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Land Ladies: Gender and Access to Shambas and Quarries in Pemba

Mary Bryan Barksdale

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Land Ladies: 
Gender and Access to Shambas and Quarries in Pemba

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SIT Fall 2013
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I first want to thank Dr. Nat and Said and the other SIT Staff for preparing me for this project. Without your constant guidance, teaching, and logistical work during the past three months, I would not have nearly as mentally or organizationally prepared to go off on my own for 19 days and to conduct this study. Next I want to thank Dr. Simeon Mesaki for agreeing to be my advisor for this study. Thank you for all the sources you have sent me, for your always prompt emails, and for your willingness to read over outlines and discuss ideas. Thirdly I want to thank Shaame, my translator from Mjini Ole, for helping me tirelessly for every day of my study. Thanks for all of your advice, your superb translating skills, and your friendship. I will never forget. I want to also thank Hamadi and Asha for opening up their house to me, helping convince people to sit through interviews, and for sitting and laughing with me after each dinner. A special thanks to Khamis Shaaban and Fakih Yussuf for allowing me to come study in their villages. And finally I would like to thank the people of Mjini Ole, Kangagani and Wandani for being the most welcoming people I have ever met and for agreeing to answer hours-worth of tedious questions.

ABSTRACT:

A 19-day study was conducted to determine how access to farming land in Mjini Ole and Kangagani, Pemba and how access to land in the Wandani Quarry differ according to gender. Interviews, focus group discussions and observations were carried out to determine the divisions of labor within the shambas of Mjini Ole and Kangagani; the divisions of labor within the Wandani Quarry; the institutions, social norms, and cultural traditions that institute and influence these divisions of labor; how these divisions of labor effect access to resources within the shambas and quarry; and how increased competition for land with increasing population affects
women differently from men. It was found that within the study areas, there are many ways in which women have less access to land compared to men because of a number of reasons and there are several ways in which gender equality with respect to access is more present in the study areas compared to other studies and study areas. It was also found that increased competition for land will most likely affect women more greatly than men.

INTRODUCTION:

Mjini Ole, Kangagani, and Wandani are all villages near the mid-east coast of Pemba Island, which is the northern of two main islands in the Zanzibar archipelago. Mjini Ole and Kangagani are in Wete District, while Wandani is the Chake district. It is a mostly rural and agricultural island and it also has a high level of poverty. Wete is the second poorest district, with around 71% of inhabitants living below the basic needs poverty line (Mutembei, 13, 2012).

Because Pemba is rural and poverty-stricken, many people rely on the natural resources around them for livelihoods, food, water, construction, and sources of energy. As Farhat Mbarouk et. al state in their study “Preliminary Assessment of Coastal Management Initiatives in Zanzibar,” “The coastal zone [of Zanzibar] provides most of the natural resources that its population relies upon for sustenance. Most coastal inhabitants engage in fishing, mangrove woodcutting (for cooking, construction purposes, and sale), subsistence farming, coastal thicket harvesting and livestock keeping. However in order to make ends meet the majority of the inhabitants engage in two or more of these activities simultaneously” (2003). Equality of access to these resources can have large effects on members of society because they play such a large role in daily life and economic activity of the island. As Albinus M.P. Makalle asserts in his study “Gender Relations in Environmental Entitlements: Case of Coastal Natural Resources in
Tanzania, “access to or control over resources determines the level of equality achievable by an individual within the community” (128).

Farming land is one such resource, and provides many men and women with food and income from selling crops. Because agriculture is one of the main livelihoods for residents of Pemba, it is important to study land distribution, access and ownership among the population. Different access to the land based on gender, disability, and/or age can have large socioeconomic effects on those excluded since land is an important resource in the environment for many people. Less access to resources for vulnerable groups like women and children can have great implications for and great effects on their status in society. As Dr. Lugoe asserts in his report “Land Policy Reform in Zanzibar”, “Land has a particularly significant role to play in Zanzibar as it secures livelihoods of poorer rural people as more than half of the population live in abject poverty on less the US $ 0.75 per day. Since land is a primary means of both subsistence and income generation in rural economies, access to land, and security of land rights, is of primary concern in improving on such statistic” (2012).

Gender equality is a global issue and is often paired with environmental issues in the study of ecofeminism which is the ideology that women and the environment, and feminism and environmentalism share important links: for example, the oppression of women and the environment often go hand in hand (Agarwal 1997). And indeed, even in Tanzania (and Zanzibar/Pemba), growing populations and increased competition for resources is becoming a problem. Dr. Tom Balsem in his report (SMOLE II) Report Of The International Land Use Planning Advisor’s Mission stated, “…recent research has indicated that although at the national level, there seems to be abundance of unutilized land and other resources, the fast population growth and rapidly changing socio-economic environment coupled with limited management
capacities in use of resources is already creating enormous pressure on the resources” (25). Many people think that increased degradation of the environment will hurt women disproportionately because of their higher dependence on natural resources in their household responsibilities—“The degradation of natural resources, including that induced by development processes, can undermine women’s ability to perform roles in food production and the collection of fuelwood or water: or it can mean that they can fulfil them only with increasing costs to their time and energy (Leach, 13)—or, like Makalle, because of increasing competition, the wealthier will begin to assume access to and control over natural resources that had previously been used and controlled by vulnerable groups like women (2012).

Gendered access to and control over natural resources, like land, are also controlled by institutions like government and religion. In Pemba, both governmental law and Islamic customary law attempt to control access to resources based on gender. The customary Islamic Inheritance Law endows brothers, upon a parent dying, with twice as much land as sisters. The article “Women Inheritance and Islam in Mali” discusses the Inheritance Laws based off of the Quran:

Some key Koranic provisions regarding women’s inheritance are: 1. In the case of a father who dies, he is directed to give his son “a portion equal to that of two daughters.” If he has no sons and two or more daughters, they receive two-thirds of the inheritance. If he only has one daughter, she receives half. 2. If a man dies without children, his sister is entitled to half of his estate. If it is a woman who dies, under the same circumstance, her brother inherits the entire estate. 3. a woman is directed to leave her husband half her estate if she has no children. If she has children the husband is entitled to one fourth of the inheritance (after paying debts). In contrast, a man is directed to leave one eighth of his estate to his widow if he has any surviving children or agnatic grandchildren. If he has no such descendants, his widow is entitled to one quarter of the estate. In the case of polygamous marriage, the inheritance share of the wife is split equally among each of the wives. (Jones-Kasey et. All, 4-5).

The SMOLE (Sustainable Management of Land and Environment) Project published “Land Policy Reform in Zanzibar” with a list of suggestions for the National Land Policy for
Zanzibar. In this report, Lugoe suggests reforms that take a different approach to dividing land compared to the customary Islamic Inheritance law that most people in Pemba practice. He writes:

A key aspect of the land tenure system of Zanzibar should… be to enhance the land rights of vulnerable groups (women, children, minorities) whose livelihoods depend on working the land…. The male dominant structure of society governs nearly 80% of the rural population including succession and inheritance. The problems are deep-rooted in the succession or inheritance of immovable property including land by the female gender. Custom, culture and certain religious practices have combined to produce a bias against vulnerable groups. Gender discrimination in land matters is repugnant at law (2012).

The Islamic customary Inheritance Law and this proposed reform to the National Land Policy for Zanzibar are very obviously at odds with one another, though, and since people in Pemba have been practicing this customary law for centuries, is it doubtful that they would willingly switch to the secular law. These are examples, though, of how institutions attempt to control gendered access to resources (here specifically land), and how conflict can arise between different institutions trying to exert their control over who has access to resources.

There exist several cases of gendered natural resources Kangagani, Mjini Ole, and Wandani. Women are typically in charge of collecting firewood, although they can enlist their children’s help with this. Male children who are old enough to go alone or with another sibling usually use a bicycle or an oxe cart to transport wood, whereas the women always walk and carry the firewood on their heads. In this way, even children have faster access than do women in getting firewood. Women are typically the ones in charge of getting water for cooking, drinking or bathing, be that from the local well or from a neighbor’s tap water. Women are also more involved with collecting small stones with which to build houses.

Men, on the other hand, are typically the ones in charge of livestock (in Mjini Ole, Kangagani and Wandani the main livestock are cows and goats). This includes grazing livestock,
watering, walking them from location to location, and operating oxe carts with which to transport materials. Men are also more involved with the construction of houses, which are usually built with large stones or coral rag, bricks, timber, concrete, and mud. Because men use these materials in construction and because all of these materials require transport by oxe cart or truck which women do not drive, men deal with these resources more. The focus of this study will look at two specific resources: farmland, also known as “shambas” in Kiswahili and land in the Wandani Quarry.

A study conducted by Kukoteta B. Mutembei called “Gender Analysis of HIMA Project in Zanzibar” took place in Zanzibar with some focus in Pemba. It found that women have less access to finances with which to buy land compared to men, that women do not typically know the process for buying land or think that they are unable to own land. Mutembei found a sharp gendered division of labor in Pemba, with women engaged in reproductive (or non-wage earning) activities and men engaged in productive (or wage-earning) activities. In regards to access to land, she found that “Land ownership relations between men and women in Pemba are not equal. Men are more likely to own land than women because of the number of option available for men to access and own land. Apart from land from inheritance, they can purchase land and they can lease land for agriculture. Women on the other hand, only own land when it is inherited although other are indications of changing attitudes among women, and some are beginning to purchase land” (2012). It was also found that women are a poorer group than are men. Finally, the study found that “Women’s Saving and Loans Groups are dominated by women” (2012).
STUDY AREA

This study took place in Mjini Ole, Kangagani and Wandani Pemba. According to Google Earth, Kangagani and Mjini Ole are located around 5° 10' 4.7532" S and 39° 49' 35.0364" E. The Wandani Quarry is located at -5° 11' 25.0908" S and 39° 50' 1.6008" E. These locations are near the middle of the island, near the east coast. The Sheha of Kangagani said that 3,272 people live in Kangagani and 1,520 people (46.5%) are farmers. According to the Mjini Ole Sheha, 863 people live in the village of Mjini Ole, and he said that “all of those people are farmers.” Around 3,000 live in the Shehia ya Mjini Ole. According to the chairman of the Wandani Quarry, around 5000 men work in the quarry (doing physical labor) and around 300 women work in the quarry selling refreshments and buying and reselling bricks.

METHODOLOGY:

A. Key Informants such as shehas, chairpeople and older people within Mjini Ole, Kangagani and Wandani were interviewed to gather more accurate information about different aspects of history, gender divide and access to resources within their communities. They were asked questions history of access to land, different ways that people within their villages gain access to and ownership resources and differences between men’s and women’s access to land.
B. Focus Group Discussions composed of male farmers from Kangagani, female farmers from Mjini Ole and Kangagani, female workers in the quarry from Wandani, and female land owners in the quarry from Wandani were interviewed to assess their specific access to farmland or quarry land. FGD were also used to provide more accurate information about the topic of study by prompting discussions which ended in a consensus about what people generally thought. Information was gathered on what factors control who has more access to and control over resources, the key environmental issues in the area and how their access has changed in the past 10 years, among other things.

C. One on one interviews were conducted to assess people’s individual access to and control over land in their area and their perceptions about gendered resources and about their individual access to resources.

D. Observation/Participant Observation was conducted through working on people’s shambas, going to collect firewood, working a little in the quarry to assess how people interacted with the land and to observe their access. Participant observation was also helpful in making people more willing to answer questions during an interview, more comfortable with an outsider’s presence and more willing to give more accurate or personal information.

E. Finally, records about who, when, how many people hired tractors to plow their shambas within the months of September and November were studied and information was averaged. These records also included the number of acres of land of each farmer. Based on the names recorded, the sexes of the farmers was determined. From this, average land sizes of women compared to men was calculated. More generally, these records gave information about who has access to equipment like tractors.
RESULTS

A. Key Informant Interview Results:

In a KII with the Sheha of Mjini Ole, it was learned that there are three ways that people can access land: clearing a new plot, through inheritance or by buying from someone else/the government.

A.1. Clearing a New Plot of Land

According to the Sheha of Mjini Ole, many years ago there were forests around the village. When someone wanted a shamba, he or she would have to clear the plot of forest where they wanted to establish the shamba. Then that person would own the land and control it, without having to buy the land.

Now the government owns the land in the west, and people are able to access the land in a similar way by clearing the land of forest. Because the government owns this land, it is able to reclaim land for use, even when people are using it for farming and for their livelihoods. In this case, the government will compensate people for the time and work lost.

The Sheha said that women can get land through buying or inheritance but that they need to be able to clear trees on their plots to establish a new shamba. He said that women themselves think that they are unable to clear land because they consider themselves weak or underestimate their power. In this way, he said women have a lack of ability to access resources like land and usually conduct farming on the shambas of their father or husband. Two other KI, the Sheha of Kangagani and the Wete District Import Coordinator, stated that women are found more in agriculture in the area, and the Wete District Import Coordinator said this was because more men go to work [with the government] or have other jobs.
In a KII with the Sheha of Kangagani, it was learned that all land is owned by the government outside the village. First people clear the land from the forest and then start planting. But to use the land, people must clear the forest, and to do this, they need big equipment to clear the trees.

In a KII with an older men farmer, the history of the government’s control over the land was explained. (see Table 1). He also explained the history of men and women’s shamba locations. He said that generally women planted (and still do plant) rice near the village because there are more ponds there, and gets more rain than the region in the east. In the past, if women came out to the Mashindeni region in the East, they were helping their husbands and/or fathers. But around the year 2005, many women established shambas in the Mashindeni/Makaani region planting tomatoes to sell.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>Before 1969</td>
<td>People of Mjini Ole and Kangagani established homes and shambas in Mashindeni and Makaani</td>
</tr>
<tr>
<td>1969</td>
<td>The government began to construct the prison center in Mashindeni, about ___ km from the outskirts of Mjini Ole</td>
</tr>
<tr>
<td>1970</td>
<td>The prison opened</td>
</tr>
<tr>
<td>1971</td>
<td>The prisoners cleared much of the land east of the Kidike Forest, and the prison officials took land from the people and claimed for the prison</td>
</tr>
<tr>
<td>1972</td>
<td>The government established sorghum and corn plantations</td>
</tr>
<tr>
<td>Sometime between 1973 and 1984</td>
<td>The number of prisoners decreased in the center, and the prison center could not manage all of the land. Hence some land was left free.</td>
</tr>
<tr>
<td>1984-1985</td>
<td>People of Kangagani and Mjini Ole wanted to use some of the land that the government had originally taken from them and that was not currently being used due to the smaller number of prisoners. With the help of the Minister of Education, they sent a letter to the Chief Minister of Zanzibar who sent a letter to the Chief Commander of Prison in Zanzibar who then sent a letter to the commander of the prison in Mashindeni. The Commander of Mashindeni then aged to let villagers apply for land for occupation. The people sent him a list of names and the Commander</td>
</tr>
</tbody>
</table>
gave them access to the land for farming with the condition that they not plant permanent trees in case the prison or government needs to reclaim the land in the future.

1997  People began planting permanent trees on their plots of land so that the government is less likely to reclaim their land because it would have to cut down all of the trees.

1999  The number of prisoners again decreased, and the prison center is even less able to manage the land.

Now  People still go to request farming land from the prison center. They have to fill out a special form. Some villagers take the land without informing the administration.

Table 1. Timeline of the Government’s Control over Land East of Mjini Ole and Kangagani.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tr>
<td>1997</td>
<td>People began planting permanent trees on their plots of land so that the government is less likely to reclaim their land because it would have to cut down all of the trees.</td>
</tr>
<tr>
<td>1999</td>
<td>The number of prisoners again decreased, and the prison center is even less able to manage the land.</td>
</tr>
<tr>
<td>Now</td>
<td>People still go to request farming land from the prison center. They have to fill out a special form. Some villagers take the land without informing the administration.</td>
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A.2. Inheritance of Land

According to a KI who is the Wete District Import Coordinator, after a parent passes away or is too old to farm, all his or her men children receive equal amounts of land among themselves, and women children receive half of the men but all equal with each other according to Islamic law. He said this is because the women usually lived far away after being married so they would not be able to farm land near their parents. Another reason for this unequal passage of land to subsequent generations is Islam tenets that men should be the main income earners of the family so they need larger pieces of land on which to farm. A third reason is that if a man’s sister gets a divorce, he then is in charge of taking care of her.

A.3. Buying land from the Government

The Kangagani Sheha explained that another challenge to owning land (besides clearing the land) is the process of going to the government to get the title deed to a piece of land. First the person needs to go the Sheha who will prepare a letter. The person takes the letter to the Land Department, where there are further processes to guarantee land. The person must be a resident, but no restriction on age or gender. The person must pay for services; the fee depends on the size of the land. He did not know how much one acre of land generally costs, but a KII with the Wete District Import Coordinator revealed that one acre of land in the region Makaani now costs around 10,000,000 Tsh. In 1993, one acre of land in the same region costs 72,000 Tsh.
A.4. Buying Land in the Wandani Quarry

A KII with a quarry miner who spoke good English revealed that the people who owned most of the land on which the quarry has now been established live in Ole. The process of buying land in the quarry consists of going to the owners and paying for the land. One 2 x 3 m block of land costs around 200,000 Tsh. He said that many people will buy a block of land in the quarry and begin digging only to find that the stone there is too hard or too soft to cut into bricks. In this case, there is no way to get money back from the owners because a contract has already been signed. The person will just lose 200,000 Tsh on buying land which cannot be used for brick making.

A.5. Exhausting a Block of Land in the Wandani Quarry

During a KII with the chairman of the quarry, it was learned that the government has set a maximum depth of three meters that miners are not allowed to surpass in their mining activity. After a miner has finished a block, or if the stone has proven to be too hard or not compact enough, the debris—like sand and rock—around the plots will be used to refill the blocks. Another KI miner said miners also try to reduce the condition of being used by planting trees in the area where the block has been refilled.

The environmental committee also received money to plant trees around the quarry area in 2011. Now the government comes every three years to check to see if the trees are still here and to make sure that no miners are exceeding the maximum depth of three meters.

A.6. Kangagani Plant Nursery run by the group Hakuna Kulala

Hakuna Kulala is a group that runs a tree nursery in Kangagani. They sell makrismas and mvinje trees to people wishing to plant on their farms or to larger organizations like the Wandani Quarry environmental committee that want to help reforestation. In a KII with the leader of the
group Hakuna Kulala, the process of buying tree seedlings was explained. Because most people do not have the money to buy trees from her, she compiles a list of names and sends this to the government. The government gives loans to the people, but “usually” money is provided by sponsorship, as is the case with the Wandani Quarry committee. The farmers who have received loans from the government come and take the trees, and the government will send the check directly to Hakuna Kulala, 1-3 months after the farmer has come to take his/her trees.

Hakuna Kulala also has a tree farm of mivinje trees on two acres of land. They sell trees to people for construction for houses or for firewood. This abides by the law “cut a tree, plant a tree” and “plant a tree, cut a tree.” When a person plant a tree, he/she is allowed to cut a tree. The KI said it is free to cut natural trees, but to cut a tree that has been planted, people must pay. For women looking for firewood, she said that now because of deforestation, people have to go long distances to find firewood that is natural to cut.

The group Hakuna Kulala has 12 members—9 women and 3 men. The leader of the group explained the benefits of having men in the group. Firstly, if a women is in the midst of childbirth, the men are able to do the women’s activities. Secondly, if a member of the group needs to travel a long way to “get things,” the men are able to go. She said men can go on bicycles, vespas, oxe carts. She said that men access more natural resources and have more opportunity to access, and she does not have that much access. Some women may have “good” access, but these women work in the government. For most women, opportunity is very low because they are mostly housewives.

A.7. Sunflower Project

A new sunflower seed oil project was revealed by two KI who are participants in the pilot project. The Zanzibar Ministry of Agriculture gave free sunflower seeds with which to grow
sunflowers to 60 farmers, 30 men and 30 women, in Zanzibar. These people were chosen because they attended meetings in which the idea was proposed and they were the most willing to participate. After harvesting the seeds, the farmers will send the seeds to a company in India who will then process sunflower seed oil for cooking. For each acre of sunflowers harvested, the farmer will receive 2,500,000 Tsh.

B. Focus Group Discussion Results:

B.1. Relationship Between Farmers and Government

In a FGD with two men farmers and one women farmer from Kangagani, it was revealed that many people have gathered together and talked to the sheha to petition the government for the government land in the east to be free for all and equal for all. They believe that the possibility of a poor person’s land being taken over by someone with more money who wants to buy land in the east is unfair. They believe it is not fair that more money means more land for some people. They agreed that the only factor that affects access to land is money (not gender or age or other factors). It was learned that only around 4 people own title deeds to land in the east, and some of these people own up to 10 acres of land. Everyone else borrows land from the government, and usually farm on around 2-3 acres of land.

B.2. Gendered Access to Land

During a FGD in Mjini Ole, all five women farmers agreed that men access more resources and that “women are behind.” They said that “if land is for sell, women have no money to buy it.” The women who are able to buy land work for the government. All five of them inherited land, and two borrow land from the government. When asked why they did not buy land, they said they have no money to do so. All five work on their husbands’ shambas, and their husbands work with them on their shambas. The women and men make decisions like what to
plant, when to plant, when to harvest, on their respective shambas, even though they help each other.

**B.3. Gendered Crops**

Women in a Kangagani FG explained that more harvest rice because it is a more “tedious” crop and requires more attention. Because men are “busier doing other jobs,” they have less time than women do. All four of these women planted rice on shambas that they’ve inherited that are located around the ponds near the villages of Kangagani and Mjini Ole; none borrowed land from the government and none have bought land. Five women in a second Kangagani FG agreed that more women plant rice, corn, cassava, green gram and cow peas than do men. When asked why more women plant rice than do men, they gave two different answers: because men are unable to identify which plants are the weeds and which are the rice, and because men have fat backs so they are unable to bend over to weed for long periods of time. After a few minutes of arguing, the women concluded that women in general work more in the shambas than men do because men are exposed to other activites. But they also said that men and women share the decision making and that economic status and social capital are the two factors that control access to resources, not gender.

**B.4. Division of Labor at the Wandani Quarry**

Three focus groups consisting of only women who work in the quarry were interviewed. The first was made of five women who sell refreshments like tea and mendazi at the quarry and who buy and resell the bricks to customers gave information about the typical work that women do in the quarry. They usually buy bricks from the men miners for 300 Tsh and then resell the bricks for 400 Tsh. They collect bricks, make it known that bricks are for sale to potential customers and usually provide transport into town by hiring people to use lorries or trucks. All.
five have husbands who work in the quarry. They also buy bricks from their husbands for 300 Tsh and resell for 400 Tsh. None of the five women had ever tried the physical labor in the quarry, and they all laughed at the idea. They agreed that men use more resources and that the men own the land because they bought it, while women are just the traders. Men are free to sell the bricks to the women or not. The current environmental committee that operates at the quarry does not have many women and no one new is allowed to join, but in January the chairman will hold open meetings, and he told the women during the FGD that they are looking to add a large number of women to the committee.

A second FG of five women who work in the quarry and live in Wandani revealed more about the division of labor within the quarry. They said that they wish that they could do the men’s work to increase their income. They have not tried the physical labor, but if they are “disappointed with the conditions of life, they will need to plant themselves in physical labor.” 

The husbands of both women who are married work in the quarry as well. These women buy bricks from their husbands as well, but do not receive a special deal from their husbands because they keep their money separate from their spouses. They said that their husbands use their earnings to buy food for the family, while women use their money to do their own business. When asked what this individual business was though, the women said they spend their money on helping their husband to send their children to school and on clothes.

During a third FGD in Wandani, 10 women who are members of a group that owns and rents plots in the quarry were interviewed. This group consists of 70 women and two men. Fifty percent of the earnings go to the men doing the labor and 50% goes to the group. They own seven plots of land, each one costing around 700,000Tsh. They first borrow land from the owners and then seek men youth to remove the soil that rests above the extensive layer of rock
and dig the holes. Sometimes if the group has no money, the women are forced to clear the soil themselves. They said this work is hard and that they “lose health from doing this.” After collecting enough money, they pay the owners for the land. After allocating money to landowner and to the workers in the blocks, the group sometimes makes only 100,000Tsh per month, and that is divided among around 70 people.

All 10 of the women are married and all 10 of their husbands first began working in the quarry, and then they followed their husbands there to make more money. They all also sell refreshments and buy and sell bricks.

Three of these women did the physical labor that is currently all-men for 4 months. This labor consists of sawing blocks out of the ground and then cutting the individual bricks from these blocks. They discontinued because they are not as youthful anymore. They said other workers’ receptions of them working was welcoming and that people helped them.

All 10 women agreed that men have more access to resources because men spend more time in the quarry while women must return home for cooking, cleaning and other domestic activities. It is easier for men to get money to buy land because men have other ways to make money, whereas women have small chances to make money because they have to spend most of their time at home. They said that their husbands do not help them financially. They all said that they saved money to buy land by stashing away some money after their husbands had given them money to buy domestic things like food. They said that, for example, if their husbands gave them 5,000 Tsh, they would save around 500 Tsh which would later be used to buy land.

There are only two men in their group because they “dislike to involve men in the group because they think their voice will go down if they admit more men.” The two men currently in the group are “wise” and have knowledge about which plots to buy and how to find customers.
C. Questionnaire Results

Eighteen people of Mjini Ole, Kangagani and Wandani were interviewed one on one using a questionnaire that consisted of around 19 questions, depending on time constraints, general atmosphere of the respondent towards the questions asked and the level of detail they had already provided. People within focus groups and key informants were also asked some or all of the questions from the questionnaire.

C.1. Land Ownership

A comparison between men and women farmers was made with respect to the ownership statuses of their shambas. (See Figure 1). The most common form of land ownership within the population sample results from inheritance, the second most common is borrowing land from the government, and the least common form is borrowing from a group. Within the group of respondents, it was more common for men to have bought land compared to borrowing from a friend or relative, while it was more common for a women to borrow from a relative, friend or group than to have bought land. A higher percentage (88% or 22 out of 25) of women respondents owned land that was inherited compared to men respondents, 75% (or 9 out of 12) of whom owned inherited land. A slightly higher percentage of men borrow land from the government compared to women, and a comparable percentage of men and women borrow land from a friend or relative.

Out of 26 respondents (19 women and 7 men) who answered the question about decision making on their shambas, 23 said that they make the decisions on their individual shambas. One of the seven men said that on the land that he inherited from his father, his father still makes the decisions about when to plant, what to plant and when to harvest. Two of the 19 women said that other people make all of some of the decisions on their shambas—one who borrows land from an
agricultural group said that the leader of the group makes the decisions for the shamba, and the second woman said that her husband makes many of the decisions on her shamba and also gets the money from selling the harvests. Even though she used her own money that she earned from a teaching job to buy her plots of land, she gives all of the money she makes to her husband who uses the money on domestic needs like food. He also gives her money with which to pay for tractors to plough her land and to hire workers to help weed and harvest.

Figure 1. Breakdown of Land Ownership According to Gender. Sample size is 25 women and 12 men.

Figure 2. Women Farmers and Decision Making. Sample size is 19 women.
C.2 Gendered Crops

A comparison between men and women farmers was made with respect to crops harvested. (Refer to Figure 3). It was found that the most common crops harvested were cassava, corn, tomatoes, rice, cow peas, and bananas. Other crops included ground nuts, spinach, sweet potatoes, watermelon, cucumber, peppers, eggplants, green gram, pumpkin, mango, papaya, lemon, jackfruit and coconut. The biggest gender discrepancy within the population sample of farmers was found in the harvesting of green gram, ground nuts, and rice. Zero percent of men respondents farmed green gram, while 74% of women respondents did. Eighty four percent of women respondents said they farm ground nuts, while only 14% of men respondents did. The third biggest discrepancy between men and women farmers was found within rice farming, where 84% of women respondents said they farmed this crop, and only 43% of men respondents did.

Figure 3. Breakdown of Crops Harvested According to Gender. Sample size is 19 women and 7 men.
C3. Selling Produce

The percentages of women farmers who sell produce compared to the percentages of men farmers who sell produce was compared. (See Figure 4 and 5). A greater percentage of men respondents sell their produce (75%) compared to only 64% of women respondents who sell their produce. When asked what the women spend their money on after selling the produce, one woman said she gives the money to her husband who spends it on domestic needs, and the other 14 respondents said that they support their husbands’ expenditures on school fees, clothes, hospital fees, etc. When asked whether husband and wife share money or keep it separate, 22 out of 28 respondents said that they keep money separate, and the five out of six respondents who said that they share money gave a vague answer and said that it was because men have multiple wives so husband and wife have to share money on domestic expenditures.

![Figure 4. The Percentage of Women Farmers who Sell Their Produce Versus Eating it within Their Families. The sample size is 11 women](image)

![Figure 5. The Percentage of Men Farmers who Sell Their Produce Versus Eating it within](image)
C.4. Participation within Environmental Groups

A comparison was made between the percentages of men and women respondents who are members of agricultural and environmental conservation groups. (See Figure 6 and 7). Around 42% of women respondents are members of either agricultural groups (that share equipment, money, and/or ideas about income promotion through agriculture) or environmental conservation groups (that share ideas about how to better protect the environment and plant trees, etc) or both. More women respondents are members of agricultural groups than environmental conservation groups. Around 58% of women respondents are not involved in agricultural or environmental conservation groups, but 34.5% of women respondents said that even though they are not in groups, they want to be and 31% said that they are looking for some kind of financial assistance or to share equipment for farming or to learn ideas about how to promote income.

A higher percentage of men respondents (see Figure 7) are involved in environmental or agricultural groups compared to women (55% compared to 42%). More men respondents indicated that they would like to be members of some kind of agricultural or environmental group than did women respondents, but 19.2% of women respondents did not indicate if they would like to be members. A higher percentage of women respondents indicated that they would like to join groups to receive some sort of assistance, compared to the 22% of men respondents who just want to join a group to help promote environmental conservation.
Figure 6. Women Respondents’ Participation in Environmental/Agricultural Groups. Sample size is 26 women.

Figure 7. Men Respondents’ Participation in Environmental/Agricultural Groups. Sample size is 9.
C.5. Access to Resources

A comparison of women and men respondents’ concerns over changes in access to resources was made (refer to Table 2, Figure 8 and Figure 9). Based on the information presented in Table 2, five different categories of resources were created to show the areas of men and women respondents’ concerns (see Figure 8). A comparable percentage of men and women expressed concern over shrinking access to farming land, as well as threats to harvest size. Twice the percentage of men (50%) expressed concern over less rainfall/less water in water sources than did women (25%). No women expressed concerns over livestock, whereas ¼ of men respondents did. Almost twice the percentage of women expressed concern over deforestation and the difficulty of finding firewood compared to men.

Figure 9 shows respondents’ perceptions of how use of and access to natural resources differs according to gender in Mjini Ole, Kangagani and Wandani. Half of the respondents (4 men and 3 women) said that they thought men buy/use more resources than women, and 21% of respondents (2 men and 1 woman) said that they thought that men also have greater access to natural resources. Thirty six percent of respondents (three men and two women) believed that access to resources only depends on money, but one of those men said that men have more money so they have greater opportunity to buy resources.

<table>
<thead>
<tr>
<th>How Access to Resource Has Changed in the Past 10 Years</th>
<th># of Men Respondents Who Voiced Concern</th>
<th># of Women Respondents Who Voiced Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarry land has decreased (many workers/government has filled up holes/more expensive to buy)</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Reduction of trees</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Reduction of harvest size</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Longer dry season</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Mangrove forest has flourished, but that is because access for firewood has been cut off</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Expensive to buy land now</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>
Trees are dying because of heat & 1 & 0 \\
Lack of water—decrease of water in water sources & 2 & 1 \\
Livestock diseases & 2 & 0 \\
Hard to get land for farming because population increase and more competition & 0 & 3 \\
More difficult to buy livestock because higher cost & 1 & 0 \\
Hard to get enough food for livestock during dry season & 2 & 0 \\
Promotion of desertification because more people farming now than 10 years ago & 1 & 0 \\
Poor people have less access now because hard to get loans and someone wealthier could buy land that someone who is unable to buy land is using & 1 & 0 \\
Compaction of land (weeding is difficult) & 1 & 0 \\
Limited access to better technology (people have to do physical labor) & 1 & 0 \\
Cows eat crops & 1 & 0 \\
Buying firewood is more expensive because of deforestation & 0 & 1 \\
Land is exhausted from so much agriculture & 0 & 1 \\
More kinds of flies that eat crops & 0 & 1 \\

<table>
<thead>
<tr>
<th>Resources</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land (Shambas)</td>
<td>41.7%</td>
<td>37.5%</td>
</tr>
<tr>
<td>Rainfall/Water Sources</td>
<td>50.0%</td>
<td>62.5%</td>
</tr>
<tr>
<td>Forest</td>
<td>25.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Livestock</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Harvest</td>
<td>16.7%</td>
<td>25.0%</td>
</tr>
</tbody>
</table>

Table 2. Respondents’ Concerns over How Access to Resources Has Changed in the Past 10 Years and Gender Breakdown. Sample size is 8 women respondents and 12 men respondents.

Figure 8. Gender Breakdown of Concerns over Changes in Access to Resources. Sample size is 8 women and 12 men.
Figure 9. Perceptions of How Use of and Access to Natural Resources Differs According to Gender. Sample size is 7 women and 7 men (not including data gathered from focus group interviews).

C.6. Sizes of Shambas and Time Spent on Shambas

Out of the 8 women respondents and 6 men respondents asked, the average land size of the women was 1.66 acres and the average size of the men’s shambas was 3.33 acres. Based on these numbers, men own almost exactly twice the amount of land that women do, including inherited land and land borrowed from the government, friends, relatives and groups. On average women spent 4.2 hours and men spent 3.8 hours on their shambas (based on a sample size of 11 women and 7 men).

D. Observations/Participant Observation Results

D.1. Men and Women Working Side by Side

Usually men and women work side by side, either on neighboring shambas or within the same shamba. Out of the six visits to shambas, only twice was there not a member of the opposite sex working on a neighboring shamba—only other women farmers were present in the shambas near the southern edge of Mjini Ole, and once on the eastern side of Kangagani, there
was only one male farmer. Near inherited plots of land outside Mjini Ole, two uncles were working on neighboring or nearby shambas to their niece. Twice while participant observation was being conducted, husband and wife were working on the same shamba (once on a shamba which had been bought by the husband, and once on a shamba which the wife and husband borrowed from the government and did not own the title deed). The sixth experience working on shambas, a woman was farming and hoeing on the neighboring shamba.

The husband and wife who borrow land from the government both make decisions on the farm. They both helped to build the well that is on their land, and they both hoe and plant crops together. They also use the money from selling tomatoes together.

D.2. Deforestation to make Shambas

Two examples of how overpopulation may be causing people to clear more and more land and lose forested land and land on which to graze cattle were observed. Firstly, there are many areas that do not have ideal soil on which to grow crops. This is the case especially in the east, in the land far from ponds. The soil is hard to plow and there are only certain crops that can grow in this land. This is also causing deforestation: one interviewee said it took him three months to clear the land on which he now farms. The second example observed was the lack of land on which to graze cattle. People in this area have been grazing animals for centuries, but people are increasingly meeting challenges in finding areas to graze their cattle and sheep and food which to give them. Many of the interviewees complained of animals who were not tied up destroying their crops. On multiple occasions it was observed that people let their cattle graze in land that is clearly prohibited by the government on which to graze animals (designated by signs). There is little land available nearby on which to tie up animals so either people have to
walk a far way away to leave their animals for the day, or they put them in illegal lots or they tie them up so tightly so that they do not encroach on farmland.

D.3. Plowing the Land with the Help of a Tractor

The Wete District Import Coordinator was accompanied to visit land which his tractor plowing. It costs 16,000 Tsh to hire the tractor to plow one acre of land. Usually the cost would be around 64,000Tsh, but the government subsidizes the cost to make it more affordable for people.

D.4. Quarry Gender Divide and Physical Labor

When visiting the quarry, it was observed that only men do the physical labor and there are a few women who have set up stands around selling refreshments. The physical labor is very demanding, with most men sweating profusely, shirts off, debris from sawing and hammering at the rock coating the faces, checks and arms of the workers. Many men have set up tarps in their plots to offer shade from the direct sun, and most men go through many liters of water in one day. Only men were seen carting the bricks around on oxe carts and trucks.

E. Tractor Rental Records Results

The West District Import Coordinator’s records revealed the number, sex, and size of the land plowed of farmers from Mjini Ole and Kangagani who had hired the tractor and tractor operator to plow land within the months of September and October of 2013. In Kangagani, during the two month period, 34 women and 15 men had hired tractors to plow their land. The average land size that the women paid to be plowed was 0.32 acres, while the average land size men had plowed was 0.57 acres. In the Shehia of Mjini Ole, 67 women and 55 men had hired a tractor during September and October 2013. The average land size women had plowed was 0.45 acres and the average land size the men had plowed was 0.58 acres.
DISCUSSION

The five main factors that were found to affect women’s access to shamba land and quarry land in Mjini Ole, Kangagani and Wandani, Pemba were A). Conceptions about characteristics of sexes, B). Islam’s Inheritance Laws C). Cultural Division of Labor/Responsibilities within the Family D). Socioeconomic status E). Deforestation.

A. Differences within the Environment Based on Conceptions about Characteristics of the Sexes

A.1. How Conceptions about the Biological Differences Between the Sexes Affects Gendered Crops and Division of Labor

At least 11 people during interviews demonstrated or pointed out the effects of men and women in Mjini Ole, Kangagani and Wandani adhering to the concept that men are more physically capable. The five women who sell refreshments in the quarry and who buy and resell bricks all laughed at the idea (as did other men around them) of them attempting the physical labor in the quarry. Because they had not seen the women who did work in the quarry, or because they did not think those women were capable or because they think that physical labor is too hard for them, they are limiting the amount and type of work that they can do to make more money.

The Sheha of Kangagani also pointed out that because many women think that they are weak or incapable (compared to men), they assume that harder physical work like clearing land is too difficult for them. This finding is similar to Mutembei’s findings about women’s low self-esteem and self-confidence in “Gender Analysis of the HIMA Project, Zanzibar” (2012). One male miner during an interview gave reasons why the few women who had done the physical
labor in the quarry for a little while might have stopped, according to her possible perspective
towards the work. He said she might they might have felt too shy to try or shame or maybe felt
that they were not able.

Another male respondent said that work in the quarry is “men’s work, not women’s.
Women are weak, and men are strong.” Even though most men are physically stronger than most
women, by comparing the two in such definite terms and in such extremes, this kind of thought
relegates women to always participate in non-physical labor and will establish men as the
primary income earners as long as the more physical labor (like mining) is a better paid
occupation compared to selling refreshments or weaving.

At least two respondents (one during a one on one interview and one or more during
focus group discussions) attributed the existence of fewer men rice farmers than women to the
fact that it hurts men’s backs more to bend over to weed/men’s backs are “fatter”. Another
woman said that men are unable to distinguish between what is rice plant and what is weed.

These conceptions can cause the “gendering” of crops like what is seen in Figure 3. If
men think that weeding will always hurt their backs more than women’s, more women will end
up doing the more intensive farming of rice but in some cases give the money from selling the
rice to their husbands to use.

In her article, “Gender and the Environment: Traps and Opportunities,” Melissa Leech
mentions a group of studies that “emphasize that divisions of labour and responsibility in society
are not ‘naturally’ constructed, and they demonstrate how these are influenced by ideas about the
characteristics of the sexes…” (1992). In Mjini Ole, Kangagani and Wandani we can see how
ideas about the characteristics of the sexes—women are unable to do the physical labor in the
quarry, women are unable to clear land or chop down big trees, men’s backs hurt too much to
weed, men are unable to distinguish between rice and weed—can affect local division of labor—women farming more rice, men doing the physical labor in the quarry while the women sell refreshments and resell the bricks.

A.2. How Assumptions about Characteristics of the Sexes Affects People’s Access to Natural Resources

The assumption that one is unable to perform a certain task within the environment because of his/her sex limits that person’s access to whatever natural resources are involved in that task. The women who believe that they are not strong enough to clear a piece of land or saw bricks in the quarry are limiting their own access to that resource, and all the people who affirm this belief are indirectly limiting their access to that resource. The men who believe that they are not able to grow rice because their backs are “too fat” or because they will be unable to distinguish between weed and rice are limiting their access to that crop and limiting their options in what they will grow.

A.3. Developing Attitudes about Women’s Capabilities

There were many people, however, who were challenging the idea that physical labor is only for men or that previously held assumptions about the sexes should lock people into certain jobs. The FGD at Wandani of women who sold refreshments and bricks but who were open to the idea of beginning physical labor if need be, if poverty pushes them to it, were prepared to break out of conventional stereotypes of women’s jobs. Here poverty, was the impetus. But they did not react in the same way when asked about whether they had tried the physical labor as the first focus group of women workers in the quarry and instead of laughing, answered seriously. Even though poverty might force them into physical labor as they said, they are more empowered, and did not question their ability to perform the work.
Other people like the Mjini Ole Sheha and the miner also seem more open to the idea of women breaking out of conventional stereotypes and taking control of the resources around them than for example, the interviewee who said that women were incapable of working in the quarry because they are too weak.

B. Customary Inheritance Law

B.1. Current Situation of Farming—Relevancy of Inheritance Law

The reasons for the existence of the Inheritance Law have already been explained. Even though it was found that a higher percentage of women own inherited land than do men (Fig. 1), the average size of women respondents’ shambas were on average less than men’s shambas, most likely due to the inheritance law and the fact that less women are able to buy land compared to men. In this way, the inheritance law limits women’s access to land by giving brothers in a family more land than sisters. The fact that the Wete District Import Coordinator who supervises tractors rentals and who deals with people on their shambas every day during his job said that more women work in shambas along with the fact that the consensus during the third FGD with women farmers in Kangagani was that more women farm in Kangagani and Mjini Ole shows that the reasons for the establishment of the inheritance law do not hold true anymore. The inheritance law was originally established because men were the primary farmers in society, but that is not the case in Mjini Ole and Kangagani. And even though men are still expected to be the primary wage earners in the household, 64% of women farmers interviewed sell some of the crops, and from their responses most of this money goes towards helping their husbands pay for domestic needs like food, school fees, clothes, etc.
B.2. Islam as an Institution Affecting Access to Farming Land

Albinus M.P. Makalle asserted in his study “Gender Relations in Environmental Entitlements: Case of Coastal Natural Resources in Tanzania,” “Environmental entitlements (entitlements (access to, ownership and control) of coastal resources through endowments) are enhanced by institutional means and mechanisms and the policy dimension of which demand specific forms of action to promote and protect them” (2012). In this study, the inheritance law shows how institutions like religion can play a part in the different levels of access different groups within society have to natural resources in their environment. In Mjini Ole, Kangagani and Wandani this Islamic Inheritance Law directly limits women’s access to the land.

The fact that the majority of women interviewed were participating in some kind of income generating activity—whether that be selling crops, selling refreshments and bricks at the quarry, renting out land in the quarry, weaving, teaching, etc—illustrates the fact that these women desire more income, and thus do not want to be completely reliant on their husband’s or father’s income. Considering that all but one of the interviewees were farmers, increasing women’s access to land with new laws would increase women’s access to income and thus limit how much they rely on others in society.

B.3. Inheritance Law and Increasing Competition for Land

With overpopulation and increased competition for land, women’s and men’s inheritance plots will become steadily smaller as parents have to divide their already small plots of land among all of their children. Women, however, because they receive half the size of land that men do, and because a higher percentage of them farm on inherited land compared to men, will be hit even harder by overpopulation and their access with diminish more quickly.
C. Cultural Division of Labor

C.1 Gender Division in the Home

This study found a sharp division of labor in the study areas, as women were in charge of domestic tasks like cooking, cleaning, laundry, collecting firewood, etc. Men in Mjini Ole and Kangagani are the primary income earners and generally are gone during the day, either to the shambas, to the quarry, to the ocean to fish or to government jobs. This breakdown of gendered responsibilities in Pemba can be attributed to the tradition of gendered responsibilities in society: women have traditionally been and still are in charge of domestic responsibilities, and much of their time is spent in the house. Mutembei also found strict divisions of labor in Pemba: “In Pemba, the communities have a very distinct set of expectations who does what in the community and at the household level. Women are fully responsible for the reproductive roles (cleaning the household, cooking, fetching water and caring for the children)” (2012). This limits how much time women can spend working on shambas or in the quarry. As the FGD of women quarry land owners in Wandani said, the division of labor relegates women to domestic life for much of the day, and women thus lose time during which they could be accessing resources like land, crops, bricks, etc. In her analysis of gender in Zanzibar, Mutembei addresses the same issue: “Women bear a disproportionate burden managing household and production roles and thus minimizing their time to engage in work that could more them out of poverty… Men on the other hand have more time productive roles and thus greater opportunities to make income compared to women” (2012).
C.2. Gender Divisions of Labor in the Quarry

This division of labor seems to extend even into the work sphere, where both men and women want to work to produce income. Every woman interviewee who worked in the quarry and was married had a husband who also worked in the quarry. They all also said that their husbands began working there first, and then they followed them there to make extra money. The division of labor at the quarry was evident in that women’s jobs were molded around whatever the men were doing. Because men became thirsty and hungry during the course of their physical labor, women sold refreshments and food. Because men are busy cutting and sawing all day, and thus do not have time to sell bricks to customers, women would collect the bricks and resell to customers. The fact that the men created the quarry first and women followed their husbands there and the fact that women have molded their work around whatever the men are doing alludes to the idea that men control the quarry land. Compared to the shambas, the division of labor is much sharper at the quarry, which means that levels of access to land and bricks are more different at the quarry than on the shambas. This makes sense considering one plot of land in the quarry can cost anywhere from 200,000 to 700,000 Tsh. This steep price is more out of reach for women who have less of an opportunity to make income than it is for their husbands and other men.

C.3. How Division of Labor Affects Money Transfer within the Home and in the Work Area

Because men are expected to be the primary income earners, they also spend the money and buy the food. One interviewee said that “men are responsible for the whole family including
the women.” Because most men see themselves as responsible for the whole family, they make the decisions concerning how money is spent and they do not feel the need to consult their wives on these matters. Even though the majority of men and women respondents keep their money separate, when women do get money they support the husband’s domestic expenditures. In the FGD with women landowners in the quarry, the women said that they did not receive financial assistance from their husbands, even though their income would eventually help their husbands pay for domestic needs.

D. Women’s Socio Economic Status

D.1. Socio Economic Status Relation to Access to Resources

Women’s greater use of inherited land compared to other types of land (bought, borrowed, etc.) also indicates that inherited land is the most accessible to women (Figure 1), which is similar to one of Mutembei’s findings. She writes, “Despite these obstacles, a significant majority of women in rural areas seem to have greater access to inherited land compared to any other type of land tenure” (2012). Only 1 woman out of 25 women respondents had bought land; everyone else farmed inherited or borrowed government land. The one woman who did buy her land used money made from her teaching. She said, though, that her husband makes some of the decisions on her shambas and that after selling her produce, she gives the money to her husband to spend. So while it does indicate positive access to purchased land, she loses control of her land at the same time. Because farmers have the option of buying a title deed to government land which would give farmers full control over their land and prevent the government from reclaiming the land. This process, however can limit other people’s access to the land because the wealthier people are able to buy the land that someone else (who is unable to buy the land) is using. Women are members of this more vulnerable group of people who are
often unable to buy the land but instead borrow it, another similar finding to those in Mutembei’s study.

The women landowners in the Wandani Quarry are increasing their access to land by buying the land. Considering, however, that there are 72 people in the group but the group only makes around 100,000Tsh every month after paying the land ownership and the men who work in the plots their share, the economic benefits of being in the group are very low. After dividing 100,000 Tsh among 72 people, each member makes less than 2,000Tsh per month from being in the group. They said this is “no income, but there are no others means, and of course working in the quarry is very difficult.” If they get the chance, they will “run away from this.”

**D.2. How women are combating lower economic status**

Referring to Figures 6 and 7, a higher percentage of women respondents are members of agricultural groups that share equipment, money, and/or ideas about income generation than are men. A higher percentage of women respondents who were not currently members of any groups said that they wished they were members of agricultural groups than did men who were not currently members. Hakuna Kulala (which has nine female members and three male members) and the women quarry land owners group (which has around 70 female members and two male members) are just two examples of agricultural groups dominated by women. These high percentages of women who do use agricultural groups and who wish to be members of agricultural groups show that women are using groups or want to use groups to combat poverty. The fact that there are higher percentages of women respondents in agricultural groups and who wish to be in groups than men may suggest that belonging to these kinds of groups is more imperative for women’s access to and control over land than it is for men. The existence of these groups, however, is a positive indicator for women’s growing access to land.
D.3. Women Farmers and Quarry Owners and Overpopulation

Because it was found that women occupy a lower socioeconomic class than do men in Mjini Ole, Kangagani and Wandani, women will be hit harder than are men with increasing population and competition for land. As the villages of Kangagani and Mjini Ole grow, the land and farmland around them will shrink as the land is taken over by houses, roads, etc. This was discussed previously with relation to the customary Inheritance Law, but it also should be noted that because women occupy more of the land nearer to the villages of Kangagani and Mjini Ole, (because that is where most inherited land is located which a higher percentage of women use, and because that is where the ponds are located which is better for rice farming), their access to the land might shrink disproportionately compared to men’s access.

E. Deforestation

Increased deforestation is also affecting women’s access to resources unequally because women, who are in charge of collecting firewood, have to walk further and further to find wood. These hours spent collecting firewood (some women spend 5 hours per day, others 2 days per week walking and collecting firewood) could instead be used to participate in wage earning activities and/or work more on their shambas or the quarry, which could both potentially be used to increase access.

F. Access in Contention with Environmental Conservation

There are many potential ways in which access to land is seen in contention to conservation efforts. The recent protection of mangroves in the area (with the creation of a beekeeping group in the area) means that women who had previously used that area for firewood now have to walk
further distances in order to find wood. Referring to Figure 8, the majority of female respondents and almost twice the percentage of women compared to men, when asked about how their access to resources has changed in the past 10 years gave an answer pertaining to dwindling forest and the difficulty in getting firewood. Not only does this point to the idea that women will be disproportionately affected by deforestation compared to men, but it also shows that women will be disproportionately affected forest protection compared to men. This positive step in protection of the environment is seen as a negative step in terms of access, and women needing to walk further to find firewood will again lose time to be doing other activities that could help increase their access. In the quarry, the government mandate not to dig deeper than three meters limits people’s access to the land that they have bought themselves, but it will be a good thing for regeneration of nutrient rich soil, a good thing for regeneration of plants in the area and a good thing for limiting erosion. This likewise will disproportionately affect men compared to women because more men work in the quarry. With less strict divisions of labor, however, environmental conservation like that taking place in the mangroves around Mjini Ole and within the quarry will not disproportionately affect men compared to women.

G. Government Control over People’s Access to Resources

G.1. Government Control over land

The prison center’s claiming of the land around the area for its own use represents the way that institutions can affect people’s access to land. Government reclaiming of land in the 1970s severely limited people’s access to the land, but access again improved after the government began allowing people to borrow land on which to farm. Still today, the government is able to reclaim land from people who work on borrowed land. Outside of Mjini Ole there was a small-scale mine where the government had contracted with a company who was extracted
material from the land in order to build roads around Pemba. This goal of this project was to improve four rural roads in northern Pemba. It was learned that people who had been farming on this land were kicked off their shambas by the government, although they were compensated for their loss.

The SMOLE report “Land Policy Reform in Zanzibar,” in its recommendations for considerations for land policy reform in Zanzibar, recognizes women’s current subjugation under the customary inheritance law and is working to change it in new land policy reform (2012). This is a positive step in the way that the government is managing access to resources.

**G.2. Government Control in Quarry**

Government control within the quarry is limited because the land is privately owned and miners own their plots of land and work individually or with a few other friends, not under a larger company. The government’s restriction on the depth of the quarry is a good thing for the environment, as mentioned, but for people who already have access to small amounts of land, a limit on their access in their own plot of land might further limit their access.

**H. Indicators of Positive Steps in Improving Women’s Access to Land**

There are a few indicators of positive steps in improving women’s access to land. The first is women’s high level of decision making on their own shambas and women quarry landowner’s control over their land. Compared to the “Gender Analysis of HIMA Project, Zanzibar,” this study found that women of Mjini Ole have greater decision making power on their shambas (2012), This data, however, might be warped considering full decision making power was defined as the ability to decide what to plant, when to plant, and when to harvest and no questions were asked about decisions regarding the selling and leasing of land. The second is equal access under the law to the borrowing of government land and to the purchasing of
government land, although women’s lower socioeconomic position and their self-doubt hinders their access in reality. The third indicator is women’s participation within agricultural groups that share equipment, money, and ideas and thus help increase their access to the land. The third indicator are the tractor rental records which show that more women access the tractors than do men. The fourth is the Land Policy Reform in Zanzibar, 2012 which advocates for the replacement of the customary Inheritance law for one that does not discriminate on the basis of gender.
CONCLUSION:

In conclusion, it was found that access to farm land of Mjini Ole and Kangagani and to land in the Wandani quarry is unequal according to gender in many ways. Men may more easily access these lands for many reasons: beliefs about the characteristics of the sexes; the inheritance law; cultural/traditional divisions of labor within the home and the work area; socioeconomic status of women compared to men in these towns; and deforestation. These are challenges that Mjini Ole, Kangagani and Wandani face in attempting to limit gender discrimination of access to land.

The Land Policy Reform in Zanzibar has not yet been successful in establishing a new system of inheritance, and because the customary inheritance law is embedded in the religion and tradition of people of Mjini Ole and Kangagani, a new system would most likely result in resistance or be ignored without good enforcement.

The findings do show that men and women have greater access and control over land than the “Gender Analysis of the HIMA Project in Zanzibar” did. It was found that women have more control over decision making on their shambas and that the methods by which women can purchase land are the same as the methods by which men can purchase land. The reasons listed above, however were found to act as limitations to women accessing this land.

Because the majority of women respondents who do make an income, when asked, use that money to help their husbands or parents pay for household expenditures, with greater access to land which would give women greater access to income, women would be better able to help their husbands/families spend money on domestic needs like food, school fees, hospital fees, etc.

Because an overwhelming majority of people in Mjini Ole, Kangagani and Wandani
use the natural resources in their environments for their livelihoods, food, house construction
sources of energy, until women gain equal access to land and other natural resources in their
environments, they will not achieve full gender equality within society.

RECOMMENDATIONS FOR FURTHER STUDY:
There are many areas of women and access to/control over natural resources that need to be
studied in Unguja and Pemba. Firstly, more study needs to be done on the intricate process of
land inheritance in Pemba and Unguja. Even if women have access to their husband’s and
brother’s lands, how much decision making do they have? How much work do women put into
men’s shambas, and how much income/how many benefits do they receive from this work? How
do women view the inheritance law versus men, and what is the potential for acceptance of a
new government-mandated law that prohibits inheritance laws from discriminating on the basis
of gender?

Another potential topic for further study is: What effects do greater access to and control
over natural resources for women have on women’s households and surrounding community?
Have women been gaining greater access to land or are environmental degradation, increased
competition for land, and women’s lower socio-economic status too limiting for women to be
able to improve their access?

More people need to be interviewed about their access to equipment, and a study needs to
be done on the correlation between more equipment/more advanced equipment and greater
access to resources. On a similar note, what is the correlation between involvement in
agricultural groups that share money, equipment and ideas and people’s greater access to
resources and land? Even though assumptions can be made about potential correlations, many people (members and non members of such groups, more active and less active members) should be interviewed to draw conclusive data.
REFERENCES


Makalle, Albinus M.P. (2012). *Gender Relations in Environmental Entitlements: Case of Coastal Natural Resources in Tanzania.* Environment and Natural Resources Research, 128-142. doi:10.5539/enrr.v2n4p128


APPENDIX 1.

Questionnaire for One-on-One Interviews:

   (What is your name? How old are you? Are you married? How many children do you have? Which level of education have you finished? Or You ended which classroom?)

2. Je unafahamu nini kuhusu neno mazingira?
   (What do you understand about the word mazingira/environment?)

3. Je unatumia rasili mali gani katika mazingira yako? (kwa mfano kuni, ardhi, miti, choka, na kadhalika)
   (Which natural resources do you use within your environment? (for example, wood, land trees, charcoal, etc.))

4. Vipi ulipata rasili mali hizi? (kwa mfano: kwa kununua, kwa kurithi au kwa kugaiwa) Vipi unadhibiti rasili mali zako?
   (How did you get these natural resources? (for example: by buying, by inheritance or by gift)
   How do you control your natural resources?)

5. Mara ngapi unavuna/unapata rasili mali zako kwa kilamezezi?
   (How many times do you harvest/get your natural resources every month?)

6. Kiasi gani cha pesa unapata kwa kilamezezi? Na kiasi gani cha pesa kinapatikana kutochoka na kilame mbacho unaothi au kuvuna mwenyewo unapouza?
   (About how much money do you get every month? And about how much money is obtained from what you grow or harvest yourself when you sell?)

7. Ni kipato cha jumla cha nyumba yako kwa kilamezezi?
   (How much is the total income of you house every month?)

8. Masaa mangapi kwa siku unatumia katika shamba lako au mazingira ya kazi?
   (How many hours every day do you use in your shamba or your work environment?)

9. Rasili mali zipo ulitumia kujenga nyumba? Je unaumeme?
   (Which natural resources did you use to build your house? Do you have electricity?)

10. Je unashirikishwa katika kikundi chochote cha mazingira? Kama hapana je ungependa uwemo?
    (are you involved in any environmental groups? If no, do you wish you were a member?)

11. A je unauelewa wowote wa sheria zinezohusu misitu iliyopo na kuhusu matumizi ya misitu kwa binedamu?
    (Do you understand anything about the laws concerning available/surrounding forestry and about human uses of the forestry?)

12. (a) Kivipi upatikanaji wa rasili mali umekuwa na au umpata mabadiliko ndani ya miaka kumi iliyoita? Kwa mfano ardi imedua hali, miti imedua tabu, au vianzo via maji kama mito maziwa vinapungua maji kowingi?) (b) na vipi mnakabiliana na mabadiliko hayo?
    ((a) How has the availability of natural resources you have or have gotten changed inside the past ten years? For example, land has gotten expensive, trees are hard, or sources of water like rivers or lakes have decreased too much water? (b) and how have you faced these changes?)

13. Vipi wanaume na wanawake hutumia rasili mali zaofauti? Je upatikanaji wa rasili mali ukotofauti kati ya wanaume na wanawake?
(How do men and women use their natural resources differently? How is the availability of natural resources different for men and women?)

14. Ni changamoto gani zinakukabili kazini mwako?
(Which challenges do you face in your work?)

15. Kazi zipi kufanya zaidi na wanaume na kazi zipi kufanya zaidi na wanawake?
(Which jobs do more men do and which jobs do more women do?)

16. Kwa mkulima:
(a) Nani huchukua pesa baada ya mavuno? (b) Nani kufanya maamuzi ya kuwa nini kipandwe, wakati gani tupande na tuvune? (c) Dhana gani unazo kwa ajili ya kulimia?
((a) who takes the money after harvesting? (b) Who makes the decisions about what to plant, when to plant and when to harvest? (c) Which tools do you have for farming?)

APPENDIX 2
Prompt Questions for Farmer Focus Groups:

1. How to people gain access to and control over natural resources in Mjini Ole/Kangagani?
2. What factors control who has more access and control?
3. What are key environmental issues here? How do people deal with them?
4. What is the gendered division of labor within Mjini Ole/Kangagani?
5.

APPENDIX 3
Questions for Women Quarry Owners from Wandani:

1. Are all of the women landowners in the group together?
2. When did you buy your land? And why?
3. How much control do you have after renting your land?
4. Do you sell refreshments and buy and resell bricks as well?
5. Do you provide equipment to workers working in your plots?
6. Do your husbands work in the quarry as well?
7. What are the advantages and disadvantages of owning the land and renting it to other people?
8. Have you tried doing the physical labor within the quarry?
9. What are the environmental issues within the quarry?

APPENDIX 4

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