

THE DEMOGRAPHIC TIME BOMB

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1. INTRODUCTION

At the centre of any alternative framework in development is the human dimension. Population growth and spatial distribution in a region is an important pointer for guiding the direction upon which the development strategy should focus. In many development agenda, however, this important human element is either omitted or less vigorously addressed.

Since development is brought about by man and woman, it is on him and her that us all, Government, Non- Governmental Organizations, Development agencies, should focus our effort. The ultimate purpose of development is to improve the basic social services and generally raise the quality of life in a given community. We cannot, however, attain this objective without an understanding of where the people live, their numbers, their problems and priorities, their history, their perceptions and many other socio-economic aspects.

Kitui District is one of the arid and semi-arid regions of Kenya whose high population growth threatens the future development of the area. Its deteriorating population-resource balance is set against a limited resource base and a demographically explosive growth rate. The total population in the district increased seven times between 1910 and 1989. The population growth rate jumped from 1.7% in 1932 to about 3.8% in 1989. As a result of this rapid growth, population pressure is now a major threat to agricultural productivity in the district. Like in many other rangelands of Kenya, signs of physical environmental stress and deterioration in human conditions are already evident throughout the district. Among them are land fragmentation, migrations to the more arid areas, increased soil erosion, declining crop yields and a swelling flow of urban-bound migrants.

This box presents the demographic trends in Kitui District. It is divided into four parts. Part one traces the historical migrations and settlement of the Akamba people in Kitui district. Part two presents the demographic characteristics. In this section population growth is examined from the pre-colonial period to the present. Part three discusses population pressure and some of the major consequences of rapid population growth rates in the area. The last part presents a summary and the recommendations bearing on policy implications. All this information is considered necessary because it forms a strong base upon which more informed decisions should be built if sustainable development in Kitui district is going to be achieved.

2. MIGRATIONS AND SETTLEMENT

Theories state that the Akamba migrated to their present settlements by branching off, into Kenya, from a group of Bantus who were moving north-eastwards along the coast of the East African region from the Shaba region of Zaire during the early fourteenth century (Ogot, 1968; Murdock, 1959; Soper, 1967; Guthrie, 1962). Archaeological evidence for the Bantu Iron age agrees well with this linguistic proposal. The distribution of "channel dimple-based" pots from the Zambezi River, which date from the beginning of the first millennium, has generally supported an eastern and northward expansion of Bantus from Zaire (Murdock, 1959:106). Soper (1967) has also revealed an iron age Bantu culture, known as the Kwale culture, extending from the hinterland of Mombasa to Pare mountains, and Mount Kilimanjaro.

Gregory (1896) holds the view that the Akamba originated from the south of Mount Kilimanjaro. Fedders (1979) makes a similar argument when he states that:

"...with an exception of a small group (The Mumoni) all Akamba agree in their oral tradition that the plains around Mount Kilimanjaro were the earliest known region for them --- during the sixteenth century the Akamba dwelt in the plains "Nthi" around "Kiima Kyeu", the white mountain (Fedders, 1979:113).

The white mountain mentioned here by Fedders (1979), which is also indicated in more recent research by O'Leary (1984), is believed to be the snow-covered peak of Mount Kilimanjaro.

Oral tradition suggests that the Akamba arrived in the area of Machakos during the fifteenth century when through migratory drift they left Kilimanjaro plains for the Kyulu (Chulu) hills where water proved insufficient. Migrating across Kibwezi plains, settlements were finally established in the seventeenth century. Scholars have long suggested that the initial Akamba settlements in the hills were for protection against the Maasai, however recent investigation of both Maasai and Akamba oral traditions casts doubt on these early interpretations (Jackson, 1976:191). More likely fertile soils and reliable water supply provided the prime inducement for the emergence of prosperous rain-fed agricultural settlements in the seventeenth century.

It was in Mbooni hills that the social character of the Akamba developed and where the primary institutions of the Akamba society emerged. Through the creation of terraces and simple dams, the Akamba society adjusted to their highland environment. From Mbooni families migrated to neighbouring hills such as Kilungu, Mbitini, Kalama, Iveti and Kanzalu. These hill lands of Machakos became known as IULU, to be later corrupted as "Ulu" in colonial geography. Subsequent population growth and increasing denudation of the hill tops resulted in erosion such that by the beginning of the eighteenth century small groups migrated from Mbooni hills, crossed the Athi River and established the Akamba settlements in the central hills of Kitui and at Miusyani in Ikutha (Map 1). Lindblom (1920) dates the crossing of the Athi River into Kitui at about 1715 A.D. About 1740 A.D larger groups followed into Kitui and movements continued until 1780 A.D (Lindblom, 1920:162).

Once in Kitui the Akamba continued to migrate. From Miusyani they moved to the hill complexes of Ikutha, Kanziko, Mutha, and Inyuu, eventually reaching the central block of mountains in Kitui Central and into Mutito hill about 1800 A.D. From there migrations went south-eastwards towards Zombe. At Zombe, one migratory path went towards Makongo mountain and from there to Endau mountain, another edged southwards towards Mutha and Kanziko where there were already Akamba settlements already.

Another migratory route from the central block of Kitui mountains went northwards through Mutonguni and Migwani hill ranges reaching as far as the hills which surround Mwingi at about (1820 A.D). At Mwingi one migratory route continued northwards reaching the Mumoni range at about (1850 A.D); the other followed the Enziu River eastwards. At Nguni this path split. One route moved northwards reaching the Nthunguthu complex of hills (Mai), Ngomeni, and Tolotwa outcrop about 1860 A.D. The other wave turned southwards towards the hill complexes of Imba and Ukasi (O'Leary, 1984:19).

The continued population growth forced people from the better-watered hill lands into the more arid and drought prone plains. This migration to adjust to population pressure was stopped at the beginning of the twentieth century by the imposition of the colonial system and ancillary differentiation in society (Mutiso, 1977:11; Munro, 1975; 125). It is evident that at the advent of the colonial period, there were only three main isolated pockets of population concentration in Kitui District, that is the Central Hills, the Southern block of hills at Mutha, Kanziku and Ikutha, and the Northern range of hills at Mumoni. Another isolated pocket of population settlement was around the hills at Engamba in Eastern Kitui.

The history of the Akamba from the eighteenth century is replete with accounts of devastating droughts and famine. Historically the Akamba coped with the vagaries of their environment through a variety of traditional mechanisms. Hunting, gathering, and trade became viable options for survival. Out-migration from the devastated areas was an option in an area where land was an abundant resource. Raiding became common in times of extreme stress. It is apparent that these traditional mechanisms of coping with drought and hardship are no longer viable alternatives, yet drought and famine remain a persistently recurring problem.

Colonial domination of Ukambani began in the nineteenth century and resulted in the Akamba being confined to "native reserves". Continuing population pressure within the Kitui native reserve forced the Akamba into the more arid, marginal lands and the ensuing population and livestock pressure caused severe environmental deterioration. The colonial government undertook vigorously forced soil conservation programmes in the 1950's, which were partially successful. Attempts to control the number of livestock, however, met with total failure. With the advent of independence much of the work undertaken by the colonial government in soil conservation was abandoned and once again environmental deterioration became an ever-increasing problem as the population had grown and even more marginal lands had been brought under cultivation.

3. THE DEMOGRAPHIC CHARACTERISTICS

The demographic situation in Kitui District is one of the most alarming in Kenya. The total population jumped from 95,000 people in 1910 to about 640,304 in 1989 (Kenya, 1989). Thus, the population increased by almost seven times in only seventy-nine years. From Table 1, it may also be noted that the District population more than doubled between 1910 and 1948 and also between 1948 and 1979. Table 1 also indicates that the annual growth rate has progressively increased throughout the twentieth century. The current growth rate is estimated at 3.8% per annum and the district has an overall density of about 30 persons per square kilometre. This density varies considerably from over 100 persons per square kilometre in Central division to under 30 persons per square kilometre in parts of Kyuso, Eastern and Southern divisions.

One of the major factors, which have fuelled the demographic flames in Kitui District, is the high fertility rate. In 1969, the overall rate was in the range of 11.97 for the 30-39 age groups to a low of 7.96 for the age group of 25-29 (Kenya, 1969). In the 1979 census, the fertility rates were still high with a mean of 9.37 for the whole district (Kenya, 1979). The current fertility is estimated at 8 (Kisovi, 1989).

Table 1: Population Growth in Kitui District 1910-1989

Year	Total	Annual Growth %
1910	95,000	-
1932	152,759	1.70
1948	203,035	1.68
1962	284,659	2.20
1969	342,953	2.60
1979	464,283	3.50
1989	640,304	3.80

Sources: Population Census Reports. Population numbers of 1910 and 1932 are based on hut counts by the colonial government. The 1989 population figure is from unpublished census data at Central Bureau of Statistics.

A close examination of the 1989 unpublished population data at the Central Bureau of Statistics shows evidence of very little decline in Total Fertility Rate in the District.

By moderate estimates, the district's current population will exceed a million people in less than 20 years. In fact the doubling rate is estimated at only 17 years (Kisovi, 1989). This figure of a million people does not, however, seem excessive or startling, especially for a district of 22, 814 square kilometre-area, until one realises that ***more than 70% of the district is not suitable for rain-fed agriculture.*** If we also consider the fact that nine out of every ten people in Kitui District earn their living from agriculture, and if we assume that the current farming technology is to continue for a long time, which is very likely, then this aggregate is certainly high.

Unless something is done to resolve the population problem in the district there is a grave danger of a catastrophe, which threatens to destroy the stability of the ecosystem upon which the local people depend for food and water. Doomsday may be an inappropriate philosophy for people seeking solutions. In fact Maddox (1972) argues that it is defeatist and over reactionary in any context. His contentions, however, seem unjustifiably optimistic, for it is certain that never before has the land in the arid and semi-arid areas of Kenya been subjected to such stress and never before have the lives of so many people in these areas been so impoverished. The emerging population resource relationships are truly unprecedented.

4. POPULATION PRESSURE AND INTERNAL MIGRATIONS

Although population pressure is a widely used term in all disciplines that deal with human-environment relations, its definition is a major problem and its measurement is quite another difficulty. Different practitioners within the same discipline and those in different fields conceive of population pressure differently. However, they seem to agree that population pressure (PPR) means an imbalance between the resources of a community and its population. They argue that population pressure may be caused by either an increase in population, a deterioration of resources or both (Browning, 1970:72; Kay, 1970:363).

Consequences of PPR function as neither discrete nor as linear variables. Instead they interact synergistically, accelerate, and compound exponentially. As populations grow and require more from a finite resource base, pressure gains momentum with pervasive impact. Man-land and man-man balances tilt. Rural resources deteriorate progressively with lasting effects. Conditions of life worsen for the following generations.

As indicated earlier, Kitui District is one of the Arid and Semi-Arid regions of Kenya with a worsening population resource balance. Its rapidly deteriorating population-resource balance is a product of limited resource base and an explosive demographic growth rate. **Only about 2.2% of the land in Kitui District falls within ecological zone III, which is of medium high potential. Rainfall of about 760-1015 mm. per annum is realised in many areas within this zone such as in Central Division and around the various hills in the district. The rest of the district receives 225-510 mm of rain per year. Much of this rain is torrential and is lost through run-off and evapotranspiration.**

Throughout the district, especially in more fragile ecosystems, signs of environmental stress and evidence of deteriorating human conditions have become increasingly conspicuous (Kisovi, 1989:140). However, talking of population pressure in Kitui District may be surprising to those familiar with the comparatively low population densities in the area. Nevertheless, crude density *per se* has been described as a misleading statistic (Hance, 1968:7). This is so since population pressure upon resources may occur where overall densities are low.

Numerous symptoms and clear signs of deterioration of environment and human conditions are now evident in Kitui. Among them are gullied and eroded hill-sides, deforestation, silt-laden rivers, declined crop yields, food shortage, land fragmentation and sub-division, use of marginal land, breakdown of indigenous farming systems and a swelling flow of urban bound migrants (Kisovi, 1989).

Results of my field work which I undertook in Kitui District in 1988-9 indicate that land fragmentation and sub-division is so severe in Central Division that now land parcels have declined to 0.5 ha per person in many parts of Matinyani, Mulango and Kyangwithya locations (Kisovi, 1989).

Increased soil erosion was reported by 84% of the 345 respondents interviewed in the field. Use of marginal areas (roadsides, steep slopes, more arid areas) was reported by 78.5% on average across the three main ecological zones (Kisovi, 1989:162).

Table 2
Net Population Flows into Different AEZs

AEZ.	Actual Growth and Migration Rates								
	1948 - 1962		1962 - 1969		1969-1979		1979 - 1989		
	G	M.R	G	M.R	G	M.R	G	M.R	
III	4	-960	2	-1120	2	-1050	2.3	-2346	
IV	31	+4100	3	-1660	4	-970	4	-3019	
V	32	+3896	7	+3541	4	+2953	4	7	+2443
VI	35	+3569	2	+3050	4	+3840	5	+4231	
VII	38	+4068	3	+4133	3	+4247	3	8	+5100

Key: G - Growth % p.a.
M.R - Migration Rate per 1,000

Source: Compiled by author from Population Census Reports: Kenya Colony (1950, 1962), Kenya Republic (1969, 1979, 1989).

One of the significant consequences of population pressure in Kitui is internal migration. As pressure builds in the relatively high potential zones of Kitui Central and Mwingi Divisions, it sends shock waves down the ecological gradient and spills over into the more arid lands. Table 2 presents population growth and flows into zones of differing Agro-ecological potential. Once the migrants settle in these fragile areas they apply inappropriate technology, which in time turns the areas into dusty wastes. Each year more and more people are moving from their settlement area looking for a place to graze and cultivate. My field data indicates that migrants from Central Division are largely moving to Kavisuni and Yatta. Migrants from Kitui South, Eastern and Mwingi Divisions are already encroaching and in fact settling or cultivating in the State Lands and even in the Game Reserves (Kisovi, 1989).

It seems likely that as the population pressure becomes more acute in Central and Mwingi Divisions, movement into the adjacent areas will increase. Population pressure and land shortage will become an ever-increasing problem, which must be faced without further delay. As indicated earlier, already signs of environmental stress caused by overpopulation are evident throughout the district. Even in the sparsely settled areas, environmental deterioration caused as much by mismanagement as by overpopulation, is becoming a serious threat to future productivity of the areas. While vigorous efforts to rehabilitate the land through soil and water conservation have been undertaken, and indeed should be increased, so far they have been insufficient. Unless the basic problem of population pressure is resolved in this area, and in other areas with similar ecological and demographic conditions, further efforts in development are bound to fail. This is a challenge that faces us all.

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