THE UNIVERSITY OF ZAMBIA
SCHOOL OF NATURAL SCIENCES

THE ROLE OF MULTI - STAKEHOLDER PARTNERSHIPS IN THE DELIVERY OF PERI - URBAN WATER INFRASTRUCTURE AND SERVICES: THE CASE OF THE CHIBOLYA COMMUNITY WATER SCHEME IN LUSAKA.

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GEO 474

A PROJECT REPORT SUBMITTED TO THE DEPARTMENT OF GEOGRAPHY AT THE UNIVERSITY OF ZAMBIA IN PARTIAL FULFILMENT OF THE DEGREE OF B.A ed.

AUGUST, 2002

DECLARATION

I, Orleans Mfune declare that this Project Report has been composed and compiled by me and that the source of all material referred to have been specifically acknowledged and that the Project Report has not been accepted in any previous application for academic award.

Signature ....

Date .... 13th September, 2002 ....

DEDICATION

To my Mother who has worked tirelessly to see me educated and my wife Grace, for her patience and encouragement during the course of my studies.

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ABSTRACT

It is estimated that forty to eightypercent of the population living in peri - urban areas lack clean and safe drinking water. The government on its own has failed to provide adequate water services to these people due to financial constraints and the fact that some of these peri - urban areas had an illegal status. To solve the problem, partnerships involving many stakeholders have emerged as a way of providing water services to the areas. One such partnership is the Chibolya Community Water Supply Scheme. Therefore, this study was aimed at examining the role of multi - stakeholder partnerships for delivery of peri - urban water services: the case of the Chibolya water scheme. The objectives were: to identify the major stakeholders involved in the scheme; find out their roles in the scheme; establish the benefits of the scheme to the community and lastly, to find out whether public limitations were overcome by the scheme.

To achieve the set objectives Interviews were conducted with the community and the other stakeholders involved in the scheme. The findings of the study reveal that there are six major stakeholders involved in the water scheme and each has a distinct role to play in the water scheme. The benefits of the scheme to the community include increased access to water, reduction in walking distances to water points and provision of regular and adequate water to the community. The scheme has also played an important role in addressing public section limitations in providing water services. These benefits have been adequately discussed in the study. It has been concluded that to some extent the Chibolya water scheme has benefited the community.

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LIST OF ABBREVIATIONS

ABO	Area Based Organisation
CBD	Central Business District
CBOs	Community Based Organisations
DFID	British Department for International Development
GRZ	Government of the Republic of Zambia
JICA	Japanese International Co-operation Agency.
LCC	Lusaka City Council
LWSC	Lusaka Water and Sewerage Company.
NGOs	Non - Governmental Organisations
OSN	Obras Santitories dela Nacion
RDC	Residents Development Committee
SAP	Structural Adjustment Programme
SEAGA	Socio - Economic and Gender Analysis Programme
TDC	Technical Department for Co - operation
UNDP	United Nations Development Programme
UNZA	University of Zambia
WHO	World Health Organisation.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

According to WHO (2001) 40% of the world's six billion people have no acceptable means of sanitation and more than one billion people draw their water from unsafe sources.

In Zambia, Cottam and Morser (1994) point out that access to water in urban areas has decreased from 70% of the households in 1985 to 66% of the households in 1990. This problem is much acute for peri – urban areas of Zambia as 56% of the peri – urban population have no access to safe drinking water (GRZ, 2001). For example, in Lusaka, Zambia's capital city, the existence of peri – urban areas, mostly unplanned or informal have put strain on the ability of Government to meet the needs of the city dwellers for water infrastructure and services. The supply services in these areas are poor, inadequate and unreliable (GRZ, 2001). Lack of sufficient government funds, inadequate managerial and technical skills of local government, legal and policy constraints have resulted in inadequate and inefficient delivery of water services. The population of these areas comprising mainly the poor has failed to attract private sector water provision. However, in areas such as Chibolya there have been interventions aimed at solving these water problems and overcoming public sector limitations through schemes involving partnerships between different stakeholders. This study examines the role of these multi – stakeholder partnerships in the delivery of water infrastructure and services to peri – urban areas. Jackson et al. (1999) points out that there is need for multi – stakeholder partnerships that solve real problems such as water problems, hence the need to study this emerging arrangement.

1.2 STATEMENT OF THE PROBLEM

The failure of the conventional (public) approach to provide adequate and efficient water services due to lack of sufficient government funds, inadequate managerial and technical skills of local government's agencies, legal and policy constraints means alternative approaches have to be sought in order to solve peri – urban water problems.

The establishment of water schemes, that involve partnerships between different stakeholders have emerged as an alternative approach to exclusive public sector water provision. These partnerships rely on the knowledge and resources of a multiplicity of sectors and institutions and can play an important role in providing water services to the people. However, questions arise as to what extent these partnerships can benefit the community and overcome public sector limitation in meeting the water needs of the peri – urban areas. What role can they really play in solving water infrastructure and supply problems?. It is in this context that this study examines the role of these multi – stakeholder partnerships for the delivery of peri – urban water infrastructure and services in the Chibolya Community Water Scheme.

1.3 PURPOSE OF THE STUDY

The aim of this study was to examine the role of multi – stakeholder partnerships in the delivery of peri – urban water infrastructure and services in the case of the Chibolya Community Water Scheme. To achieve this aim the study had the following objectives:-

(i) To identify the major stakeholders in the Chibolya Community Water Scheme.

(ii) To determine the roles of each stakeholder in the Chibolya Community Water Scheme

(iii) To establish the extent to which the community has benefited from the scheme

(iv) To find out whether public sector limitations such as financial, managerial, technical and policy limitations have been overcome or not by the scheme.

1.4 RATIONALE OF THE STUDY

A lot has been done by researchers on peri – urban water problems, both in Zambia and outside and the failure of the public sector to meet the people's water needs has been widely acknowledged. However, very little has been done to study alternative approaches suitable for water delivery to peri – urban areas. It is hoped that this study will add to the pool of knowledge on the role of public - private partnership schemes in providing water services. In addition, the results can be used by other researchers as a starting point for further studies in partnerships. Furthermore, the results of this study can be used as a window of opportunity for developing more partnerships for the delivery of urban environmental services and provide more information that can strengthen existing partnerships.

1.5 SCOPE OF THE STUDY

This project is limited to the study of partnerships and the Chibolya Community Water scheme partnership arrangement only. It examines the role of the scheme in providing water infrastructure and services by looking at its benefits to the community, the stakeholders involved and their role in the water scheme. Additionally, the study looks at whether this scheme has overcome the limitations faced by government agencies in providing water services to peri- urban areas.

1.6 DEFINITION OF TERMS

In this study, the following operational definitions are used for key terms:-

(i) Partnership: It refers to an arrangement involving close co – operation between different sectors.

(ii) Scheme: This merely refers to the Chibolya water project.

(iii) Stakeholder: This refers to those people or institutions who stand to gain or lose something by the project or those who are capable of affecting the outcome of the project.

(iv) Multi – Stakeholder Partnership: This is an arrangement involving close co-operation between many stakeholders.

(v) Peri – Urban Areas: Refers to formal or informal settlements within the areas of a local authority jurisdiction with high population density and mostly low cost housing having inadequate or lacking basic services such as water supply, roads, water drainage and solid waste disposal.

(iv) Public – Private Partnerships: is a spectrum of possible relationships between public and private actors for the co-operative provision of infrastructure services

1.7 ORGANISATION OF THE REPORT

This report is divided into seven chapters. Chapter one is the introduction. The introduction has eight sections comprising the background to the study, objectives, rationale, scope of the study and the definition of terms. The second chapter is the review of Literature. The review of literature has four sections that discuss the public approach to the delivery of water and its limitations, the alternative approaches to water delivery, the partnership approach and lastly, partnerships for Zambia. The third chapter provides a description of the study area. It comprises the location and size of the study area, the physical characteristics of the study area and population and housing. This is followed by the methodology in the fourth chapter which gives the data sources and methods of data collection, sample size and sampling procedures, problems faced in data collection and a section on data presentation and analysis.

The fifth chapter is the Research findings. This has sections on the stakeholders involved in the Chibolya water scheme, the role of each stakeholder in the scheme, the benefits of the scheme, the benefits of the scheme in comparison to the old water sources and limitations of the public sector. In the sixth chapter, which is the discussion of the results, there are four sections dealing with stakeholders, their role in the scheme, benefits of the scheme to the community, and solutions to public sector limitations.

Lastly, the report gives the conclusion and recommendations in the seventh chapter. This comprises, two sections, one for the conclusions and the other for the recommendations.

CHAPTER TWO

• LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews some of the literature that has been written on the various approaches to urban water delivery. The first section gives an overview of the conventional approach to delivery of water infrastructure and services and the second looks at the limitations of the public (Conventional) Approach. This is followed by a section on the alternative approaches to the delivery of peri – urban water services which includes the partnerships approach and lastly, there is a section on partnerships for the Zambian situation.

2.2 THE PUBLIC (CONVENTIONAL) APPROACH TO THE PROVISION OF WATER IN URBAN AREAS.

Quite a number of studies have been conducted on this subject by various scholars. Among such scholars is Gidman et al. (1995) who points out that in order to deliver services such as water to the urban communities, a tradition had grown up within urban authorities that an organisation to do so has to be created within the local authority's administration. Gidman et al's studies have shown that as urban centres have grown in size even these organisation have grown in size and complexity. Omar and Afshar (1999) who studied approaches to the delivery of water in Luanda, Angola also point out that such has been a tradition even in developing nations where large centralized government agencies responsible for water delivery have been established.

This trend is also seen in the Zambian context. The National water policy of the government of Zambia points out that the Ministry of Local Government and Housing and Local Authorities are responsible for urban water supply and sanitation schemes (GRZ, 1994). This has seen the emergence of the Lusaka Water and Sewerage Company that is wholly owned by the Lusaka City Council and other such institutions across the country. The question that arises from this trend is "to what extent have these been effective in the delivery of water services to the peri- urban areas?"

2.2.1 PUBLIC SECTOR LIMITATIONS

Omar and Afshar (1999), UNDP (2000) and SEAGA (1997) are among the scholars that have pointed out the limitations of the public sector to provide water infrastructure and services to the urban communities. Omar and Afshar (1999) for example, argue that many governments and international organisations have come to realise that the conventional approach to managing and providing water services are not suitable for some areas. SEAGA (1997) while agreeing with the view that the public sector approach is not suitable, blames this on Structural Adjustment Programmes (SAP) that have left governments without financial means to complete infrastructure provision goals.

Though SEAGA's argument may hold, it must be noted that structural adjustments programmes can not be the main cause of this as most governments, especially in developing nations have failed to achieve this infrastructure provision even without embracing SAP measures. This argument may apply to a few countries only.

According to UNDP (2000) urban administrators have failed to respond to the demand for public services such as water due to the following: limited government funds, inadequate management and technical skills and rapidly increasing size of cities. Jasperson (1998:16) who has also studied the Argentine water sanitation system gives the following problems faced by the Argentine State agency responsible for water supply in Buenos

> *Obras Santiarias dela Nacion (OSN) had many weaknesses found in the Argentine Government. Problems of operational efficiency, weak commercial and financial management, lack of funds, overstaffing and failure to address important environmental issues comprise the key areas of OSN'S poor performance. High unaccounted for water losses (about 45%), the consequence of inadequate maintenance, lack of billing procedures adversely affected profitability and prevented expansion of services to the poor households.*

In these studies both UNDP (2000) and Jasperson (1998) expose the limitations or weaknesses of state agencies in providing water services. Lack of finances, managerial and technical problems emerge as common government weakness in both studies.

Though both UNDP (2000) and Jasperson (1998) point out these limitations, they do not point out how the various sections of the urban population are affected. Jasperson (1998) makes a brief mention of the poor but does not make mention of where these poor are found in Argentine. These scholars do not also make mention of the legal and policy implication of this approach and this provides an avenue for more studies in this area. WHO (2001) points out that the limitations of the public sector are intensely felt in the urban poor areas as public investment tend to favour water supply services which provide water directly into people's homes in reticulated areas.

2.3 ALTERNATIVE APPROACHES TO WATER DELIVERY

From the already reviewed literature, it is clear that many scholars have found the public (Conventional) approach to water delivery inadequate. In view of this, there have been other studies looking at alternative approaches for peri – urban areas. One alternative approach is that suggested by Konives et al. (1998) who studied the Bolivia water situation. Konives et al. Point out that dissatisfied with public sector approach, Bolivia is turning to the private sector for water delivery. Omar and Afshar (1999) also point out that in Angola the private sector water delivery model is an alternative approach that has emerged. They argue that the private sector involvement brings in good managerial skills, productive efficiency and dynamic efficiency, accountability and financial autonomy.

Notably, the private sector would indeed bring in these benefits but one has to ask the private sector's willingness to move into peri- urban areas and the ability of peri – urban residents to pay for the services. Konives et al, (1999) and Omar and Afshar (1999) seem not to have taken into account the heterogenousness of urban centres and therefore have not taken into consideration how this approach would affect peri – urban areas.

Roth (1987) points out that of all the areas she studied, water and sewerage systems seem to be the ones in which the private sector is least involved. The areas studied by Roth were health, education and Telecommunications. Roth (1987) notes that the private sector is discouraged in investing in water infrastructure in poor areas by the riskiness of investing in fixed capital which would be impossible to recover in a short period of time and cannot be moved in case of a declining market. Government controls of prices and the risk of expropriation magnify investment risks to unacceptable levels.

It is evident from Roth's argument that even the private sector approach would not work well for the peri – urban areas hence the need for consideration of yet another alternative approach.

2.4 PARTNERSHIPS APPROACH AS A MODEL OF WATER SERVICE DELIVERY

Bennet (1998) studied approaches to the delivery of urban environmental services such as water. He proposes public – private partnership as one alternative approach that is innovative and can take over from either exclusive public or private sector delivery of services. In public – private partnerships, the only essential ingredient, apart from public sector involvement is some degree of private sector participation in the delivery of traditionally public domain services. In this context private actors may include private businesses, local and International Non – Government Organisations (NGOs) or Community Based organisations (CBOs).

While Bennet (1998) recognises NGOs and CBOs as private actors, his study mainly focused on the partnership between the public sector and private businesses. He looked at NGOs as merely being Intermediaries between these other sectors.

However, some studies have shown that some partnerships for delivery of peri – urban water services can occur even without the involvement of the private businesses with NGOs and CBOs playing the central role (Jackson 1999 and Hulme and Edwards, 1997).

While CBOs, represent directly one or several communities, NGOs are intermediates between governments and often provide communities with technical and financial assistance for the development of their projects. Gidman et al. (1995) who also studied partnerships points out that partnerships can occur between NGOs, CBOs and government. These studies show that such partnerships can yield the following benefits: promote sustainability; reduction in construction costs; increased cost recovery; and respond more to the needs of the people. Gidman and others further point out that these partnerships are also necessary to increase access of the poor to infrastructure services. The NGOs and CBOs or communities play an important role in awareness raising, advocacy, decision making, implementation operations and maintenance of infrastructure facilities such as those for water.

Hulme and Edwards (1997) say the rise of NGOs is an important phenomenon which has implications for the development prospects of the poor people. Of particular importance is the popularity of NGOs with governments and official aid agencies which is itself a resource to development. The relationship of NGOs with the people is seen as giving them greater public legitimacy than government while their managerial features are seen as permitting private sector levels of control and efficiency.

Despite these benefits highlighted by Gidman et al. (1995) and Hulme and Edwards (1997) the partnership between these sectors can not work well without a proper partnership structure and sustainability of co-operation. Jackson (1999) add to this that government, civil society and the private sector must all improve their understanding of how to structure and sustain productive partnerships. They add that today's problems increasingly demand rapid solutions based on knowledge and resources of multiplicity of sectors and institutions. In this context, multi - stakeholders partnerships that solve real water problems have become especially valuable.

2.5 PARTNERSHIPS FOR ZAMBIA

There is very little literature on partnership arrangement for delivery of water infrastructure and services for Zambia. One notable work on partnerships for a peri – urban area is that done by Mwanamwambwa and Kamg'amba (2001) in Chipata compound of Lusaka.

Mwanamwambwa and Kang'amba (2001) pointed out that solving infrastructure related problems in peri – urban areas of Lusaka requires joint efforts by all stakeholders in the water sector and an enabling policy environment. They point out that Chipata compound had suffered from severe water shortages as water facilities had deteriorated to such an extent that supply was intermittent or non – existent. Government had no capacity to solve this problem.

To solve the water problems, residents, the Lusaka City Council and other stakeholders such as Non – Governmental Organisations begun mobilising wide participation towards implementation of a new water system. Funds were sourced and through joint efforts of many stakeholders Chipata Compound has a new water system. This water system has greatly reduced distances to water points and money spent on buying water from vendors.

This study by the two scholars provide an interesting case of the role of partnerships in providing peri – urban water services. However, Mwanamwamba and Kang'amba's (2001) study was not scientifically done and did not investigate the effects of the partnership through a field survey, but assumed the partnership has greatly benefited the people of Chipata compound. It would have been worth to interview the community on the benefits of the partnership.

GRZ (2001) also notes that many stakeholders have begun to get involved in solving peri – urban water infrastructure and services problems in Lusaka and other Zambian towns. It is pointed out that in the past, prior to 1993, many stakeholders could not get involved in peri – urban water provision because of the illegal status of some of these areas. Policy, legal framework and institutional arrangements, inadequate cost recovery and lack of financial viability were the major constraints that hindered delivery of peri – urban water infrastructure services. These had to be addressed inorder to solve the water problem (GRZ, 2001).

GRZ (2001) further points out that a policy reform exercise was embarked on in 1993 to address these problems. This was aimed at promoting poverty reduction approaches based on partnerships, participation and demand responsiveness at the grassroots levels. The national water policy also points out the importance of partnerships in delivery of peri – urban water services. The policy document says government will endevour to encourage participation of Non – governmental organisations and other service providers in water provision (GRZ, 1994). In 1997, the water supply act that has enabled many actors to participate in the water sector was enacted providing space for many joint ventures and other partnerships.

The Lusaka City Council (2001) has endorsed partnerships as an essential strategic element in projects designed to improve and develop infrastructure in peri – urban areas. It is in this context that the Lusaka city council established Area Based Organisations (ABOs) in peri – urban areas to stimulate and coordinate infrastructure development in these communities in partnership with Non – government organisations and other stakeholders.

From the available literature on partnerships in Zambia, it can be noted that the use of partnerships is a relatively new approach to water services provision in Zambia. This probably accounts for the lack of studies on actual partnerships. There is thus need for more studies on partnerships to ascertain their role in delivery of peri – urban water infrastructure and services.

CHAPTER THREE

DESCRIPTION OF THE STUDY AREA

3.1 INTRODUCTION

This chapter presents the description of some of the characteristics of the study area.

3.2 LOCATION AND SIZE OF STUDY AREA

?

Chibolya settlement is located within Lusaka which lies at 20° 10' east and 15° 28' south of the equator in the Central African Country of Zambia. It is located a kilometer west of the Central Business (CBD) of Lusaka city. The settlement has an area extent of 0.5 square kilometer. Figures 1 and 2 show the location of Lusaka and Chibolya settlement respectively.

3.3 PHYSICAL CHARACTERISTICS OF THE SETTLEMENT

The area to the west of Lusaka, which covers Chibolya settlement is generally flat low land with some rock outcrops. The area is underlain by dolomite limestone with no surface drainage (Williams, 1984).

According to Davies (1968) in this limestone terrain, two situations occur in a year. Firstly, during rain season fissures and solution hallows fill with water and the water table rises to the surface which becomes liable to flooding. Secondly, in the dry season a reverse situation occurs as the water table reaches a point were water is not easily accessible. Thus the area experiences floods in the rain season and dryness in the dry season. However, the good limestone acquifier underlying the area stores adequate ground water that can easily be accessed by boreholes.

In terms of climate, Chibolya's climate is that of Lusaka and Zambia ~~as~~ a whole. Four seasons can be identified. These are the rain season (November – March), warm post rain season (April to June), cold – post rain season (June to August) and the hot season (September to October). It is during the November and March period that Chibolya experiences floods.

3.4 POPULATION AND HOUSING

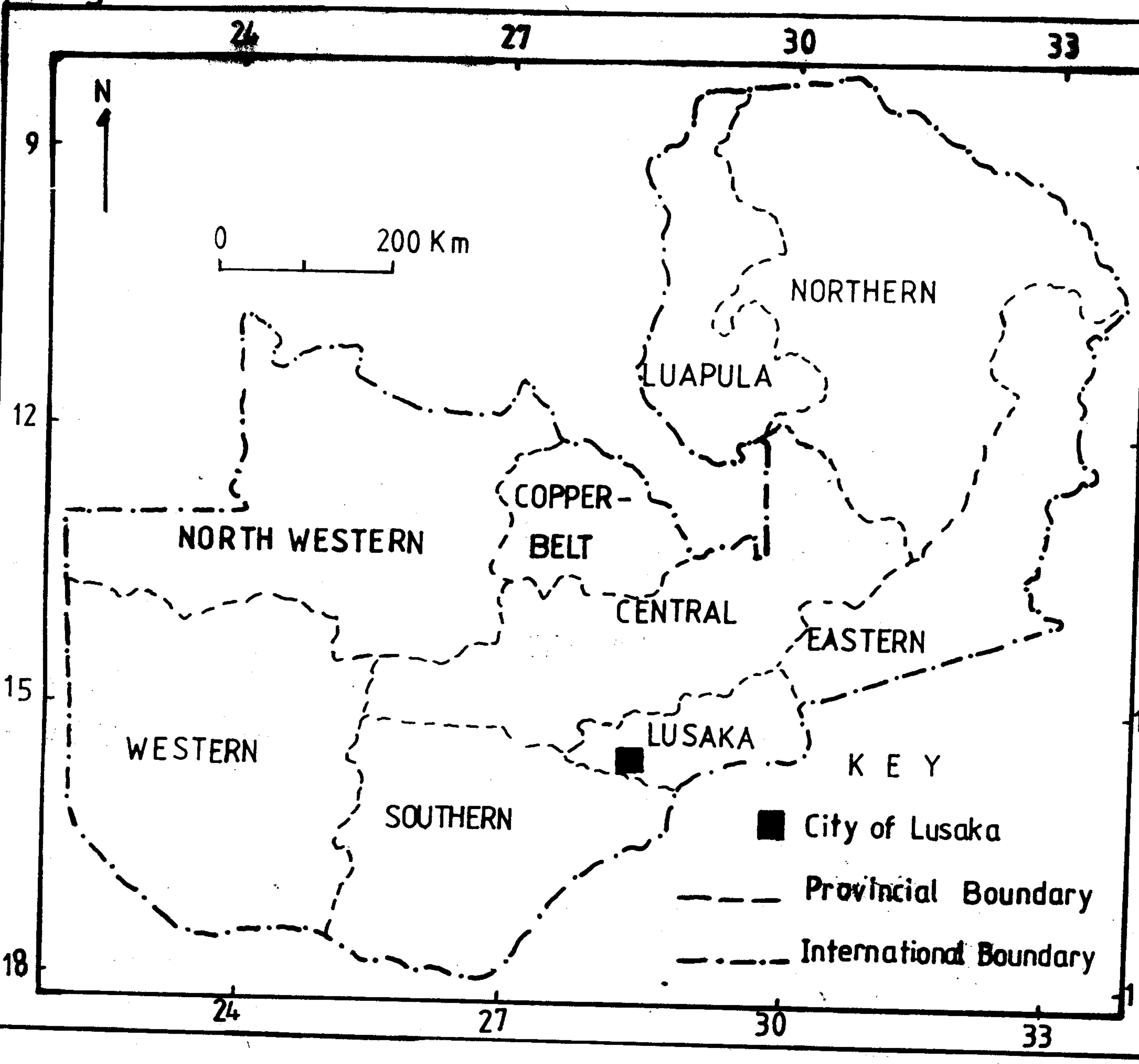
Chibolya settlement is characterised with high population density and mostly low cost housing mostly haphazardly laid down. The statistics from the Chibolya Residents Development committee indicate that the settlement has a population of 25,000 people and about 4,000 households. The compound is divided into new and old Chibolya. Chibolya begun as a legal settlement where housing was provided for Africans working for the white settlers in the colonial era. This was just after the second world war when the colonial Board begun providing housing to African workers. Later on the settlement begun to expand as a self - help scheme enabling people to build their own houses in the area.

Basic services such as water and sanitation facilities take centre stage in this area as these have always been inadequate. Prior to the year 2000, new Chibolya's water system was characterised by hand dug shallow wells and a few boreholes located around some churches. The hand dug wells were usually flooded during the rain season. Old Chibolya had some public stand pipes provided by the city council which have been vandalized and have deteriorated such that they are non – operational.

3.5 SELECTION OF THE AREA

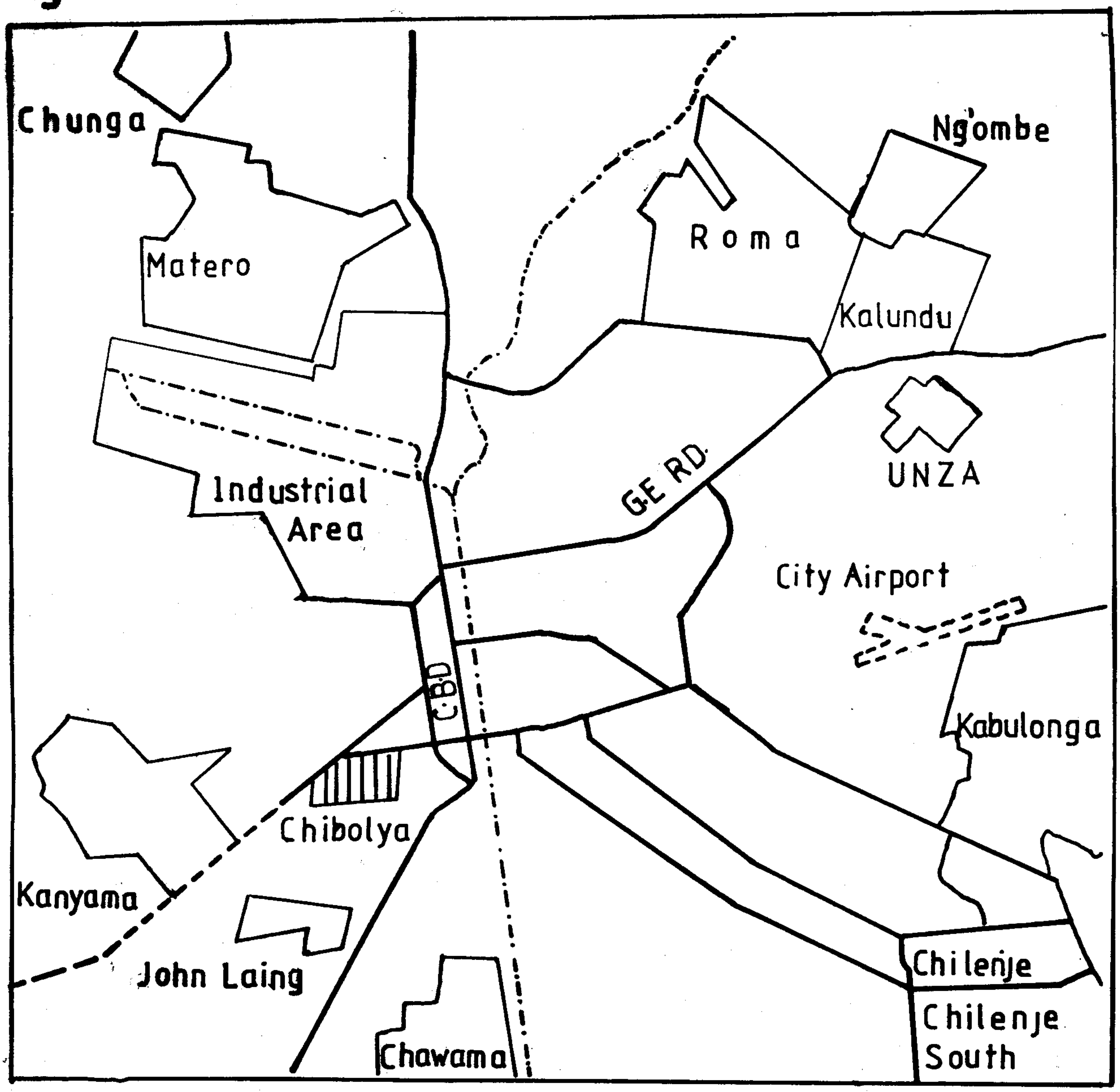
Chibolya was selected as a study area for mainly three reasons. Firstly, the area is easily accessible to the researcher. Secondly, Chibolya was one of the most severely affected areas by the water problem, hence the establishment of the water scheme provided an interesting case of study. Thirdly, the interest in the area was heightened by the fact that the scheme was a partnership arrangement. Partnerships for environmental services has been the researcher's area of interest for quite some time.

Fig 1: LOCATION OF LUSAKA

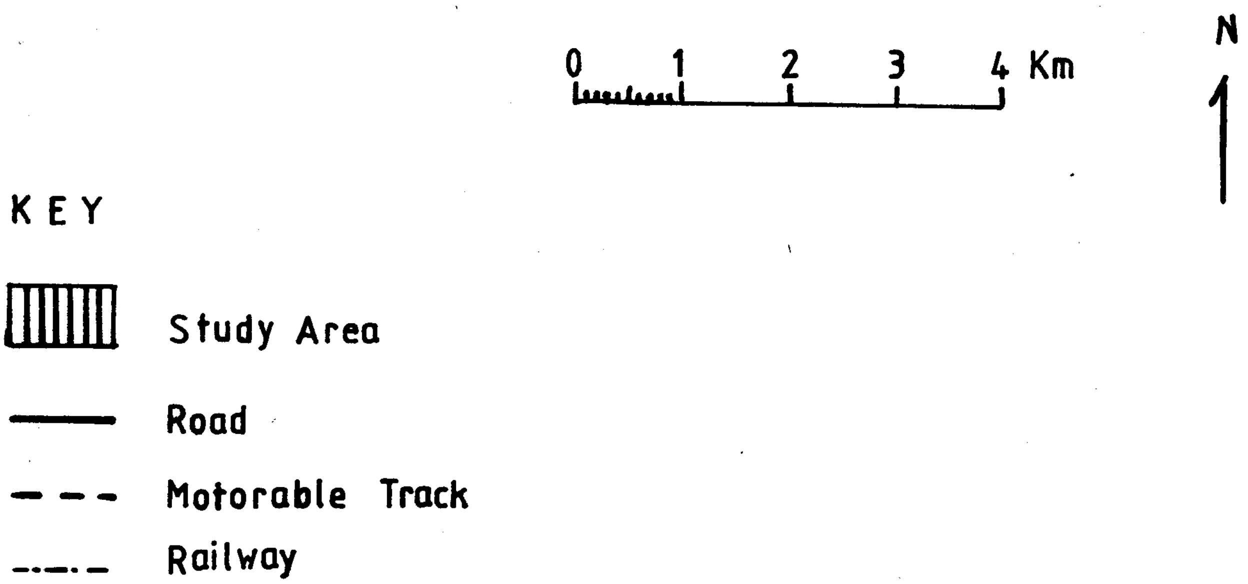


Adapted from, Davies, 1971:51

Fig2: LOCATION OF CHIBOLYA SETTLEMENT



Source: mapsheet 1520 A4 (1986)



CHAPTER FOUR
METHODOLOGY

4.1 INTRODUCTION

The purpose of this chapter is to present the methodology of data collection used in the study. It includes the sources of data, the sample size, problems faced in the collection of data and the limitations of the data.

4.2 DATA SOURCES AND THE METHODS OF DATA COLLECTION

There were two sources of data used in this study. These are primary and secondary data sources.

4.2.1 PRIMARY SOURCE

Primary data was obtained through use of questionnaires, interviews and field observation.

(a) QUESTIONNAIRES

Questionnaires were administered to household heads in the community in order to collect data on the benefits of the water supply scheme to the community. It was also used to collect data on the role of the community in the water scheme and to identify the stakeholders involved in the partnership scheme (Appendix 1).

The questionnaires were administered through personal contact with respondents. Personal contact was used to accommodate illiterate respondents and to allow collection of additional data.

(b) INTERVIEWS

Interviews were conducted with the Chibolya Residents Development Committee (RDC) Chairman and treasurer for the purpose of identifying the stakeholders involved in the partnership, the role of the RDC in the scheme and the benefits of the partnership scheme. Interviews were then also held with officers of the LCC, LWSC, Care International, JICA and DFID in order to collect data on their role in the partnership scheme. The open – ended questions of the interview guide allowed for respondents to be asked and give even more than the anticipated data. The method was also used to collect information on government's limitation in the provision of peri – urban water services and to establish whether the scheme has over come these limitations (ie whether the partnership has offered any solutions).

(c) FIELD OBSERVATION

On spot observation of all water points was done in order to establish the physical status of the facilities and assess the adaptability of the technology used to the community. It was also used to verify the number of taps and estimate distances to water points from homes.

4.2.2 SECONDARY DATA SOURCES

(a) USE OF EXISTING DOCUMENTS

Various documents and archival information pertaining to the scheme and partnerships were used to obtain information on the scheme and the subject of partnerships. The documents were also used to confirm some data collected in the field.

4.3 SAMPLE SIZE AND SAMPLING PROCEDURE

According to statistics from the Chibolya RDC the settlement has about 4,000 households. For the questionnaire, a sample of 80 was proposed for the study because it was more representative of the population and manageable. However, it was discovered while in the field that interviewing just one respondent consumed a considerable amount of time, hence it was impossible to reach 80 respondents within the two weeks period within which data was to be collected. Thus only 30 respondents that could be reached with questionnaires within that period were interviewed for the study in Chibolya.

These 30 were randomly selected from RDC's list of residents' houses and plot numbers. Where it was discovered there were more than one household in a sampled house only one household head was interviewed. Random sampling was used because it is simple to use and more representative as each respondent had equal chance to be selected. The Rotary technique were each house or plot number was written on a piece of paper, then placed in a bucket from which the sample was drawn was used.

For the interviews, all institutions involved in the scheme were interviewed in order to gain adequate data on their roles in the scheme.

4.4 PROBLEMS FACED IN DATA COLLECTION

A number of problems were faced in the collection of data. One of the problems was that only 30 respondents were interviewed in the compound instead of 80 respondents. This had a bearing on the results as 80 respondents would have been more representative than the 30 respondents interviewed. Additionally, these 30 respondents where not widely distributed across the compound and this affected the study as only a limited area was represented.

Another problem is that of limited finances that mostly caused delays in data collection. Finances were needed for transport for data collection and production of questionnaires. Lastly, a lot of time was spent by the researcher fulfilling appointments with officers of institutions involved in the scheme. The appointments were often not honoured hence causing delays and limiting the collection of data.

4.5 DATA PRESENTATION AND ANALYSIS

Data collected was analysed both quantitatively and qualitatively. Data is presented in statistical tables and descriptively were appropriate. Percentages were calculated for the purpose of drawing conclusions in the analytical process.

CHAPTER FIVE

RESEARCH FINDINGS

5.1 INTRODUCTION

This chapter presents the findings of the study. The findings presented were obtained from the study area using questionnaires, interviews, observations and documents pertaining to the study area. The chapter is divided into five major sections comprising the stakeholders involved in the water scheme, the role of each stakeholder, the benefits of the partnership scheme, Government limitations in providing peri – urban water services and whether the water partnership scheme has overcome the identified government limitations.

5.2 STAKEHOLDERS (PARTNERS) INVOLVED IN THE CHIBOLYA COMMUNITY WATER SCHEME.

The findings of the study reveal that there are six major stakeholders or partners involved in the Chibolya Water Scheme. Primarily, the six stakeholders involved in the scheme can be divided into five major categories according to sector. Table 5.1, below shows these stakeholders and the sectors to which they belong. This community water scheme is a new water supply system involving a wide range of participants in its planning, implementation and monitoring. At the core of the scheme is the concept that local residents would manage the water system operations and maintenance including its financial management.

Table 5.1 STAKEHOLDERS (PARTNERS) INVOLVED IN THE CHIBOLYA COMMUNITY WATER SCHEME

STAKEHOLDER (PARTNER)	SECTOR REPRESENTED
Lusaka City Council (LCC)	Government (Public)
Lusaka Water and Sewerage Company (LWSC)	Private company
Residents/Residents Development Committee (RDC)	Community (Beneficiaries)
Care International	Non – Governmental Organisations
Japanese International Cooperation Agency (JICA)	
British Department for International Development (DFID)	Aid Agencies

Source: Field Data

Note - The RDC has since changed structure and name to Area Based Organisation (ABO). It is a citizen participation and representation mechanism established by local Authorities (LCC) to stimulate and co – ordinate development in local communities.

5.3 THE ROLE OF EACH STAKEHOLDER IN THE PARTNERSHIP/SCHEME

Interviews, with different stakeholders revealed that each stakeholder has a role to play in the water scheme.

Table 2 below shows the role of each stakeholder involved in the water scheme.

Table 5.2 THE ROLE OF EACH STAKEHOLDER IN THE CHOBOLYA COMMUNITY WATER SCHEME

STAKEHOLDER (PARTNER)	ROLE
DFID/JICA	Financing of capital costs ie cost of feasibility studies, cost of design and construction. Supervision and cost of construction material
LCC – Department of Peri – Urban Development	- Regulatory and supervisory role - Lease of assets to water trust under Area Based Organisation (AOB) - Auditing of scheme's accounts - Technical Assistance
LWSC	- Water quality monitoring
Area Based Organisation (RDC)	- Meeting costs of operation, maintenance, repair and replacement - Manage scheme's operation, including collection of revenue, recruitment and paying of water manager and tap attendants.
RESIDENTS	- Contribute to capital cost by providing labour
CARE INTERNATIONAL	- Capacity building - Community mobilisation - Facilitation of project implementation - Monitoring and supervision - Provision of Technical Assistance

SOURCE: FIELD DATA

5.4 BENEFITS OF THE WATER SCHEME

5.4.1 WATER POINTS ESTABLISHED

Twenty – five water points have been constructed by the partnership scheme. Each water point has four (4) taps. Thus in total, 100 taps have been established. These are communal water points.

5.4.2 ACCESS TO WATER

All the 30 respondents interviewed indicated that they have access to water everyday. 28 of the 30 respondents who represented 93.3% of the respondents said they obtain their water from water taps constructed by the partnership scheme. The other two respondents representing 6.7% of the despondents said they obtain their water from Bore – holes constructed by their churches.

4.4.3 ADEQUACE OF WATER PROVIDED BY THE SCHEME

For the 28 respondents (93.3%) that obtain their water from the scheme's taps, their amount of consumption ranges as shown in table 5.3 below.

Table 5.3 AMOUNT OF WATER CONSUMPTION PER HOUSEHOLD.

WATER CONSUMPTION (LITRES)	FREQUENCY	% (PERCENTAGE)
20 - 59	6	21.43
60 - 99	7	25.00
100 - 139	5	17.86
140 - 179	0	0
180 - 219	9	32.14
≥ - 220	1	3.56
Total	28	100.00

SOURCE: FIELD DATA

Note: Water is always drawn in a standard 20 litre container, hence the number of containers drawn multiplied by 20 gives the total amount of water consumed by a household per day (ie the taps are not metred). The average water consumption per day is 140 litres.

All the 28 respondents representing 93.3% that obtain their water from water points constructed by the scheme said the scheme adequately provided for their water needs according to their household level daily consumption.

4.4.4 AFFORDABILITY OF TARRIFFS

There are two modes of paying water fees in the scheme. There is one for card carrying members of the Residents Development Committee and the other for non – card carrying members. Table 5.4 below shows this situation. All the 28 respondents that obtain water from the scheme water points indicated that the tarriffs are affordable to them. However, in comparison to their old water sources only 34% of respondents indicated that the tarriffs are more affordable

Table 5.4 WATER TARRIFFS

CATEGORY OF WATER USER	MODE OF PAYMENT	WATER CHARGE	AMOUNT OF WATER ALLOWED TO DRAW PER DAY
Card carrying 40% of the population (card carrying)	Monthly	K3,500/6000	200 L/card (one can increase amount to draw per day by getting another card)
Non card carrying	Daily	K50/20 litres	Unlimited as long as each litre is paid for

SOURCE: FIELD DATA

4.4.5 DISTANCES TO THE WATER POINTS

Only 83.3% of the respondents interviewed came to Chibolya compound prior to the establishment of the water scheme. For these 85.3% (25), their average distances to water points prior to the establishment of the Chibolya water scheme was 1,642m. The new average distance for these respondents now stands at 48m. Table 5.5 shows the range of distances for all the 28 respondents that obtain their water from the partnership scheme's water points. In terms of distribution of water points, the RDC said the aim was to have an average distribution of 100m between water points.

TABLE 5.5 DISTANCES TO WATER POINTS

DISTANCE TO WATER POINT (METRES)	FREQUENCY	% (PERCENTAGE)
≤ 20	16	57.1
20 - 40	7	25.0
40 - 60	1	3.4
≥ 60	4	14.3
Total	28	100

SOURCE: FIELD DATA

4.4.6 BENEFITS OF SCHEME'S WATER POINTS COMPARED TO PREVIOUS WATER SOURCES

Of the 25 respondents, whose average new water distance stand at 48m, 2 of them do not obtain their water from the scheme. However, the 23 respondents (76 .7% of 30 respondents) that obtain the water from the schemes' points and have been in Chibolya prior to the construction of the water points indicated the following in comparision to their old sources of water.

TABLE 5.6 COMPARISON OF OLD WATER SOURCE AND PRESENT ONE.

PRESENT WATER SOURCE IN COMPARISON TO PREVIOUS WATER SOURCE	FREQUENCY	%
Clean water	8	21.74
Cheap and Affordable	5	34.78
Treated and safe	14	60.87
Regular supply	13	56.52
Provides adequate water	12	52.17
Nearer to home	15	65.22

SOURCE: FIELD DATA

5.5 LIMITATION OF PUBLIC SECTOR PROVISION

Interviews with the Lusaka Water and Sewerage Company and the Lusaka City Council revealed that they had the following limitations in providing water infrastructure and services to the peri – urban areas such as Chibolya.

(i) Financial – the city council lacks adequate finances to exclusively establish water infrastructure in these areas

(ii) Policy/legal limitation: the illegal status of most peri – urban areas prevented the local authorities from providing environmental services to these areas. There was no clear policy towards peri – urban areas.

(iii) Technical and Managerial limitations: lack of adequate technical staff and limited managerial resources for the affective management of peri – urban areas infrastructure and services

(iv) They also lack adequate cost recovery mechanism in their operation.

(v) Lack of proper sustainability approach

5.5.1 ROLE OF THE SCHEME IN OVERCOMING PUBLIC SECTOR LIMITATIONS

The findings from interviews conducted with the partner institutions in the water scheme show that measures have been put to address these limitations in the partnership scheme. Table 5.7 below shows how each is addressed by the scheme.

TABLE 5.7 SOLUTIONS TO PUBLIC SECTOR LIMITAIONS

LIMITATION/CONSTRAINT	MEASURE/SOLUTION
Financial	- User fees - Funds are provided by JICA and DFID - Community meets the cost of labour
Policy/legal	- Water and sanitation act enacted in 1997 to enable many actors participate in the service provision creating space for partnerships - Regularisation of settlement
Technical and Managerial	- Technical assistance provided by Care Internation - Community Based Management employed with capacity building provided by Care International
Cost – Recovery	- Lease of scheme's assets to the Chibolya Water Trust - Firm financial management system - Tarriff setting took in consideration community willingness to pay
Sustainability	- Community Based Management

SOURCE: FIELD DATA

CHAPTER SIX

DISCUSSION OF RESULTS

6.1 INTRODUCTION

In this chapter the results of the study are discussed. The chapter is divided into four sections. The first section looks at the stakeholders involved in the water scheme and the second discusses the roles of each stakeholder. The third section discusses the benefits of the scheme and lastly, the fourth section is an analysis of whether the partnership scheme has contributed to the eradication of public, sector limitations in peri – urban water provision.

6.2 STAKEHOLDERS

As revealed in the findings of the study, six major stakeholders are involved in this scheme who are categorized into four sectors as in Table 5.1. It can be noted from this, that the involvement of a lot of stakeholders in the scheme clearly implies that this is neither an exclusively public nor exclusively private venture as in the conventional approach to urban water service delivery. While the government represented by the LCC has always been involved in most water services delivery, the involvement of a non – Government Organisation is of particular significance to the scheme. Taking Hulme and Edwards' (1997) argument that NGOs have popularity with official aid agencies because their relationship with people is seen as giving them greater legitimacy than Government, it is thus, not surprising that the involvement of Care International in the scheme occurs with the involvement of aid agencies such as DFID and JICA. NGOs have the capacity to attract these aid agencies and at the same time aid agencies have also put trust in Non-Government organisations. While this might seem to be good, the trust put in the NGO than all the other stakeholders by the aid agencies is bound to affect the balance of the relationship in the partnership. Care International, seemingly has more influence in the scheme than all the other stakeholders. The residents on the other hand have always participated as beneficiaries. The most important difference, however, is their changing role to that of an active participant and influential stakeholder. The LWCC have always been involved in provision of water services and there involvement in the scheme expected.

6.3 THE ROLE OF EACH STAKEHOLDER IN THE SCHEME

Table 5.2, reveals the role of each stakeholder in the scheme. It is seen from the table that each stakeholder has brought into the partnership a resource of some sort. One notes that from the roles presented in the table, at least each project stage, from investment to operational stage has had the input of two or more stakeholders. There has been a sharing of responsibilities. It is noted that responsibilities previously left to the public sector such as funding of capital costs, management of operations, monitoring and supervision have now been taken over by other partners. It is evident that the water problem in this context is being solved by the co –operative efforts of these many institutions involved. The scheme's operation is like a reaction to Jackson's et al's (1999) call for rapid solutions to such problems based on resources and multiplicity of sectors and institutions. In this case, water infrastructure provision is no longer the domain of the public sector only.

On the other hand, though the residents of the community are taken as an influential stakeholder in this scheme, the real situation is such that only 40% of the population have ever participated in any of the schemes activities apart from paying user fees. In other words only 40% have contributed to the capital cost of the project through contribution of labour or plumbing skills and so on. It is clear that many other viewed this as an outside intervention and did not understand that they are key players in the scheme or some merely ignored the call for co-operation. This can affect the project performance and affect sustainability when community view the project as not theirs.

6.4 BENEFITS OF THE SCHEME TO THE COMMUNITY

It is evident from the findings that the scheme has presented the community with some significant benefits that can not be ignored.

Firstly, the construction of 25 water points, each with four (4) taps represents an increase in water equity for the community. In total a hundred water taps have been added to the existing few boreholes that previously benefited only 6.7% of the 25,000 Chobolya population. One notes that these 100 water taps now benefit about 93.3% of the population. In other words there is now increased access to tapped water services in the Chibolya community. However, despite this increase in access to water, the ratio of these taps to the population can not be said to be adequate, though the community indicated that water obtained from the points is adequate for their needs. A hundred water points means these is only a tap for every 250 people (1:250) and a tap for forty (40) households (1:40). Consequently there is great pressure exerted on these taps. Thus though there is increase in water points they are still not enough if people's needs are to be met without exerting great pressure on existing infrastructure. In addition, this service is still very far from the standard of other residential areas that either have yard taps or piped water inside their homes. While taking this in mind, this study recognises that for a people that almost had no access to water within their own area, the existence of these water points represents an extremely important development and therefore not surprising that the community finds water provision from this scheme very adequate.

Another benefit that arises from the findings of the study is that of affordable water tarriffs. The results have indicated that all respondents that obtain their water from these water points constructed by the scheme said the tariffs are affordable. One notable characteristic of the tarrifs system of the scheme is its flexibility in mode of payment. There are two modes of payment, as indicated in Table 5.4 which enable one to choose a mode convenient to him or her. While others prefer to pay K50 per 20 litre container on a daily basis some find the monthly mode of paying K3,500=00 per 6000 litres of water drawn monthly convenient. In real terms, however, it is cheaper to pay on a monthly basis. If one can draw 6000 litres of water monthly for a K3,500, then the same 20 litre container that cost K50 will cost K11.66. Thus it can be noted that a household consuming 100 litre per day in the K50/20L mode will pay K7,500 monthly while a household consuming double that amount of water per day (200L) pays K3,500 monthly in the other mode. Evidently the monthly mode of payment is four times cheaper than the other. However, some households are unable to raise K3.500 at any one time and prefer the other mode which allows them to buy water only when they have money.

Interestingly, when asked to compare these tarriffs to their previous sources of water only 34.78% consider this a cheaper source of water than the previous one. The majority perceive this tarriff as either the same or more expensive than previous sources for a number of reasons. Firstly, some residents obtained their water from free shallow wells prior to the scheme while others managed to obtain water from outside the community at the same K50 per 20 litre rate or even freely. Evidently, the tarriff system though affordable has not made much difference as people are still paying the same. However, had most analysed the advantages of the monthly mode of payment, they would find the scheme's tariffs very cheap. Infact the institutions involved in the scheme had proposed this mode of payment to apply for every member of the community as this was arrived at after assessing the community's willingness to pay and their poverty levels. In this mode of tarriff payment one sees the efforts of the partnership in responding to the needs of the community. This seems to agree with existing literature that partnerships between NGOs, CBOs and government respond more to the needs of the people (Gidman, 1995). On the other hand, though it is generally agreed in the existing literature that partnerships between NGOs and communities play an important role in awareness raising, it seems this awareness has not been carried out for the tarriff system. Only 40% of the beneficiaries use the monthly mode of payment an indication that the majority are not aware of its advantages or merely find the K50 per litre rate more convenient.

The distances covered by residents to water points is another significant factor when considering the benefits of the partnership to the scheme. Looking at the results, one notes that there is a great difference between distances to water points prior to the establishment of the scheme and the present situation. Walking distances to water points have been reduced by 1,595 m from an average 1,642 m to an average of 48m. The great distances to water points before the scheme were due to the fact that tap water points were outside the Chibolya community with some as far as 3 km away. Also because the old Chibolya taps were non – operational. The existence of the water taps in the community has now led to a reduction in these distances. The schemes documents indicate that the water points have been established after every 100 metres and this is also a contributing factor to distances reduction. Though the scheme's documents indicate that the water points are constructed after every 100 metres, it is evident that this has not been achieved. Since the area extent of Chibolya is 0.5 km^2 and there are only 25 water points, it implies that the water points could be only distributed a 200 m away from each other. Thus 25 more water points would be needed to achieve a 100 m distribution. However, despite this, the reduction in distances is a significant benefit to the community and has achieved a recommendation of the National Peri – urban water supply and strategy work group that argued for an achievement of a 200 metres average distance to water points in the peri – urban areas (GRZ, 2001). In this case the scheme has achieved a 48m average distance. Furthermore, this result in reduction in distance is similar to that of the Chipata Compound study where the partnership arrangement in water provision also resulted in reduction in walking distances to water points (Mwanamwambwa and Kangamba, 2001)

It is also worth noting that the reduction in distances has also led to reduction in time spent walking to water points and queuing for water. This then enables the women folk to concentrate on other activities. Besides distances, the fact that the scheme offers a regular supply of water for 10 hours every day also helps in time conservation and reduction in inconveniences. The results have also indicated that 60.87% consider this water clean and safe for drinking. This is also a significant benefit to the community as it will help in reduction of water - born diseases. Infact, on spot observation, proved that the water and the water points environment were clean and the RDC confirmed that the water was treated with chlorine. The water quality is also regularly monitored by the Lusaka Water and Sewerage Company. Previously, some people would utilise shallow wells which would be contaminated and flooded during the rain season as the area lacks surface drainage. The scheme, then, has provided the community safe water to control this situation and will help prevent water borne diseases in the area. The scheme's water comes from Boreholes sunk in the area.

6.5 PUBLIC SECTOR LIMITATIONS: SOLUTIONS

According to the results of the study, the major government limitations in providing water services to the Chibolya compound were: financial constraints; policy and legal limitations that prevented local authorities from providing water services to the country; technical and managerial limitation; lack of cost recovery mechanism and; finally lack of a proper sustainability approach. These limitations are not different from those pointed out in the literature of UNDP (2000) who points out that many municipalities face inadequate management and technical skills, insufficient government funds and others.

It is evident however, that these imitations are being addressed by this scheme. It can be seen that aid agencies have remedied the financial situation, while government itself enacted a water act in 1994 to enable many actors participate in service delivery (GRZ, 1994). This has paved way for such partnerships to emerge in peri-urban areas such as in Chibolya. From the results, it is evident that the lack of technical and managerial capacity of the water scheme has been addressed in two fold. Firstly Care International now provides the technical assistance, in addition to the assistance provided by the Lusaka City Council and Lusaka Water and Sewerage company. Secondly, the problem is solved by building the capacity of the RDC to manage the operations of the water points. This is employing the concept of community based ownership and management. Thus the community is not just a beneficiary but also a manager of the water resource, there by removing the burden from the public sector. In this way the scheme also solves the problem of sustainability as the community will be able to manage and sustain the operations of the scheme long after all these partners have with, drawn. Additionally the approach has brought in a sense of ownership to the community.

It can also be noted that the scheme also has a cost reduction and recovery mechanism lacking in the public sector. First, the tarriffs set in consideration of the community's ability and willingness to pay has ensured that all tarriffs are collected before services are rendered hence all revenue is collected without defaults. This revenue can help in meeting the recurrent costs and help achieve cost recovery. In addition to that the Lusaka City Council leases the schemes assets to the Chibolya community water trust under the trust deed laws of Zambia. Under this law, the scheme as a trust is not obliged to pay corporate taxes and thus will reduce costs for the scheme. At the same time the community through the water trust will have symbolic ownership. In addition, the scheme has put in place a firm financial management system. While revenue is collected by the water trust, the scheme's accounts are audited by the Lusaka city council and other external auditors. Thus one notes that through these measures the partnership has been addressing the problems faced by the public sector and have scored some success. In fact UNDP (2000) has argued that limited government abilities creates opportunities for using partnerships to optimise the available public and private resources.

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATION

7.1 INTRODUCTION

This chapter summarises the major findings of the study and provides recommendations based on the results of the study.

7.2 CONCLUSION

The results of this study have shown that the Chibolya community water scheme has to some extent benefited the Chibolya community. The benefits have been in the form of increased access to tapped, clean and safe drinking water, reduced distances to water points from their homes and cheap tarriffs. The scheme also provides regular water supply though for only ten hours a day from 07.00 hours to 17.00 hours. However, the water points are still inadequate as the ratio of people per public stand pipe is still high and thus exerting pressure on existing infrastructure.

The scheme has also offered a solution to some of the problems faced by government in providing water services to peri – urban communities. This is due to the participation of many stakeholders in the partnership scheme. These include Care International, DFID, JICA, the Lusaka City Council and the community itself. Thus, for example, the scheme has solved the problem of financial limitations as funds were provided by DFID and JICA while community also contributed to the capital costs. Furthermore, technical and managerial limitations have been addressed through the use of the community Based Management with technical assistance coming from both Care International and Lusaka City Council. Additionally the scheme has established a firm financial system and cost effective Mechanism. With a passage of time, it would be interesting to note how sustainable the scheme's approach has been.

Looking at the results, this study concludes that the objectives of the investigation have been achieved as the results show what role a multi - stakeholder partnership can play in providing per - urban water services.

7.3 RECOMMENDATIONS

Based on the findings, this report makes the following recommendations.

(a) The results show that, while the community is considered a major stakeholder, only 40 percent participated in the schemes' activities. This study suggests that there should be adequate awareness campaigns to encourage and mobilise community members to participate in the scheme's activities. Wide community participation brings a sense of ownership to the residents and increases capital contributions to the projects.

(b) The concept of community Based Management is still a new concept in provision of water services. In order for this to be successful, the community must have the necessary human resources and must understand its options and resources and be willing to take responsibility. Therefore this study suggests that the partnership must strive to empower the Area Based Organisation with the necessary skills and organisation to take charge in the operation and maintenance of their water facilities.

(c) This study also recommends that incentives for personnel in the scheme such as the water manager and tap attendants must be increased to motivate them and ensure efficient performance.

(d) The study also recommends that the withdrawal of other stakeholders inorder to leave the scheme totally in the control of the community must be done gradually. Community management is not an ad hoc solution, it is a gradual process of learning where the local community gradually assumes responsibility. Thus, the other partners must be there to facilitate this transition.

(e) Lastly, the study suggests that the partnership must consider constructing more water points in order to reduce pressure on the existing ones. The current number of water points can not contain the pressure exerted on them for a long time and this might render sustainability as merely a pipe dream as the infrastructure might not last long.

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APPENDIX 1

THE UNIVERSITY OF ZAMBIA

QUESTIONAIRE ON THE ROLE OF MULTI - STAKEHOLDER PARTNERSHIPS IN THE DELIVERY OF PERI - URBAN WATER SERVICES

Dear respondent,

I am a 4th year student of Geography at the University of Zambia carrying out research on the Role of Mult - stakeholder Partnerships in the delivery of Peri - urban water infrastructure and services. You have been randomly selected to participate in the it's research as a respondent. You are required to fill in the Questionnaire, and for academic purpose only and will be treated to the strictest confidence.

1.0 PERSONAL DETAILS

1.1 AGE : ....

1.2 SEX; M ☐ F ☐

1.3 EDUCATION LEVEL (state grade reached)

....

1.4 House Hold Size: ....

2.0 CHIBOLYA WATER SCHEME STAKEHOLDERS AND THEIR ROLE

2.1 Are you a member of the Chibolya Residents development Committee Association

Yes ☐ No ☐

2.2 Do you ever, participate in any activity involving the operations of water points in the Chibolya water scheme.

Yes ☐ No ☐

2.3 If No proceed to Question 3.1, if yes what role have you played in the water scheme

....

....

....

2.4 What other roles are you expected to play as a resident of Chibolya?

....

....

....

2.5 Which organisations/institutions have you been working in co-operation with in the water schemes? (name them)

....

....

....

2.6 What role have the organisations mentioned in Q 2.4 7 played in the water scheme?

....

....

....

3.0 BENEFITS OF THE SCHEME

3.1.1 What type of water points have been constructed by the Chibolya water scheme?

Bore holes ☐ Communal stand pipes ☐

Yard taps ☐ Any other (specify) ☐

3.1.2 Do you set your water from the points constructed by the scheme/ (ie from water point you have indicated in Q 3.1)

Yes ☐ No ☐

3.1.3 If No proceed to question 3.5, if ~~no~~ yes, what is the source of your water?

....

....

....

3.1.4 Who provides that water?

....

....

....

3.1.5 What is the approximate distance of your source of water from your home?

....

....

....

3.1.6 On average, what is your consumption of water per day? (In litre) ....

3.1.7 Does your source of water adequately provide the quantity of water you have indicated in Q 3.6."

Yes ☐ No ☐

3.2.1 Do you pay for the water services

Yes ☐ No ☐