

Roles of Gender on Forest Management in Unguja, Zanzibar: A Case Study of Chaani and Pete Villages

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Abstract

This paper focused on roles of gender on forest management in Chaani and Pete villages, in Unguja, Zanzibar. The paper examined the roles of women and men in the management of forest resources. In total, 200 people were interviewed where both quantitative and qualitative data were collected. Information and data on gender involvement in forest conservation and management were procured through interviewing respondents using questionnaires and interview guides. Focus group discussions and observation were also used in data collection. The results of this study indicated that people interviewed participated effectively in forest management through tree planting, establishing tree nurseries and woodlots, participating in campaigns on tree planting and forest committees among others. Further, the findings indicated that illegal forest products harvesting, wildfire, uncontrolled grazing and charcoal making are challenges facing forest management in Pete and Chaani villages. The study recommended that, enforcement of laws, by-laws and policies will increase involvement of men and women on the management of forests.

Keywords: Gender, Forest, Forest, Unguja, Forest management

Introduction

The United Republic of Tanzania is the largest country in East Africa covering a total area of 94.5 million hectares out of which 88,604,000 hectares make up Tanzania Mainland (Kihyo, 1998; NBS, 2013). Tanzania is endowed with vast and diverse forest resources. Forests and woodlands occupy about 33.5 million hectares of land (MNRT, 1998). Tanzania has a population of about 45 million growing at a rate of 3% a year (NBS 2013). The distribution of the forest cover includes 13 million hectares (ha) of gazetted forest reserves, 2 million ha as forest and woodland in unreserved areas (MNRT, 1998). The 13 million hectares of forest reserves are owned by the central government and 1.6 million ha of protected reserves is set aside for catchment and biodiversity values, and about 80,000 ha are for commercial forest plantations (Kihyo, 1998; Mugasha *et al.*, 2004).

Natural and artificial forests have productive, protective and scientific functions (Kihyo, 1998; Mhache, 2012). Products obtained from forests include fuelwood (firewood and charcoal), timber products, building materials, food, fodder, genetic materials and medicinal products. Protective functions of forest include soil conservation, environmental amelioration, conserving water catchment areas and home for fauna and flora. The remnants of tropical high forests in the Usambara, Uluguru and Udzungwa (otherwise known as the Eastern Arc) provide good scientific research sites due to their unique flora and fauna and high level of endemism (Mgeni, 1992; URT, 1997). Forest plantations provide softwoods and hardwoods to reduce pressure on natural forests (Mhache, 2004). Examples of softwood tree species are *Pinus patula*, *P. Caribaea*, *P. Elliottii* and *Cupressus lusinica* (Kowero, 1990). Hardwood tree species are *Tectona grandis*, *Melia excelsa*, *Acacia mearnsii*, *Eucalyptus saligna*, *E. Maidenii* and *E. Grandis* (Kowero,

1990). Woodlands and forests are important habitats for an assortment of flora and fauna some of which are unique in the ecosystem. The forests and woodlands also provide a reserve and sanctusry for insects such as bees, butterflies and reptiles whose benefit to the natural economy.

In general, forests and woodlands provide a variety of environmental services (URT, 2001). For example, forests and woodlands protect watersheds and thereby ensure flow of water all year round. Moreover, forests regulate water balances and protect soils from water erosion. The flows of water throughout the year guarantee hydroelectricity power generation and water supply for irrigation, domestic and industrial uses. Trees are sometime used as wind breaks while other trees act as boundary or demarcation beacons and other trees are just for decoration (Mhache, 2012; 2004). The goal of the National Forest Policy (NFP) is to enhance the contribution of forest sector to the sustainable development of the country and the conservation and management of her natural resources for the benefit of present and future generation (URT, 1998). The National Forest Policy of 1998 recognizes that, forests are one of the key prerequisite resources for local and international development (URT, 1998). The forest policy is a guide for proper and sustainable uses of forests.

International policies and legal agreements accept the key role that women play in the management and use of biological resources including forests. Together with the recognition of the importance of gender in forest management, little is known to justify and proves the nature of the relationship between management and utilization of forest resources. Furuberg (2004) asserts that women comprise more than half of the world's population and most of them depend on

forests. Women key roles and management practices for conservation and improvement of plant genetics resources and knowledge of plants remain invisible to the forestry and environmental technicians as well as planners and policy makers (Rojas, 1994). The role or contributions of gender on forest management have been under-recognized (Colfer, 2004; Furuberg, 1998). With this flaw, the focus of this article is to ascertain the role of gender on forest management and conservation.

There is a say that, “more people, more mouth to feed”. As population increases means more land for settlement and farming is required; more grazing land, more fuelwood and building poles are required. If precautionary measures are not taken, this situation can lead into deforestation and land degradation. Proper use of forest resources is an important ingredient in forest conservation and management. Thus, the management of forest resources is gender based as benefits accrued from it vary between men and women. With this variability, the management of forest resources should take gender in consideration. The involvement of men and women in forest management and conservation is constrained by culture and traditions.

Some traditions, taboos and believes consider women to be inferior to men in decision making. The roles and efforts of women in forest resources management have not been adequately explored. These bottlenecks impede gender ability to improve resource management practices and increase their welfare. Few women have opportunities for education and training in forestry and agro-forestry as forestry was considered to be men’s’ field. It is, therefore, important to determine roles of men and women in the management and conservation of forest resources. This article attempted to explore the

role of gender on the management and conservation of forest resources. Specifically, this article sought to identify gender roles and perceptions on forest resources management; examine strategies for managing forest resources and factors constraining management of forest resources and evaluate measures to counter-attack factors constraining management and conservation of forest resources.

Material and Methods

This study was carried out in two villages (Shehias) in Unguja, Zanzibar which were Chaani and Pete. The reasons for selecting these two villages include their closeness to forests. Chaani is a village located close to Masingini Forests Reserve while Pete Village is close to Unguja-Ukuu Forest and Jozani Forest Reserve. The study sought to investigate the level of involvement of men and women in forest management in these two villages. In this study, both primary and secondary data were collected. A combination of quantitative and qualitative data was collected.

Several methods were employed in data collection. About 200 questionnaires were administered to heads of households to get explanations regarding forests in general and forest management in particular. Interviews were held with village government leaders, village environmental committees and groups of men and women involved in forest activities in each village. Other methods which were used in data collection were direct observations, which involved viewing or observing the real situation in the field. Literature with articles explaining forests in Tanzania and Zanzibar were reviewed. Statistical Packages for Social Sciences (SPSS), a software computer package was used for analysis. Descriptive statistics queries were run on all questions covering both nominal and ordinal data. The results were presented in table and narratives.

Results and Discussions

Socio-Economic Characteristics of the Respondents

The majority of the respondents in Chaani and Pete villages, 75% were females and 25% were males (Table 1). The female's respondents were more than males because the study wanted to know the contribution of women in forest management and conservation. There is a notion that, forest management is a male activity. Age-wise, the respondents were aged 18 years and more. Age was considered important because it determined the understanding of the forest management and conservation in the study villages. Respondents were asked about their economic activities and about 42.5% of the respondents were engaging in agriculture only, while 30.5% were practising both agriculture and livestock keeping.

Others were combining agriculture and petty business (11%) while 10% of the respondents were engaging in forest related activities like tree nurseries and woodlots. However, the remaining 6% of the respondents were civil workers (teachers, nurses and health workers). Others were working in tailoring, masonry and carpentry. Majority of the respondents (47.5%) had primary education followed by 28.5% who had not gone to schools, had non formal education (Table 1). About 18.5% and 5.5% of the people interviewed had secondary and college education, respectively. The result shows that more respondents had primary education compared to other level of education. With this low level of education, there is a need of improving education of people living in rural areas.

Table 1: Sex of the Respondents

Variables	Responses	Percentages (%)
Sex		
Male	50	25
Female	150	75
Total	200	100
Economic activities		
Agriculture	85	42.5
Agriculture and livestock keeping	61	30.5
Agriculture and business	22	11,0
Forest related activities	20	10.0
Others	12	6
Total	200	100
Education		
Non formal education	57	28.5
Primary	95	47.5
Secondary	37	18.5
College	11	5.5
Total	200	100

Forest Conservation and Management

Women play multiple roles in rural social system (World Bank, 2004). Apart from bearing children and managing households' activities, women engaged in various productive activities like agriculture, forest management and conservation activities. The findings revealed that both men and women are involved in forest management through carrying out various management activities (Table 2).

Table 2: Involvement in Forest Management

Activities	Frequencies	Percentages (%)
Participating in tree planting	47	31.3
Established tree nursery	28	18.7
Initiating forest related project like beekeeping	21	14.0
Participating in tree planting campaign	19	12.7
Make and use energy saving stoves	13	8.7
Participating in forest guards like watch women/patrolling	10	6.7
Member of village forest committee	7	4.7
Establish woodlots	5	3.3
Total	150	100.0

Both males and females had tree nurseries where tree seeds are growing (Figure 1 and 2). About 18.7% of the respondents were engaging in attending tree nurseries (Table 2). Seedlings were growing in individual farms; other seedlings were sold to other community members and the remaining seedlings were growing in the public forests. In establishing tree nurseries people were participating in forest conservation and management as they grow and supply/selling seedlings (Haapanen, 2011). A woman interviewed in Pete village had these to say,

“I started tree nursery since 1999, I started with 100 seedlings, now have a big nursery of 10,000 seedlings. I used to sale seedlings to villagers and to the government during the tree planting campaign”.



Figure 1: Tree Nursery in Pete Village



Figure 2: Tree nursery in Chaani Village

Several men and women were involved in environmental and forest committees at village level. In these committees women were active

member of the forest committee as revealed by 4.7% of the respondents (Table 2). Each village (Chaani and Pete) has the environment committee made of 12 members of which 4 members were women. One member of the committee interviewed said that,

“There is no segregation in the committees; women bring in the views of women on how to conserve forests at the same time enjoying the benefits of forests. Women in the committee have a role to tell their fellow women about the importance of forests and the problem encountered without forests”.

Forest patrol was used to control illegal activities in the forest. Guarding the forests was another activity of conserving the forests as mentioned by 6.7% of the respondents. Both men and women were also participating in patrolling and guarding the forests to prevent illegal harvesting in the forests. One member involved in guarding the forest said that,

“forest patrolling has reduced illegal harvesting in the forests and incidences of fire caused by honey gatherers have been reduced”.

About 14% of the people interviewed were engaging on other activities which are friendly or compatible to forests. The activities identified as compatible to forest conservations include beekeeping and collecting dry wood in the forest. Right of collection of dry wood in the forest was granted by the village forest management committee. It is done under the supervision of the forest management. These alternative activities prohibit charcoal making and cutting trees for poles or firewood for sale (CHAPOSA, 2002; Mhache, 2004). All activities which are harmful or destructive to

forests are not allowed because they contribute to deforestation (Agarwal, 2001; Gwalema, 2015). There is specific time set aside for people to enter and collect wood in the forest, as said by one of the respondent that,

“some villagers are not honest, they enter the forest clandestinely and cut trees for charcoal making or for building”.

The use of energy saving stoves was another way of reducing effects on forests (Eshetu, 2014). These stoves (energy saving stoves), use less wood and also sawdust can be used as fuel which is the by-product of timber. A woman interviewed, had this to say, *“Energy saving stoves are very economical because they consume few pieces of firewood; hence conserving forests. Some stoves can use sawdust and cow-dug”.* 8.7% of the respondents supported the idea that, energy saving stoves are environmental friendly as they use less firewood and they can use cowdung as fuel.

People’s Perceptions towards Forest Management

This section assessed local people perceptions and experience on forest management. Management refers to guarding, taking care, guiding and controlling uses. While forest management is the process of managing, guarding and controlling the use of the forest resources; it also includes some restrictions in access and the use of forests and other products situated within them. The study found that local people are strongly aware of the importance of forest management, although the people interviewed had different perceptions towards forest management. Perception means being aware of or understanding of something. The perception of the people interviewed was that, forest management restricts people’s access and use of the forests. This scenario ought to improve forest as

it increase biodiversity, improve availability of rainfall, and increase rivers and streams flow throughout the year and biomass increases (Nkengla, 2014; Lulandala, 1998). The respondent perceive forest management as an important resource to their community as forests attract rainfall, provide shade and provide areas for ritual purposes, provide areas for burying relatives and many others. The old man interviewed in Chaani Village said this,

“This forest is very important to us; we buried our relatives in the forest. They have to be buried in a place with shade”. Another old man in Pete Village had this to say, “Our ancestors live in the forest, that’s why rituals are done in the forest, not in open space like in the play ground”.

Deforestation is perceived as a result of lack of alternative means of survival (Silori, 2006). People used forests to get their needs such as fuelwood, poles, timber and others (Silori, 2006). Thus, to other people forest management is an important element in protecting the forests (Mgittu, 2001).

Challenges Facing Forest Management

The livelihoods of people in rural and urban areas depend on forests in one way or another. In meeting those needs, forests are either destroyed or damaged (Gwalema, 2015; Mhache, 2004). It is assumed that non-timber forest products (NTFP) harvesting is more sustainable than timber harvesting. In most cases people use forest to get timber and wood for building their houses or making charcoal (CHAPOSA, 2002). Though forest contributes culturally, socially and economically to the people, the management of forest is facing several challenges. Some of those challenges are bushfire, illegal

hunting and illegal tree harvesting done by the communities residing close to forests (Table 3).

Table 3: Challenges Facing Forest Management

Challenges	Frequencies	Percentages
Illegal tree harvesting (poles and building boats)	93	36.9
Fire	77	30.6
Animal grazing	35	13.8
Honey collection	21	8.3
Charcoal making	15	6.0
Others (firewood, farming)	11	4.4
Total	252	100

Fire is among the challenges facing forest management in Tanzania and Zanzibar in particular. Fire is the result of different activities. The study found that, there are fires caused intentionally and others caused unintentionally. In Tanzania, the use of fire to clean farms (slash and burn) is considered to be the principle agents of deforestation (FAO, 2011; Gwalema, 2015). Most bushfires are a result of uncontrolled human activities particularly preparation of cropping fields (URT, 1998). Other major causes of fire include game hunters who set fire deliberately in order to drive animals for an easy catch. However, 30.6% of the respondents in the study village said that fire in their area is the result of farming where people clear land by fire (Table 3). The expectation of getting good fodder during rain seasons is also a reason for fire as people intentionally burn the forest to provide good area for grass to sprout. Pastoralists burn the forest during the dry seasons in order to get good and ample grasses/fodder for their animals during rain seasons, farmer's burn forests to get farms to grow crops. Unintentional fire is the result of

the people clearing their farms by fire as the result fire exceeds their control and burn the forests. Cigarette smokers can also cause fire, when s/he throws the lighting butt of cigarette in the forest when wind blow can cause fire which then burn the forest.

Honey gatherers and collectors are also responsible for wildfire. Many beekeepers and honey gatherers in the process of harvesting honey, use fire/smoke to drive away bees, but often do not extinguish the fires, which then lead to accidental or unwanted fires. About 8.3% of the respondents had the opinion that, fire is also caused by honey collectors. These people do not use efficient methods of collecting honey; rather they burn the bees, as the result fire. The forest officer interviewed in Pete Village said that,

“Beekeeper has not been trained on how to harvest honey without using fire or smoke, people are used to fire. This practice has been causing fire in the forest because some honey collectors forget to put off the fire”.

Charcoal making is one of the income generating activities for rural dwellers in Unguja, Zanzibar. Charcoal preparation in Tanzania is noted as one of the serious human activity that leads to forest degradation especially within 200 – 300 km radius around the major urban areas (CHAPOSA, 2002; FAO, 2011). About 6% of the people interviewed confessed to engage in charcoal making as an income generating activity. And since charcoal making is a continuous process, people continue cutting trees, usually large ones and as the result; forest are disappearing. Because of these activities only 31% of the earth’s land surface is forested today, this is equivalent to about 4 billion hectares (FAO 2010 in Gwalema, 2015). Nearly half of the people interviewed, 36.9% declared that illegal tree harvesting is a

problem to all forests in Unguja Island. Illegal logging and harvesting are among the activities with serious impacts on forests. The term illegal logging refers to timber harvesting-related activities that are inconsistent with national (or sub-national) laws (Smith, 2002). In other words, illegal logging is when timber is harvested in violation of national laws. The study found that, illegal activities are conducted in the protected areas and even in the individual farms or plots. Trees are illegally cut to get poles for building, for making charcoal and timber without permission from the responsible authorities. Other causes of illegal harvesting related include duplication of felling licenses, extracting more timber than authorized, logging without authorization and obtaining logging concessions through bribes.

Livestock is one of the economic activities of some families in Africa and Zanzibar in particular. The challenge of feeding livestock is getting enough fodder during dry seasons. Thus, animal keepers opt to graze in the forest in case fodder is scarce in their farms or people have planted crops in their farms which they used to graze their animals. Thus open grazing has an impact on the forest as animals do eat the coppice or top of the trees. If grazing is done for sometime in one area there is a possibility of killing some species and cause deforestation. Sometimes livestock keepers set fire deliberately in the grasslands or forest in order to improve pasture quality and in some areas to eradicate parasites such as ticks or tsetse flies (Firzgerald, 1971).

However, there are other challenges facing forest management like mining and establishing settlements in the forest. Mining activities involve using explosions which can cause fire and pit sawing can also cause forest fire (Poulsen, 1975). Controlled burning especially

in forest plantations at the beginning of the dry season is done deliberately to reduce amount of biomass and therefore, maintain conditions that do not lead to accidental fires from pedestrian (smokers) and arson induced fires. Some time in executing this fire controlling process it can cause forest fire.

Conclusion and Recommendations

Forests are an important resource to both rural and urban economies; it is a source of food, income, cultural identity and medicine. In order to sustain these benefits, this article provided ways to manage and conserve the remaining forests, without compromising these authentic needs. People are encouraged to use forest resources rationally and sustainably. Harvesting should consider regeneration; planting of new trees should be emphasized and supported through, regulations, laws, by-laws and policies that should be adhered to in order to rescue forests in Tanzania. It is important to consider uses of forests in relation to both males and females. T

he study revealed that, there are different uses and interaction with the forest by men and women. With this scenario, gender is an essential element of designing and planning forest management interventions. Peoples' participation both men and women play a vital role on the management and conservation of forest. Women have been playing different roles in forest management such as tree planting, establishing tree nurseries and woodlots and involved in Forest Committees. Some cultures and lack of land tenure is a blockstone to women participation in forest activities, as senior male family members make women hesitant to participate in meeting needs related to forests, or speaking up in the meeting. The paper recommends the following:

- i. Increase tree planting rate. The rate of forest harvesting for timber and poles does not match with the tree planting rate and natural forest regeneration. People should be educated on the important of planting trees and the cost of not planting trees.
- ii. Capacity building for different actors on how they could manage forest fires and networking deemed essential undertakings. There should be fire break in the forest to control fire. Fire break acts as barrier to slow the progress of a bushfire or wildfire.
- iii. There is a need for research to be conducted on best ways of involving women in forest conservation and management.
- iv. Communities living around forest reserves should be involved in management of forests. Involving local people in the management of forest help people to feel the ownership of the forest. Since they are part of it, will not dare to damage the forest.
- v. Villagers should find alternative sources of energy: Use of alternative source of energy such as using modern stoves which consume a little amount of charcoal will minimize the amount of forest harvests to provide fuelwood and to conserve our environment.
- vi. The government should subsidze energy sources such as lowring the prices of gass and electricity
- vii. The country have a very good laws, by-laws, policies and regulation whcih could be used to help in managing forests but the problem is on enforcing and executing them.
- viii. Lack of political will is another challenge. Tanzania is a multi-part country. Every part is trying to increase numner of their members. If one patt advvocate people should not cultivate in the forest, other part says do. This contract members, thus, all

parties should advocate forest management because it important of all.

- ix. Education should be provided on the important of forest management. Impart knowledge on sustainable use of forest to public.

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