Research article

Gender Partiality in Land Ownership and Water Distribution in Rural Tanzania

YUMIKO TANAKA*
Institute of Social Sciences, The University of Tokyo, Tokyo, Japan
Japan International Cooperation Agency (JICA), Tokyo, Japan
Email: Tanaka.Yumiko@jica.go.jp

EIJI YAMAJI
Graduate School of Frontier Sciences, The University of Tokyo, Tokyo, Japan

Received 14 December 2012 Accepted 30 January 2013 (*Corresponding Author)

Abstract The social and economic impact of modernisation processes of agriculture is diverse in rural sub-Sahara Africa.With the introduction of modern agricultural technology, such as high yield varieties, irrigation infrastructure and water distribution, paddy yield increased in Lower Moshi Irrigation Scheme (LMIS) in the Kilimanjaro region in Tanzania. The major aim for developing LMIS was to reduce rural poverty through improving food security and income from paddy production. It was partially achieved, however, generated controversial effects of unequal land and water distribution. In Tanzania, 84% of the female labour force is engaged in agriculture, consisting of about 50% of the total agricultural labour force. However, female farmers have limited access to and control over land and water due to pre-existing social and customary practices, as well as limited participation in the decision-making processes. Land ownership is a condition for obtaining a membership in the water association. And water is becoming scarce due to climate changes, encroachment on the forests and conflicts between upper-stream and down-stream. The main objective of this paper is to analyse relationships between women's land ownership and water distribution through a case study of modern irrigation project. The research methods used are literature review, semi-structured interviews with male and female farmers, and statistical data analysis of landholdings. Main results of the study are: 1) the number and share of female land ownership increased in the last 25 years, however, the social and gender partiality about land inheritance and ownership are still persistent which prohibit female farmers from equal access to irrigation water, 2) changing regulations and practices of water users associations to be more gender-responsive lead into more equitable and impartial water distribution.

Keywords gender partiality, land ownership, water distribution, modern irrigated agriculture, Kilimanjaro, Tanzania.

INTRODUCTION

Land has a central value for people in sub-Sahara African countries providing a source of identity, food security and income, and constitutes an asset of cultural and spiritual significance as well as increasing market commodity (Benjaminsen and Lund, 2003). As land becomes scarce and acquires economic value, a demand for more individualised and formalised land ownership rights increases. An evolutional theory of land rights has been debated by researchers on land tenure system in Africa leading to the criticisms that it is un-automatic for rural societies to "evolve" from informal/customary practices, and successfully adopt formal/statutory laws (Platteau, 1996). Rural women, subsistence farmers and pastoralists are most unlikely to be guaranteed for the security of land tenure if the formal land titling is provided (Yngstrom, 2002; Odgaard, 2003). The development agencies argued that the farmers become more productive and efficient provided with the formal land titles and would increase investment in agriculture production. However, it is unclear under what specific conditions the security increases, especially for female farmers and

small landholders.

In Tanzania, the Land Act 1999 guaranteed the gender equality in legally acquiring and owning the land through registration and having the land title. The Village Land Act 1999 provided for women to be involved in decisions regarding the use and disposal of village land through equitable representation in the village land councils. The Land Act No.2 of 2002 established Land Tribunals regulating the assignment of at least 43% of women as tribunals, and Land (Amendment) Act 2004 allowed women to mortgage their land on the same basis as men.

In reality, however, women tend to lose customary land and water rights along with land commoditisation processes and modernisation of irrigation systems (Upperman, 2000; Englert, 2008). The customary rights of water are closely associated with land rights. Since the efficacy of land laws has been dismal and women are continuously excluded from accessing and owning the land, the discriminatory decision-making processes and inheritance practices, dominated at the household and community levels, need to be scrutinised (Mascarenhas, 2007). Given that 84% of the female labour force is engaged in agriculture, consisting of 50% of the total agricultural labour force, knowing how to secure land and water rights with substantive effects for female farmers needs to be examined.

OBJECTIVE

The main objective of this study is to analyse the relationships between women's land ownership and water distribution and find a new perspective for changing gender partiality through a case study of Lower Moshi Irrigation Scheme (LMIS) project in the Kilimanjaro region in Tanzania.

METHODOLOGY

Methodologies adopted in this study include: 1) literature reviews; 2) analysis of 1,845 sampled farmers based on dispersed lists of landholders between 1987 and 2013 kept by the Lower Moshi Irrigation Association (LOMIA) and LMIS office, which the author consolidated and analysed; 3) interviews with farmers (8 persons in 2011 and 42 persons in 2012), local government officials, LMIS office staff and Japanese experts. The first fieldwork was conducted in July 2010, the second in November 2011 and the third in August-September 2012.

RESULTS AND DISCUSSION

The LMIS is located at a distance of 15 to 20 km in the southeast of Moshi town in the Kilimanjaro region. It was developed with financial and technical assistance by the Japanese government. The irrigation facilities were handed over to the Tanzanian government after completion in 1987. The irrigated area for paddy is about 1,100 ha in total. There are 5 divisions (Upper Mabogini, Lower Mabogini, Ru ya Kati, Chekereni and Oria), consisting of 45 blocks with about 3000 plots in total (Fig. 1). Each block is about 10ha to 30ha. Average plot size is 0.3ha. The average paddy yield increased from 1.5-2.0 tons/ha to 6-7 tons/ha as a result of the project.

Based upon the data obtained from the LOMIA lists of landholders, it was found that the female farmers consist of 21.1% of total numbers (390 females out of 1,845 landholders), and they owned 16.8% of the total plots. Therefore, it was found that an overall gender gap exists in land ownership. As shown in Fig.2, the frequency distribution of landholdings indicates that average size of the female-owned plot is more concentrated towards the smaller size than those of male farmers meaning that female farmers are more clustered at the subsistence levels.

One block each from Upper Mabogini, Lower Mabogini and Chekereni was selected for this study. The selection criteria are: 1) the blocks belong to the up-stream with plenty of irrigation water, mid-stream with rotationally distributed water and down-stream with acute water shortage; 2) the share of female landholding exceeds 20% of the total block of landholders; 3) the share of female landholding areas exceeds about 20% of the block area; 4) the average size of female landholding is less than 3,000 m^2, meaning that the majority consists of small-holders.

In all the blocks studied, the number of female landholders increased, as well as their share as shown in Fig. 3. However, data of Lower Mabogini in 1987 was unavailable. Female's share reached to almost 50% in Upper Mabogini and 57% in Lower Mabogini in 2013. The female share of the total landholding areas also increased in all the blocks as shown in Fig.4. It reached up to 51% in Upper Mabogini and 44% in Lower Mabogini. The changes in the average size of the plots owned by farmer poses a somewhat different trend from the previous figures as shown in Fig.5. Only in Upper Mabogini the average size of the plots owned by females had increase, whereas in the other two blocks it decreased between the year 2008 and 2013. In the case of male farmers, it decreased in all the blocks. The average size of the plots owned by farmers had also decreased meaning that the segmentation of land has been progressed in all the blocks.

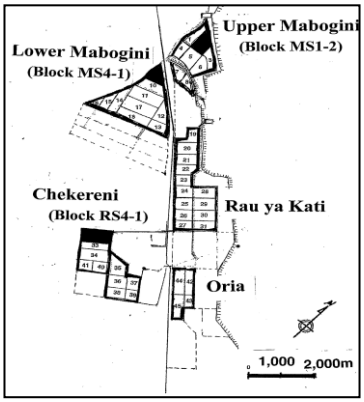

Fig. 1 Divisions in LMIS and three blocks studied

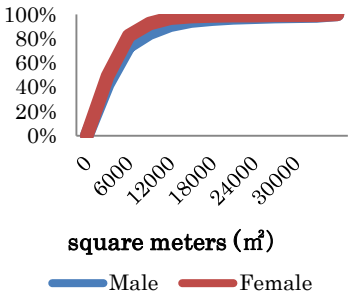

Fig. 2 Frequency distribution of average landholding size per farmer in LMIS

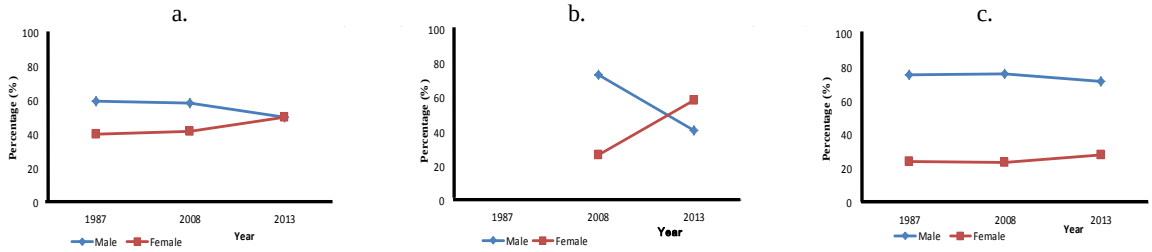

Fig. 3 Share of total landholders by gender

a. Upper Magobini (up-stream), b. Lower Mabogini (mid-stream), and c. Chekereni (down-stream)

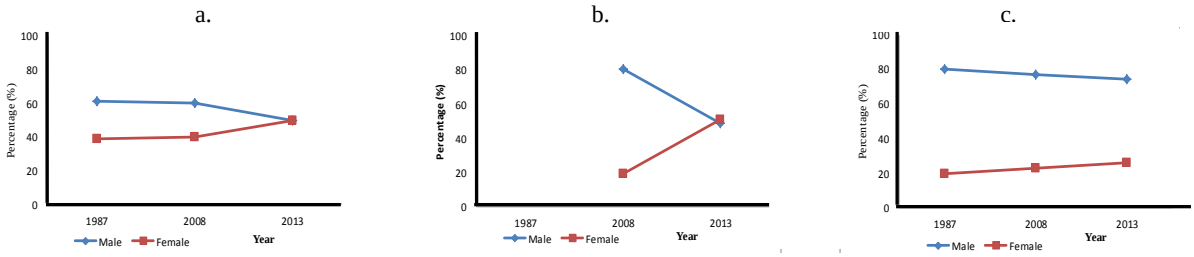

Fig. 4 Share of total landholding area by gender

a. Upper Magobini (up-stream), b. Lower Mabogini (mid-stream), and c. Chekereni (down-stream)

The changes in female holding plots in Upper Mabogini, Lower Mabogini and Chekereni are shown in Fig. 6, 7, and 8, respectively.

The share of female land owners, the number is increased in all 3 blocks in LMIS as indicated above. It reached nearly half in the case of Upper Mabogini and Lower Mabogini, indicating "feminisation of agriculture" is taking place, however, the changes have been rather slow in Chekereni. More female farmers are engaged in paddy production today, whereas men are breaking

away for alternative sources of income. On the other hand, the average size of landholding declined in all the blocks. This means more numbers of female farmers became landholders but held a much smaller size plot, except in Upper Mabogini, where the average size of female landholding slightly increased.

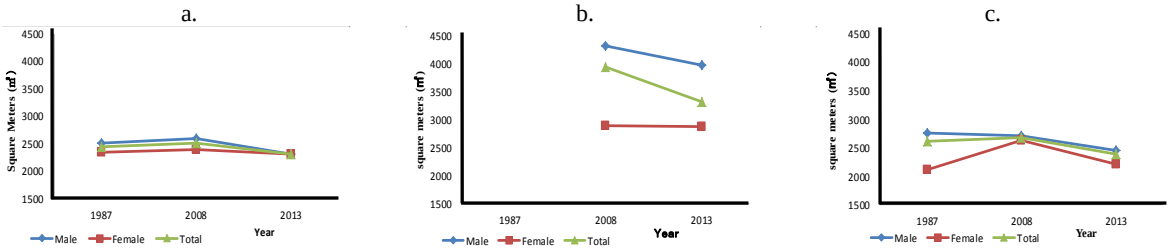

Fig. 5 Average plot size owned by a farmer

a. Upper Magobini (up-stream), b. Lower Mabogini (mid-stream), and c. Chekereni (down-stream)

Fig. 6 Changes in female owned plots in Upper Mabogini (up-stream) from 1987 to 2013

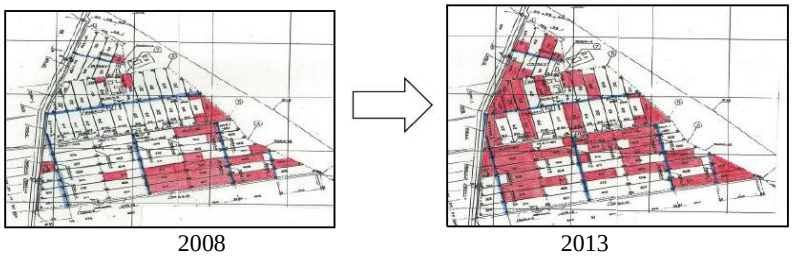

Fig. 7 Changes in female owned plots in Lower Mabogini (mid-stream) from 2008 to 2013

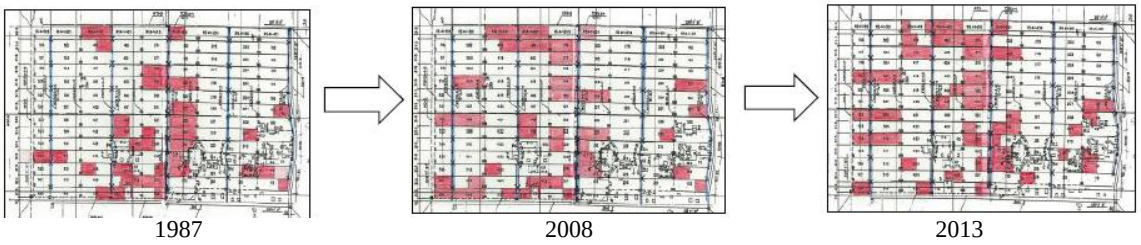

Fig. 8 Changes in female owned plots in Chekereni (down-stream) from 1987 to 2013

The socio-economic features as well as the difference in views about water rights of Upper Mabogini, Lower Mabogini and Chekereni are shown in Table 1. If women have more access to education, information and networking, they are less bound by traditions and attending LOMIA meetings and speak out about their views as seen in Upper Mabogini and Lower Mabogini. Some women groups organised themselves into collective farming using rented plots. With their earnings, they even purchased the plots. They are also active in engaging in non-farm income-generating activities. On the other hand, women in Chekereni down-stream face extreme difficulties with obtaining water. They pay water fees to LOMIA, but unable to access water. They face difficulties in physically fighting over water with male farmers and going out at night waiting for their water

turn. Thus, they have to pay extra amounts to send some men to secure water at night. They complained about unfair distribution of water, but if they are widows and do not have sons, their voices are unheard in the negotiations and meetings. Although, in principle the water rights are attached with landholding rights, the landholding rights do not automatically guaranteed to female farmers with securing water rights. They get more marginalised when water gets scarce.

Table 1 Main features of three irrigation blocks studied

	Upper Mabogini (Up-stream)	Lower Mabogini (Mid-stream)	Chekereni (Down-stream)
Geographical conditions	Surrounded by a river and spring, restricted for area expansion.	Originally flat upland, so expansion was easy.	Arable land became unavailable for new comers by 1980s.
Water situation and paddy cultivation	Due to plenty of water available, they continued cultivating paddy twice a year since 1987.	Water is not enough. Paddy cultivation is rotational, once in 2~3 years. They alternately grow maize.	Due to acute water shortage since 2008, they stopped cultivating paddy. Instead, they grow maize and beans in the plots today.
Social features	Early settlers. Little support by government as it is near Moshi town. Many live in the town and have alternative income sources.	Multi-ethnic groups migrated into the area. The tradition is not so strong, and women inherit and purchase the land.	Migration started in early 1970s. Government provided support. Now the most impoverished area. Local governance is weak.
Landholdings	Mostly small farmers, with a few large holders.	Many large holders, as land was cheap and abundant.	Mostly small holders under collective farming (*Ujamaa*).
LOMIA (water association)	People are not interested in LOMIA. But recently, leaders taking initiatives for collective repair works of infrastructure.	LOMIA is relatively well functioning, and farmers, both men and women, follow the water distribution calendar.	Due to acute shortage of water, severe disputes occur within the blocks and between mid- and up-streams. LOMIA is not working.
Ideas about water conflicts and distribution	Most men and women think they have customary rights and priorities to use water as they are up-stream, and down-stream should grow maize. However, renters, labourers and young owners think the water distribution should be rotational, and one woman renter even thinks that they should skip one season in Upper Mabogini.	The block leader and some women think the water should be used rotationally. One woman land owner even thinks the water distribution should start from the down-stream, Chekereni, since they are suffering most from water shortage.	Most men and women think that the up-stream does not have priority rights to water and water should be used rotationally in all LMIS. Majority think that water should be distributed equally. Women and widows have great disadvantages for negotiating with watermen and accessing water, especially at night to get water turns.
Women's activities and groups	Most women live in the town. They have better access to education and information, and individually actively engaged in economic activities.	Women groups are active in income-generating activities and collective paddy cultivation in rented plots.	Only churches and mosques organise small women's groups. Women are busy working as wage labourers in other places. Not attending village meetings.

Source: Field interviews undertaken by the author.

"Ujamaa" is collective farming and villagisation policy introduced by government in the 1970s.

Women can obtain agricultural land but have to go through difficult processes. The ways they obtain land are mainly by inheritance from father (occasionally mother or family members), by inheritance from husband, by purchasing with own money, and in earlier days during 1960s and 1970s by allocation through official institutions such as colonial government, collective farm system, etc. The main ethnic groups in LMIS are Chagga and Pare. In Chagga tradition, land is the source of identity, providing cultural and spiritual values. It has been and still is only the male members who inherit their family and clan's land, as women get married outside of the clan member. It is shameful for men without land, thus leading into fragmentation of arable land after generations. With the enactment of Marriage Laws (1971 and 2002) along with women's groups movement, such practices are gradually changing, however, still persistent in their discourse on landholdings.

Women's landholding is mostly relational. The widows can inherit husbands' land today, however, mostly before passing them onto their sons. They are unable to sell family and clan's land, but can sell self-acquired land after marriage. In addition to the cumbersome bureaucratic procedures and money cost to formalise the land title, they are afraid that such an action may cause unnecessary suspicion among the sons and family members, and as a result they may lose the usufruct rights. They know that if they keep quiet about the formal rights, they can continuously use the land. As long as one can count on the good will of village offices and community members who they know in the village, the security of customary land rights might be guaranteed. However,

women are also aware of the constraints and risks of such situations.

LOMIA allows only the land owners to be a member and attend the meetings. The renters and labourers are usually excluded though the majority are women who are engaged in the major part of cultivation and maintenance of irrigation facilities. Female landholders are called for the meetings when their labour contributions for irrigation maintenance are required and water fees need to be collected. Women are more willing to talk about water allocation issues between up-stream and down-stream and sharing water resources as shown in Table 1. However, their participation in LOMIA activities is non-active. There are only 3 women out of 28 central board members of LOMIA and they are only serving as treasurers.

CONCLUSION

The main findings of this study are: firstly, although the number and shares of agricultural land owned by females was increased from the past 25 years, it is not automatically considered a gain for women. In order to secure land rights, LOMIA should provide legal consultations and information to women so that they can easily register their names as landholders; secondly LOMIA should allow both of husbands and wives as well as cultivators participation in decision-making processes for water distribution. Women and cultivators (renters and labourers) are more open to talk about sharing water between up-and down-streams, which would lead into creating new and more impartial systems for water distribution; thirdly, the Lower Moshi irrigation office should prove technical guidance on saving water in up-stream with proper infrastructure maintenance, which women farmers are already involved and thus their knowledge and views may lead to more appropriate maintenance means. As some interviewed women commented, if they will get more chances to get involved in meetings and decision-makings, they can speak out and share their ideas.

ACKNOWLEDGEMENTS

The authors would like to express deep appreciations for those kindly providing valuable support for undertaking this study: Dr. R. M. Mwaipopo of Dar es Salaam University, Ms. Anne N. Assenga, Ministry of Agriculture Food Security and Cooperative, Mr. R. Makange and Mr. G. Chonjo of LMIS Office, Mr. M. Tomitaka and Mr. N. Oizumi of TANRICE, and all the people concerned. A major part of this study was supported by JSPS KAKENHI Grant Number 23510341.

REFERENCES

Benjaminsen, Tor A., and Lund, C. (eds.) 2003. Securing land rights in Africa, Frank Cass, London.

Englert, B. and Daley, E. (eds.) 2008. Women's land rights and privatization in Eastern Africa. James Currey, Suffolk, UK.

Mascarenhas, O. 2007. Gender profile of Tanzania: Enhancing gender equity, Tanzania Gender Networking Programme (TGNP) and Swedish International Development Cooperation Agency (SIDA), Dar es Salaam, Tanzania.

Odgaard, R. 2003. Scrambling for land in Tanzania: process of formalisation and legitimisation of land rights. In: Securing land rights in Africa, Benjaminsen, Tor, and Lund, C., eds., Frank Cass, London, UK.

Platteau, J.P. 1996. The evolutionary theory of land rights as applied to sub-Saharan Africa: A critical assessment. Development and Change, 27(1), 29-86.

Upperman, E. 2000. Gender relations in a traditional irrigation scheme in Northern Tanzania. In: Gender, family and work in Tanzania, Creighton, Colin and Omari, C.R. ed., Ashgate, England, 357-379, Tanzania.

Yngstrom, I. 2002. Women, wives and land rights in Africa: situating gender beyond the household in the debate over land policy and changing tenure system. Oxford Development Studies, 30-1, 21-40.