Poverty and Food Security: Miambani and Maliku Locations Cases
Mutua Isika, Milu Muyanga and G-C. M. Mutiso

Poverty Where There Is Food Security

Field observations show that Miambani Location is the most fertile location in Kitui district yet bad communication leads to ***extensive poverty in spite of food security***, as the population does not have access to markets for their extensive agricultural production. Water for household use and production is not a problem in this location for practically every household has access to either river water or well water. The flood plains of Thua river and its branches assure this. Rainfall is more than adequate although we cannot substantiate this formally for recording stations do not exist.

The socio-economic study included this location to check whether the SASOL decision to leave it out of the water sources development activities was justified. From interviews in the location water for domestic purposes is within reach for most of the households in Miambani location during the dry season. Sixty one (61) per cent of the respondents reported that they fetch water from sources, which are less than two kilometres from their homes. Thirty two (32) per cent fetch water from distances which fall between 2 and 5 kilometres while 3% fetch water from sources which are more than 5 Km.

Seventy-five (75) per cent of those interviewed get water from scoop holes whose depth is less than 5 feet while only 3% fetch water from scoop-holes of more than 5 feet. Data show that, 43% of the respondents spend less than 1 hour to and from their main water sources, 39% of the respondents spend between 1 and 2 while 15% of those interviewed spend between 2 and 5 hours.

It then can be concluded that the decision by SASOL to leave the location out of the water sources development activities was justified.

Miambani location is between the Central Kitui range and the Mutito Range. Road access, from the east of the location, is after negotiating the drop from Kitui town through a very twisted road so dangerous that the locals call it God Help Me (Ngai Ndethya). Historically, there was access in the west of the location from Mutonguni location. This western access is so rough and dangerous that nobody has motored through it during the past five years. This communication problem is so serious that the Chief, Assistant Chiefs and local leaders told us during fieldwork that they did not agree with the statement in the current District Development Plan which states that for the whole district the priority is water development. The locations priority according to them is creation of access roads. They were going to petition the District Commissioner on this issue.

Most of Miambani Location agricultural land is matiko *(flat lands in the flood plains)*, which is quite fertile for production of maize, millet, sorghum, cowpeas, pigeon peas, beans, green and yellow grams, peas, pumpkins, *Mongu* (cucurbit species), bananas, fruit trees and assorted vegetables. It has possibly the widest range of crops in the district. Yields are excellent for the rich alluvial soils have not been exhausted as soils in the areas in proximity to Kitui town. Most of the produce is wasted for lack of access to markets. We therefore have the ironical situation where people are poor

although they have farm produce rotting in the fields.

The state of the road network inhibits the residents from accessing external markets for their produce as well as their travel. Only one dilapidated vehicle leaves the location for Kitui town every day. The few traders who are courageous enough to venture into the location to buy farm produce pay very little. During fieldwork a kilogram of maize was being bought for Ksh. 3 whilst in Kitui town – less than 30 km. away- it was being bought at Ksh. 12! This is the "undiscovered" food basket of Kitui district. According to the respondents, if served with a proper road network, the location can perhaps feed the whole of Kitui district.

Poverty And Food Insecurity In High Potential Black Cotton Soil Areas

Significant parts of Kitui district have what is generally called black cotton soils. It is estimated that they may constitute about a quarter of all the Kitui District land. These soils are agriculturally very productive. Almost all of Maliku Location has these soils. Technically speaking, the most dominant soils in the location are Vertisols, commonly misnamed "black cotton soils". These soils have poor drainage properties and are difficult to manage. During the wet seasons, the soils seal up thereby limiting absorption of water and thus recharge of the ground water table. During the dry season they develop very deep cracks thereby allowing accumulated water to drain away into a lower thieving layer. This thieving layer (usually made up of carbonates very hard to dig when dry and very soft if wet) presents a further challenge for water seeps through it as soon as it gets wet. It does not provide a secure base for masonry dams therefore for their weight enables them to sink through it. During the dry and wet seasons, masonry cement structures normally collapse. Frima et al (2002) describes the soil as "notorious".

The populations use these lands only during the wet periods. For most of the year, the land is idle. It is not even available for grazing for there is no water for livestock. Earlier attempts by an assortment of development partners (including the colonial government) to develop water sources (particularly earth dams) have failed miserably where these soils dominate in Kitui district. The issue of assuring utilisation of these lands for production was not urgent when the district population density was low. However, given the demographic explosion, over the last forty or so years, significant numbers of people have moved into areas dominated by these rich soils which lack water sources. They suffer poverty on these potentially very productive lands. The first step in alleviating poverty, through assuring food security, is provision of water. To date SASOL has not build water sources in areas of black cotton soils for the simple reason that the dominant technology it uses- masonry dams- is not suitable.

Due to these technical limitations, of construction of affordable water provision structures, on very good for agricultural black cotton soils, fantastic water shortages exacerbate food insecurity.

Maliku Location was surveyed during the study. The data shows (*CHECK IS THIS DRY OR WET PERIODS MUST PROVIDE BOTH*) that 21% of the respondents access water from sources which are less than two kilometres from their, 25% fetch water from distances ranging between 2 and 5 kilometres while 38% fetch water from distances ranging between 5 and 10 kilometres. Sixteen (16) per cent of the

respondents fetch water from distances, which are more than 10 kilometres from their homes. The data showing people within short distances to water sources can be explained by the fact that the Tiva River and its tributaries have influenced settlement in the past. Very large areas of the location have no people. Land, which could be used for production, is thus not available for there are absolutely no water sources.

From its formation SASOL has been aware that black cotton soils are potentially very important for long-term food security of the district. It was mainly on this basis that a relationship was sought with TU Delft to assist SASOL in the research and development of techniques to be used for construction of water sources in the black cotton areas. A group of Engineering students from the Technical University, Delft The Netherlands, is currently (2002) working on the problem.