Women’s access to irrigated land in a patrilineal customary area: Baare Community Irrigation Project.

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Abstract
Small scale agriculture is the main source of livelihood for most rural communities in sub-Saharan Africa. Thus, secure access to land is crucial for rural communities in the sub-region. Land is a resource which, if put to proper agricultural use, can reduce poverty and raise the standard of living of the people. However, the rate of climate change alongside its unreliable rainfall pattern makes rain-fed agriculture unreliable. Irrigation can greatly improve returns from land, with beneficial results in household food insecurity and incomes. Irrigated land contributes significantly to world food production. Hence, one way to fight poverty in sub-Saharan Africa is to invest in irrigation infrastructure in order to increase food production and reduce the challenges associated with unreliable rainfall. On the other hand, there is often fierce competition for irrigated land. In most cases only the rich have access to irrigated land to the detriment of vulnerable groups like women and youth. Irrigation therefore may perpetuate poverty for the rural poor. Despite the fact that they produce most of the food, poor women in particular, have difficulty obtaining access to irrigated land in customary patrilineal areas, where they access land through their male relations. This paper investigates how vulnerable groups like women may access community-irrigated land in customary patrilineal areas. The study is based on the mixed method approach of data collection. Primary and secondary data were collected from different sources on the Baare community irrigation in the Upper East region of Ghana. Customary land owners in the irrigated area release their land for community use during the dry season while the land reverts to the owners during the raining season. The land is reallocated for community use by the water users association during the dry season. Out of 185 farmers who farmed the irrigated land during the last dry season, 104 of them were women. Thus, community-managed irrigation projects can provide vulnerable groups with irrigated land.

Keywords
Access to land, customary tenure, patrilineal inheritance, irrigation, Ghana
**Introduction**

Climate variability and change are expected to compromise agricultural production and food security severely in many African countries (International Fund for Agricultural Development (IFAD), 2011). In the northern parts of Ghana, the effects of climate change will be compounded by the region’s high poverty levels, weak infrastructure, poor natural resources management and dependence on rain-fed agriculture. A combination of strategies has been initiated by government and NGOs in the area using community-based approaches to strengthen the resilience of poor communities’ to reduce vulnerability. IFAD (2011) posit that in poor rural communities in Africa, women and youth are amongst the most marginalized and vulnerable members of communities. However, when women are empowered they can strengthen family livelihoods, improve food and nutrition security, and enhance overall resilience of their families in the face of climate change and socio-economic instability. The Baare Community irrigation project in the Upper East Region is a good example of an initiative that empowers rural vulnerable groups in the face. The Baare Community small scale irrigation scheme was developed by the Government of Ghana as part of a social intervention projects to help alleviate poverty among the people. The main objectives were to reduce youth immigration to the south and enhance food security in the area. A major hindrance to the project was to overcome the long-entrenched community custom of inequity of access to farm land by women. This paper examines how access to irrigated land can be made equitably available to all land users in customary areas where rain-fed agriculture is not reliable. The study is based on a small farming community called Baare in the in Talensi District of the Upper East Region of Ghana.

**Women access to land in patrilineal customary areas**

A review of literature indicates that marriage remains the most important means of access to land in customary areas for women (Whitehead & Tsikata, 2003; Grigsby, 2004; Itani, 2007; Peters and Kambewa, 2007; Kapur, 2011). Wives acquire both the right and obligation to cultivate land. They are also expected to fulfil certain labour obligations, such as subsistence food provision (Akrofi, 2013). Divorced women, however, have no claims on land they acquired through marriage in most areas (Lastarria-Cornhiel, 1995; Whitehead and Tsikata, 2003). Women who are separated from their husbands are liable to lose the land rights they gained through marriage over time. Single women in most customary areas can only access land through their male relations (Whitehead and Tsikata, 2003; Grigsby, 2004; Peters and Kambewa, 2007).
Kapur (2011) argues that women’s’ economic participation in urban development necessitates the use of statutory provisions which guarantee gender equality in land rights and inheritance. Formal law, however, is limited in this regard because the majority of the population continues to be governed by customary law. Although international human right treaties have enhanced the articulation of women’s’ land rights in accordance with human rights principles, in customary areas, there is a general disregard for these laws. Kapur (2011) stresses a need for the study of customary law at community level to improve on the situation. “Any property system must be respected locally because central governments of developing countries are too institutionally resource poor, to effectively, administer and enforce a comprehensive law scheme” (Kapur, 2011:74). Thus, women’s land rights cannot be enforced locally by international legal treaties without local input. The aforementioned arguments necessitate innovative ways of providing secure access to land for women and other vulnerable groups and the Baare community irrigation project is one such example.

**Case study Area**

The case study area is called Baare, a small community in Talensi District of the Upper East Region of Ghana (Figure 1). Customary land tenure is the only land holding system through which land can be accessed in Baare. The custom allows only men to have right over land. People own land either by inheritance or by gift. Those who migrated from other communities to settle at Baare also have access to land by grant through customary arrangements. Indigenes of Baare have customary freehold rights and inheritance is patrilineal. Thus women cannot inherit land. Women have no title to land and can only access land through a male relationship yet their access to land is not guaranteed by custom. Most often, women make use of the infertile lands that are not used. Thus there is long-entrenched community custom of inequity of access to farm land against women in Baare.
Rain-fed small scale agriculture is the main source of livelihood for most rural communities in sub-Saharan Africa. Thus, securing access to agricultural land is crucial for vulnerable groups in rural communities in the sub-region. However, the rate of climate change alongside its unpredictable rainfall pattern makes rain-fed agriculture less productive and unreliable. Irrigation can greatly improve returns from land, with beneficial results in household food security and incomes which can consequently reduce poverty and raise standard of living (IFAD, 2012). Irrigated land contributes significantly to world food production. Hence, one way to fight poverty in sub-Saharan Africa is to invest in irrigation infrastructure in order to increase food production and reduce the challenges associated with unreliable rainfall (UNHABITAT/IFAD/GLTN, 2013). The community irrigation system at Baare is one of the Small Scale Irrigation Projects (SSIP) in Ghana. This facility needs to be expanded in order to meet its objectives that is reducing youth migration, poverty alleviation and enhancing...
food security in the area. The community irrigation project makes irrigated lands accessible to everybody, irrespective of sex or social status in the dry season.

In 2007, it was estimated that Ghana had a total of 6.9 million hectares of cultivable area of which 1.9 million hectares can be used for irrigated farming. However, only 33,800 hectares are under irrigation (Namara et al., 2011). This represents less than 2 percent of the potential irrigable area. Irrigation development in Ghana, however, has the potential to achieve food security, reduce poverty and improve rural employment.

Water is one of the most vital inputs in agriculture in Ghana apart from labour. Agricultural production depends on natural rainfall in most cases with severe consequences to food production capacity of farmers when the rains fail. In northern Ghana, the rainy season comes only once in a year and its timing is unreliable. One strategy to fight poverty in the area is to invest in irrigation infrastructure to increase food production and help reduce the challenges associated with unreliable rainfall. Access to irrigated land, particularly in Northern Ghana, may reduce youth migration to the south in search of unavailable jobs and enhance food security. All year round irrigated farming may increase food production and create employment opportunities for farmers especially women and youth.

However, irrigation schemes raise issues regarding land tenure and the development of irrigation infrastructure by either government or development agencies can significantly increase land values which may subsequently increase conflicts over land access and tenure, increase speculation in land and the development of inequalities in land assets and wealth (GLTN/IFAD, 2013). Thus, irrigation may entail suppression of existing land rights, and the reallocation of land and water rights to users who may not be the original right holders (Cotula, 2006). (Zwarteveen & Meinzen-Dick, 1998)argues that irrigation is perceived to be the activity of men, and that women are not considered to have direct interest, they are therefore excluded from making critical decisions on irrigation projects. The dominance by men makes it difficult for women’s specific concerns to be heard. It is important for policy makers, planners, engineers and all the interested groups in irrigation development to draw a balance that takes care of the needs of both men and women in formulating irrigation policies so as to reduce the problems of access to irrigated land by vulnerable groups especially, women.
Land ownership remains a major challenge in many parts of Ghana, particularly in the Upper East Region because of the fragmentation of land holdings. Lands in the region mainly belong to individual families or clans, making it difficult to acquire land of any significant size for irrigation development.

**Methodology.**
This is a qualitative research using mixed method approach. The mixed method approach is useful in triangulating and increasing reliability (Blaikie, 1991). The study seeks to understand how women can access irrigated land in a patrilineal customary area and to understand individuals and communities’ perceptions on the effect of such access to productive land on poverty reduction.

Different sources of both primary and secondary data were used. These include focus group discussion with management of WUA, original land owners who leased the land to GIDA, male and female farmers. Semi structured interview guides were used to individual interview farmers, traditional leaders, the agricultural extension officer, the Regional Director of GIDA. Field data collection was carried out by two trained undergraduate students from the Department of Geomatic Engineering who are indigenes from the community.

Baare is a small community. It was therefore easy to collect data on naturally occurring behaviours of people in their usual contexts through participant observation. A walk through the community and around the dam was undertaken while observing, discussing and conducting informal interviews with Key Informants, local farmers’ management of the WUAs and others. The field observations provided useful insights on the user rights of women farmers, state of the reservoirs’ infrastructure and maintenance works; catchment area protection and soil erosion control measures; irrigation methods and farming practices used by farmers. Fifty farmers (35 female and 15 males) were interviewed.

Narrative and discourse analysis methods were used in analysing how individuals and communities perceived the granting of farming rights to women on irrigated land during the dry season.

**Observations and discussions**

Project development
Baare Irrigation Scheme is a community project developed by Ghana Irrigation Development Authority (GIDA) under the Small Scale Irrigation Projects (SSIP). The land for the irrigation
The project was not acquired by Government but was donated by the community. The facility was handed over to the community to manage under GIDA’s supervision. All community members, irrespective of one’s ethnic background, sex, age, religion or social status including women and the disabled, are allowed to participate in the project. The community is of the view that irrigation is crucial for their survival as a subsistence farming community. It improves their livelihood, in the face of the current unpredictable weather changes.

Conditions for the construction and management of the dam

The following arrangements were reached:

- The community was to provide land for the project. The chief of Baare donated land for the construction of the dam.
- Land within the catchment within the catchment area of the dam were consolidated and right holders signed undertaking to lease the land for the project for 99 years with GIDA.
- GIDA’s right to use the land was only limited to dry season farming and was to be returned to the original land owners to farm after the dry season.
- No compensations were paid to the land owners during the acquisition however arrangements were made for the community members using the facility to pay an amount to the land owners every crop season. This amount is to be paid into an Irrigation Service Charge (ISC) fund.
- An agreed percentage of the ISC per year is paid as land rent land owners (As at 2014, GIDA put the ISC per year to GH¢ 203.00 per hectare and 3% of this were paid to land owners).
- A cooperative called Water Users Association (WUA) to be solely responsible for project management was formed by community members.
Management of Baare Irrigation Project

The construction of the dam was carried out under direct supervision of GIDA, however after completion of the project it was handed over to WUA. Zwarteveen & Meinzen-Dick (1998) identified official land right holding and family headship, among others, as pre-requisites for management positions in WUA. However in Baare, WUA is open to all community members who are interested in farming during the dry season. One need not be a land right holder or a household head to be a member, since the land reverts to communal use during the dry season and one need not be a household head to participate. Thus, a major hindrance to women participation and management in WUA is addressed.

Three committees are created out of the WUA to manage the irrigation. These committees are Land Allocation Committee (LAC), Water Distribution Committee (WDC) and Financial Committee (FC) as indicated in Figure 2. The composition and use of the land allocation are discussed.

![Diagram of Management of Baare Irrigation](image)

**Figure 2: Management of Baare Irrigation**

**Land allocation committee**

The membership of LAC includes; the District Chief Executive (DCE) as Chairman (the DCE is the representative of the President in the District), the Assemblyman (an elected community representative to the local authority), the Chief of Baare, two representatives of GIDA and other members elected by the WUA. The mandate of LAC is to allocate farm land.
to farmers who express interest in farming in the irrigable area and meet the requirements set by the WUA. During dry season, every piece of land that falls within the irrigable area revert to GIDA and it is allocated to interested individuals by LAC on a first come first serve basis without any discrimination. A respondent argued that even though there seems to be no discrimination in the allocations, the plot sizes were not equal. This was confirmed by the community agriculture extension officer, however, he explained that farmers who get allocations in the middle portion get smaller size than those at the peripheries because normally farmers at the periphery have challenges with animal control and that is the reason why they get bigger sizes. This suggests that the Baare community irrigation does not conform to the assertion made by Zwartveen (1995) that, it is usually the male water users’ needs that are taken into account in irrigation projects. A key informant explained that the increase in the number of women participants is partly due to the fact that the funding agencies made equal access to women a prerequisite requirement for funding. The total irrigable area acquired for the project was 12 Hectares initially, but this has been increased to 15 Hectares. On the average, farm sizes are about 15 metres by 15 metres.

**Water Distribution Committee (WDC)**

This committee is responsible for ensuring that farmers in the scheme get water at the appropriate time. The farm land is divided into two blocks, and the committee decides when each block is to be supplied with water. They also supervise the creation of local or manual canals to complement the only canal provided by the project planners.

**Finance Committee (FC)**

The FC is charged with the collection and disbursement of ISC from farmers every crop season as per an agreed formula. The ISC as at 2014 was GHC203 and a percentage of this amount is supposed to be paid into GIDA Accounts. However, according to a GIDA official the WUA does not honour this agreement. A member of the WUA explain that once money is paid to government account it is very difficult and time consuming to retrieve such money, so they keep the money for regular maintenance of the dam.

**Benefits to the community**

As at the time of data collecting, the main crop cultivated in Baare were vegetables. Most
farmers (about 93%) cultivated okra, the rest of the farmers planted pepper and other vegetables. However, about 43% of the farmers preferred tomato production to okra farming because tomatoes are in high demand. However, most farmers have resorted to the planting of okra because there was an outbreak of tomato disease which reduced their yield. 14% of the farmers (all men) thought that rice production give them better income. The Regional Director of GIDA is of the view that most farmers at the Baare irrigation are women because of the insistence of the WUA that farmers plant mainly vegetables. Figure 3 shows some women preparing fresh vegetables from their farms for the day’s meal in the dry season. This is only possible because of the irrigation.

Women also take active part in the maintenance of the irrigation infrastructure in Baare. Figure 4 show women carrying sand and gravel at the ongoing exercise to re-embank the dam. Thus, women in the community who may not necessarily be farmers make extra income to support their families as a result of the dam.

**CONCLUSIONS**

Access to irrigated land at Baare is granted by a committee charged to allocate land to farmers with all fairness. The land allocation committee ensures that every farmer who meets their requirements is given a piece of the irrigated land to farm. One can see equity in land allocation in this irrigation scheme because more priority is given to women who unlike their male counterpart have equal access to farm land only in the dry season. This is contrary to an observation made by UN-Habitat (2012) that introduction of irrigation into previously rain-fed farmlands, or when roads are built to link farmers to markets, the new economic potential of the land makes it more attractive. Consequently, small-scale producers may lose their land to more affluent or powerful interests (UN-Habitat, 2012). The Baare irrigation has attracted a number of farmers in the area. The number of registered farmers in the project was initially 107, but as at 2014 the number increased to 185 farmers. The results of the study shows that out of 185 farmers who farmed the irrigated land during the last dry season 2014, 104 of were women, representing 56.2% of the total farmers. It was observed that women played active part in all aspects of the management of the project.
The composition of the LAC may also be a major factor. The high-powered committee made up of local government and customary leaders does not leave room for customary leaders to enforce their customs, thus men and women are treated equally. Allocation is on a first come first serve basis. The only condition is meeting the requirement of the WUA. The original land owners argue that as long as the land is not permanently alienated, but reverts to them during the raining season, they have no problem with whoever is allotted the land.

REFERENCES


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