



17th WEDC Conference  
Infrastructure, environment,  
water and people  
Nairobi, Kenya 1991

## Services in site and services projects

Dr Joyce Malombe

### INTRODUCTION

Cities of the developing countries have developed fast in the last three decades. This growth has not been accompanied by the necessary development of infrastructure and services and has induced many problems. One such problem is that of housing characterized, in many cities, by the rapid growth of squatter settlements. These settlements have low quality houses and also lack basic services. Initial responses of providing conventional housing have not been successful (1). The units constructed have not only been too few but have also been too expensive for majority of urban households. The inability to provide affordable adequate housing led to a shift in emphasis in the 1970's (2). The shift was to provide services rather than the whole unit. The emphasis was on providing land and basic services. In addition the beneficiaries were provided with small materials loan and were expected to do most of the building using their own savings and labor.

The idea of site and service schemes in Kenya dates back to early 1960's. However large scale implementation of this strategy as we know it was started in 1970 when the government adopted site and services strategy as a government's policy for meeting the housing needs of the low-income households who had not benefited from previous projects. The first pilot large scale project was started in 1975 and is known as the Dandora site and service project. The project has a total of 6000 plots (3). These plots have individual water connection and sewer connections, and related basic services, including roads, security lighting and refuse collection. The plots vary in size from 100 to 160 square meters and are leased for a period of 50 years. Three types of plots were provided. A total of 65 percent were option A and these had a toilet and shower. Option B which comprised 30 percent of the units had the above services plus a kitchen while option C had the above services and an extra room. Option C was sold at market place.

This paper examines the adequacy of services in the Dandora project 10 years

after its implementation. The data used in this paper was obtained from a random sample of 300 households interviewed in Dandora in 1988. The sample included 150 tenants and 150 plot owners. This data was used to evaluate the level of services in Dandora. The aspects analyzed include socio-economic characteristics of the residents and the level of services before and after the move to Dandora. The services include water, toilet and shower facilities and availability of electricity and kitchen.

### SOCIO-ECONOMIC CHARACTERISTICS OF DANDORA RESIDENTS

To evaluate the adequacy of services in Dandora one has to look the socio-economic characteristics of the households which include age, sex, occupation and incomes among others. According to the survey 42 percent of the households were female while 58 percent were male headed households. These had varied ages ranging from 18 to 90 years. Most of those aged between 18 and 30 years were tenants while majority of the older beneficiaries were plot owners. However most of the beneficiaries were young and a total of 63 percent were 40 years or less. A total of 56 percent of the respondents were married while the remaining 44 percent were single. Some of the married respondents had left their spouse and some of their children in the rural areas. Thus out of 56 percent of the respondents who were married, only 33 percent lived with their spouse in Dandora. These had children ranging from one to twenty one but the number of children living on the plot with the parents only ranged from one to ten. In addition, a total of 30 percent had relatives living with them who ranged from one to eight. As will be discussed later these large household put a strain on the services provided.

The incomes of the respondents were much higher than that intended for the project. Thus a total of 28 percent of the respondents earned Kenya Shillings (Kshs. 1 U.S. \$ is equivalent to Kshs. 28.8) 1000 or less, 35 percent earned Kshs. 1001-2000 while the remaining 37 percent earned more Kshs. 2000. A total of 46 percent of the respondents were employed in the formal

sector while 27 percent worked in the informal sector. Those who depended on their plots wholly (sub-letting) as their only source of income included 16 percent. Only 5 percent of all the respondents were unemployed and were depending on others to help pay their bills.

#### LEVEL OF SERVICES IN DANDORA

To determine the level of services, the number of rooms, the level of services and the number of adults and children using these services are discussed in this section. The number of rooms occupied by the households ranged from one to seven. A total of 54 percent of the households thus lived in one room, 20 percent had two rooms, 22 percent had three to four rooms while the remaining 4 percent had five to seven rooms. Most of those living in one room were tenants, thus a total of 84 percent of all the tenants occupied one room. Only 13 percent of the tenants had two rooms while the remaining 3 percent had three to four rooms. The plot owners had more rooms when compared to the tenants. Thus 24 percent occupied one room, 27 percent had two rooms, 42 percent had three to four rooms while the remaining 9 percent had five to seven rooms. The relatively few number of rooms led to overcrowding in Dandora.

The number of persons per household ranged from one to twenty with an average number of 4.9 persons per household. The households with three to five persons per household included 32 percent, 29 percent had six to ten persons while the remaining 8 percent had eleven to twenty one persons. A total of 54 percent had one room and the number of persons living in that one room ranged from one to thirteen. The households with two rooms comprised 20 percent and these had one to 12 persons. A total of 22 percent had three to four rooms and these also were occupied by one to thirteen persons. The households with five to seven rooms had 5-12 persons. The figures above indicate high overcrowding levels in all the households even those with more rooms.

The Dandora project provided the respondents with shared facilities. Each plot had water, toilet and shower facilities which were shared by an average number of thirteen persons. This large number of persons per plot led to overuse of the facilities and high rents paid by the owners. In most cases the rents paid by the tenants included the cost for services. But the high cost of especially water was transferred to tenants in term of rent. The cost of services among others led to high rents per room in Dandora.

This has limited the number of people who can benefit from these projects because of their low incomes. The high rents for rooms has also meant that most of the households can only afford one room. This is especially true for tenants (84 percent) who have only managed to rent one room. As discussed above this has led to high levels of overcrowding and overuse of the services.

Other services available in the project included electricity. Although this was brought to the site, each individual plot owner had to get electricity connected to the plots. This has proven to be expensive, and not all the respondents can afford it. Thus, 46 percent of the respondents had electricity while 54 percent did not. Most of the households also lacked kitchen facilities. Thus a total of 79 percent did not have kitchen facilities while the remaining 21 percent had kitchen facilities. Most of the households with kitchen facilities were mainly plot owners. Thus, 36 percent of all the plot owners had kitchen facilities compared to 6 percent of the tenants. The lack of kitchen facilities meant that people cooked in the rooms they slept in. This is especially true given the fact that most of the respondents occupied one room. Thus, 94 percent of all the tenants cooked in the room where they slept, compared with 64 percent of the plot owners. However, it is worth noting that those who had kitchen facilities did not use them exclusively for cooking purposes. Most of these were used as bedrooms for children or other members of the household. Although the plot owners had more rooms, they opted to sublet them so as to get extra income to enable them to repay their loans.

#### ADVANTAGES OF MOVING TO DANDORA

To further evaluate the level of services in Dandora availability of services before and after the move to Dandora are discussed. The households moving to Dandora had lived in different types of settlements before the move to Dandora. The survey revealed that 27 percent of the households moved from the squatter settlements, 13 percent moved from the rural areas while the remaining 60 percent moved from standard housing.

The households moving from squatter settlements benefited significantly from the move to Dandora because they not only got services they did not have before, but also had a higher quality of services. The Dandora project provided all the respondents with water, toilet and shower facilities. This was not the case in the squatter settlements, where 10 percent did not have water and 18 percent did not have

toilet facilities. Most of those with water in squatter settlements depended on water bought from the communal water taps. These were within a walking distance from most people but not on the plot like in Dandora. Also in squatter settlements water was paid for separately according to quantity, while payment was included in monthly rents in Dandora. Water was therefore much more accessible in Dandora, where the cost was fixed and paid for at the end of the month. Also pit latrines or communal toilet facilities were mainly used in squatter settlements unlike in Dandora where they have water borne sanitation. Pit latrines pose a health hazard to residents especially when they live in densely populated settlements like the squatter areas. Shower facilities were not available to 80 percent of the households in Dandora.

The households moving from rural areas to Dandora also significantly benefited from the move in terms of services. All the respondents in Dandora had water, toilet and shower facilities unlike in the rural areas where 31 percent did not have water nearby and 34 percent did not have shower facilities. Most of the households in the rural areas have to walk long distances to fetch water and in most cases this water is not purified. Except for one household all those moving from rural areas had toilet facilities. Like in squatter settlements most of the households used pit latrines. The households moving from standard housing did not benefit significantly in terms of services. This is because standard housing is constructed with the necessary services. These facilities were therefore available to the households before the move to Dandora.

#### CONCLUSION

In conclusion it is clear that the site and service project provided services to some households who did not have those services. The households benefiting were not many and the main benefit was in terms improvement of these services. This was especially for households moving from both the squatter settlements and the rural areas. The services were however expensive for these households due to the large number of households found in a plot in Dandora. This made this type of housing unaffordable by the target income group who could not afford to pay the high rents because of their low incomes.

Also only 40 percent of all the respondents had moved from squatter areas or rural areas while most of the respondents were from standard housing. The main beneficiaries thus turned out to be households who had these services before.

Those lacking these services who comprise a majority of urban households did not significantly benefit from this strategy. The strategy thus excluded most of the households it was meant to serve as is evidenced by the rapid growth of the squatter areas. Most of these do not have basic services and are currently not benefiting from site and service schemes. This strategy remains the governments' main housing policy for meeting the housing need of low-income households in Nairobi which has continued to grow rapidly. There is therefore a need to adopt a policy that will make services affordable by low income households. It is to this end that squatter upgrading strategy is recommended for Nairobi. This has been implemented in smaller towns but not in Nairobi mainly because of the official negative attitudes towards these settlements and private land ownership patterns.

It is recommended that progressive upgrading which includes community participation be adopted. In the past squatter upgrading programmes have been implemented without any consultation with the local population. If people were consulted, priorities could be identified and development undertaken if and when the households can. In the past the money borrowed from World Bank had to be used within a certain time and most local authorities just went ahead and brought the services to the people without assessing whether they are willing and able to pay for these services. This has created many problems with loan recovery. It is recommended that foreign funds should not be used for this kind of development and the improvement of these settlements should be piecemeal. This will benefit the community who most need these services without displacing them with a higher income group.

These settlements are going to be in most Third World cities for a long time and there is no way we can continue ignoring them if we want to address the housing needs of low income households who comprise a majority of urban dwellers. It is to this end that squatter settlements should not be demolished but improved. The survey clearly demonstrated that what people needed was services. The policy makers should address this need and not be overly concerned about the structures. Our image of the city has to change to incorporate the economic realities of most of urban dwellers.

## REFERENCES

1. PAYNE K V. Low income housing in the developing world: The role of sites and services and development upgrading. Wiley, Chichester, 1984.
2. VAN HUYCK A. New Directions for national shelter policies. Shelter settlement and Development, Rodwin Llyoyd. (ed), 1987, 339-359, Allen & Unwin.
3. MALOMBE J M. The impact of site and service projects on urban housing market: The case of Dandora, Nairobi, PhD. Dissertation, 1990.