2 Methodology

This chapter presents the methodological procedures that were used in this study. We first discuss the research problem, main objectives and relevance of the study. Next, we formulate the research questions and discuss the methods utilised.

2.1 Problem statement

The Municipal Council of Nakuru (MCN) is in charge of providing basic services and the necessary environmental infrastructure. However, the demand for these services – especially water, garbage collection and sanitation facilities – is exceeding the available supply because of the rising urban population and informal settlement. It is of utmost necessity to examine how the role of the MCN has been changing from that of provider to that of facilitator and coordinator of different actions by a wide variety of actors in the provision of water, sanitation and solid waste management services. It is important to study how new partnerships between different actors emerged and operate and what problems they are facing in these three areas of urban environmental management. Partnership between different actors, municipal authorities, central government agencies, NGOs, CBOs, households and the private sector is not a new phenomenon. What is new is the commitment by local authorities to work with ‘other sectors’ to ensure adequate provision of urban basic services.

Our study identifies some problems associated with partnership arrangements, using the case study method. The MCN, in its attempts to solve some environmental problems and improve the service delivery process, has been looking for a new approach. The 1990s saw interventions in the areas of environmental management by NGOs, which mobilised local communities to participate in environmental improvement initiatives. Most of the existing self-help groups were sensitised about environmental management issues through *barazas*\(^{10}\) and community environmental education organised by the NGOs with support from the MCN. Today, various community-based-organisations (CBOs) are undertaking joint activities with the MCN and NGOs. There has also been a rise in the number of small-scale private enterprises offering services related to solid waste management and water supply to households.

\(^{10}\) This is a Swahili name for public meetings. They are normally used to pass specific messages and government policies to the public.
While the principles of local participation and partnerships are now quite widely accepted and promoted, there is relatively little documentation on the strengths and weaknesses of different models and structures of partnerships and forms of participation or on their outcomes. Researchers and practitioners fail to assess the performance of partnerships. Because of the unequal power relations between different partners, the performance may be mandated or coerced by one party on the other. The public-civil society-private partnerships may not always be effective or should not always be sought. The goals and core objectives of various actors are always different. Clarity about the allocation of roles and identification of the core objectives is critical to successful partnerships. Little is still known, however, about the functioning of partnerships.

The LA 21 in Nakuru has re-emphasised the need for increased partnership between different actors in the area of urban environmental management. There is need to study the initiatives being undertaken through partnership arrangements between different actors. The operational dimension of the partnerships is complex and an examination of partnership outputs and an assessment of their contribution to urban sustainable development are therefore important. The constraints that these innovative approaches are facing need to be identified and clarified. For instance, only limited resources have been available for distribution into the LA 21 programmes. Local communities and their organisations are quickly incorporated into the process without having their roles specified. The effectiveness of this process largely depends on whether the communities will identify themselves with the initiated activities. This study examines how these new initiatives are being incorporated in the existing local institutions and organisations and what perceptions the community has towards them.

2.2 Research objectives

The recently emerging importance of participation and partnerships in urban environmental management calls for empirical analysis of the actual roles that these approaches can play in a specific setting. Most proponents of participation and partnership approaches assume that they will be put in practice with ease given the appropriate preconditions for their success. We contend that, until recently, studies aimed at establishing the actual performance of partnerships in urban environmental management were limited to large cities, mainly in developed countries or to success cases in the South. It is now necessary to understand the dynamics of these new forms of governance to distil lessons that can be learnt and to identify the factors that affect the effectiveness of partnerships. We therefore define as the main aim of this study:
to examine the realities, possibilities, problems and constraints of partnership arrangements in urban environmental planning and management between the municipal government, central government authorities, households, CBOs, NGOs and the private sector.

More specific objectives are:
1. To identify, analyse and compare the various actors involved in solving environmental problems related to water supply, sanitation and solid waste, thereby examining the roles played by the different actors.
2. To identify different kinds of partnership arrangements, and their specific outcomes, between two or more of the following actors: local communities and their organisations, NGOs, local governments, the private commercial sector and other private organisations, and external support agencies.
3. To critically examine the process of LA 21 and its specific outcomes and assess how it has utilised the partnership principles.
4. To assess the process and substantial outcomes of the partnership arrangements studied in order to inform policy makers about the factors that affect the formation and functioning of partnership arrangements and the constraints that need to be addressed to ensure good urban governance.
5. To recommend appropriate measures in the legal and regulatory framework and the institutional, political, environmental and financial contexts.

Addressing these objectives, we expect that the results of the study will help the government, NGOs and other interested actors working in Nakuru in their attempts to improve the environmental quality and the health status of the town. With this study we also aim to contribute to the ongoing debates on urban management and urban governance, state-civil society relationships and sustainable development.

2.3 The central research question

The central research question addressed in this study is: how do partnerships in urban environmental management, particularly those in the LA 21 process, contribute to sustainable development in terms of processes and outcomes? From this main research question we derived some specific research questions that guide the present research:

1. Who are the actors involved in the urban environmental management process in Nakuru, what problems are they dealing with and under what institutional framework do they operate?
2. What kind of partnership arrangements in urban environmental management has been developed and what are their major characteristics and outcomes?
3. What does the LA 21 process in Nakuru entail, to what extent it utilises the partnership approach and what are its specific outcomes?
4. What are the process and substantial outcomes of each of the various partnerships observed in Nakuru?

2.4 Methodology

Although there have been an increasing number of case studies of urban communities and environmental management, in general very little emphasis has been placed on methodology. What is evident from the existing literature is a wide range of macro-descriptions of cases in the developing world and some few evaluation studies on partnerships in the developed world, especially the UK (Selman, 1996). According to Selman (1996), two approaches can be distinguished in studies concerning local environmental conditions and responses: those which provide firm information about the environment, which is used as a basis for designing policy options, and those which focus on citizen involvement in debates and decisions. The methodology utilised in this study borrows much from the second approach. Some methods relate mainly to environmental data and trends, while others refer to partnerships, awareness and participation.

The main methodology used in this study is based on the case-study approach. This generated a wealth of information concerning responses of households to environmental problems, the role of various actors and organisations and specific examples of partnership arrangements. The data were collected primarily through in-depth interviews with a wide range of key actors in Nakuru (see Section 2.4.1).

Focusing on the research questions, the research design was geared to local circumstances. As a preliminary step, an extensive survey of existing information was carried out to identify community groups, NGOs and private organisations dealing with water supply, sanitation and solid waste management. A rapid urban appraisal was done to identify different settlement structures, actors and other organisations in the areas of water supply, sanitation and solid waste management. It became clear that collective actions in these areas were concentrated in the low-income, high-density settlements and were dealing mainly with water supply and solid waste management. From this initial appraisal, it was possible to identify areas where the MCN was still supplying services and areas where the private sector had intervened.
2.4.1 Operationalisation of the research questions

Who are the actors involved in the UEM process in Nakuru, what problems are they dealing with and under what institutional framework do they operate?

The actors studied were those that have been identified by Agenda 21 and those examined by Davidson and Peltenburg (1993) and UNCHS (1996; 2001). For purposes of convenience we focused on those actors (a) who control the relevant implementation instruments and powers; (b) who possess relevant information and expertise for the formulation and implementation of strategies; and (c) whose interests are affected by environmental management strategies and actions. It is important to note that these categories are not mutually exclusive and that there is overlap between them. On the basis of these criteria, groups of people representing low-income and private sector groups and interests (especially from the informal private sector) at both the city and neighbourhood levels were studied. The actors can broadly be classified in the following categories: the MCN and those government agencies, formal and informal private sector organisations, CBOs, NGOs and households that work together in one or more areas.

The Municipal Council of Nakuru (MCN)

This is the elected government of the town and the level of government with direct contact with the people through their representatives. The MCN fulfils many different functions. It is the major governmental organisation for the provision of local services and the first point of contact with government for most citizens. We focused on how different institutions and organisations have formed cooperative working relations with the council in the areas of water supply, sanitation and solid waste management. Other working relations forged by other actors without necessarily incorporating the MCN were also of great importance for this study.

Government agencies

The government agencies that are represented in Nakuru were also selected to be interviewed on specific issues. The Provincial physical planning officer, the District physical planning officer, District Environmental officer, the Lake Nakuru national park warden and an officer with the Department of Social Services were all interviewed. In the follow-up interviews, officers within the Ministry of Environment and natural Resources were also interviewed.

Private sector organisations

The private sector ranges from small, individual garbage collectors or water vendors to large local companies, which operate or develop large segments of water supply, sanitation and solid waste management (UNDP, 1996; UNCHS, 1996; Davidson and Peltenburg, 1993; Faulkner, 1997). Participating firms are normally concerned with the profitability of the enterprise. Employees within the private sector are
Challenges of Urban Environmental Governance

concerned with issues of job security, working conditions and the particular social status associated with certain jobs.

Community-based organisations (CBOs)
The definition of CBOs adopted for this study is borrowed from Davidson and Peltenburg (1993) who define CBOs as the types of organisations, formal or informal, that are based on a group of people living or working together and who associate to pursue common interests. They are characterised by being local in focus and being directly accountable to their constituents.

Non-governmental organizations (NGOs)
NGOs are defined as associations established to pursue developmental objectives on a non-profit basis. They are associations of people, often professionals, who provide support to certain population groups. NGOs of major interest for this study are the World Wildlife Fund (WWF) and the Intermediate Technology Development Group (ITDG), which are active in the areas of solid waste management and shelter improvement, respectively.

Households
Households are defined as a person or a group of persons generally bound by ties of kinship who live together under single roof or within a single compound and who share community life in that they are answerable to the same head and share the same food (Casley and Kumar, 1988). This definition captures the spirit of extended family that is still very common in Kenya.

Involvement is defined here as an organised opportunity for all stakeholders to voluntarily take part of and have their voices heard in urban environmental management and the decision-making process, in order to improve the process and the quality of the living environment. In participatory decision-making, decisions should be made as closely as possible to the people primarily affected. We operationalised this by measuring (i) attendance to and participation in decision-making meetings by different groups and actors; (ii) contributions in terms of money or labour to environmental management initiatives; (iii) attendance to and participation in clean-up exercises; and (iv) the frequency with which an actor is consulted on specific issues or with which he has a function and role in the planning process.

With respect to the level of involvement (as defined above) different levels of activity can be filtered out: the household level (see working definition below), the neighbourhood level and the town level. We defined the neighbourhood level as composed of a number of households sharing similar socio-economic and environmental conditions and having socially constructed boundaries. In Nakuru, neigh-
bourhoods correspond to estates that are either planned or unplanned. We collected data from unplanned and informal low-income neighbourhoods. The town level refers to the entire municipality.

The quality of any urban environment is affected by many factors, including the physical environment and location, historical background, population dynamics, the scale and nature of human activities and the structures within it. A documentary analysis of all these factors was done mainly on the basis of recent studies by the Department of Urban and Regional Planning (DURP) and related literature.

The role of local government in the provision of urban basic services and other infrastructure has been emphasised in scholarly and popular literature. For our study on partnerships we need to identify how the local government institutions and the legal framework will affect the formation and functioning of emerging partnership arrangements. To get this information, secondary sources and documents from the Ministry of Local Government were consulted. The Local Government Act (Cap. 265 of the Laws of Kenya) was studied to examine the powers of the local authorities. To identify the different institutions dealing with environmental management in Kenya, we referred to several policy documents such as sessional papers and development plans. Research reports and literature on the legal framework were also used. We further examined the laws that affect environmental management in Kenya and captured the recent legislation and its implications for emerging partnership arrangements.

2 What kinds of partnership arrangements in urban environmental management have been developed, what are their major characteristics and what are their outcomes?

We developed a framework for analysing partnership arrangements\footnote{Because of the overlapping nature of partnership arrangements observed in Nakuru, this framework is meant to indicate the general differences between these arrangements. It is not totally inclusive of partnership aspects and a more detailed framework may be developed for other situations.} between two or more actors, taking into account a number of aspects, such as who are the partners, what do they seek to achieve, how is the partnership implemented, how will it change over time, what are the challenges and obstacles and the options available for effective functioning of the partnership. These aspects will be discussed under three headings (\textit{cf.} Table 1.1):

- \textit{The mandate}, \textit{i.e.} the sphere of activity and level of intervention, including aims, range of activities and the scale of intervention.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|}
\hline
\textbf{Mandate} & \textbf{Characteristics} \\
\hline
\textit{Aims} & \\
\hline
\textit{Range of activities} & \\
\hline
\textit{Scale of intervention} & \\
\hline
\end{tabular}
\caption{Framework for analysing partnership arrangements.}
\end{table}
- **Arrangements**, including the range of actors included and excluded, the nature of relationship (formal or informal), the decision-making structure, the division of tasks in the partnership arrangements and the monitoring and evaluation mechanisms.

- The **outcomes** of the partnership arrangements.

3 **What does the LA 21 process in Nakuru entail, to what extent does it utilise the partnership approach and what are its specific outcomes?**

The aims, goals and reasons for starting the LA 21 process need to be identified. This was done through a series of interviews with officers who have been involved in the process and also through the perusal of documents and progress reports. Other data required to answer this research question refer to the consultation process: how was it done and with whom? What did this process manage to produce? Information was generated through a series of interviews and a workshop organised to assess the views of stakeholders on the LA 21 process. Another issue of interest is the question of the partners involved in the process and their major characteristics. Interviews were held with the programme coordinator, while the minutes of frequent meetings during the process also provided some of the information required. Other documents and research reports by DURP were consulted as well.

4 **What are the process and substantial outcomes of each of the various partnerships observed in Nakuru?**

To answer this question, we build on the three pathways to sustainable development as identified by Bührs and Aplin (1999): one based on environmental policy, another one based on institutional reform and the third one on social mobilisation. These pathways refer to policy, process and outcome, respectively. It is a difficult task to assess whether the stated aims of partnerships result in specific output or outcomes and what factors make them effective. This is because some partnership outcomes take long to be seen, especially those that are related to the improvement of environmental quality. Some scholars and practitioners argue that despite a call from the UNCHS that different forms of partnerships in different contexts should be monitored effectively, there is still no agreed set of performance indicators to guide such an assessment. Actually, some confusion exists about whether the assessment should be based on the normative potential of partnerships or on their practical output. Without clear performance measures, studies tend to combine Preconditions and the outcomes of partnerships to assess the failure or success of such initiatives. The absence of performance measures for a policy that features so prominently on the international agenda is worrying enough, but is heightened by observations that “very few partnerships in either industrialised or developing countries have managed to achieve results on a significant scale” (Jones and Pisa, 2000).
In terms of both processes and outcomes, the partnerships have the potential to offer significant benefits. However, there is considerable difficulty in disentangling what partnerships produce as opposed to what some of the individual programmes and projects of different actors or agencies participating in the partnership produce.

As regards the process, important questions to be answered are:
- Have all the stakeholders been consulted?
- Is there political will and support for the process?
- Are the partnership arrangements socially and legally legitimate?
- Have accountability mechanisms been put in place?

With respect to the outcomes, the following questions need to be addressed:
- Are financial resources available to support different joint activities?
- Have action plans been developed?
- How effective are partnership activities in terms of a cleaner environment and improved service provision?

To answer these questions, we use the process-type and outcome-type indicators listed in Table 2.1.

Table 2.1  Process and substantive outcomes

<table>
<thead>
<tr>
<th>Issues to be considered</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>The number of actors involved and increase in the number of participants and organisations over time</td>
</tr>
<tr>
<td></td>
<td>Existence of political will</td>
</tr>
<tr>
<td></td>
<td>Are partnership relations socially and legally legitimate?</td>
</tr>
<tr>
<td></td>
<td>Accountability</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Are the initiatives financially viable?</td>
</tr>
<tr>
<td></td>
<td>Existence of action plans and contracts</td>
</tr>
<tr>
<td></td>
<td>Effectiveness in terms of a cleaner environment</td>
</tr>
</tbody>
</table>

2.4.2  Research methods

We started with an inventory survey, in order to identify the various actors involved in water supply, sanitation and solid waste management. During this time it was possible to negotiate entry points and get familiarised with the current situation in the delivery of services in the town. Having been a resident in Nakuru for close to six years and also involved in the training of local authorities in integrating environmental issues in the local authority development programme, the researcher had an advantage in accessing some basic information about the growth of the town and the changing environment in the delivery of basic environmental infrastructure.
Challenges of Urban Environmental Governance

The changing role from trainer to researcher had its own limitations. However, when approaching community leaders and CBO officials at the local level, the researcher took advantage of having interacted with them at a different level for a long time. It was therefore easy to establish rapport with the respondents after a brief introduction. The respondents rapidly understood the importance of the study and they were ready to offer the information needed.

A variety of information sources was used to provide different perspectives on similar issues, applying a combination of qualitative research techniques. This included direct and participant observation, secondary sources of data, open interviews with household heads and interviews with key informants. Focused group discussions were used especially when interviewing CBOs.

Firstly, we employed direct observation during the entire fieldwork period. Both the principal researcher and the research assistants documented various issues through observation, such as clean-up exercises, garbage heaps, location and type of the toilet facilities and neighbourhood types. Direct observation is a means for certifying, challenging, complementing or extending local knowledge and opinion, rather than a technique to be used in isolation (McGranahan, et al., 1997). This research also benefited much from secondary sources of data; information collected from a wide variety of the institutions that are operating in Nakuru. Several research reports and survey reports were sources of information. Written sources included, among other ones, the Urban Pacts I and II, research reports by the Department of Urban and Regional Planning (DURP) and the Housing and Building Research Institute (HABRI), consultative workshop reports and sectoral studies done by DURP and HABRI during the preparation of the Nakuru Strategic Structure Plan (SSP), various research and survey reports and the MCN Annual reports. The secondary sources were used mainly as background information on Nakuru and to determine the gaps that this study intends to fill.

We utilised semi-structured interviews during the household survey and the institutional surveys, combining some predetermined questions or activities with more open-ended discussions. Three types of interviews were held: with households, with community leaders and representatives of CBOs at the community or neighbourhood level and with key informants with specialised knowledge of some topics of interest. The household survey employed in this study was designed to generate information on household profiles, environmental conditions, as well as on inter- and intra-household partnership and group membership in four low-income neighbourhoods. Focusing on water supply, sanitation and solid waste management, the survey illustrated important aspects of environmental problems in these neighbourhoods. Formal and informal institutions between the households
and the utilities have an important role to play in environmental management to compensate for the fact that these utilities rarely reach the individual households.

Collecting data on a variety of household characteristics makes it possible to analyse important relationships between different aspects that make up the quality of life (see Box 2.1). The sampling procedure for selecting households in four low-income neighbourhoods was simple random sampling whereby 120 households in each of the four neighbourhoods were selected for interviewing (see Section 2.4.3).

Box 2.1 Topics covered by household interview schedules

- **Background information**: household size and age structure; indicators of income and wealth; gender of household head; education; migratory status; type and quality of residence; size of residence; tenure of residence; neighbourhood characteristics.
- **Water supply**: sources and provider of water; type of water supply by use; ease of access to drinking water supply; water storage practices; water supply disruptions; frequency of payments.
- **Sanitation**: form of sewage disposal; provider of the same; reliability; payment practices; toilet sharing; flow of grey water into drains.
- **Solid waste**: amount of solid waste; solid waste storage practices; waste disposal practices; waste picking and recycling; who collects waste; frequency of collection; dumping behaviour; location of serious solid waste problem; household waste separation.
- **Group membership**: group membership; frequency of meetings; average time spent in meetings; group activities; contributions; functions and roles played.
- **Perceptions on CBOs, NGOs, MCN and private sector**: perception of the provision of services, the actors and the roles they play, etc.

Another 90 households benefiting from private solid waste collection were purposively selected and interviewed. These households were selected from a list provided by three small-scale private companies operating in Nakuru. These companies – Salvage Services, Nakuru Hygiene services and Parrots – have entered into contractual agreements with households in the middle-income settlements of Freehold, Shaabab, Section 58 and Racecourse.

In order to limit the length of the household questionnaire, information on local conditions that are similar for all households in the area was gathered through interviews with community leaders and officials of the CBOs. The information collected at community level included the condition of local infrastructure such as refuse receptacles and the sources and availability of water and sewerage; the presence and nature of community organisations; and the relationship between different actors.
Key information interviews were held with selected key informants, such as the MCN departmental heads, officers involved in the LA 21, private sector executives like waste pickers and their organisations, leaders of four CBOs and officials of the World Wildlife Fund (WWF) and Intermediate Technology Group (ITDG). In the inventory study we had identified 41 respondents from the public, private and civil society sector, who were actively involved in some form of partnership arrangement and were all interviewed. The distribution of the key respondents over the various organisations is given in Table 2.2. More information about the way they were selected is given in Section 2.4.3.

Table 2.2 Distribution over various organisations and sectors of respondents interviewed

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCN</td>
<td>5</td>
</tr>
<tr>
<td>NGOs (WWF and ITDG)</td>
<td>5</td>
</tr>
<tr>
<td>4 CBOs</td>
<td>8</td>
</tr>
<tr>
<td>3 industries</td>
<td>3</td>
</tr>
<tr>
<td>NAQWASS</td>
<td>2</td>
</tr>
<tr>
<td>LA 21</td>
<td>2</td>
</tr>
<tr>
<td>Provincial physical planner</td>
<td>1</td>
</tr>
<tr>
<td>District environmental officer</td>
<td>1</td>
</tr>
<tr>
<td>District physical planner</td>
<td>1</td>
</tr>
<tr>
<td>Ministry of Social Services</td>
<td>1</td>
</tr>
<tr>
<td>KWS</td>
<td>1</td>
</tr>
<tr>
<td>Informal private sector</td>
<td>8^a</td>
</tr>
<tr>
<td>Private sector representatives</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41</strong></td>
</tr>
</tbody>
</table>

^a Includes three respondents engaged in water supply; one in sanitation and four in solid waste management.

Data were also collected through focused group discussions. In these discussions, small groups of representatives from CBOs were brought together to discuss a specific issue. Focused group discussions were chosen because they are relatively cheap and quick to conduct, while the interaction between participants leads to relatively spontaneous responses and creates a high level of involvement. The participants share a pool of experiences, and the discussions provide a consensus on the most typical experiences, but also less typical experiences, differences of opinion, and examples may come to the fore. The questions and discussions are open-ended, thus preventing interviewers’ preconceived ideas and biased results, and placing more emphasis on the participants’ points of view. It is also possible to purposively select subgroups of the population (i.e. those that are going to
Methodology

provide the most meaningful information) and to make selected comparisons. In such a case one should be aware, however, that the results are biased and should not be are interpreted as representing the full spectrum of opinions (Rakodi, 2000). Most of the groups with which focused group discussions were held comprised 5-10 participants and discussions lasted for less than two hours. The participants were encouraged to discuss freely and all members were encouraged to contribute. In most instances, the researcher acted as a moderator of the discussion, while a group member acted as the facilitator. A secretary recorded all the important facts verbatim in a notebook. Most of the data presented in Chapter 7 was enriched through a two-day workshop with all the stakeholders involved in the LA 21 process, during which the focused group discussion methodology was also employed. The International Institute for Environment and Development (IIED) availed funds for this workshop.

Fieldwork was carried out between April 1999 and March 2000. Due to an outbreak of cholera in Lakeview, Kaptembwo and Rhonda in April 1999, we had to reschedule the interviews in these three settlements for the first weeks of May 1999. The situation was soon arrested, however. This outbreak was a good indicator of the environmental health problems being experienced in the selected study areas. It did not, however, affect the output of our interviews and enriched the information that we were looking for. We used the SPSS statistical package to analyse the household survey, the results of which are presented in Chapter 5. The sequence of activities and presentation of the findings is given in Figure 2.2.

Figure 2.1 Sequence of activities and presentation of the findings

2.4.3 Sampling techniques

The household survey

The household survey was carried out in four low-income neighbourhoods, viz. Lakeview, Mwariki, Kaptembwo and Ronda. The four settlements were selected
because there is hardly any regular collection of garbage, because they use the same mode of sanitation and because they are faced with regular disruptions of water supply. Many community-based organisations and communal activities are concentrated in these areas. The neighbourhoods border Lake Nakuru National Park, which explains the intervention of the World Wildlife Fund (WWF) in the Lake Nakuru Development and Conservation project. The Green Towns project is also active in these neighbourhoods, with its Environment and Urban Development Training programme. These two outside agencies were instrumental in the formation of the community groups and organisations that can be found in these communities.

A pilot survey conducted during the inventory study revealed that the population in the settlements was highly heterogeneous, but that most of the activities related to environmental management in low-income settlements were homologous. Households were selected using simple random sampling. We used the municipality clusters as defined by the Central Bureau of Statistics (CBS) to select a representative sample of 120 respondents from four out of the 15 clusters distinguished by the CBS. All the clusters have about 1,400 households and we take the 481 households from the four clusters as representative.

Table 2.3 The household sample

<table>
<thead>
<tr>
<th>Cluster name</th>
<th>Estate name</th>
<th>Housing density</th>
<th>Number of households in the sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lakeview</td>
<td>Lakeview</td>
<td>medium/high</td>
<td>121</td>
</tr>
<tr>
<td>2. Mwariki</td>
<td>Mwariki</td>
<td>high</td>
<td>120</td>
</tr>
<tr>
<td>3. Ronda/Pondamali</td>
<td>Kwaronda</td>
<td>high</td>
<td>120</td>
</tr>
<tr>
<td>4. Ronda/Kaptembwo</td>
<td>Kaptembwo</td>
<td>high</td>
<td>120</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>481</td>
</tr>
</tbody>
</table>

We need to point out that the 15 CBS clusters cover only the built up areas within the old municipal boundaries prior to the 1972 and 1992 boundary extensions. There are no clusters in the newly settled areas or what is now referred to as the peri-urban areas of the municipality. Some of these areas are former rural agricultural areas that were incorporated into the municipality after the review of municipal boundaries in 1972 and 1992.

The selection of key respondents

Interviews with selected key informants within the MCN were held on a continuous basis during the entire fieldwork period. Appointments were made with Heads of departments and the interviews were guided by pre-prepared interview schedules. These interviews were designed to generate information on the institutional set-up
of the council, the process of urban environmental management and the structure of services that are central to this study. One of the major problems with these interviews was that the appointments were rarely honoured because of the tight schedules of the chief officers. We continued re-scheduling the appointments, however, and managed to get all the information required. In addition, there were frequent strikes within the MCN as a result of delayed salaries between October 1999 and February 2000 and this kept on interrupting the interviews. This did not, however, have any serious impact on the data collected.

Interviews were also conducted with the officials involved in the LA 21 process.

Formal and informal actors in the private sector were important for our study, in order to be able to analyse the degree to which they are involved in water supply, sanitation and solid waste management. The private sector was found to be actively involved in the collection, recycling and disposal of solid waste. Three private companies are involved in the collection and disposal of garbage in middle-income areas. We studied Nakuru Hygiene Services, Salvage Services and Parrots garbage collectors. Nakuru Hygiene Services was also involved in other cleansing services in a number of institutions. The other two – Parrots and Salvage – specialise in house-to-house garbage collection and its disposal in a designated dumping site. Informal private sector actors included the water vendors, waste pickers, as well as their networks.

An up-to-date inventory of CBOs was generated from the Municipal records. Most of the CBOs are registered with the Department of Social Services. We selected the CBOs operating in the settlements where a household survey was conducted and crosschecked the list with one from the MCN. We collected information about the activities the CBOs were undertaking, the areas in which they were operational, the projects undertaken, the partners, the problems they face while undertaking their activities, leadership and the relationship of the CBOs with the MCN. Most of the CBOs are involved in self-help activities, while a few of them are also involved in clean-up exercises in their neighbourhoods.

The World Wildlife Fund (WWF) and the Intermediate Technology Development Group (ITDG) are the two major NGOs dealing with environmental management issues. WWF has been involved in solid waste management and environmental awareness campaigns, while ITDG has been involved in the upgrading of the housing stock in Rhonda and Kaptembwo.

The interviews with key informants were conducted in two separate rounds, the first of which took place between July and December 1998 and the second between
August 1999 and January 2000. The interviews were open-ended to allow generation of additional information and structured by a set of pre-prepared lead questions, which were revised from time to time to capture some specific aspects. Follow-up discussions were also held from time to time. The respondents were selected through purposive sampling: only those people who were actively involved in partnership arrangements were interviewed. They were selected from the departments most engaged in water supply, sanitation, solid waste management and the LA 21 programme.

2.5 Conclusions

In this chapter, we made it clear that there is an urgent need to undertake a study of partnership arrangements in urban environmental management. It was observed that there is a knowledge gap in understanding the forms and functions of new partnership arrangements that have been coming up in Nakuru and also how the concept of partnership has been utilised in the LA 21. In this study we intend to capture environmental initiatives and responses by combining process-based and outcome-based approaches. To this end, the study addresses actors involved in urban environmental management at three levels of analysis: the household level, the settlements and CBOs at neighbourhood level and the municipality level. We further clarified that we employed a combination of several methods such as surveys, interviews, observations and focused group discussions. This means that we make an ambitious attempt to analyse partnerships at different levels, indicating the challenges that they face in their attempt to improve the quality of the living environment in Nakuru. With this study we hope to contribute to the ongoing debates on local level environmental initiatives, partnerships and attempts to achieve urban sustainable development.