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Policies that constrain women irrigators

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Introduction.

The major objective of this paper is to highlight the specific ways in which resources policies constrain women irrigators in Africa in general and Kenya in particular. Five resources considered essential for irrigation and discussed are: land, water, technology, labour, and organisation and management (O&M). However, in recognition of the emphasis placed by the organisers of this workshop on the personal experience of authors and local people working with them, the paper draws on this writer's field research experience in Kenya and survey of literature to document the efforts of women irrigators in Western Kenya to overcome the policy constraints discussed. Suggestions for effecting greater equity for women irrigators are also made.

Irrigation Resources Policies in Africa

Policies are instruments or systems of regulative measures which, in the case of irrigation, were designed to achieve two major objectives. First, colonial regimes embarked on irrigation development as an adjunct to rainfed agriculture to promote the export of cash crops, a legacy that is reflected in the dependency by many African countries on one or two cash crops for foreign exchange earnings. Irrigation is similarly dominated by cash crops such as cotton, sugar, rice etc.

Second, irrigation was also developed to serve political objectives, for example, in Kenya, captured nationalist fighters were forced to work on massive irrigation canals and were later settled on the schemes. Italian prisoners of war were also deployed on the construction of irrigation works.

The strategies used by colonial regimes deserve comment. They declared state ownership of land and water, invested heavily in water control through the creation of specialised water bureaucracies to manage irrigation centrally; manipulated labour and regulated production through hardline rules. In short they ensured total control of the five essential irrigation resources. Under this form of irrigation, farmers, officially recognised as male heads of households, were reduced to serfs, their wives and children to legal nonentities.

Independent African regimes, far from changing these features of poblic irrigation reinforced them through the construction of massive dams and irrigation schemes which were placed under central water bureaucracies such as the Nile Waters Commission (the Sudan), the National Irrigation Board (Kenya), River Basin Development Authorities (Nigeria) etc. The notable change was to reorient public irrigation to serve import substitution objectives, thus Kenya expanded rice production, Nigeria embarked on wheat cultivation.

But, following the disaffection with public irrigation in the mid 1970s due to poor agronomic results, heavy financial losses and management bottlenecks, many African countries introduced small-scale irrigation schemes ostensibly to remedy the above constraints and boost food production. But their major achievement was the transfer of O&M responsibilites to farmers. However, even under this form of irrigation the position of women defined in terms of their rights to the five key resources, still remains vulnerable.

Specifically, women have insecure land and water rights, their labour is unpriced, they have no ownership rights over irrigation technology and have little or no say in the O&M of irrigation. These generalisations do not hold good in each and every instance. For example some women have title deeds at some of the public schemes notably in Islamic countries such as the Sudan and Somalia but these are exceptions. The case study material presented below not only illustrates how policies actually place women irrigators in a disadvantaged position but also how women are trying to overcome these setbacks.

Women's Autonomous Irrigation Schemes (WAIS) in Western Kenya.

WAIS belong to a form of irrigation that is spontaneously proliferating in many African

countries such as Kenya, Chad, Senegal and Zimbabwe in some respects as an imitation of, and in others as an alternative to agency sponsored irrigation. Although WAIS play a complementary role to rainfed agriculture they also reveal marked discontinuities with it, notably, the shift from food staples to horticulture, the formation of production units which are distinct from those of the rainfed system and most importantly, the creation of an enabling environment that accords women a degree of economic emancipation that surpasses by far what they enjoy under both rainfed agriculture and agency sponsored irrigation.

Types of Irrigation Schemes in the Lake Victoria Basin (LVB).

The LVB has an estimated irrigation potential of 200,000 ha of which only 3400 ha, 1.7%, have been developed. Statistics on irrigation schemes in the LVB are hard to come by, as a result categorisation is difficult. For our purposes irrigation is categorised into public and autonomous (private) schemes.

Public schemes are those developed with public funds, the so-called large scale schemes, and managed by the National Irrigation Board (N.I.B.). There are three of these with a total irrigated area of 1923 ha.

Autonomous irrigation schemes can be subdivided into assisted, failed, and unassisted. Assisted schemes receive support from an assortment of agencies, for example 26 schemes, in a survey of 61 schemes in the LVB, receive support from 15 agencies: five government ministries, two parastatal organisations, six NGOs and two donor agencies. According to government estimates, assisted schemes are less than a third of all schemes. Failed schemes are those which were upgraded but collapsed altogether or riverted to the previous state.

Resources policy.

Schemes under the NIB are in a class of their own in that the NIB owns the land, water, irrigation works, manages the schemes on a draconian regimentation (stipulates what to grow, when to grow it and the proportions of the harvest for sale and home consumption). Resources policies on assisted schemes are inconsistent due in part to the multiplicity of agencies engaged in irrigation. Farmers generally manage the scheme and dispose of the harvest as they wish. Policy is to turn-over these schemes to farmers eventually.

Organisation and Management Policies

One of the key policies is that government assistance will be given to irrigation groups which request for it, they must be organised and already involved in irrigation. This in essence means that assistance is given to groups or communities rather than individuals. This inherently entails organisation and management skills, however policy does not go beyond the superficial requirement that farmers be organised.

Community irrigation projects. The Water Act states, "Community projects are such projects, other than public or urban projects, as are conducted in acordance with rules approved by the Water Apportionment Board and agreed by a Local Water Authority operating under a permit for one or more of a series of authorised pruposes connected with the use of water, or the drainage or reclamation of land situated entirely, or for the greater part, within the area in respect of which such Local Water Authority is appointed." (Ref. 1).

The requirement to be organised therfore also defines the group as a community irrigation project and entails compliance with the provision of this portion of the Water Act. Unfortunately policy does not lay down the mechanisms for enabling irrigators to know, let alone comply with it but failure to do so means that water is abstracted illegally as is shown later. An irrigation group must also register with the Ministry of Culture and Social Services (MCSS) if it wishes to qualify for assistance as a self-help group. Finally, irrigation groups must also register themselves with the Ministry of Agriculture (MOA) if they wish to qualify for government assistance. Again policy does not make these requirements known to irrigation groups. As a result, only 30% of surveyed schemes were registered with the MOA, 46% with MCSS.

Membership. Numerical size varies widely (12-200, mean is 41) but there are no

guidelines for appropriate size, taking into account the type of technology and the requirements for leadership. A numerical aspect of crucial importance to this paper is the finding that women make up 70-100 per cent of individual group membership - aggregately the correlation coefficient of women to total membership is 0.92493.

Leadership roles. All surveyed schemes (61) have formal leadership roles, usually, a chairman, secretary, treasurer but there is a proliferation of roles, for example a sub-sample of 47 schemes has a total number of 19 different leadership roles, mean number is 13, mean ratio of members to leaders is 2.63; in one extreme case the ratio is 0.85. This culculation leaves out the case of 33% of groups which also have parallel cooperative structures.

From the point of view of this paper, a crucial finding is that **women dominate the leadership of irrigation groups.** Aggretately women have a share of 83% of all leadership roles, possibly a unique situation among irrigation organisations in Kenya.

Land Policy

Land in the LVB, except for small enclaves, has been adjudicated, surveyed and registered under individual title owners. However, the original registration exercise recognised only male heads of families and conferred on them the rights of absolute owners, a right that was only vested in the lineage. The traditional rights of women and children were totally ignored.

Land in the LVB was not consolidated, instead the scattered land parcels were registered individually. For example out of 469 family land plots surveyed by this writer, only 17% were consolidated as one piece; mean number of plots owned by a homestead was 5.5 in Kisumu, 3.4 in South Nyanza, and 4.1 in Siaya. Partly because of the scattered tenure system, 64% of irrigated fields are separated from the rainfed plots.

Transfers of whole or subdivisions of land plots to new owners are not always registered, due, partly to the complicated legal procedures and the phonomenon of joint ownership made worse by absentee landlords. Roughly 14% of homesteads have unregistered plots.

The net impact of these tenurial features is reflected in the finding that only 33% of WAIS have land titles to the land they irrigate, a similar proportion have formal lease arrangements but a large number of these are shortterm leases. It is not uncommon therefore to find women's groups irrigating a scheme part of which is registered under the group, a second portion may be leased, while a third may be rented on a seasonal basis. The Water Act makes additional constraining land requirements.

Water Use Policy

The section of Water Act quoted earlier stipulates that a water permit must be acquired for irrigation of even less than 2 acres. Furthermore the application must show, among other things, a general plan of the scheme, quantity of water required, description of soil to be irrigated, crops to be irrigated by area, and should be accompanied by a copy of the title deed of the land to be irrigated. The state also claims exclusive rights to the 50 metre littoral strip but inexplicably, land registration does not respect this provision.

Not surprisingly only 35% of surveyed WAIS have water permits. The majority of water users do not know its provisions, instead they believe they act in accordance with customary law that accords them free access to the Lake or river. In any case even if they knew the legal requirements few would be in a position to comply with them.

Irrigation Technology

There is a four-way association between type of technology, location and size of irrigated fields, and crops grown. About a third of WAIS use pumps, the rest rely on bucket water lifting. Engineers estimate that if a farmer carries water in amounts of 10 litres, it would take 500 walks to carry enough water per week to irrigate $100m^2$. As a result fields are typically located within the 40 metre strip along the Lake. This time/labour budget also effectively limits the area that can be irrigated, as a result the largest irrigated individual plot is $120m^2$ (Ref 2).

Another factor limiting the size of plots is the choice of horticultural crops which require individual husbandry. Estimates of mandays per 1 ha of the major irrigated crops are as follows: tomato (554), kale, (373), onions (336)(Ref.3). These crops are also labour-intensive. However, the microproduction scale suits the nature of horticultural products which can conveniently be marketed in small quantities. These agro-technological features reinforce the part-time nature of irrigation in the LVB, women are not able to simultaneously attend to rainfed and irrigated agriculture, as a result, the latter is limited to the dry season.

EXTENSION SERVICES

There is a dearth of extension workers trained in horticulture, a factor that compounds the neglect of women farmers by extension agents in general. As a result, the quality of crop husbandry on irrigated fields is very low.

Recommended Resources Policy Changes

Since most African countries cannot meet their food needs from rainfed agriculture alone, irrigation is therefore a necessity. It is therefore vital to develop **integrated irrigation resources policies.** To do this, reliable information gathering is crucial particularly for priority setting.

If women are to manage the irrigation schemes, then the single most critical resource is the O&M if management is defined as both an economic resourse comprising technical functions for administering other resources as well as a control structure to ensure the performacne of tasks and activities according to lines laid down, in this case, by the irrigators themselves. It is the O&M resource that will administer the agronomic, hydrologic, labour, land and water resources.

Unfortunately none of the agencies involved in irrigation development in the LVB - and possibly in all African countries - have the capability to assit irrigators in this respect. The first step will be to train trainers of irrigators, especially their leaders in the complex tasks of O&M. Women trainers would have an adge over male ones.

Land and water rights are closely associated and call for three policy changes. First, there is need to draw up simplified versions of the legal requirements that rural water users can readily comprehend. Second, some of the requirements such as the provision of a general map, description of soil, etc are unnecessary. Government workers, not the communities applying for water permits, should give this information. Third, Governments, working with local communities, should work out ways of giving women secure land rights.

The issue of irrigation technology is critical since it determines the size and location of irrigated fields as well as the gender participating in irrigation. Men are unlikely to participate in irrigation if it depends on bucket water lifting. In addition, women should be assisted to use less labour demanding technology.

Finally, case study material has illustrated that this form of irrigation offers women a unique avenue for earning cash income independently. Though not discussed, women use this income also to balance household diets. Assisting women to gain economic emancipation is, in itself, a cause worthy of support. This is therefore an opportunity governments, NGOs and Donors should seize.

References

1. Kenya, Republic of. Laws of Kenya: The Water Act, Chapter 372 Government Printer, Nairobi, 1972.

2. Kenya, Republic of. Ministry of Agriculture. Small-Scale Irrigation Development: Outline and Feasibility Study of Irrigation Development Along the Shores of Lake Victoria. Mimeo. Nairobi. 1988.

3. Kenya, Republic of. cf op. cit. suppra.