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LAND ALLOCATION TO WOMEN: A CASE STUDY OF TWO COMMUNITIES IN THE NORTHERN REGION OF GHANA

Huriatu Anafo Alidu

Environmental Protection Agency
Post Office Box 620, Northern Region, Ghana
anafo.huriatu@epa.gov.gh/ anafo.huria@yahoo.com

Supervisor

Magnfríður Júlíusdóttir
Human Geography
University of Iceland
mj@hi.is

ABSTRACT

Despite women's significant contribution in provision of food and general well-being of families in rural areas, gender disparity is still found in access to land and quality of land allocated to women. This study explored the socio-cultural context of land allocation to different groups of women and women's land management practices in two communities in the Savelugu Nanton Municipality of the Northern Region of Ghana. Primary data were gathered by semi-structured interviews and focus group discussions with women, men and key informants. The results showed that women of differing marital status get access to land through different men. Married women, widows and separated women had a better chance of being allocated land than never married women. In general women's access to land for farming is strongly linked to motherhood and feeding children. Women can inherit land at their natal home but in practice this right is mainly activated by widows and separated women returning home from matrimonial homes. Women's access to land in the studied communities has increased over the last 20 years. This is due to men's recognition of women's contribution to the family and women's need for a new source of income with the depletion of shea trees. Women generally have access to poorer quality land close to homesteads, but can get unused land through chiefs if they can pay for the clearing of fields. It is recommended that local government's extension services and NGOs

address the gender-gap in farming, attend to both practical and strategic needs of women farmers, and promote women's access to communal land and assistance with clearing new land.

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1. INTRODUCTION

In my work with women's groups in the West Mamprusi District in Ghana, I became interested in how women are allocated land for farming in rural communities. After a meeting in one community, I had a conversation with a middle-aged woman who said "If my husband brings in an additional wife, she will relieve me of my reproductive and productive roles at home so I can concentrate on my farm". I stood perplexed wondering why she was willing to share her husband with another woman to enable her to concentrate on farming. This woman is just one out of many women in Africa who work hard on their farms to feed their household members and sell their farm products to others.

As the world celebrates Beijing + 20 in 2015, success stories are championed on progress made in the inclusion and participation of women in various spheres of development and governance in the last two decades. The partial mainstreaming of gender in policies has resulted in reducing gender-gaps in some areas. For example, the indispensable role of governments and development organizations has contributed to increasing women's access to credit (UNECA [United Nations Economic Commission for Africa] 2007). However, there are still concerns over women's limited land rights, ownership and access to land across Africa, mostly due to institutional and customary practices (Arora-Jonsson 2014).

In Africa, it is estimated that women own 1% of land but produce 80% of food for household consumption (FAO 2011). Disparities also exist between women and men regarding the quality of agricultural land they have access to due to restrictive institutions, myths and beliefs surrounding land ownership, control and use. The land allocated to women is often exhausted fields, which limits their production and ability to expand (Action Aid 2013). Gender disparities in access to inputs and extension services add to the problem many women farmers face. Earlier work by Berger et al. (1984) and recent work by Muniru (2013), in Ethiopia and Northern Ghana, reveal a wide gender-gap with less access of women farmers to information to increase production and income.

It is estimated that women could increase production by 20-30% if they had the same access to productive resources that their male counterparts do (FAO 2011). With the current estimates that 798 million people globally are undernourished (FAO 2014), it is important to work towards closing gender disparity because increasing women's production and access to fertile land will contribute significantly to meeting the food needs of the present and future generations and improve the well-being of the poor (GAAP [Gender Agricultural and Asset Project] 2013). It can also reinforce women's role as pillars of food security in the family and household as in many societies they produce a great deal of food crops for domestic consumption. Additionally, it will secure women's income which might be used to pay for health care and children's education (MuGeDe 2013). Ultimately reducing the gender gap will help address structural inequalities in land tenure rights of women which is important to achieving gender equity in land ownership and access (GAAP 2013).

Gender disparity in allocation of land in Africa is primarily attributed to land tenure arrangements based on patrilineal inheritance and cultural norms. Complex rights and responsibilities emanating from culture leave women disadvantaged in land ownership and

access (Apusigah 2009; FAO 2011). Various arguments have been developed to understand patriarchy and its system of operation. The household and family production under a patriarch is seen as a ground for women's oppression and a social structure through which women's labour is exploited (Walby 1990; Sultana 2011) and as a site for conflicts and negotiations (Kandiyoti 1998). In the study I used the above theoretical approach on patriarchy and the family, where the family is regarded as a site of gendered conflicts of interest and negotiations among its members. I argue that in the context of Northern Ghana, men have a dominant role while women have a subordinate role in land allocation in patrilineal communities. The conflicts of interest are related to the social and economic benefits derived from allocating and managing fields and production in farming.

1.2 Problem statement

A number of factors including land tenure arrangement, patrilineal inheritance, population increase and expansion of the market economy, determine women's access to land in developing countries (Tripp 2004), and Ghana is no exception (Duncan & Brants 2004). The patrilineal system of inheritance where property, including land, is inherited only through the male blood line for the protection and continuity of a descent group hampers women's access to land. In Ghana, women in patrilineal communities have less access to secure land for farming (Duncan & Brants 2004; Agana 2012). This is because within the patrilineal structure, land is a valuable asset which can only be kept and protected by men in the cultural framework (Bonye & Kpieta 2012). In instances where a woman is allowed to have access to fields after the death of a husband, her user rights to land are temporal and depend on the personal relations she has with her in-laws (Duncan & Brants 2004; Tripp 2004).

As a result of the population increase, sub-division of land into fragmented sizes for additional family members further threatens women's access to land (Bremner 2012). The gradual expansion of the market economy also militates against women's access to land in Africa. High value of land through commercialization and privatization in the market economy has made land a scarce commodity. In Uganda studies show that clan leaders and family heads hold on to land and protect it for commercial gains and are reluctant to allow women's access to land (Tripp 2004).

Land tenure rights or policies do not guarantee women's access to secure ownership or access to land in developing countries (FAO 2011). In instances where laws and policies are changed to increase or promote equitable ownership and access to land among women and men, they tend to be inefficient and lack enforcement due to conflicting laws or traditional practices and customs (Kachika 2010; FAO 2012). For instance, in Malawi, a review process to enact a law which could guarantee equal access of men and women to land was contested by chiefs who argued that their rights and responsibilities would be stripped away if the law was passed (Kachika 2010). Similarly, in South Africa, the government has been criticized for the non-inclusion of women's interest in the Land Acquisition and Redistribution programme introduced in 2008 (Kachika 2010).

In Ghana, where the constitution allows equal rights of men and women to acquire or have access to property, including land, men have always controlled land issues including ownership,

allocation and access (Sarpong 2006). The authority of men in land issues is due to traditional practices. In Northern Ghana most land is owned by custom and the Northern Region has been identified as one of the regions in Ghana where gender disparity is widest (FAO 2012). Despite their valuable contributions to agriculture in Ghana, with women producing 60% of the total agricultural production (IFAD 2011), comparative disparities exist between women's and men's access to agricultural land and other productive resources. A recent study, measuring the gender assets gap in Ghana, revealed that men own 69% of agricultural land and women 31%, but there is market regional variation. In the Northern Region 4.4% of agricultural land was owned by women compared to 20.5% in the Ashanti Region (Odoru et al. 2011). In the rural savannah of Northern Ghana, the number of women engaged in agricultural activities has increased slightly (2008- 2014) from 28.1% to 35.1%. Women's involvement in agriculture in the rural savannah is still lower compared to the number of women engaged in the rural forest, 43.8%, and coastal areas, 48.3% (GLSS [Ghana Living Standards Survey] 2014). It is estimated that women's farms are one-fourth the size of men's and available land for women is usually marginal or unproductive in Ghana, thus limiting their output (Muteshi 1995). The fact that women have less access to extension services compared to their male counterparts also affects productivity in farming (Berger et al. 1984; FAO 2011). This is also the case in Northern Ghana (Muniru 2013).

1.3 Research goal and questions

The essence of this study has been to increase knowledge on land allocation to women, especially in Northern Ghana. It will generate knowledge on the socio-cultural context of land allocation to women of different marital status in male- and female-headed households, adding a new dimension of diversity among women which has not been a focus of some recent studies of women access to land in the Northern, Upper West and Upper East regions of Ghana (Muniru 2013; Agana 2012; Bonye & Kpieta 2012). As an example of female-headed households, this study looked at widowed and separated women to assess the vulnerabilities that are associated with assessing land for farming for women not living with a husband (Perkins et al. 2014). In male-headed households, land allocation to married and unmarried women was also assessed. The focus was on the arguments advanced by different women when requesting land from men, as well as arguments men use for land allocation to women. Further, the study determined women's and men's perceptions about the quality of land allocated to women and management practices women adopt to improve production and land quality. My interest in conducting this research unfolded from the need to provide detailed information and insights to land allocation to women, which is important to understand gender disparities in farming.

Research goal:

The goal of the research was to examine the context of land allocation to women and the quality and management of women's fields.

Research questions:

1. How do different groups of women access fields for farming?

2. What arguments do men use in allocating fields to women and women when requesting land?
3. What is the perception of women and men of the quality of fields allocated to women?
4. What management practices do women employ on their fields?

2. LITERATURE REVIEW

2.1 Women's access to land

Ownership, access and control of land differ in meaning and understanding (GAAP 2013). Drawing parameters and indicators is important to gain a proper understanding of the gender dimension of land ownership and useful when making comparisons across findings of gendered ownership and access to land. Ownership of land is the process of acquiring land rights through legally regulated or customary methods. The land can be privately, collectively or jointly owned (Doss et al. 2013). Ownership might denote a person's control over decisions regarding the use and possible sale of the land or may imply restricted individual control where it is jointly or collectively owned. In Africa, even though a couple may jointly own land, use-rights and control can differ among women and men. Compared to ownership, access to land depicts temporal use rights to land without full control over the disposal or use of that land (Duncan & Brants 2004). Women's access to land does not guarantee them secure tenure or use of the land (UNECA 2007). In patrilineal communities in Northern Malawi marital status determines women's access to land (Banda 2012). With the end of marriage, through death or divorce, the precarious situation of women's land rights is manifested in studies from southern Africa (Mutangadura 2007) and Ghana (Duncan & Brants 2004). Divorced women lose land use rights at their matrimonial households and widows may have to rely on continued access to land through sons. A widow without children is not allowed to have access to her deceased husband's land. Cultural perceptions which hold that women are temporal members of the family inhibit their ownership and access to fields. Men, in their attempt to maintain their dominance in the inheritance of productive resources, argue that if women are allowed to inherit, that land will become the property of the husband's family when she marries (Bonye & Kpieta 2012). Land in this case is not just viewed as a means of production but as a tool of wealth, power and control at the household and family level. Bonye & Kpieta (2012) identified the spiritual value attached to land as an asset which limits women's access to fields because women in Northern Ghana cannot make sacrifices to land as it is a preserved custodian role for men. If women cannot make sacrifices, they cannot own land. In some instances, they are considered as people who cannot be entrusted to manage a valuable asset like land. Duncan & Brants (2004) noted that in Ghana, even though a couple might jointly own a piece of land, men have greater control in making decisions on the management and use of it.

Insightful contributions towards understanding women's access to land have been gained from studying gender relations in farming households. Whitehead (1994) developed the concept of joint and separate interest in households from her studies in Northern Ghana. She describes the family as a site for subordination and domination, and conflicts of interest are often found

between husbands and wives in the household on the use of land and labour. Similar notions of joint and separate interest are found in Sen's (1999 cited in Apusigah 2009) representation of the household as characterized by cooperative conflicts. Sen argues that women often lack a perception of self-interest because they are more concerned with the welfare of the household than attending to their own interest. The term patriarchal bargains (Kandiyoti 1988) draws attention to renegotiations of patriarchal systems in different contexts and how they affect the coping strategies women undertake. For instance, women use their labour on personal fields or marketing activities when their productive and reproductive services are not needed by other household members. In Mamprugu and Sisal areas in Ghana, women for example, use their labour to work on their personal farms during yam cultivation, since they are not allowed to cultivate yam (Apusigah 2009). Women's access to land in Ghana has improved compared to some African countries, mainly due to the policies and interventions of government and organizations. The gains have been largely in urban areas and differ among regions within Ghana (UNECA 2007). In the Upper East Region of Ghana women's access to land is improving as a growing number of men are willing to offer land to women for farming because they recognize their contributions to the family income (Bonye & Kpieta 2012). According to Apusigah (2009) women are able to access land in Northern Ghana through labour contributions. They work on family farms and negotiate to get personal fields for farming. However, such access to land is criticized by some scholars because it lacks formality and security for women. Especially in peri-urban communities, where commercialization and privatization have resulted in high demand for land, land has been sold by chiefs and family heads, denying women the traditional access to land for farming (Mutangadura 2007; Tiskata & Yaro 2014).

2.2 Quality of land allocated to women

Land quality can be assessed using parameters such as soil fertility, soil depth, soil type and vegetation cover (FAO 1997; Kassie 2014). Besides these parameters developed by researchers is the qualitative assessment of farmers. Farmers may use colour of soil and level of erosion to determine the quality of land while researchers might be assessing the nutrients in the soil to determine soil fertility (Teshome et al. 2014). Apart from the gender difference in access to land, the quality of land allocated to women has been claimed by some studies to be less productive than land allocated to men (Muteshi 1995; Perez 2014). Millar & Issaka 2004 (cited in Apusigah 2009) suggest that the perception of women as farm hands on family farms has contributed to women having access to less productive land in Ghana. Productivity is often used to represent land quality when comparing gender differences in farming (IFAD 2014). Such arguments are contested because high productivity does not necessarily define land quality, which may be determined by other factors such as location, distance, access to water and exposure of land to disasters (FAO 1997; Kassie et al. 2011). Land located on slopes has the potential to affect nutrient retention and will affect land quality (Teshome et al. 2014). Distance of a field from a household has the tendency to affect management practices adopted to improve land quality. A study in the Ethiopian highlands revealed that households who had farms distant from homes were less likely to invest in composting due to the additional transportation involved in carrying the compost to farms. Finally, farmers' access to water resources is a key tool for good productivity (Kessie 2014). Awareness of existing gender differences is an essential step to achieving equitable access and control over water for agricultural use. Division of labour and traditional norms are seen as the cause of the gender gap in agricultural water management.

Women spend much of their time fetching water to meet the demands of the household's productive and reproductive needs (Njie 2013).

Gender difference in productivity has also been attributed to availability of labour, pressure on land and limited access to credit and input (UNECA 2007; Tesfahunegn et al. 2014). In Uganda, a study on male-headed households showed no relationship between soil fertility indicators and productivity on farming plots of wives and husbands (Nkedi-Kizza et al. 2002). Other productive and reproductive activities of women tend to contribute to the low productivity of women's fields (Tadesse 2003; Apusigah 2009) and in Ghana and Nigeria, women's assistance to their husbands in farming has been found to deny women adequate time to concentrate on their personal farms (IFAD 2014). Similar findings on gender differences in land management practices in marriage are common in the African context (Mutangadura 2007).

Some researchers have divided crops into male and female crops. Doss (2002) argues in her study in Ghana that crops are disproportionately grown among men and women, but crops cannot simply be classified as male or female crops. She further suggests that a woman holding land with a man in a male-headed home is likely to focus on growing vegetables and leave the staples to the man to grow. This suggests that women are likely to concentrate on the growing of specific crops for various reasons. The issue here is that even though crops might be disproportionately grown among males and females, the possible concentration of women and men in the growing of certain crops might have certain historical or cultural roots, as identified by Pandmanabhan (2004). In his study of the Dagomba and Kusasis communities in Northern Ghana, Pandmanabhan, discovered that Dagomba women became "pioneer farmers" farming on their own farms after the introduction of soya bean which is used to supplement the "dawadawa" seed in the preparation of "Kpalago", a spice for cooking. According to him, among the Dagomba men are responsible for providing the staples, while women are responsible for providing the ingredients for cooking. Apparently this cultural division of roles could influence the types of crops grown by women and men in such communities, and women might focus on growing crops they can use for cooking.

2.3 Management practices adopted by women farmers to improve land quality

Culture plays a crucial role in shaping indigenous management practices, which is important to achieve household food security (Upret 1998). In Ghana, a study conducted by Donkoh & Awuni (2011) in the Northern and Upper East Regions revealed the high use of local management practices such as plant residues and animal droppings by farmers to improve soil fertility. However, women in the area did not have the independence to choose management practices without consulting the husband or land owner who controlled the land. A number of factors including farm size, education, and cost of technology have been found to influence the type of land management practices that farmers adopt (Fakoya et al. 2005), which in turn affects productivity (Asuming-Brempong 2010). Male farmers have the advantage over women farmers when it comes to the adoption of new technologies (Fakoya et al 2007; Upret 1998). This is because men control most productive assets which can provide them with money or credit needed to cover the cost of technological adoption. The majority of the poor in rural areas are women farmers, who supply household food needs (FAO 2011). A study in the Upper East Region of Ghana noted that most women found it difficult to access modern technologies due to

the high cost (Agana 2012). The media plays an important role in creating awareness about the adoption of modern technology and agricultural information in general (Muniru 2013).

Access to extension services has a positive correlation with the adoption of modern technology (Akudugu et al. 2012). It helps farmers to adopt innovations to increase production and protect the environment (FAO 2011). In Ghana only 10% of farmers get access to extension services with an average ratio of 1:3000 Agricultural Extension Agents (AEAs) to farmers. The low ratio is attributed to poor remuneration offered to AEAs compared to other public sector workers, which has led to the resignation of some for other more lucrative jobs and the non-replacement of retiring officers (Ziem & Gyabi 2013). In terms of gender, out of the 2,068 AEAs in Ghana in 2013, only 276 were female. With the criticism that most extension services focus on male farmers (Cohen & Lemma 2011; FAO 2011), women farmers are likely not to get equal access and services from extension officers in Ghana, especially in rural communities. However, Muniru (2013) in his study of some communities in the Upper East and West regions of Ghana observed that both male and female farmers had access to agricultural information from extension services.

Planners and development agencies working to bridge gender inequalities or gaps have often been criticized for adopting and implementing interventions which address socially accepted roles of women rather than those which challenge social norms and roles in society (Moser 2003).

Moser (2003) distinguishes between practical and strategic gender needs of women's approaches in interventions. She notes that practical gender needs *do not challenge the gender division of labour or women's subordinate positions* but strategic gender needs *changes existing roles and therefore challenges women's subordinate position* (Moser 2003, p. 39 and 40). Meeting the strategic needs of women in interventions includes challenging the gender division of labour, power and control which is such an important ingredient in achieving equity. From the brief description about the two approaches, it is important to note that the type of approaches adopted by development agencies in interventions and programmes has a great potential to influence gender disparities or address inequalities in agricultural activities.

3. METHOD AND STUDY AREA

This section gives details of the study area and method of data collection and analysis.

3.1 Research design

The research was a qualitative case study. Case studies facilitate a holistic perspective on causality in a certain context (Rose et al. 2014) and can give detailed insight into a phenomenon by providing the flexibility of obtaining data from different sources (Baxter & Jack 2008). Case studies applied properly can be valuable to evaluate situations and phenomena (Rose et al. 2014).

3.2 Study area

The case study was conducted in the Tarikpaa and Kuduzeigu rural communities, located in Savelugu Nanton Municipality of the Northern Region in Ghana (see Fig. 1). Tarikpaa is larger with 150 houses and a population of 2,200, whereas in Kuduzeigu there were 55 houses and 1,152 residents (GSS [Ghana Statistical Service] 2014). The size of the municipality is 1790.70 sq. km. It is one of 26 districts in the region, sharing boundaries with West Mamprusi District, Karaga, Tolon Kumbungu and Sagnarigu Districts. Savelugu is the capital and administrative town of the municipality. The municipality has 149 communities with a total population of 139,283 in 2010, of which women comprise 51.5% (GSS 2014). The majority of the population, 80%, live in 143 rural communities and 20% reside in 9 towns (SNDA [Savelugu Nanton District Assembly] 2012). The predominant ethnic group is Dagomba, which forms 90% of the total population of the municipality (SNDA. Profile n/d).

3.3 Natural setting

The Savelugu Nanton Municipality is gently flat, with the altitude ranging between 122 m to 243 m above sea level. The southern part is slightly hilly with many slopes in the northern part (SNDA 2012). The Municipality is located in the interior (Guinea) savannah woodland, which supports livestock rearing and farming (SNMA [Savelugu Nanton Municipal Assembly] [n/d]). The main drainage system is the White Volta and its tributaries, which usually flood communities along the northern part of municipality (SNMA n/d). The region receives an annual average rainfall of 600 mm. The average annual temperature is 32°C, the minimum temperature is 16°C, and the maximum temperature can rise to 42°C. The low temperatures are recorded from December to February as a result of the north-east trade wind (the Hamattan) (SNMA n/d). Denser vegetation with secondary forest is seen around the northern part more than in the southern part, where vegetation has been depleted by human activities. The natural environment is quite depleted due to unsustainable human practices such as deforestation, farming along the courses of rivers, bush fires and gravel mining activities (SNMA n/d).

3.4 Socio-economic characteristics

The local economy is sustained by agricultural activities which engage 89.3 % of households (Ghana Statistical Service 2014). The majority of farmers produce staple crops which are maize, rice, yam and beans. Cash crops are produced on a minimal scale including shea nut, soya bean, cotton and cashew. There are a few irrigation dams which are used for dry season farming. Livestock rearing is on a small scale, with animals such as cattle, goats, sheep and poultry (SNMA n/d). The income level for women and men is generally low, with women having a lower income than men. This phenomenon has been attributed to the cultural system which prioritizes males in resource ownership such as farming land (SNDA 2012).

In the 2010 census there were 14,669 registered households in the Savelugu Nanton Municipality. They vary in size with the average household size being 9.4 people. The majority of the households, 89.4%, are headed by men whereas only 10.6% of households are headed by women. Among people older than 11 years, the majority are illiterate. There is a gender gap in

education, with only 21.5% of women being literate while 40.9% of men can read (GSS 2014). More girls drop out of school than boys at the basic and senior secondary schools in the Municipality, a difference which is attributed to the multiple domestic roles of girls such as cooking, fetching water, etc. (SNMA n/d).

3.5 Data collection

Focus group discussions (FGDs) and semi-structured interviews (SSIs) were used to gather qualitative data from the communities. Focus groups and interviews were administered by five experienced research assistants working with the Savelugu Nanton Municipality. The research assistants were trained adequately by the researcher via Skype to give them details on how the interview and focus group guides should be carried out and ethical issues required for the data collection. Dagbani, the local language, was used as the medium to elicit information from the two communities. My research assistants recorded data from the field using a voice recorder through interviews and focus group discussions. The data were then transferred by e-mail using a drop box to deliver the data collected to the researcher for analysis and interpretation. The research assistants took notes of the discussions and observations on the field which were also transferred by e-mail as Word documents to serve as backup for the voice recordings. All interviews and focus group discussions were done with respect for confidentiality and the anonymity of the respondents. In all, 27 participated in either FGDs or SSIs in the two studied communities. Three of them were key informants. The sample size is considered adequate since the emphasis of the research was to gain qualitative information.

3.5.1 Focus group discussions

Focus group discussions were held with 14 women, seven in each of the two communities (Tarikpaa and Kuduzeigu). The seven participants in each community were made up of women with different marital status. In each group there were two married women, two widows, two separated women and one never married woman. The maximum number of seven participants in each of the focus groups was to enable my research assistants in the field enough time to listen, probe and document views expressed by different participants to provide rich information (Braun & Clarke 2014). Research assistants identified and recruited participants for the focus group discussions with the help of the two *magazia*'s (women's leaders) in the communities. Different categories of women in male- and female-headed households were recruited for the focus group meetings. In male-headed households, married and never married women were selected whilst in female-headed households, widows and separated women participated in discussions in the two communities. The criteria for recruiting woman included selecting one woman from a household to ensure wide representation of views across households in the communities. To address power relations among different groups of women and family relations, women such as mother and daughter, mother-in-law and daughter-in-law were not recruited together. This was to ensure that younger women and women at the periphery of power were not hindered from expressing their views during group discussions (Rose et al. 2014).

Focus group discussion as a data collection method was used to gather information on the socio-cultural context of land allocation to women, including arguments they put forward when requesting for land, their perceptions about the quality of land allocated to them, as well as

management practices they employ to improve land quality. The method offers a face-to-face interaction between research assistants and participants who can bring various views and shared experiences expressed in the participants own terms (Braun & Clark 2014). Despite this advantage, the outcome of focus group discussions depends on the experience of data research assistants in using the method, which can be time consuming (Jacobsen 2012). The method was found useful to create an open milieu for participants to express their in-depth opinions and experiences surrounding land allocation by different men. Land in Northern Ghana is considered sensitive and spiritual and mainly dominated by men (Bonye & Kpieta 2013). Focus groups are considered an appropriate tool to discuss sensitive issues (Braun & Clark 2014). The platform offered by small focus group discussions served as a secure atmosphere for women to discuss an issue dominated by men. My research assistants who collected data on the field were all men, which might not be the optimal situation. However, considering the experience of these research assistants in working with women in the two communities might have created enough trust for the women to freely express their views during the focus group discussions.

3.5.2 Semi-structured interviews

Semi-structured interviews were used to interview ten male farmers and three key informants. The key informants included a chief, a sub-chief of the two communities, and the Municipal Director of Agricultural Development Unit of Savelugu Nanton. These three were identified by the researcher as people with valuable knowledge to understand the situation in the two communities in relation to traditions and present practices in land allocation and farming. The criterion for recruiting male farmers was that a man had allocated land to a woman for farming. Male leaders in the two communities helped research assistants to identify men who had allocated land to different groups of women. Ten polygamous and monogamous men who had allocated land to women were interviewed. Semi-structured interviews were preferred over group discussions for men in the study because some of the issues men might consider in land allocation might be regarded as personal. For example, polygamous men may not be willing to share with their fellow men the reasons for allocating land to different wives. The interviews were used to collect perceptions of men about the quality of the land allocated to women and arguments they advanced for allocating land to women for farming.

3.6 Data Analysis

During transcription of voice recordings, the data were translated from the local language Dagbani into English by the researcher. At first the data were categorized and coded by different respondents. Recording of focus group discussions with women was grouped by marital status: widows, married, separated and never married women. The voice recordings of interviews with men were grouped as polygamous and monogamous men allocating land to wife/wives, and men who had allocated land to their sisters and sisters-in-law. The codes developed for the categorization included the initials of the community name (K or T to represent Kuduzeigu or Tarikpaa), initial letters of the various groups of women (W- widows, NM- never married and SP- women separated from their husbands). It also included the age and a number for each participant in that group. For instance, KW1 (55) and TM1 (35) represented a 55-year-old widow in Kudzeigu and a 35-year-old married woman in Tarikpaa who spoke first during focus group discussions. P was used as a code to identify polygamous men and KY key informant. This

categorization made it possible to identify experiences and thoughts of different groups of men and women.

Thematic coding, based on the objectives of the research and guides for collecting the data (see Appendices 1-4), was used to analyse the data. During data analysis, quotes were extracted from the voice recordings to make the voice of participants more visible in the study. As part of the analysis, names were made up for interviewed people to attempt to secure their anonymity in the written presentation. This study was executed with some challenges which included the long distance between the researcher and research assistants. Occasionally I had to call (skype) my research assistants for clarification on certain issues during data analysis to enhance proper understanding and interpretation of results. Additionally, there were a few questions which could have been probed further if I had been with the research assistants in the field, thereby enhancing the opportunities offered by the case study as a research tool for collecting in-depth information.

4. RESULTS FROM INTERVIEWS

The analysis of focus group discussions and interviews in the two study communities are presented in this main section of the report. The section is structured into 4 main sub-sections: Land allocation to different groups of women; quality of land allocated to women; management practices adopted by women; and the main difference in women's and men's farming in the study area.

4.1 Land allocation to women

This sub-section addresses how and why different groups of women get access to land in the two communities and the main trends in women's farming.

The two key informants interviewed in the communities were the chief of Trikpaa (73 years old) and a sub-chief from Kuduzeigu (60 years old). Both of them disclosed that husbands, brothers, elders, chiefs and heads of families can allocate land to women for farming. Interested women who need fields for farming will have to make a request to certain men, who then allocate fields to them. A married woman gets land from her husband and a separated woman who has returned to her father's house can request land for farming from her brothers. From this assertion, men are responsible for allocating land to women and deciding on the type of land to allocate. According to these key informants, women can inherit farming land from their father's house as daughters. Wives cannot inherit farming land belonging to their husbands but their children can inherit land from their father. The chief of Tarikpaa said:

Our customs do not allow a wife to inherit farming land of her husband; she can have access to the land through her children. The children can inherit it and decide to allocate the land to their mother for farming. He added: In the absence of sons, daughters inherit farming land. Where sons and daughters are available, sons inherit the land and allocate to their sisters.

4. 1.1 Land allocation to wives

The four polygamous men interviewed had either two or three wives. They all had a similar rationale or criteria for allocating land among their wives. It's worth noting that each of these men have allocated land to all their wives for farming, probably indicating that farming is not a preserve for the "favourite wife" in polygamous homes. Hassan (46 years old) has two wives and has allocated one and two acres of land to them for farming. He explained that the difference in land size was due to the number of children and current domestic duties among his wives. He said: *Actually my first wife has a bigger plot than the second one because I think most of her children are with her, and my second wife has her children been raised by my sister and she does not cook.* Mutual understanding and co-existence among wives also helps to determine land allocated to them in polygamous households. Abubakari (32 years old) ploughed different fields for his two wives to farm but the decision on access to a particular land was made among the wives. Abukari said: *They actually agreed among themselves on who should farm on which parcel of land without me.* Among monogamous men, land allocation to wives depended on the availability of land, the ability of the wife to afford the cost of extra labour and the time needed to take care of the farm. Alhassan (38 years) has allocated land to his wife for farming but is afraid his wife will not be able to manage additional land if he allocates more to her. Alhassan said:

How will she manage the weeds on her farm if I give her more land, once there is no additional labour and she has no money to hire labour? I am the person who sometimes helps her to clear her field of weeds but not until I have finished clearing the weeds on my farm. Sometimes before I finish mine to attend to hers, some of her crops are destroyed. Other times she manages to clear the weeds by herself but as a woman, she does not have the strength or it takes her a long time to do that.

This points out that hiring labour and available time are constraints to women's access to land and that men recognize some of the challenges women face as farmers. Tanko (39 years old) allocated land to his wife previously, but is unable to allocate land to her now even though she is still interested in farming. He does not have enough land at his disposal to allocate to his wife because the number of people in his family has increased and more men have been allocated land for farming. This means that priority is given to men and their family members over wives in land allocation.

From the studied communities, women noted that, among different women in a family or living in a common compound, women who have more dependent children, women who are still giving birth and women who are cooking for the family stand a greater chance of being allocated land for farming than older women with grown-up children and women with no or few children. In the two studied communities, newly married women are not allowed to cook, but they can assist any woman in the compound or their rival (co-wife) to cook for the house. These women are given the opportunity or the honour to cook if they conceive and bear children and as long as a woman does not cook in her marital home, she cannot have access to land for farming. The important thing here is that child bearing is a primary determinant to married women's access to land. Speaking on their experience on how easy it is for different groups of women to get access to land, women noted that it is much easier for married women to get access to farming land in

the two communities. Widows and women who have separated from their husbands also stand a better chance than never married women.

4. 1.2 Female-headed households

The Ghana Statistical Service (2014) defines the head of household as a male or female of a household who is recognized by other members of the household as head, who bears the social and economic responsibilities for the household. In the two studied communities, women in female-headed households were defined as widows and separated women. They are classified as heads of households because they are the sole providers of their own needs and in most cases have dependent children. The chief of Tarikpaa said that widows can have access to farming land through their children, brothers, chiefs, neighbours, and in-laws. Widows who decide to stay in their husband's house after the death of the husband can continue farming on the husband's farm. Adisa (60 years old) for a long time saw her husband allocate land to her for farming whenever she requested. Adisa explained: *My children assume the responsibility of allocating land to me for farming after the death of my husband.* Ayisha (55 years old) was not farming until after the death of her husband. Then her mother-in-law took it upon herself to offer her land for farming. According to Ayisha, the mother-in-law said: *Take this land and farm on it, at least you can provide food for your children.* It is interesting here that it was a woman who allocated the land. Rahi (40 years old) continued to live with her children in the husband's house and was allocated land by her brother-in-law who assisted her in farming after the death of her husband. She disclosed: *I am a widow and my brother-in-law allocated a field for me for farming; sometimes he ploughs it before giving it to me.* Kusumi (50 years old) and Rukaya (45 years old), both separated women, have been allocated land by their brothers. The two women moved from their marital home back to their father's home. Kusumi returned alone without her children from the marital home in a neighbouring community. On her return, her brothers allocated land to her for farming. Kusumi said: *After I had some issues with my husband, my brothers offered me a land for farming.* According to the Chief of Tarikpaa fathers, brothers, chiefs and community members can allocate land to never married women. He said: *By our traditions, unmarried young women can get access to farming fields if they express the interest to farm.*

Two young never married women interviewed, Fauzie (24 years old) and Amina (17 years old), claimed that they could easily get access to land if they made a request to their fathers, brothers and the chief in the community, but they were not interested in farming now. Fauzie is a senior high school graduate and Amina, a drop-out from school who is selling ice water in the community. Judging from the view of these women, it is clear that farming is not the first option for a livelihood for young unmarried women. Longer education might be an explanation and also that they are unmarried and childless. Migration to cities is also an option for young women. As Abubakari (32-year-old man) mentioned: *Young women migrate to the cities to work as head porters [Kayayo]. The few that are left in the village are just not interested in farming nor express interest for a land for farming.*

Summary of findings on land allocation to women

- ✚ Men are responsible for allocating land to different groups of women.

- ✦ Wives are more likely to be denied access to land in families where land is limited because priority is given to men in the extended family.
- ✦ Daughters can inherit farming land from their father with limited inheritance rights, as they get access to land in the father's house after they have returned as separated or widowed women.
- ✦ Wives cannot inherit farming land from their husbands, but can have access to it for farming as married or widowed women. Separated women lose access to farming land in their marital homes.

4.1.3 Rationale for allocating land to women

This section presents reasons women and men put forward to explain land allocation. First the section looks at reasons men advance or consider for allocating land to women for farming, then the reasons women advance when requesting for land for farming.

Tanko (39 years old) and Alhassan (38 years old), both monogamous men, noted that through farming their wives have reduced their dependency on them for personal needs and housekeeping money. Tanko said:

I ploughed and allocated part of my farming land to my wife knowing that the crops she will grow will come back to the house for consumption and I have also observed that when she cultivated that year she did not ask for so much money from me for ingredients compared to the days she is not farming.

Hassan (46 years old, polygamous man) said: *I willingly gave the land to my two wives after they requested land to cultivate vegetables.* He gave the following reason:

You know if a woman want land to cultivate and you don't give her she will keep disturbing you for small things for herself, money and food for the house. When you give them land for farming, they do not usually disturb you for money or food since they can sell and buy personal things for themselves and also provide food for the house.

From the above statements, men allocate land to women to enable them to co-manage the home. The primary reason men allocate land to women is for the supply of food and to enable men make savings of their income. Payment of children's school fees was counted as one of the benefits associated with women's farming. Dramani (49 years old, monogamous man) said: *My wife is able to pay for our children's fees and buy clothing for them; sometimes I am able to borrow money from her.* Fusheni (24 years old) has observed that his home is now free from frequent disagreement because his wife is able to support the home with food and income which initially he was fully responsible for. According to Fuseheni: *I don't have problems with my wife if she is taking some of my produce to do something because I know she can replace it and we depend on each other, which has reduced disagreement in my home.* This shows that women are able to fill in financial gaps in families which can promote cooperation among couples and the good functioning of the home. By this, women are taking up new roles in the family which was traditionally the reserve of men. It can be argued that farming is empowering women in homes

which has the potential to reduce conflicts among couples over household resources and promote respect among them.

According to married women in the two communities, they get access to land by requesting it or through voluntary allocation by their husbands suggesting that they farm it. These married women advance various reasons when requesting for land from their husbands, but notably their arguments were similar to those advanced by husbands allocating land, the main theme being the well-being of the family. Major arguments wives advance when requesting for land from their husbands include complementing the food supply in the family, income generation, independence and providing educational needs of children. Adamu (40 years old) took the initiative to ask for her own field to provide more food and income for the household. She claimed: *My husband allocated land to me to farm after I expressed the interest that I want a field to cultivate and support the home with food and income.* Zelia's (30 years old and married with five children) husband decided to allocate a farming land to her to enable her to provide food for her ageing mum. Zelia said:

I was always buying a bag of maize for my mother every year, and my husband suggested to me that he would offer me land to farm to enable me to provide a bag of maize for my mum each year, to save money and provide food for the household.

Zenabu (55 years old) requested for land from her husband to cultivate crops for the upkeep of the family. Even though Zelia was allocated the land, it is not big enough for her to increase her production. Zenabu explained:

I told him I wanted to cultivate some crops, however he is unable to give me a bigger field because he has limited land. Sometimes he requests for additional land from our neighbours to enable him to cultivate the acres he wishes to cultivate.

Scarcity of land is not only a limiting factor to women's access to land but a hindrance to increasing production. Marriage offers women the opportunity to have access to farming land in their marital home as benefits accrued from their farming activities are enjoyed by family members. Salamatu (57 years old) requested land from her husband when he was alive to enable her to supplement food and income for the home. Salamatu was motivated by her former neighbour and friend whom she visited in another village and saw the plentiful harvest she had from her field. Upon returning home she convinced her husband to give her land, arguing that she could also harvest more like her friend which helped in providing food and income for the family.

Widows and separated women have various reasons for requesting or accepting land allocated to them by different men for farming. Food provisioning, self-reliance and supporting their children are the key reasons women in female-headed homes advance. The men allocating land to them used similar arguments. Adisa (60 years old, widow) took the initiative to request for land for farming because she wanted to be able to support herself and the family with food and an income. Adisa said: *I am able to buy some things for myself and that eases the burden of responsibilities of my children, the money they would use for my upkeep will be directed to their children and wives.* Ayisha (55 years old) and Rahi (40 years old), both widows, indicated that

they decided to accept the land offered to them by the mother-in-law and brother-in-law because it would help them feed their children and meet their personal needs. Rahi claimed: *My first-born is in school and I want to be able to pay his fees when he qualifies for the next stage now that the father is not there to support us.* Similarly, Kusumi (50 years old, separated woman) requested for land from her brothers because she wanted to pay school fees for her children who are living in their father's house. Kusumi claimed: *I requested for the land to reduce my dependence on my brothers for my personal needs and also to support my children with money for school when they visit me.* Rukaya (45 years old, separated) returned to her father's house without her children and requested land from her brothers to grow vegetables. Rukaya said: *With the land I request for, it will help me cultivate vegetables and groundnuts for cooking in the house.*

The customary practice where widows and separated women are able to have access to land for farming in their father's house can help to reduce the vulnerabilities of these groups of women and their children. However, since priority is given to married women and women still bearing children, there is a risk that they will be denied access or only given small plots of farming land, especially in families where land is scarce.

Summary of findings on rationale for land allocation to women

- ✚ Complement food provision at home and support educational needs of children.
- ✚ Make personal savings and lessening dependence on husbands, own children or other family members.
- ✚ Reduce conflicts and disagreement on the use of income and economic resources.

4.1.4 Changes in women's access to land and farming

Women observed that there have been changes in women's access to land over the last twenty years and more women are farming today in both communities. They attributed the changes to enlightenment or "eye opening", distraction of the shea tree and the benefits they derive from farming. Some compared the present situation with their childhood experiences. According to Ayisha (55 years old):

The time I married and came about 20 years ago, men were reluctant to give land to women because they knew that women will not farm because we were not interested, but now they have seen the interest that we have for farming and are willing to give us more land if it is available.

Ayisha explained the increased interest of women in farming by changes in their livelihood options:

In time past, picking of shea nut was the main livelihood of women to produce shea butter and sell but due to massive clearing of land and bush burning, most of the shea trees have been destroyed or they are not fruiting. Women have therefore shifted their attention to farming.

From this statement, farming is fairly new among women as a livelihood option. Increased environmental degradation has contributed to women's own farming. Ayisha continued explaining the reasons for women's interest in farming:

You know in the past most women did not see the importance of farming and were just sitting down without farming. However these days, more women are now requesting fields to farm. Mainly because farming helps us to be less dependent on men for our personal needs, provide food for the household and income to pay fees for our children. We even want to compete with the men in farming.

Adisa (60 years old, widow) said: *Women are farming today because eyes have opened, men will not refuse to give land to women if land is available. Women now see that they can get a livelihood from farming, before we were ignorant.* The gradual entry of women into farming shows that women are becoming more informed and that they can venture into livelihood activities traditionally regarded as a preserve for men.

The major changes men observed about women farming over the years is that more women are farming today compared to two decades ago. According to most of them women were not farming before, just the men. Hassan (46 years old, polygamous man) described the changes he has observed:

When I was a child growing up, my mother was not farming and I did not see other women farming. It was my father doing the farming. What my mother used to do is just to drop few seeds of okra on the farm of my father after he had harvested. You know farming in those days was done just to provide food for the family but now farming has changed and has become profitable and attracted women because they want to be able to buy new things for themselves. The eyes of women have opened and that is why they are now interested and serious about farming. It was ignorance that prevented them from farming.

According to this, women's role in farming was before limited to growing crops like okra on the husband's field after he had harvested the main crops. Women might have provided labour on their husband's farm, which was not seen as women farming. Alhassan said:

Farming is now profitable to women, you see those days our fathers were farming just to provide food for the home, but these days women want to wear good clothing and compete with their fellow women, so they farm to earn money for themselves and also cater for family needs such as food, clothing and school fees. The way the women are farming this time, I did not see that when I was growing up. Today I can count a lot of women who have cultivated one or two acres of land.

The sub-chief in Kuduzeigu noted that more women are farming today than in his childhood days. According to him, most women were attracted to farming when they saw the gains made by women who farmed. He said:

Over the past twenty years I have seen great changes in women farming, my mother was not a farmer like other women today, when I was growing up, but now women are farming and some women in this community have harvested more groundnuts than men.

Summary of findings on changes in women's access to land

- ✚ There is common knowledge among men and women that women's farming has increased over the last two decades.
- ✚ The distraction of the shea tree has made women look for new sources of income in their own farming.
- ✚ The increase in women's access to land can be attributed to new awareness of the benefits of women's farming to their homes.

4.1.5. Opportunities and threats to women's access to land

This subsection looks at the opportunities and threats to women's access to land which have the potential to affect future access of women to land. Insecure access to land is a major threat to women farmers. This is clearly manifested when the chief of Tarikpaa said:

Women can easily lose their farming land if the owner request for it but the good thing about women is that men feel more comfortable to allocate their land to them than men because women will easily hand over the land to its owners any time they demand it.

The chief of Tarikpaa also said: *I will give more land to women because I know she will bring the food home.* Even though men were willing to allocate more land to women their insecure access to land is facing threats that can hinder future allocation of land to women. Among potential threats mentioned were population increase, women's time constraints and lack of interest among young women to go into farming. Time is a limiting factor to women's access to land. Both men and women acknowledged that some women do not get the time to manage their farms. The domestic and reproductive roles of women such as cooking, fetching of water, child bearing and taking care of children tend to negatively affect the time women will spend working on their farms. Alhassan (38 years old, monogamous man) is not prepared to allocate additional land to his wife because she finds it difficult to find time or money to hire labour for her farm. This means that time constraints will affect men's allocation of land to women. This can lead to limiting women's expansion in farming and output from their own farming. Land scarcity resulting from population increase restricts women's access to land, especially good quality land. As the number of people in families increases, preference is given to men. Fuazie (24 years old, never married) explained how the sub-division of land to sons can result in women getting smaller or no fields:

These days, due to the increase in family size, members of the family have small size of land due to sub-division of land among the growing members of the family. The household head will allocate land among interested men who want to farm before they allocate to women. This has reduced the sizes of women's farms or denied some access to land.

The cultural system of inheritance that prioritizes sons over daughters is a fundamental constraint to increasing women's access to farming land; however, family ties from marriages or blood relations are reinforced through land allocation to widows and separated women. Bukari (45 years old) and Haruna (39 years old) have allocated land to their sister-in-law and sister to reduce their suffering. Bukari said:

I thought it wise to allocate the land to her to enable her to provide food for the children and income to take care of her needs since my brother died and I cannot provide all that for her. Haruna said: *I offered her the land when she requested because she will be able to meet her personal needs.*

Rukaya (aged 55, separated woman) who got land from her brothers said they had to give her access to land, despite limited land available. Rukaya said: *It was difficult for my brothers when they were to give me land for farming because they have small fields but they had no option than to give me.* From this statement Rukaya was allocated the land by her brothers because she is a blood relative and probably would not have been given access to that land if she had been a wife

The lack of interest of young never married women in the communities will potentially lead to a decrease in women's farming, as the current group of women farming will be out of active farming in some years to come. It is possible that more educated women will not see farming as an attractive livelihood. Fauzie (24 years old, never married) who has completed senior secondary school, claimed some men were afraid of losing the respect of their wives if their wives prospered from farming and this hinders women's access to land. She claimed: *If a man sees that his wife harvests more than him, he might not be prepared to give her land next time to farm because he feels the wife will earn more than him and override him.* From this statement it is clear that men might deny women land, especially wives, just to maintain their dominance in the family or home.

Summary of findings on opportunities and threats to women's access to land

- ✚ The willingness of men to offer more land to women for farming is an opportunity.
- ✚ Land scarcity in families in times of population increase is a threat to women's access to land as the patrilineal inheritance system prioritizes sons over daughters in land allocation.
- ✚ Time and labour are constraints to increasing women's access to land.
- ✚ Longer schooling and migration options contribute to low interest of young women in farming.

4. 2 Quality of land allocated to women

This sub-section focuses on the perception of men and women of the quality of land allocated to women for farming, local perception about land quality and characteristics of land quality.

4.2.1 Perception of land quality among women farmers

On questions regarding quality of fields, women in the two communities generally responded that land allocated to them for farming was of good quality, but some of them indicated that their fields were of bad quality. According to women, their choice of crops is sometimes affected by the land allocated to them. Salamatu (57 years old, widow) said: *I observed that the land I had could not support maize cultivation so I planted groundnuts and okra. The groundnuts were able to produce very good yields.* Explaining why land allocated to her by her children was not too good Adisa (60 years old, widow) said:

The land offered to me was previously used for farming which made it less fertile. Recognizing that the field was not too good, I decided to cultivate groundnuts and okra because it could not support maize cultivation The low output I had from cultivating the field made me know the land was not too good, but men give good land to women.

From Salamatu's and Adisa's experience, it can be said that the type of land allocated to women determines the type of crops they cultivate on their farms. Groundnuts can be cultivated in poor land because it fixes nitrogen into the soil and does not require fertilization. If the land allocated to them could not support maize then it can be concluded that the land had lost fertility from previous use of those allocating it. Kusumi (50 years old, separated woman) was allocated land but she was unable to hire labour to clear her farm of weeds and that affected her output. Kusumi said: *I did not have money to hire labour to clear my farm and that affected my yields.* Zenabu (55 years, old married woman) said the land given to her for farming is good and men will not give bad land to women. She justified the choice that men give women used land because women lack the strength of men to clear land. Zenabu said: *What I also know is that men do not often give us new land because we do not have strength to clear the land or money to hire labour, but they give good land to women.* Fatalistic views were also expressed. Zelia (30 years old, married) believes that men do not give bad land to women because it is God who determines the yields men and women will harvest. Zelia said: *Land is sacred and there is no way the men can give us poor fields. Nature determines what you will get as a man or woman, our fields as women cannot be like men's.*

4.2.2 Men's perception about the quality of land allocated to women

Traditionally, there are no customary rules stipulating which type of land should be allocated to women for farming in the two communities, but usually men do not allocate new fields to women because women are unable to afford the cost of labour associated with clearing of trees stumps and weeds. Men argued that they addressed women's labour and financial constraints by allocating used land which they have ploughed for two or more years, such that the stumps and trees would have been removed making it easier for women to cultivate it. The chief of Kuduzeigu said: *The practice is that we usually will use our labour or money to plough or clear the land and cultivate on it for at least two years before allocating it to women.* From this statement it is obvious that women have access to used and less fertile fields for farming. It is a fact that new or virgin land is usually fertile and if women are denied access to this type of land, the land allocated to women is not of same good quality as men's land. Women however can have access to new fields if they can cover the cost associated with the clearing of a new field.

The sub-chief in Tarikpaa explained this: *It all depends if a woman has money to hire labour and plough, then she could be allocated a fallow land by her husband, chief or head of the family, if land is available.* It is certain from this statement that among women farmers there is a land quality difference emanating from the financial status of women. The chief and sub-chief claimed that women have access to good quality land for farming; they however admitted that in families where land is limited or has become scarce, women might be allocated less fertile land, but generally men change land for women when they realize or complain that their land has become weak. It all depends on the availability of land in the community or in the family. Most of the men interviewed claimed that land allocated to women was of good rather than bad quality. They indicated that women have access to fertile land for farming and were not given weak or infertile land.

They identified soil infertility as a challenge facing both women and men farmers over the years. Some of them argued that the fields they allocate to women are within their fields or an extension of their farming land and they only allocate parts of those fields to women and they farm side by side on different parts of the farm. Hassan (46 years old, polygamous man) said: *I allocated the same land in which I was farming to my wives, which is close to mine. I will not give poor land to my wife to cultivate on it.* However, Hassan made an important point at the end of his interview saying: *The only thing a man will not do is that he will not give land which is good to cultivate a male crop for a woman to farm. As a man you will get her a different land to cultivate her crops.*

In this context, male crops refer to crops usually grown by men such as maize, rice and yam. These are crops commonly grown on fertile land and since land allocated to women is possibly not suitable for major crops it indicates that some women get access to less fertile land. Bukari, who had allocated land to his sister, said: *I cannot give my best land to a woman to farm and just sit down; you will allocate a land which you have previously farmed on to her.* Tanko (39 years old) on the other hand expressed the view that women should be allocated good land to encourage them to continue with their own farming. He said:

I will not give bad land to my wife or a woman, because I know that if she cultivates, the productivity will come home. If you give her bad land and she is unable to get good yields she gets discouraged and will not farm again and that will definitely affect availability of food for the household.

4.2.3 Views of agricultural director on land allocation and land quality

Francis, the Municipal Director of the Agricultural Development Unit of the Savelugu Nanton Municipality (MADU) claimed that women were given both good and bad quality land for farming, depending on who allocated the land. According to him women who get land allocated by their husbands often get poor land, because husbands allocate abandoned or used land to their wives. On the other hand, women who request for land from community chiefs or community members have access to good quality land. Women who request for land from men other than their husbands have good land allocated to them. Francis noted that this is a result of the fact that such land is unused, either because it has been left fallow or has never been used and will possess good soil fertility. As is customary, chiefs hold land in trust for community members and

women, like other members in the community, can request for land from the chief who will allocate land to them for farming. Women whose family or husband has limited land can use the opportunity to approach families or individuals with enough land and make a request for farming land. He said that chiefs usually allocate “virgin” land to women. If a woman asks for land from a chief, he will send his elders to allocate a new land which has not been used to the woman. In this case the woman will have to spend money or use her labour to clear the land of trees and stumps. Such land, he noted, can be to cultivate maize or yam but most women in the communities grow soya beans, groundnuts and cowpeas, which he termed as “women’s crops”. Few women in the municipality cultivate rice, yam and maize because of the cost of tractor services. According to the director of MADU, the presence of shea and dawadawa trees, upland soils and the absence of invasive weeds are the common characteristics used to assess the quality of land. In his view the major constraints facing women farmers in the area are “stringa” (invasive weeds), pest and weed control, low yields and poor quality fields allocated to women.

Summary of findings on quality of land allocated to women

- ✚ Men and women perceive that women are allocated good quality land.
- ✚ There is a gender difference in quality of land, depending on the source of allocation.
- ✚ The type of land allocated to women affects their output and crops cultivated. Most women are given used land, which is too weak to sustain cultivation of crops like maize.
- ✚ A woman’s access to quality land depends on her financial abilities.
- ✚ There were references to spirits and natural order, when explaining gender differences in land quality.

4.2.4 Defining land quality

The basic characteristics used to assess land quality include location of fields, output, weeds, soil type, and appearance of crops and presence of trees/vegetation. Both men and women were of the view that declining yields from farmland is one way they use in determining good and bad quality land. Salamatu (57 years old, widow) is able to determine the quality of land allocated to her by the harvest/yields she gets from her farm. Salamatu said: *The low yield I had from my field made me know that the land I was given was not too good.* According to the Chief in Tarikpaa a good land is one that produces higher yields and the land that produces less is bad land. Explaining his experience, he said: *A good land is known by the yields that it produces, if the land yields more food than it is good, but if its yields are low then it is bad and that is what we refer to as old/ weak land.* Women also use location of fields to determine the land quality of their farms. Farms located close to homes were regarded as overstretched /-used due to continuous farming on the same piece of land. Farms far from home were claimed to be of better quality than those around homes, as they were free from animals grazing on crops. Women farming far from home have a better chance of being allocated new fields, if their fields are exhausted. Limited land close to homesteads within the community makes it impossible for men to allocate new fields for women close to homes. Kusumi (50 years old, separated woman) has her farm close to the house and is unable to harvest more from her farm compared to the initial years when she was farming on the same land. According to Kusumi: *Initially it was good but now it is poor as it is near the community and thereby fields are poor now.*

The appearance of crops is used by women to determine land quality. Healthy, strong looking plants and growth of crops is a sign among women farmers that land is good quality. Rukaya (45 years old, separated woman) said: *The growth of my crops tells me my land is good. Strong and good fruiting crops are a good sign that the land is good and vice versa.* Adamu (40 years old, married) is able to detect land quality if her crops begin to germinate and fruit. Additionally, the presence of invasive or competitive weeds which are commonly known as “stringa” helps women to assess land quality. According to them, when they see this type of grass on their fields they know that it is a bad land. This is because when they farm on a land infested with this type of vegetation, they will have low yields because the plants compete with the crops on the farm land. Abubakari (32 years old, polygamous man) claimed: *When a field is free of striga then it is a good land, not a bad land, and crops planted on that land will not do well.*

The type of soil found on their fields helps farmers to assess land quality. Loamy soil and a field devoid of stones is a measurement that the land is good and a field with plenty of stones and gravel tells them that crops will not do well. Rukaya (45 years old, separated) uses the colour of soil such as brown and black looking soil to describe loamy soil. She says this type of soil on a farm shows that the land is good. Another feature that is used to determine good land quality is the presence of trees and shrubs. Land that is degraded or has lost all its trees is a sign that it is a bad land. Zelia (30 years old, married) claimed: *The presence of shrubs and trees around my farm tells me that I have a good land but bare land means that the land is not good.*

Summary of findings on women’s and men’s assessment of land quality

- ✚ Men and women use the same characteristics to assess quality of land.
- ✚ The characteristics they use are location, type of soil, whether or not invasive weeds, appearance of crops, output and vegetation like trees.

4.3 Management practices adopted by women farmers

4.3.1 Women’s practices and decision making

Women farmers explained that most of them make their own decisions regarding the management and use of their farms. Kusumi (separated woman) takes all decisions: *I make all decisions regarding my farm, I decide on what to plant, how to weed and what management practices to adopt on my field.* Zenabu (55 years old, married) also makes all necessary decisions on her farm like clearing of weeds, pesticide application, and type of crop to plant and decides when to harvest from her field. From the testimony of these women it is clear that most women take full responsibility in the management of their fields, which gives them room to explore different management practices, which can be indigenous or modern technology. Decision making on Salamatu’s (57 years old, widow) farm used to be done by her husband when he was alive and these decisions included the type of crops to cultivate and time of harvest. However, since the death of her husband she has taken it upon herself to make all those decisions by herself. Salamatu said:

I take my own decisions on tractor services, maintenance of my farm, harvesting and the sale of my produce. My husband, when he allocated the land told me what to plant and what to apply on my crops.

Major management practices adopted by women farmers in the two communities are crop rotation, animal dropping, bullock farming/ animal traction, composting/manure and pesticide application. They also include weeding, Neem extracts for controlling weeds and ridging. Ayisha and Adisa (55 and 60-year-old widows) employ the services of bullock traction for ploughing their fields yearly. Ayisha is unable to afford the cost of tractor services and is now too old to use a hoe to farm. Since the death of her husband, her children's friends always use their bullock to plough her fields free of charge for her each year. Adisa on the other hand employs the services of bullock traction because it keeps the soil fertile and she is able to harvest more by using a bullock. According to her, tractor service is good but she prefers the bullock because when she used a tractor for two years she observed that her yield became low. Organic manure is the common fertilizer used by women, the use of animal droppings and composting is the preferred choice among women to increase yields on their farms. Weeding is the basic management practice undertaken by women. This is done regularly to stop the weeds from competing with the crops for nutrients. Few women are able to afford weedicides/herbicides and other pesticides for their fields. Those that are able, purchase or hire the services of men to spray their fields. What is important here is that women always hire men to spray their farms because they have basic training on how to use pesticides. Some women use local treatment for the control of insects, i.e. the use of "neem leaves" to control weeds on the farm. Crop rotation is the common form of farming among women to increase fertility of the soil.

Women in the two communities learnt how to farm and use management practices through their husbands, neighbours, friends, extension officers and children. Most women did not farm when they were children or young women but began to learn it when they got married and starting to help their husbands on farms. One factor which might be contributing to this is the custom that allows sisters to raise and train their brother's girls (nieces). Girls are not trained in farming in their father's home; usually they are supposed to help their aunt with domestic work. Abubakari (32 years old, polygamous man) explained this when he said: *You see our young women or girls do not usually grow up in their father's homes, they are usually raised by their aunties in different homes or villages.* The labour wives offered to their husbands gave them the opportunity to learn some farming techniques, skills and management practices. Ayisha is a widow and learnt how to apply fertilizer, weeding and crop rotation from her husband. After the death of her husband, she still practices these techniques with her children on her farm. Aysiha (57 years old, widow) said: *When my husband was alive and doing weeding and applying fertilizer I observed him, and that is what I am practicing with the children on my farm.* Zelia depended on her husband to identify appropriate farming methods on her farm since she had no knowledge of farming. She said:

My husband taught me how to rotate my crops yearly, that is how the men teach us, we do not know much about it. I do not use fertilizer on my farm because we do not use fertilizer on groundnuts.

Rahi (40 years old, widow) observed carefully how her husband applied manure on his farm when she was helping him and that served as a training ground for her which she now adopts on her farm to increase soil fertility. She said: *I saw how my husband used to apply manure on his farm when I used to help him and I put that in my head, and that is what I am doing on my farm now.* Observation is one way women adopt management practices on their farms. They observe what is done on their husband's /neighbours' farms and apply such practices on their own farms. From the above statements husbands/ men are the first and primary source where women learn about the basic practices in farming and management practices for their own farms. Besides husbands/men, women also learn how to maintain their farms from their children, agricultural extension officers, NGOs and friends and through radio broadcasts.

4.3.2 Technology adoption among women farmers

The director of the Savelugu Municipal Agricultural Development Unit (MADU) mentioned that his outfit carries out a number of activities which integrate women farmers. Two departments within MADU, women in development (WID) and the extension office, are responsible for introducing technologies and management practices to women farmers. Some activities undertaken by the two departments include home and farm visits, shift cropping, water and soil conversation methods, video and radio programmes. They are currently running a project (Agriculture as a business) to educate women in making farming a business to enable them to earn a better income. The home and farm visits as well as the radio and video shows are used to educate farmers on appropriate management practices to adopt on their farms. These departments also provide women with education on alternative livelihoods such as rearing of small ruminants, good nutritional activities and link them with credit such as the village savings and loans.

Summary of findings on management practices adopted by women

- ✚ Most women are responsible for making all decisions on their farms.
- ✚ Women use simple technologies on their farms.
- ✚ Women get information on farming from their husbands and radio, rather than from extension services.

4.4. Differences in men's and women's farms

This sub-section extracts major perceived differences women and men have about male and female farms, which include location, type and number of crops grown, inputs and risk factors.

The number of crops grown by men and women varies. Men usually cultivate two types of crops while women cultivate more than two crops on their farms. Rahaman (50 years old, polygamous man) in his assessment of the difference between male and female farms said: *A man will usually cultivate one type of crop and at most two but women will have more than two such as groundnuts, okra and beans.* Another area of distinction is the type of crop grown. The main crops cultivated by women include groundnuts, soya beans, rice, okra and pepper. The main crops cultivated by men are maize, yam and rice, so there is clearly a gender difference in the main crops grown. However, it should be noted that a few women cultivate rice and maize and some men also cultivate groundnuts and soya. Yam farming in the two communities is limited to

men, as the common view is that women do not have the strength to make yam mousse needed for growing yam. The crops usually grown by women are legumes which fix nitrogen into the soil and will do well even on poor land. Unlike most men, women do not have enough money to purchase inputs such as pesticides and fertilizer for application on their fields. Zenabu (55 years old, married) thinks that one main difference between male and female farms is the ability of men to purchase and apply fertilizer or pesticide on their fields whilst most women are unable to afford the cost. Zenabu said: *We do not have enough money to buy the inputs that men are able to buy and apply on their fields.* From this account it means that men will have a better output from their farms than women because inputs help to increase the output from farms.

Most women's farms are located close to homes, while men's farms are located far from homes. This was clearly stated by Tanko (39 years old, monogamous man) who said: *The only difference I can say about male and female farms is that male farms are located far away but women usually farm close to the house.* Experience in farming is one important distinction between male and female farms. It is generally regarded that male farmers are more experienced than female farmers. Most women see men, especially their husbands, as their teachers, from whom they learn and continue to learn how to become better farmers. This assertion is seen in Rahi's (40 years old, widow) observation when she said: *When they gave birth to men, they were with the hoe and they are ahead of us in farming, we are learning and it has become attractive to us.* Adamu (40 years old, married) also added: *As a woman, you will not be able to know how to rotate your crops yearly; the men they know and they will tell you how to do it.* Men are regarded as the reserve of farming knowledge and women have internalised the view that they cannot be better than men in farming. The final distinction is that men farm continuously every year but some women only farm for a certain period instead of taking up farming as an annual activity. Most often women are limited in their farming activities by money or they lose land allocated to them. According to Alhassan (38 years old, monogamous man): *Women do not always farm every year; she can farm this year and the next year she will tell you I don't have money to cultivate this year, but we men we usually farm continuously.* Hassan also thinks that women are often divided between taking up petty trading and farming and that sometimes stops them from farming. According to him, when a woman gets low yields from a farming season, she will prefer to concentrate on her petty trading rather than to farm, or if she earns more from her trade, then she will not farm. It indicates that women fear to take on the risk associated with farming and any failure in their outputs can push them out of farming.

5. DISCUSSION

In this last section the main results from the two studied communities will be discussed and reflected on in relation to the research questions and literature reviewed.

5.1 Changes in women's access to land

Results from the studied communities show that women's own farming and access to land has increased a great deal in the last two decades. This is consistent with findings from UNECA (2007) and Bonye & Kpieta (2012). In UNECA's study of Ghana, the increase in women's

access to land was attributed to policies and interventions of the government and organizations in Ghana. Bonye & Kpieta, on the other hand, attributed the increase to the recognition by men of women's contribution to the family, a finding which is supported by this study. The interviewed men attributed the contributions of women to the family as reasons for allocating more land to them. These contributions include women's role in food provision, payment of children's school fees and less reliance of women on them for money and food. This means that women do not fully depend on men for their personal needs and contribute to housekeeping. This finding is consistent with findings of MuGeDe (2013) and GAAP (2013), who identified significant contributions of women to food security, payment of school fees, income and promotion of the well-being of the family. Although the influence of government interventions can't be dismissed, they were not a central topic in the analysis, but may have contributed to the eye opening and fading away of ignorance, mentioned in the interviews.

Women farming their own fields is quite new in the area, as came out clearly in childhood memories of many respondents. The reason stated for women not seeking access to land before was that their own income was secured with the abundant fruiting of economical trees, notably the shea tree. The distraction of the shea tree by bush fires and deforestation impacted negatively on women's income, and left many women without their own source of livelihood. This was identified by some respondents as the turning point where women decided to venture into farming and began to negotiate for increased access to land. This outcome corresponds to Pandmanabhan (2004) who suggested that Dagomba women had recently begun their own farming. Before, women played a minimal role in farming as they did not have their own fields and their contributions were restricted to assisting their husbands or cultivating vegetables on the husband's field after harvesting.

5.2 Cultural context of gender and marital status in land allocation

The most common access to land for women in the studied communities is through their husbands, brothers and sons. In the cultural context of the area, women can inherit land from their father's house but not in their marital home. Thus the patrilineal system of inheritance does not deny women inheritance to resources including land, as suggested in the findings of Duncan (2004) and Tripp (2004). However, the cultural expectation for women to get married and move to their matrimonial home means in practice that women are denied the opportunity to make use of inheritance rights. The impact of the movement of women upon marriage is that a limited number of women will actually own land and farm in their father's house, which is rooted in the view that women are temporal members of the natal home. The patrilineal system gives priority to sons in land allocation, which puts women in a subordinate position to men in access to farm land. This finding is consistent with the findings of Bonye & Kpeita (2012) in the Upper East Region of Ghana. This socio-cultural context not only hampers women's access to land but denies them secure access to land. Findings from this study suggest that women have a more secure access in their father's house compared to the marital home, as they usually get access to land in their father's house after they return back as widows or separated women. Widows can get access to land through their grown-up sons in the study area, a finding which correlates with findings reported by Mutangadura (2007) in Malawi. Younger widows with dependent children can also continue to have access to their husband's land for the provision of food for the children as long as they remain in the marital home. Then they get land allocated by the head of the

family of a deceased husband, brother-in-law or the chief. An interesting deviation from this norm was found in this study, where a young widow got land from her mother-in-law. In families with limited land women were vulnerable to losing formerly allocated land in their marital home. Men, as both husbands and brothers, are more likely to allocate land to their sister who has returned home as a widow or separated, as they are considered part of the family by ancestry.

Land scarcity due to the population increase also affects women's access to land in the studied communities, which is consistent with Duncan's (2004) study in Ghana and Tripp's (2004) in Malawi. Population increase with expanding families has led to the subdivision of land among sons to the detriment of daughters, which is in line with the findings of Bremner (2012). As sons are prioritized in land allocation, women are denied access to land or lose possession of their current farming land. Apart from son's other male relatives are prioritized in land allocation when families grow. The pressure for land can result in wives, daughters and other female relatives losing land rights and access to formerly allocated land.

The number of children, labour and financial means or constraints also determine women's access to land. Child-bearing is a crucial determinant of women's access to land as having children and responsibilities associated with motherhood qualify women in their marital homes to access land. Therefore, women can remain landless if they do not bear children. In this study, differences in accessibility to land among women were found to relate strongly with the number of children that stayed with a woman and her economic status. Wives in polygamous homes with more dependent children had a better chance of been allocated larger fields than women with fewer children to feed. Difference in size or quality of land among wives or women in general was also found to be explained by economic and labour constraints. Women who can afford to pay for labour services stand a bigger chance of being allocated new or fallow land from their husbands or chief for farming. Knowing that the majority of the rural poor are women (FAO 2011), we can conclude that few women are able to get access to unused land of good quality for farming. Labour constraints hinder women's access to land as observed by the finding of IFAD (2014) in Ghana and Nigeria, where women's assistance to husbands on their farms denies them time to maintain their own fields. Whereas IFAD findings point to the effect on women's output in farming, reduced if much time is spent helping on male farms, time constraints also determine how much farming land women in this study are allocated by their husbands. Men, who are at the heart of land allocation, recognised the multiple domestic roles played by women and were sceptical of allocating additional land to women if they thought time constraints hindered them in managing large fields. Additionally, in the two studied communities, women are constrained by the financial inability to hire labour to work on their farms, despite their reproductive activities and the labour they provide to their husbands on his farm. Women in these communities spend time cooking, bathing children, fetching water, helping their husbands to sow their fields or harvesting whilst at the same time performing all farming activities on their own farms.

5.3 Evaluating gender differences in land quality

Some studies on gender difference in land quality claim that land allocated to women is of poor quality (Muteshei 1995; Perez 2014). Information gathered in this study shows that both men and women perceive that women have access to good land for farming, even though they agreed that

land allocated to women was usually used land. Perception of the quality of this land, already used by men, might depend on the length of time such land has been used (after clearing of trees) before allocating it to women, which was commonly two years. Francis, the Savelugu Nanton Municipal Assembly (SNMA) Director of Agriculture, indicated in his assessment of the quality of land allocated to women that women who were allocated land by their husbands have access to poorer quality land than those having land allocated by chiefs or community members. Despite claims by most women that land allocated to them was of good rather than bad quality, they pointed out that land allocated to some women could not support maize production and had low productivity, hence their decision to cultivate other crops such as groundnuts and soya beans. The focus of women on growing legume crops may be a result of poor land allocated to them because legume crops require little fertility and will grow well in used land through the fixation of nutrients in the soil. This finding is consistent with Action Aid (2012) that type of fields allocated to women limits their production. It should be noted that some women cultivate legume plants for purposes such as providing ingredients for cooking and some extra income, not just because of the limited quality of land allocated to them. The gender difference found in crop production not only limits women's production but also their income potential from cultivation of crops considered as male crops. Reducing the gender difference in growing of crops for the market and for domestic use can contribute to reducing poverty among women farmers.

A common understanding was found among men and women in their assessment of land quality, which may be attributed to the fact that women usually get their first experience and training in farming through men, usually their husbands. In assessing land quality characteristics such as location of field, type of soil, presence of invasive weeds and vegetation, and the appearance of crops and output from the land were used by both men and women. Some of these parameters such as vegetation, type of soil and colour of the soil are identified by FAO (1997), Teshome et al. (2014) and Tesfahunegn (2014) as being part of other parameters used to determine land quality, such as assessments of nutrients in the soil, erosion and soil depth.

In the two studied communities, women continue to cultivate the same plots close to home year after year. Apart from the likelihood of reduced soil fertility, fields located close to homes suffer from animal grazing, which reduces crop quality. The common practice of allocating land to women close to homes can be related to the splitting of women's time between domestic duties and farming. Women that spend much of their time taking care of children, cooking and fetching water have limited time to work on their farms. According to other studies, the work load of reproductive activities of women tends to contribute to the low productivity of women fields (Tedesse 2003; Apusigah 2009).

Gender difference in productivity in the study communities can be attributed to the above mentioned hindrances women face in farming as well as limited access to credit and inputs. This is similar to findings from FAO (1997) and Kassie et al. (2011). In the studied communities, men have better access to labour on their farms than women. Due to limited domestic work at home, men can dedicate their time and energy to their farms. Additionally, men are in a better financial position to hire labour to clear their fields. Women in the study area are financially stressed and most of them are unable to hire labour for their fields

5.4 Management practices adopted by women to improve land quality

Most women in the two studied communities are responsible for making all management decisions on their farms, which was not the case in an earlier study by Donkoh & Awuni (2011) in the Upper East Region of Ghana, which found that women could not choose management practice on their farms without consulting land owners. Observation and farm training on husbands' farms are the major ways women learn management practices. Radio also plays an important role in women's adoption of management practices in the areas. This is consistent with an earlier study in Ghana by Muniru (2013) who identified the important role media played on farmer's management practices and the technology used. Radio is common and widely accessible among women farmers and they can tune in to their radio sets when they are carrying out their domestic activities. Both women and men have access to extension services in the study area, which is similar to findings by Muniru (2013) in Ghana. However, interviews with women in the focus groups indicate that the impact of extension services on their farming is limited. The women were very quick to identify their husbands, radio, and neighbours as the main sources of their agricultural information, rather than extension services. Information gathered from the women suggests that they gain more theoretical than practical knowledge from extension services. This can be a result of the limited number of extension officers, which has been identified by Cohen and Lemma (2011) and FAO (2011) to be a hindrance to women's access to extension services. Another contributing factor to the lower impact of extension services on women's farming in the area can be related to little focus on gender approaches by the extension office in educational and farm visits, as men are regarded as the main farmers. According to the director of MADU, interviewed as a key informant, inadequate and untimely release of funds to the office by the government is part of the explanation. The Women in Development (WID) Department, which is mainly responsible for carrying out activities with women, mostly relies on project funds to carry out activities in the communities. With the limited number of staff and funds, the office is unable to carry out regular activities for women and might just be able to meet a fraction of women farmers in a large area with 149 rural communities. The studied communities, Tarikpaa and Kuduzeigu, are currently not among the communities where MADU is implementing its women's projects.

Women farmers in the studied communities adopt basic technologies in their farming due to financial constraints. For example, widows can't afford the cost of tractor services for ploughing and other women mentioned their inability to purchase pesticides and fertilizers for their farms. This finding is consistent with a study in the Upper East region of Ghana which stated that women are unable to adopt new technologies because of limited finances (Agana 2012). According to Fakoya et al. (2005) farm size, education and cost of technologies influence land management practices. As women in the study area have smaller farms than male farmers and the majority are illiterate (GSS 2014), they might need more education on basic or local management practices on their farms. Usually the agricultural education on radio and community meetings is theoretical and denies women the opportunity to receive training in some basic practices, such as learning how to properly apply pesticides on their farms. These women would probably be in a better position to adopt new technologies if their contact with extension services was improved and supported with credit from financial institutions and development agencies. A prior study by Akudugu et al. (2012) in Ghana identified a positive correlation between access to extension services and adoption of modern technology.

5.5 Negotiations in the patriarchal context

In the patrilineal and patriarchal context in the studied communities men control the allocation of land to all groups of women. Their dominance is derived from cultural values and the system of inheritance which puts a premium on male inheritance of land. Men's dominance in land allocation is maintained through negotiations between men in extended families and at the community level, resulting in the exclusion of women from secure access to agricultural land. At the same time as women earn respect when they get married, in practice they lose inheritance rights to land in their father's house when moving to live with the husband. In the matrimonial homes women cannot inherit land from their husbands, despite all the reproductive and productive work they provide. In this patriarchal system women's labour is exploited (Walby 1990; Sultana 2011) and the family and household become a site for gendered conflicts of interest and negotiations (Kandiyoti 1988; Whitehead 1994), but also cooperation between husband and wife/wives. According to Sen (1999 cited in Apusigah 2009) most rural households are characterized by cooperative conflicts. After losing much of their separate income from trees that were economically productive to tend, women in the studied communities began bargaining with patriarchy (Kandiyoti 1988), that is, renegotiating their access to land. The women's way of negotiating with men for more access to land is to use most of the food and income from their own farming to meet the needs of the family. This has been important for increasing women's access to land, because as men recognize the contributions of women's farming to the family most of them are motivated to allocate land to women. This kind of negotiation corresponds to Sen's (1999 in Apusigah 2009) claim that women often lack self-interest as they prioritize the well-being of the family. Although agreeing with Sen's arguments on women's concerns for the well-being of their children, this was possibly the only avenue of negotiation open to women to also meet their personal needs and interests. The same can be argued for the coping strategies women adopt when allocated less fertile land for farming. Most women resort to the cultivation of legume crops which are more tolerant of poor soils. Most women are still denied access to the most fertile land by claiming that they lack masculine power, that is, women are not regarded strong enough to clear new land from trees and stumps. Women are also denied the opportunity to cultivate certain crops like yam with the excuse that they are not strong enough in both cases hindrances are advanced against women by men (and some women) to maintain men's control over farming, which they have ruled for ages. If women are able to carry out all the work they do now on their own and men's farms, as well as all domestic work, I think they will manage to raise yams when given the opportunity.

6. CONCLUSION AND RECOMMENDATIONS

It is important to recognize that men, often husbands, are invaluable contributors to women's farming in the two communities. Despite the gender-gap in control of productive resources like land, husband and wife/wives in monogamous and polygamous homes can work together to increase household food security by pulling land and labour resources together. Interventions at the household level should encourage cooperation and lessen conflicts among couples. As many women farmers are not married, household intervention methods need to be developed to also integrate widows, separated and never married women in female-headed households. It is also important to pay attention to difference in experience and source of knowledge between men and

women, as well as among local farmers and technical experts, when interpreting divergent views on the quality of women's fields. Many women see the allocation of used land to them as facilitating their farming because they do not have same financial means as men to hire labour for the clearing of trees or physical strength. In my view this arrangement can be interpreted as negotiation between men and women in land allocation. If women don't get more assistance with clearing of available land, the outcome will possibly be to further widen the gender-gap in quality of land allocated because the majority of women cannot afford the cost of clearing new fields. Finally, it is important for development agencies especially government sector to focus on promulgating and implementing programmes and projects which meet both strategic and practical needs of women (Moser 1989) in farming. Project implementers and government agencies working with women need to adopt gendered strategies which counter social structures serving as barriers to gender equality. For instance, women should be empowered and supported to take up activities in farming and cultivation of crops which are perceived as men's activities or crops and men encouraged to lessen the domestic work of women. "Opening eyes" or challenging the views that most activities in farming are better done by men, due to recent venture of women into farming in the area, is also needed to empower women. The limitation of women to female crops is a hindrance to their economic benefits and empowerment. Most of the crops grown by men such as yam and maize earn better income than most women crops and this can further widen income gap among men and women. If the trend is not checked, the gender gap in agriculture in communities like these two study communities will widen.

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APPENDICES

Appendix 1

Interview guide for key informant s 1 (Chief/ elders, spiritual leaders, magazine?)

Introduction letter from the researcher we are gathering information for:

My name is Huriatu Anafo. I am an Assistant Programme Officer with the Environmental Protection Agency, Tamale office. Currently I am taking a course at the United Nations Programme on land restoration, in Iceland, Europe. As part of my training, I am doing a research on land allocation to women. The facilitators you see are my research assistants, gathering information for my study. I am interested in hearing from you how women get access to land for farming in your community. I and the research assistants will treat everything you tell us in this study as confidential. Nothing you say will be personally attributed to you in the report resulting from this interview. My report will be written without attributing any comment to a specific person.

Your participation in this interview is voluntary and you decide what you are willing to share with us. Your contribution is very much appreciated.

1. Can you share with us how land ownership and access to land is for men and women in the community?
2. How do women get access to land for farming? Is it the same process for all women or different for different groups of women? Explain the criteria and variations found. Are there any traditional beliefs regarding where women should farm and what type of field should be given to them for farming?
 - ✚ Have there been any changes to women's ownership or access to land for farming? If yes, what are the changes and reasons for them?
 - ✚ Do you see any threats to women's access to land for farming?
3. Do you think women have access to high or low quality land for farming? Explain the criteria for judging the quality of land in this community.
4.
 - ✚ Is there much difference in quality of land women and men have access to for farming? If yes, explain the reasons for this.
5. What is the traditional role of women farmers in the family /household?
6. Do you see any changes in farming by women? (Crops grown, use of products and farming methods).
 - ✚ Do you have any question for us or any other view you want to share in our discussion on this topic?

Thank you for sharing your time with us.

Appendix 2

Interview guide for key informant 2 (SNM Agricultural Office)

Introduction letter from the researcher we are gathering information for:

My name is Huriatu Anafo. I am an Assistant Programme Officer with Environmental Protection Agency, Tamale office. Currently I am taking a course at the United Nations Programme on land restoration, in Iceland, Europe. As part of my training, I am doing a research on land allocation to women. The facilitators you see are my research assistants, gathering information for my study. I am interested to hearing from you, on two main issues: 1) your assessment on the quality of land allocated women. 2) Extension services your outfit renders to women farmers. I and my research assistants will treat everything you tell us in this study as confidential. Nothing you say will be personally attributed to you in the report resulting from this interview. My report will be written without attributing any comment to a specific person. Your participation in this interview is voluntary and you decide what you are willing to share with us. Your contribution is very much appreciated.

1. Working with women farmers, do you think they have access to good or low quality land for farming (in this community)? Explain
 - ✚ Explain what characteristics make a land good or bad quality.
 - ✚ What do you consider to be the major constraints of women farmers?
 - ✚ What efforts is the Municipality making to assist women in farming?
2. How do you involve women in introducing new management practices or technology on farms?
 - ✚ Are women farmers able to adopt new technologies to the same extent as men? If not, what is the reason?
 - ✚ What approaches or medium do you use to reach out to women for extension services? Do you think they are effective or need to be changed? Are they different from approaches used in extension services to men?

Appendix 3

Focus group discussion guide

Introduction letter from the researcher we are gathering information for:

My name is Huriatu Anafo. I am an Assistant Programme Officer with Environmental Protection Agency, Tamale office. Currently I am taking a course at the United Nations Programme on land restoration, in Iceland, Europe. As part of my training, I am doing a research on land allocation to women. The facilitators you see are my research assistants, gathering information for my study. I am interested in hearing about your experience and views on three main issues: 1) how women get access to land for farming in this community and how you got your own field/land; 2) your assessment of the quality of the land you have been allocated; 3) what you do to improve production on this land. I and the research assistants will treat everything you tell us in this study as confidential. Nothing you say will be personally attributed to you in the report resulting from this focus group. My report will be written without attributing any comment to a specific person. Your participation in this focus group is voluntary and you decide what you are willing to share with us. Your contribution is very much appreciated.

Information on gathering of data:

Date: -----

Location of FGD: -----

Facilitator of FGD: -----

Information on participants (approximate age and marital status, for example: 2 married women, 35 & 60; 2 widows, 2 women separated from their husbands and two unmarried women).

Guide to themes to cover in focus group discussion with women farming own fields:

Section (A) How different women get access to land for farming

(NB – you/facilitator must write approximate age and marital status of each woman answering, to make it clear who is talking about her experience in a), for example: married, 40-50 years)

1. How did you get land to farm?

✚ Who allocated it (Chief, husband, brother, in-law, etc.?)

✚ Did you request a field to farm or was it offered to you?

✚ If offered to you, what reasons were given for the allocation?

✚ If you took the initiative, what reasons did you advance for the field? (Food, income, etc.)

✚ Was it easy for you to get the land?

2. Do you think it is easy or difficult for women to get access to land for farming in this community? Is there a difference between women? (By marital status, age, etc.)
- ✚ Have there been recent changes in women's access to land for farming? If changes, what are the reasons?

Section (B) women's perceptions about quality of fields allocated to them

1. What do you think of the quality of the land you were given to farm on?
 - ✚ Explain what makes it a high or low quality land? (These options should not be read for the group, as the answers indicate their understanding of land quality - fertility, location, distance, soil type access to water, etc.)
2. What crops do you cultivate and why this choice of crops (food, income, type of land, etc.)
3. Does the quality of your land influence your choice of crops?
4. Do you think the quality of your land affects your production or income? Are other circumstances than land quality affecting production and income from the land? (Lack of time, labour, inputs, distance to market, etc.)
5. Do you think women in this community are generally given poor or good quality land to farm? Explain why?
 - ✚ Is there a difference in the quality of land women and men farm? If yes, explain why?
 - ✚ If yes, how do you think women can secure equal access to better quality land in the future?

Section (C) addresses questions on management practices adopted by women on their fields.

1. Do you make all decisions on the use and management of the field you are farming? If no, what decisions are others making and who do you have to consult?
2. Can you share with us the management practices you adopt in your fields to improve land quality? (Local/indigenous and new management practices. E.g. composting, fertilizer use, soil water conservation methods, animal dropping, tractor ploughing, pesticide use, etc.)
 - ✚ What is the reason for your use of these management practices?
 - ✚ Who taught you how to use these indigenous or new management practices/technologies? (Father, mother, husband, family fields, extension officers, NGOs, etc.).

- ✚ Is it easy or difficult for you to assess information and new technology for managing your farms? Explain.

Final question

Is it important for your household and family that you have access to your own field? Explain why?

- ✚ Is there anything you want to add to this discussion? Are all relevant questions addressed?
- ✚ Do you have any question for us?

Thank you very much for making time to share with us your experiences as women farmers.

Appendix 4

Interview guide for male farmers

Introduction letter from the researcher we are gathering information for:

My name is Huriatu Anafo. I am an Assistant Programme Officer with the Environmental Protection Agency, Tamale office. Currently I am taking a course at the United Nations Programme on land restoration, in Iceland, Europe. As part of my training, I am doing a research on land allocation to women. The facilitators you see are my research assistants, gathering information for my study. I am interested in knowing your experience and views on two main issues: 1) Reasons you consider before allocating a field to a woman. 2) Your assessment of quality of land allocated to women. I and the research assistants will treat everything you tell us in this study as confidential. Nothing you say will be personally attributed to you in the report resulting from this interview. My report will be written without attributing any comment to a specific person. Your participation in this interview is voluntary and you decide what you are willing to share with us. Your contribution is very much appreciated.

Information on gathering of data:

Date: -----

Location of interview: -----

Person taking interview: -----

Information on participants (approximate age, marital status and relation to woman/women he has allocated land to). (Polygamous man, father, brother, uncle, son, father in law). Allocation of land to woman/women (if more than one woman, list separately for each woman, e.g. woman 1 = first wife; woman 2 = sister).

- 1 Which women have you allocated land to? (Relation, if polygamous order of wife).
- 2 Did the woman ask for the land or did you take the initiative to offer her land?
- 3 Why did you allocate land to this woman? (Reason: crops for household, or market, children to support, customary practice, etc.)
- 4 What reasons did you consider before choosing a certain field to allocate to the woman? (Distance, crop, scale of farming, etc.)

Quality of land allocated to women

1. What do you think about the quality of land you gave to women for farming?
 - ✚ What makes the land regarded as low or high quality land?
- ✚ Do you think there are generally differences between male and female farms in terms of quality of land in this community? Explain.

Impact and changes in land allocation to women

1. What is the contribution of the field /fields you have allocated to the family or household?
 - ✚ Are you prepared to give more land to women for farming? Explain why/why not.
 - ✚ Have there been changes in men's land allocation for farming to women? If yes, explain what accounted for the changes.
 - ✚ Is there anything you want to add on the subject of women's access to land and the quality of the land or ask us regarding this study?

Thank you for taking time to discuss with us.

Appendix 5



Focus group discussions in Tarikpa and Kuduzeigu during field interviews by research assistants. Picture courtesy: Research Assistants



Research Assistants conducting interviews with men in Tarikpa and Kuduzeigu. Picture courtesy: Research Assistants



Several research assistants interacting with the Savelugu Nanton Municipal Director of Agricultural Development Unit on the left and on the right are several research assistants with some community members. Picture courtesy: Research Assistants