

THE IMPACT OF OUT-MIGRATION ON HOUSEHOLD LIVELIHOODS AND THE MANAGEMENT OF NATURAL RESOURCES: A KENYAN CASE STUDY

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1 INTRODUCTION¹

This article describes some of the findings of the Kenya case study of UNRISD's 'Women, Environment and Population' project. The project as a whole was set up to investigate gender aspects of changes in community livelihoods in situations of environmental stress. The Kenyan study was carried out in Embu District, which lies across and down the slopes of Mount Kenya, two hours by road to the north east of Nairobi. It concerns an area of great ecological variety and very uneven spread of population. The more fertile, upper locations are extremely densely populated, to the extent that no additional inhabitants can be assimilated. Earlier, a state agricultural development scheme, the Mwea Rice project, provided nearby resettlement opportunities; but nowadays the population spill-over is down the slope onto drier marginal lands within the same district. This research has provided systematic evidence of difference in living conditions, livelihood strategies and gender relations between the two areas for the first time.

2 THE STUDY AREA

Embu District as a whole is semi-arid but rainfall is so closely correlated with altitude that the area covers three distinct ecological zones. The possibility of cultivation depends on precipitation and soil type; cultivable land comprises about half the total area of the district. Higher altitudes have not only greater rainfall but more fertile soils than locations lower down the slope. The official land classification breaks down three ways, into high potential in the upper reaches (comprising about five per cent of the cultivable official land area in the district); medium potential (about 12 per cent); and low potential or marginal land (about 78 per cent). In the high potential areas coffee, tea, maize and beans are grown, while lower down the slopes there is a transition to a more mixed farming system with greater emphasis on livestock keeping and cultivation of millet and sorghum. Whereas livestock in the high potential area are mostly stall-fed grade cattle, in

the low potential area there are traditional cattle breeds and goats, free-grazed on uncultivated pasture lands in the vicinity of homesteads or further away.

The Embu District population is most heavily concentrated in the high potential areas: 56 per cent of the total population inhabit these parts, where population density is 462 persons per sq. km., while the marginal areas have densities of below 100 persons per sq. km. The marginal areas are 'distress' areas, recently cultivated, in many cases, by people from other areas seeking new land. In the study sample, the average size of holdings in the low potential area (13.3 acres) is four times the average size of holding in the high potential areas (4.4 acres). In Embu District, as in Kenya as a whole, the rate of population growth has been extremely high in international terms, with an estimated increase of 70 per cent in total numbers between 1979 and 1993.

3 CONTRASTS BETWEEN HIGH AND LOW POTENTIAL AREAS

3.1 Standards of living

Despite the fact that holdings are over four times as big, and cultivated area per person three times as great, the standard of living of the population is very much lower in the lower locations in Embu District than in the higher locations.

The information given in this paper is from a survey carried out over four rounds in the sub-locations of Gachuriri in the low potential area and Kiriari/Kibugu in the high potential area; data was collected from individual members of 114 households. The questionnaire proved more difficult to administer in low potential Gachuriri where most men and some women were absent from the homesteads at any time, away in search of income to boost the meagre sustenance provided by their low-grade soils. During the study period a serious drought, of three years duration, had exacerbated this situation. Its effects

¹ The material in this article is drawn from the complete study, by the same author: 'Women, environment and population project: Kenya

country study'. Final Report, 1994, Jomo Kenyatta University of Agriculture and Technology, P.O. Box 62000, Nairobi, Kenya, mimeo.

were most severe in the lower settlements. Because of the drought, serious food deficit was experienced with many communities experiencing no harvests at all for two consecutive seasons, with banana plants dying and the normally drought resistant indigenous grains, millet, sorghum and pigeon peas, failing. Most households had to resort to selling smallstock like poultry and goats to raise cash income, although most sales generated poor returns. People also turned to unusual trading activities, like firewood sales, handicraft making, sale of thatching grass and other odd items. Food was available in local markets, but high prices made purchases unaffordable for many.

In a good season, most foods come from own production, while in a dry season food purchases tend to be high. Almost half of all households in the low potential area reported using wild fruits in their diet. The Aembu people's diet is mainly vegetarian with a maize and beans mixture as the main dish, to which vegetables, fat and flavourings are usually added. Three quarters of households never consumed any meat. The main form of animal protein is milk, consumed in tea. Thus livestock are kept to produce milk for domestic use, and as an asset for disposal in lean times, rather than for meat consumption.

Differences in nutritional status between the populations of the two areas are very striking and indicate a much greater degree of poverty in the low potential areas. First, most children in Gachuriri are consistently worse off than their counterparts in Kiriari/Kibugu. Thirty per cent of children in the poorer community were undernourished² compared to 14 per cent in the high potential area community. Chronic malnutrition is also a serious problem as measured by low weight for height (wasting). No children were affected in Kiriari/Kibugu, compared to nine per cent in Gachuriri³. The situation would be even worse without a limited World Food Programme school feeding project operative within the low potential area.

Adults' nutritional status is also affected by location. Both men and women have lower mean weights in Gachuriri than in Kiriari/Kibugu. The percentage of adults with Body Mass Index (BMI) below 17 (indicating undernutrition so severe that it constitutes a

substantial risk to health) is, at 13 per cent for females in low potential Gachuriri, about three times as high as in high potential Kiriari/Kibugu.

However, men in Gachuriri suffer greater inter-seasonal fluctuation in weight than women. Between the first two rounds of the survey the average weight for males fell from 53.3 kg to 42.9 kg, compared to a fall from 52 kg to 49.9 kg among women. Also more men than women fell below the crucial 17 BMI point in the sample as a whole (assessed in Round 4). The greater weight loss experienced by men over the course of the study in the low potential area was attributed to the fact that men travelled further away from the home than women, expending energy in the process and also missing meals. At the household level, members of the poorer households (those providing less than 90 kg in staple maize production in the previous crop season) were at significantly higher nutritional risk than those producing more.

Finally, it is very noticeable on site that standards of housing construction and domestic equipment and ownership of assets were all lower in Gachuriri than in Kiriari/Kibugu. A far higher proportion of houses in the higher areas had corrugated iron roofs and concrete floors and ferro-concrete water butts for collecting rainwater runoff. People in the low potential area had to spend much greater amounts of time collecting water and fuel for domestic use than people in the upper locations. In Kiriari/Kubugu, there is no 'bush' land left from which wood can be gathered or on which animals can be grazed - hence the prevalence of stall feeding of milch cows, facilitated by the existence of water tanks which supply drinking water.

3.2 Property rights

Property rights vary substantially within the sample population, according to residence location and gender. A process of land adjudication or privatization of title has been under way in Embu District since the late 1970s, but it remains incompletely observed. The pattern of land rights in the district is revealing of the history of settlement in the area, which has gradually moved down-slope. In the low potential area less than half as many households (24 per cent) acquired land through inheritance as in the high potential area (54 per cent) and many more are

² Falling below minus two standard deviation z-score weight for age, indicator of short- and/or long-term shortfall in energy intake. All nutritional status differences noted in this section are statistically significant.

³ This is a very high figure: the 'acceptable' rate for a community is 2.5 per cent.

'temporarily' operating the land (42 per cent compared to 24 per cent) some as tenants, some as squatters.

Many of the population in the marginal area are therefore in a very vulnerable position as regards land tenure. However, some do have ownership. Those who had bought land earlier in marginal areas, notably during the coffee and tea boom of 1978-90, were able to build a house and settle there, later inviting relatives from the high potential areas to join them. People bought land for the following reasons: they wanted *shambas* where they could plant food crops (maize and beans); those squatting on their fathers' land in the high potential area wanted to settle on their own pieces of land; and people who were salaried took out loans and bought land. A second influx into the marginal areas was noted in 1984-86 following a very serious famine in the area in 1984. People from the low potential zone were hard hit; a number of people sold part of their land to buy food, at prices ranging from KShs 5,000-15,000⁴. People are still now moving into the low potential zone, with the current price of land at around KShs 30-50,000 or KSh 400/- per acre per season rental.

Some others have benefited from reallocation of previous 'no-man's lands' (designated Crown land as part of the adjudication process) under various Government resettlement schemes. All of these people have title deeds. But there is another category who have forcefully settled on land they mustakenly believed was 'no-man's land', but which, in fact, is land claimed by a different tribal group. In these cases, serious disputes over land are commonplace.

Traditions that solely entitle men to be the owners of land are strongly persistent in the area of the study. Ownership is accorded women or girls only in the absence of a key male figure, such as in cases of divorce, widowhood, or single motherhood. Even in these circumstances, women can only own land which is not family/clan land. The emergence of a market in land is easing the position of these women to some extent; there are some instances where such women have been given purchased land by their fathers. Otherwise women only ever hold land in trust, e.g. for a son until he reaches adulthood.

Ownership rights are being exerted more rigorously these days in the marginal area: access for grazing

and gathering of wild fruits and fuelwood is becoming more restricted. When land was first adjudicated in the lower potential area, new owners tended not to disturb previous 'open access' arrangements for livestock grazing and collection of fuelwood for fuel, charcoal and other bush products in areas where the land is mainly uncultivable. Livestock grazing is still permitted except where land is fenced - something which is becoming more common. Several respondents in the study noted that land owners were beginning to impose tough restrictions on the gathering of bush products including wild foods. Given their low incomes, people in this area are in no position to purchase fuelwood, as is becoming common in Kiriari/Kibugu.

Such restrictions on access reduce people's livelihood options at times of prolonged drought, as well as reducing supplies of daily necessities. Poor households use the bush as a source of raw materials for handicraft production (e.g. ropes, baskets, wood for furniture making and for charcoal, etc.) and of products for direct sale when food production fails.

3.3 Gender divisions of labour and decision making

Throughout the study area, much of the labour for the cultivation of both food and permanent cash crops is provided by women and children. Men are most actively involved in land clearing and preparation for permanent crops (i.e. tea, coffee, etc.). With regard to food crop production, male participation is limited to activities where machine technology can be applied and to the production of lucrative seasonal cash crops such as french beans. Both men and women in the low potential zones were reported to be active in livestock production activities. In the high potential zones, however, women alone hold responsibility for livestock, and these are mostly stall-fed in home compounds.

Many respondents declared that roles were no longer gender-based since changing circumstances had led to the disintegration of the indigenous social matrix. A common assertion was that 'Anybody can perform any role'. In practice, however, gender-biased sentiments, and even practices, continue to be subtly expressed. For example, many women are engaged in both their traditional roles and emerging ones. Their traditional roles include: food preparation, care of children, planting, gardening, and

⁴ US\$ 1 = KShs 25 at the time.

women's group work. Emerging roles include: milking, grazing, weeding and harvesting of cash crops, coffee spraying, guarding crops against thieves and animals/birds. Most men were reported to be away at the market (even on non-market days), while a few were engaged in casual or permanent employment away from home. In the low potential area women, in many instances, have completely taken over all farming tasks.

Women tended to make more decisions to do with children's responsibilities, food preparation, purchase and sale of fruits, vegetables and pulses while joint decision making was reported on the sale or purchase of cereals and livestock. For most couples, joint decisions were made on what to grow and when to cultivate; in the absence of a man, women made all decisions pertaining to this area. Men directly controlled income from agricultural produce, especially cash crops, while in the case of income from food crops, women's control appeared to be limited to drawing up a list of priority needs for the household, which in any case had to receive a husband's approval. However, men perceived this as being part of a **joint** decision making process. It is clear in this case that joint does not imply equal control.

Where men are away and return home only sporadically, women have to consult on major issues but have considerable latitude on smaller issues which affect the day-to-day running of households. There were a number of cases where men were described as being dictatorial. Most men felt that their wives 'lacked vision' for the future and could, therefore, not be left to make or participate in the making of major decisions.

Like the men, the majority of the women said they were satisfied with arrangements around the allocation of family income. Even where women received a monthly payment of cash crops, as was the case with tea, the money had to be given to men for reallocation. Women's main concern was to minimize friction in their marital life since male violence was a real possibility. Respondents reported to interviewers that 'You know people have been beaten' and 'My daughter was beaten by her husband because of tea money'.

In focus group discussions women admitted that they felt they were being left out of key decision making processes at the household level. It was

clear on their part that this would remain the case so long as men retained household headship. However, they did not wish to press for greater participation in decision making for the sake of family stability.

Women in the better developed high potential area had more flexibility in decision making and participated more in this process than their counterparts in the marginal areas. This is paradoxical given that male out-migration is higher from the marginal area (see below). One interpretation is that men from the marginal areas are exerting their authority to prevent women, who are maintaining the households in their absence, from assuming too much autonomy and control over household affairs.

3.4 Male out-migration

As noted, people have been moving into the lower marginal areas in increasing numbers. But clearly the resource base is insufficient to support them. Male out-migration is much more common from the lower potential areas than from the higher potential areas. Men's movement out of the marginal areas is related to seasonality in labour demand and food availability. During the off-seasons when there is little to do on the farms, some men leave in search of alternative income. Those with livestock concentrate on free-range grazing, sometimes trekking long distances to water and/or pastures. Those without much livestock move out in search of casual employment.

This kind of movement is a regular phenomenon as drought spells are experienced even in a 'normal' year in the marginal areas. In the course of this study, however, there was widespread and prolonged drought, spanning four failed cropping seasons. The situation was serious, leaving many households in this area female-maintained. Many men had moved out completely with expectations of returning only when the drought subsided. Other men went out everyday from dawn to sunset, returning home just to sleep.

As men move out for extended periods, women stay at home to oversee the homestead. Even where women engage in market activities (the recent drought saw many take up petty trade and other income generating activities such as basket making and rope making for livestock), they perceive it their duty to ensure that the home is kept safe and secure while men are away.

This kind of situation does not obtain in the high potential area where there is little drought-triggered male out-migration. Instead, the land continues to be productive even in cases of severe widespread drought. Tea continues to be harvested, water is available and can be used for vegetable gardening and livestock, and fruit trees continue to produce and to serve as a source of income at a time when the market tends to be sparsely supplied due to the non-productivity of the marginal areas. The considerable out-migration in the higher potential area has been prompted by land scarcities. Land in this area can no longer be viably sub-divided - most holdings have reached the limit of 0.25 of an acre. A number of young men interviewed reported that 'I cannot get married as I do not even own a 0.2'.

4 IMPLICATIONS FOR LIVELIHOOD SECURITY

4.1 Differential property rights

Ownership of land bestows on the owner a right to grow permanent cash and free crops and to control income from it. Conversely, lack of ownership is a bar to such activities. This has two types of consequences for livelihood security and natural resource management.

In the marginal areas, lack of ownership severely constrains land use practices and militates against improvement in soil structure and soil moisture conservation. More than 50 per cent of the households within the marginal study area did not legally own the land which they were farming. Indeed, the farmers interviewed in these areas were doing little to develop the land on which their homestead stood. When asked, they argued 'I cannot do much to this land as it is not yet legally mine' or 'I am only a squatter on this land and the owners cannot allow me to develop it'. In this case developing land - the usefulness of which is well understood by respondents⁵ - means:

- terracing and digging trenches to prevent soil erosion;
- planting trees;
- mulching to improve soil structure;
- planting cash crops such as cotton which is not a 'permanent' crop like tea or coffee but which would do well in this area.

Contrary to the claims above, many farmers were seen applying organic manure on their farms. This suggests that the immediate perceived benefits of this measure bypassed the insecurity of tenure.

Clearly farmers in the marginal areas are in a predicament. Not only are they struggling to survive in a new environment which is harsher than the one they left behind, but also, they are unable to try measures which could contribute towards longer-term adaptation and therefore sustainable agriculture. This situation has created considerable acrimony among the groups involved and has constrained a smooth resettlement process. Moreover, in the short-term, the population of the marginal area are not being helped to maximize agricultural production. National agricultural extension efforts are concentrated on cash crops which have not been introduced into this area. Thus they do not receive any assistance with production inputs or advice on production methods, in contrast to the good service provision to farmers in the high potential area.

Second, the exclusion of half the farming population from land ownership precludes them also, in their capacity as farmers, from carrying out such improvements. This refers of course to gender differences in land ownership. In the high potential areas, where men are present in the household, women do take part in field conservation activities, such as terracing, mulching and trenching, on instruction. In addition, although traditionally women could not plant trees, they now can and do carry out this activity. There is some evidence that women's needs for wood fuel are being considered in local planting practices and choice of species. But decisions regarding cutting and subsequent disposal are left to the man to whom the tree belongs.

Where the man is absent, though still head of household, women are constrained from taking decisions in the best interests of long-term land productivity. The 1981/82 Census showed that 32 per cent of all households in Embu District were headed by women. In this survey female-maintained households (including cases of full day time absence by the man) were more prevalent in the marginal areas, even among the farming households containing at least one pre-schooler and one school age child, which were the subject of the research. It is worth noting,

⁵ Even though shifting cultivation was, until recently, the practice in this area.

however, that female-maintained households are not on average the poorest here. Two thirds have holdings of five acres or more compared to one half of male-headed households and twice as many (19 per cent compared to 10 per cent) have large (> 360 kg) maize harvests. This situation suggests that it is only households above the very lowest income levels that can support a male migrant in his efforts to seek income elsewhere.⁶

Women's participation in major decision making at household, clan and community levels is limited, not least because the gender stereotypes related to land ownership permeate into decision making and resource allocation. Women are seen as labourers or squatters on their family land. This situation is internalized by women so that it limits their interest in the possibility of land improvement, and inhibits them from undertaking - perhaps even from suggesting - conservation activities for fear that they will be seen as constituting an indirect claim to the land. In households squatting in the marginal areas, whether male- or female-maintained, women thus face a double constraint: the family is unable to undertake long-term improvement and conservation measures, and the man must dampen any initiatives that might come from the wife regarding either long-term improvement or short-term maximization of production, lest these threaten his authority.

4.2 Lack of remittance income

Decision making structures and discriminatory property rights suppress women's ability to undertake labour intensive soil conservation activities. The sustainability of land use and agriculture and standard of living are further jeopardized by the lack of success, on the part of men who seek casual or contract employment outside the area, to generate any significant income. Attempts to secure off-farm income are much greater in the marginal than in the high potential areas. This extends to the higher presence of small businesses in this area as well as more male out-migration. If these efforts were more successful, certain investment and consumption activities could be undertaken, not contingent on land ownership, which could unlock benefits to sustainable land use. Purchase of corrugated iron roofs and/or water storage tanks (as exist in the high potential areas) could make more livestock and poultry raising and vegetable and fodder growing viable, providing more organic matter for soil

improvement. Purchase of fuel wood or gas or other cooking fuel would relieve pressure on wood cutting in the area and reduce erosion. But the generally low level of economic activity in nearby towns and cities as well as in local markets prevents generation of a surplus for these and other possible investments in agriculture or rural industry. Resolution of tenure rights and a change in women's land rights are obviously crucial structural needs in the marginal area, but without access to higher incomes, impoverishment will mean that a better incentive structure could only bring about limited changes on its own.

4.3 Human resource development

We have noted that standards of living vary considerably between the high potential and marginal areas, with the marginal area population having a lower standard of living. There are differences in the quality of life for women between the two areas which are not fully conveyed by the data presented above and which may have negative effects in the longer term on human resource development.

Women in the marginal areas are more stressed and burdened than those in the high potential areas. They have to travel much longer distances for fuelwood (households in the high potential area plant trees on their small farms and men travel to the forests to get firewood for the household) and for water - in those few households that have corrugated iron-roofing, they cannot afford water collection containers. Although women have to travel much longer distances to fetch water, some are able to use donkeys where one is available. In the low potential areas, distances to a water source may be considerable, taking as long as 1.5 hours one way, since most seasonal water springs and shallow rivers dry up off season. Expanding storage capacity would help in organizing water collection more efficiently.

Women also have to travel longer distances in the marginal areas to reach health facilities and must resort to self-treatment where transport is lacking. When household members are sick, the great majority of women forgo work. Far fewer men do this. This affects women's work schedules as they spend considerable amounts of time in care activities within the household. When women are themselves sick, their household chores often go unattended, while they receive less care than their

⁶ Nevertheless these households are under pressures of another kind which hinder sustainability. See section 4.3.

spouse and dependants can expect in the event of illness. Women in the high potential area with easy access to water reported much lower rates of disease. The most common ailments among all women respondents were headache, and chronic joint and back pains connected to carrying heavy loads, especially water.

There is another way in which women's lives are harder in the poorer marginal area. Men only tend to help out to any great extent when some technology or gadget to facilitate work, such as an ox cart for water collection or plough for land clearing (otherwise done manually by women using hoes), is available. Again this carries over into differentials between the two areas, to the extent that assets are fewer in the low potential area.

The study also revealed more collaboration between the genders in terms of sharing of economic activities (i.e. flexibility in the pattern of gender division of labour) and roles in major decision making in the higher potential, higher income areas. The paradox that male absenteeism (on a daily or annual basis) is higher from the marginal areas and yet the rigidity of gender relations is more pronounced, may be related to men's fear that women's autonomy during their absence might cause them to challenge their authority. To act against this possibility they lay down strict limits in advance.

Another link with human resource development comes about via the effects of these harsh living

conditions on children. In the marginal areas many more women are obliged to pass the day away from their homesteads in search of water, casual employment and cash to buy food. In such circumstances, where there are no other adults, children are often left to fend for themselves - either, as pre-schoolers, without any child care arrangement, or as school-age children kept out of school to guard the farm while the mother is away. Respondents reported cases of children being kept off school for this reason, as well as because parents could not afford fees. There is official concern at the high level of school drop-outs in Embu District and a study is currently underway to identify the causes.

Declines in school enrolment have been noted through the 1980s in many African countries. This is usually linked to the austerity conditions experienced in the aftermath of debt crisis, and the fall in household incomes associated with this. This study illustrates how the cycle of poverty and deprivation works out for people forced by land shortage in certain areas to move into ecologically poor zones elsewhere and who are faced with trying to support their livelihoods and sustain improvements in agricultural productivity, without the incentive structure and income surplus for investments which would allow them to do so. Women bear the burden of trying to support themselves and their children on the most meagre resources in highly constrained circumstances. In doing so, they are forced to deprive some children of their educational birthright in the process.

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