



## MIGRATION AND SQUATTING AND THE IMPLICATION THIS HAS ON WATER SUPPLY AND SANITATION

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### Introduction

Much has been written about migration but little has been said on how it affects the sanitation and water supply of the region to which the migrant is bound. Migration as defined in this paper is population movement from one place to another, either temporarily or permanently. Although there are several patterns of migration all of which have different effects on water and sanitation, in this paper the emphasis is on urbanization and the influx to Dar es Salaam for presumed opportunities, rather than migration in the general sense which is rarely encountered in Tanzania.

Urbanization in Tanzania has been very conspicuous and has attracted much attention, especially from planners. Although most of the present urban centre developed during the Colonial period as a result of externally oriented economic development, much urbanization occurred after Independence in December 1961. The indigenous population accepted urbanization as a way of life and this could be reflected in the rural to urban migration. In Dar es Salaam in the recorded population growth of the last few years, migrants represent 79% of the population. It has been observed that most major towns grew at an average of 8-10% pa over the period 1957-67. The annual growth rate for Dar es Salaam rose from 7% in 1957 to 11% in 1967. The 1978 census put the population at 830 398 compared to 272 875 in 1967, which is an annual growth rate of over 15%. Such a rapid increase in urban population means at least doubling it in less than ten years. Urban population in Tanzania is 2.8 million, constituting 13% of the total population of 17.5 million.

The inevitable consequence of this high rate of urbanization is seen in the pressure exerted on land, housing, employment and other social and technical infrastructure. Implicitly, urbanization is associated with problems of low income which creates a category of people who cannot afford to develop land in planned areas. Available services and utilities are unable to cope with urban growth and financial constraints on the government contribute to the problem. This partly explains the existence of large squatter or slum areas which are inadequately serviced. Government housing and loans favour people in formal employment, whereas migrants

are usually jobless, self-employed or doing low paid jobs. When the city expands these people are engulfed as squatters and the government demolish their poor structures or accept and upgrade their settlements.

The slumming and squatting problems are invariably associated with poor and inadequate sewage disposal and sanitation systems, poor refuse collection and diseases associated with sewage and water.

The case-study findings presented in this paper are based on Mabibo, Buguruni and Keko Toroli squatter areas, with the emphasis on Buguruni.

### Rural to urban migration and government policies towards associated problems

Both 'pull' and 'push' from the place of origin suggest to the rural residents that things might be better in the urban areas. Factors constituting the 'push' include:

1. Lack of employment opportunities for the large numbers of untrained people in rural areas.
2. Low productivity and low incomes in the agricultural sector due to traditional farming methods, vagaries of weather and pests, resulting in low prices for agricultural products.
3. Over population in some areas such as Kilimanjaro and Bukoba where the land tenure system has resulted in fragmentation of land through multiple inheritance. Young people who cannot inherit land from family and are not willing to find other vacant land migrate to urban areas in search of jobs.
4. Government investment in major regional towns in preference to rural areas. Over 80% of industries in Tanzania are found in urban areas, Dar es Salaam having more than 25% and employing 61% of all urban labour in manufacturing industries. The absence of effective planning and co-ordination among responsible authorities has contributed to continued unregulated urban growth.
5. Immediately after Independence the education curriculum was changed to increase primary and secondary education. At least 10% of urban and rural youth received seven years of primary Colonial education so as to be able to assist in clerical teaching and

administrative work. Education after Independence, education was aimed at preparing young people to live in rural areas and to be self-reliant. However this was not successful. Employment in the non-agricultural sector continues to be the ambition of people even after completing primary, middle and higher education. Research in Dar es Salaam shows that increasing numbers of youths engage in banditry.

6. At the family level, social disruption caused by modern development is seen. The present high living standard is out of reach of many low-income, unskilled and unsuccessful farmers. Family breakdowns are common. Male divorcees migrate and engage in such jobs as banditry and pick-pocketing. Females engage in sedentary jobs such as plaiting women's hair, selling bread and prostitution.

#### Consequences of migration

After looking into the 'push' and 'pull' factors we have now to look into the positive and negative aspects of migration. The negative aspects are mainly problems caused by the increase in population. The effects of this are social, economic, health and technical.

1. Housing is a problem in all urban centres in Tanzania. Due to financial constraints, the government has failed to house its increasing urban population. Individuals, especially low income earners, are unable to construct their own houses and provision of government housing favours people with formal employment. Thus the unemployed and those in the informal sector usually seek accommodation in privately owned housing or they construct houses in unsurveyed areas. Every town or city is bounded by a legally recognised boundary. Many low income earners dodge plot payments imposed by the government by crossing the urban boundary and settling 'free of charge'. As population increases these areas become congested and disorganised. Pressure falls on related government authorities to try to accommodate these areas in plans for provision of water, dispensaries, electricity, roads, schools and markets, but this is difficult to achieve.

2. Slumming and squatting have always produced hygiene problems. Disorganised, congested housing with no proper roads have made it difficult to construct storm water drains or service the areas with refuse trucks. Often the groundwater table is too high for the use of pit latrines, although these are the most common form of sanitation system. With inadequate emptying services the latrines are flooded and create serious public health problems.

3. Hospitals, schools and other social facilities are overcrowded, so that the limited facilities become obsolete too quickly.

4. Water for Dar es Salaam is the responsibility of the Ministry of Water, Energy and Minerals and the Dar es Salaam Water Corporation. The Public Health Department within the City Council has the duty of checking water quality by taking samples for bacteriological and chemical analysis, and advising the Water Corporation. Demand for water in the city has increased very rapidly in recent years and has outstripped both supply and distribution facilities.

5. Sanitation. Only six towns in Tanzania have some form of sewerage system which is limited to 10% of the population of those towns. Septic tank soakaway systems service a further 10% of the population in the low and medium density areas. The other 80% depend on either pit latrines or nothing at all. Those with no latrines use neighbours facilities or public toilets which are often in a disastrous condition, out of order or overflowing due to misuse. At present out of 77 units in Dar es Salaam only 11 are functioning. In squatter areas conditions are worse. Inadequate structures are built due to lack of finance. Pits fill quickly through over-use and inadequate emptying services, and the high groundwater table means they are often flooded. Malaria, cholera, hookworm, Bilharzia, Filariasis and other excreta-related diseases are common.

6. Increased urbanization brings technical problems, especially in the field of town planning. Master Plans for towns, Bye-laws etc become inadequate in a short space of time even if the technical and economic means are available. Traffic and transport problems abound due to narrow roads and increased numbers of vehicles.

7. Government efforts to solve the problem have included the slum clearance and compensation programme of 1964, aimed at ejecting people from squatter areas and discouraging more people from coming to town, forceful repatriation of loiterers and unemployed migrants, and the 1975 Repatriation Program.

8. Migration involves movement of people from less developed areas to developed areas. Hence more development takes place in urban towns and so the migration process becomes continuous.

#### Government efforts to contain migration problems

1. Repatriation. This concentrated on street beggars, loiterers and those engaged in selling on the streets. Disabled beggars were taken to Rehabilitation Centres. The Forceful Repatriation method was in line with the goals of the Arusha Declaration of 1967 which stated that everyone should be self-reliant by being an industrial worker or a peasant. By the end of 1967 the policy was seen to be inadequate because it attacked the migration problem from

the receiving area rather than from the source area, only dealing with those who were rounded up and not prohibiting further migration. It was also expensive. Identity Cards were then tried, but people managed to forge them.

2. Slum clearance and reconstruction. Before Independence provision of good housing was largely based on race and income, with residential zoning for high, medium and low income dwellers. Characteristically, in high income areas, density is low and the areas are well planned on good land and with good quality services, as opposed to low income areas with high density, poorly or unplanned, with few or no services and thus poor conditions. After Independence the government aimed to eradicate insanitary conditions by providing modern standard housing and basic infrastructure. Rural people were expected to be self-reliant, providing their own modern housing. Institutions were created to cater for housing needs and to provide loans.

In 1964 national slum clearance aimed at the abolition of the worst housing and the redevelopment of modern housing. In 1969 the programme was stopped because it had proved too expensive. Construction of houses was slow and behind target, and at family level income was reduced due to disruption. Also the compensation scheme brought an unexpected problem in that the compensation money attracted more people. Poor units were erected overnight in anticipation of compensation. It became necessary for the government to pass a bye-law to stop compensation in cases of illegal construction on private plots. The abolition of the town council in 1972 resulted in further deterioration of the urban environment with no enforcement of urban laws.

In 1972 the government adopted the site and service squatter upgrading scheme focussed at providing infrastructural services at a minimally technically viable level. It was envisaged that this would act as an incentive for people to improve the quality of their environment by building their own houses on newly serviced areas or improving existing houses with loans. Poor houses were no longer bulldozed.

3. Redistribution of investments and basic community infrastructure. Rural development policy through Ujamaa villages was expected to absorb the present unemployed and unskilled and school leavers. To date we find that 90% of our people live in 8210 villages throughout Tanzania. This figure is below target but nonetheless acceptable. In general redistribution of investment has been unsuccessful.

#### Water and sanitation

Various water projects in association with

UNICEF and DANIDA have been undertaken. There have been improvements to water supply stations, increase of public standpipes etc. Water at public kiosks is provided free. In 1976 86% of households used tap water as their main source of supply. Unpiped water is contaminated and the public is cautioned and advised to boil this water. Various water and sanitation campaigns have been carried out through radio, newspapers, adult education classes and meetings etc, aimed at improving public health, respect and dignity and increasing productivity. In spite of this sanitation systems in old towns are inadequate. Sewerage systems are old, and out of eighteen pumping stations serving Dar es Salaam centre only two are in operation and those are giving problems. The results have been discharge of sewers and foul sewerage overflows to drainage ditches and streams.

The government has set up a sewerage and drainage division in the Ministry of Lands, Housing and Urban Development, with the task of formulating sanitation policies and rehabilitating the existing sewerage system. Assisted by the World Bank the country has adopted both sewerage and low-cost sanitation systems, according to local conditions and financial constraints. Compost pit latrines and ventilated improved pit latrines (VIPs) are being tested.

In the Water and Sanitation Decade the government will provide loans for upgrading of latrines in squatter areas or construction of new ones, mainly VIPs. Studies are currently being undertaken by foreign firms in the major towns aimed at rehabilitation of existing sewerage and drainage systems.

#### Case studies of Buguruni, Keko Toroli and Mabibo

In 1974 Dar es Salaam was converted into a Region by itself with three Districts: Ilala, Kinondoni and Temeke. Buguruni is located in Ilala District. The area is densely populated with disorganised housing highly congested. Keko Toroli and Mabibo are situated on either side of Buguruni. All the areas have similar socio-economic conditions.

#### Economic factors

All three areas are squatter areas situated near Industries Government and privately owned. Except for the major tarmac roads crossing the areas there are no proper roads, being served by meandering tracks. There is limited social infrastructure, with only one Dispensary at the District centre to serve almost all the people in the District. Water points are few and the taps are far apart. Buguruni has only 52 public taps serving a population of 32 672. There are no surface water drainage systems.

#### Housing and people

The majority of houses are poor, Swahili type

houses which are cheaper to build than a modern house of equivalent size. Despite poor conditions rents are usually high and frequently raised. To many house owners housing is seen as a source of income rather than a social amenity. Tenants complaining about intolerable conditions are threatened with eviction. Because housing is a problem for both employed and unemployed people accept insanitary conditions because there is no alternative. Most people are low-income earners self-employed in petty businesses or casual work who often cannot afford to pay their monthly water charges and so have the water cut off.

#### Sanitation and water

For the household survey done in Buguruni, 688 houses were visited and completed the questionnaire, showing that 98% used pit latrines and 1% had no proper sanitation. In Keko all fourteen houses visited had pit latrines. In Mabibo of 123 houses visited, 97% had pit latrines, and three houses had flush toilets.

In a number of cases the pit latrine superstructure is also used for showering. There is no problem with sharing of sanitation facilities between families in the same house, although the same cannot be said for next-door neighbours.

Among complaints were the inefficiency of the city refuse trucks, shortage of space for a new pit and scarcity of materials for building permanent latrines. Low income is seen as a contributory factor to the present poor latrine structures. The units lack privacy and have no ventilation pipes or covers to prevent smells and insect breeding. Drums, tyres and blocks are used to line the pit, and are easily affected by water causing sagging and collapse. Overcrowding causes the pits to fill up rapidly and high ground water causes overflowing of excreta. These problems are more pronounced in Mabibo.

Another feature brought out by the survey is the practice of manual pit latrine and soak pit emptying. The method involves the digging of a new pit adjacent to the full one. A hole is then broken through the adjoining wall, releasing the contents to the new pit. The faeces is removed by scooping with buckets. The government is trying to improve conditions by introducing a high capacity vacuum truck to do the job, and also by increasing the numbers of cesspit emptiers.

People are generally not aware of the connection between insanitary conditions and disease and mostly believe that foul water from shallow wells is safe for washing. Garbage disposal is done in open pits, dustbins and on vacant land, so garbage tends to be blown and spread around. City Councils are inadequately equipped to deal with the problems, having only 21 refuse trucks and few street sweepers and refuse collectors.

Waste water is disposed of in soak pits, pit latrines and open drains near houses.

#### Recommendations

Over-concentration of economic activities in Dar es Salaam and other major towns partly contributes to the poor sanitary conditions. Government funds are directly channelled to those productive activities and thus proper sanitation, safe water and cleaning activities are given less attention. The government should put priority on primary health care and implement equalization of socio-economic development in rural and urban towns so as to reduce the burden brought about by migration.

Practical implementation of preventive health programmes in urban and rural areas as a whole is essential and should be enforced by law. This will alleviate many of the insanitary conditions. Better preparation of refuse for collection is one of the prime needs of the residential areas. Improvements may be brought about by a media campaign, through radio and self-help groups. If this does not work it may be necessary to use a law and impose fines.

To make the Decade successful we should train more women in water-related professions. Health education in primary schools should be strengthened. It is women and children who suffer most from poor facilities and disease. It is these people who must walk long distances or queue at taps for water. It is therefore these people who could prevent environmental contamination and plan for adequate options in safe water and sanitation if they were equipped with adequate knowledge and tools.

#### Conclusion

There should be effective control of the environment for better living. Endeavours made by related Ministries of the Government of Tanzania to ensure better conditions are greatly appreciated. Efforts are however hampered by lack of proper expertise and resources, thus reflecting the general level of development in the country.