The informal settlements of Voi

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Abstract

Perhaps the biggest problem facing the urban developing world is the informal settlements, or slums. In Kenya, the issue is very pronounced - some 70% of the total urban population live in informal settlements. This study, using the town of Voi as an example, looks for the factors that contribute to the squatter problem, the government policies of urban planning and slum upgrading behind it, and the historical background as well as the current situation with the specific problems that the informal settlements of Voi are encountering. The issue of land ownership is addressed, and practical examples of different ways to approach security of tenure in the case of Voi are given.

Introduction

Urban growth in the developing world and Kenya

It is generally accepted that one of the most important factors that hinders development in the third world is rapid population growth. This, together with continuing poverty and lack of basic needs of acceptable life (e.g. food, clean water, shelter, basic health care, security of tenure) imposes a great challenge for sustainable development. What is even more important, however, is the fact that most of the population growth in the world during the next 15 years will be urban growth, and the vast majority of it will take place in developing countries. The population growth rate in years 2000-2020 is estimated to be 1.3 % in developing regions (2.4 % in Sub-Saharan Africa) compared to only 0.1 % in developed regions (HABITAT 2003:Table A.1). There remains a huge potential for urban growth for the countries in Africa, since in the year 2000 only 37.1 % of their total populations were urban - this is estimated to grow up to 47.8 % by the year 2020 (ibid.).

In Kenya, the level of urbanization in 2000 was 33.4 % and it is estimated to go up to 50.8 % by 2020, indicating an annual growth rate of 3.76 % in the next 15 years (HABITAT 2003:Table B.2). Within the developing regions, Sub-Saharan Africa had the largest proportion of the urban population resident in informal settlements in 2001, 71.9 %, which is alarmingly high when compared to the average of developing regions, 43.0 % (HABITAT 2003:Table 1.3). Thus, a major focus in sustainable development and issues related to it should be directed towards the urban environment and problems caused by rapid urban growth which takes place mostly in informal settlements.

Slums vs. informal settlements

As pointed out in HABITAT (2003:8-12), the term 'slum' is a "general context to describe a wide range of low-income settlements and/or poor human living conditions". Different criteria used to define slums include physical, spatial, social and behavioural criterion. However, the situation in the real world is much more complex - rapidly expanding squatter settlements comprise of simple shacks and permanent structures, with a population having a wide variety of social, tribal and economical backgrounds, thus escaping most of the definitions given by scholars. Every settlement is different with distinctive characteristics.

On the other hand, informal, or spontaneous settlements are settlements whereby persons, or squatters, assert land rights or occupy for exploitation of land which is not registered in their names, or government land, or land legally owned by other individuals (Kibwana 2000a:110). Squatters are people who occupy land or buildings without the explicit permission of the owner (HABITAT 2003:82). In Kenya, there exists no official definition of slums or
informal settlements, and these terms are used interchangeably (HABITAT 2003:219). City authorities, however, view lack of basic services and infrastructure as characteristics of slums, an aspect that slum dwellers do not emphasize (ibid). For these reasons, the term 'informal settlement' will be preferred to 'slum' within this study.

**Aim of the study**

In this paper the prime objective is to introduce the issue of informal settlements in Kenya, using Voi town as an example. Firstly, the fieldwork findings are introduced, followed by a brief historical and economical background of the study area. Secondly, related questions of urban planning and slum upgrading policies are addressed, and the CLT model as one possible solution of secure land ownership is introduced. A more detailed description of the characteristics of informal settlements in Voi is made, as well as a breakdown of each settlement, giving a better understanding of the situation on the ground. Lastly, some conclusions based on the data and practical experiences gathered during the fieldwork are drawn.

This paper is a part of my Master's thesis studies, serving as an introduction to the study. In my thesis, remote sensing and GIS methodologies and techniques are given much a bigger role. In my Master's thesis, the prime objective will be to map the changes that have taken place in the informal settlements of Voi during the timeframe of investigation. This change, in practical terms, can either be growth or decrease of informal structures. A series of aerial photographs from 1985, 1993 and 2004 will be used as the primary data. Important points is also to understand why, where and when these changes have taken place. Secondary data sources, like interviews and literature, are taken into consideration when trying to answer to those questions. Emphasis is put not only on the local level, but on the national level as well, because policies and regulations made by the government of Kenya through various ministries are affecting the very nature of informal settlements as well.

**Study area**

The study area is the township of Voi, located in South-Eastern Kenya, Coast Province, Taita Taveta District, 327 km South-East of Nairobi and 159 km North-West of Mombasa (Lat. 3(25´, Lon. 38(20´). It is situated at an altitude of approximately 580 m a.s.l., at the western edge of the Taru desert. It borders in the north and east the Tsavo East National Park, in the south Sagala Hills, and in the west Voi Sisal Estates.

Situated logistically in an excellent place, Voi lies at the crossroads of the Nairobi-Mombasa highway and the road leading to Taita Hills, the district capital Wundanyi, and Taveta, which is one of the border crossings between Kenya and Tanzania. Voi is also an old railway hub on the busy Nairobi-Mombasa and Voi-Taveta-Moshi railways. Voi is favoured as a stopping place by the truck drivers travelling between Mombasa and Nairobi. Buses operating on the Nairobi-Mombasa route also drive through the town, bringing much activity and business for the hawkers. The town serves the administrative function of headquarters to the Voi district division. Although the district capital is in Wundanyi, a much smaller urban centre in Taita Hills, Voi is the biggest urban centre in the district, and also a major marketplace for agricultural and meat products from the fertile Taita Hills and adjoining periphery.

The newest population Census from 1999 puts the population of Voi Municipality at 33,077 and that of Voi Township at 24,404 residents (Republic of Kenya 2001). Voi Municipality (the same as Voi location) is much larger in area, but contains also rural areas. The borders of Voi Township, however, were drawn back in 1932, the centre point being the Voi railway station in Voi, from where a full circle with a one mile radius was drawn (Figure 1). It is clear that these administrative boundaries no longer serve their original purpose, because Voi has grown well outside the circle. The actual built-up urban environment of Voi is bigger than the Township area, so statistics based on administrative boundaries should be used with caution.

The rural squatter problem in Kenya is most pronounced in the Coast Province (Kibwana 2000a:115), and large squatter settlements can
be found in the rural areas of the Taita Taveta District as well. A big squatting settlement can be found, for example, just a few kilometres west from Voi, in the land belonging to Mwatate Sisal Estates. In the urban setting, it is estimated that some 75% of the total population of Voi town lives in informal settlements (VMC 1995:5). Of the total housing units in Voi, 70% are constructed of temporary materials (VMC 1995:21).

Fieldwork in Voi, January-February 2004

As a basis for my fieldwork, a mosaic of aerial images taken in March 2003 was made. A visual preliminary classification of different land-use classes (13) was made based on the mosaic and the 1:50 000 topographic map. This was done for the purpose of getting some preliminary knowledge of the study area, showing all different land-use classes. The classification results, image mosaic, road networks and a grid of 100 x 100 meters size, all of the same 1:5000 scale, were printed in transparent A4-papers for 10 different areas around Voi town, applying the "Field-GIS" (Maasto-GIS) method by Pellikka (1996).

The preliminary classification proved to be problematic in the field. Although 10 of the 13 informal settlements were correctly identified, a lot of errors of emission and commission occurred. Furthermore, the classes chosen didn't represent the situation on the ground. For example, it turned out that most of the areas classified as shambas (agricultural) were only being cultivated seasonally after rains, most of the year being idle, thus showing random land use patterns. Land grabbing and squatting was also very common, making it difficult to identify patterns of land use. Being in the field with my assistant really revealed the weakness of the classification, which was done without any prior knowledge of the area. After a few days it became appropriate just to forget the classification and just concentrate on collecting data from the field, using only the mosaic prints and the grid. Some 300 photographs with a digital camera were also taken for reference.

Acknowledging these facts, the mosaic prints were just used as "base maps" for field notes. In these maps, with the help of the grid, different settlement areas, land-use types, plot boundaries, place names, important buildings and other points of interest were marked. Because my objectives only concerned built-up areas, especially the informal settlements, undeveloped (non-built) land-use types were ignored in the field. The mosaic prints also proved to be useful for identifying and drawing the boundaries of each settlement area with the kind help of the local residents, in cases where there were no clear natural boundaries.

Some 20 interviews were conducted, involving representatives from each settlement area (the Resident Committees and Self-Help Groups), as well as various actors and administrative personnel from Voi Municipal Council (hereby referred as VMC), Taita Taveta District and the Ministry of Lands & Settlement in Nairobi. The information I got from them was very crucial in understanding the complex political and legal issues behind urban planning in Kenya. Residents Committees (RC) also provided much needed statistics, information and historical background of their settlements.

Historical and economical background of Voi

The history of Voi dates back for more than 400 years, when a rich Kamba slave trader called Chief Kivoi, mispronounced as Voi, founded an outpost near the river, a pleasant resting place on the slave-route towards the coastal slave trading points (Mwandambo 2004). While the colonial government were constructing the Kenya-Uganda railway, Voi began its modern era when the railroad reached the small village in 1898 (ibid.).

Voi shares the same history with many other Kenyan towns, whereby urban layout was based on government-sanctioned population segregation into separate enclaves for Africans, Asians and Europeans, which led to the development of extensive African informal settlements - some of them in existence in Voi since 1920s (Republic of Kenya & GTZ 2001; HABITAT 2003:219). Before independence, Voi remained for a long time a small town of some 5000 inhabitants, but since Kenya gained independence in 1963, the population of Voi started a steady growth (Table 1), caused by rural-urban migration and high birth rates.
The pulling factors for in-migration include the much better job and education opportunities in Voi, compared to the surrounding periphery characterized by traditional agriculture and grazing (VMC 1995). The only places in Voi where small-scale subsistence agriculture can be practiced are the narrow riverbanks surrounding the seasonal river of Voi, although some idle land is converted into shambas after the very few rainy days that Voi gets yearly. Some industrial activities are to be found, although the biggest industrial employer, Bata shoes, has left. Voi Sisal Estates is a major employer, and recently there has been an increase in the gemstone mining in Sagala Hills. The proximity to Tsavo East and West National Parks makes it also an attractive place to stay for tourists. Unfortunately for Voi, most of the income from tourism and mining has fallen outside the town itself, not ploughing back into local development (Mwandambo 2004).

Other small jobs can be found in various government and VMC offices, shop vending, hotels, bars and tourism. The majority of those employed are in the informal sector, though, selling all kinds of goods in Voi's three markets, hawking and selling curios to travellers or working in the informal jua kali industry. Many are also employed as night watchmen. Voi has seven primary schools, two secondary schools, thirty nursery schools, a technical high school (Coast Institute of Technology), a catering school (at Tsavo Park Hotel), a youth polytechnic school, and a few private ones offering a wide range of educational services (VMC 1995:14). All these schools have, naturally, a wide range of quality in education.

**Urban planning and housing in Voi**

The majority of the migrants settle in informal settlements, because the rents in these are affordable, and also because there is no formal low-income housing available (VMC 1995). Furthermore, the majority of Voi's population are from Taita and Sagala tribes, quite small in number, so it is fairly easy for the migrants to find relatives and friends from these tribes, who are always ready to help the newcomer.

The physical development plan of Voi town was recently updated, showing corresponding land-use arrangements, but it doesn't point out any development strategy (Republic of Kenya & GTZ 2001). There is no guidance as to how and where the town should grow first. The actual planning is done in Wundanyi, which is the district capital and has the offices for the district surveyor and his staff. However, they are lacking personnel, funds and equipment to fulfil their duties set by the Ministry of Lands and Settlements in Nairobi (Omoro 2004). Topographic and cadastral maps are still drawn by hand by the cartographer (ibid.). In the Taita/Taveta District Development Plan 2002-2008 (Republic of Kenya 2002:32), it is stated that "lack of updated land information" and "increasing number of squatters" are the major constraints of land administration in the district, and the strategies to overcome these would be "computerization of land information, adequate staff and alienation of public land for settlement schemes".

These issues have lead Voi to the prevailing situation, where residential, commercial and industrial areas are scattered around the town area, leaving many empty and idle areas near the core of the town (Figure 1, VMC 1995:5). There has been a tendency, though, for the informal settlements to form in the outskirts of Voi, where abundant land has been available. This squatted land belongs officially to either the government or Voi municipality, or to the big landowners such as Kenya Railways, Voi Sisal Estates or Voi Development Company. During president Moi's regime, those close to the president’s inner circle, the KANU party, grabbed a lot of land. After the election of the new NARC rainbow coalition, there have been a lot of disputes over land ownership, whereby those who felt they were mistreated during the former regime's era, are demanding land to be returned to its rightful owner.


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<tbody>
<tr>
<td>Population</td>
<td>5313</td>
<td>7397</td>
<td>16 273</td>
<td>24 404</td>
<td>26 161</td>
</tr>
<tr>
<td>Households</td>
<td>-</td>
<td>2182</td>
<td>4507</td>
<td>6818</td>
<td>-</td>
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</tbody>
</table>
The most recent growth of informal settlements has been taking place outside the Voi town circle (the township boundaries), namely Mwakingali A (Kedu), Bomani and Kaloleni (Figure 1). This means in practice, that all land outside the town circle belongs either to the government or individual landlords, falling outside the jurisdiction of VMC. This causes further administrative problems, if these areas are to be developed by the VMC. Furthermore, there often prevails a hostile attitude among the squatters towards the surveyors trying to do their job, maybe because of illiteracy, or because of fear of eviction and land grabbing (Omoro 2004). The problem of informal settlements is widely recognized in the VMC, but until very recently the residents have seen no improvements, only talks and promises. However, the VMC’s opinion on upgrading from 1995, which is still valid, states that "the upgrading programme should limit itself to the subdivision of plots in order to legalize the tenancy situation [in informal settlements] and to the provision of infrastructure ... ...The improvement of the houses themselves should be left to private initiative" (VMC 1995:21).

**Slum upgrading policy in Kenya**

There is still a lack of a clear policy that would facilitate and guide urban development in Kenya; upgrading projects are largely made on an ad hoc basis (HABITAT 2003:219-220). Although several efforts have been made, very few tangible results can be seen. The biggest problem, perhaps, lies in the fact that these upgrading projects have been done with a top-down approach, without any discussion with the residents themselves. The government still has a problem acknowledging the fact that some of the residents and their ancestors have settled in government land for even as long as 100 years, thus having at least some moral justifications for that land. Some were given land by the colonial government, which is now extinct. Some were given land informally by the area chiefs and District Officers, without the necessary legal documents. Furthermore, land use management systems and laws are overlapping and mixed in urban areas (Leach 2000:205). As long as the land has speculative and development value, land use planning is very difficult to enforce because of the intense division of land, lack of legal regulation of transactions, and the interests of powerful elites (ibid).

It seems that the policies that the government have been conducting to date are not transparent - government has merely demolished informal settlements without warning, constructing new middle- or high-class housing, with rents so high and infrastructure so over-designed that the original residents cannot afford them any more (Republic of Kenya & GTZ 1996:1). Livelihoods of many are destroyed with slum upgrading projects, causing further blight and poverty. In worst cases, the slum problem is just moved from one slum to another. This kind of policy, or lack policy if you like, has lead to proliferation of new slums, exclusion of particular popular groups, gentrification, failing partnership and distrust between communities and NGOs on the one hand and government on the other, and weak implementation capacity at all levels (HABITAT 2003:220, Republic of Kenya & GTZ 1996:1). Corruption in allocation of land rights (Kibwana 2000b:227), as well as tribalism (Leach 2000:192), has also played a major part in the failing of these projects. In short, the government has failed to meet the needs of the slum residents in its slum upgrading policies, which are only favouring those few who already are in privileged positions.

**The STDP and community land trust**

The Small Towns Development Project (STDP), initiated by GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit), has been assisting the VMC in upgrading of one the informal settlements, Tanzania-Bondeni, as a pilot project in 1991-2004 (Republic of Kenya & GTZ 1996:2001). It was a typical informal settlement with the ordinary characteristics (see next chapter), squatted on land belonging to the government, Kenya Railways and Voi Sisal Estates, having less than 1% of its structures permanent (Republic of Kenya & GTZ 1996:1). The project was generally viewed as a success, to an extent that it won the UN-HABITAT award of 1996, so VMC requested the STDP to assist in developing an upgrading project for all the informal settlements in Voi. The idea was to replicate the upgrading process in other settlements, in view of the lessons learned from the pilot project. In 1997, STDP carried out a preliminary assessment of eleven informal
settlements in Voi, resulting in guidelines and action plans for the upgrading process. However, since the STDP is now officially finished, each settlement and their RCs are now on their own to implement these strategies.

In short, the Community Land Trust (CLT) land tenure system tries to solve the problems mentioned above regarding slum upgrading projects. This is done through a project strategy, which encompasses empowerment of the community, professionalisation of the support agencies and establishment of a partnership among beneficiaries, the government and collaborating NGO’s. The CLT tries to make land tenure for the targeted community sustainable and minimize the negative effects of the land market, such as land speculation, on poor residents (Republic of Kenya & GTZ 1996).

The first principle was to recognize and accept the situation created by squatters. The second principle was that beneficiaries would have to pay for infrastructure improvements and security of tenure, in order to make the project replicable and sustainable. From these experiences, the STDP created a Minimum Intervention Approach (MINA) to upgrading of informal settlements (Republic of Kenya & GTZ 2001:4). The structure owners, who were identified as the first beneficiaries, were initially organized into a self-help group. The CLT land tenure was chosen, because it provided sustainable security of tenure. Land was registered to the community, with individual members owning developments and improvements, which they have undertaken on their plots. If a member wants to move out, he/she can only sell the developments, but not the land, which stays in the ownership of the community (Republic of Kenya & GTZ 1996:5).

Before the registration of the Self-Help Group, a socio-economic survey and a topographic survey were conducted to understand the current situation in the ground. An upgrading concept was then presented to the group, which started to mobilize the community and elected a Residents’ Committee (RC). After the private landowners agreed to exchange their land in Tanzania-Bondeni, a cadastral survey was done, the Tanzania-Bondeni CLT was registered, and Letter of Allotment was issued to the community, title deed is still pending. A PDP was made in close collaboration with the community. The PDP in essence is a new plan, whereby residential, business, educational and public plots were issued. About 300 structure owners had to be resettled according to the PDP, because they resided on the road reserve, on public purpose plots, on plot boundaries, or were living in over-crowded areas (Republic of Kenya & GTZ 1996).

The achievements in Tanzania-Bondeni after the implementation of the CLT include security of tenure, division of the land to 818 plots, construction of new houses, opening of new access roads and building of a nursery school and dispensary and starting a tree nursery. The challenges ahead include acquiring title deeds, building of a sewerage system and primary school, better sanitation, stopping soil erosion and getting electricity (Mwamburi 2004). All this they have to do at their own, because they are lacking a donor after the GTZ funding ended in early 2004 (ibid.).

Characteristics of informal settlements in Voi

Although each settlement has its distinctive characteristics, some of them shown in Table 2, common characteristics shared by all informal settlements in Voi are (1) insecurity of tenure, (2) lack of planning, (3) lack of infrastructure (e.g. roads, water pipes, drainage systems, toilets, waste collection, electricity), (4) poor environmental condition, (5) lack of public facilities (schools, dispensaries), and (6) unemployment and poverty (Republic of Kenya & GTZ 2001). Based on the author's observations and interviews in Voi, the consequences of these problems to the inhabitants themselves are, respectively:

1) Constant fear of eviction, which hinders all development and maintenance of structures and infrastructure, depressing and frustrating people even more. Furthermore, houses are built of temporary or semi-temporary materials, such as mud, wattle, cardboard and scrap metal. Inhabitants that might be financially able to improve their structures decide not to risk their money in fear of eviction. Landlords are unwilling to improve structures, since the demand is high and they will get their money anyway. Tenants are often indifferent, because the plot and the structure belong to somebody else. The
government and local authorities are unwilling to provide any services due to the informal status of these settlements. Corruption is also a major contributor to this problem.

2) Lack of planning causes random patterns of built-up environment, inefficiency and congestion, which itself contributes to more problems. Cadastral data is often non-existent, which can lead to land disputes between neighbours. Haphazard layout of structures means that open spaces necessary for essential infrastructure developments are hard to find without removal of structures. Squatter houses block spaces reserved for roads, toilets, drainages, schools etc.

3) Lack of infrastructure causes poverty, misery and disease. Most of the roads in informal settlements of Voi are either so narrow or so badly eroded by heavy rains, that no vehicle can pass, which makes moving within settlements difficult, but also prevents any emergency vehicles from entering these areas. Lack of water pipes means that people in these settlements have to fetch water from long distances, which consumes a lot of time. Those who cannot afford water sold by vendors have to rely on secondary sources, which are unreliable and often contaminated. Lack of drainage systems, toilets and waste collection attributes to poor sanitation and numerous health hazards, making the spread of deadly diseases easy.

4) Poor environmental condition means diminishing vegetation cover, soil erosion, polluted soil, water and air. Raw sisal waste from the nearby sisal factory causes pollution of the river as well as flooding during heavy rains (Republic of Kenya & GTZ 1996:2). These problems, which are connected to the other issues mentioned above, cause settlements to be further uninhabitable, contributing to bad sanitation, spreading of diseases and preventing substantial agriculture in an semi-arid setting which is already environmentally vulnerable.

5) Lack of public facilities, like schools and dispensaries, forces the residents to travel longer distances to get these services. Those few that exist are already over-crowded and working over their capacity. Communal facilities and social halls have an important role in the community and its integrity.

6) Unemployment and poverty causes many human tragedies, forcing people to prostitution, substance abuse and criminal activities. The majority of the people residing in informal settlements have to rely on informal activities to feed their families, because job opportunities are few and require education which most of the dwellers do not have. Informal activities include hawking in the Voi bus station, selling roasted maize or boiled eggs, small-scale farming or grazing on squatted land, doing small repairs or manufacturing in the jua kali, or just begging.

The informal settlements in Voi

Lower Kariakoo (Bangladesh), Central Kariakoo, Upper Kariakoo and Gaza

The three Kariakoo settlements, Lower, Central and Upper Kariakoo, are the oldest residential areas of Voi town (Figure 1). They stand out from the rest of the informal settlements, because structures have been put almost in an orderly manner, on neat rows. There is adequate accessibility with roads and footpaths between housing blocks, piped water is available put poor sanitation and waste management are major threats (Republic of Kenya & GTZ 2001). Lower and Central Kariakoo used to be the CBD of Voi, hosting the main market, before it was moved to its current location some 500 meters eastwards (Mwanake 2004). It still has some commercial activities, including shops, kiosks, garages and some small jua kali industries, which are located on both sides of the main tarmac road.

The houses are very old and some in poor condition. A few individuals have title deeds; others have Letters of Allotments or Temporary Occupation Licences (TOL). All plots are now surveyed, but the main issue still remains the same; the majority are missing title deeds (Mwanake 2004, Abdi 2004). The main reason for this, according to Abdi (2004), is lack of law enforcement, which causes under-capacity and incompetence.
Table 2. Statistics for the informal settlements of Voi

<table>
<thead>
<tr>
<th>Settlement</th>
<th>Structures (S) / Plots (P)</th>
<th>Household size</th>
<th>Population density</th>
<th>Land ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sofia Bona</td>
<td>577 (S), 311 (S)*</td>
<td>5-6</td>
<td>Very high</td>
<td>Informal</td>
</tr>
<tr>
<td>Sofia Kati</td>
<td>170 (S), 90 (S)*</td>
<td>5</td>
<td>Very high</td>
<td>Informal</td>
</tr>
<tr>
<td>Sofia Juu</td>
<td>114 (P)</td>
<td>7</td>
<td>Medium</td>
<td>Informal</td>
</tr>
<tr>
<td>Kedu</td>
<td>785 (P)</td>
<td>5-6</td>
<td>High</td>
<td>Informal</td>
</tr>
<tr>
<td>Mlekenyi</td>
<td>100 (S), 202 (P)</td>
<td>6</td>
<td>Very high</td>
<td>Informal</td>
</tr>
<tr>
<td>Aseko</td>
<td>455 (S), 400 (S)*</td>
<td>7</td>
<td>Very high</td>
<td>Informal</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>110 (S)</td>
<td>7</td>
<td>Very high</td>
<td>Informal / Formal</td>
</tr>
<tr>
<td>Upper Kariakoo</td>
<td>24 (S)*, 40 (P)</td>
<td>7</td>
<td>High</td>
<td>Informal / Formal</td>
</tr>
<tr>
<td>Central Kariakoo</td>
<td>57 (S)*, 40 (P)</td>
<td>8*</td>
<td>High</td>
<td>Informal / Formal</td>
</tr>
<tr>
<td>Gaza</td>
<td>108 (S)</td>
<td>8</td>
<td>Very high</td>
<td>Informal</td>
</tr>
<tr>
<td>Kaloleni</td>
<td>290 (P)</td>
<td>6-7</td>
<td>Low</td>
<td>Informal</td>
</tr>
<tr>
<td>Maweni</td>
<td>298 (S), 352 (S)*</td>
<td>8</td>
<td>Very high</td>
<td>Informal</td>
</tr>
<tr>
<td>Tanzania-Bondeni</td>
<td>600 (S), 818 (P)</td>
<td>7</td>
<td>Medium</td>
<td>Upgraded (CLT)</td>
</tr>
<tr>
<td>Bomani</td>
<td>?</td>
<td>?</td>
<td>Low</td>
<td>Informal</td>
</tr>
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</table>

Figure 1. Informal settlements of Voi, based on author's fieldwork in Jan-Feb 2004.

1 The figures given for structures, plots and average household sizes were provided in interviews with the representatives (chairmen, vice-chairmen or secretaries) of each settlement’s RCs and self-help groups. The ones marked with an asterisk (*) are from the Preliminary Assessment Report of Informal Settlements in Voi Town (Republic of Kenya & GTZ 2001). Note that some of the figures are contradicting, but the ones from the latter source are already three years old. Number of structures is according to the cadastral survey of PDPs, so it doesn’t include structures erected illegally after the survey was done. Population density is just a relative measure done by the author through visual interpretation of aerial photographs and walk-throughs in the settlements.
After the survey, it was noticed that some of the houses in Bangladesh are erected in road reserves, or they didn't take into consideration the required plot coverage, which means that some houses need to be demolished or shifted to another location (Republic of Kenya & GTZ 2001). Those who already have title deeds in Bangladesh, have problems because the original owners, their parents or grandparents, are now deceased, and changing the owners name in the title deed seems to be a difficult and lengthy process (Mwanake 2004).

Gaza has a very interesting history: some 30 frustrated Voi youths from Bangladesh squatted an narrow piece of land, entitled 'Gaza Strip', between Bangladesh and the railway line, during one weekend in 1991 (Kubo 1991). They complained that the VMC had allocated 22 plots for them in 1983, but nothing had happened, so they had to act independently (ibid). There was little the VMC could do, because when it came to Gaza it was already settled and temporary structures were hastily put up. Nowadays Gaza is one of the most dense informal settlement areas in Voi, originally built for 30 people, but has now over 900 (Abdi 2004). Land speculators have already displaced the original settlers (ibid). There is basically no infrastructure whatsoever; only a few narrow footpaths lead through the settlement. The residents of Gaza are now trying to mobilize the community, start the planning process and try to collect money for buying annex land from VMC to settle their people (ibid).

Mwakingali A (Kedu), Mwakingali B (Aseko) and Mlekenyi

Mwakingali A, B and Mlekenyi are located on the outskirts of Voi town, northwest and north of CBD, on the foot of Mwakingali and Mwangea Hills (Figures 1, 2 and 3). The first settlers to Mwakingali came during colonial times, but the real boom started after independence. Squatters divided land among themselves illegally, without permission from VMC or local administration (Republic of Kenya & GTZ 2001:Annex 5.3). Originally the residents relied on agriculture and livestock, with ample land for these activities, but for the last ten years the growth of the Kedu settlement especially has been so fast that these practices are now mostly abandoned. Residents are now even settling the environmentally hazardous slopes of Mwakingali and Mwangea Hills.

The soil of the previously forested steep hills is now rapidly eroding, some parts of it being bare bedrock. Without vegetation cover, the soil cannot absorb any rainwater. This poses a major threat, not only to the environment, but for the residents as well - already major floods have taken place, sweeping tens of houses from its way, eroding roads and destroying property (Figure 4). The lack of drainage systems further worsens the situation, letting the water flow freely all the way from the hills down to the Voi river. Because the foot of Mwakingali Hills is heavily populated, blocking the natural waterways, the few roads are transformed into streams. Gullies are widened and deepened, and roads become impassable for many days. The worst hit area is Maweni settlement, just near the river, where the storm water streams flow.

The newest growth area of Kedu is outside the town circle, on government land, so it falls outside of VMC jurisdiction (Mgolia 2004). This makes things more complex planning wise. The Kedu RC was formed in 1996, and so far the topological surveying and the PDP has been done, which is waiting for approval (ibid). The residents are applying for communal title deed, following the example of Tanzania-Bondeni and the CLT. Structures are constructed haphazardly with only a few footpaths and roads leading through. Other infrastructure is practically non-existing; the community gets its water from a big water tank near the Voi Hospital, but only for a few hours a day (Mwaliko 2004). There is no plan in the PDP for sewerage or drainage systems, since the RC is waiting assistance from outside (ibid.).

Mlekenyi is a small, but compact and densely built area just southwest of Kedu. The RC was formed in 1996, the objective being pursuing individual title deeds, and so far the results have been very promising. Topographical and cadastral surveying has been done, the PDP is done and approved, the residents have gotten their letters of allotment in 2002 and are waiting for the title deeds (Mwakulua 2004). After a struggle with the VMC, they hired a private surveyor to do the job. According to Mr. Mwakulua, the key for success was teamwork within the RC, good leadership and knowledge of the political system in the Municipal and
District levels. After getting title deeds, the residents want to concentrate on infrastructure: new roads, drainage systems, water installations and electricity are needed (ibid.).

Aseko (Mwakingali B) neighbours Mlekenyi in the north. Just like Kedu and Mlekenyi, the land of Aseko was initially suited for keeping livestock, with a few temporary structures. Later on, these evolved to semi-permanent structures after more and more squatters came in, leading to a very fast expansion, also because house rents here were much cheaper than in town (Republic of Kenya & GTZ 2001:Appendix 5.4). Physically the two settlements look just like the same, but they have decided to form separate RCs with quite different goals regarding land tenure systems. The RC of Aseko was formed already in 1991, and to date all surveying work is done, the PDP is approved, and the letter of allotment came in 1996 (Mwarabu 2004). All this work, already paid for, was done in order to get a communal title deed, but now the RC has changed its mind and they want individual title deeds (Mwarabu 2004, Chawana 2004). This means that plots need to be sub-divided and a new PDP to be drawn. Houses in Aseko are temporary or semi-permanent, but still new structures are put up illegally just east of Aseko, although they are not part of the RC (Chawana 2004). Future improvements include roads, electricity, water storage tank and some income-generating activities with the help of NGOs (Mwarabu 2004, Chawana 2004).

Lower Sofia (Sofia Bona), Central Sofia (Sofia Kati) and Upper Sofia (Sofia Juu)

The three Sofia settlements were first settled by squatters in the 1950s, starting from Central Sofia, and then moving to Lower Sofia in the 1960s (Republic of Kenya & GTZ 2001). Upper Sofia is the most recent of the three, with much lower population density than the crowded Lower and Central Sofia.

After the initial settlement, Lower Sofia grew slowly, but the greatest invasion was in 1983 when the VMC failed to enforce development control (Kenya & GTZ 2001:Annex 5.2). Squatters divided the government land amongst themselves, so there has been no planning, and new structures are still being erected (ibid.). The Sofia Bona housing project was started in 1996, the topographic survey has been done in 2002, although the RC is not happy with the outcome as it contains errors and they are still waiting for

Figure 2. Mwakingali A (Kedu) settlement (P. Hurskainen).
Informal settlements Mwakingali B (Aseko) is located in the top left corner, Kariakoo is located in the lower left corner and Maweni just south of the CBD (see Figure 1 for comparison).

Figure 3. The central business district (CBD) of Voi in the middle of an aerial photograph, January 25, 2004. Informal settlements Mwakingali B (Aseko) is located in the top left corner, Kariakoo is located in the lower left corner and Maweni just south of the CBD (see Figure 1 for comparison).

Figure 4. Badly eroded road in Mwakingali (Aseko) revealing water pipelines (P. Hurskainen).

The area covering the settlement known as Central Sofia was initially a bushy area with wild animals, until squatters settled it in the 1950s (Republic of Kenya & GTZ 2001:Annex 5.5). The RC of the settlement was founded in 1996, and it handles development control and requests for land allocations within the settlement (ibid.). Other activities include road maintenance and garbage collection (Mwangombe 2004). The topographical surveying and the PDP have been done in 1999, and the RC is pursuing to get individual title deeds, but so far they have only TOLs (ibid.). Problems in Sofia Central include lack of security of tenure, accessibility, lack of water, poor sanitation and infrastructure (Republic of Kenya & GTZ 2001:Annex 5.5).

Upper Sofia started as an annex to Central Sofia, to settle the overspill population (Republic of Kenya & GTZ 2001:Annex 5.6). Structures were erected in large numbers, so the VMC was unable to evict them (ibid.). The residents applied for land in 1986 and the RC was registered in 1997 (ibid.). VMC started to plan Upper Sofia in 1987, but so far from the 114 plots only 67 have been planned (Righa 2004). Upper Sofia was "opened" for development, and new settlers came in,
replacing the original squatters (ibid.). Furthermore, VMC prohibited the erection of new structures in 1991, which is the reason why the settlement is still quite spacious compared to others. The topographic surveying was done in 1996, and PDP is ready and approved. The RC is still waiting for letters of allotment and, eventually, title deeds, which they decided to pursue individually (ibid.). The RC is willing to do the infrastructure upgrading themselves, biggest problems being lack of water, electricity, social amenities, access roads and poor housing (Righa 2004, Republic of Kenya & GTZ 2001:Annex 5.6). There are a lot of absentee landlords, which makes the RC inactive (Righa 2004).

Maweni

Maweni was initially settled in 1965, when the first squatters came to the area, which used to be an open, bushy area (Republic of Kenya & GTZ 2001:Annex 5.1, Kamando 2004). Zoned officially for industrial use, plots were divided illegally by the village elder to squatters, without charge (Kamando 2004). Houses were built of temporary materials, like cartons and grass, and the soil is characterised by rocky beds and clay soils, which can be found near the Voi River (ibid.). The real population boom in Maweni began in the early 1990s, which has lead to overcrowding - Maweni is perhaps the closest equivalent in Voi to the informal settlements in Nairobi and other big cities (Figure 5). Now VMC has taken some developmental control, which has been effective since no new structures have been erected since 1993 (Republic of Kenya & GTZ 2001:Annex 5.1). People of Maweni are very poor, majority of them earning less than a dollar a day, making their living either as hawkers in the CBD or by practicing small-scale substantial agriculture in small shambas near the river (Shighadi 2004). The current population size is too high for Maweni, and they are looking for an annex area to settle the overspill population (ibid.).

Figure 5. Narrow street in Maweni informal settlement (P. Hurskainen).
The RC of Maweni was formed in 1993, but the first two committees were too corrupt to achieve any significant improvements in Maweni - a lot of money and property was lost (Shighadi 2004). The third committee, elected in 2003, is now trying to pursue individual title deeds, which was the plan from the beginning. They are currently collecting money for the topographical survey and the PDP, and the only thing that is ready is the member register (ibid.). Problems within the settlement include poor sanitation, lack of drainage systems, access roads, water, electricity and inadequate housing facilities (Republic of Kenya & GTZ 2001:Annex 5.1). As noted earlier, storm water flooding is a major problem as well.

Kaloleni

Kaloleni is maybe the oldest settlement that falls within Voi Township. According to Mr. Moses "Musa" Athman (2004), it was settled in 1888 by the Sagala tribe, which still consists the overwhelming majority of people in Kaloleni. It can be divided into two parts, the first falls within Voi town circle, and the other side is within Sagala native reserve (ibid.). Kaloleni is quite different form any other informal settlements in Voi, firstly, because its population consists mostly of Muslims, secondly because it is relatively sparsely populated and thirdly because the plot size is quite big. It actually looks more like a rural village than an informal urban settlement. The area chief did plot allocation and there has been no official planning so far (Republic of Kenya & GTZ 2001:Annex 5.11). Although the land belongs to the government, the people of Kaloleni have a very strong connection to the land that was settled by their forefathers, and are very much committed to pursue individual title deeds. They have been fighting for their land for years; the government grabbed two big plots, for a tree nursery and Bata Shoes company, which are now both defunct (Athman 2004). Recently there was also a big dispute between Kaloleni and Maweni RC's about the Maweni annex in Kaloleni land, but the resolution was made in favour of Kaloleni.

Topographic surveying has been done, and cadastral survey is under the way (Athman 2004). So far they haven't got letters of allotment. Environmental degradation is a big problem, since majority of Kaloleni people rely on agriculture. The seasonal Voi river used to be permanent, tree cover is diminishing and there is a threat of soil erosion, although the RC has started a tree-planting program (Athman 2004).

Bomani (Irima)

Bomani is a vast area northeast of Voi town and Mwakingali settlement, bordering the Tsavo East National Park. It is very sparsely populated, and the residents rely on cattle grazing (hence the Swahili name Bomani). This settlement came into existence when a certain rich individual evicted squatters who had invaded his land and assumed to stay without his consent, and because VMC has permitted cattle keeping within the township boundaries (Republic of Kenya & GTZ 2001:5.10). It is the most rural of all Voi's informal settlements, and the residents haven't been mobilized yet for a RC (ibid.). There is no infrastructure whatsoever and the residents are suffering from lack of security of tenure and water (ibid.).

Conclusions

The squatter problem in Voi is real and the informal settlements should be the number one priority when planning the future of Voi town. First of all, the issue of land ownership should be solved, because it seems like all problems in these settlements ultimately come back to this issue, their nature of being informal, or illegal. Residents of these settlements have seen municipal councils, governments, ministers, and presidents come and go, yet no tangible achievements or efforts have been made since the first informal settlements came into existence. Getting false promises, seeing land grabbed by corruption and land speculation, loosing the faith of VMC taking any action in providing the services that should be it's duty, the residents feel betrayed and misled by the government and local authorities.

It is from these experiences, and the positive impact of Tanzania-Bondeni case, that the residents have chosen to take matters into their own hands, by mobilizing the community and trying to get security of tenure by their own means and on their own conditions. Many RCs have collected notable amounts of money with harambees (a traditional way of fundraising) and hired private surveyors to prepare surveys
and draw PDPs. Many communities have enhanced the feeling of togetherness by forming RCs and self-help groups.

However, many problems and challenges still lay ahead. Getting title deeds seems to be a big problem, even if all the necessary paperwork is done. Many have waited for years. The process seems to take too much time to be justifiable only by slow bureaucracy, possibly due to corruption and mismanagement by the Ministry of Lands and Settlement. Population is still increasing, each day there are more people coming in that need to be accommodated, employed and fed, new structures are coming up, and the environment is failing. Lack of money is a prevailing problem, which leads to a situation where RCs are seeking for external assistance, be it NGOs, donors, individuals, investors or the government.

The residents could do much more by themselves. They are the experts in their own area; they have the best knowledge of the specific problems, causes and possible solutions. They have the manpower and willpower to help themselves; it is only waiting to be harnessed. More than financial assistance, they would need assistance in training, guidance and self-empowerment to get solutions that would be self-sustainable and replicable. If the government and local authorities are unable to upgrade these settlements for one reason or another, it should at least acknowledge and encourage the residents themselves to take matters in their own hands, still following the government policy.

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List of acronyms

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<tr>
<td>CBD</td>
<td>Central Business District</td>
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<tr>
<td>CLT</td>
<td>Community Land Trust</td>
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<td>GIS</td>
<td>Geographic Information Systems</td>
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<td>GOK</td>
<td>Government of Kenya</td>
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<td>GTZ</td>
<td>Deutsche Gesellschaft für Technische Zusammenarbeit</td>
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<tr>
<td>HABITAT</td>
<td>United Nations Human Settlements Programme</td>
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<tr>
<td>MINA</td>
<td>Minimum Intervention Approach</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
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<td>PDP</td>
<td>Partial Development Plan</td>
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<td>RC</td>
<td>Residents' Committee</td>
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<td>STDP</td>
<td>Small Towns Development Project</td>
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<td>TOL</td>
<td>Temporary Occupation Licence</td>
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<td>VMC</td>
<td>Voi Municipal Council</td>
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References


**Interviews**


