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An enumeration and mapping of informal settlements in Kisumu, Kenya, implemented by their inhabitants

IRENE KARANJA

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ABSTRACT This paper describes an enumeration of all households living in informal settlements in Kisumu, Kenya, implemented by their inhabitants and supported by savings groups, the Kenyan Homeless People's Federation (Muungano wa Wanvijiji), of which they are members, and Pamoja Trust, a Kenyan NGO. This work included collecting data on each household, numbering each structure and providing photo identity cards to each household. It also included the preparation of detailed maps defining the boundaries of all house structures along with features of the site, with a level of accuracy and detail needed for upgrading and providing secure tenure. The data from the enumeration helped inform the residents of each settlement about their needs, and supported their collective discussions about priorities. The enumeration in Kisumu is part of a larger enumeration and mapping programme, both within Kenya and in many other nations, supported by organizations and federations of the urban poor.

KEYWORDS enumerations / federation / informal settlements / Kisumu / land tenure / mapping / Muungano wa Wanvijiji / Pamoja Trust / slum inventory / urban poor

I. ENUMERATIONS AND DEVELOPMENT

Over the last 10 years, in a growing number of nations, grassroots organizations formed by the urban poor and the larger federations of which they are part have undertaken detailed household enumerations in the informal or illegal settlements in which they live.[1] There has been considerable interchange among these grassroots organizations and federations as they visit each other to learn how this is done.[2] These enumerations have some similarities to household surveys undertaken by research organizations to examine in detail the scale, depth and nature of poverty. For instance, both involve a detailed set of questions to households about livelihoods, living conditions and services. But they are different in at least three ways. First, enumerations involve the grassroots organizations formed by those living in the settlements that are enumerated and mapped, and the members of these organizations have central roles in determining what questions are asked and in actually asking the questions; also, it is the inhabitants of the settlements who do most or all of the data gathering. Second, the enumerations cover all

households, not just a sample. In part, this is to provide details of each household and each house structure, which is needed for any detailed programme of support for upgrading and secure tenure; but this is also to ensure that every household knows the reason for the enumeration and how they can become actively engaged in the plans and proposals that the enumeration seeks to support. Third, the data is returned to households and neighbourhood organizations (for instance, the savings groups that are the foundation of the federations) for verification – and it is generally at the neighbourhood level that anomalies and errors are addressed.

Enumerations are an essential part of any "slum"/squatter upgrading programme, especially when there are no official maps or data on households in the settlements that are to be upgraded. The enumeration seeks to provide basic information on all individuals and households and the housing structures in which they live; also information on the businesses and public and private institutions located there. It also has to provide accurate information about the tenure status of each individual or household – whether, for instance, they consider themselves to be the owner of the land on which the structure is located, and the basis on which this ownership was established; whether they have official documents, or local leaders who will support their claim for plot ownership; or whether they are tenants renting the structure or one or more rooms within the structure. There is also a category of "structure owner" for people who claim ownership of house structures but have no formal title for the land; and there is the added complication that many of those claiming to be owners of land or of structures may not live in that structure, and may live in another settlement.

The enumeration also provides detailed data on existing infrastructure and services, which is particularly important for any upgrading programme to ensure the upgrading builds on what exists already.[3] Thus, the enumeration provides the basis for local planning. But as experiences within Muungano wa Wanvijiji (the Kenyan Homeless People's Federation) and other federations have shown, enumerations can also provide the process through which consensus is built and the inclusion of all residents is negotiated. Enumerations are among the means to help organize communities and bring community organizations together into larger federations. When the inhabitants of the "slums"/informal settlements and their own grassroots organizations undertake the surveys and are responsible for verification, these actions help form the larger settlement and citywide federations, which in turn ensure the basis for the full involvement of communities in large-scale upgrading projects.

Experience with enumerations in Kenya and elsewhere has shown that the way in which the enumeration is done and by whom are as important as the information it collects, because this influences not only the quality and detail of the data collected and its verification but also the nature of the inhabitants' engagement with the planning and implementation of the upgrading.

First, there is the importance of involving the inhabitants of informal settlements and their own organizations in the enumeration, rather than developing a specialist team of external enumerators. Enumerations are planned with committees of residents for each settlement, mostly members of the urban poor federation and other stakeholders (individuals or community organizations who lay a claim to any investment in the

1. For more details, see Slum/Shack Dwellers International at http://www.sdinet.co.za/; also Patel, Sheela, Celine d'Cruz and Sundar Burra (2002), "Beyond evictions in a global city; people-managed resettlement in Mumbai", *Environment and Urbanization* Vol 14, No 1, April, pages 159–172; Weru, Jane (2004), "Community federations and city upgrading: the work of Pamoja Trust and Muungano in Kenya", *Environment and Urbanization* Vol 16, No 1, April, pages 47–62; and Patel, Sheela, Jockin Arputham, Sundar Burra and Katia Savchuk (2009), "Getting the information base for Dharavi's re-development", *Environment and Urbanization* Vol 21, No 1, April, pages 241–252.

2. Asian Coalition for Housing Rights (2000), *Face to Face: Notes from the Network on Community Exchange*, ACHR, Bangkok, 32 pages; also Patel, Sheela (2004), "Tools and methods for empowerment developed by slum and pavement dwellers' federations in India", *Participatory Learning and Action* 50, IIED, London, pages 117–130; and Mitlin, Diana, Sheela Patel and Joel Bolnick (2001), "Squatting on the global highway: community exchanges for urban transformation", in Michael Edwards and John Gaventa (editors), *Global Citizen Action*, Earthscan–UK/Westview–US, Boulder, Colorado, pages 231–245.

3. See Hasan, Arif (2006), "Orangi Pilot Project; the expansion of work beyond Orangi and the mapping of informal settlements and infrastructure", *Environment and Urbanization* Vol 18, No 2, October, pages 451–480.

settlement). The savings schemes within each settlement, based on the model supported by Muungano, have been particularly important in mobilizing large numbers of residents within each settlement to contribute to the enumeration and mapping.

Enumerations must also ensure that they include all groups within the settlement. In informal settlements, there are usually groups and sub-groups whose needs and priorities are not easily identified and complex micro-politics may act to exclude them – for instance, because the household is headed by a woman or because they are immigrants or because they are tenants. Such micro-politics often exclude some of the poorest individuals or households. Upgrading schemes generally increase the value of the upgraded structures and the land on which they sit – often very considerably. Since any upgrading scheme supported by the government implies more secure land tenure and may include the provision of government-sanctioned titles to households, there will be conflicts between those who are (or claim to be, even if the claim has no legal basis) landowners or structure owners and tenants (and possibly sub-tenants). There is also obvious pressure from those who do not live in the settlement to be registered as residents in the enumeration – and from local inhabitants who also want to get plots for friends or family members who live elsewhere, or for adult children who currently live with them. Thus, an enumeration needs strong local knowledge and a strong local organizational base to deal with such issues; mediation and negotiation are central to an accurate, effective enumeration.

Verification takes place through community registers and household enumeration reports. Community registers, posted for all to see, include such public information as:

- number in household; names; national identity card number of head of household;
- status of head of household (structure owner or tenant);
- national identity card number of structure owner; and
- residence of structure owner and period of stay in the settlement and in the household.

The household enumeration report includes all the information collected for each household, and it is important for updating the information and building the confidence of households in preparation for the post-enumeration activities.

The verification process is highly political, especially the household register, as people who own and rent out many structures may see this process as threatening the investments that they have made in the community. In communities that conduct enumerations for land regularization and housing with support from the government, the interactions arising from the verification process begin to raise issues about why there are so few structure owners living in the settlements and why tenants, who are in the majority, are not being recognized in the same way as structure owners. The enumerations in Nairobi and Kisumu found that many tenants had lived in the settlements for many years (some for more than 20 years) and had invested far more in the structures than the structure owners. They felt they had an equal claim to resources from the state. This helps explain why associations of landlords and structure owners strongly opposed some of the earliest enumerations in Nairobi.[4]

4. See reference 1, Weru (2004).

II. EXPERIENCES WITH ENUMERATIONS IN NAIROBI

Pamoja Trust, a Kenyan NGO, and Muungano wa Wanvijiji, the Kenyan Homeless People's Federation, have been working together on a range of initiatives that include support for savings schemes (there are currently more than 1,000 such schemes), community-led upgrading, infrastructure and service provision and new house developments. They have also developed an Urban Poor Fund (Akiba Mashinani Trust) to support this work. The work has included many detailed enumerations of informal settlements in Nairobi and other Kenyan urban centres, prior to the Kisumu enumeration; in total, enumerations to date in Kenya have covered more than 200,000 households. There have also been many exchanges with urban poor federations in other nations on how to organize and support enumerations – since community-driven enumerations have formed an important part of the work of many of these federations.

Enumerations in the informal settlements that house more than half of Nairobi's population have proved particularly important in providing an information base for upgrading. They have also been used as part of a defence against evictions – as they demonstrate, for instance, the importance of informal settlements to the local economy or as they provide evidence that counters official justification for evictions. Politicians or government agencies often justify evictions on the basis of the number of recent migrants in settlements, or their parasitic quality; enumerations often show that the settlement under threat has a high proportion of people who have been living and working in the city for many years and who are important to the city's economy. Detailed enumerations and maps can also show how a need for space to be cleared for new infrastructure within or around informal settlements can be achieved with minimum dislocation for the inhabitants. They are also important for brokering agreements within such settlements to ensure that all the inhabitants' needs are addressed in any upgrading programme. As noted above, in most informal settlements in Nairobi many of the rooms are rented to tenants, and the "structure owners" see enumerations as a threat to their profitable rental businesses. In Huruma (in Nairobi), the enumeration and mapping process provided the basis for brokering agreement between tenants and structure owners so that all households were accommodated within an upgrading scheme.[5]

Enumerations have also been important for households living close to the railway track that runs through Kibera and Mukuru, Nairobi's largest informal settlements, both of which have high population densities. In a plan to improve the railways, the authorities were going to clear homes and businesses from large areas on either side of the tracks. The communities collected information in Mukuru and Kibera where the encroachments along the railway tracks are dense, and often referred to as "hot spots", and the information showed that large numbers of people and businesses would be evicted under the official plan (Table 1). Presenting this information to the railway authorities allowed for detailed discussions, which led to a change in plan that greatly reduced the number of people and businesses that would have to move. It also allowed those who had to move to be relocated to sites close by (which would have been impossible with the much larger eviction programme originally planned). In a report presented to the World Bank and the government of Kenya in April 2005, Cowi[6]/PamojaTrust proposed the relocation of

5. See reference 1, Weru (2004).

6. Cowi is a Danish consultancy firm.

TABLE 1
Household and business enumeration along the railroad tracks in Kibera slum and Mukuru slum, January 2005

Category	Kibera households	Mukuru households	Total
Physical and economic displacement (number of units)	1,440	948	2,388
1. Number of mobile vendors occupying space	276	114	390
2. Number of businesses	1,047	706	1,753
2.1 Business structure owners (persons)	815	639	1,454
2.2 Businesses, tenants (households)	232	67	299
3. Business employees (persons)	1,234	428	1,662
4. Residences (number)	78	113	191
4.1 Residents, structure owners (persons)	47	88	135
4.2 Residents, tenants (households)	31	25	56
5. Number of residents cum vendors/businesses	39	15	54
5.1 Residents cum vendors/business structure owners	24	13	37

SOURCE: Pamoja Trust.

7. Pamoja Trust and Shack/ Slum Dwellers International (2008), *Nairobi Slum Inventory*, Pamoja Trust, Urban Poor Fund International and Shack/Slum Dwellers International, Nairobi, 175 pages.

project-affected persons from a 5.2-metre corridor on either side of the Kenya railway reserve, with the objective of establishing a safety corridor for railway traffic as well as for people in the immediate vicinity of the railway line. The government of Kenya raised certain concerns about the relocation action programme and requested Pamoja Trust and a local architectural firm, Tecta Consultants, to amend this to take into account these concerns. The changes were presented to the government and the World Bank in July 2005.

Citywide inventories of all informal settlements complement the detailed enumerations by providing data on the number, size and location of all informal settlements. These inventories also provide the information base for negotiating with city authorities for citywide initiatives to improve conditions. A citywide slum/informal settlement inventory for Nairobi undertaken by Pamoja Trust and Muungano covered more than 190 informal settlements.[7] For each of these settlements, the inventory includes a profile with details of the history of its formation, location, types of structure, land tenure, main sources of employment and services available. The inventory identifies settlements on government land and private land and, based on this, the possibilities of tenure and upgrading. The inventory information has been used by the Nairobi City Water and Sewerage Company, the Water and Sanitation Programme of the World Bank and other utilities to prioritize settlements for infrastructure development.

Pamoja Trust and Muungano have also undertaken enumerations and mapping for more than 50,000 households in Nairobi. This information has been given to the Nairobi City Water and Sewerage Company, providing it with the information needed for the provision of individual water connections; one of the settlements that was enumerated was Kosovo, which now has water provision from the company. The enumerations allocate numbers to all structures, which allows those living in the settlements to be provided with residential addresses; it also becomes possible to develop streets and allocate street names and this, in turn, makes it possible for the Nairobi City Water and Sewerage Company to provide water to and bill individual households (Figure 1). The residents now receive far more

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FIGURE 1
A mapped slum showing the streets, household addresses and proposed water reticulation plan

SOURCE: Pamoja Trust mapping team.

convenient water supplies and they only pay for the water they use, which is less than they were paying previously to water vendors.

Enumerations have also proved important in protecting the inhabitants of informal settlements from eviction in the riparian reserves on either side of rivers. The government claims that there is a need for a 30-metre wide reserve along rivers, clear of any settlement. The Nairobi slum inventory identified more than 60 slums within these reserves; one such settlement is Mathare 4B, which is part of the water and sanitation city programme. Enumerations and mapping provided details of the extent of the encroachment and of the households that would be affected by the state directive to demolish all such encroachments. Figure 2 shows that almost half the housing in Mathare 4B would be affected.

There are also land tenure difficulties for informal market communities, similar to those faced by residents of informal settlements. Informal markets in Nairobi have developed on government land, on road reserves and on private plots. Large government developments such as road widening or rehabilitation and "beautification" have caused many large-scale displacements of informal markets. These often lead to the displaced traders becoming hawkers in the city centre, where they have a constant running battle with city council officers. The city council has developed stalls for traders in a few road reserves but the displaced traders never benefit. Also, the cost of leasing these new stalls is far beyond what urban poor groups can
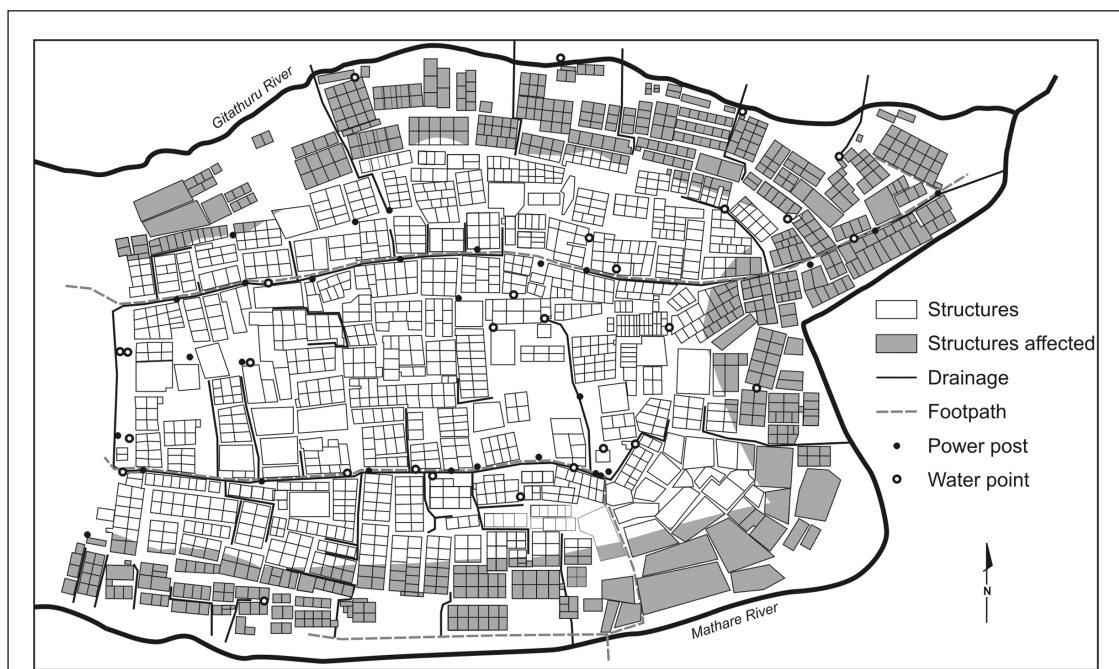
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FIGURE 2
Households affected by a 30-metre riparian reserve in Mathare 4b; the settlement is situated between the Gitathuru and Mathare rivers

SOURCE: Adapted from original Pamoja Trust mapping team figure.

afford. The Kenyan federation Muungano conducted an enumeration in a market called Aoko Road, with the support of Pamoja Trust, and established that 292 traders would be affected by a city council road rehabilitation programme. These enumerations brought the market traders together and helped them start negotiations with the council. The traders also began to save hard so that they could afford to lease stalls from the city council. They believe that the enumerations data and the traders' registers will protect them from outsiders. Pamoja Trust is also in discussions with local banks to finance an alternative, more affordable stall model. In addition, the enumerations provide individual profiles of traders, addresses and locations, which helps move such traders from informal to formal status.

III. HOUSEHOLD ENUMERATION AND MAPPING IN KISUMU

Kisumu is a port city on Lake Victoria in western Kenya. It is Kenya's third largest city and recorded 355,024 inhabitants in the 1999 census. It is the capital of Nyanza province and headquarters of Kisumu district.

The enumeration and social and economic mapping of informal settlements in Kisumu took place between April 2005 and March 2006. These sought to provide the information base needed for designing and implementing an upgrading programme within the Kisumu Cities Without
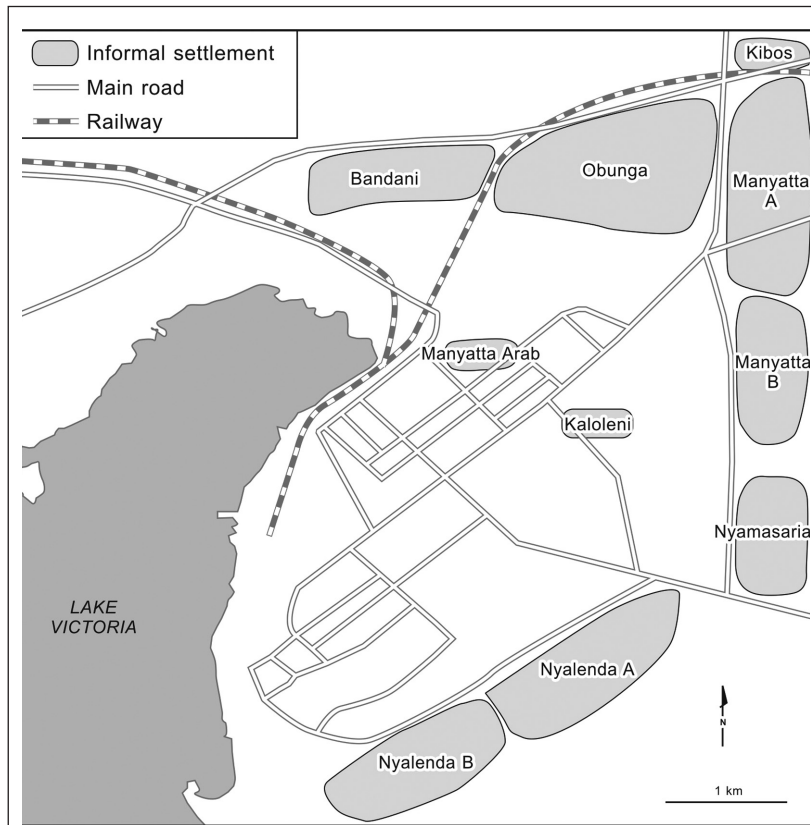
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FIGURE 3
Map of Kisumu showing the informal settlements and their boundaries

SOURCE: Adapted from original Pamoja Trust map.

Slums programme, which is part of the Kenya Slum Upgrading Programme (KENSUP). This work was undertaken by Pamoja Trust and Muungano, with the Kisumu residents who are members of Muungano having central roles, working in collaboration with the municipal council of Kisumu and the United Nations Human Settlements Programme (UN–HABITAT).

Enumerations were conducted in all the informal settlements (or "slums") identified in Kisumu and covered 72,433 households. This showed that there was a substantially larger population in the informal settlements than was previously thought, as prior to the enumerations estimates had suggested 60,000 households. The enumerations covered all structures and households, businesses and institutions within these settlements; but because Kisumu municipal council and other official bodies had no accurate, detailed maps (existing maps were from satellite images from 2002), physical mapping of all the structures was undertaken. The enumerations were carried out by residents and representatives of grassroots organizations within each settlement, and data collected were returned to the respective communities for verification. Figure 3 shows

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the location of the settlements within Kisumu; the boundaries for each settlement were established through discussions with the inhabitants who were part of the enumeration process.

IV. IMPLEMENTING THE ENUMERATION

a. Preparation

Figure 4 shows the key stages in the enumeration process – from preparation, which includes the pilots, stakeholder meetings and the training of enumerators; to the enumeration itself, which includes numbering of all structures, household questionnaires and photos of each household; data registration and the preparation of household and community data; and finally, data verification, including community meetings and public display of the data.

It was important to have some pilot enumerations before launching large enumerations. While Pamoja Trust and Muungano have a lot of experience in community-driven enumerations, the pilots allow an appraisal of the appropriateness and completeness of the questions to be asked and provide an opportunity for the volunteer enumerators to go through the process before they undertake enumerations in their own settlements. The pilots are also useful in setting up the systems and the logistical base for the larger enumerations and for showing other key stakeholders, such as Kisumu city council and other government agencies, how the enumeration will be done.

The first step in Kisumu was the selection of three pilot settlements, in consultation with the Kisumu Muungano network. These were Nyalenda, Manyatta Arab and Bandani. They were selected for a number of reasons, including the high level of interest shown by residents and local community and religious groupings, the support of local administrations following meetings with area chiefs, and the security of the area plus the least likelihood of resistance from the community.

Visits to and meetings in each of the settlements identified the different stakeholders and supplied qualitative information about the settlements. These meetings also informed the inhabitants about the enumeration and the reasons why it was being held. These planning meetings provided opportunities for the inhabitants of each settlement to meet each other and learn about each other's problems. This process also identified local inhabitants who would form the community enumeration team and it was explained to them how this would take place. As a plan for the enumeration developed and the date was set, posters and handbills were distributed informing the inhabitants about the enumeration. In each settlement a community convening point was identified (often an existing centre/facility supported by other partners of that particular settlement), which provided training for the enumerators, where initial field maps were prepared and where the questions that were to form the main basis of the enumeration were defined. An important part of the enumerator training was on how to approach households, how to explain to them the reasons for the enumeration and how to collect data. Settlement elders and enumerators also walked around each settlement, and worked together to prepare a rough map and agree on settlement boundaries (Photo 1).
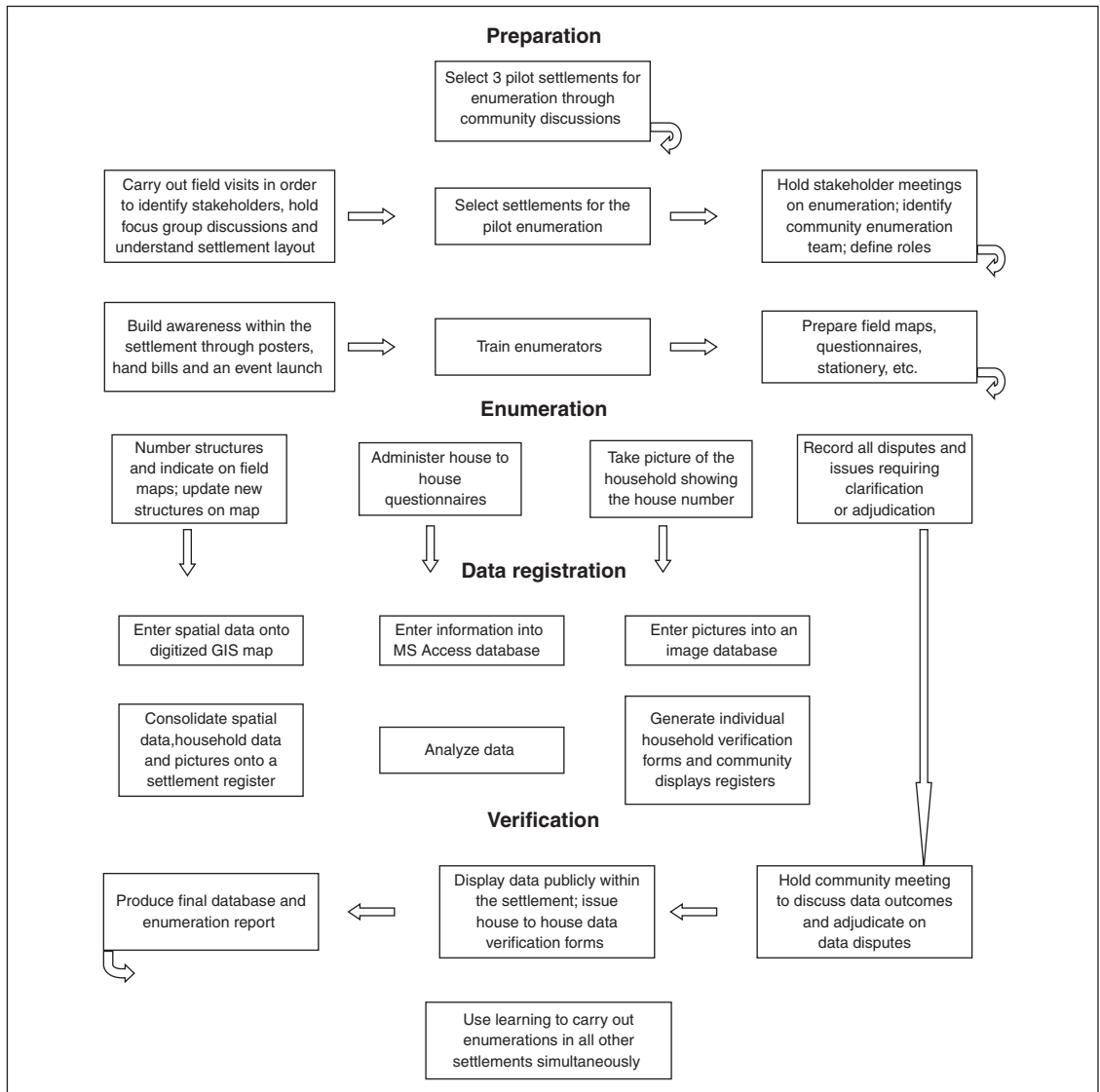
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Preparation

Select 3 pilot settlements for enumeration through community discussions

Carry out field visits in order to identify stakeholders, hold focus group discussions and understand settlement layout → Select settlements for the pilot enumeration → Hold stakeholder meetings on enumeration; identify community enumeration team; define roles

Build awareness within the settlement through posters, hand bills and an event launch → Train enumerators → Prepare field maps, questionnaires, stationery, etc.

Enumeration

Number structures and indicate on field maps; update new structures on map

Administer house to house questionnaires

Take picture of the household showing the house number

Record all disputes and issues requiring clarification or adjudication

Data registration

Enter spatial data onto digitized GIS map

Enter information into MS Access database

Enter pictures into an image database

Consolidate spatial data, household data and pictures onto a settlement register

Analyze data

Generate individual household verification forms and community displays registers

Verification

Produce final database and enumeration report ← Display data publicly within the settlement; issue house to house data verification forms ← Hold community meeting to discuss data outcomes and adjudicate on data disputes

Use learning to carry out enumerations in all other settlements simultaneously

F I G U R E 4
Enumeration process in Kisumu's Cities Without Slums programme

SOURCE: Pamoja Trust.

During the community meetings the need for a main resource centre was identified, to provide a coordinating base for the Kisumu citywide enumeration programme and to serve as the storage hub for all stationery, as well as a key-in centre for the enumeration data and as a central meeting point. It would also serve as an information centre for all the savings schemes, where all information would be kept as well as all the savings books; and it could house the federation members from other towns or cities who came to support the enumeration. The community
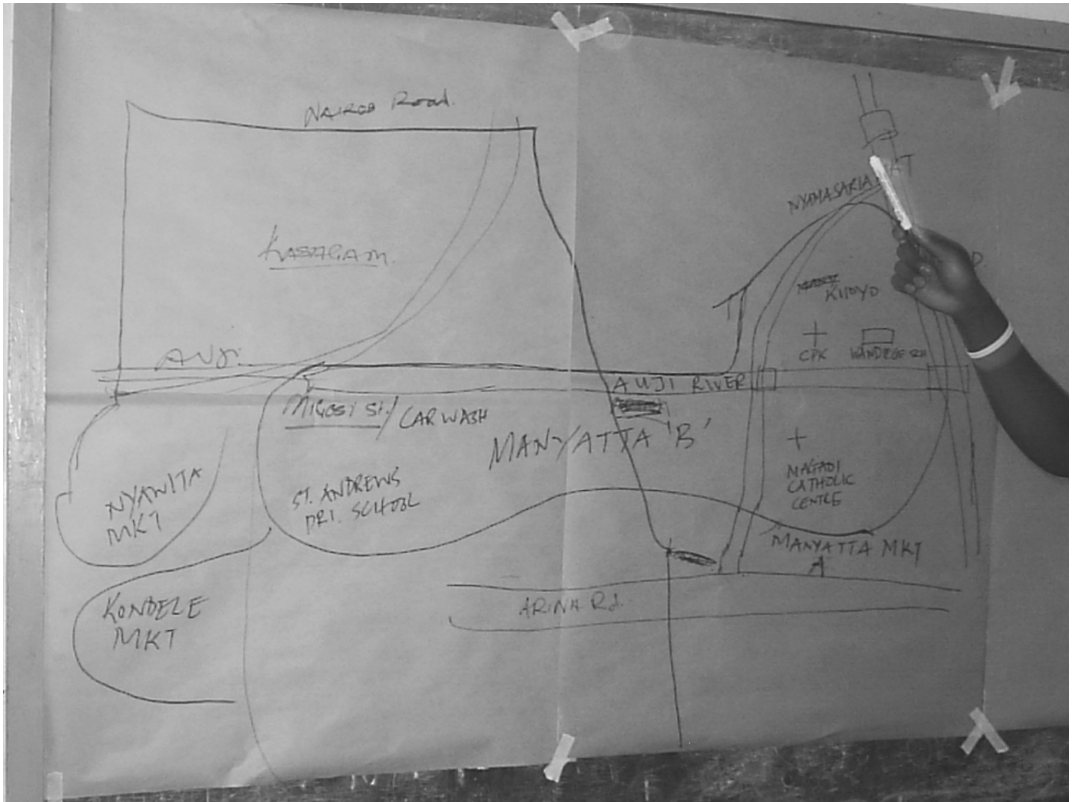
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PHOTO 1
A draft community map was developed as settlement elders and enumerators conducted a walk around each settlement to mark out the boundaries

© Residents of Kisumu informal settlements/Muungano wa Wanavijiji wa Kisumu (Kenya Homeless People's Federation)

found a house in a formal residential area close by, which became the Kisumu resource centre. A unique feature was that the community chose to have it in a place where access by public transport was convenient for all residents of the settlements.

b. Enumeration

The first step for the enumerators was to number all house structures (Photo 2) and to mark each structure on the field map. The base map for this was from a satellite image, but as this was taken in 2002 there was a need to add details of new or expanded structures. The enumerators then moved from house to house with a questionnaire (Box 1), and photographs were taken of each household showing the house number. Furthermore, any uncertainties or disputes concerning any house or plot – for instance over tenure – were recorded.

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PHOTO 2
An enumerator numbers a household

© Pamoja Trust

c. Data registration and verification

Information from the questionnaires was fed into a standard database format (using Access software), while the spatial data were entered onto a digitized GIS map and the photographs were put into an image database. These were then consolidated into a settlement register that contained spatial data, household data and photographs.

An initial analysis of the data collected was undertaken and the information was fed back to households and communities in two forms. First, each household received individual household verification forms so that they could see (and check) what data had been collected on them. Then community display registers were set up at central points within each settlement, displaying key data about the settlement (Photo 4). In addition, meetings were organized to discuss the data collected and to adjudicate on disputes. This allowed the production of a final database and enumeration report, which was then further discussed at a stakeholder meeting.

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BOX 1
Summary of the questions asked

The questions sought information on the land/plot and on who lived there, on businesses and on institutions or public facilities. Each enumeration record stated the date of the enumeration, the name of the enumerator, the plot number and the structure number.

Questions asked of residents included:

- name of owner, owner ID, gender;
- type of plot ownership (purchased, allocated by government, inherited or moved onto) and whether they had a title deed or other evidence of ownership;
- land/house use: residential, business, agricultural, public facility, institution or mixed use;
- plot size;
- details of all occupants and whether they were land/structure owners or tenants; and if they were tenants, whether they paid rent;
- size and quality of house;
- years of residence;
- distance to work;
- main source of water, time needed to collect it and how much is used in a day; and
- availability of services.

For each resident, questions were asked with regard to name, age, gender, level of education, occupation, daily household expenditure, marital status, religion and relation to household head.

Questions asked of institutions or public facilities included:

- type of institution (school, religious, health facility, NGO, CBO);
- who owned the institution;
- land ownership status;
- rent paid;
- size and quality of the structure;
- years of residence;
- number of works undertaken; and
- area served and number of clients.

SOURCE: Pamoja Trust.

These pilot enumerations allowed the whole process to be tested and, where needed, adjusted and modified so that enumerations could be launched in all other settlements.

d. Community participation

To reinforce community ownership of the data collected, the enumerations were carried out on a voluntary basis. All concerned groups and enumerators agreed that no formal payments would be made. However, allowances were provided for lunches and transport, and each enumerator received Ksh 200 per day (around £1.50 or US$ 2.50).

The enumeration helped build stronger community organizations within each settlement and boosted their capacity to manage their own development. It also created an information base for each settlement that is available to the settlement's inhabitants at the community resource
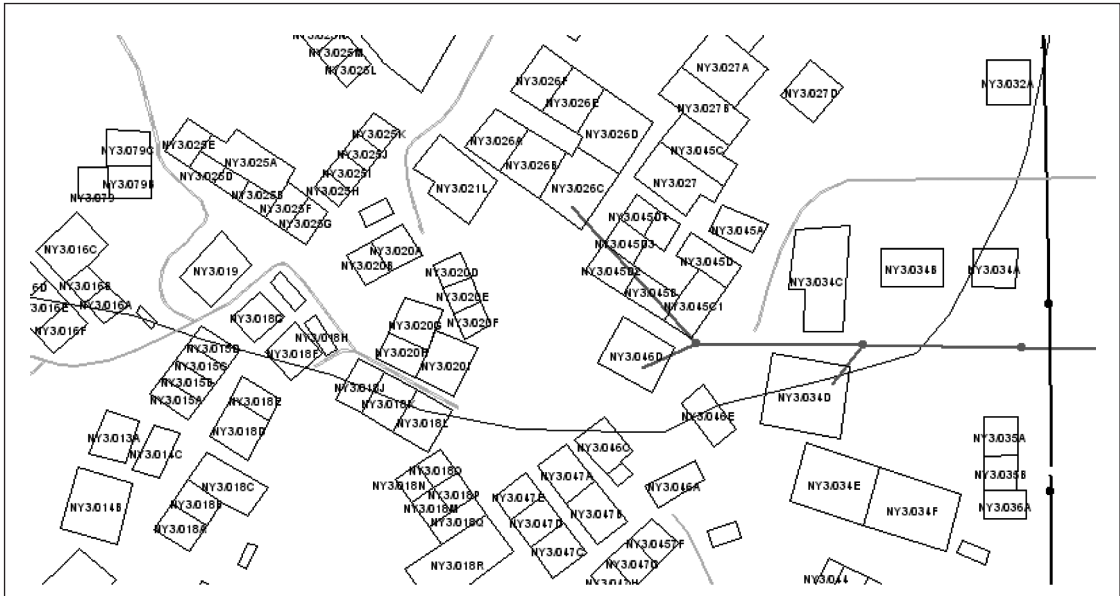
FIGURE 5
**Digital map of Nyalenda, derived from a satellite image and mapped
by the communities***

* Each structure has been allocated a door number (Photo 2), which is inscribed on the map by the mapping
team. Road networks and existing infrastructure such as electricity lines are also identified.
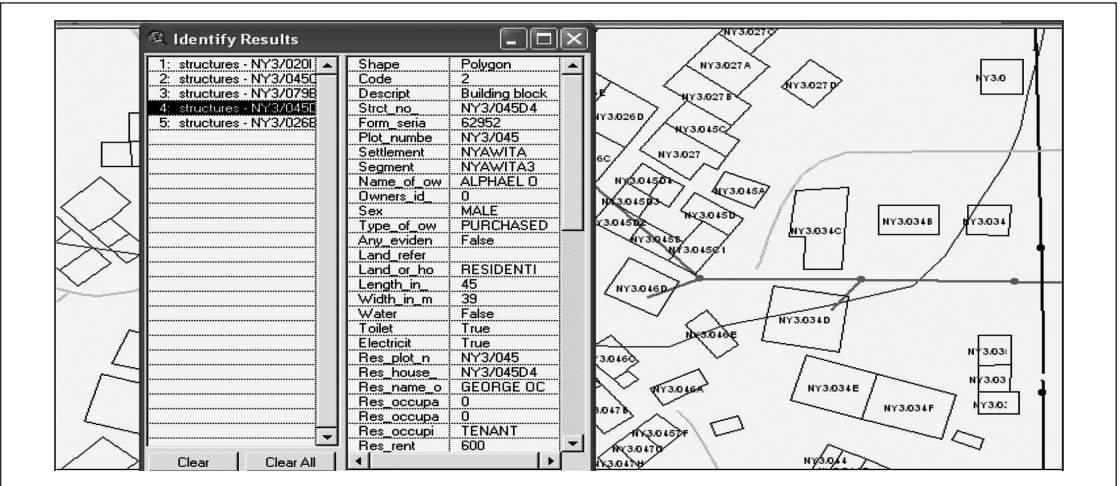SOURCE: Pamoja Trust mapping team.

FIGURE 6
**Data from the enumeration are linked to the mapped settlement
through the house number***

* There is socioeconomic information attached to each house or other structure on the map, which is
accessible by clicking on the structure on the computer screen.
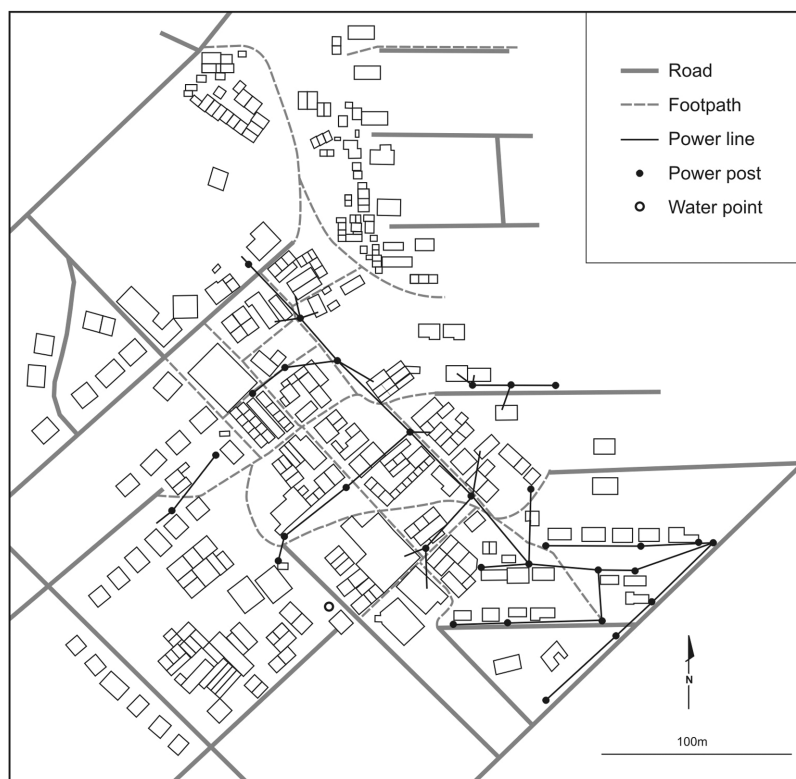SOURCE: Pamoja Trust research team.

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FIGURE 7

Manyatta Arab settlement: an example of how, once the data and maps from the enumeration have been completed, details of water points, roads, electric power posts and power lines, and footpaths can be overlaid

SOURCE: Adapted from original Pamoja Trust mapping team figure.

centre. This information base is easy for the inhabitants to use since volunteers from the community helped collect the data and input it into the database. The maps created also provided the inhabitants with a visual understanding of their settlement and its connection to other settlements and other areas in Kisumu – which allowed for more detailed discussions of what needed to be addressed by the upgrading programme, and also of problems within their settlements.

V. A SUMMARY OF THE ENUMERATION'S FINDINGS

An analysis was done of the data collected from 33,940 plots from informal settlements in eight areas of Kisumu. This included data from all plots in Bandani, Obunga, Manyatta Arab, Nyawita and Kaloleni and from two-fifths of plots in Manyatta A and B and Nyalenda.

Table 2 gives details of the proportion with evidence of land ownership and the proportion with water, toilets and electricity in their house or

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PHOTO 3
Community enumeration team compiling and undertaking a
quality check of enumeration questionnaires

© Pamoja Trust research team

plot. Of these 33,940 plots, 87 per cent were residential, 8 per cent were businesses and 2 per cent had mixed use. Only 94 of the 33,940 plots were for public facilities and only 121 were for institutions.

It should be noted from Table 2 that for nearly three-quarters of the plots there was no evidence of land ownership. Overall, 85 per cent of the plots lacked electricity, 83 per cent lacked water on the plot and 51 per cent lacked toilets. The data on these eight settlements can also be broken down into 62 segments or neighbourhoods

Table 3 provides details on how the plots of land were acquired. Note that for half of all the plots, it was unclear how the occupants had acquired them, while for close to a third, the plot had been purchased.

Figure 8 gives more details of the 29,674 residential households surveyed. Of these, 69 per cent were tenants, 10 per cent were structure owners living in their structures and the rest were unspecified occupants. Note too the high proportion of female-headed households among structure owners and tenants.

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PHOTO 4
Data for Obunga are displayed for public viewing at a central place in the community, which allows the residents to verify the data

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In all settlements, most of the land use was residential (87–94 per cent), except in Nyawita, where it accounted for 74 per cent, with 22 per cent being used by businesses. Only 12 per cent of the economically active population worked in the settlements; 46 per cent worked within three kilometres and 31 per cent worked in places more than three kilometres away.

In the business survey, 3,059 businesses were recorded. More than half were retail and 19 per cent were services. Only 20 per cent of the business structures were shops (semi-permanent structures with concrete walls and floors and iron sheet roofing, which are often secure and often have some kind of permit from the municipality to undertake business); 22 per cent were stalls (temporary removable wooden structures with polythene sheet roofing, whose owners may not have a formal licence to do business and hence lack the security to invest in a proper structure); 45 per cent were kiosks (with mud/wattle or iron sheet walls, a concrete floor and iron sheet roofing; 8 per cent were mobile vendors and 5 per cent were unspecified businesses. The enumeration showed a total of 255
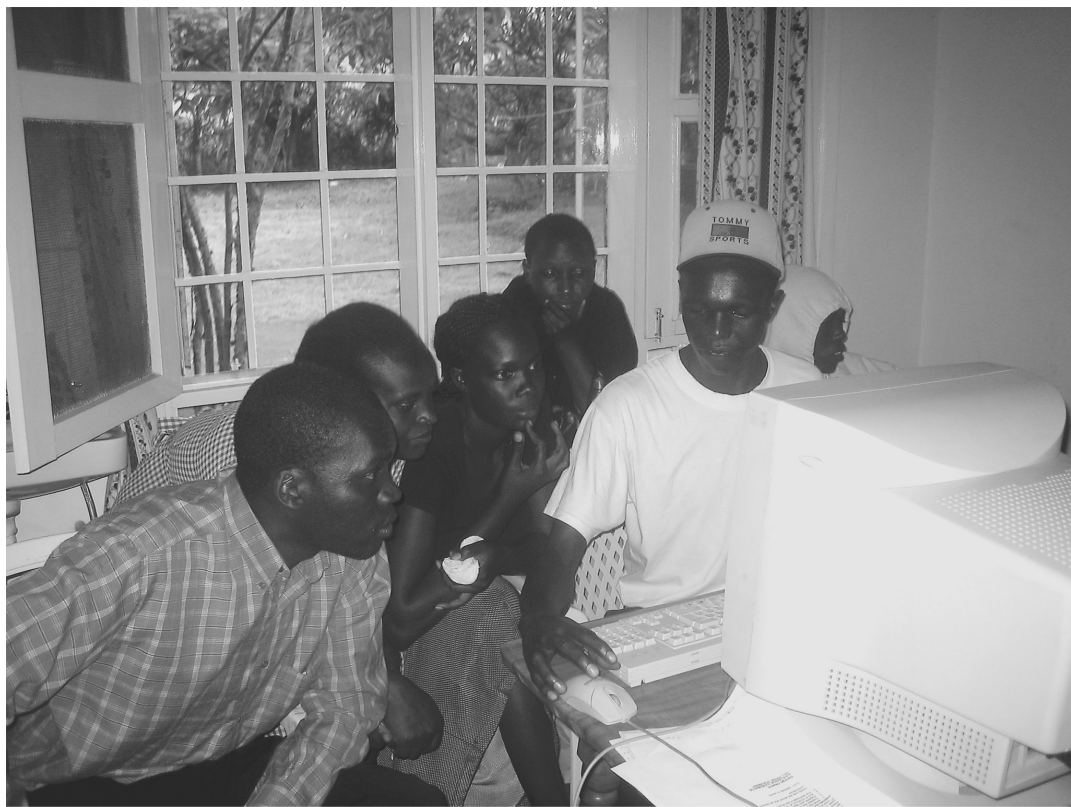
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PHOTO 5
Training of the community data entry team

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TABLE 2
**Land ownership status and provision for facilities in
eight of Kisumu's informal settlements**

Settlement	Number of units	% with no evidence of land ownership	% of households with services in house or on plot		
			Water	Toilet	Electricity
Bandani	2,402	74.2	2.9	47.6	2.3
Kaloleni	811	42	18.1	80.3	30.8
Manyatta A	10,142	81.3	22.4	57.6	24.9
Manyatta Arab	377	96.3	4.8	18	6.4
Manyatta B	2,552	63.6	10.3	65.9	10.1
Nyalenda	9,985	68.2	26.4	57.5	15.6
Nyawita	1,071	57.1	6.1	66.1	29.8
Obunga	6,600	80.5	2.3	12.3	2
Total	**33,940**	**73.9**	**16.6**	**49**	**15.1**

SOURCE: Pamoja Trust.

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TABLE 3
How the plot of land was acquired

| Settlement | Mode of acquisition of plot | | | | | Total Households |
	Allocated by government	Inheritance	Self-allocated space	Purchased	Unspecified mode of acquiring ownership	
Kaloleni	21	387	14	290	99	811
Manyatta B	3	374	214	978	983	2,552
Manyatta A	86	877	1,173	2,886	5,120	10,142
Nyawita	83	205	103	479	201	1,071
Bandani	39	279	191	1,199	694	2,402
Obunga	74	437	68	1,165	4,856	6,600
Manyatta Arab	0	47	50	19	261	377
Nyalenda	59	2,104	752	3,618	3,452	9,985
Total	**365**	**4,710**	**2,565**	**10,634**	**15,666**	**33,940**

SOURCE: Pamoja Trust.
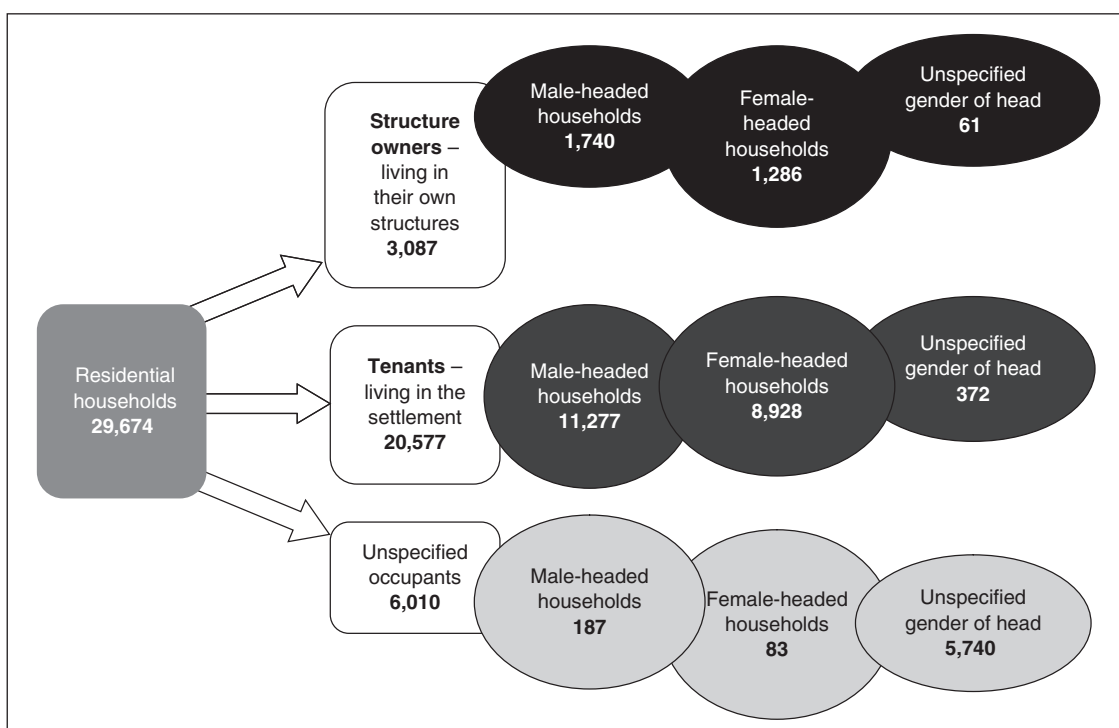

FIGURE 8
Details of the different kinds of residential household

SOURCE: Pamoja Trust.

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institutions within the settlements, of which 45 per cent were religious and 35 per cent were schools; there were only 11 health facilities.

VI. SKETCHES OF SOME OF THE INFORMAL SETTLEMENTS

The literal meaning of Nyawita is " place where people are thrown away", since its first use was as a burial ground for people whose families could not afford to bury them in their ancestral homes (anyone buried outside their ancestral homes was perceived as being "thrown away"). A land adjudication team in 1977 had supported a land demarcation exercise that facilitated the provision of title deeds to land owners in Nyawita; as shown in Table, Nyawita has among the lowest proportion of dwellers with no evidence of land ownership. Very few households have water available on their plot, although ironically the main water pipe supplying Kisumu runs through Nyawita. Water is usually purchased in 20-litre cans (at a cost of Ksh 3 from the water vendors, although some water traders sell water door-to-door and charge Ksh 5 per 20 litres). Water is also drawn from boreholes, but it is salty and contaminated and cannot be used for drinking or cooking. Few households have permanent toilets and a third of households have no toilet on their plot. Electricity is available but most households have no connection. There are no schools in the settlement and no government health facilities; the only health service available in the settlement is a private dispensary and a chemist set up by a women's group with support from the NGO World Vision, to help local residents get access to medicine. With regard to governance, there is an elected council of elders that settles disputes and petty offences, with larger problems passed to the assistant chief or the chief

Obunga is named after the flowers that used to grow along a stream that flows through the settlement. It was formed when the colonial government forced the inhabitants out of Kisumu. Its population grew when it developed as a fish market, as the economy of Kisumu expanded. Around one-fifth of the households say that they have evidence of ownership – for instance, sale agreements of land transactions, government allotment documents or inheritance documents. Very few households have water connections or toilets on their plots and many use the bush for defecation. Obunga faces serious problems with flooding during the long rains and many areas are waterlogged. Electricity is available but very few households are connected. There is no primary or secondary school nor health care facility in the settlement.

Nyalenda means " place where people are called upon to come and share the land". Originally, the area was not settled because of the presence of tsetse fly, and was made safe for settlement only once it had been sprayed. The land was first settled by the Kasagam people, who sold or provided land to newly arriving settlers. Most households do not have water on their plots (and rely on water purchased from traders); more than two-fifths of the inhabitants do not have toilets on their plots and many rely on open defecation; "flying toilets" are common.[8] There is little provision for drainage and parts of the settlement flood during the long rains. There is good provision for schools – seven primary schools and two secondary schools – and there is a municipal hospital and various private health services.

8. "Flying toilets" is the name given to plastic bags or other waste material into which a person with no access to a toilet defecates and then throws away.

Manyatta Arab, meaning "a place where Arabs are residing and working", was formed by Arab traders mostly of Tanzanian origin who were relocated there from old Kisumu by the colonial government. The inhabitants feel insecure – 96 per cent do not have evidence of land ownership and the settlement was ignored by the land adjudication process in 1976. Ninety-five per cent of households have no provision for water on their plot, and most purchase water. Less than one in five households has a toilet on their plot. There are no government schools – although there are two private primary schools and one private secondary school. For health care, there is one dilapidated dispensary owned by the municipal council. Many residents have had problems getting identity cards. There is an active youth group, Mwanzo Mpya, which dug and helps maintain the drainage system, and it is planning to install new water points.

Bandani, meaning "bright light", was named after an iron sheet building constructed by an Indian entrepreneur who made tyres for carts. The enumeration showed that it had around 14,000 inhabitants living on a 13.1 square kilometre site. The area is poorly drained and forms a bowl through which storm water runoff drains from the hills to the lake during the rainy seasons. Several houses in the settlement are destroyed every time there are heavy rains. The drainage problems are compounded by some structures that impede natural drainage. Part of Bandani is swampy and provides a breeding ground for malarial mosquitoes. There is no formal provision for water (only 3 per cent of households have a water supply on their plot), and residents obtain water from water points in a neighbouring settlement, from a spring outside the settlement, from water vendors or from boreholes (which cannot be used for drinking). Around half the population has pit latrines on their plots. There is a primary school that serves both Bandani and adjacent settlements, but a number of residents take their children to more distant schools because of overcrowded classrooms, staff shortages and poor performance. There are no formal health care facilities within the settlement. Until last year, there was no secondary school. Only a mosque and three households have electricity.

VII. BEYOND THE ENUMERATION

The enumeration and mapping process was intended to provide the information base for an ambitious slum upgrading programme, but it sought to do more than this. Settlement executive committees were set up in each settlement to manage community funds that could be used by community groups and individual households for micro-businesses and initiatives aimed at improving their livelihoods. It also sought to develop community-based mortgage finance systems to help support individual or collective tenant purchase schemes.

In each settlement, there were initiatives to set up local structures to ensure representation and participation of the wider community in the Cities Without Slums programme. All the settlements have a variety of community-based organizations, and these were identified and provision was made to encourage their participation in the social mapping; many were single-issue or religious organizations. In some of the settlements (Bandani, Obunga, Nyalenda), neighbourhood associations served as

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umbrella structures for all the community groups. Care was taken to work with these umbrella organizations because the formation of new structures for the upgrading programme could undermine community participation. Where umbrella organizations did not exist, there was a need to consolidate the various community-based organizations into a single transparent and representative community-wide one. It should be acknowledged that in all cases these processes are political, and require substantial amounts of negotiation and time. Community workshops were held in all the settlements to introduce and explain the Cities Without Slums programme.

It was also important to develop a common understanding between the city council and all other stakeholders, including the community groups that would provide representation for their settlements. This was carried out in a series of forums that included community stakeholder workshops organized by Pamoja Trust and Muungano, held with Kisumu municipal council, the Ministry of Land's Department of Planning, CARE Kenya, Sustainable Aid in Africa (SANA) and other stakeholders. There were also stakeholder consultations and consensus building meetings with a number of organizations involved in the programme, including Muungano, the Regional Centre for Mapping of Resources for Development (RCMRD), Kisumu municipal council's departments for planning, social services and environment, SANA, CARE Kenya, the Ministry of Lands' Department of Planning and Kisumu Slum Dwellers Development Group. Kisumu municipal council proposed the formation of a steering committee that would oversee the consolidation and support of a common community structure.

Discussions were also held with the city mayor, the town clerk and all councillors in whose wards the informal settlements were located, and councillors have been instrumental in mobilization and support for the social mapping. Presentations on the Cities Without Slums programme and on socioeconomic mapping were also made to Kisumu's two divisional district officers and all locational chiefs and sub-chiefs. The administration was helpful in dispute resolution and in clarifying what the upgrading programme would involve, and work was also undertaken on capacity building and training and on peer exchanges.

Pamoja Trust has also facilitated and supported the growth of 31 community-based saving schemes, spread throughout the Kisumu settlements. These schemes have an ever-growing number of members – currently they include more than 4,000 people – and these groups have come together to form a Kisumu network that is able to coordinate and consolidate the efforts of the individual schemes. Women's saving schemes in Kisumu have also helped develop responses to the high prevalence of HIV/AIDS, and help support livelihoods and sustain good diets. Loans from savings schemes have allowed women living with HIV/AIDS to buy goats, since goats' milk is valuable both for improving their diets and for contributing to income. In addition, these women also engage in home-based care in their communities as well as in campaigns on healthy living.

The aim of these savings schemes is to build community trust and a collective capacity to manage community finances. Most of the savings groups have the capacity to manage revolving funds drawn from their savings, as micro-loans for business and welfare purposes among their members. The savings schemes provide the basis for establishing community funds that will be developed in all the settlements.

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Working in conjunction with the international umbrella group, Slum/Shack Dwellers International (SDI), Pamoja Trust has asked the municipal council of Kisumu to develop a plan for a pilot housing scheme in one of the settlements. This is to help develop an efficient institutional framework and practical systems for housing development.

In the enumeration exercise, more than 780 residents of the settlements were trained in data collection, which the teams carried out in their respective settlements. Working together with two surveyors, 32 community members were also given training in surveying and mapping, and this team carried out much of the field mapping exercise. Twenty-five community members were trained in computer skills and carried out the data entry. The community resource centre set up for the enumerations remains, and is equipped with six computers. This is managed entirely by community members and remains open to all community groups from the informal settlements in Kisumu.

Pamoja Trust has also supported many peer exchanges between groups in the Kisumu informal settlements. In addition, representatives of the Kisumu groups have taken part in enumeration exercises in Nairobi and have travelled to Ghana, Malawi, Tanzania and Uganda to help with enumerations there. The capacity acquired by local residents during the Kisumu citywide enumeration has made it possible to assist federations in these countries to recognize that they too can conduct and manage preparatory work for any development interventions in their settlements.

Other opportunities for growth and development have also emerged, including:

• exchanges for community members on self-organization, savings and basic infrastructure development, and community safety and security;
• exposure trips focusing on community savings and community-led housing development; and
• specific sessions on relationships between community organizations, civil society and the city's political, managerial and administrative systems.

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