NaFIRRI, and to promote gender analysis as an integral part of value chain research.

Methodology

The project involved a ten-week field study including an integrated value chain analysis in the communities surrounding Lake Wamala. Mixed methods were used to complement quantitative data

on labour and income with qualitative data on attitudes, norms and beliefs about men's and women's participation, and broader socioeconomic factors. By linking broader processes with micro-level qualitative and quantitative data, insights can be gained into how adaptation options can decrease the vulnerability of men and women involved in the fishery. Prior to outlining the specific methods used in the field, I will outline the theoretical framework used in the study. This work draws upon overlapping theoretical frameworks: integrated value chain analysis, and transformative gender approaches.

Value Chain Analysis

A useful method to analyze fish production and related activities is value chain analysis. A value chain is defined as "the full range of activities which are required to bring a product or service from conception, through the different phases of production, delivery to final consumers, and final disposal after use" (Kaplinsky & Morris 2001). This research incorporates an integrated conceptualisation of value chains as embedded within a particular social context (Bolwig et al. 2008). That is, the analysis begins with an assumption that power relations and sociocultural institutions influence all economic activity along a value chain.

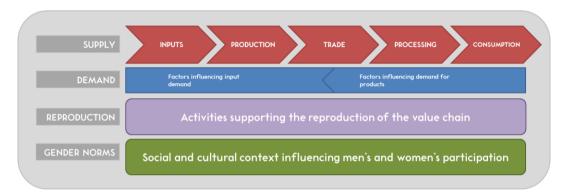


Figure 2: Integrated Value Chain Framework

Existing value chain research illustrates such sex-disaggregated roles, but rarely incorporates influential power relations and structures. This research proposes deeper analysis into these aspects, defining gender as the socially constructed difference between women and men. Gender analysis in value chains extends beyond describing women's roles and value; it also provides understanding of men's roles and constraints, intra-household and intra-community power relations. The value chain analysis of fish is useful to illustrate downstream activities outside of production, and reveal social relations that will interplay with any technological innovation proposed and introduced by NaFIRRI.

As a complement to NaFIRRI's work, the proposed research is situated within an emerging body of literature on integrated value chain research for development (Barrientos et al. 2003; Tallontire, Barrientos, et al. 2005; Bolwig et al. 2008). Strengthening the impact of value chain analysis for poverty alleviation and food security necessitates an integrated approach, addressing environmental, social, and economic concerns. In general, here is a gap in gendered value chain methods a value chain

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analysis is conducted parallel to a gender analysis (Laven et al. 2009). Laven et al. outline an approach that provides an intra-household perspective, and insight into multi-level (local, regional, national) institutional context (2009).

Value chain research has spearheaded the integration of gender in agricultural research. Koczberski (2007) evaluates the success of a modified payment scheme for palm oil producers in Papua New Guinea. The main objective of the study was to present evidence that an analysis of intrahousehold gender and labour relations, *paired with* a broader analysis of cultural ideologies and economic processes, leads to an understanding of the success of an intervention to increase smallholder productivity and gender equity. Understanding intrahousehold dynamics makes it possible to understand the mechanisms that will increase productivity and women's access to income. In this case, the remuneration of women's labour was successful in overcoming intrahousehold conflicts of women's labour and income distribution because the intervention did not fundamentally challenge the cultural ideologies underpinning intrahousehold power relationships (Koczberski 2007).

Similarly, Tallontire et al. (2007) consider the implementation of labour codes in the African horticulture industry and evaluates whether codes can improve working conditions for all. This study, like Koczberski's, builds the case for a more holistic method of analysis – in order to adequately address gender inequalities, a more nuanced method of analysis is required.

The authors combine a value chain analysis with the gendered economy approach in order to understand the complex and dynamic roles of women, and the social relations that directly affect their position and gains from participation. A top down institution (such as a labour code) that seeks to improve the quality of working conditions for all will likely fail without consideration of local gendered economies (Tallontire et al. 2005). Further, a process approach considering contextualised governance structures and gender dynamics is more likely to reach marginalized workers (who, in this case, tend to be women).

These two studies present examples of an emerging type of agricultural research for development, explicitly integrating social relations analysis into research programming. This constitutes transformative gender research, a concept that is outlined in the following section.

Gender Analysis

This project contributes to an emerging base of evidence supporting transformative gender research in agricultural development. Gender, here is defined as a social construct, or:

...the social category usually associated with being a man or a woman. It encompasses economic, social, political, and cultural attributes and opportunities as well as roles and responsibilities. Gender is defined differently around the world and those definitions change over time (USAID 2009)

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Gender changes over time, and has a powerful influence on day to day activities. On an individual level, it influences men's and women's perceptions of their own capabilities. Socially, it can set an expectation for social interaction, resulting in measurable inequalities between men and women such as the gender wage gap.

This type of research stems from the assumption that economic activities are situated within a particular social context that tends to disadvantage women. Promoting gender equality in agricultural research, the central hypothesis to transformative research, will lead to more robust, sustainable value chain. This hypothesis is supported in literature reaching back to the 1990s, supporting social relations analysis in rural development research (Kabeer 1994; Razavi & Miller 1995).

Gender Research in Agriculture

There is increasing consensus that gender disparities in agricultural-dependent communities are a major hindrance to global equity. This is evident in the proliferation of development funds allocated for gender programming and mainstreaming. The speculation that gender equality can improve economic growth has empirical support (Kabeer & Natali 2013). In 2009, the World Bank released the Gender in Agriculture Sourcebook outlining women's vital role, and relative disadvantage, in agricultural development (World Bank 2009). The theme of the Food and Agriculture Organization of the United Nations (FAO)'s State of Food and Agriculture Report in 2010-2011 was women in agriculture. This report estimates that eliminating gender disparity could decrease world hunger by 12-17% (FAO 2011). Both high level reports respond to the gender gap in agriculture, that is, the measurable difference between men and women in income and access to assets. These reports illuminate the lack of progress that has been made toward gender equity on a global scale despite significant contributions of development investment.

There is a significant body of research advocating the need to address the underlying causes of gender inequality in order to move toward gender equality in rural development (Bolwig et al. 2008; Laven et

Gender Exploitative projects manipulate or misuse knowledge of existing gender inequalities and stereotypes in pursuit of economic outcomes. The approach reinforces unequal power in the relations between women and men and potentially deepens existing inequalities.

Gender Accommodating projects acknowledge unequal gender relations and seek to develop actions that account for gender differences and inequities without addressing the power relations that perpetuate gender inequalities. Commonly, projects are sex-specific, focusing on issues such as women's empowerment.

Gender Transformative research explicitly engages both women and men to examine, question, and change the institutions and norms that reinforce gender inequalities.

Source: USAID 2009

al. 2009; Riisgaard et al. 2010; Cornwall & Edwards 2010; Okali 2011). Current initiatives have incorporated these concepts into their research programming, such as the CGIAR Research Program on Aquatic Agricultural Systems, and the Swedish International Agricultural Network Initiative. The theoretical and methodological way forward has been articulated through the continuum of gender research for development.

Transformative Gender Research

Transformative gender research is an emerging approach in international agricultural research that examines institutions and norms that reinforce inequality (Farnworth et al. 2013; USAID 2009; Weeratunge et al. 2012). The goal is to fundamentally alter institutions, resulting in more equitable outcomes (Kabeer 1994; Kabeer 1999). The process addresses symptoms of inequality *and* their underlying causes(Cornwall et al. 2008; Okali 2011). This research must be well-contextualized to particular sociocultural norms (Okali 2013). Related methodology is emerging (Mayoux & Mackie 2008; Laven et al. 2009; USAID 2009; Agri-ProFocus 2012)

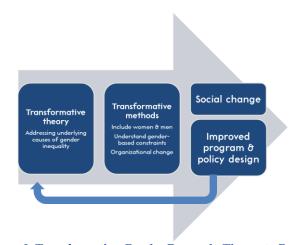


Figure 3: Transformative Gender Research, Theory to Practice

As previously mentioned, value chain analysis has spearheaded the integration of gender inequalities and constraints through the collection of quantitative and qualitative data. The value chain of fish usefully illustrates activities outside of production, revealing social relations that will interplay with any interventions proposed and introduced by NaFIRRI.

This research project aims to contribute a case study of Lake Wamala's fishery as transformative gender research. The research analyzes activities and the gender norms that influence them within the value chain for fish from Lake Wamala. This project explicitly includes both men and women, to examine the norms and institutions that cause gender inequality. By partnering with an implementing institution in Uganda, there is potential for this research to inform interventions in the field.

Data Collection

The project entailed preliminary scoping (1), a value chain survey (2), and (3) in-depth interviews. The study took place in five fishing areas called landing sites, or areas cleared to access the lake, where fish are brought in on a daily basis. Many business transactions take place at the landing site, where fishers arrive and sell produce to fish traders and transporters. The five data collection sites are pictured below: named Gombe, Katiko, Butebe, Lubajja A, and Lusalira. Select respondents were interviewed in Mityana Town's Central market.

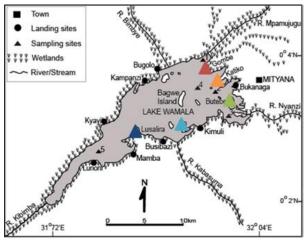


Figure 4: Research sites around Lake Wamala



Figure 5: Transporters pack fish onto motorcycles (left) while fishers patronize a restaurant (right) at Gombe landing site.

Preliminary Scoping

A literature review of major fish value chains in Uganda was conducted in order to understand and contextualise trends in small-scale fisheries. Secondary data from Lake Wamala was considered. This data was collected by NaFIRRI, on topics such as: shifts in physio-chemical conditions, aquatic

productivity processes, life history characteristics of fishes, fish stocks, changes in riparian ecosystems, fishing practices and livelihood options, policy constraints and opportunities, and potential for information-sharing.

Prior to fieldwork, introductory meetings were held with NaFIRRI's headquarters in Jinja. The initial proposal was presented to NaFIRRI staff, followed by modifications made with the Climate Change Team and Socioeconomics Team.

Following this, consultations were made with local government officials; the District Fisheries Officer, Chief Administrative Officer, and the Chairman of Lake Wamala. The Climate Change team conducted a tour of each landing site to complete introductions with community leaders and members.

Value Chain Survey

Quantitative data was collected with a socioeconomic survey, focussing on demographics, labour contributions and value, disaggregated by sex. A sample of 110 actors along the value chain was selected according to their role as producer, trader/transporter, processor, and retailer. This survey captured data on participants of the 'traditional' nodes of the value chain. That is, fishers, fish traders,

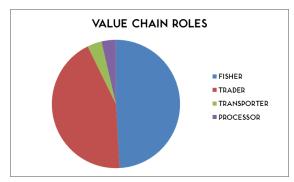


Figure 6: Quantitative survey respondents

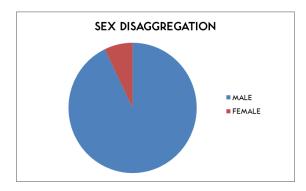


Figure 7: Disaggregation of quantitative respondents by sex

processors, and marketers. Data was collected on costs and revenues and seasonal activities. Consumption data was gathered through questions built into the survey.

Landing sites were selected in consultation with NaFIRRI and local authorities. Respondents were chosen according to their role in the value chain. Data collection was facilitated by Sekiwunga Ali, Chairman of Lake Wamala, and respective Chairman of each landing site's Beach Management Unit.

The team surveyed 110 fishers, traders, transporters and small scale processors. Within the sample size, 4% of respondents were women. The relatively small sample of transporters and processors indicates two things. First, the value chain for fish is short – the majority of fish is sold door-to-door by fish traders, acquired from fishers at the landing site. Second, a subset of processors was not captured in the survey: those processing illegal fish in their homes. These people were left out of the survey with ethical concerns in mind. The majority of survey respondents are from the Buganda tribe (70%), representative of Central Uganda.

Qualitative Assessment

Unstructured interviews were completed with 35 individuals participating in the fishery. Data was collected on the roles of men and women in the value chain, reproductive roles and responsibilities, gender norms, and mechanisms through which norms are maintained over time. Men and women

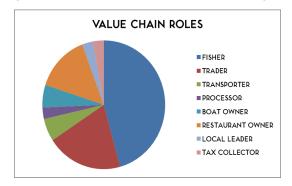


Figure 8: Qualitative survey respondents

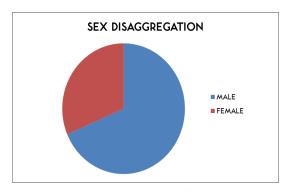


Figure 9: Disaggregation of qualitative interviewees by sex

were interviewed separately, due to the sensitivity of interview content. In some cases, groups of men and groups of women were interviewed. Interviews were conducted with the assistance of a translator (translating English to Uganda and vice versa). Questions focussed on the identification of gender roles within the fishery, followed up with questions unpacking gender norms that maintain these roles. The data was analyzed through two iterations of coding with Nvivo software.

Results

Characterising the Fishery

Lake Wamala's fishery is artisanal. NaFIRRI completed a frame survey of Lake Wamala in 2012 estimating 600 fishers on the Lake, and the same number of boats. Fishers generally own their own boats, although some rent from others. Demand for inputs is often influenced by environmental factors; variable costs fluctuate for inputs used by fishers as storms and sudds damage nets and boats.

Fishing was done for more days during the dry season (an average of 5 days on both lakes). Target species are African catfish (*Clarias glariepinus*), Nile tilapia (*Oreochromis niloticus*) and lungfish. Fishing is considered a major, preferred source of income in the area. Large papyrus islands, or *sudds*, greatly impede fishing throughout the year, most significantly during the rainy season.

Although some fish is sold directly to consumers or artisanal processors, most is sold to local traders at landing sites. Select traders sell fish to retailers at Mityana Central Market, or transport fish to Mubende and Kampala. Some small-scale processing is done, namely, dip-frying and drying, at the landing site and within people's homes. The majority (81%) of those involved in fishing, trade, transport and processing are permanent residents near the landing sites. The average size of households of those involved in these tasks is 6.

100% of respondents have a preference for fish in their diets. The majority of respondents use fresh fish that is prepared at home. Others prefer to purchase prepared fish that has been smoked or dip fried. Some respondents prefer a variety of fish, both prepared and fresh. Although there is a high preference for fish, respondents reported that it is substitutable for other types of protein such as meat sold in the market, or beans from their own gardens.

The Value Chain

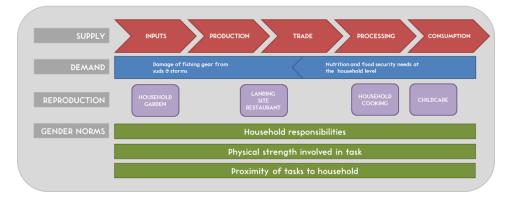


Figure 10: Fish Value Chain components, Lake Wamala

Women's vs. Men's Roles

Consistent with research on small scale fisheries in East Africa, this value chain is highly segregated by gender. There are select activities done by both men and women, namely, owning and renting boats, small-scale processing (drying, smoking and frying) and selling fish in the market. Tasks almost exclusively done by men include: fishing, fish trade, transport and all positions of political leadership governing the fishery. Women make up the majority of reproductive aspects of the value chain, that is, household tasks such as cooking and childcare, tending to gardens for household food. There are also small restaurants at each landing site that are generally owned by women. It is important to note

Inputs

Fishers use income from household gardens & local credit facilities to purchase inputs:

- 3.5-4.5" gillnets
- Long line hooks
- Dugout canoes

Target Species



Nile Tilapia



Lungfish



African Catfish

that there are some exceptions to these cases. For example, in NaFIRRI's survey of 785 fishers on the lake, 6 are women. Respondents perceive that married women are responsible for preparing fish in the household, while married men are responsible for the income to purchase this fish.

Gender Norms

Gender norms significantly influence individual decision making and social interaction within the fishery. These norms can be classified into three categories: norms related to household responsibilities, the proximity of a particular activity to the household, and the amount of physical strength involved in a task.

Household Responsibilities

Marriage is valued highly in Central Uganda; a family is considered the central unit of Buganda culture. The roles of husband and wife are linked to norms of men's and women's behaviour and responsibilities to the household. Within a household, women are deemed responsible for 'care' roles, such as childcare, cooking, and tending to household gardens. Alternatively, men are considered responsible for providing income for the household to use. Women with husbands involved in the

"Women have always been home" -tax collector, male

"Since men are the ones working and looking for money...women are supposed to stay home and take care of the kids, cooking and things of the sort..." –local leader, male

fishery assume significant portion of their time toward maintaining the household; any additional time may be allocated toward other tasks.

Norms about household responsibilities influence men's and women's participation in the fishery. Fishing and fish trade are relatively good economic opportunities for men to fulfill their duty to the household. Alternatively, women tend to fulfill the reproductive roles of the value chain: childcare, cooking, and household maintenance.

Proximity to Home

Related to household responsibilities, men's and women's roles in the fishery tend to be influenced by the proximity of tasks to the home. In general, respondents reported women's responsibility for tasks close to the home, while men travelled farther, often spending the night away from home if an economic opportunity arose.

"I have to get work near home which can enable me to take care of my children" –restaurant owner, female

"Their (women's) work should find them there (at the household)" –fish transporter, male Completing tasks near the home allows women to care for children and assumed household responsibilities. This can be seen in the fish value chain - women's involvement in fish related activities is associated with their proximity to the household. For example, women can manage boats and rent them to fishermen without leaving their children unattended. Alternatively, women can process fish at a small scale within or nearby their home. This processing

often takes the form of dip-frying or smoking. Positions in the value chain that involve travelling farther from home are almost exclusively done by men.

Women's and men's activities in proximity to their home are connected to another norm particular to Central Uganda. Here, it is considered inappropriate for women to ride bicycles or motorbikes, the two main forms of transportation. Fish trade requires the use of a bicycle or motorbike in order to sell a significant amount. Fish sales are done throughout rural areas where houses are often spread apart.

Physical Exertion

Within the communities surrounding Lake Wamala, work is perceived to be 'heavy', involving significant drudgery and strength, and 'light', for example, household duties. The norm, here, is that men are responsible for heavy work, and women, light. An example of this is fishing. Fishers use wooden canoes and nets, often spending the night on the Lake, which can be windy. It is perceived by both women and men that men are naturally more able to engage in this work. It is not suitable for women to fish, given the energy and strength it requires; it is perceived that women can't handle the

"It's nature – just like a woman is supposed to put on dresses and a gomasi [traditional dress for Buganda women]" –processor, female

"Women are just not strong enough to fish" – fisher, male (in the company of men)

How are norms maintained?

Mythology

Interview data suggested that Buganda mythology plays a part in men's and women's behaviour in the community, in particular, the myth of Lake Wamala's creation. The myth of Wamala's creation is used in society as a way to exclude women from the fishery. There are two specific taboos that common to the area regarding women in the lake. The first is associated with the birth of the Lake itself. The water is considered to be the

physical struggle involved in fishing. Specifically, women lack strength in their chest and hands required for paddling.

Lake Wamala's Creation

As told by Samuel Mekanga, fish trader

Our grandparents told us that Lake Wamala was born. The woman who gave birth to it was called Wamala [her family name]. While pregnant, she was walking and stopped to rest at Kabbindula, right over there [gestures]. While she was there her water broke, poured there, and her son Wamala was born as a lake. Just like that, the water flowed and the lake grew. That is the story of Wamala; it was just born. Even the government doesn't have control of it because it's the Lake of a spirit. After a while, it dried up, and people cultivated their crops there. After all that, the water filled the lake again. Because it's the lake of a spirit, us – as people – we do not have control over it.

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"It's not good for women to fish...you're the one who produced this Lake. The lake was produced by women. So a woman can't go to fish there...you are spoiling the customs" –fisher, male (in the company of men)

equivalent of Wamala's mother's amniotic fluid, and it is a taboo for any menstruating woman to enter the lake. It is considered disrespectful for women to engage in any activity in the Lake, including bathing. However, this taboo is particularly connected to women's potential to fish.

The second taboo is associated with the gender of the Lake; because the Lake is a man, it is considered indecent for a woman to get into, and out of, a fishing boat. Women are expected to wear dresses and skirts, and the simple act of spreading one's legs over the 'male' spirit is a taboo. Women engaging in activities in the Lake, or using fishing boats, then, may disrupt the Spirit Wamala, causing changes in the Lake ranging from storms, to declining fish stocks.

It is evident that it is not the myth itself (described in the box above) which contributes to Buganda's cultural history, but the way that the myth is used, that leads to gender inequality in the fishery. Women are excluded from both fishing, and also using the lake in general, due to the threat of disrupting the Spirit Wamala.

Mocking and Shame

Both men and women in the fishery reported that public mocking and shaming is a barrier to women's participation in maledominated activities. There is a suite of Luganda vocabulary to mock women who engage in 'men's work', while the interviews suggested no corresponding vocabulary to mock men.

Marriage is a paramount Buganda social institution. Young women are encouraged to marry at a young age, and act in accordance with social norms to be desirable for marriage. A woman engaging in tasks that are perceived as physically demanding attracts mocking from men and women that they will

Community members may consider a woman who engages in typically-male behaviour as raised

improperly. This is a social norm particular to Central Uganda; in other areas of the country, it is common for women to ride bicycles and transport themselves. It is a cultural norm to consider the opinions of others when engaging in work. Respondents consider this mocking and shame a barrier to women's sustained participation in tasks, particularly self-transport. Women may avoid, or

no longer be seen as desirable for marriage.

Luganda Vocabulary

Nakawanga: direct translation 'cock'; slang for a woman who behaves like a man

Naluwali: a woman acting aggressively or violently towards others

Kyakulasajja: tomboy

"If you [a woman] who is riding fails to get embarrassed, I can get embarrassed on your behalf, looking at you on a bicycle. Is that right?" –fish trader, male

"Here in Buganda, it can scare her off completely" –local leader, male

leave, profitable activities to avoid gossip within the community. This social norm tends to apply solely to women. Men involved in the fishery consider one activity to be their equivalent: theft. Thieves are publically shamed in the community, perceived to be equivalent to a women engaging in fishing or fish trade.

Gender-based Violence

A key barrier for women engaging in traditionally male activities in the fishery is the threat of gender based violence, defined as any physical, verbal harassment, or forced sexual activity that occurs based on one's gender. There have been incidences of rape on the lake, and violence against women in the area is common. Both men and women consider gender based violence to be a barrier to women engaging in tasks that involve being alone in remote spaces, such as on the lake overnight, or travelling in the dark. Alternatively, activities conducted during the day, where women can move in groups, are common.

"You can't report what happens on the lake" –fisher, female

"Like it or not, if you're (a woman) on the lake, you're supposed to obey him. You do what he tells you to do" –local leader, male

Social change in the Fishery

The dynamism of gender is illustrated through the minority of people who break gender norms in Lake Wamala's fishery. Although gender relations largely prescribe the roles of men and women, there are instances where norms are broken. For example, select men are staffed in landing site restaurants, after receiving formal training in a cooking school. Women's involvement in the productive aspects of the fishery may involve owning boats that are rented to male fishers. These women are perceived as business-savvy, and also experience mocking from other community members. Historically, some

"Men got worried that their wives would also start fishing. They were saying that if a lady gets a lot of money, it's very hard to control her...It was only a trick for them, they didn't want women to get money" – former fisher, female

"Men knew it would be easier to control a woman without money" –former local leader, male women have chosen to pursue fishing on Lake Wamala, yielding a higher income than renting boats to fishers, where only a portion of income is received.

The common factor among women engaging in productive aspects of the value chain for fish is their marital status; women tend to engage in these activities if they are widowed, separated or have never married. Interviewees responded that the absence of a male head of household translates into women breaking gender norms, overcoming social pressures and the risk of gender-based violence.

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Observations from interviewees reveal the importance maintaining existing gender norms to exert financial control.

The quotes above exemplify the intersection of gender norms and underlying inequality. The communities surrounding Lake Wamala have been, to some extent, exposed to shifting gender roles. The words that best describe this in Luganda are *omwenkanonkano* (gender equality, *enkolagana ya bakyaala nabami* (gender relations) and *omwenkanonkano gwajja* (gender equality came/ the emancipation of women).

"She came from behind the house to its front. That's a woman who was poor and she started working and improved her status. She starts her business says 'I left the back of the house, now I can talk for myself.' That's the saying which is common nowadays." -shopkeeper, female

Analysis

This gendered analysis illuminates key areas to both account for gender differences, and also challenge the underlying institutions causing gender inequality in the fishery. NaFIRRI's research and development program involves designing adaptation strategies for those dependent on an increasingly vulnerable water body for their livelihoods. One example of their adaptation strategies is encouraging fishers to diversify their livelihoods away from fishing, toward farming high value crops. As the goal of their program is to increase resilience and sustain livelihoods under a changing climate, it is integral to incorporate both men and women – all people dependent on the fishery - into adaptation design

A traditional value chain analysis of the fishery will typically analyze fishing, trade, processing, marketing and consumption. The gendered analysis conducted in this project incorporates reproductive aspects of the value chain – that is, activities sustaining the productive aspects of the chain over time. In the case of Lake Wamala's fishery, it is clear that some reproductive activity is also an important source of income for female entrepreneurs. Fishers and traders take a portion of their daily meals from female-owned restaurants at each landing site. The role of these restaurants in sustaining the fishery is crucial. Additionally, the restaurants are an important source of income that is highly dependent on the fishery. When fishing activity declines, restaurant patronage also declines. This report recommends that NaFIRRI account for these businesses in their design of adaptation options, to complement their encouragement toward fishers to diversity their livelihood away from fishing.

Reflecting on the theory of gender research discussed in earlier sections, this recommendation is classified as 'gender accommodating'. It acknowledges unequal gender relations and accounts for gender differences in the fishery without addressing the underlying structures that perpetuate gender inequality.

This analysis also uncovers gender norms in the fishery that manifest in unequal opportunities for women and men. In instances where women break gender norms and engage in, for example, fishing and fish trade, they are marginalised with the threat of violence, mocking and shame, and potential criticism for acting in defiance of a Buganda cultural norm. Fishing and fish trade are the most lucrative opportunities within the fish value chain, offering daily income.

A transformative intervention in the area involves continued sensitization of gender equality in the community. The qualitative interviews conducted for this study allowed people space to question the gender norms that govern their day to day lives. This provoked conversations where men and women were able to challenge their own views. This type of activity on a greater scale could benefit men's and women's rigid views on 'appropriate' behaviour. The ideal type of sensitization explicitly engages both women and men to examine, question, and change the institutions and norms that reinforce gender inequalities.

Study Limitations

This study faced select limitations due to time and budget constraints. It was difficult to conduct purely individual in depth interviews with community members. In some cases, interviews were conducted in groups, with special attention paid to respondents' gender and group dynamics. In some cases, group interviews proved beneficial, as gender norms play a large part in social interaction.

A second limitation to this study is the lack of quantitative data on reproductive activities in the value chain, such as household gardening, and running landing site restaurants. As such, it is difficult to compute the contributions of these tasks to the fishery. Further research should aim to quantify the value of landing site restaurants, in order to analyze this economic activity led by women that falls outside of a traditional value chain analysis.

Lastly, this research did not conduct an in depth analysis of intrahousehold power relations. Although the study reveals gender segregation in the value chain and the associated underlying causes, it does not analyze negotiation and control of income and resources within a household. This would require additional fieldwork resources to conduct ethnographic research, which lies outside the scope of the study. However, it is highly recommended that intrahousehold gender relations be analysed in order to implement interventions with the goal of transforming gender relations.

Conclusion

Small scale fisheries are integral for the income and food security of Ugandans. However, Uganda's small lakes are threatened by climate change and variability. NaFIRRI's Climate Change project is one

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of the first in Uganda to investigate the links between climate change and variability and biological and social aspects of fisheries. The overall objective of this project is to increase capacity, knowledge, awareness and resilience of fisheries, riparian and aquatic ecosystems and communities to climate variability and change.

A key component of their project is to include both men and women in the process of designing adaptation strategies to climate change. This project contributes a gender analysis to their project to enable the design of adaptation strategies to benefit both men and women. Secondly, this project contributes a case of transformative gender research to the field of agricultural research for development. This is an emerging concept that requires a wider evidence base.

The value chain approach is useful to illuminate the suite of activities that support fish to move from the lake to consumption by household members. An integrated approach incorporates a wider range of activities than a traditional value chain study; including the tasks that support the productive aspects of the value chain over time, and the local norms that prescribe activities and behaviours. This project focuses on gender norms that lead to sex segregation in the value chain.

The transformative approach was useful to illustrate the powerful influence of gender, and also to illustrate women's integral participation in the fishery. The qualitative interviews enabled open, candid discussions wherein respondents were provided space to reflect upon and question their own ideas of gender.

Roles in the fishery are highly segregated by sex. Men tend to take up higher income-generating positions, such as fishing and fish trade, while women contribute heavily to the reproductive aspects of the value chain. The qualitative analysis reveals the underlying causes of such distinct segregation related to the particular social context of Central Uganda. These norms prescribe the roles of men and women in the fishery, and are maintained over time by both women and men through cultural mythology, public shaming, and gender-based violence. The data gathered in this study suggests that gender relations have a disproportionately negative effect on women involved in the fishery, over men.

The gender analysis reveals two instances for intervention, ranging from gender-sensitive to gender-transformative. Ultimately, this research does not aim to shift gender norms in the communities surrounding Lake Wamala. Rather, its purpose is ultimately to provide a deeper, more nuanced understanding of complex social relations in order to design interventions that may support and improve the livelihoods of people reliant on a vulnerable natural resource.

References

- Agri-ProFocus, 2012. Gender in Value Chains: Practical toolkit to integrate a gender perspective in agricultural value chain development.
- Allison, E.H., 2011. Aquaculture, Fisheries, Poverty and Food Security.
- Barrientos, S., Dolan, C. & Tallontire, A., 2003. A Gendered Value Chain Approach to Codes of Conduct in African Horticulture. *World Development*, 31(9), pp.1511–1526.
- Bene, C., MacFayden, G. & Allison, E.H., 2006. *Increasing the Contribution of Small-Scale Fisheries to Poverty Alleviation and Food Security*, FAO.
- Bolwig, S. et al., 2008. *Integrating poverty, gender and environmental concerns into value chain analysis*, Copenhagen, Denmark: DIIS.
- Cornwall, A. & Edwards, J., 2010. Introduction: Negotiating Empowerment,
- Cornwall, A., Gideon, J. & Wilson, K., 2008. Introduction: Reclaiming feminism: Gender and neoliberalism,
- FAO, 2004. A research agenda for small-scale fisheries. Available at: http://www.fao.org/docrep/007/ae534e/ae534e02.htm.
- FAO, 2005. Increasing the contribution of small-scale fisheries to poverty alleviation and food security. *FAO Technical Guidelines for Responsible Fisheries*, 10, p.79pp.
- FAO, 2011. Women in Agriculture: Closing the Gender Gap for Development. The State of Food and Agriculture 2010–2011, Rome: Food and Agriculture Organization of the United Nations. Available at: http://www.fao.org/publications/sofa/2010-11/en/.
- Farnworth, C. et al., 2013. Transforming Gender Relations in Sub-Saharan Africa.
- Kabahenda, M.K. & Husken, S.M.C., 2009. *A review of low-value fish products marketed in the Lake Victoria region*, WorldFish Center.
- Kabeer, N., 1999. From Feminist Insights to an Analytical Framework: An Institutional Perspective on Gender Inequality. In *Institutions, Relations and Outcomes*. London: Zed Books.
- Kabeer, N., 1994. Reversed realities: Gender hierarchies in development thought, London: Verso.
- Kabeer, N. & Natali, L., 2013. Special Issue: Gender Equality and Economic Growth: Is there a Win-Win?,
- Kaplinsky, R. & Morris, M., 2001. *A Handbook for Value Chain Research*, International Development Research Centre.
- Kleiber, D., Harris, L.M. & Vincent, A.C.J., 2014. Gender and small-scale fisheries: a case for counting women and beyond. *Fish and Fisheries*. Available at: http://doi.wiley.com/10.1111/faf.12075 [Accessed March 6, 2014].

- Koczberski, G., 2007. Loose fruit mamas: Creating incentives for smallholder women in oil palm production in Papua New Guinea. *World Development*, 35(7), pp.1172–1185.
- Laven, A. et al., 2009. *Gender in value chains: Emerging lessons and questions*, Arnhem: Agri-ProFocus.
- Mayoux, L. & Mackie, G., 2008. Making the strongest links: A practical guide to mainstreaming gender analysis in value chain development. *International Labour Office Addis Ababa*.
- Ministry of Water and Environment (MWE), 2007. *National Adaptation Programme of Action on Climate Change in Uganda.* (NAPA), Available at: http://www.preventionweb.net/english/policies/v.php?id=8578&cid=180.
- Ogutu-Ohwayo, R., Odongkara, K.N. & Okello, W., 2013. Vulnerability and adaptation of fisheries and riparian resources to climate change. *New Vision*. Available at: http://www.firi.go.ug/climate_change/climate_articles.php.
- Okali, C., 2013. *Making sense of Gender, Climate Change and Agriculture in sub-Saharan Africa: Creating Gender-Responsive Climate Adaptation Policy*, Brighton, UK: Future Agricultures Consortium/IDS.
- Okali, C., 2011. Searching for new pathways towards achieving gender equity: Beyond Boserup and "Women"s role in economic development', Rome: FAO.
- Razavi, S. & Miller, C., 1995. From WID to GAD: Conceptual Shifts in the Women and Development Discourse. *United Nations Research Institute for Social Development, United Nations Development Programme*.
- Riisgaard, L., Escobar Fibla, A.M. & Ponte, S., 2010. *Evaluation study: Gender and value chain development* 2010/2, Copenhagen, Denmark: DANIDA.
- Ssebisubi, M., 2011. Analysis of Small Scale Fisheries' Value-Chains in Uganda, Draft Report.
- Tallontire, A. et al., 2005. Reaching the marginalized? Gender value chains and ethical trade in African horticulture. *Development in Practice*, 15(3-4), pp.559–571.
- USAID, 2009. Promoting Gender Equitable Opportunities in Agricultural Value Chains.
- USAID, 2013. *Uganda Climate Change Vulnerability Assessment Report*, African and Latin American Resilience to Climate Change Project.
- Weeratunge, N. et al., 2012. Transforming aquatic agricultural systems (AAS) towards gender equality: A detailed five country review, Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems.
- Weeratunge, N., Snyder, K. & Choo, P.S., 2010. Gleaner, fisher, trader, processor: Understanding gendered employment in fisheries and aquaculture. *Fish and Fisheries*, 11, pp.405–420.
- World Bank, 2009. *Gender in Agriculture Sourcebook*, Washington, DC: The World Bank, Food and Agriculture Organization of the United Nations, and International Fund for Agricultural Development. Available at: http://go.worldbank.org/5Z9QPCC7L0.