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# Women and Access to Land in Smallholder Irrigation Schemes: The Case of Ngondoma Irrigation Scheme in Zhombe (Zimbabwe)

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**Abstract:** The study examines women's access to land in Ngondoma irrigation scheme. Results of in-depth on-site interviews showed that 75% of farmers who hold land rights in the scheme are women. The paper argues that land acquisition by women is inadvertent rather than a result of explicit policy decisions to empower women. Once acquired land is held in perpetuity. Some women acquired land in their own right 42%, while others acquired land from; in-laws 40%, matrikin 6%, patrikin 4% and nonfamily 8%. Land holdings vary in size from 0.1 ha to1.0 ha. Decline in size of holdings between 1968 and 2003 is attributed to land fragmentation due to cultural practices of partible inheritance. Problems faced by women include spousal control over marketing of produce, demand by disemployed spouses to have title to land, high costs and unavailability of inputs as well as produce wastage due to lack of markets.

**Key words:** Land, smallholder irrigation scheme, women access, ngondoma, Zimbabwe

## INTODUCTION

Despite the adoption of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1979, the Rome declaration on world food security and the world food summit plan of action in 1996, macro and micro level gender disaggregated data show that the majority of the world's landless are women. Globally, women have title to only one percent of the world's land; yet, paradoxically, women produce over half of the world's food and provide significant unpaid agricultural labour for other crops. In developing countries, women are over- represented in agriculture, producing up to 80% of all foodstuffs in Sub-Saharan Africa, 50-60% in Asia, 46% in the Caribbean and 31% in the Middle East[1] .

All the seven Commitments of the world food summit plan of action (1996) highlight the role of rural women in household and national food security. Rural women continue to have unequal access to productive natural resources (land and water), credit, appropriate technology, extension and decision making positions. Country specific indicators show that despite legal equality between men and women, the latter's economic empowerment is often compromised by social positional and status inequalities that reinforce women's secondary position in society which, as a result, peripheralizes their entitlement and access to productive resources[2].

With only 31% of the population living in urban areas, Zimbabwe is essentially a rural country[3]. Worldwide rural poverty accounts for 63% of poverty and up to 90% in Sub-Saharan Africa. Female-headed households are amongst the poorest in all societies[4]. Because of declining aggregate food production levels, raising agriculture productivity thresholds has often been seen as an integral component of rural development programmes because of its multifaceted approach to solving such problems as rural unemployment, poverty, household food insecurity and poor standards of living.

In Zimbabwe, agriculture's contribution to GDP ranges from 10-22%. Variability is determined by seasonal distribution of rainfall, which varies from year to year. Agriculture provides 27% of total employment and more than 50% of the country's exports. Per capita income has declined steadily over the years due to high rates of inflation, high budget deficits, low levels of investment in the productive sectors, falling real wages and high unemployment[5]. According to the UNDP poverty assessment report[6], 73% of Zimbabweans are classified as poor[7]. It is against this background that irrigated farmland is viewed as a premium resource because land and water form the basis of all farming systems[1,8,9].

Rural women's ability to access and use scarce land and water resources in Zimbabwe is often constrained by social exclusion, population pressure, gendered land rights, privatization and institutional failures. This reinforces the fact that women are marginalized in many important socio-economic processes[10]. While, historically, women have been neglected as subjects and objects of development, there is an increased realization by governments, donors and communities that, particularly in agriculture, no meaningful development can

take place unless women are granted access to all resources[2]. Excluding women in rural development programmes underutilizes half to over half of the potential human capital[9]. It is out of this realization that South Africa has undertaken a commitment to make sure that women constitute, at least, a third of beneficiaries of the land reform programme[1]. Under the current land reform programme (2002), the Zimbabwe Government also outlined its intention to allocate land to women in their own right. However, as observed by Kajoba[11], for women, having legal rights does not necessarily guarantee access or ownership.

The purpose of the study was to:

- examine causal factors for gender based inclusion or exclusion in the irrigation scheme.
- determine the proportion of women land title holders in the irrigation scheme.
- assess the level of gender inclusiveness of irrigation institutions at the scheme.
- highlight problems faced by women farmers in the scheme.

## THE STUDY AREA

Ngondoma Irrigation Scheme is 44.4 hectares in size. The irrigation scheme is located in Kwekwe District in Zimbabwe's Agro-Ecological Region Three. The area is generally dry with an average annual rainfall of 550 mm, which falls intermittently during the summer season[12]. The main human activities are subsistence and intensive crop cultivation. Population density in the province is 27 people per $km^2$[3].

## METRIALS and METHODS

The irrigation scheme is divided into two sections A and B of approximately the same size. Section A represents the oldest part of the scheme while section B represents the annex or the newer part of the scheme. Section A farmers access water for irrigation on Mondays while section B farmers access irrigation water on Wednesdays. Of the 179 farmers in the scheme, 134 are women. Each section of the scheme had an equal number of women farmers, namely, 67. In order to get a representative sample of women farmers from both sections of the scheme, the following procedures were followed:

- A list of names of all women farmers in the scheme was abstracted from the farmers' register kept by the scheme's management committee.
- Women farmers were then assigned or grouped into two categories on the basis of whether their plots were in section A or section B of the scheme.
- Names of women farmers in each section of the scheme were matched with the corresponding plot numerical identification tags, for example, $A_1$ (as a plot identification tag), refers to the first plot in section A of the scheme, while $B_3$ refers to the third plot in section B of the scheme.
- For each section of the scheme, plot identification tags were then used to draw up a modified list of women farmers where names were ranked chronologically in ascending order as determined by the plot's rank (e.g. $A_1$, $A_2$, $A_3$----------$A_{67}$).
- Using lists of women farmers (derived as in 4 above) systematic random selection was then used to select 25 women farmers from each section of the scheme who were subsequently interviewed.

To obtain background information pertaining to the gender composition of farmers in the irrigation scheme, land entitlement, tenure history, land acquisition procedures, crop regimes and size of land holdings, on-site in-depth interviews were conducted with the resident Agriculture Extension Officer, the land management committee chairperson and 50 women farmers. Questions on the interview schedules were pilot tested on 20 women farmers. Responses were then used to improve the quality of the research instruments.

## RESULTS AND DISCUSSION

**Background characteristics of respondents:** Background characteristics of women with land rights in the irrigation scheme are shown in Table 1.

The youngest woman was aged 19 years while the oldest woman's age was estimated at 79 years. Twenty percent of the women had no education. Only 66% of the women were currently in union. The average size of households was seven. Fifty percent of the women had held land rights in the irrigation scheme for at least 15 years or more.

**Methods of acquiring land in the irrigation scheme**: Under indigenous land tenure systems, women in Sub-Saharan Africa, generally, lack individual rights to land, water and other productive resources. In irrigation schemes, however, there is individualization and formal titling of land[13]. Against this background, the study sought to determine how women acquired land in the scheme.

Forty two percent of women were allocated land in their own right after applying to the scheme's land management committee. Forty percent of women acquired

Table 1: Background characteristics of respondents (n 50)

| Characteristics | Percent |
|---|---|
| Age | |
| <30 | 30 |
| 30-49 | 36 |
| 50+ | 34 |
| Education level | |
| Tertiary | 0 |
| Secondary | 38 |
| Primary | 42 |
| None | 20 |
| Marital status | |
| Currently in union | 66 |
| Divorced | 10 |
| Widowed | 20 |
| Single | 4 |
| Number of people per household | |
| <4 | 6 |
| 4-5 | 18 |
| 6+ | 76 |
| Duration in the scheme (years) | |
| <5 | 20 |
| 5-8 | 10 |
| 9-15 | 20 |
| 15+ | 50 |

Table 2: Methods of acquiring land in the scheme

| Methods | Percent |
|---|---|
| In own right | 42 |
| From patrikin | 4 |
| From matrikin | 6 |
| From in-laws | 40 |
| From nonfamily | 8 |
| Total | 100 |

land through in-laws. Eight percent of the farmers acquired land from nonfamily. Unlike the situation in mainstream subsistence agriculture where less than 30% of African women have control over family land[14], women in the irrigation scheme have a direct relationship to land as it is registered in their names. While access to irrigation land has given rise to beneficial outcomes, the fact that women are the main beneficiaries of land in the scheme (75%) is by default rather than as a result of an explicit policy decision to empower women. Because farmers work an average of five days per week in the scheme, the key criterion for accessing land in the scheme is that one should not be in gainful employment elsewhere. According to CSO[3] the unemployment rate in the Midlands Province in 1992 was 28.2% excluding communal farm workers. The majority of unemployed people in rural areas are women. In 1992, there were 66% of females in the Midlands Province who were economically inactive[3].

In local terminology, irrigation farming is referred to as backbreaking all year round gardening (food production), a task that traditionally has fallen on women and been shunned by men. Most men were reported to prefer jobs in the formal sector or other short-term gain non-farm pursuits like gold panning. For these reasons access to land by women in the irrigation scheme should be interpreted in this context. The fact that it is predominantly women (75%) who hold land rights in the scheme reaffirms the status quo, namely that, women are the major food producers and provide much of the agricultural labour for other crops. Admittedly, irrespective of the mechanism of acquisition of land by the women, having land rights in the irrigation scheme in an area that experiences periodic hydrological droughts has yielded direct benefits to their families[15]. Having title to land does not make women the sole farm decision makers. For some women tenure security is under threat. Ten percent of married women reported harassment by disemployed spouses who want land rights transferred to them in accordance with existing traditional and cultural norms[16].

**Size of holdings:** Plot sizes in the scheme are variable as shown in Table 3.

Landholdings in the scheme range from 0.1 ha to 1.0 ha. The majority of farmers have smallholdings. Among those surveyed 52% of farmers have holdings 0.1 ha in extent while 74% of farmers have holdings measuring less than half a hectare in extent. At the scheme's inception in 1968, the inaugural number of farmers was 20 and total hectarage of the scheme was 33. Farmers had holdings measuring one hectare each. Current scheme hectarage following phased extension is 44.4. The total number of farmers is 179. If land were equitably distributed among farmers each farmer would have about 0.2 ha.

Decline in size of holdings is attributed to land fragmentation due to cultural norms of partible inheritance and entry of new farmers both male and female due to high demand for land and high national levels of unemployment (70%) [3,17]. The average per capita arable land in Zimbabwe in 1997 was 0.27 ha[18]. Women farmers reported that accessing land in the scheme was easy between 1968 and 1981 as demand for land was low since men had greater likelihood of getting employment in the formal sector. Following the introduction of the Economic Adjustment Programme in October 1991, widespread job losses due to company closures resulted in high demand for land in the scheme[19,20]. By 1999, the scheme's capacity had been reached.

**Per capita land per member of household**: Based on an average house hold size of 7 people among scheme

Table 3: Size of landholdings in the irrigation scheme

| Size of holdings (ha) | No. of Women Farmers | Percent |
|---|---|---|
| 0.1 | 26 | 52 |
| 0.2-0.4 | 11 | 22 |
| 0.5-0.7 | 9 | 18 |
| 0.8-0.9 | 2 | 6 |
| 1.0 | 2 | 21 |
| Total | 50 | 100 |

Table 4: Size of land per capita

| Size of holding (ha) | Land per capita | Percent of households | Farmers' comments on size of plots |
|---|---|---|---|
| 0.1 | 0.01 | 52 | Desire more land |
| 0.2-0.4 | 0.03-0.06 | 22 | Desire more land |
| 0.5-0.7 | 0.07-0.1 | 18 | Satisfied |
| 0.8-0.9 | 0.11-0.13 | 6 | Satisfied |
| 1.0 | 0.14 | 2 | Satisfied |

farmers, land per household is meager. For example, for 52 % of farmers whose land is only 0.1 ha, a household member would have only 0.01 ha ofland on which to grow one to one and half rows of maize plants in summer or less due to unfavourable physiographic features on some sections of the scheme. Fifty two percent and 22% of farmers whose plots average 0.1 ha and 0.2-0.4 ha, respectively expressed dissatisfaction with the current size of their holdings and expressed a desire for more land. Because all land in the scheme has been allocated and there are no immediate plans to extend the size of the hectarage, additional land can only be obtained through expropriation of land from farmers whose performance record, as measured by production tonnage history is below potential yield, chronic failure by farmers to pay water and land rates timeously, or where a farmer leaves land fallow for three consecutive seasons. In the 12 months prior to the survey, only 4 farmers had lost land in this way. The incidence of this happening is infrequent and when it happens farmers compete for such land not only among themselves but also against applicants on the waiting list. Because holdings are too small to bring about marked changes in per capita food production, food supply and per capita income, most women consider land in the scheme as complementing dry land farming (Table 4).

**Production assets**: Farmers have limited access to production assets. Only 38 % of the farmers had all the production assets listed above. Twenty percent of women did not have critical production assets. Female headed households in particular had the least number of production assets in each category[11]. Coping strategies include hiring, borrowing or pooling resources together with other farmers. For some farmers time, energy and simple hand tools are the only major assets. (Table 5).

Table 5: Ownership of production assets

| Production assets | No. of women | Percent of Women farmers |
|---|---|---|
| Cattle | 33 | 66 |
| Plough | 33 | 66 |
| Scotch cart | 29 | 58 |
| Siphons | 28 | 56 |
| All the above | 19 | 38 |
| None | 10 | 20 |

Table 6: Crops grown by farmers per season and potential yield per hectare

| Season | Crops | Production targets per hectare |
|---|---|---|
| Summer | green mealies | 1500 dozens |
| | okra | 2000 buckets |
| | tomatoes | 60 tonnes |
| | leafy vegetables | variable (per type) |
| Winter | beans | 1 tonnes |
| | vegetables | variable (per type) |
| | wheat | 4 tonnes |

**Crop regimes**: Farmers grow basically the same range of crops per season irrespective of gender. The farmers determine crops grown per season with advice from the extension officer. Some married women reported having less control over marketing of produce compared to other farmers. This is consistent with observations made by Raftopoulous *et. al.,*[21], who reported that in the cotton growing area of Gokwe in Zimbabwe, 153 married women committed suicide after spouses squandered all proceeds from cotton sales. The disenchanted women's coping mechanisms include planting a few rows of leafy vegetables and groundnuts, crops over which they exert greater marketing control. These crops are traditionally considered women's crops.

**Use of produce**: Given the limited amount of land available to farmers, agricultural produce is predominantly used for household consumption and, when produce is sold, the income is used to meet household recurrent expenditure such as payment of children's school fees, purchase of clothes and agricultural inputs. Few farmers (2%) reported making enough money for investment or purchase of "luxury" consumer goods such as televisions, radios and solar panels.

**Problems faced by farmers:** The major problems are unavailability and high costs of inputs notably fertilizers, seeds and pesticides. Since year 2000, the agricultural sector has suffered from severe shortages of inputs attributed mainly to critical shortages of foreign currency. Devaluation of the Zimbabwe currency against major international currencies and high inflation (over 300%) have driven the costs of inputs upwards making them unaffordable. Problems are attributed to, among other factors, economic implosion, decline in export earnings, flight or lack of investment due to low investor confidence [6].

The national shortage of petrol and diesel in the last twelve months has constricted the farmers' marketing options. Long haul merchants who used to travel to the scheme to buy produce in bulk no longer do so. Shortage of the local currency in the last six months has affected the local market as well forcing farmers to sell their produce at the scheme or in the surrounding areas at give

away prices[22]. Produce that does not have a long shelf life like tomatoes and leafy vegetables causes farmers to incur losses. Farmers sometimes have no option but to barter their produce for clothes and household utensils brought in by urban merchants. Some farmers grow tomatoes and beans under contract to two companies that supply them with inputs but they are dissatisfied with conditions of the contract especially that produce is not weighed when collected on site but at the company's premises in the absence of the farmers. There is suspicion of under-invoicing and underpayment. Half the women farmers complained that water rates (Z$755) and land rates (Z$14.50) per season per 0.1 hectares and the land management fee of Z$100 reduce their profit margins. During September and October, which are the hottest months of the year, irrigation water is rationed because dam levels drop due to high rates of evaporation and low water holding capacity of the dams due to siltation. Crops grown in rows do not provide much soil cover[23]. The now ubiquitous alluvial gold panning also accelerates erosion. Poor fencing along the scheme's perimeter allows domestic and wild animals to destroy crops. Monkeys in particular are a major problem. Holdings on the fringes of the scheme are particularly vulnerable.

## CONCLUSIONS

In spite of the problems faced by farmers there was a commonality of views that women with land in the scheme are better off compared to those who depend entirely on dry land farming and who have no alternative sources of income. Women with land irrespective of size of holding contribute significantly to household food security, household income and family welfare by participating in productive income generation. Ninety-nine percent of farmers reported that agriculture was their only source of income. There is need therefore for increased public investment in irrigation schemes of this nature given the high incidence of hydrological droughts in the country. Land allocation in the scheme reflects the same socio-economic inequalities prevailing at macro level with some farmers having more land than others. Farmers with influence irrespective of gender, tend to acquire additional land ahead of those on the waiting list based on dubious grounds of observable good agricultural performance. Farmers who were allocated land have rights to the land and hold it in perpetuity, which also explains the disparities in the size of holdings.

While women have the arduous task of working the land with minimal production assets, some married women reported that their spouses control or exert influence over the marketing of produce. Some married women reported that their husbands are unhappy that land rights are registered in their names and expect that these be re-registered in the latter's names in accordance with cultural gender norms obtaining in the country.

While it is laudable that the extension officer is a woman given the high number of women farmers in the scheme (75%), her role and effectiveness is overshadowed by the predominantly male dominated land management committee. The committee made up of 10 farmers has only 2 women who hold the inconsequential positions of secretary and committee member. There is need for greater visibility of women in the scheme's management committee so that they can directly influence operations. To achieve this, the management committee must concede more spaces of control, management and leadership rights [1]. Farmers need to work out group marketing strategies targeting specific niches in the market like local boarding schools and hospitals in order to minimize the impact of negative macro economic conditions.

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