

IMPACT OF URBANISATION
ON MUNICIPAL SERVICES DELIVERY
WITH PARTICULAR EMPHASIS ON
THE PROVISION OF WATER
IN THE DURBAN METROPOLITAN AREA

BY

PREGALA PILLAY

THESIS

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PROMOTER: DR S MOODLEY

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✓

DEDICATION

TO MY LATE DAD

MR MOONSAMY PILLAY

WITH LOVE

*Thank you for instilling
in me the value of education.*

*May the Lord grant you
eternal peace in the knowledge
that this study was not in vain...
until we meet again.*



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Durban, 2000

ABSTRACT

The main aim of this thesis was to explore the impact of urbanisation on the provision of water to the people of the Durban Metropolitan Area.

The literature study revealed that urbanisation is proceeding rapidly and that the urban population in Durban will continue to grow and expand. Employment opportunities and enhanced service delivery in urban areas were two of the primary factors that attracted people to the city centres.

The provision of water was identified as a growing priority in the new South Africa. It was found that whilst the privileged minority enjoyed first world lifestyles, the majority of people were poverty stricken and had little or no access to basic services.

The literature as it exists reflects that local government is entrusted with a mammoth and crucial task in enhancing sustainable service delivery at affordable prices to impoverished communities. In light thereof, local government required a concerted strategy to address urban needs if it is to respond more effectively to its clientele and to the effects of urbanisation in the new millennium.

The empirical study included the use of questionnaires to:

- managers at the Urban Strategy Unit;
- managers at Durban Metro Water Services; and
- two hundred subjects randomly selected from the Inanda/ Phoenix, Cato Crest / Cato Manor, Clare Estate / Reservoir Hills and Umlazi informal settlements.

The data was analysed using both descriptive and inferential statistics.

The findings illustrates that an increase in urbanisation patterns has caused a decline in job opportunities and has added pressure to the local government infrastructure.

The data revealed that the major obstacles to water delivery was accelerated urbanisation, lack of finance, high construction costs, high population growth rates, shortage of skilled labour, violence and crime and inadequate community participation.

The empirical study revealed that people of all ages resided in the informal settlements. The majority of people were unemployed, generally had access to primary or secondary education and occupied menial jobs which were poorly remunerated.

There is a need to create a National Commission on Urbanisation Development which can serve as an advisory body to government. This provision is universally recommended by urban geographers and government officials.

This study calls for central government to play a more meaningful role in service delivery by strengthening the authority of local governments to raise adequate revenues to meet rising urban service needs. Central government must also provide technical assistance and training to local officials in improving tax administration, collection procedures and increasing revenues from existing and new sources.

Local authorities need to improve their own performance in service delivery. This can be achieved if it has the capacity to act effectively and efficiently. Administrative structures and practices should be designed according to the services to be provided and the policies to be implemented.

Furthermore, private sector involvement is crucial to ensure the provision of water to people, especially in impoverished areas.

DECLARATION

I hereby declare that except where acknowledged, this research is, in entirety, my own work, that all sources used or quoted have been acknowledged and that this thesis has not been previously submitted for a degree or diploma at another tertiary educational institution.



PREGALA PILLAY

JANUARY 2000

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CHAPTER ONE

DEMARCATIION OF THE STUDY FIELD AND RESEARCH METHODOLOGY

1.1 INTRODUCTION

The process of accelerating urbanisation is taking place in countries with the lowest levels of: education, economic development, life expectancy at birth, energy consumption levels and the poorest nutritional levels.

There is a dramatic shift in the incidence of poverty. For much of this century, the majority of the poor have been found in rural areas; by the year 2000, the majority of the poorest households would be concentrated in urban areas.

The large and rapid influx of people to urban areas in developing countries, has not only created new demands for urban social services, such as health and education, but has also placed greater strains on physical infrastructure, including housing, water and sanitation facilities, electricity and transportation systems.

South Africa is a land of diverse cultures with both first and third world characteristics. The majority of its people had been denied political power and participation in government at all levels. Today, a new era unfolds and the process of reconstruction, development, transformation and change has begun.

In general, the Government of National Unity has a monumental task ahead of it to redress the unequal distribution of basic services. In particular, the provision of basic water supply and sanitation is a growing priority.

This research focuses on the impact of urbanisation on service delivery with particular emphasis on the provision of water in the Durban Metropolitan Area (DMA).

1.2 BACKGROUND OF THE STUDY

The legacy of apartheid in South Africa impacted on every sphere of life. Government structures that were created provided impetus to the policy of separate development. Local authorities that were formed, were designed to implement local apartheid. Preferential treatment was accorded to the minority, whilst the majority of people lived under the most marginal conditions. Whereas in some areas service delivery was effective and efficient, other

areas were marked by poor access to services, insufficient financial resources and weak administrative structures. It is these areas that have the largest, poorest and predominantly African sectors of the population.

The demand for urban services such as water will continue to expand at a rapid pace owing to accelerating urbanisation. Urban reconstruction and development is seen as the highest development priority of the Government of National Unity (GNU).

The central or national government's capacity to meet this growing need for urban services is limited by the lack of financial and human resources. Therefore the commitment to cope with problems of inadequate distribution and inequitable access to services is poor.

Regional or provincial governments serves as a link between central and municipal government. Regional governments need to guide and support local government to ensure that the highest standards of public service and good government are maintained.

Municipal or local governments, often, have neither the financial resources nor the administrative capacity to extend services rapidly to the poorest neighbourhoods.

Increasing the access to urban services is likely to become a crucial problem by the start of the millennium and its solutions will require a combination of innovative and creative approaches.

1.3 NEED FOR THE STUDY

The research study is necessary for the following main reasons viz. :

- In the Durban Metropolitan Area, considerable backlogs exist within the ambit of basic needs which is part of a broader development process, integrally linked to the Reconstruction and Development Programme (RDP). The delivery of primary elements such as water, is essential to improve the quality of life of the majority of disadvantaged people;
- Local government has a moral obligation to involve members of the informal settlements in development projects and programmes irrespective of their socio-economic status. These communities will provide valuable information to local government regarding the quality and quantity of service delivery. Many of them, demonstrate remarkable vigour and ingenuity in improving their living standards;

- The study reflects on international lessons, (both positive and negative), in addressing urban growth and development in South Africa; and
- Cities are becoming engines of growth and important centres of production and employment in developing countries. New approaches to urban planning is required in order to achieve successful economic development.

In view of the aforementioned, the study is of paramount importance to all stakeholders involved in local government politics and administration.

1.4 OBJECTIVES OF THE STUDY

The central objectives of the research study are to:

- provide an historical and current overview of urbanisation in the Durban Metropolitan Area;
- identify the main problems currently facing urban development and to devise an urbanisation policy for the Durban Metropolitan Area;
- identify the main problems facing local authorities in delivering basic services, especially water to the community;

- evaluate the lack of water services in urban areas and the effects it has on the quality of life; and
- finally, to draw conclusions and make recommendations in the field of study researched.

1.5 RESEARCH METHODOLOGY

In keeping with the objectives outlined in the study, the research methodology consisted of the following aspects:

1.5.1 Theory search and research model construction

A literary study of available texts comprising national and international books, journals, dissertations, acts, legislation proposals, departmental rules and regulations, research reports and newspaper articles were undertaken.

1.5.2 Empirical surveys

Several surveys were conducted by distributing questionnaires to high ranking officials in the following departments:

- * Durban Metro Water Services; and
- * Urban Strategy Unit.

The questionnaires were designed to ascertain urbanisation patterns and the nature and extent of water delivery in the Durban Metropolitan Area.

In addition, questionnaires were distributed to members of selected informal settlements in the Durban Metropolitan Area viz. :

- * Cato Crest / Cato Manor;
- * Inanda / Phoenix;
- * Clare Estate / Reservoir Hills; and
- * Umlazi.

These questionnaires were designed to ascertain the perceptions in relation to the efficiency and effectiveness of service delivery.

1.5.3 Data Interpretation

The data interpretation determined values pertaining to the established criteria which emerged from the surveys, and transferring the coded data onto a computer data base.

1.6 RESEARCH AIMS

The research intends to answer the following questions:

- What does the term "urbanisation" mean in the South African context ?
- How does the provision of water improve the quality of life of the community ?
- Is it possible for a local authority to finance basic services such as water provision with a culture of non-payment for the service ?
- Can a local authority fund the provision of water to the magnitude that is required without the assistance of other spheres of government ?
- What role can the private sector play in providing water to the people ?
- Should privatisation be encouraged as a development strategy to alleviate the water shortages ?

- How does the Reconstruction and Development Programme (RDP) influence the provision of water to disadvantaged people at the local authority sphere?

1.7 LIMITATIONS OF THE STUDY

It is accepted, that in a research undertaking of this magnitude, there will always be limitations. The following constitute the main shortcomings of the empirical survey:

- Complaints were voiced by the members of the informal settlements that they were constantly inundated and bombarded with questionnaires throughout the year. Some respondents refused to co-operate citing reasons, such as their plight to a better life has not been addressed and their input was of little significance.
- Other respondents were hesitant to answer the questionnaires in light of the political rivalry between the Inkatha Freedom Party and the African National Congress and feared for their safety.
- A limited number of high ranking officials responded to the questionnaires. They cited reasons, such as work pressure and commitment which prevented them from providing detailed and adequate information. Moreover, they stated that research students consume much of their

work time and this impacts negatively on their duties. In light thereof, it was difficult to use statistical analysis to interpret the data.

- The data obtained from some of the returned questionnaires were inadequate, incomplete and poorly answered.

- Owing to the language barrier, the researcher was not able to administer the questionnaires personally to the members of the informal settlements. This problem was resolved as the questionnaires were administered by field research assistants versed in English and Zulu.

1.8 OVERVIEW OF CHAPTERS

The chapters in this study are organised as follows:

CHAPTER ONE - DEMARCATION OF STUDY FIELD AND RESEARCH METHODOLOGY

This chapter demarcates the field of study, and outlines the research approach. It includes the formulation of the research objectives and study goals, as well as an overview of the proposed study.

CHAPTER TWO - LOCAL GOVERNMENT : A CONCEPTUAL FRAMEWORK

This chapter reviews the role of local government in a post-apartheid South Africa and examines its capacity to provide essential services.

CHAPTER THREE - URBANISATION : A COMPARATIVE STUDY

This chapter examines the path of urbanisation in the developing world and highlights the incidence of poverty amongst the poorer segments of the urban population. It includes an important discussion on service delivery and an international perspective of urban management.

CHAPTER FOUR - WATER PROVISION : CRITICAL ISSUES

This chapter focuses on the importance of water in daily life and highlights the gross inequalities in service delivery in South African society. The institutional and legislative framework is discussed against the backdrop of the social, political and economic constraints.

CHAPTER FIVE - PRIVATE SECTOR PARTICIPATION IN WATER PROVISION

This chapter describes the role of the private sector in providing water to the local people. International trends

and challenges of privatisation are cited in the literature and guiding principles and lessons for South Africa are emphasised.

CHAPTER SIX - RESEARCH METHODOLOGY

This chapter discusses the research design, the methodology used and the different types of statistical analyses.

CHAPTER SEVEN - PRESENTATION AND ANALYSES OF RESULTS

This chapter renders an exposition of the presentation and analyses of results using appropriate statistical tests.

CHAPTER EIGHT - CONCLUSION AND RECOMMENDATIONS

This chapter contains general conclusions and recommendations arising from the empirical research.

1.9 DEFINITION AND TERMINOLOGY

It is important for the purposes of this discussion to provide definitions of significant concepts to clarify their usage.

1.9.1 PUBLIC ADMINISTRATION

Corson & Harris (1963 : 12) are of the opinion that,

Public administration is ... formulating objectives and goals, working with the legislature, ... establishing and revising organisation, directing and supervising employees ..., determining work methods and procedures ... and exercising controls. It is the action part of government, the means by which the purposes and goals of government are realised.

Public administration is multi-disciplinary in nature. It consists of numerous activities, processes or functions performed by public officials to promote the welfare of the community.

1.9.2 URBAN

According to The Oxford English Dictionary (1989 : 331) urban pertains to or is characteristic of, a city or town.

Webster Comprehensive Dictionary Encyclopedic Edition (1992 : 1380) defines urban, as pertaining to, characteristic of, including, or constituting a city, or dwelling in a city.

The word "urban" relates to a mode of living in a city as opposed to a rural area.

1.9.3 URBANISATION

Urbanisation is a process of population concentration (Berry 1981 : 27):

It proceeds in two ways: the multiplication of the points of concentration and the increasing in size of individual concentrations ... Just as long as cities grow in size or multiply in number, urbanisation is taking place. ... Urbanisation is a process of becoming. It implies a movement ... from a state of less concentration to a state of more concentration.

Urbanisation is understood primarily as population movement towards densely populated and non-agricultural settlements governed by some urban structure and administration.

1.9.4 WATER

Water according to the Oxford English Dictionary (1989 : 975) is the liquid of which seas, lakes, and rivers are composed, and which falls as rain and issues from springs. When pure, it is transparent, colourless, tasteless and inodorous.

The focus of discussion would be on piped water provided to the local community by the local authority for various functions, for example, washing, cooking, bathing and drinking.

1.9.5 LOCAL GOVERNMENT

Meyer (1978 : 10) defines local government as:

... local democratic units within the unitary democratic system, ... which are subordinate members of the government vested with prescribed, controlled governmental powers and sources of income to render specific local services and to develop, control and regulate the geographic, social and economic development of defined local areas.

Local government is that sphere of government closest to the people, entrusted with the responsibility of rendering basic services such as water, electricity, transport and health for the benefit of the community.

1.9.6 MUNICIPAL GOVERNMENT

To clearly understand the term municipal government, one has to analyse the word "municipal".

Craythorne (1990 : 53) notes that the word municipal means relating to a town or city and has its roots in the Latin word *municipium*, referring to a town in Italy, the inhabitants of which had Roman citizenship but were governed by their own magistrates and laws i.e. a free town.

Today, a municipality is a defined geographical area which has a governing body created and vested with authority and power and is a term often used to cover cities, boroughs, towns and villages (Collier's Encyclopedia 1973 : 703).

Vosloo, Kotze & Jeppe (1974 : 10) stress that municipal government is generally used to refer to a decentralised representative institution with powers that have been devolved upon it and delegated to it by the central or regional authority and for which it is responsible to exercise within a demarcated geographical area in the state.

In this study, the term "local" and "municipal" are often used interchangeably.

1.9.7 LOCAL AUTHORITY

According to Speed (1971 : 1) local authorities are statutory bodies which are the constituent parts of local government which derive their power from a higher source and are bound by the terms and conditions upon which they

are created.

Local authorities generally have the following common characteristics (Speed 1971 : 1):

- are created by statutes;
- have localised governing powers;
- have the power to tax by levying rates on immovable property;
- are charged with certain duties for the protection of public health;
- are road making authorities; and
- may render certain services to the public and levy charges for them.

The primary function of local authorities is to make the areas they administer, desirable places to live in.

1.9.8 METROPOLIS AND METROPOLITAN AREA

The terms metropolis and metropolitan area, commonly refer to a major city together with its suburbs and the nearby cities, towns and the countryside over which the city exercises commanding influence. Literally construed a metropolis or a metropolitan area refers to the central or dominant city of an urban conglomeration of several

municipalities and other urban units (Gildenhuis, Fox & Wissink 1991 : 87).

1.9.9 CITY

The Webster Comprehensive Dictionary Encyclopedic Edition (1992 : 242) describes city, as a place inhabited by a large, permanent, organised community.

1.9.10 DURBAN METROPOLITAN AREA (DMA)

The Durban Metropolitan Area extends from Kingsburgh in the south to Hambanati in the north and to Cato Ridge in the west.

The Durban Metropolitan area encompasses the following local council areas:

- North;
- North Central;
- South;
- South Central;
- Inner West; and
- Outer West.

The boundaries of the Durban Metropolitan Area are depicted in the maps provided below:

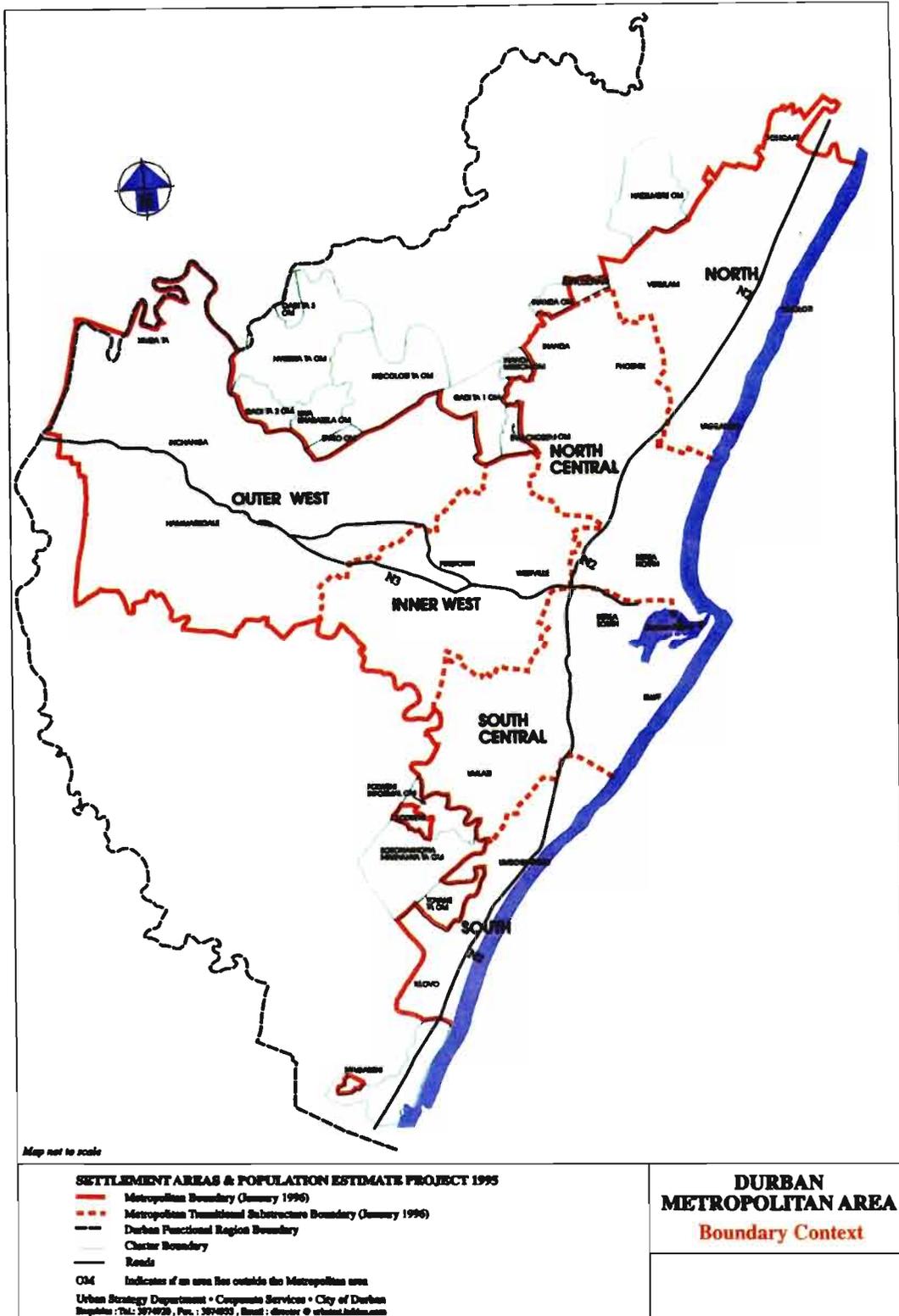
Map 1.1 depicts the Durban Metropolitan Area - Boundary Context (see page 20);

Map 1.2 depicts the Durban Metropolitan Area - Spatial Clustering (see page 21);

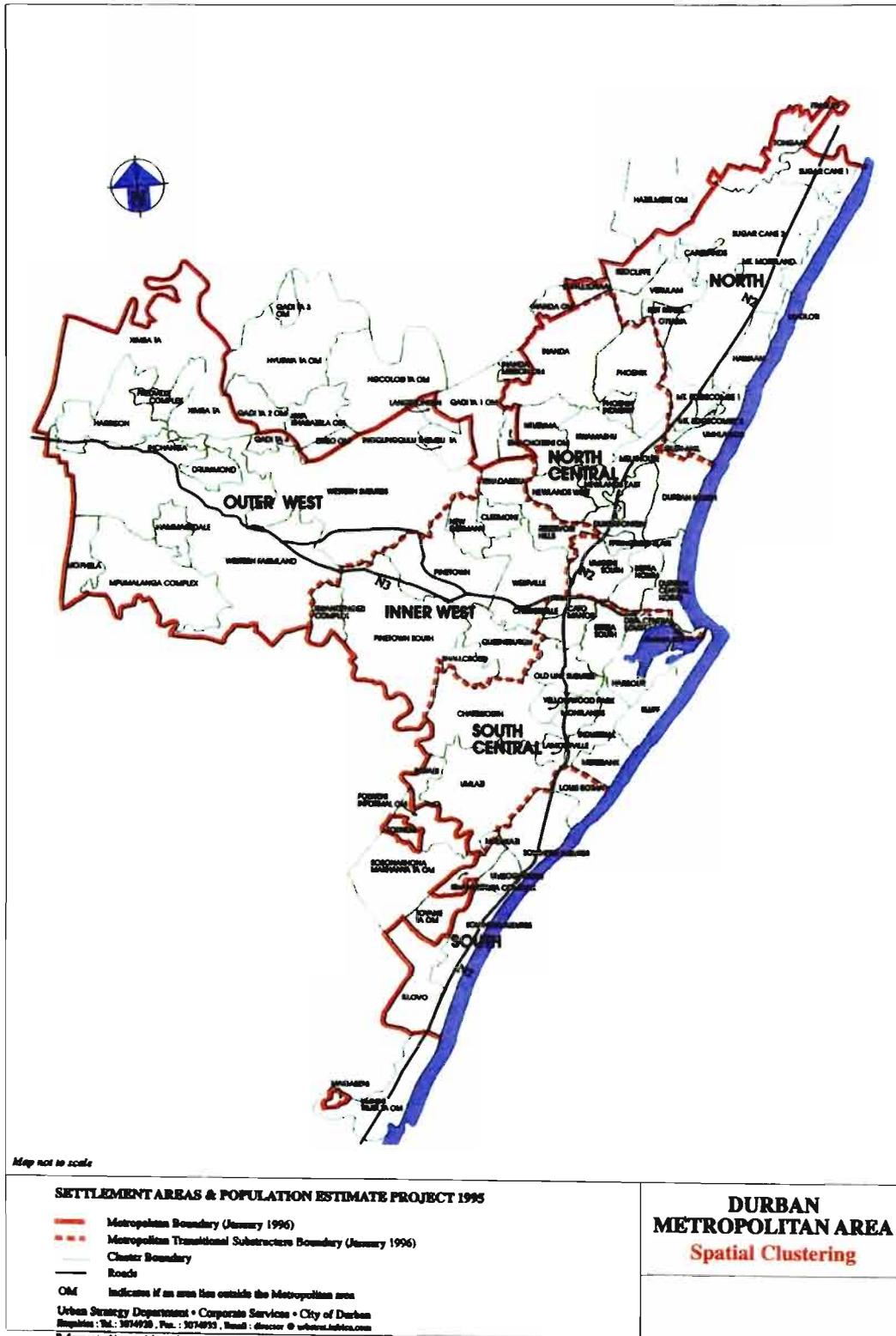
Map 1.3 depicts the Durban Metropolitan Area - Dwelling Types (see page 22); and

Map 1.4 depicts the Durban Metropolitan Area - Areas of Greatest Need (see page 23).

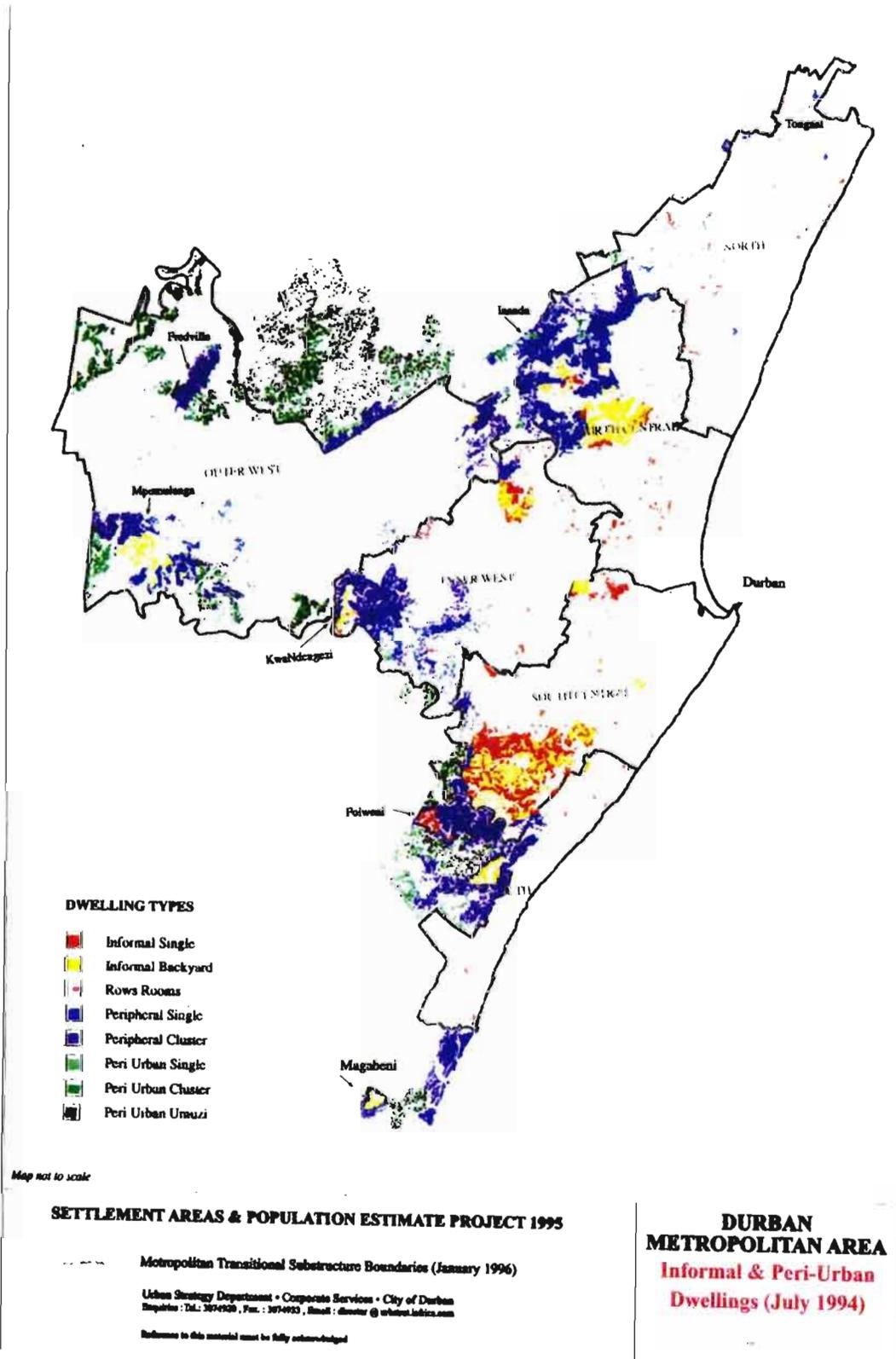
MAP 1.1 DEPICTING THE DURBAN METROPOLITAN AREA - BOUNDARY CONTEXT



MAP 1.2 DEPICTING THE DURBAN METROPOLITAN AREA - SPATIAL CLUSTERING

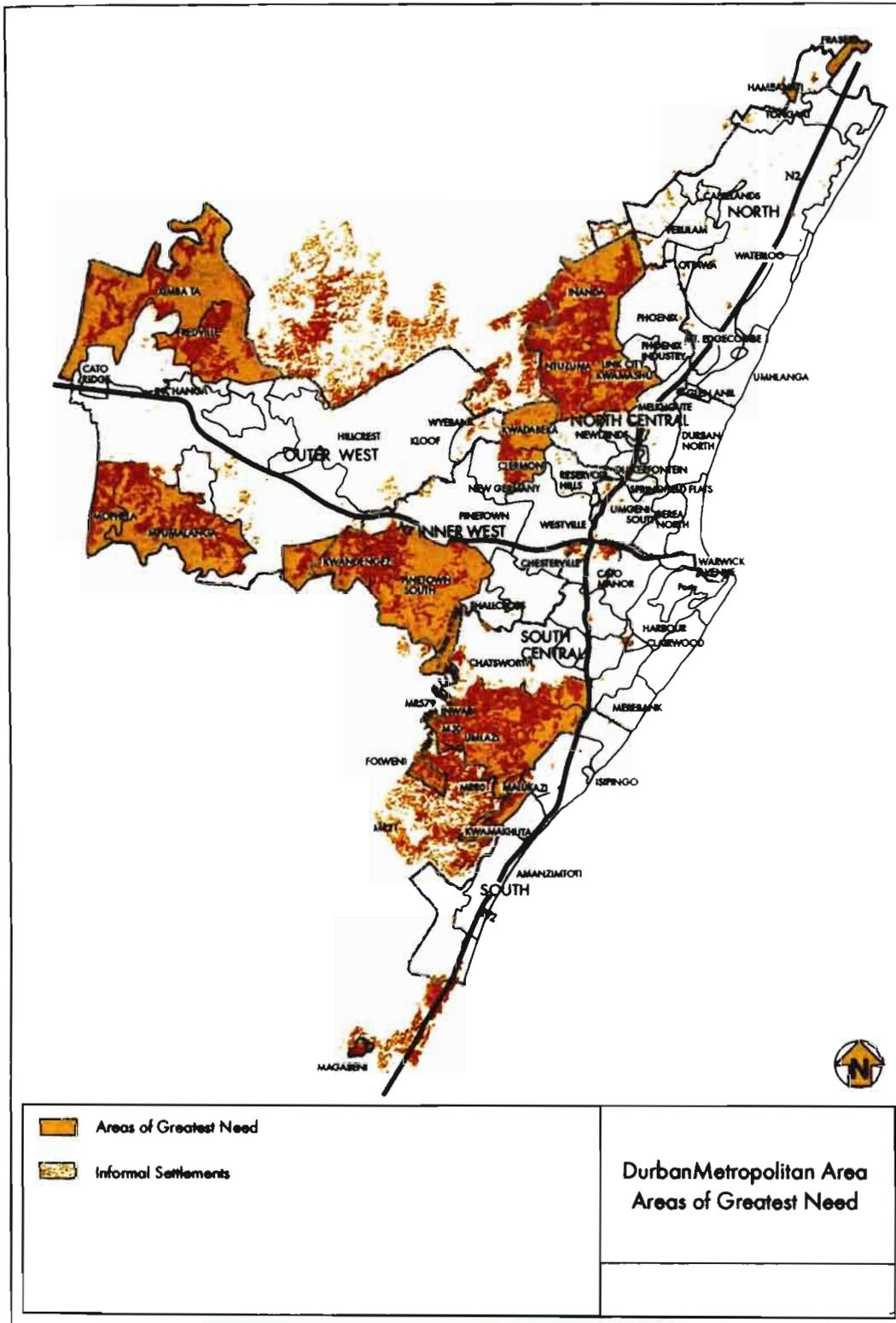


MAP 1.3 DEPICTING THE DURBAN METROPOLITAN AREA - DWELLING TYPES



MAP 1.4 DEPICTING THE DURBAN METROPOLITAN AREA -

AREAS OF GREATEST NEED



1.9.11 RACIAL CATEGORISATION

The use of racial categories in this research is unavoidable when describing government structures and policies in South Africa especially during the apartheid and post-apartheid era.

According to Census in Brief (1996), South Africa is made up of 4 main race groups viz.

* African * Indian * Coloured * White.

"Black" people would encompass the historically disadvantaged communities viz. African, Indian and Coloured.

"White" people would represent all Afrikaans and English speaking Europeans.

CHAPTER TWO

LOCAL GOVERNMENT : A CONCEPTUAL FRAMEWORK

For the vast majority, the idea of a country derives its deepest roots from the local community, because it is there that the benefits of a social order, with its indispensable requirements, and often indeed its damaging errors and shortcomings to be avoided, are experienced in practice. Moreover, in the matter of civic education, the municipalities have performed in the past and still perform a role of first importance.

(Pope 1979, Council of Europe)

2.1 INTRODUCTION

In terms of section 40 of the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996), three spheres of government are provided for, viz. :

- Central or national;
- Provincial or regional; and
- Local or municipal.

The provision of public services is directed through the three spheres of government. The activity or process of implementing government policies with the explicit intention of improving the quality of life of the citizenry is called public administration. Increasingly, it is also referred to as public management. In South Africa, the perception which has been popularised is that public management is a part of public administration.

Public administration comprises numerous sub-fields. Municipal administration, which is one such field, is specifically concerned with the administration of municipal affairs by municipal officials at the local government sphere.

Municipal administration, like public administration, is also a comprehensive field of activity which comprises several sub-fields. Municipal service delivery which is one such aspect is mainly concerned with the provision of services such as water, housing, health, transport and electricity.

It follows, that, municipal administration is part of the greater field of activity known as public administration.

Therefore, the theories and guidelines of public administration will also apply to municipal administration and municipal services delivery.

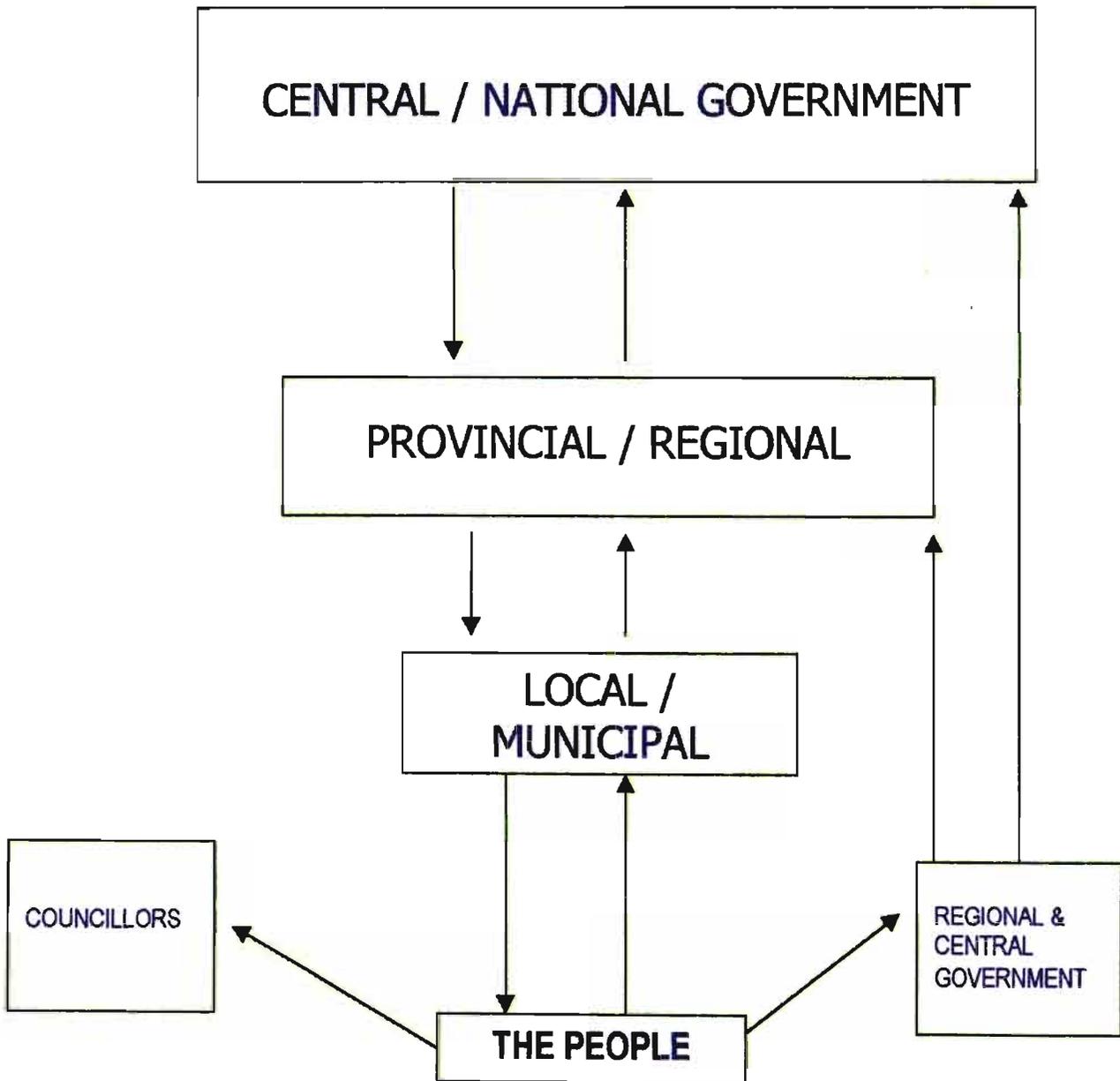
In this chapter, an attempt is made to highlight the principles of co-operative government. The role of local government, as a direct provider of services and its ability to meet the challenges of accelerating urbanisation is examined.

2.2 CO-OPERATIVE GOVERNMENT

According to the White Paper on Local Government (1998 : 40 - 41), all spheres of government must co-operate with one another in mutual trust and good faith through fostering friendly relations. The three spheres of government are distinctive, interdependent and interrelated.

Figure 2.1 graphically depicts this relationship.

FIGURE 2.1 DEPICTING SPHERES OF GOVERNMENT



The Daily News, 22 July 1994

A synopsis of intergovernmental relations follows.

2.2.1 NATIONAL GOVERNMENT

National government is responsible for setting the overall strategic framework for the economic and social development of the nation, and for all spheres of government. It ensures that local government operates within an enabling framework and is structured in such a way that enables it to promote the development of citizens, local communities and the nation (section 41 of the Constitution of the Republic of South Africa, 1996; du Toit & van der Waldt 1997 : 207; White Paper on Local Government 1998 : 39).

2.2.2 REGIONAL GOVERNMENT

Regional government establishes municipalities and is entrusted with promoting the development of local government capacity to enable municipalities to perform their functions and manage their own affairs. Regional government has a key role in monitoring local government in order to ensure that high standards of public service and good government are maintained (section 139 of the Constitution of the Republic of South Africa, 1996; White Paper on Local Government 1998 : 41).

2.2.3 LOCAL GOVERNMENT

Local government plays a major role in facilitating and promoting the following three important values which nurture democracies (Bekker & Jeffery 1989: 1):

- Liberty

as local government is a vehicle for dispersing political power and catering for local variations;

- Partnership

as local government extends choice and individual involvement in the democratic process; and

- Efficiency

as local government, with its greater sensitivity to local conditions - enables the matching of services to the needs and wishes of local communities.

Local government is that sphere of government deliberately created to bring government to the grass roots (Reddy 1996 : 3). National government is increasingly looking to local government as a logical point of co-ordination and the necessary vehicle for the implementation of policies and programmes. Provincial governments are also decentralising certain functions to local government. At the same time, local government is constitutionally obliged to participate

in national and provincial development programmes (section 154 of the Constitution of the Republic of South Africa, 1996; Cloete 1998 : 34 - 37).

It can, therefore, be deduced that the central, provincial and local spheres of government need to work together in harmony in order to achieve public goals successfully.

2.3 DISTINCTIVENESS OF PUBLIC ADMINISTRATION

Public administration is a distinct field of activity and as such, is part of the political life of society (Cloete 1998 : 91). It is imperative that a definition of public administration be provided for clarification.

2.3.1 DEFINITION OF PUBLIC ADMINISTRATION

van der Waldt & Du Toit (1997 : 13) write that,

... public administration is concerned with handling public matters and the management of public institutions in such a way that resources are used efficiently to promote the general welfare of the public.

It can be deduced, that public administration involves a holistic approach to the delivery of goods and services for the benefit of the community it serves.

2.3.2 PUBLIC ADMINISTRATION APPROACHES

For the purposes of this discussion, two specific approaches of public administration are explained, viz. :

- the traditional approach advocated by Cloete (1981 : 2 - 4); and
- the innovative approach advocated by Fox, Schwella and Wissink (1991 : 2).

2.3.2.1 TRADITIONAL APPROACH

Cloete (1981 : 4) asserts that:

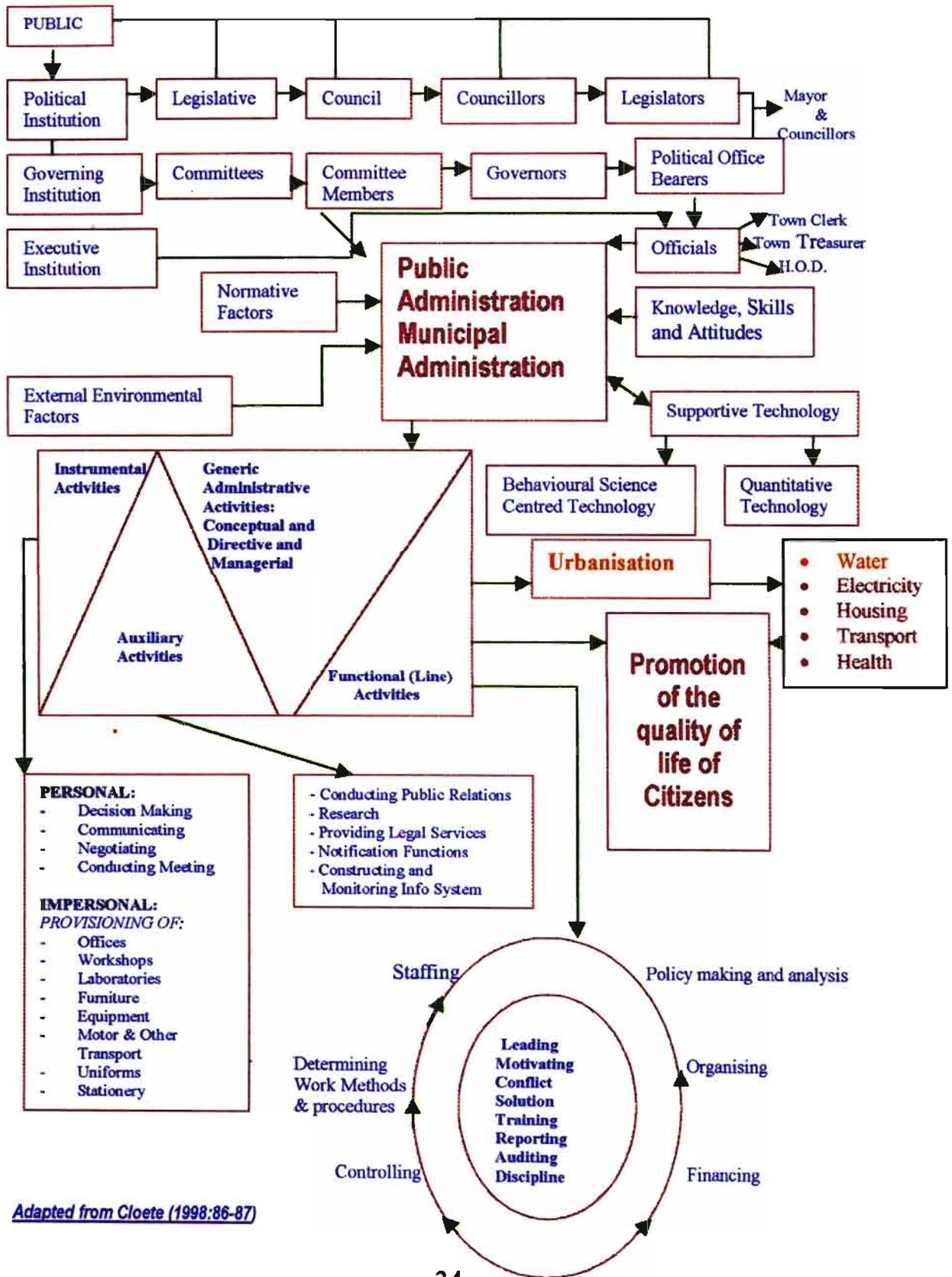
public administration refers to the administrative processes which must be carried out and which are inextricably linked with the functional activities of the various public institutions, namely policy making, organisation, financing, staffing, the development of work procedure and the exercising of control.

According to Cloete (1998 : 85 - 87) public administration comprise the following aspects:

- generic administrative and managerial;
- auxiliary;
- instrumental; and
- functional (line) activities

which are performed by public functionaries in public institutions to achieve institutional goals and to ensure the improved quality of life of the citizenry. These aspects which are illustrated in Figure 2.2 shall be discussed.

FIGURE 2.2 MODEL OF PUBLIC ADMINISTRATION



Adapted from Cloete (1998:86-87)

(Cloete 1998 : 86 - 87) asserts that the generic public administration approach has two dimensions, viz. :

(i) Conceptual and Directive Dimensions

The conceptual and directive functions consists of:

- policy-making and analysis;
- organising;
- financing;
- staffing;
- determining procedures; and
- exercising control.

(ii) Delivery Functions

A synopsis of these processes are presented below:

- POLICY IMPLEMENTATION

Policy implementation involves, inter alia., the following:

- Setting missions/objectives/goals;
- Planning, programming, marketing missions / objectives / goals; and
- Identifying and reporting shortcomings.

- ORGANISING

Owing to the magnitude and complexity of government activities, it is necessary to group individuals into a team to realise the same goals (Botes 1994 : 28). Organising generally refers to delegation, co-ordination and effective lines of communication.

- STAFFING

These processes relate specifically to the following (Cloete 1998 : 86 - 87):

- Leading, motivating, training, merit rating; and
- Maintaining discipline, counselling, reporting on personnel systems and individuals.

- FINANCING

According to Cloete (1989 : 127) the process of financing in municipal administration entails numerous activities, such as:

- Preparation of draft estimates of income and expenditure;
- costing / cost-benefit analysis;
- accounting; auditing; and reporting.

- DETERMINING WORK METHODS AND PROCEDURES

Specific work methods and procedures will result in efficient work performance and that work will be done in the shortest time, using the minimum amount of labour and at the lowest cost (Cloete 1981 : 70 - 73).

- CONTROLLING

The process of control in municipal administration entails numerous activities, inter alia,

- applying standards prescribed;
- checking on quantity and quality of products;
- internal auditing; and
- reporting (feedback).

- AUXILIARY FUNCTIONS AND INSTRUMENTAL ACTIVITIES

These are enabling functions which help or aid in the provision of the necessary support services to local authorities so that they may render improved and efficient services to the community (Cloete 1986 : 2). Within this group are included, inter alia, the following types of activities (Cloete 1990 : 50) the following:

- research;
- conducting public relations;
- providing legal services;
- notification functions;
- constructing and maintaining information systems - data collection, processing and retrieval.

It is necessary that continuous research on the nature, scale and pace of urbanisation is undertaken so that the local authorities can provide adequate levels of service to urban areas. It is, therefore, vital to collect data and have statistics readily available to match service delivery with urbanisation patterns.

The instrumental activities may be regarded as tangential because they are performed in conjunction with both the administrative and functional activities (Cloete 1991 : 223).

Personal: decision-making, communicating, conducting meetings and negotiating.

Impersonal: provision of :

- offices;
- workshops;
- laboratories;
- furniture;

- equipment;
- motor and other transport;
- uniforms; and
- stationery.

- FUNCTIONAL OR LINE ACTIVITIES

The functional activities undertaken by municipal institutions are determined by the physical and social conditions prevailing in the municipality and the local community, as well as the ideologies of the functionaries who are in power in the legislative and governmental institutions. Examples of functional/line activities are (Cloete 1988 : 86 - 87):

- building roads;
- nursing patients;
- urbanisation;
- providing health services;
- water and sanitation;
- electricity;
- transporting goods;
- education;
- foreign affairs;
- environmental conservation; and
- library services.

The generic administrative/managerial, functional (line) and auxiliary (instrumental) functions are necessary to achieve the goals of a local authority, viz. meeting urban needs and the efficient and effective rendering of goods and services such as water for the promotion of community welfare.

- CRITICISMS OF CLOETE'S APPROACH

Cloete's administrative process model still has a very strong influence on the theory and practice of public administration in South Africa today. However, there have been several criticisms of Cloete's approach. Schwella (1992 : 4 - 11) discusses these in terms of reductionism, reification and relevance.

- Reductionism

One criticism is that the generic administrative process model reduces the complex phenomenon of public administration to the administrative process by equating public administration to the administrative process. The administrative process is then further reduced to the six generic functions of policy-making, organising, financing, staffing, determining work methods and procedures, and control. The logical consequence of this is that public administration is reduced to these six administrative functions (Schwella 1992 : 4 - 11).

- Reification

This occurs when intellectual or abstract ideas are confused with reality. Many public administration academics were exposed to the regulating practices of government when they worked as public officials themselves. As a result, practices in the South African civil services were reified to the status of theory in Public Administration (Schwella 1992 : 4 - 11).

- Relevance

Another criticism is that the very nature of the generic administrative process inhibits critical and relevant theorising about the relationship between the system of public administration and the society in which it operates. Cloete's administrative process model does not take into account the ever-changing and troubled environment (political, economic, social, cultural and technological) of a society and the way in which this environment influences administrative activities (Schwella 1992 : 4 - 11).

2.3.2.2 INNOVATIVE APPROACH

Schwella (1991 : 2) defines public administration as:

- that system of structures and processes;
- operating within a particular society as environment;
- with the objective of facilitating the formulation of appropriate governmental policy; and
- the efficient execution of that policy.

Management of public affairs is an integral and important aspect of public administration. The assessment of public management functions is dependent to a large degree on the environment it serves. It is for this reason that a public management model becomes necessary (Schwella 1991 : 1).

According to Schwella (1991 : 2) the public management model stresses the importance of the environment for the theory and practice of public management.

Public management applications attempt to incorporate a wide spectrum of management knowledge and skills into integrated and systematic approaches, to improve the quality of particular aspects of public management. Examples include policy analysis, strategic management and organisation development. Supportive technology and techniques provide tools and aids that may be used, when necessary in

conjunction with and in support of public management functions and skills and when using public management applications (Schwella 1991 : 2).

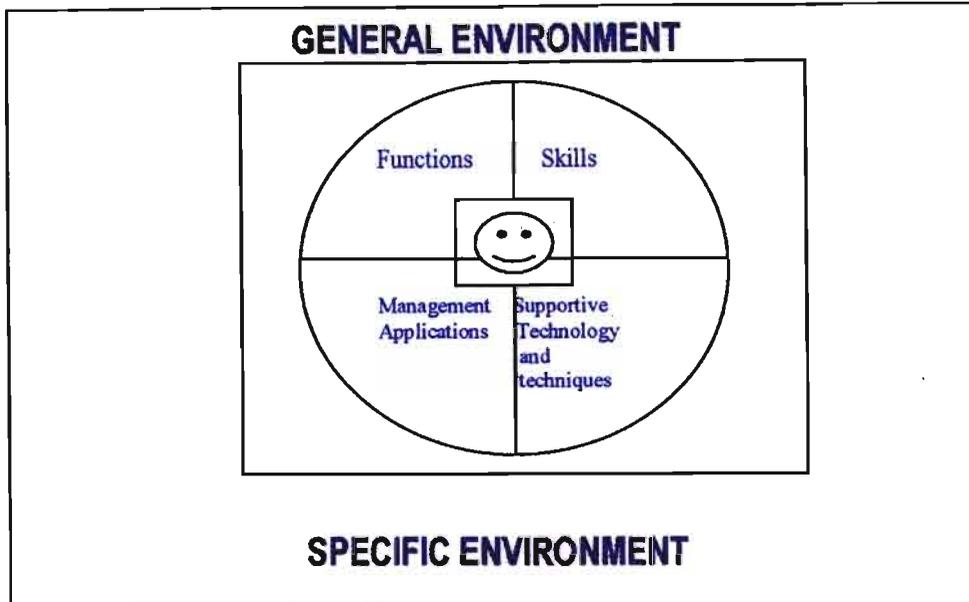
The public management environment consists of general and specific components (Schwella 1991 : 5). The general component includes the political, economic, social, cultural and technological aspects of the environment. The specific environment includes suppliers, regulators, competitors and consumers.

Public management functions include policy-making, planning, organising, leadership, motivation, control and evaluation (Schwella 1991 : 5).

Public management, like management, generally, requires skill for competent decision-making, constructive negotiation, the successful management of conflict, change and bargaining. In exercising public management functions and skills, public managers can be assisted by using available supportive technological aids and techniques. Computer technology and information management are two such examples. In order to enhance the functioning of public management, areas of operation need to be constantly researched (Botes 1994 : 191 - 192; Schwella 1991 : 6).

Figure 2.3 illustrates Schwella's Public Management Model.

FIGURE 2.3 ILLUSTRATES SCHWELLA'S PUBLIC MANAGEMENT MODEL



GENERAL ENVIRONMENT

* Political * Social * Economical * Technological * Cultural

SPECIFIC ENVIRONMENT

* Suppliers * Competitors * Regulators * Consumers

FUNCTIONS	SKILLS	APPLICATIONS
Policy-making Planning Organising Leading Control and evaluation	Decision-making Communication Management of change Management of conflict Negotiation	Policy analysis Strategic management Organisation development
		SUPPORTIVE TECHNOLOGY AND TECHNIQUES
		Computer technology and information management Techniques for public management

Fox, Schwella & Wissink (1991:4)

- PUBLIC MANAGEMENT ENVIRONMENT

The environment forms an integral part of all public management decisions and applications (Schwella 1991 : 18 - 20). The environment can be discussed in terms of the general environment (political, economic, social, cultural and technological) and the specific environment (suppliers, regulators, competitors and consumers).

A brief discussion of the general environment follows.

- GENERAL ENVIRONMENT

The general environment refers to all those factors external to an organisation that influence the management of an organisation. According to Schwella (1991 : 18) the components of the general environment can be identified as follows, viz,

(a) Political Environment

The political environment impacts on the political system to deal with fundamental political demands of the people:

- public managers need to be aware of the impact that the political system has on organisations;

- political ideas, philosophy and political ideology form the basis of the political environment; and
- public organisations are influenced by national power and process structures such as political parties, pressure and interest groups, political policy, governmental laws, acts and regulations, as well as political and executive authorities.

(b) Economic Environment

The economic environment comprises key issues such as national income, reducing poverty and unemployment, equitable distribution of wealth and job creation:

- the economic system of a society is the way in which society creates and distributes wealth;
- economic ideas, philosophy and ideology provide a basis for international and national economic structures and processes;
- national economic factors include the structure of the economy, patterns of economic growth, inflation trends, rates of exchange, trends, balance of payment trends and saving and investment trends; and

- climatic conditions have to be taken into account since they influence the availability of land, water, mineral and energy resources, as well as the international competitiveness of the national economy.

(c) Cultural Environment

The cultural environment is intertwined with cultural beliefs, practises and customs:

- the cultural system of a society includes the basic beliefs, attitudes, role definitions and interactions of that society; and
- the family, religious institutions and educational institutions transmit cultural patterns from one generation to the next; they also redefine and build upon cultural values.

(d) Technological Environment

The technology environment impacts on efficiency, effectiveness, speed, accuracy and precision:

- the technological environment refers to the use of machinery and processes to produce and distribute goods and services; and

- public managers need to consider the importance of the technological environment which influences their functioning in public organisations.

(e) Social Environment

The social environment necessitates the provision of basic services in order to improve the quality of life of the community.

- For management and organisational purposes, the social environment includes trends regarding demographic characteristics of the population, trends affecting urbanisation, human development and improvement in the social being of the people.

- **SPECIFIC ENVIRONMENT**

According to Schwella (1991 : 20 - 22) the specific environment is that part of the environment which directly influences the availability of resources to the organisation. As such these environmental components are observable and directly experienced by the organisation.

Schwella (1996 : 21 - 23) has divided the specific environment into the following components viz. :

- Regulators

Regulators mediate, control or regulate the relationships between the organisation and its suppliers, consumers and competitors.

These institutions perform specific functions in accordance with the needs of the polity, the society or the economy as they perceive it.

- Suppliers

Suppliers produce, mobilise and allocate various kinds of resources to particular organisations. These financial resources are mobilised by means of taxes, levies or service charges and are then allocated to public organisations in accordance with political and policy priorities.

- Consumers

Consumers constitute the users of the products or services of the particular public organisation. The consumers may voluntarily consume the services provided or may even be compelled to use the services provided.

- Competitors

Competitors consists of those societal institutions which compete for scarce resources with the particular public organisation concerned.

It is important to note that this study takes into account a combination of both approaches viz. :

- traditional approach ; and
- innovative approach.

2.3.2.3 AN ADAPTATION OF THE CLOETE-SHWELLA APPROACH

Cloete stresses the following key generic administrative processes in public administration, viz.

- policy-making, organising, financing, staffing, work methods and procedures and control.

Schwella stresses the importance of the environment (general and specific) in public administration. The general environment includes the following viz.

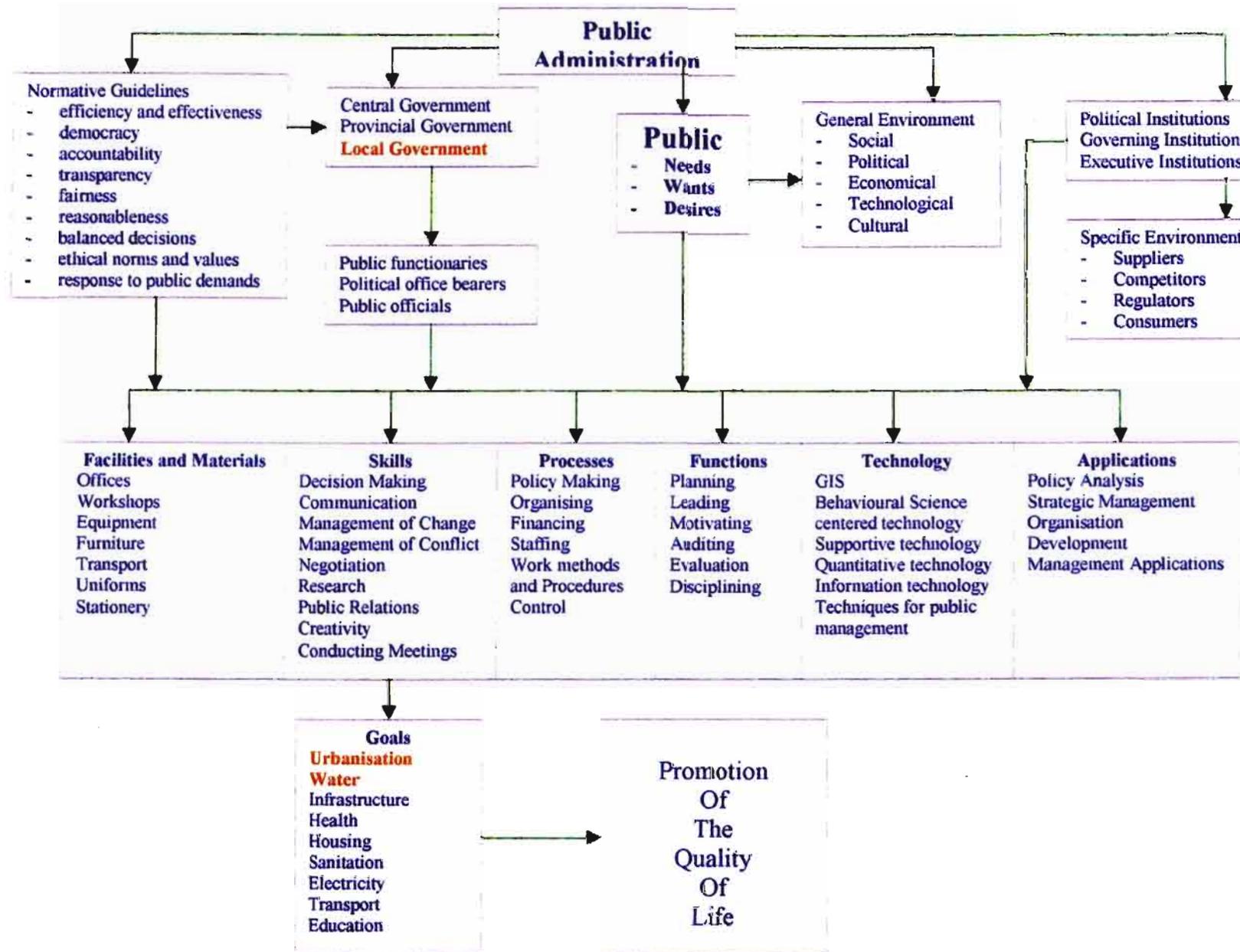
- political, economic, cultural, technological and social.

The specific environment comprises viz.

- regulators, suppliers, consumers and competitors.

By using the key themes of the study viz. local government, urbanisation and the provision of water, an illustration of the Cloete-Schwella approach is presented in Figure 2.4 followed by a discussion.

Cloete - Schwella Approach



The urban population in developing countries are growing at a phenomenal rate. This poses a huge challenge to local government for the management of urban development (Devas & Rakodi 1993 : 1). In addition, urban dwellers are placing unprecedented strains on the financial and administrative capacity of local governments to provide the basic urban social services and infrastructure such as water, sanitation, housing, education, transport and health. (Rondinelli 1986 : 1; Hillard 1992 : 169; Gelderblom & Kok 1994 : 178 - 179).

The Cloete-Schwella approach calls for innovative combinations of alternative arrangements (generic processes and the environment) to promote urban service delivery in the face of rapidly growing urban populations.

The process of urbanisation and the provision of water calls for specific urban policies and initiatives in South Africa. These policies should be part of a balanced and integrated development strategy to ensure growth and effective service delivery (White Paper on Water Supply and Sanitation Policy 1994 : 8).

It can be stated that the policy implementation stage is a difficult process because the various resources, such as, financial, human resources and equipment may not be available when they are needed and in the required quantity.

When water is identified as a basic need, a formal arrangement of people are needed to perform particular activities. An organisational structure such as branches, divisions, sections or units are formed for the smooth facilitation of goals. Aspects of co-ordination and delegation of power is inevitable in service rendering institutions (Sing & Moodley 1996 : 86).

The staffing function consists of a network of functional activities which must be exercised in order to provide, utilise, remunerate, train, develop and maintain a motivated corps of personnel for the public sector (Andrews 1988 : 3).

Local government, often, lack skilled personnel to plan and manage service delivery - especially to the poorer sections of the city. The type of experience, knowledge and attitude that engineers, consultants, contractors and municipal functionaries and leaders possess, to reach public goals, cannot be compromised (Gilbert, Stevenson, Girardet & Stren 1996 : 30 - 33).

Urban dwellers need access to basic services such as water, sewerage and electricity and these goals can only be achieved if municipal functionaries are professional, competent, responsive and sensitive to people's needs (Bayat & Meyer 1994 : 36 - 39).

All types of institutions, whether public or private, rely heavily on effective communication for their efficient performance (Cloete 1986 : 79). In this study, the Urban Strategy Unit and Durban Metro Water is no exception.

The citizens pay taxes to finance the activities of public institutions. It is imperative therefore, that financial resources are utilised effectively and efficiently commensurate with proper financial guidelines, monitoring techniques and reporting systems (Moodley & Sing 1996 : 184).

Local authorities are accountable for the collection of rates, taxes and levies . In the same vein, they should be transparent in their actions and dealings with the municipal electorate and avoid all forms of maladministration and unethical conduct of municipal officials. The normative guidelines of public administration must prevail at all times (Moodley & Sing 1996 : 184; section 195 of the Constitution of the Republic of South Africa, 1996).

It is imperative that **work methods and procedures** are constantly reviewed, improved and devised to meet the basic needs of a society in transition (Cloete 1991 : 53).

The aim of the control function is to ensure that account is given in public for everything public authorities do or neglect to do. There are different types of control measures, for example, written reports, inspection, investigation and internal auditing (Cloete 1991 : 53).

The quantity and quality of products, goods and services such as water and electricity must be continuously reviewed to prevent impurities, pollution, contamination, spread of diseases and the like.

Urbanisation also has a profound effect on the environment and a public manager is expected to act as a leader, initiator and stimulator to manage change and promote effective service delivery.

The policy of separate development by the National Party Government has been the main cause of uneven and unequal urbanisation patterns in South Africa (Magubane & Yrchik 1977 : 31; Maharaj 1995 : 33).

There were separate social, residential, industrial and political development among the different races. Whites were a privileged, minority group that lived in urban areas with fully functional and high quality services whilst the majority of South Africans were denied political representations and lived under the most marginal

conditions in rural areas, often with lower quality or non-existent service delivery (Smith 1992 : 2).

Today, a stable and democratic political environment is a recipe for addressing urban development and the efficient and effective delivery of water for all South Africans, irrespective of race, colour or creed.

The economic decline that South Africa faces has impacted negatively on the ability of ordinary citizens to pay for basic services, thus, crippling the financial base of local structures (GEAR 1996 : 1).

It can therefore, be deduced, that local government needs a concerted economic strategy to address urban issues if it is to respond more effectively to the changing needs of its clientele and to the pervasive impacts of urbanisation in the new millennium.

South Africa is a multi-cultural and heterogeneous society. Public functionaries interact with people from different spectrums, political affiliations and religious denominations on a daily basis. In executing their tasks and in the delivery of services such as water, it is imperative that they show respect, tolerance and fairness to all people of South Africa (section 195 of the Constitution of the Republic of South Africa).

The provision of water can be enhanced through the use of modern **technology**. Technology has many advantages such as speed, accuracy and precision. There are also disadvantages in the sense that many third world countries cannot afford expensive and sophisticated equipment. Furthermore, they lack qualified personnel to operate them. In addition, technology should not be allowed to harm community values (Naidoo 1987 : 44).

Geographical Information Systems (GIS) works with spatial data processing as well as non-spatial, or textual and numeric data processing. The spatial data is represented in three forms : points, lines or areas and shows where the physical feature occurs geographically, what the feature is and what the relationship between the features. Features may be things like soil, rivers, roads, houses and the like. GIS can thus make a model of the real world. GIS integrates spatial data to help solve problems and therefore helps people to make decisions (Planact 1997 : 6).

GIS could, therefore, be useful to the study of urbanisation and its impact on service delivery in identifying goals, designing alternative courses of action, allocating resources and making informed local government decisions.

The new democratically elected government faces massive social problems of urban homelessness, poverty, provision of health services, education, water, electricity, cultural amenities and growing rates of urbanisation (RDP - The First Year Reviewed 1995 : 1).

Public managers need to take into account the growing numbers of people moving to urban areas in search of a better life. There are heightened expectations in the cities, which acts as a constant pressure on the government to deliver programmes such as urban employment creation and its promise of " a million houses" (RDP - The First Year Reviewed 1995 : 2).

The specific environment comprises regulators, suppliers, consumers and competitors.

For the purpose of this study, key regulators would include Durban Metropolitan Council, Urban Strategy and Durban Metro Water Services.

These institutions control the impact of monetary values in the provision of water and they undertake continuous research to solve development issues. They are also responsible for price control whereby they ensure that consumers are not subjected to exorbitant prices and that there is some stability in the market. This allows for the

low income groups to pay for services that was previously inaccessible.

Durban Metro Water purchase water in bulk from the supplier, Umgeni Water Board. The intermediaries (Durban Metro Water) are supplied with their respective goods at a fairly reasonable price because of bulk buying. They should, therefore, make these services accessible to all people because their motive is to promote the quality of life of people and not to indulge in profit maximisation (New Water World 1995 : 52).

It can be stated that the consumer is the individual citizen, collectively termed the public, community, or society. They have unlimited needs, wants and desires which includes housing, transport, water and electricity but limited resources with which to satisfy these needs.

Competitors could include the private sector, international donors, funders and non-governmental organisations who can provide the same services as public institutions. The private sector generally has adequate financial resources, technical expertise and superior quality goods which can be provided at either a cheaper or more expensive rate.

It is essential that public functionaries have the necessary facilities and materials to perform their duties. In view thereof, the need for offices, workshops, equipment, furniture, transport, uniforms and stationery are emphasised.

Public managers also require the following management functions, skills and applications:

FUNCTIONS

planning, leading, motivating, auditing, evaluation and disciplining.

SKILLS

decision-making, communication, management of change, management of conflict, negotiation, research, public relations and conducting meetings.

APPLICATIONS

policy analysis, strategic management, organisation development and management applications.

Ultimately, the goals (urbanisation, water, sanitation, infrastructure, housing, education, transport, electricity and health) will be accomplished and the quality of life of the citizenry will be promoted.

2.3.3 NORMATIVE GUIDELINES OF PUBLIC ADMINISTRATION

The reputation and success of any sphere of government depends on the conduct of public functionaries. It is therefore necessary to lay down certain normative guidelines to serve as a framework within which officials can perform their duties (Cloete 1988 : 22 - 24).

According to Isaak (1975 : 5) the concept "normative" implies value-laden prescriptions which are based upon moral, ethical or value judgements.

The normative foundations that should guide public officials in the performance of their duties are, inter alia.,

- democratic requirements;
- moral and ethical norms;
- human rights;
- public accountability and transparency;
- efficiency and effectiveness; and
- response to public demands.

An exposition of the above mentioned norms are provided below:

- DEMOCRACY

According to Cloete (1988 : 24) democracy is to create conditions under which individuals will experience the greatest state of well-being. There should be consultation between the government and the urban community to determine and ascertain urban needs, resulting in a harmonious atmosphere (Reddy 1996 : 119). In addition, citizens should have specific rights and liberties.

According to Stahl (1976 : 271) public administration at every level, must serve the public in a manner that strengthens the integrity and processes of democratic government. This fundamental principle has implications for public officials, viz. :

- that all people must be served, equally and impartially;
- that this must be achieved with full respect for and reliance on representative institutions; and
- that internal administration in public institutions must be consistent with these codes of behaviour.

- ETHICAL NORMS

Ethics implies a moral code of conduct which distinguishes right from wrong and entails the practice of virtues such as courage, selflessness, honesty and justice in the performance of one's duties (Dwivedi & Engelbert 1981 : 153; Andrews 1988 : 33; Bayat & Meyer 1994 : 39).

The personal conduct of public functionaries is essential to promote a more professional ethos and a commitment to serve the people. In view thereof, a code of ethics is intended, not merely as a set of standing rules for behaviour but rather as a guide to public servants to use their creativity and discretion to promote national priorities (Hanekom, Rowland & Bain 1987 : 163; Rosenbloom 1989 : 463; Skweyiya 1996 : 3 - 4).

According to Botes (1991 : 20) public officials must adhere to the following acceptable standards when serving the public interest and executing public goals viz. :

- friendliness;
- diligence;
- respect for humanity;
- humaneness (especially to senior citizens); and
- patience.

- HUMAN RIGHTS

Section 10 of the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996) provides that everyone has inherent dignity and the right to have their dignity respected and protected. In the same vein, freedom of choice allows anyone to reside in an urban or rural area.

This provision will be interpreted, in terms of the Constitution, as an individual's right to a level of service adequate to provide a healthy environment. Local government is, therefore, expected to provide basic services such as water at a cost which is affordable both to the household and to the country as a whole.

- PUBLIC ACCOUNTABILITY AND TRANSPARENCY

It is generally accepted that every political office-bearer and every public official should display a sense of responsibility when performing his or her official duties (Cloete 1991 : 62).

Public officials are implementers of public policies, it is not surprising that the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996) makes specific provision for public administration to be accountable.

Public institutions, therefore, play a vital role in bringing urban services closer to the people. Hanekom & Thornhill (1983 : 184) identify public accountability as one of the prominent characteristics of twentieth century public administration.

Public administration cannot expect to command the respect of the population if it is carried out behind closed doors. Like justice, administration must not only be carried out, it must be seen to be carried out (Bayat & Meyer 1994 : 40; Reddy 1996 : 120). Transparency, is a principle, that the new government has taken great strides to implement in order to achieve clean administration (section 195 of the Constitution of the Republic of South Africa, 1996).

- EFFICIENCY AND EFFECTIVENESS

According to Cloete (1998 : 110 - 111) a public institution exists for and on behalf of the community. The services and activities of the public institutions should always be judged on the basis of their necessity. It is inevitable that the needs of the community will always be greater than the resources available to satisfy those needs. This characteristic of human society becomes more pronounced as the population increases and exerts greater pressure on the available resources. Public institutions obtain their revenue from money paid by the citizens and the ability of

citizens to pay is limited. Therefore, the collective ability of the public institutions to provide goods and services is also limited (Robbins 1982 : 317; du Toit & van der Waldt 1997 : 100).

Priorities, therefore, need to be set and resources must be used sensibly in order to obtain optimal results.

- RESPONSE TO PUBLIC DEMANDS

The responsiveness of public institutions to individual problems, needs and values, as well as those of specific groups, should be increased and secured. The historical development in South Africa has resulted in imbalances among the various components of the total population. Recent changes have resulted in higher aspirations among those who have been relatively underprivileged. This has created certain expectations and demands, especially in socio-economic fields such as housing, education and urban infrastructure. It is important for officials to provide a satisfactory response to these needs and demands (Bayat & Meyer 1994 : 38).

It is crucial that public functionaries adhere to and respect the above mentioned guidelines in order maintain confidence in government, promote professionalism and enhance service delivery to the public.

2.4 DISTINCTIVENESS OF LOCAL GOVERNMENT AND ADMINISTRATION

Local government and administration is a specialised branch of public administration found at the municipal or local sphere of government (Cloete 1998 : 85). Consequently, the functions and processes carried out in municipal administration will be very similar to those in public administration.

2.4.1 DEFINITION OF LOCAL GOVERNMENT

Definitions of local government abound. The following definitions have been cited in the literature:

Tooke (1977 : 12) defines local government as,

... the action of governing the affairs of a town or city, that is, the affairs of people, business and industry. Government derives from an ancient Greek word meaning "to steer". To govern a city then, means to direct and control, or to regulate the things that need to be done.

According to Penceliah (1995 : 11),

Local government is the third tier of government. It is the level of representative government which is closest to the people. In a unitary system of government, local government is often regarded as the agent of central government where it is responsible for functions at the local or municipal level.

The United Nations (in Govender 1995 : 8) defines local government as,

... a political subdivision of a nation or state which is constituted by law and has substantial control of local affairs, including the power to impose taxes or exact labour for prescribed purposes. The governing body is either elected or locally selected.

It can, therefore, be affirmed that local government :

- is that sphere of government closest to the people;
- consists of local authorities that have stable and clearly marked boundaries;
- renders a wide range of services that affect the lives of the local people residing within its area of jurisdiction; and
- has an independent power of local taxation.

2.4.2 PRINCIPLES GOVERNING LOCAL GOVERNMENT AND ADMINISTRATION

The principles governing public administration is *mutatis mutandis* to local government and administration. It is important for municipal functionaries to abide by the following principles (Bayat & Meyer 1994 : 40; Loxton 1994 : 105; Ramokgopa 1997 : 232 - 233; Gildenhuis 1997 : iii; Cloete 1998 : 91):

- professional ethics must be promoted and maintained;
- efficient, economic and effective use of resources must be promoted;
- services must be provided impartially, fairly, equitably and without bias;
- people's needs must be responded to, and the public must be encouraged to participate in policy-making;
- every official is accountable for his/her actions or inactions;
- every official must display insight and take balanced decisions without ulterior motives; and
- transparency must be fostered by providing the public with timely, accessible and accurate information.

2.5 HISTORICAL PERSPECTIVE OF LOCAL GOVERNMENT IN SOUTH AFRICA

In South Africa, the system of local government had developed to reflect the political policies and goals of the apartheid state (Friedman 1990 : 33; Mawhood 1993 : x).

In 1948, the National Party government came to power and introduced a policy of separate development (Picard & Garrity 1995 : 67; Swilling & Boya 1995 : 168; Planact 1997 : 10). The intention of central government was to reflect apartheid at all spheres of government and in all spheres of life. As the apartheid city developed, so did the apartheid system of government (Cloete 1994 : 42).

Until 1971, the African townships were controlled by the White municipalities. Thereafter, townships were administered by administration boards (Mawhood 1993 : x; Picard & Garrity 1995 : 69). The boards ensured that a large amount of money available for township development went to the homelands, and not, to the cities. The boards also applied influx control very strictly. This system of local government made Africans part of another city, thus fragmenting city government (Friedman 1990 : 34).

According to Friedman (1990 : 34) Whites enjoyed privileges and local government rights, while Africans had no such rights and were not allowed in the cities. From 1976, the apartheid system of local government started coming under pressure, when people in Soweto and other areas began to resist very strongly and began boycotting rent and service charges (Kroukamp 1995 : 192). The government began to realise that African people were not prepared to tolerate the apartheid system (Swilling & Boya 1995 : 173). In 1982, the National Party government introduced Black Local Authorities to cater for the needs of Black people.

Black Local Authorities did not have the money to implement their decisions (Simkins 1990 : 41). There were few skilled Black people that were willing to work for these authorities. The only way the Black Local Authorities could raise money they needed to run their areas was to get it from township residents, but most were too poor to pay (Bernstein 1990 : 50).

In 1983, the Tricameral System was introduced (Cameron 1991 : 29). This brought Coloured and Indians into the same system but Whites retained control. There was no provision in the Tricameral System to accommodate the majority of people, namely 20 - 22 million Black South Africans (Friedman 1990 : 35).

The government proposed Regional Services Council which could tax all business undertakings in its area and use that money to develop the townships (Friedman 1990 : 35). Since 1990, with the unbanning of the liberation movements and the release of Nelson Mandela, South Africa has been set on a path towards a non-racial society (White Paper on Reconstruction & Development Programme 1994 : 4; Picard & Garrity 1995 : 66; Swilling & Boya 1995 : 173; Reddy 1996 : 16).

A discussion on local government transition would now follow.

2.6 LOCAL GOVERNMENT RESTRUCTURING IN SOUTH AFRICA

The local government restructuring process brought together all stakeholders involved in local affairs.

2.6.1 LOCAL GOVERNMENT IN CRISIS

During the mid-1980s the administration of Black urban areas reached crisis levels as the legitimacy of Community Councils and Black Local Authorities were questioned and rejected by civics with strong grassroots support. Rent and service boycotts led to the collapse of the provision of

basic services (Simkins 1990 : 45). By 1990, the State was forced to acknowledge that Black Local Authorities were not financially viable and were unable to govern Black urban areas (Reddy 1996 : 54). New local government options had to be considered (Maharaj 1994 : 3).

The African National Congress proposed the establishment of a multi-party commission on local government which resulted in the formulation of the Local Government Negotiating Forum (The Daily News, 2 September 1994).

2.6.2 LOCAL GOVERNMENT NEGOTIATING FORUM

The Local Government Negotiating Forum was representative of statutory and non-statutory structures (The Daily News, 2 September 1994).

2.6.2.1 MISSION

The Local Government Negotiating Forum was established on 22 March 1993, comprising existing local authorities, civic organisations and other interested parties whose mission was to contribute to the democratisation of local government and to bring about a democratic, non-racial, non-sexist and financially viable local government system (Sunday Times, 1 August 1993; Reddy 1996 : 57 - 62).

2.6.2.2 COMPOSITION OF THE FORUM

The forum is a non-statutory voluntary body and has no legal status. It offered a unique opportunity for both statutory and non-statutory organisations to jointly solve problems of local government (Sunday Times, 1 August 1993).

2.6.2.3 LOCAL LEVEL REFORM

According to the Local Government Negotiating Forum Newsletter (1993 : 6), the reform process at local government involves three phases:

- The pre-interim phase

This phase has two logical stages:

- (a) During this phase, existing structures remained and legislation was prepared by negotiation to dismantle segregated councils; and
- (b) The transitional local councils and transitional metropolitan councils were appointed to replace segregated structures. This phase ended when interim and local metropolitan structures had been elected.

- The second phase commenced with local and metropolitan elections for new councils, which took place after the national elections.
- The final phase will introduce the final constitutional model for local government.

The agreements reached at the Local Government Negotiating Forum were translated in the Local Government Transition Act, 1993 (Act 209 of 1993).

2.7 DURBAN METROPOLITAN GOVERNMENT SINCE 1994

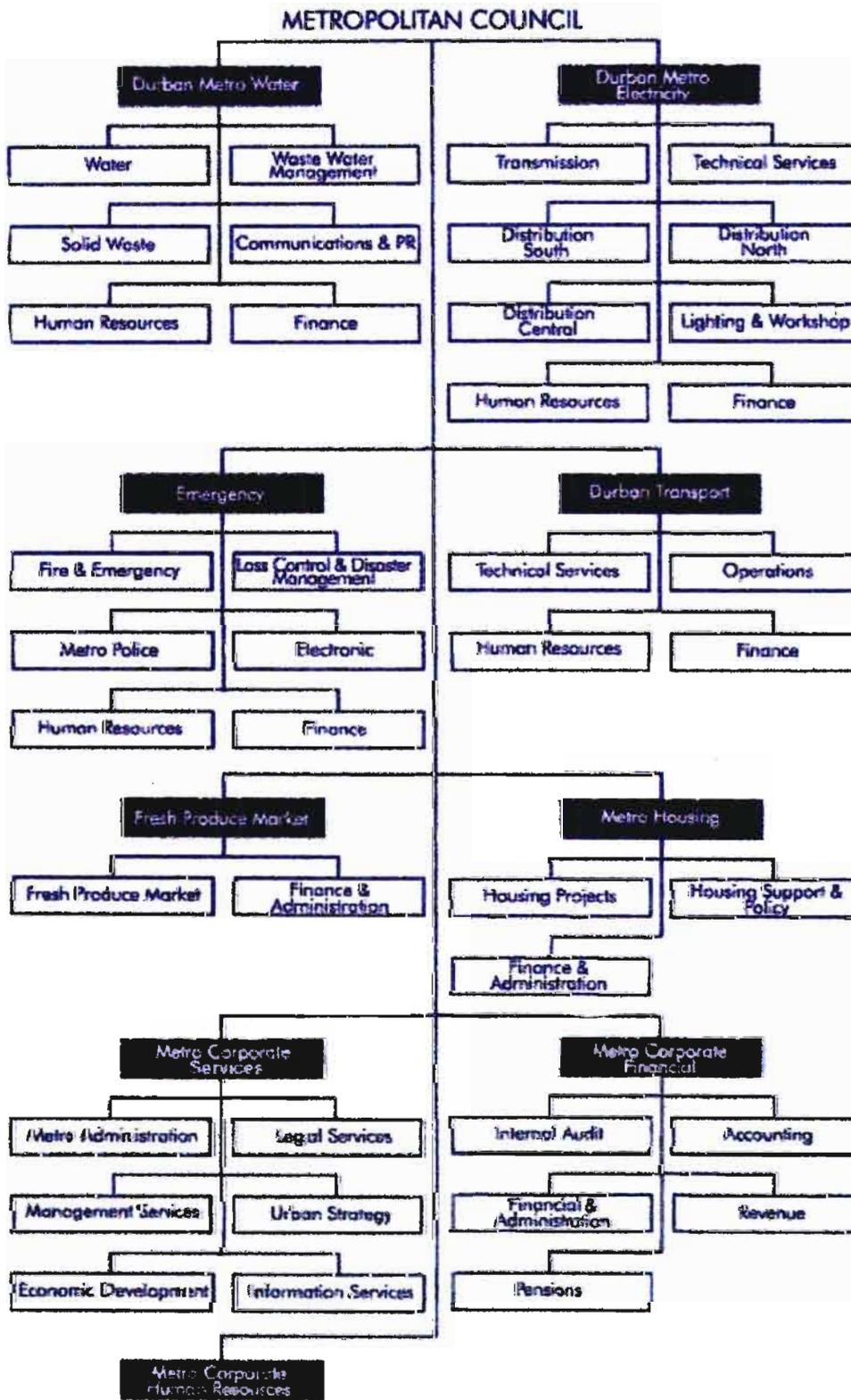
The democratic national elections of April 1994 heralded a fundamental change in the form and character of local government. In the interim phase between the national elections and the local government elections, local government was given broader political power. The emphasis was on establishing the boundaries, both physical and functional, in which the new local governments would operate after the local elections. Extensive negotiations at local, provincial and national level led to the introduction, in Greater Durban, of a dual system comprising a number of local councils on the one hand and a metropolitan council on the other. After the 1996 local government elections, this system was formalised with the proclamation of six local councils and the Durban Metropolitan Council,

consolidating the previous 49 authorities that administered the same area (Robbins & Watkinson 1999 : 117).

The Durban Metropolitan Council provides services throughout the Durban region and the Local Councils provide services at a municipal level for their area (<http://www.durbanmetro.ac.za>).

The structure of the Durban Metropolitan Council is presented in Figure 2.5.

FIGURE 2.5 DURBAN METROPOLITAN COUNCIL



(<http://www.durbanmetro.ac.za>)

2.7.1 OBJECTS, POWERS AND FUNCTIONS OF MUNICIPALITIES

The objects of local government are set out in Section 152 of the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996) and the KwaZulu Natal Provincial Enactment (No 38 of 1996).

Zybrands (1998 : 205 -208) provides an overview of each object:

(a) Providing democratic and accountable government for local communities

There is an obligation on the part of the Government of National Unity (GNU) to provide democratic local government. This implies free, fair and regular elections based on voters' rolls that are comprehensive to reflect the potential number of voters adequately. Democracy is not restricted to elected government structures only. It implies that ways and means should be found for the broad public to give input on a continuous basis. For this to be successful, a municipal council should also report back regularly to its electorate. This is where the aspect of accountability comes into play, *viz.* accountable government.

A council must give feedback to its community regularly, but what can a community do if it is dissatisfied with such feedback ? The offices of the Public Protector and the Auditor-General have been established as public watchdogs.

(b) Ensuring the provision of services to communities in a sustainable manner

This underlines the fact that a local authority is a service-rendering institution. Such services are rendered to satisfy the needs of the people. Sustainability could imply that the services should continue in the future and not be easily abandoned. A service is also only sustainable if it is affordable and addresses a real need of the public. The identification and prioritisation of services to be rendered are, therefore, key objectives of a municipality.

The service rendering function of a municipality is crucial to this study. The provision of water and electricity are fundamental services that should be made accessible to all citizens, especially the poorer sectors of the population at affordable cost.

Sustainable development (Hunter 1995 : 238) is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Cook (1995 : 279) asserts that people are at the heart of the quest for sustainability, both as the means by which development activities are carried out (through direct or indirect funding), and as the reason why development happens in the first place (to improve the quality of life).

(c) Promoting social and economic development

Both these aspects are relatively new to local government and have not, in the past, been part of their traditional functions. Social development could include aspects such as child welfare functions, for example, feeding schemes, creches, day care centres and recreational facilities. It could also include the care of the aged by promoting the establishment of geriatric health care services, retirement homes, and even pension pay-outs. It could address issues such as unemployment, family violence, drug dependence, alcohol abuse and marriage counselling.

All these services, if rendered, would require highly skilled employees and, in turn, also substantial funding. In this regard, Section 10D (1) (b) of the Local Government Transition Act, 1993 (Act 209 of 1993) states that the

powers and duties conferred or imposed upon or delegated/ assigned to a council can only take place if sufficient resources for the exercise of such power or the performance of such duty are made available. Economic development can only take place if a municipality has adopted its own Local Economic Development (LED) Plan.

In order to address urban problems such as unemployment and the affordability of levels of services such as water and electricity, it follows that urban local government will, in future, be obliged to stimulate its local economy and create jobs.

(d) Promoting a safe and healthy environment

"Safe," from a health point of view, could mean preventing the spread of contagious diseases and ensuring a healthy life, inter alia, by providing primary health care services. It could also refer to matters such as environmental pollution, which could include noise, water and air pollution. "Safe" could also refer to the combating of crime. Authority to combat crime can be found in Section 10D (1) (a) of the Local Government Transition Act, 1993 (Act 209 of 1993), which states that a council may establish and control a municipal law enforcement agency subject to the South African Police Service Act, 1995 (Act 68 of 1995).

As policing is primarily a function of concurrent national and provincial competence, it should be understood that local government is not obliged to do local law enforcement and may only do so if it has the financial resources available. One of the major challenges will be to strike a proper balance between economic development - which implies industrialisation and its concomitant negative impact on the environment - and the promotion of a safe and healthy environment.

(e) Encouraging the involvement of communities and community organisations in the matters of local government

Section 152 (1) (e) of the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996) states that one of the objects ("purposes") of local government is to encourage the involvement of communities and community organisations in the matters of local government.

Similarly, Section 10G (1) (g) of the Local Government Transition Act, 1993 (Act 209 of 1993) states that a municipality must annually report to and receive feedback from its community regarding the objectives set in its integrated development plan. The audited accounts of a municipality must also be considered in public at a meeting to which the public has specifically been invited.

(f) Achieving objectives within financial and administrative capacity

The attainment of the stated objectives is qualified by Section 152 (2) of the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996) which states that a municipality must strive, within its financial and administrative capacity, to achieve its objectives. The constitutional recognition that a municipality's own financial and administrative capacity could inhibit the attainment of the objectives is very meaningful. It implies that a local community cannot raise unrealistic expectations which are beyond the financial and administrative means of a municipality.

The powers and functions of municipalities are to administer the local government matters listed in part B of schedules 4 and 5 of the Constitution of the Republic of South Africa 1996 (Act 108 of 1996), as well as other matters assigned to them by national or provincial legislation. In terms of Section 156 (5) of the Constitution of the Republic of South Africa 1996 (Act 108 of 1996) , municipalities also have the incidental right to exercise any power concerning a matter reasonably necessary for or incidental to the effective performance of their functions. These schedules contain a wide range of functions ranging from traditional aspects such as the

provision of water, sewerage, sanitation, electricity and roads, to other less traditional functions such as child care facilities and the control of undertakings that sell liquor to the public.

The above mentioned powers and functions make the Durban Metropolitan Council the primary infrastructure and service provider in the Durban Metropolitan Area.

2.7.2 POST-APARTHEID LOCAL GOVERNMENT : DEVELOPMENTAL ROLE

The developmental local government as an official policy objective and broad strategic framework represents the first sign that the second wave of postapartheid reconstruction is beginning (Parnell & Pieterse 1998 : 1).

According to Craythorne (1997 : 50) a municipality must -

- (a) structure and manage its administration and budgeting and planning processes to give priority to the basic needs of the community, and to promote the social and economic development of the community; and
- (b) participate in national and provincial development programmes.

Although accountable to national and provincial government, the local authority assumes enormous responsibility both for defining and implementing development priorities.

Institutionally development responses such as the Integrated Development Plans required of all South African local authorities are tools for achieving integrated planning by democratically elected local government structures (Parnell & Pieterse 1998 : 13).

As part of its mandate to meet the needs of the entire metropolitan population, the Durban Metropolitan Council has prepared a number of integrated planning documents to guide it in its work (Robbins & Watkinson 1999 : 120).

Integrated development planning is one of the most important mechanisms through which local authorities can develop the strategic capacity to meet their existing responsibilities and additional functions (Integrated Development Plan for Durban Central Councils, undated).

The main steps in producing an Integrated Development Plan are viz. (Integrated Development Plan for Durban Central Councils, undated) :

- an assessment of the current social, economic and environmental reality in the municipal area - the current reality;

- a determination of community needs through close consultation;
- developing a vision for development in the area;
- an audit of available resources, skills and capacities;
- a prioritisation of these needs in order of urgency and long-term importance;
- the development of integrated frameworks and goals to meet these needs;
- the formulation of strategies to achieve the goals within specific time frames;
- the implementation of projects and programmes to achieve key goals; and
- the use of monitoring tools to measure impact and performance (Integrated Development Plan for Durban Central Councils, undated).

An integrated development plan can serve a number of desirable purposes including :

- breaking down the racial mould of apartheid cities;
- injecting strategic thinking into local government decision-making processes;
- more effective allocation of scarce resources;
- providing the basis for performance management by both local government and communities;
- contributing to organisational development and managerial reorganisation within local government;

- providing communities and other affected parties with the opportunity to have a say in the development of their cities; and
- ensuring that financial decision-making is related to a broader vision for the city.

Set against the experiences of the past, building a post-apartheid society seems to depend on at least four aspects (Parnell & Pieterse 1998 : 4):

- first, the total reorientation of the planning apparatus inherited from the segregationist and apartheid states;
- second, the physical and economic reconstruction of the racially divided city;
- third, the introduction of a transparent and unified system of urban revenue creation; and
- finally, the social, political and psychological incorporation of all Black South Africans into legitimate state structures and the sensitisation of the state to survival systems and social networks that dominate the lives of the majority of poor citizens.

2.8 RECONSTRUCTION AND DEVELOPMENT PROGRAMME (RDP)

The Reconstruction and Development Programme (1994 : 133) is an integrated, coherent, socio-economic policy framework, which seeks to mobilise the people and the country's resources toward the final eradication of apartheid and the building of a democratic, non-racial and non-sexist future. It is, therefore, fundamental to local government.

2.8.1 BASIC PRINCIPLES OF RDP

According to the Basic Guide to the RDP (1994 : 4) the following principles can be identified:

- A programme to address the whole problem

The effects of apartheid cannot be overcome by policies which only look at some of the problems and ignores others. The RDP addresses all of the problems. It brings together strategies to make the best use of all resources, both now and for the future.

- A programme which puts people first

People, with their hopes and strengths, are the most important resource. The RDP focuses on peoples's most immediate needs, and it relies, in turn, on their energies to meet these needs.

- A programme for peace and security

In the past, the police, the security forces and the law served apartheid and were unable to control the wave of violence against people. In order to rebuild and develop the country, it is necessary to establish security forces which protect people and a legal system which will treat all people fairly and equally, according to the Constitution.

- A programme to build the nation

Apartheid divided people into developed "first world" communities and underdeveloped "third world" communities. The RDP aims to build a strong nation which cannot only develop itself but also play a part in the development of the whole Southern African region. It aims to build a nation which can play its full part in the world community.

- *A programme to link reconstruction and development*

Building the economy and developing the country must happen side by side.

- *A programme based on democracy*

Under apartheid, a minority of people controlled everything. This led to great inequality and underdevelopment. The way to real development is through democracy which allows everyone the opportunity to shape their own lives and to make a contribution to development.

2.8.2 KEY PROGRAMMES OF RDP

The RDP (1994 : 7) sets out 5 key programmes to rebuild and develop the country:

- meeting basic needs;
- developing human resources;
- democratising the state;
- building the economy; and
- implementing the RDP.

Attention would focus on meeting the basic needs of people and the implementation of the RDP.

A list of important facts below show that almost half of the people do not have such basic things as jobs, houses and medical care (Basic Guide to the RDP 1994 : 7; The RDP - The First Year Reviewed 1995 : 1):

- About 17 million people live below the poverty level;
- In 1990, there was a shortage of about 1.3 million homes;
- About 12 million people have no reasonable access to water and about 21 million do not have adequate sanitation;
- There is spare electricity in South Africa but only 36 % of households are electrified. About 3 million homes do not have electricity; and
- Millions of people do not have adequate health care.

Many RDP projects are infrastructural and directed towards poorer areas and communities. By sector, the biggest spending has been on urban housing, infrastructure and renewal (R 3 billion), health (R 2,7 billion) and water (R 500 million). However, considerable amounts of unspent money were rolled over after the first two years of the RDP. This was mainly due to government departments not being geared to spend money according to the RDP principles (Naidoo, 31 October 1995; Stewart 1997 : 12).

The implementation of RDP promises and plans, and especially the lack of implementation, has been the subject of much debate and negative comment. This debate and comment is based both on the RDP's impending failure to meet its own standards (for example, the one million houses in the first five years), and the visible persistence and growth of poverty and inequality. The delay in establishing democratic local government structures clearly impeded RDP processes of that level up till the beginning of 1996 (Stewart 1997 : 10).

It is undeniable, that non-payment for services hampered the delivery of basic services to many impoverished communities (Kroukamp 1995 : 194). Some of the reasons for this situation are listed below:

- non-paying consumers having adjusted their lifestyles in accordance with the increased disposable income;
- a common complaint from residents is that the services for which they are being charged are non-existent, or are of a very poor quality;
- there is suspicion that tariffs charged in townships are not the same as those charged in the city areas; and
- unemployed people simply being too poor to pay for services (Kroukamp 1995 : 194).

In addition, many knowledgeable, senior treasury officials have left local government in large numbers, thereby leaving a void that cannot easily be filled. Sound financial management requires a high degree of financial expertise and without such expertise, financial mismanagement becomes inevitable, thereby exacerbating an already complicated manner (Moodley 1994 : 22). Political supremacy must also lead to political and financial accountability and unless that happens local government finances will remain precarious (van der Linde 1996 : 92).

2.8.3 ROLE OF LOCAL GOVERNMENT IN IMPLEMENTING RDP

According to RDP Challenges (1994 : 3) local government structures are the "hands and feet" of the RDP. Cameron & Stone (1995 : 101) also advocate that viable and democratic local government is crucial to the success of the RDP.

The Centre for Development and Enterprise (1998 : 14) asserts that local government capacity is vastly overestimated. There is a lack of proper and sufficient administrative, managerial and financial capacity in many local authorities, to enable them to function as viable entities. This worrying reality is hardly mentioned in the White Paper on Local Government, March 1998.

On the contrary, the White Paper on Local Government (1998 : 9 - 10) assumes capacity in most respects and then lists and enumerates many new functions for local governments to perform inter alia, :

- represent communities;
- meet basic needs such as water;
- improve the quality of life of communities;
- empower marginalised and disadvantaged groups;
- leverage resources and investment for both public and private sectors to meet developmental targets;
- promote local democracy;
- promote involvement of citizens and community groups in the design and delivery of municipal programmes;
- undertake integrated development planning with very sophisticated requirement;
- negotiate a public investment plan around all government investment in the municipal area;
- develop strategies and mechanisms to continuously engage with citizens, business and community groups;
- be the point of co-ordination and necessary vehicle for implementation of national policies and programmes;
- ensure the environmental sustainability of delivery and development strategies;
- adopt a holistic strategy for poverty alleviation;
- attract investment; and
- support the growth of local enterprises.

The above is a difficult and daunting task for any metropolitan government (The Centre for Development and Enterprise 1998 : 14).

A fundamental question needs to be posed to local government - how does any city or town deal with the current list of demands being made on their limited resources ?

There is an increasing focus on decentralisation from the national government, and there is a growing pressure for delivery of basic services from the previously ignored and under-serviced part of the urban population (Mahwood 1993 : 1; Reddy 1996 : 6; Planact 1997 : 23). These demands arrive at the local authority's door in a context of fiscal cut-backs and stagnant or low economic growth.

It is necessary to re-examine the role that the third sphere of government should play in South Africa today.

2.9 GROWTH EMPLOYMENT AND REDISTRIBUTION (GEAR)

The Growth Employment and Redistribution (GEAR) strategy is aimed at job creation and economic growth through strict fiscal control and a tough deficit reduction schedule. There is also an explicit commitment to modernise industries, enhance the competitiveness of exports and encourage technological innovation. GEAR has major

implications for urban areas. These include privatisation, the rationalisation of the civil service, the issuing of bonds for municipal investments and the introduction of principles of budget accountability in local project management. The tension between GEAR and the RDP will be contested at the local level within the context of developmental local government. Crucially GEAR places higher priority on debt reduction than on social spending (GEAR 1996 : 1).

In the urban context this means privatisation and the promotion of the principle of cost recovery which will reflect in inadequate subsidies targeted at the poor (Parnell & Pieterse 1998 : 13).

The principles of GEAR are institutionalised in so far as all municipal priorities have to be formulated within the context of a budget that cannot be overspent and in the context of locally generated revenue (Parnell & Pieterse 1998 : 13).

2.10 CONSOLIDATED MUNICIPAL INFRASTRUCTURE PROGRAMME (CMIP)

The Consolidated Municipal Infrastructure Programme (CMIP) is designed to further the aims of the RDP by: (Consolidated

Municipal Infrastructure Programme Handbook 1998 : 1, Batte
1999 : 9):

- the provision of internal bulk and connector infrastructure in support of household infrastructure to needy South Africans in ways that enhance the integration of previously divided areas;
- enhancing the developmental impact of the delivery process: for example, by focusing on the transfer of skills and the promotion of small, medium and micro-sized enterprises (SMMEs), using labour-intensive construction processes and maximising job-creation opportunities.

In terms of the Consolidated Municipal Infrastructure Programme Handbook (1998 : 1):

- Over a 10 year period, CMIP will provide capital grants to municipalities to provide services such as water, roads, solid waste and community lighting to needy South Africans.
- An amount of up to R3 000 per site will be made available per low income household - that is, households with an income of less than R3 500 a month.

- CMIP funds can be used to leverage additional funds to provide higher levels of service, on condition that it is affordable to the community.

The Department of Water Affairs and Forestry has utilised RDP funds for both peri-urban and rural infrastructure programmes, and has worked through provincial planning forums to prioritise projects. Projects have been implemented by municipalities, water boards and community structures (Consolidated Municipal Infrastructure Programme Handbook 1998 : 4).

2.11 CHOOSING PRIORITIES FOR LOCAL GOVERNMENT IN THE NEW SOUTH AFRICA

According to the Centre for Development & Enterprise (1998 : 19 - 21) the following aspects present staggering challenges to local government as the new millennium draws near:

- How many billions of rand are required to meet the basic infrastructural needs of urban South Africa ? How are these needs defined, what are the most critical priorities and how far do current provisions fall short of the critical needs ? It has been estimated that the Municipal Infrastructure Investment Framework, developed

to address backlogs in infrastructure delivery over the next ten years, will cost between R60 and R80 billion, an amount that local government will not be able to meet without private sector co-operation. These amounts appear to be enormous and to set an unrealistic challenge. Are they valid and how is the challenge to be approached ?

- What is the current rate of urbanisation, and to what extent is this adding to the backlogs as regards services ? What are the latest trends in the increase in informal settlements ? What are the characteristics of the in-migrants and what are the implications for cost recovery of services ?

- What are the current service backlogs in local government delivery levels ? In 1996, about 4 million South Africans had access only to untreated and non-reticulated water; 8 million people had access only to minimal sanitation; 8 million people did not have formal road access to their residence or any storm water drainage. While running tap water was available in 74% of dwellings in urban areas, the total in non-urban areas was just 16,8 % and in predominantly African non-urban areas was even lower, at 12 %. About 17 million people were without access to electricity. Local authorities were responsible for refuse disposal in



90.9% of urban areas, but only 7.7 % of rural areas. While only 1.8% of urban areas have no form of refuse disposal, this figure was 29.4% in rural areas. These estimates, if indicative of the reality, need prompt action to provide adequate services for all.

From the above exposition, it can be stated that the post-apartheid State has radically transformed and extended the role of local government. The municipality today is expected to become the primary development champion, the major conduit for poverty alleviation, the guarantor of social and economic rights, the enabler of economic growth, the principle agent of spatial or physical planning and the watchdog of environmental justice. The social, environmental, economic and physical challenges and aspirations of urban communities are to be simultaneously confronted in a holistic vision of sustainable development that will be operationalised at the municipal scale (Parnell & Pieterse 1998 : 4).

2.12 SUMMARY

In Section 40 of the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996), it is stated that the Government of the Republic is constituted as national, regional and local spheres of government which are distinctive, interdependent and interrelated.

The provision of public services is directed through the three spheres of government. Central government, being responsible for the country as a whole, is entitled to set high expectations in the delivery of basic services such as water. No local government, however, could meet these expectations unless it has sufficient funds. In addition, local governments should be in a position to impose local taxes and service charges. In speeding up service delivery, local government requires sustained support of both regional and central governments.

Two approaches of public administration has been given particular emphasis in this chapter viz. the traditional approach advocated by Cloete and the innovative approach proposed by Fox, Schwella & Wissink. Cloete stresses the classification of activities into four main groups of generic administrative and managerial, auxiliary, instrumental and functional activities whilst Schwella et al. stresses the importance of the environment (general and specific) for the theory and practice of public management.

A combination of the Cloete-Schwella approach has been proposed. This new approach highlights key aspects of the traditional approach and the innovative approach. Within the context of this approach, local government may become more effective and efficient in the delivery of basic

services, such as water, in the face of rapidly growing urban populations.

It is expected of every public functionary to abide by certain rules and standards of behaviour in accordance with the prevailing values of society. It is therefore incumbent upon every functionary to ensure that their actions are aimed at promoting the welfare of the community.

During the apartheid era, local government was divided according to racial lines. There were fiscally sound White local authorities and administratively and financially weak Black local authorities. Local government restructuring was imminent, therefore the challenges facing local government today, is not only to redress historical imbalances and spatial distortions, but to manage its resources in such a way that it leads and facilitates the development of impoverished communities.

It is imperative, that local authorities should have the competence to govern and to administer efficiently.

Municipal functionaries play a crucial role in service delivery and it is imperative that they act fairly, justly, impartially and transparency must be fostered at all times.

The need for effective, democratic and accountable local government as a vehicle for development and national integration is necessary.

To ensure that economic growth and development is achieved, poverty is eradicated and the quality of life of all South Africans is enhanced, the spirit and successful implementation of the Reconstruction and Development Programme as well as Integrated Development Planning must prevail.

CHAPTER THREE

URBANISATION : A COMPARATIVE STUDY

In a very real sense these ports - Buenos Aires, Lagos, Calcutta, Shanghai, with their modern buildings, installations, and services - were as much part of the developed world economy as today's European bidonvilles are a projection of the poorer countries. This is the background - of long subservience to an economic system designed for other nations' interests, of an infrastructure still geared to those interests, of relatively stagnant agriculture, ... and export cities dominating the urban scene - that we must bear in mind when we examine the settlement of the developing world.

Barbara Ward, 1976

3.1 INTRODUCTION

The accelerating pace of urbanisation, especially in the countries of the Third World, has been a matter of growing concern to planners, decision-makers and development analysts. Rapid population growth, unbalanced urbanisation and the deteriorating human environment form the trilogy of problems, which the Third World countries are facing today.

These problems seem to negate all national planning and development efforts aimed at improving the quality of human life. The Third World contains some of the largest and the fastest growing metropolitan cities in the world, which invariably function as primate cities.

In this chapter, definitions of urbanisation will be offered and a critical overview of the causes will be presented. The impact of apartheid on urban spatial structure warrants an in-depth discussion. An attempt would also be made to focus on the genesis of third world urbanisation, drawing examples and parallels from Latin America, the Caribbean, Africa and Asia.

3.2 DEFINITION OF URBANISATION

Urbanisation means different things to different people:

According to Swanepoel & Van Zyl (1997 : 135) urbanisation can be described as a worldwide process of transformation whereby communities change from a rural to an urban place of residence, work place and lifestyle:

The process can be viewed in two ways, namely demographic (the percentage of urban dwellers in proportion to the total population), and socio-economic (how city dwellers experience life in the

urban environment, which includes the circumstances in which they live and work and the influence of the city on their quality of life and happiness).

Diddee & Rangaswamy (1993 : 57) provide a comprehensive definition of urbanisation as a continuous and complex process whereby the proportion of population living in places defined as urban, by an appropriate national authority increases, *vis-a-vis* the rural component:

Rural urban transfer has been the moving force behind the rapid pace of urbanisation in the Third World countries. There are two notions involved - one geographical, the other sociological and, although closely related, they are not identical. One relates to place, the other to people.

It can, therefore, be deduced that urbanisation is a process whereby people move from a rural area to an urban area in search of a better life.

3.3 IS THE GROWTH OF CITIES A GOOD OR BAD THING ?

The process of urbanisation impacts on urban growth and development. Opinions differ sharply on whether urban growth is a good thing or not. On the one hand, the popular perception is that it is a bad thing, conjuring up

images of appalling slum conditions and human misery. On the other hand, many see cities as symbols of prosperity and civilisation, and as the engines of economic growth (Devas & Rakodi 1993 : 25).

Historically, cities have grown as the centres of trade. The concentration of activities in the cities permits specialisation and exchange - processes which are essential to economic growth. Commerce and industry are located in the cities because of the existence of external economies of scale: pools of skilled labour, access to capital, availability of information, common services, markets for products and sources of inputs. Such interdependencies mean that urban services have a clear comparative advantage for industry and commerce: few industries can survive in isolated locations (Devas & Rakodi 1993 : 25; Roberts 1996 : 272).

In the view of Lipton (1977 : 13), cities have managed to extract most of the resources from the rural areas and have spent them on high levels of urban consumption. In many countries, the rural sector has been exploited through low product prices and high taxation, while resources have been wasted on bloated bureaucracies and projects in capital cities.

It can be deduced that urbanisation is neither good nor bad. It is not, in itself, a cause of economic growth: rather it is a response to it. The principal objection to the urbanisation process in the developing world has arisen because of the failure to cope with its effects - the failure of governments to meet the basic needs for land, shelter and services of the growing urban population (Devas & Rakodi 1993 : 27 - 28).

Therefore, it is not urban growth itself which is the problem, but the rapid rate of growth, which outpaces the institutional, administrative and financial capacity to cope with it. This challenge must be met without wasting resources or distorting the pattern of national development. Continued urban growth in the world is inevitable (Devas & Rakodi 1993 : 27 - 28).

3.4 THIRD WORLD URBANISATION

The United Nations Report (1990 : 2) estimates that more than 66 % (nearly 2.2 billion) of the world's urban population will be living in developing countries by the year 2000. This will result in an increase of more than 265 million urban dwellers in African cities, more than 300 million in Latin and Central American cities, and 93 million in Asian urban centres. By the end of the 1990s, it is expected that about 42 % of the population in Africa

will be living in cities, as will 75 % in Latin America and 40 % in Asia (Rondinelli & Johnson 1990 : 248; Devas & Rakodi 1993 : 6).

Migration patterns are also changing rapidly in the more urbanised developing countries (Rondinelli & Johnson 1990 : 248). In a number of Asian countries, cities are expanding more as the result of natural increase than as a consequence of migration from rural areas. Rural to urban migration accounts for less than 35% of urban population growth in Thailand, the Philippines, Malaysia, Pakistan, India and Indonesia. In Pakistan, rural to urban migration accounted for about 22% of the population growth in urban areas in the late 1970s. About 70% of the urban population growth was due to natural increase (World Bank 1990 : 5; Urban Foundation 1990 : 3; Devas & Rakodi 1993 : 7).

By the end of the 1990s, large cities in developing countries will be more numerous and of much bigger size than many of those in more developed countries (Urban Management Programme Annual Report 1993 : 8; Wratten 1995 : 11).

In 1950, there were 31 cities in developing countries with more than 1 million residents; by the year 2000 there will be 284 such cities. At least 45 cities will reach 5 million or more in population (Urban Management Programme Annual Report 1993 : 8).

The United Nations Report (1990 : 3) estimates that by the end of the 1990s, 20 of the 25 largest cities in the world will be in developing countries, with the population of Mexico City reaching nearly 26 million and Sao Paulo about 24 million (Rondinelli & Johnson 1990 : 248; Cotton & Franceys 1993 : 129; World Bank 1995 : 3).

Many cities have serious deficiencies in housing that exacerbate the problems of the poorest families in finding decent shelter. The World Health Organization (in World Bank Report 1995 : vii) estimates that one quarter to one half of the urban population in developing countries is unserved by basic urban services. Approximately 25 % to 30 % of the urban population in Latin America, Africa, and the Middle East, and more than one-third of the urban dwellers in Asia and the Caribbean, lack access to water (Stren & White 1989 : 7, 38 - 42 ; Devas & Rakodi 1993 : 8 - 9; Diddee & Rangaswamy 1993 : 166 - 167; Hoque, Hoque, Ali & Coghlan 1994 : 79).

The percentage of urban population that lacks access to sanitation systems is even greater. About two-thirds of urban households in West Africa lack basic sanitation services, as do more than half in Asia, Central America, Latin America, North Africa, and the Middle East (Rondinelli & Johnson 1990 : 253; Urban Foundation 1993 : 14 - 15; Urban Management Programme Annual Report 1993 : 8; Hoque et al

1994 : 81 - 82).

With the rapid increase in population in Third World cities, there will be a dramatic shift in the incidence of poverty (Devas & Rakodi 1993 : 12; Wratten 1995 : 11).

A World Bank Report (1995 : 3) indicates that although about two-thirds of those households now living in absolute poverty are in rural areas, by the end of the 1990s more than half of the absolute poor will be concentrated in urban places.

In Latin America and the Caribbean over 90% of the absolute poor will be urban dwellers, as will be about 40 % of the poorest in Africa and about 45 % of those in Asia. In Eastern and Western Africa, the number of households living in absolute poverty is expected to increase from about 2.1 million to more than 7.9 million by the end of the 1990s.

In East Asia and the Pacific, there is likely to be a growth of 3 million poor households, as there will be in cities of the Middle East and North Africa (World Bank Report 1995 : 3). In South Asia, the number of poor urban households is expected to triple, from a little more than 10 million in 1975 to about 32.5 million in the year 2000 (World Development Report 1989 : 12).

In Latin America and the Caribbean, the number of poor households living in poverty is expected to more than double from the 1975 level of 33.5 million to about 74.3 million at the end of the 1990s (Rondinelli & Johnson 1990 : 3; Cotton & Franceys 1993 : 129; United Nations Commission Report on Sustainable Development 1994 : 8).

United Nations Children's Fund (UNICEF) estimates that nearly 70 % of Addis Ababa's 1.2 million residents live in the city's congested slums, and that 64 % of these households live in absolute poverty. About one-quarter of Kuala Lumpur's population have incomes below the poverty level. More than 40 % of Lima's residents live in *pueblo jovenes*, where only 7 % have access to water and sewerage facilities, more than half have no stable employment and 60 % suffer from malnutrition. About 6000 tons of garbage are dumped in areas around these slums each month because of inadequate refuse disposal services in the city (Berry 1981 : 89; World Bank Report 1995 : 11).

United Nations Children's Fund (UNICEF) studies (in World Bank Report 1995 : 15) indicate that more than half of the population of Colombo, Sri Lanka, is living in congested "shanty gardens", where sanitation, water, waste disposal, health and educational services are scarce. More than 60 % of the residents of Casablanca, Kinshasa, Bogota and Calcutta now live in slums, as do more than 40 % of the

residents of Buenos Aires, Mexico City, Lima and Bombay. At least one-third of those living in Nairobi, Dakar, Rio de Janeiro, Delhi, Dacca and Manila are slum dwellers who lack access to even basic urban services (Berry 1981 : 89; Rondinelli 1986 : 3).

In the Philippines, about 53 % of the families in cities are poor and more than 40 % live in absolute poverty. In Thailand only about one-quarter of the urban population is served by piped water (World Development Report 1991 : 7).

A major obstacle to urban economic growth in developing countries is the inability of most local governments to raise adequate revenues and to manage services and infrastructure efficiently (Stren 1989 : 20 ; Rondinelli & Johnson 1990 : 254; Abbot 1994 : 207; World Bank 1995 : 3).

A crucial problem for developing nations will be to increase production and expand employment opportunities sufficiently to absorb the rapidly growing numbers of urban workers. It is for this reason that productive capacity must be increased rapidly to create about one billion new jobs in urban areas over the next few years. Many urban residents earn their living through part time employment, in informal jobs such as hawking and vending, or by providing low cost services (Berry 1981 : 89; Rondinelli & Johnson 1990 : 252; Urban Management Programme 1993 : 9).

Additional problems arise for developing countries from the spatial distribution of jobs. In many of the poorest countries, employment opportunities in manufacturing and commercial services are highly concentrated in one or two large cities. For example, nearly half of Bangladesh's total formal sector manufacturing employment is found in Dhaka. Dhaka accounts for nearly all of the country's employment in rubber products, the furniture industry, footwear production, and leather goods, and more than half in machinery production and textiles. Similarly, more than 50 % of Egypt's skilled tradesmen and workers in transformative industries and 36% of its production workers are concentrated in Cairo (Rondinelli & Johnson 1990 : 252; World Development Report 1991 : 9).

Developing economies will have to generate jobs for a labour force that is now dominated by people in relatively young age groups (Brimble 1990 : 264; Swanepoel & van Zyl 1997 : 266 - 269).

3.5 URBANISATION : SELECTED INTERNATIONAL EXPERIENCE

In the process of urban policy-making, one of the most critical elements is an exchange and learning from other people's experience. The following countries are examined

and discussed:

- the focus on Mexico City is related to the speed and manner in which it grew and outstripped the ability of local officials to implement plans in order to house its population of poor people;
- the focus on Seoul is related to its model of service delivery and the lack of community participation in its "top-down, centralised government approach"; and
- the focus on Nigeria is related to the inability of local and urban governments to provide essential services without an appropriate financial base to perform them.

In light thereof, it is urged that policy-makers can benefit from learning lessons, both positive and negative, from the record of managing urban growth in the above countries.

3.5.1 MEXICO CITY

Mexico City is currently the largest city in the world with Sao Paulo, of Brazil, second (Cottrell 1979 : 13; Webber 1985 : 7; Rogerson 1989 : 149). No long term planning was in place when the rate of population increase surged and the number of people was multiplied by a factor

of 8 in the 30 years between 1940 and 1970 (Wilcock & Muller 1996 : 77).

The growth of Mexico City increased from an urban place of just over half a million people into an urban giant of some 18 million. The urban managers of Mexico City did not cope very well with the rapid urbanisation that confronted them. This could be ascribed to a lack of domestic capital, inadequate information and too little planning compounded by inappropriate and erroneous political decisions taken at a higher level. The result was the rapid emergence of the largest concentration of urban population in the world in an urban environment that was ill-prepared to either receive or cater for them (Rogerson 1989 : 154; Girardet 1992 : 32; Gilbert & Gugler 1992 : 57; Box 1995 : 62 - 63; Paddison & Lever 1997 : 165).

It may appear that there is no basis for urban policy makers in South Africa to learn any direct lessons from a study of the largest city in the world. No single city in South Africa is remotely near the present size of the Mexican capital. The important lessons are indirect ones, but need to be learnt and acted upon soon to avoid an unplanned drift into over-crowded and unstable urban chaos (Rogerson 1989 : 153).

The message for South Africa is also to plan and install the new infrastructure in advance of any further surge in urbanisation rates or in the numbers of people who can only look to squatter settlement for accommodation (Rogerson 1989 : 153).

If those who govern, fail in the task of developing and implementing a humane, positive and successful urban policy, considerable cost in human suffering would be paid by the Black poor who are the ultimate victims of apartheid (Rogerson 1989 : 154).

3.5.2 SEOUL

Seoul has emerged as one of Asia's most dynamic metropolises and an important world city (Crowther 1982 : 36). The United Nations Report on Seoul (1986 : 37) emphasises the record of success since 1960 in managing the widespread delivery of education, health care, water supplies and power to the city's rapidly expanding population. The overriding theme is of the "significant improvement" in the supply of public services. For example, the city's sewerage network is deemed "fairly adequate", power supplies "dependable" and educational and health facilities "well developed" (Reid 1988 : 63; Breen & Gustaveson 1996 : 118 - 122).

A number of experiments have been undertaken to mobilise community resources in the delivery of essential urban services to the poor through a "bottom-up", decentralised and participatory approach. These attempts at "participatory urban services" are viewed favourably as providing potential lessons for service delivery to the poor in other cities of the developing world (World Bank Report 1986 : 37; Chung, Haffner & Kaplan 1988 : 21 - 22).

A mixture of top-down and bottom-up approaches can offer a viable means of managing improved service delivery to the urban poor (United Nations Report 1986 : 38).

The successful record in managing a phase of accelerated expansion is an important lesson - if left uncontrolled, rapid urban development inevitably will degenerate into a situation of urban chaos. The Seoul experience suggests that policy attention needs to be directed to the potential of participatory urban service delivery systems and to blend top-down and bottom-up service delivery procedures (Rogerson 1989 : 157).

3.5.3 NIGERIA

Nigeria, the most populous country in Africa, is a classic example of a country in the developing world with a high rate of urban growth. It has been estimated that the

population of Nigeria will probably reach 160 million by the year 2000 (Onibokun 1989 : 71; Conyers & Hills 1992 : 220; New African Yearbook 1999/2000 : 354 - 360).

There were 25 urban centres (settlements with 20 000 and more inhabitants). This figure had increased by 125% to 56 in 1953. Between 1953 and 1963 the number of urban centres in Nigeria grew from 56 to 185. Reliable estimates put the share of urban population at present at over 35%. This proportion is expected to reach 68% by the year 2020 (Onibokun 1999 : 87).

The components of urban growth are natural growth, migration and reclassification of boundaries. The urbanisation process for Nigeria is not unique. The rapid rate of uncontrolled and unplanned urbanisation has brought with it, complex urban problems in the form of competition for land, long journeys to work, traffic difficulties (congestion), acute shortage of housing, rapid growth of slums and accompanying health hazards, qualitative and quantitative depopulation of the rural areas and high incidence of crimes (Onibokun 1989 : 71; Onibokun 1999 : 89; Africa, South of the Sahara 1999 : 797).

The absence and inadequacy of necessary supporting infrastructure and social amenities in most of the urban areas is a noticeable problem. Water supply, sewers,

roads, electricity, health facilities, and social services are heavily overloaded and unreliable (Onibokun 1989 : 71; Onibokun 1999 : 92 - 95).

Local and urban governments are given several and varied responsibilities without an appropriate financial base to perform them. The ability and capacity of the local and urban governments to provide the essential services and amenities are greatly hampered (Onibokun 1989 : 106).

No adequate level of facilities can be provided for urban areas until the population stabilises and the rural areas are provided with their own facilities and services. Rural development is a prerequisite to urban management (Onibokun 1989 : 111).

Even with the oil wealth, there has not been significant evidence of poverty alleviation in Nigeria - the situation has continued to deteriorate. The introduction of structural adjustment programmes had only benefitted a few individuals in positions of power, while the majority of people remain in extreme poverty. The First and Second National Development Plans failed to adequately address poverty (Onibokun 1999 : 93). Unless positive steps are taken, the quality of urban life in Nigeria will deteriorate faster and the future will be bleak, most especially for the urban poor.

Urbanisation in South Africa has not yet developed to the point that it can be regarded as over-urbanised. South Africa is still under-urbanised, with the result that there is a very great potential for the realisation of the full benefits of the positive aspects of urbanisation. There is still time to counteract the disadvantages of urbanisation by means of imaginative plans of action (Swanepoel & Van Zyl 1997 : 141).

A positive policy of accelerated urbanisation can be a powerful stimulus for economic growth. A policy of active urbanisation, if managed correctly, can be an important means of bringing about social change and has the potential to stimulate economic growth and development over a broad spectrum (Swanepoel & Van Zyl 1997 : 141).

3.6 URBANISATION : SOUTHERN AFRICAN PERSPECTIVE

According to Sapire & Beall (1995 : 3), Southern Africa enjoys a unique status in the world's least urbanised, but most rapidly urbanising continent. Rural-urban labour migrancy is a significant factor in urbanising patterns and natural increase within city populations themselves has become an important determinant of urban population growth.

The population of Southern African cities today, are characteristically youthful ones, with considerably better life expectancy chances than those of earlier generations of urban dwellers (Development Bank of Southern Africa 1993 : 10- 12; Hindson & McCarthy 1994 : 92).

Civil war in Angola and Mozambique since the 1970s, and the recent economic boom in Botswana have impelled thousands of rural people into urban areas (Sapire & Beall 1995 : 3).

Southern Africa displays a wide variety of urban forms,

The population of Southern African cities today, are characteristically youthful ones, with considerably better life expectancy chances than those of earlier generations of urban dwellers (Development Bank of Southern Africa 1993 : 10- 12; Hindson & McCarthy 1994 : 92).

Civil war in Angola and Mozambique since the 1970s, and the recent economic boom in Botswana have impelled thousands of rural people into urban areas (Sapire & Beall 1995 : 3).

Southern Africa displays a wide variety of urban forms, ranging from rural villages and informal settlements, to major metropolitan centres, some of which have world city status (Sapire & Beall 1995 : 3).

3.7 SOUTH AFRICA

South Africa is a country rich in diversity. Its people and their respective cultures and traditions, and its natural beauty and wildlife constitute a few of the aspects that make up a rainbow country in the true sense of the word (South Africa Yearbook 1997 : 1).

The Republic of South Africa occupies the southernmost part of the African continent, stretching latitudinally from 22° to 35° S and longitudinally from 17° to 33° E.

To the west, south and east, South Africa borders on the Atlantic and southern Indian oceans (South Africa Yearbook 1997 : 1).

According to Dewar (1992 : 243) urbanisation ranks as one of the most significant dynamics currently affecting South African society. Although in-migration is occurring apace, most urban growth is the result of natural increase: the urban explosion is irreversible and will continue for a long time to come. The highest rates of growth are amongst the poorest people: the dominant demographic tendencies are faster, younger and poorer. Accompanying this growth are high and increasing levels of poverty, inequality and unemployment with a large and increasing proportion of people seeking survival in the informal economic sector: the socio-economic profile within South African cities corresponds increasingly with those of other Third World cities.

An attempt will be made to highlight the historical origins of urban South Africa and the impact of apartheid on South African society.

3.7.1 ORIGINS OF URBAN SOUTH AFRICA

Legal slavery ended in the Cape colony with the British Imperial emancipation of 1834. Until that time such towns as existed in Southern Africa were few and tiny; the largest concentrated, non-rural settlements probably consisted of the enormous residential 'villages' of Tswana chiefdoms and the large capitals of the Zulu kingdom. Both were devoid of the commercial and financial institutions which grew rapidly in colonial parts such as Cape Town and Port Elizabeth and country towns like Graaf-Reniet and Beaufort West from the 1830's onwards (Christopher 1988 : 152; Mabin 1992 : 13).

White expansion into more remote reaches of the interior brought conflict with established politics. For the African communities already settled in these areas and subjected to colonial and boer expansion, the results generally meant anything from declining independence of the chiefdoms to forced labour for White settlers (Mabin 1992 : 14).

Urban-rural migration on any scale is often taken to have begun in South Africa with conscious attempts on the part of White colonial and Boer Republican authorities to extract labour for farm and mines late in the nineteenth century (Magubane & Yrchik 1977 : 12; Mabin 1992 : 16).

From the 1850s onwards, a number of economic changes wrought a revolution in the urban pattern. An influx of foreign investment occurred, a massive expansion of the economic activity began, and a new export in diamonds rapidly grew (Magubane & Yrchik 1977 : 12; Mabin 1992 : 16).

The period which migrants spent at urban destinations varied greatly, ranging from very short to lifetime terms. Equally, household or family participation in such migration has also varied, involving parties from individuals to whole extended families (Mabin 1992 : 17).

The government of the Union of South Africa, with its racist constitution providing for an almost exclusively white vote, took control of its million-square kilometre territory in 1910. The African population occupied land as tenants or squatters. Some labour went to production on the farm of residence, sometimes allocated by the household itself under share cropping or rental arrangements (Mabin 1992 : 17).

3.7.2 APARTHEID ERA

South Africa pursued a policy of separation and containment, that of apartheid (Magubane & Yrchik 1977 : 29; Berry 1981 : 109; Schlemmer 1988 : 2; Drakakis-Smith 1992 : 37; Smith 1992 : i).

The National Party which came to power in 1948 marked the beginning of a new era with the development of an affirmative racial policy : separate social, residential, industrial, and political development of different peoples, ensuring security for the Whites and leading to the separate political development of Blacks in separate vassal states. However, the National Party did not invent apartheid - it merely refined it (Berry 1981 : 110; Lodge 1983 : 53; Lemon 1991 : 20 - 25; Maharaj 1995 : 33; Maylam 1995 : 26 - 30; Parnell & Mabin 1995 : 48).

Separate development was designed to meet the two dominant needs of the policy of the National Party Government (Baldwin 1975 : 215):

- an ideological demand for race separation to maintain the status quo of White separacy; and
- an economic demand for rapid industrial expansion and the use of cheap and plentiful Black labour.

The Nationalist Party passed a number of legislative measures that were to leave an indelible stamp on urbanisation in subsequent years. These included the Population Registration Act (1949); the Native Abolition of Passes and Co-ordination of Documents Act (1952), Urban Areas Act and Group Areas Act (Magubane & Yrchik 1977 : 31).

3.7.2.1 INTERNAL PROBLEMS OF APARTHEID URBANISATION

The Group Areas Act of 1950 was one of the key instruments used to reinforce the ideology of apartheid. It served as a powerful tool for state intervention in controlling the use, occupation and ownership of land and buildings on a racial basis and emphasised separate residential areas, educational services and other amenities for the different race groups (Maharaj 1992 : 74; Maharaj 1997 : 135).

The country was divided territorially into a White state containing the major urban areas and White farming areas, and nine Black states, at various stages along the road to independence. By 1964, all Africans in the White areas were regarded as temporary residents whose permanent homes lay in the "Homelands" (Bantustans), to which they were compelled to return if unemployed or if their presence was deemed undesirable (Smith 1992 : 2).

The crucial aspect of the migrant labour policy is the turning of the Black labour force into rightless, powerless migrants, an attempt to reverse the historic trend in which migrancy gives way to permanent urbanisation. There are three features of the migrant labour system (Baldwin 1975 : 226):

- the social aspects of migrancy have often been emphasised, family break up and social disruption, alienation and mental disorders. This social disruption also contributes a significant way of frustrating the development of class consciousness and solidarity amongst workers;
- the political factor where government is attempting to establish all its internal labour supply on the same basis as its external migrant labour, by setting up Bantustans as separate nations. Thus migrant labour should be termed "Bantustan based labour".
- the economic aspect where the rightlessness of migrants leads to their cheapness. They constitute a reserve army of labour. An important feature of this system historically has been the ability of the reserves to support its army of labour to some extent through supplementing the wages, providing certain aspects of social security and effectively reproducing the labour force.

In this way, African labour could live in the homeland and work in the White factories, thus solving one of the continuing dilemmas of the metropolises - maintaining an apartheid policy while satisfying growing needs for industrial employment. Where boundary locations were not

possible, Black male workers were housed in dormitory compounds segregated by tribe and clan, to enable older males to maintain traditional social controls over the young men (Berry 1981 : 114; Dewar, Todes & Watson 1985 : 179 - 181). African migration to the cities had been controlled in a way not parallel elsewhere (Schlemmer 1988 : 10; Gelderblom & Kok 1994 : 86).

By 1970, the sought-after segregation involving such shifts had largely been achieved. The apartheid city contained consolidated group areas that avoided ethnic "islands", and provided "protection" in the form of either physical or man-made barriers separating the group's territory. The non-white areas were generally located close to major industrial foci, with sectoral orientation towards the native homelands where these impinge upon metropolitan areas, as at Pretoria and Durban (Berry 1981 : 112; Gelderblom & Kok 1994 : 86 - 88; South Africa Yearbook 1997 : 25 - 32).

From the mid 1970s, however, the urban racial order envisaged by the proponents of apartheid began to break down as increasing numbers of Black people moved to cities in defiance of the Pass Laws, a process which greatly accelerated once these laws were repealed in 1986. During the same period, the urban Black population was growing due to a high rate of natural population increase (Saff 1994 :

371).

3.7.2.2 GREY AREAS, LOCATIONS AND TOWNSHIPS

In 1985, metropolitan areas in South Africa (including the "homelands") had a total Black population of 8.7 million. These same areas are predicted to have a total Black population of 23.6 million by the year 2010 - an increase of 270 % (Saff 1994 : 378).

In South African lexicon, "grey areas" are those White parts of the apartheid city where people other than Whites have taken up illegal residence. The phenomenon of "greying" first became apparent in a significant manner during the mid 1980s. It reflected the chronic housing shortage created by racial divisions of residential land even for those who were wealthy enough to buy, build or rent substantial homes but who were precluded from the market as a whole merely on the grounds of race. The increased demand for residential space close to the central business district was also promoted by trends in the centre of the city where business houses were increasingly offering employment to Black people for what had formerly been White-only jobs (Beavon 1992 : 237; Goodlad 1996 : 1632 - 1633).

It is in the former "locations" that the worst of some 70 years of segregation and apartheid is most visible. The repeal of all apartheid legislation, a new and popularly acceptable constitution and the granting of a universal adult suffrage will not speedily eliminate the townships. For at least several decades into the future their monotonous and truly grey townscapes will haunt the First World component of the nearby cities, a situation reinforced by the fact that apartheid has lowered the residential value of land adjacent to Black townships (Beavon 1992 : 239).

The townships were declared "independent" municipal areas several years ago. The effect of that window-dressing decision has been not only to sever links with some of the supportive White municipalities but to place a heavy financial burden on the Black residents - many of whom earn low salaries. Blacks sell their labour in the White zone which in turn benefits from the rateable base so created and the bulk of the funds raised are used to serve the white residents (Beavon 1992 : 239).

3.7.2.3 INFORMAL SETTLEMENTS

For the purpose of this study, squatting and the informal settlements deserve special attention. Urban squatting is widespread, almost every developing country has a name for this type of settlement namely (Berry 1981 : 83):-

- in Latin America, they are *barrios, barriadas, favelas, rachos, colonias proletias, or callampas*;
- in North Africa, *bidonvilles* or *gourbivilles*;
- in India, *bustees*;
- in Turkey, *gecekondur districts*;
- in Malaysia, *kampongs*;
- in the Philippines, *barung-barongs*; and
- in South Africa, shanty towns, *mjondolo, mkhukhu, ityotyombe*.

Squatting refers to the settlement of people in places where this is not allowed because there are no formal planning and management or facilities. This is a particular feature of urbanisation in Third World countries. As a result of unemployment and famine, people migrate in their thousands from rural communities to the cities (Webber 1985 : 7). Job opportunities and housing are not available to these generally unskilled and under-nourished people. Most of these migrants make dwellings on the outskirts of the city, because of the shortage of accommodation in the city itself (Municipal Engineer 1994 : 5 - 8).

Squatters use whatever materials they can find: cardboard, wood, grass, plastic sheets and corrugated iron sheets (Diddee & Rangaswamy 1993 : 195). The fact that squatting is illegal in most countries makes no difference. Attempts to keep the flow of squatters out of the cities, to demolish

squatter camps, even forced resettlement, are mostly in vain. Large pockets of densely populated slums and squatter settlements remains a feature of city life (Cotton & Franceys 1993 : 129).

Juppenlatz (in Berry 1981 : 83), a former United Nations official, describes the informal settlements as:

... a spreading malady, fungus, or plague of excessive squalor, filth and poverty ... human depravity, deprivation, illiteracy, epidemics and sickness with growing crime rates and juvenile delinquency ... land grabbing and disrespect for property rights by a growing number of squatters ...

Cotton & Franceys (1993 : 129) reinforces this description of the informal settlements:

... waterlogged ground thick in mud due to poor drainage; ill-defined access ways and unpaved roads; long queues to obtain water from a single public tap or an expensive water vendor; open spaces covered with human excrement because there are no sanitary facilities; uncollected heaps of rotting garbage infected with vermin ...

Onibokun's (1973 : 52) description of slums strengthens the view that government's attention is required to promote the quality of life of the poor :

... today, the hearts of our cities are like islands of poverty in seas of relative affluence as it does not require professional skill in environmental perception to note the differences between the residential, environmental and the overall physical structure of the central parts of Lagos and Ibadan for example, and their suburbs. The majority of the urban dwellers live in the unkempt and often squalid hearts of the cities, under conditions that are at times subhuman, sharing substandard houses in areas, which, by any standard are slums.

Wide ranging misconceptions concerning homeless people in informal settlements include the assumption that (Adler 1994 : 99):

- they live in united communities with common purpose, which now that apartheid is dead, will, with representative leadership, simply join in stakeholders, negotiations and enter the development process under the fashionable heading of "grassroots participation";

- they are homogeneous, undiversified group; and - they are resourceless, without skills, isolated and helpless.

South Africa's informal settlements vary greatly in their setting, population size, density, social ratification, levels of wealth and poverty, social organisation, political division and conflict. People come to live in such settlements for a variety of reasons (Mabin 1992 : 20).

Squatters are, in effect, refugees from the formal townships where they had been hidden in crowded houses and backyard shacks in the day when the right to live even in a Black township was restricted by the infamous Section 10 of the Natives (Urban Areas) Consolidated Act (Beavon 1992 : 237).

Many informal settlements are found within "homeland" boundaries but adjacent to "White" South Africa, or on the urban fringes within "White" South Africa (Saff 1994 : 378).

The response of the State has been to simply destroy the shacks. Such bulldozing tactics have done nothing to alleviate the plight of the victims and have aggravated the strained relations between Blacks and Whites over residential land. The cry from squatters is for security for tenure about all else. The number of homeless and jobless people will increase in the future : a squatterscape

will certainly be part of the new South Africa (Beavon 1992 : 237).

Therefore, governments and international organisations should extend utilities and community facilities to these people, including services such as health, water, sanitation, electricity and transportation in an attempt to ensure that the needs of the poorest people are met (Roberts 1978 : 6; Berry 1981 : 89).

3.7.2.4 POLITICAL REFORM : 1990s

From 1990, the State has been set irrevocably on a path towards a non-racial society and embarked on more meaningful political reform (Maharaj 1995 : 2). The State also began backing away from the eviction of "squatters" on state-owned land.

Further, local authorities (Black and White) were placed in the defacto position that in order to move squatters alternative land had to be made available. This introduced a new facet of the changing spatial structure, this being the location of informal settlements within the boundaries of more affluent urban areas.

Three distinct processes with regard to the changing racial structure of South Africa's urban areas can be identified (Saff 1994 : 381):

First, the desegregation of the inner city and the limited desegregation of "White suburban areas. The desegregation of the White suburbs is essentially class-based, with access determined by wealth rather than race.

Second, the expansion of Black townships onto land adjacent to the White suburbs (which are often in the process of desegregation) and the expansion of informal settlements on the urban fringes of "White suburbs".

Third, the spontaneous growth of informal settlements within more affluent suburbs. These areas, each with their own dynamics, are a site of contentious struggle, as property owners in these areas are bitterly resisting the creation of these low-income settlements in their relatively more affluent midst. Ratepayers are concerned that the value of their properties will drop.

The three processes are occurring spatially in five interrelated urban settings: the inner city, White suburbs, Black townships, informal settlements on the periphery and informal settlements within White suburbs.

The struggle for land, housing, social services and jobs is likely to continue and intensify in the future. In the postapartheid State the class (as opposed to racial) dimension of this struggle are likely to become more overtly pronounced, with access to urban space based on wealth rather than racial criteria becoming the defining characteristic of South Africa's cities (Saff 1994 : 381).

3.8 URBANISATION CHALLENGE

From 5 million people in 1951, South Africa's urban population reached more than 13 million in 1980 and is likely to more than double that by the end of this century, reaching about 28 million (Urban Foundation 1993 : 3).

It is further estimated that the urban population will have grown from the current 23 million to between 36 and 42 million by 2010, with enormous repercussion in the cities, as well as in the country's extensive rural areas (Urban Foundation 1993 : 3).

According to President Nelson Mandela (Daily News, 18 January 1996) urban areas are the productive heart of the economy but are extremely inequitable and inefficient due to decades of apartheid mismanagement.

As people move to the cities, new opportunities emerge. Urban growth, therefore, does not necessarily mean greater problems; it offers many opportunities (Daily News, 18 January 1996).

Simkins' estimate (in Tomlinson 1990 : 22) of the future urbanisation levels of South Africa is shown in Table 3.1.

TABLE 3.1 URBANISATION RATES BY RACE, 1980 - 2000

YEAR	WHITES	COLOUREDS	INDIANS	BLACKS	TOTAL
1980	88.4	76.6	90.6	32.6	46.8
1990	89.4	80.6	90.6	39.4	52.5
2000	90.4	84.6	90.6	47.3	58.2

(Tomlinson 1990 : 22)

One of the major challenges facing the new South Africa (Smith 1992 : i) is to turn cities, which were substantially remodelled under half a century of apartheid, into places of real opportunity for the masses of the people.

A discussion on managing urban growth in South Africa follows.

3.8.1 MANAGING URBAN GROWTH IN SOUTH AFRICA

The World Bank Report (1992 : 21) indicated that urbanisation problems have reached a magnitude and importance necessitating immediate attention, especially by Third World Governments. It asserted that:

... all countries will be better off with a national urbanisation strategy, more especially, those nations which combined rapid rates of urbanisation with relatively high rates of population growth.

These advices are applicable to a post-apartheid South Africa. The Reconstruction and Development Programme (RDP) highlights poverty, backlogs in service delivery and meeting basic needs (Liebenberg & Stewart 1997 : 122). The RDP also proposes an integrated approach to South Africa's development challenge (Heymans 1995 : 51).

According to Heymans (1995 : 51) cities and towns need specific attention as they have a key role in equipping the country to meet its economic and social goals and to address its many socio-economic inequities.

Failure to manage urban development effectively will exacerbate the social disruption, violence, economic despair and physical degradation many people have come to associate with cities and towns. Moreover, degradation will not be confined to urban areas but will permeate the entire economic fabric of society (Heymans 1995 : 51). If a significant improvement in urban performance is to be achieved, a more integrated, co-ordinated and cohesive form of urban development must be promoted (Webber 1985 : 40).

South Africans must pursue dynamic urban development - focusing on alleviating poverty and meeting basic needs on the one hand and achieving success on the other (Urban Foundation 1993 : 18; Heymans 1995 : 51).

Basic infrastructure and services need to be provided to ensure a basic level of human welfare. Lower income areas require specific attention if cities and towns are to become more habitable. Better housing, infrastructure and services will make it possible to eradicate air and water pollution, secure the supply of adequate water, proper sanitation and drainage and the management of solid and industrial waste (World Bank Report 1992 : 20; Cotton & Franceys 1993 : 130; Heymans 1995 : 52).

The urban challenge is to manage growth in such a way that the generative capacity of cities is maximised; that opportunities are created which satisfy the set of human needs and requirements; that all people have access to opportunities; the system must be able to accommodate the needs of the poorest and most vulnerable members of society; and that the full range of available resources is mobilised and efficiently utilised (Dewar 1985 : 38).

3.8.2 POLICY CHALLENGE OF URBAN MANAGEMENT

The management of accelerated growth of South Africa's cities requires the design and implementation of a range of new policies in order to assist the absorption of growing populations. A set of policies to address the satisfaction of basic human needs in respect of income opportunities, shelter and the provision of urban services such as education, health, water, sanitation, transport and electricity is a growing priority (Fick 1990 : 31; Morris 1994 : 2; Urban Strategy Report 1994 : 3).

South African policy-makers were concerned primarily with the planning and building of cities for populations with steady incomes, who were able to pay for the shelter and services they used. The actions of thousands of informal urban builders, however, forced local policy-makers to confront the needs and demands of the new builders of South

Africa's cities (Rogerson 1989 : 130;). These were communities who could afford to pay little or nothing for housing and services, build their own shelter and neighbourhoods, and who subsisted on inadequate and unstable incomes upon which household survival depended (Khuzwayo 1995 : 2).

3.8.3 URBAN DEVELOPMENT FRAMEWORK

More than half of the South African population currently live and work in urban areas, which are growing at approximately 5 % per annum. Some 80 % of the Gross Domestic Product (GDP) is produced in the cities and towns. Their well being is vital to the national economy, to meeting the basic needs of the poor and to sustain the environment (Urban Development Framework 1997 : 1).

The key characteristics of the Urban Development Framework (Urban Development Framework 1997 : 1):

- explains and analyses the current reality of South African cities;
- proposes an urban vision;
- explains the major dilemmas affecting policy choices at all levels in this sector;
- proposes an implementation framework for the operationalisation of strategic goals;

- propose a programme to monitor and evaluate key elements of the framework.

- URBAN REALITIES

Owing to the apartheid system, South Africa's urban areas are extremely dysfunctional and do not serve the needs of the majority of the population. In order to place urban development strategies in context the framework examines some of the constraints and opportunities for development. These are a large and growing urban population, persistence of inequality and poverty, financial pressures on municipalities, a vibrant and dynamic civil society and economic and financial potentials for urban revitalisation (Urban Development Framework 1997 : 1).

- URBAN STRATEGY

South Africa will witness many changes during the next twenty five years. A clear, positive and common vision of a desired future for South Africa's cities and towns is essential to ensure that they sustain and improve their role as centres of economic and social development and opportunity (Urban Development Framework 1997 : 1).

Government is committed to ensure that its policies and programmes support the development of urban settlements that will be (Urban Development Framework 1997 : 1):

- spatially and socio-economically integrated, free of racial and gender distribution and segregation, enabling people to make residential and employment choices to pursue their ideals;
- centres of economic and social opportunity where people can live and work in safety and peace;
- centres of vibrant urban governance, managed by democratic, efficient, sustainable and accountable metropolitan and local governments in close co-operation with civil society and geared towards innovative community led development;
- environmentally sustainable, marked by a balance between quality built environment and open space; as well as a balance between consumption needs and renewable and non-renewable resources;
- planned for in a highly participative fashion that promotes the integration and sustainability of urban environments;
- marked by good housing, infrastructure and effective services for households and business as the basis of an equitable standard of living;

- integrated industrial, commercial, residential, information and educational centres which provide easy access to a range of urban resources; and
- financed by government subsidies and by mobilising additional resources through partnerships, more forceful tapping of capital markets and via off-budget methods.

- PRIORITIES

The Urban Development Framework proposes the following priorities (1997 : 1):

One of the first priorities for urban development in South Africa is to establish critical new relationships and patterns of engagement between the newly elected local governments and civil society.

A second priority is to overcome the separation between spatial planning and economic planning in South African cities. Steps must be taken to embed economic development targeted to the disadvantaged urban populace within integrated spatial and socio-economic planning framework, particularly, at the local level.

A third priority is to ensure that integrated planning determines projects which are approved and which elements are targeted within urban development, rather than the

reverse situation where large urban development projects drive the planning.

A fourth priority is to ensure successful land reform through land restitution, land redistribution and tenure reform by integrating government planning and delivery systems and developing co-operative partnerships between the government, NGOs and the private sector.

Lastly, an examination and clarification of intergovernmental relationships needs to be undertaken.

- IMPLEMENTING THE URBAN DEVELOPMENT FRAMEWORK

The implementation of the urban development framework focuses on four key programmes (Urban Development Framework 1997 : 2):

- integrating the city aims to negate apartheid-induced segregation, fragmentation and inequality. The focus is on integrated, planning, rebuilding and upgrading the townships and informal settlements, planning for higher density land use and developments, reforming the urban land and planning system, urban transportation and environment management;

- improving housing and infrastructure involves upgrading and the construction of housing, restoring and extending infrastructure, alleviating environmental health hazards, encouraging investment and increasing access to finance, social development, building habitable and safe communities, maintaining safety and security and designing habitable urban communities;

- promoting urban economic development aims to enhance the capacity of urban areas to build on local strengths to generate greater local economic activity, to achieve sustainability, to alleviate urban poverty, to increase access to informal economic opportunities and to maximise the direct employment opportunities and the multiplier effect from implementing development programmes; and

- creating institutions for delivery requires significant transformation and capacity building of government at all levels and clarity on the roles and responsibilities of the different government spheres. This will also encompass on a range of institutions, including civil society and the private sector and require significant co-operation and co-ordination among all of these.

3.8.4 CHALLENGES TO PLANNERS

Most Third World countries have accepted that, in order to effectively improve the well-being of its people, development must be planned. The planning process should involve the majority of the people. Increasingly, effective planning is something that all countries of the Third World aspire to attain (Amos 1993 : 132).

According to Conyers & Hills (1990 : 73), planning may be regarded as a cyclical process of sequential stages which combines information on the basic policy objectives with the design of specific projects, thereby ensuring that those aspects which were determined during the implementation of the project are fed back into the planning cycle.

As the democratic initiatives of the early 1990s gained momentum, urban planners in South Africa attempted to reconstruct apartheid cities by pursuing initiatives to reverse the effects of racial planning. These initiatives included, inter alia, increasing residential densities in the core city, promoting infill on pockets of vacant land which served as buffer zones to segregate racial groups and upgrading crowded townships and hostels. Great emphasis has been placed on restructuring the inner city in the post-apartheid era so that there would be desegregation and

integration (Khan & Maharaj 1998 : 197).

In this regard the urban development strategy of the Government of National Unity aims to integrate segregated cities by concentrating on rebuilding the townships, creating employment opportunities, providing housing and urban amenities, reducing commuting distances, facilitating better use of under utilised or vacant land" and introducing urban management policies which are environmentally sensitive (Khan & Maharaj 1998 : 197).

The intention is to ensure that the resources of the built environment are used efficiently in targeting the needs of the urban poor so that they become economically productive and contribute to the growth of the city as a whole (Khan & Maharaj 1998 : 197).

Cacho (1975 : 42) outlines some of the main reasons for the failure of development planning in developing countries:-

- inadequate political commitment to planning;
- frequent changes to government;
- natural disasters;
- severe adverse movements in the commodity terms of trade;
- too restricted a concept of planning;
- shortage of skilled manpower;
- imprecise definition of targets;

- inadequate attention to policy and project components;
- inadequate institutions; and
- inadequate involvement of implementers in plan preparation.

The plans are regarded with great expectations but not realised (Wildavasky 1973 : 127). Urban planning has a particularly, unimpressive record. There seems to be consensus today in the Third World that traditional master planning, being costly, time consuming, static, frequently done by expatriates and foreign consultants who are not familiar with local conditions, is not the appropriate approach in a development context. Foreign solutions are plentiful (Cheema & Ward 1993 : 12).

Most urban planning efforts in the Third World is characterised by the lack of political will and commitment to plan effectively, and political smokescreening (Todaro 1994 : 582- 583).

Most urbanisation policy is unconscious, partial, uncoordinated and negative. It is unconscious in the sense that those who effect it are largely unaware of its proportions and features. It is partial in that few of the points at which governments might act to manage urbanisation and affect its course and direction are utilised. It is uncoordinated, in that, national planning tends to be economic

and urban planning tends to be physical, and the disjunction often produces competing policies. It is negative, in that the ideological perspective of the planners leads them to try to divert, retard or stop urban growth, and in particular to inhibit the expansion of metropolises and primate cities (Berry 1981 : 108).

It must be noted that urban planning is not about producing a technically perfect plan or devising a policy to bring about an ideal situation in which all will benefit equally. Rather, it is about assessing and making informed choices that will impact positively on people's lives (Devas & Rakodi 1993 : 48).

3.8.5 KWAZULU NATAL

KwaZulu Natal is one of the nine provinces of South Africa. It stretches from the Indian Ocean in the east to the Drakensberg mountain range in the west and from Mozambique border in the north to the *Mtamvuna* River in the south (<http://umgeni.co.za>).

This verdant and green province is aptly called South Africa's garden province. It is a province with a subtropical coastline which was once the centre of the British colonial empire (South Africa Yearbook 1997 : 8).

Home to some nine million people, KwaZulu Natal is a unique melting pot of cultures and influences from the East, West and from the Continent of Africa. It was previously named "*Terra de Natalia*" by Vasco da Gama (<http://umgeni.co.za>).

The province is a bustling hub of economic activity, served by two of the busiest ports in Africa, Durban and Richards Bay. Farming in the province is dominated by sugar which is exported all over the world (<http://umgeni.co.za>).

In the past, KwaZulu Natal was governed by two administrations. Formerly, Natal fell under the jurisdiction of the South African Government and was administered by the Natal Provincial Administration (NPA) while KwaZulu was a semi-autonomous self-governing state and controlled by the KwaZulu Government. Since the elections in April 1994, the province's administration has been unified under the provincial government of KwaZulu Natal (Schwabe, Illing & Wilson 1996 : 3).

The challenges facing the KwaZulu Natal Provincial Government are enormous and can only be achieved through the commitment of all roleplayers to a common vision (Ngubane, 21 August 1997).

According to Census in Brief (1996), KwaZulu Natal has the largest population (8 417 021) in South Africa and it is also estimated that 3 628 268 (43.1 %) of KwaZulu Natal's population live in urban areas (cities and towns).

The major population groups in the province, cited in Census in Brief 1996, are as follows :

TABLE 3.2 POPULATION GROUPS IN KWAZULU NATAL

POPULATION GROUP	PERCENTAGE (%)
Coloured	1.4
African/Black	81.7
White	6.6
Indian/Asian	9.4
Unspecified	0.8

Unemployment in KwaZulu Natal is 39.1 % which is the third highest in the country. Compared to other race groups, unemployment rates among African men and women were particularly high (Census in Brief 1996).

There is a huge backlog in housing in South Africa. In KwaZulu Natal, 11.2 % of the population live in informal dwellings (Census in Brief 1996).

3.8.6 DURBAN METROPOLITAN AREA (DMA)

South Africa Yearbook (1997 : 8) indicates that Durban is one of the fastest-growing urban areas in the world. It boasts the busiest harbour in South Africa which is also one of the ten largest in the world (Daily News, 24 May 1988).

Durban is a cosmopolitan city with extensive hospitality infrastructure. It is the largest city in KwaZulu Natal with some 2.5 million inhabitants (<http://umgeni.co.za>).

3.8.6.1 UNICITY CONCEPT

The formation of the unicity is part of the change or transformation of the systems of local government across the country (UNICITY DURBAN 1999 : 2).

Durban has been declared a metropolitan area, which means it will have a Category A municipality. The proclamation of areas as metropolitan or metro areas by the National Minister of Local Government, has been declared constitutionally invalid by the Constitutional Court. The Court has ruled that the Municipal Demarcation Board will have to declare metro areas. It is likely that the Municipal Demarcation Board will re-proclaim Durban as a metro area (UNICITY DURBAN 1999 : 2).

The "unicity" is a word used to describe a single metropolitan area. The term unicity denotes the political, administrative, spatial and economic unification of the entire metropolitan area (UNICITY DURBAN 1999 : 2).

- A SINGLE METRO COUNCIL

This metropolitan area will have a single metropolitan council which will govern the entire area. The number of councillors in the new councils are still to be finalised. Fifty percent of the councillors will be elected through wards and fifty percent will be elected through the political party's proportional representative lists. This means that in the next local government elections, scheduled to take place in November, 2000, each voter will cast two votes, one vote for his/her choice of a councillor for the ward he/she lives in and a second vote for the political party of his/her choice (UNICITY DURBAN 1999 : 2).

- TYPE OF METRO COUNCIL

The new metro council may have an Executive Mayor or an Executive Committee as its political head (UNICITY DURBAN 1999 : 2).

The metropolitan council may have substructures which will be a council made up of a grouping of wards in the metro area. The substructure council will be made up of the ward councillors and the proportional representative councillors appointed by the metro council. The substructure council will have only those powers and functions that are delegated to it by the metro council. It will report on all matters to the metro council (UNICITY DURBAN 1999 : 2).

The metropolitan council may also have ward committees. These are committees of ten representatives of residents in a ward, elected at a public meeting. The members of the ward committee will serve on a voluntary basis and will not be paid for their services. The ward committee will be chaired by the ward councillor. The ward committee will advise the metro council on any matter affecting the ward (UNICITY DURBAN 1999 : 2).

The final decision on these matters will be made by the MEC for Local Government (UNICITY DURBAN 1999 : 2).

- WHY A UNICITY ?

The reason for having a unity is so that the residents of the metro area can benefit from (UNICITY DURBAN 1999 : 2):

- co-ordinated planning and delivery of services across the metro area;
- the savings on costs of services delivered at scale i.e. to a large number of people;
- rationalisation of rates and tariffs across the entire metro area;
- a single economic development strategy to attract investment to the metro which will create jobs in the metro; and
- a co-ordinated social programme to address the needs of the poorest and marginalised sections of the communities through life-line tariffs and rates, poverty programmes and redistribution of resources to areas of greatest need.

- HOW WILL THE CITIZENS OF DURBAN BENEFIT FROM THE UNICITY?

The main benefits for the people of Durban have been outlined above.

On a practical note, it will make local government simpler for residents, because they will have only one local government body to relate to in terms of making inputs on how the city should spend its budget and deliver services as well as to complain to when they have any problems (UNICITY DURBAN 1999 : 2).

The governing of the city will now be done in a holistic manner taking into account growth and redistribution to achieve a common metropolitan vision to improve the quality of life of all citizens (UNICITY DURBAN 1999 : 2).

The population of the Durban Metropolitan Area is 2 519 995 million. The Demarcation Board estimates that 10 % more people will be brought into the DMA with its section 21 boundary. Seventy five percent of these people are located within the boundary proposed by the Unicity Committee of Durban (UNICITY DURBAN 1999 : 3).

In light of the above, the demand for urban services will increase and local government is expected to be in a better position to deliver as a unicity. Local government will also be expected to be more developmental in its approach and encourage community participation in decision making and planning.

3.8.6.2 DEMOGRAPHIC CHARACTERISTICS

The DMA's demographic characteristics are typical of cities in South Africa as depicted in Table 3.3:

TABLE 3.3 : DEMOGRAPHIC CHARACTERISTICS

Local Council Areas	Population (1998 estimates)	% Share of DMA Population	% Age 0 - 17 years -1991	% 18 - 64 years -1991	% 65+ years -1991	% of Males -1991	% of Females -1991
North	130 073	5.2	34.2	61.8	4.0	49.7	50.3
North Central	865 513	34.2	33.9	61.7	4.4	49.3	50.7
South Central	783 405	31.0	32.6	63.3	4.1	51.3	48.7
South	127 135	5.0	31.7	61.8	6.5	49.5	50.5
Inner West	343 354	13.6	33.2	64.2	2.7	52.5	47.5
Outer West	227 121	11.0	40.9	55.3	3.8	46.4	53.6
DMA TOTAL	2 523 601	100.0	34.4	61.5	4.1	49.8	50.2

DMA SPATIAL DEVELOPMENT PLAN (1998:8)

According to the DMA Spatial Development Plan (1998 : 7) although the working age people make up the bulk of the population (61.5 %), there is a relatively large proportion of children under the age of 18 years (34.4 %). There appears to be significant variation in the distribution of youth, working age and aged people. Whereas the age structures of the North and North Central local council areas mirror the DMA closely, the South Central and Inner West areas have a higher proportional share of the working age people. This is attributed to the hostel dwellers that are found in these two areas, a fact that is reflected in the higher than average presence of males in the Inner West (52 %) and South Central (51.3 %). The Outer West has a substantially lower than average proportion of working age people (55.3 %) reflecting the fact that this area has an employment deficit and is consequently a net labour exporter. This is corroborated by the comparatively low ratio of males to females (46.4: 53.6).

Recent surveys have indicated that a decline in the rates of increase in population growth, attributable largely to the general decrease in family size and the impact of Acquired-Immune Deficiency Syndrome (AIDS). Current growth rate is estimated to be approximately 2% but this varies across racial groups, with the growth rate for the white population being 0.01% and the black population 3.78% (DMA Spatial Development Plan 1998: 7).

3.8.6.3 ECONOMIC DESCRIPTION

The DMA is the major and dominant centre of economic activity in the KwaZulu Natal region. It is responsible for over half of the region's production (59.3 %) and over a third of the region's total employment (33.8 %). Often classified as a fairly diversified local economy, with strengths in a number of sectors that include manufacturing, commerce (tourism being the largest subsector), transport, community and social services and increasingly, finance, the major difference between the economy of the Durban Functional Region and the region as a whole lies in the absence of any significant mining and agricultural activity in the Durban area (DMA Spatial Development Plan 1998: 11; Pillay 1999 : 202 - 203).

It is a complex and mature economy with diverse sizes of firms and jobs available for a variety of skill types, giving it a competitive advantage over most of the smaller towns which, relying on one or two product sectors, are vulnerable in periods of recession. Durban is now South Africa's most promising global competitor (DMA Spatial Development Plan 1998: 11; Pillay 1999 : 203).

3.8.6.4 SPATIAL STRUCTURE

The DMA covers a land area of 1336 square kilometres encompassing six local council areas. Less than one-third of the DMA's land area lies under formal settlement, while a further 11 % lie under informal settlement (DMA Spatial Development Plan 1998: 15). Economic, transport and public and social infrastructures account for a further 11 % of the land area and agriculture makes up 20 %. The residual 27 % of land area is undeveloped, a large part of which is designated as part of the Metropolitan Open Space System.

According to Pillay (1999 : 202 - 203) the city shape or spatial structure that emerged is marked by striking imbalances and is often characterised as a divided city. Its fragmented and inefficient spatial form works well for those who have access to the facilities and opportunities in its urban core, but it does not meet the needs and aspirations of the poor majority of its residents, mostly

Black people, who live on its fringes and comprise close to 70 % of metropolitan Durban's total population of 3.2 million (Indians make up 18 % of this total, followed by Whites at 10 % and Coloureds at 2.5 %).

The DMA is faced with a set of complex problems that are rooted in an historical legacy that includes the existence of policies and institutional arrangements of an old order which are still being transformed to meet new challenges. The physical and spatial problems occur within the context of massive unemployment and a large range of social problems, including violence, crime and Acquired-Immune Deficiency Syndrome (AIDS) (DMA Spatial Development Plan 1998 : 28).

The Durban Metropolitan Spatial Development Plan (1998 : 30) has been prescribed to promote a spatial form that redresses imbalances, promotes efficiency and sustainability and generates confidence in the DMA:

Promote an efficient city by:

- promoting more compact development by encouraging higher densities where appropriate;
- reducing the separation between places where people live and work;
- optimising development in areas of greatest opportunity;

- encouraging effective use of infrastructure and facilities;
- promoting cost effective movement systems;
- promoting optimal use of remaining land opportunities;
- promoting accessibility through improving relationships between people, places and activities.

Promote an equitable city by:

- reducing infrastructure and service disparities;
- redressing imbalances in the location of employment opportunities;
- providing adequate, accessible and affordable housing opportunities and other basic amenities such as water;
- promoting integration by linking and reducing distances between people, places and activities;
- making the city work better for the disadvantaged (the poor, the disabled and women);
- promoting effective public transport.

Promote a sustainable city by:

- promoting a spatial form that supports the DMA as a world class/globally competitive region;
- promoting the inherent value of the natural and built environment;
- introducing environmentally sensitive management of development;
- promoting total living environments;

- retaining and enhancing positive qualities and assets of the DMA;
- promoting a well-managed spatial form;
- promoting city image, civic spirit and city pride.

The challenge is to ensure that physical development of the DMA addresses areas of need and opportunity in a way that integrates the urban area, i.e. linking areas of need with opportunities in a manner that ensures that the relationships between physical elements, activities and people function in an efficient, equitable and sustainable manner (DMA Spatial Development Plan 1998 : 39).

3.8.6.5 URBANISATION CHALLENGE AND THE URBAN STRATEGY UNIT

Durban is at the cutting edge of the most crucial challenges facing South Africa. The challenge is that of urbanisation, with literally hundreds of thousands of people continuously streaming into the surrounding areas (Daily News, 25 May 1988).

Who plans and manages a city ? The usual normative assumption is that local governments do. The underlying rationale is the belief that enhanced participation by local rather than central government in urban management will (Davey 1993 : 153):

- improve the efficiency of urban investment through the involvement of local knowledge and choice;
- improve the execution of urban investment through the local accountability of management; and
- increase the recovery of costs of urban infrastructure from its beneficiaries through local taxes and charges.

There are enormous variations between countries and between cities in the extent to which local government does effectively plan and manage urban growth (Wilheim 1989 : 1; Gilbert et al 1996 : 4; Roberts 1996 : 272).

Local government in South Africa has been described as playing a paramount role in urban development (Zybrands 1998 : 216 - 217).

The Urban Strategy Unit, which is a component of the Durban Metropolitan Council, is entrusted with the function of managing urban growth and development in the Durban Metropolitan Area (<http://www.urbanstrat.org.za>).

The Urban Strategy Department provides a strategic planning service to the Metropolitan Council for the management of urban change in the Durban Metropolitan Area. Primary areas of focus include Integrated Development Planning, Spatial Development Planning, Strategic Development

Interventions and Development Planning Information support (<http://www.durban.gov.za>).

The mission of the Urban Strategy Department is to make information available to guide policy makers in the Durban Metropolitan Area councils, to enable them to accurately target those actions which make the most significant improvement in the quality of life of the people in order to achieve the greatest degree of upliftment with limited resources that are available (<http://www.durban.gov.za>).

The need to address backlogs in the provision of services and infrastructure in Durban is occurring in the face of increasing urbanisation. The physical constraints (rivers, steep topography and geology) influence the shape of development and in the DMA impose major financial constraints on restructuring efforts (DMA Spatial Development Plan 1998 : 28).

Rapid urbanisation is not necessarily a bad thing as scores of extra customers are continuously being brought into the economic arena. Collectively, they represent huge buying power (Daily News, 25 May 1988).

Urbanisation should be seen as a positive process and one of great opportunities. By their very nature, cities occurred because they were economically scaled to provide

jobs and development opportunities not available in rural areas (Daily News, 25 May 1988).

The region is, however, experiencing a development crisis comprising (Tomlinson 1993 : 2):-

- rapid population growth;
- slow economic growth, high unemployment and a markedly unequal income distribution;
- an inadequate supply of services and shelter;
- institutional complexity that render public sector responses all the more difficult; and
- a policy environment that historically prevented the planning of an efficient and equitable city.

Unless the accelerating pace of urbanisation is handled with vision, "surf city" could well be transformed into another teeming Third World slum (Daily News, 25 May 1988).

Opportunities occur within the core and well serviced areas of the DMA while areas of greatest need are located on the periphery. The vision for the DMA requires that the physical development of the DMA balances and blends a needs-based approach with an economic opportunity-driven approach (DMA Spatial Development Plan 1998 : 28).

Areas of greatest need are essentially the townships and informal settlements which were targeted for the development of Integrated Development Frameworks through the RDP urban renewal programme (DMA Spatial Development Plan 1988 : 39). They are generally characterised by poverty, a lack of integration, inadequate basic infrastructure, monotonous housing and little or no visual appeal. Attempts are being made to include these marginalised areas and transform their sterile environments into vibrant living ones (DMA Spatial Development Plan 1988 : 39).

These areas have, therefore, been accorded first priority in terms of the allocation of resources aimed at the promotion of equity, capacity building and sustainability. They need to be integrated and become functional components benefitting from the economic and social aspects of the urban area. This includes being a focus for initiatives that promote income-earning opportunities and that supply or extend educational and training facilities and among others, health and water services. Consideration should be given to longer term viability, especially in terms of location and potentials for long-term infrastructural improvements (DMA Spatial Development Plan 1988 : 39).

Areas of greatest need should be developed in such a manner that (DMA Spatial Development Plan 1998 : 40):

- they are accorded priority in the allocation of resources so that equity may be attained;
- opportunities are maximised for linkages with the rest of the urban areas;
- consideration is given to the longer term viability in terms of location, potentials for long-term; infrastructure improvements and economic opportunities;
- housing, water, electricity and other basic amenities are delivered within the context of total living environments, including quality public spaces and community facilities;
- democratic values are upheld with community participation and consultation occurring on a continuous basis at all levels;
- marginalised groups such as women, the elderly, children, youth and the disabled, and households with incomes less than R800 per month have a distinct focus;
- in the longer term, not only spatial and sectoral integration, but also racial integration will be facilitated;
- harmonious relations between interest groups are fostered, and ethnic and cultural minorities are acknowledged;
- emphasis is placed upon changing culture, attitudes and mind sets of beneficiaries of development so that they take responsibility for their development, thereby creating capacity and sustainability; and

- consideration is given to human resource development and capacity building.

3.9 SUMMARY

The end of the twentieth century can best be described as the age of urbanisation and the century of the urban transition. By the end of the century, nearly half of the world's population (3 billion people) will live in urban settlements. And two-thirds of that number will live in the less developed countries of Asia, Latin America, Caribbean and Africa. This growth poses huge challenges to those responsible for the management of urban development and the provision of services.

There is a dramatic shift in the incidence of poverty. In the past, most of the poor were to be found in the rural areas, but a growing proportion of the world's poor now live in cities.

The rapid growth of urban population has implications for the infrastructure and service needs of cities. The failure to expand water supplies, sanitation systems, housing supply and transportation to match the growth of the population has been a prime cause of misery in the cities of the developing world (for example, Latin America,

Caribbean, Philippines, Delhi, Asian and Africa).

Migration still accounts for a substantial proportion of urban population growth but the natural growth accounts for an increasingly large share of the total. The prime motivation for migration is economic - the need to secure better job opportunities and earn higher income. There is, however, a serious shortage of jobs in the urban formal sector and many migrants obtain casual labour in the informal sector.

Opportunities and facilities which do exist in the cities are often inaccessible to the poorer segments of society. These inadequacies have a serious effect on the lives of urban people and society at large.

The experiences of Mexico City, Seoul and Nigeria present valuable lessons for South Africa's urban development and planning process. A positive policy of accelerated urbanisation can be a powerful stimulus for economic growth.

Southern Africa enjoys a unique status on the world's least urbanised but most rapidly urbanising continent. Southern Africa displays a wide range of urban forms, from villages and informal settlements to major metropolitan centres.

Urbanisation ranks as one of the most significant dynamics currently affecting South African society. The National Party Government introduced a policy of separate development which impacted on every sphere of life. Government structures that were created provided impetus to the policy of separate development. Preferential treatment were accorded to the minority, whilst the majority of people lived under the most marginal conditions.

It is in the townships that years of segregation and apartheid is most visible. Job opportunities and housing are not adequately available with the result that large pockets of densely populated slums and squatter settlements remains a feature of city life.

South Africa is currently in a process of rapid change at all spheres of government. KwaZulu Natal has the largest population (8 417 021) in South Africa and it is estimated that 43.1 % of its population live in urban areas.

Durban has been declared a metropolitan area, which means it will have a Category A municipality. The term unicity denotes the political, administrative, spatial and economic unification of the entire metropolitan area.

Durban is the major and dominant centre of economic activity and is often regarded as one of the fastest-growing urban areas in the world . There is a huge demand for land, housing, social services and jobs which is certain to continue into the new millennium. The Urban Strategy Unit is entrusted with a crucial task of managing urban growth and development in the Durban Metropolitan Area.

One of the major challenges of the government is to turn cities, which were substantially remodelled under a half a century of apartheid, into places of real opportunity for the masses of the people.

CHAPTER FOUR

WATER PROVISION - CRITICAL ISSUES

If you could tomorrow morning make water clean in the world, you would have done, in one fell swoop, the best thing you could have done for improving human health by improving environmental quality.

William Clarke (1988)

4.1 INTRODUCTION

The United Nations General Assembly proclaimed the period from 1981 to 1990 as the "International Drinking Water and Sanitation Decade". The intention of the Decade was to promote the well being of humankind worldwide by bringing about a substantial improvement in the level of water and sanitation services for the poor and to highlight the importance of water in daily life.

Water is one of the basic ingredients of life, without which no form of life would exist. Water is also a major element in the economy of all nations. Too much water results in disastrous floods, and too little results in crippling drought and famine. Throughout human history, many nations and neighbours have gone to war over water. Those who

control water, wield enormous power and influence over the distribution of wealth in society.

Water is a commodity with which South Africa is not richly endowed. The policy of separate development impacted negatively on the distribution of water amongst the different race groups viz. Whites, Coloureds, Indians and Africans. Therefore, the water that does exist is not evenly distributed throughout the country.

As more and more people move to urban areas in search of modernity, progress and prosperity, the demand for basic services such as water and sanitation is steadily rising.

This chapter shall focus on the following key aspects inter alia :

- demand for water and sanitation in South Africa;
- institutional arrangements;
- financial implications for service delivery;
- community participation; and
- policy directives and proposals.

At the outset, it is essential to provide an exposition of the concept "water".

4.2 CONCEPT OF WATER

Water occurs naturally in solid, liquid and gaseous form and it dissolves a wide variety of chemicals. This latter property plays a significant role in its vulnerability to pollution. Approximately 1380 billion m³ of water gives the Earth the appearance of the "Blue Planet". With 71 % of the earth's surface covered with water, it may seem difficult to believe, that it is a scarce resource. The usable water is, however, only a fraction of the total: 98% is seawater and 1.2% of freshwater is locked in the polar icecaps and in glaciers, thus leaving only 0.8% for human use (Lotter 1995 : 559 - 560; Papp 1995 : IR 4 - 1).

The White Paper on Water Supply and Sanitation Policy (1994 : 15) describes basic water supply according to:

- quantity;
- cartage;
- availability;
- assurance of supply;
- quality; and
- upgradability.

- Quantity

An amount of 25 litres of water per person per day is considered to be the minimum amount required for direct consumption, for the preparation of food and personal hygiene. It is thus a minimum amount and not considered to be adequate for a full, healthy and productive life.

- Cartage

The maximum distance which a person should have to cart water to their dwelling is 200m. In steep terrain, this distance may have to be reduced to take account of the extra effort required to cart water up steep slopes.

- Availability

The flow rate of water from the outlet should not be less than 10 litres a minute and the water should be available on a regular basis.

- Assurance of supply

The supply should provide water security for the community.

Two factors are important here:

- (a) schemes for domestic water supply should ensure the availability of "raw" water for 98% of the time. This means that the service should not fail due to drought more than one year in fifty, on average.

(b) the operation and maintenance of the system must be effective. The aim should be to have no more than one week's interruption in supply per year.

- Quality

The quality of water provided as a basic service should be in accordance with currently accepted minimum standards with respect to health related chemical and microbial contaminants. It should also be acceptable to consumers in terms of its potability (taste, odour and appearance).

- Upgradability

The desire of many communities to upgrade a basic service to provide for household connections should be taken into account during planning. If this is not done, the system could either fail due to illegal connections or have to be expensively upgraded when there is a demand for house connections. Any additional infrastructure required to provide upgraded services will not be considered as part of the basic needs infrastructure.

Basic water supply, according to Water Services Act, 1997 (Act 108 of 1997), means the prescribed minimum standard of water supply services necessary for the reliable supply of a sufficient quantity and quality of water to households, including informal households, to support life and personal hygiene.

It can, therefore, be affirmed that water is a precious, national resource which must be properly managed and utilised if it is to bring maximum benefit to the country as a whole.

4.3 IMPORTANCE OF WATER IN DAILY LIFE

Water is a powerful symbol throughout the world, carrying with it ideas of baptism and new life, cleansing and healing and the promise of growth and prosperity (White Paper on National Water Policy for South Africa 1997 : 2).

Water is the lifeblood of the planet that links all people together. Except in times of flood and drought, one tends to largely forget the importance of water in one's daily lives. For generations, many fortunate South Africans have only had to turn on a tap in order to get water (Palmer & Eberhard 1994 : 1; On Stream 1995 : 1; Lotter 1995 : 552, Daily News, 15 September 1995).

Water is a vital element in human activity. To survive, the human body needs about two litres of water a day: to rinse, clean and quench the thirst. Water is necessary for irrigation, farming, cooling engines in industry, making turbines turn to generate electricity, and to dilute solvents (South Africa Year Book 1997 : 2).

Table 4.1 illustrates the functions of water.

TABLE 4.1 FUNCTIONS OF WATER

PERCENTAGE	FUNCTION
54.2 %	Agricultural irrigation and stock watering
12.0 %	Municipal and domestic purposes
7.6 %	Industry (It takes up to 500 000 l of water to produce one motor car)
2.7 %	Mining
2.3 %	Power generation
1.0 %	Nature conservation
7.5 %	Forestry plantations
14.5 %	Ecological uses

(Report of the IDR/ANC/COSATU/SACP/SANCO Mission on Environmental Policy 1994 : 38 - 40; On Stream 1995 : 1; South Africa Year Book 1997 : 2)

To produce one ton of steel requires 270 000 litres of water, with 5 million litres needed to make one tonne of synthetic fibres, and 1 500 litres to grow one kilo of wheat (South Africa Year Book 1997 : 2).

To produce a pound of beef takes seven pounds of grain, this grain in turn takes 7 000 pounds of water. This amount of water, if treated to potable standards, is enough to meet one person's basic needs for about 6 months (Kalbermatten 1999 : 14).

The White Paper on a National Water Policy for South Africa (1997 : 7) states that the Constitution is the highest and supreme law of the land. It contains a specific provision for water. This aspect is covered in the Bill of Rights.

- BILL OF RIGHTS

The Bill of Rights is a cornerstone of democracy in South Africa. It lays out the rights of all people in South Africa and affirms the democratic values of "human dignity, equality and freedom" as well as "non-racialism and non-sexism" (White Paper on a National Water Policy for South Africa 1997 : 7).

- SECTION 10: HUMAN DIGNITY

"Everyone has inherent dignity and the right to have their dignity respected and protected".

It is not possible for dignity to be maintained amidst grinding poverty, where the lack of basic services such as water and sanitation, and the right to access to basic commodities is a contributing factor.

The above provision places a duty on the State to make sure that this right is respected, amongst other things, through access to water.

- SECTION 11: RIGHT TO LIFE

"Everyone has the right to life".

The single largest cause of disease and death amongst the poor in South Africa, particularly amongst infants, is water and sanitation related.

- SECTION 27: WATER

"Everyone has the right to have access to water".

It is the intention of government to create the enabling environment necessary to ensure that all South Africans have access to acceptable levels of water supply and sanitation.

By making these specific provisions in the Constitution, negotiators have recognised the importance of clean water in the human environment.

According to Davis, Garvey & Wood (1993 : 9) there may be a combination of reasons for developing a water supply, but these can be divided into three broad categories:

- Social and Economic Benefits

It is not unusual for people to spend more than three hours daily to collect water. Where water is sold to communities with inadequate supplies, the price is usually several times higher than that of reticulated water supplies (Emmett 1996 : 83).

One of the most striking features of poverty in South Africa is the cost, to the poor, of water (which is by no means always clean) in terms of time, effort and money (Wilson & Ramphele 1989 : 48 - 49).

Increasing the quantity of water that is available and bringing the water closer to the point of use can help productive activities such as crop washing and processing, small-scale gardening, the dyeing of cloth, and other income-generating activities (Davies et al 1993 : 9).

- Health Benefits

The majority of infectious diseases in developing countries are related to water in some way. Water related diseases include those which are carried by water or where water provides the vital link in their transmission (Palmer & Eberhard 1994 : 2 - 4; Emmett 1996 : 81). These diseases pose a particular threat to the poor. An estimated 10 000 children worldwide die every day from diseases transferred through drinking water (Muniviro 1993 : 8; Daily News 15 September 1995). A United Nations study, for example, has suggested that the control of water related diseases would add an average of about ten years to life expectancy in the developing world (Baum & Tolbert 1985 : 305).

Disease transmission commonly occurs as a result of the unhygienic disposal of human and household waste combined with poor hygienic practices (Water Research Commission Technical Report 1997 : 27).

Water can be safe at a source but may become contaminated during collection, carrying, handling and use. For example, using potentially lethal second hand drums to store drinking water will continue to be an essential daily practice in Durban's informal households until they are supplied with piped water. Control over the sale of drums for use as drinking containers has to be tightened (Daily

News, 10 July 1997).

There is usually a relationship between morbidity rates and both the quality and quantities of water to which people have access. The shorter the distance to safe sources of water, the lower the incidence of diarrhoea. Those households with water inside the dwelling tend to have the lowest rates of diarrhoea, followed by those with water outside the dwelling but nearby, while those which are furthest from water sources have the highest rates of infection (Sorokin 1988 : 79).

Improvements in health will only be achieved by an integrated approach which includes, in addition to safe water supplies, effective sanitation and an emphasis on good hygiene practices through complementary hygiene promotion activities (Palmer & Eberhard 1994 : 2- 4; Jurg, Alfonso & Rievelde 1995 : 2 - 8).

- Environmental Conditions

Inadequate water supply and sanitation also have serious implications for the environment. For example, inadequate sanitation is a major cause of the degradation of surface water and ground water. Although less visible than surface-water pollution, contamination of ground water is often more serious because it takes decades to cleanse

polluted aquifers and because many people believe that it is safe to drink untreated ground water (Emmett 1996 : 83).

Further environmental damage may be caused to water resource because people without access to piped water, come to rely too heavily on ground water extracted by means of wells and boreholes. This can often lead to over pumping and the depletion of ground water resources. In coastal areas such depletion can lead to saline intrusion and render water unfit for consumption.

Contaminated water supplies may also encourage people to boil water, making greater demands on energy sources and firewood resources (World Bank 1992 : 98 - 99). Certain technologies, such as uncontrolled standpipes, often lead to the wastage of water.

Environmental issues in relation to water supply and sanitation are vital because South Africa is a water scarce country. South Africa's annual rainfall is well below the world average. With a growing population, it is clear that water conservation and the more efficient use of water will become increasingly important (Palmer & Eberhard 1994 : 2 - 4).

In many countries, there will not be enough water to meet all the unrestricted demands from the various sectors - municipal water supply, industry, irrigation and agriculture. Agricultural activities make up 70 % of worldwide water consumption. As the population increases, the demand rises. Water is the single most important limiting factor for growth (Simensen 1995 : 15). It is important to look elsewhere and identify other sources to augment water (Kalbermatten 1999 : 14). Furthermore, the quality of water is steadily declining.

In light of the above, there is an urgent need to encourage more efficient use of water. The way in which water is managed is critical. If managed poorly, the costs could be exceedingly high in both environmental and human terms.

4.4 WATER AS PART OF THE POVERTY CYCLE

Lack of access to basic water supply and sanitation does not exist in isolation from other poverty-related issues. It forms part of the poverty syndrome and is both a cause and a consequence of impoverishment (RDP 1994 : 14).

Illiteracy and poor education result in an ignorance of the consequences of personal and family hygiene custom and practice. While the ill effects of customary sanitation

practices may have been less evident in the past, it is clear that with increasing population densities as a result of urbanisation, certain customary practices pose a serious threat to public health (Lotter 1995 : 557).

The health implications of poor sanitation practice and facilities are enormous. Diarrhoeal disease, intestinal helminth infestation, dysentery, bilharzia, polio-myelitis, typhoid, cholera schistosomiasis all result from poor sanitation (Muniviro 1993 : 8). Around 30 000 people die each year of these infectious and communicable diseases (Geertsema 1995 : 19).

Child mortality rates in South Africa are influenced by the lack of access to basic services (Report of the IDR\ANC\COSATU\SACP\SANCO Mission on Environmental Policy 1994 : 44; Lotter 1995 : 557).

4.5 WATER DEMANDS IN SOUTH AFRICA

South Africa's population officially stood at 40 million in 1996 (Census in Brief 1996). This translates into a current annual water demand of between 25 888m kilolitres and an alarming 49 000 kilolitres (1 kl equals 1 000 litres) by the year 2000 (On Stream 1995 : 1).

This begs the question: Where will water come from ?

Rivers are the main source of water in South Africa. Water is transported over great distances from areas of relative abundance to areas of increasing demand. These rivers are fed by less than 470mm of rain a year, compared with a world average of 857mm. Some 65% of South Africa's surface area gets less rain than the amount usually regarded as the minimum for successful dry-land farming, and 21% less than 200mm a year (On Stream 1995 : 1; South Africa Year Book 1997 : 89).

It becomes clear that South Africa is, on the whole, a dry country. Rainfall is not only erratic, but also decreases sharply from east to west (Geertsema 1995 : 19; Best 1995 : IR 4 - 19).

The regions of economic growth are poorly distributed in relation to the available water and it has to be transported over great distances to areas of increasing demand.

Furthermore, South Africa is locked in a long term nine-year cycle of droughts and wet periods (On Stream 1995 : 1; Lotter 1995 : 559). These droughts necessitate water restrictions (News Release - Department of Water Affairs and Forestry, 23 May 1995).

The total surface runoff is about 53 000 million m³ per annum of which 33 000 million m³ is estimated as utilizable. In addition to this, about 2 000 million m³ is abstracted from ground-water, while current return flows add another 2 000 million m³ per annum (Lotter 1995 : 559).

The current total demand for water in South Africa is 20 000 million m³ and should resources be developed to a balanced degree of utilization across the country, it is estimated that sufficient water can be available well into the first half of the new millennium (Lotter 1995 : 559).

South Africa's water demands can only be met by building large reservoirs and storage dams with long mean retention periods (Els 1995 : IR 2 - 32). They are, therefore, very susceptible to pollution.

4.6 EQUITY IN THE SOUTH AFRICAN WATER SECTOR

One of the fundamental issues to be addressed in the South African water sector is that of equity (White Paper on Water Supply and Sanitation Policy 1994 : 3). The water supply situation is one of contrasts : a first world standard in the greater urban complexes and a third world standard in the remote regions (Els 1995 : IR 2 - 32).

The goal of the Government of National Unity and the National Ministry of Water Affairs and Forestry is to end the inequity in the water supply and assure equitable access for all South Africans (Department of Water and Forestry Budget Speech, 27 June 1995). This goal is further entrenched in section 27 the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996).

4. 7 INSTITUTIONAL FRAMEWORK

South Africa's entire framework of government is undergoing massive transformation at the central, provincial and local spheres.

The institutional goals of the Government with regard to water supply and sanitation services can be stated as follows:

In the long term, the goal is to ensure that every South African has accessible water and safe sanitation (Geertsema 1995 : 19).

According to the White Paper on Water Supply and Sanitation Policy (1994 : 9), in the medium term, the objective of government is to support institutional development at local sphere and provide financial and technical assistance for the physical development of water supply and sanitation

services.

In the short term, the immediate goal is to maintain service delivery, to rationalise the central government department, to transform and democratise the water boards and to "gear up" to achieve medium term goals (White Paper on Water Supply and Sanitation Policy 1994 : 10).

The following section details the roles of the different spheres of government in the water sector.

4.7.1 ROLE OF CENTRAL GOVERNMENT

Apartheid has left a great lack of management capacity in many areas across the different spheres of government. Therefore, to help build the ability of other spheres of government to provide water services and to contribute to water resource management, central government must be deliberately developmental in its approach (White Paper on a National Water Policy for South Africa 1997 : 28).

The role of the central government in the water sector can be divided into two distinct areas (Water Supply and Sanitation Policy 1994 : 10):

- managing the nation's water resources in the public interest; and

- ensuring that all citizens have access to adequate water and sanitation services.

Therefore, the task of water resource management has to be carried out directly by a central agency. For the provision of water and sanitation services, central government has a less direct role. It must be able to comply with the constitutional obligation to ensure that every South African has "an environment which is not detrimental to his or her health or well-being" and the equality provision in the Constitution. This requires the capacity to establish national policy guidelines, a national water and sanitation development strategy, the formulation of criteria for State subsidies, the setting of minimum service standards as well as monitoring and regulating service provision (Water Supply and Sanitation Policy 1994 : 10).

The distinction between the functions and responsibilities of the central government and the provincial governments need to be clearly defined, particularly where they inter-link. The water boards form such a link between the central government and local government through their engagement in the provision of bulk services where there is an advantage to be gained from regional management. Water boards are agents of the Department of Water Affairs and Forestry, established under the Water Act (Water Supply and

4.7.2 ROLE OF PROVINCIAL GOVERNMENTS

Provincial governments clearly share the responsibility for assuring service provision, specifically through the promotion of effective local government (Water Supply and Sanitation Policy 1994 : 11).

In this context, the need for close collaboration between provincial and central agencies is clear. While central government may be responsible for assuring essential functions where local structures are unable to do so, this has to be done in such a way as to support the development of local government to proceed with its own affairs under provincial supervision (Water Supply and Sanitation Policy 1994 : 11).

It is of utmost importance that the closest co-operation be maintained between the department and the provinces given their joint interest in the development of the capacity of local government to provide water and sanitation services on an equitable and efficient basis (Water Supply and Sanitation Policy 1994 : 11).

To ensure effective formal communication and liaison between the department and the provinces, provincial water liaison committees have been established. The functions of these committees include liaison with the department, the

identification of priorities and critical areas of need, and advising on the implementation of the Reconstruction and Development Programme as it relates to water supply and sanitation (Water Supply and Sanitation Policy 1994 : 11).

4.7.3 ROLE OF LOCAL GOVERNMENT

Local government is responsible for the provision of household infrastructure and services, an essential component of social and economic development. This includes services such as water, sanitation, local roads, storm water drainage, refuse collection and electricity (White Paper on Local Government 1998 : 23).

In general, local authorities are key institutions for delivering basic services, extending local control, managing local economic development and redistributing public resources. It is at the local level that careful, inclusive planning is required to deliver services that consumers are willing to pay for and that the local economy can sustain i.e. they are affordable at local level (Jackson 1995 : 8)

The overall aim of local government is to improve the quality of life of all communities in South Africa, particularly the poorest, without compromising the ability

to operate and maintain services already provided (Planact 1997 : 76; Biyela 1999 : 1).

The term "service level" relates to the way the service is experienced by its user. The choice of service level is dictated by affordability as well as community needs (Planact 1997 : 76).

According to the Guidelines for Local Authorities (Biyela 1999 : 3) "basic level" is considered to be adequate to ensure the health and safety of the household using the service. In many urban and especially rural areas in South Africa, millions of people have no access to basic services such as water and sanitation.

Municipalities are responsible for making the final decision about which service level shall be provided. Such decisions have a critical impact on the long-term viability of the particular service and of the municipality as a whole. Viability relates largely to the affordability of the service and are reliant largely on the income they receive from their customers. This income must be sufficient to cover the cost of running the service. Higher levels of service are generally associated with higher costs and therefore, customers need to pay more for these services (Planact 1997 : 76). If they cannot afford to pay, it will affect the ability of a municipality to

raise income and thus the viability of the municipality is threatened (Planact 1997 : 76).

It must be borne in mind that municipalities are not welfare institutions. If these bodies are expected to carry out its constitutional responsibility to provide water to the communities, then it stands to reason that it must derive some kind of revenue from the service it renders to its inhabitants (Biyela 1999 :4).

It is important for local government practitioners to lobby the Department of Social Welfare and Population to come up with policies to address social issues (Biyela 1999 : 4). Another option for municipalities is the need to explore local economic development as a means to create jobs, hence improving the prospects of people securing stable employment which culminates in a culture of payment for basic services (Maharaj 1999 : 245 - 250).

It has often been argued that municipal governments in developing countries lack adequate administrative and technical capacity to plan, finance and carry out greatly expanded service delivery water programmes (Rondinelli 1986 : 1 - 21).

4.7.3.1 LOCAL GOVERNMENT PRINCIPLES FOR WATER DELIVERY

The issue of service provision has become a critical challenge facing government. For this reason the year 1997 was been declared as the "Year of Delivery" by President Nelson Mandela (Green Paper on Transforming Public Service Delivery, 17 December 1996).

At the national sphere, the Ministry for Public Service and Administration launched the "Batho Pele" (people first) initiative which aims at placing "people" (as citizens and communities) at the centre of the mission of the public service (Green Paper on Transforming Public Service Delivery, 17 December 1996).

"Batho Pele" is about a substantive commitment to, and vigorous renewal of, the core institutions serving the public. It is about instilling a spirit of "service" in every public servant (Green Paper on Transforming Public Service Delivery, 17 December 1996).

At the local sphere, municipalities have a range of delivery options to enhance service provision. They need to strategically assess and plan the most appropriate forms of service delivery for their areas (White Paper on Local Government 1998 : 92).

The White Paper on Local Government (1998 : 93) provides the following guidelines for service delivery:

(a) Accessibility of services

Municipalities must ensure that all citizens - regardless of race, gender or sexual orientation - have access to at least a minimum level of services. Imbalances in access to services must be addressed through the development of new infrastructure. The Consolidated Municipal Infrastructure Programme has been established to provide capital grants to assist municipalities in funding bulk and connector infrastructure for low-income households and so extend access to service.

(b) Affordability of services

Accessibility is closely linked to affordability. Even when service infrastructure is in place, services will remain beyond the reach of many unless they are financially affordable to the municipality.

(c) Quality of Products and services

The quality of services is difficult to define, but includes attributes such as suitability for purpose, timeliness, convenience, safety, continuity and

responsiveness to service users.

(d) Accountability for services

Municipal Councils remain accountable for ensuring the provision of quality services which are affordable and accessible.

(e) Integrated development and services

Municipalities should adopt an integrated approach to planning and ensuring the provision of municipal services.

(f) Sustainability of services

Ongoing service provision depends on financial and organisation systems which support sustainability. Sustainability includes both financial viability and the environmentally sound and socially just use of resources.

(g) Value-for-money

Value in the public sector is both a matter of the cost of inputs and of the quality and value of the outputs.

(h) Ensuring and promoting competitiveness of local commerce and industry

The job generating and competitive nature of commerce and industry must not be adversely affected by higher rates and service charges on industry and commerce in order to subsidise domestic users.

(i) Promoting democracy

Local government administration must also promote the democratic values and principles enshrined in the Constitution.

Improving public and municipal service delivery is not a one-off exercise. It is an ongoing and dynamic process that impacts on the success or failure of serving the community.

4.8 LEGISLATIVE FRAMEWORK

Various pieces of legislation have been created to address water inequalities, distribution and resource conservation.

Water Services Act, 1997 (Act 108 of 1997) and National Water Act, 1998 (Act 36 of 1998) deserves special attention.

4.8.1 WATER SERVICES ACT, 1997 (ACT 108 of 1997)

The Water Services Act of 1997 provides a framework for local government, with support from national government, to provide affordable, efficient and sustainable water services.

The aim is to ensure that both basic and higher levels of service are economical and sustainable. This requires training, organisational development and financial management in addition to providing infrastructure.

The Department of Water Affairs and Forestry is operating over 600 water schemes in the former homelands. Considerable work is needed on refurbishment, cost recovery, institutional arrangements and capacity building before the operations can be transferred to local governments. In 1998, 51 water schemes were in the process of being transferred. The plan is to transfer all schemes to local government, or operators nominated by them, by 2004.

Water Affairs has created water boards which can provide a variety of water services to local governments.

The Water Services Programme aims to ensure sustainable and affordable water and sanitation services to all communities

through (Department of Finance - National Expenditure Survey Budget 1999):

- policies and strategies to support the integrated and participatory planning of water and sanitation services to communities;
- policies and strategies for institutional and social development through the water services programme and financial assistance for the construction of capital works.

4.8.2 NATIONAL WATER ACT, 1998 (ACT 36 OF 1998)

The National Water Act of 1998 provides the legal framework for implementing the goals of the White Paper on National Water Policy. It emphasises the use of water in supporting and promoting social, economic and environmental development. This resulted in a shift in focus from water development, which essentially involves dam building, to water resource management. For example, local authorities have to implement conservation management programmes before obtaining approval for additional water supply projects.

Over the next five years, the Department of Water Affairs and Forestry will focus on implementing other provisions of the Act, in particular, establishing new catchment

management agencies and water user associations.

It can be stated that drawing up legislation and working within a policy framework alone, is insufficient to provide water to disadvantaged people. Putting plans into action i.e implementing plans, policies and legislation is a difficult and complex task.

Environment factors, lack of financial resources, weak administrative structures and ineffective private sector involvement are some of the obstacles in effectively implementing the Acts.

The success of delivering water is, therefore, dependent on an integrated approach involving stakeholders in the public, private and non-governmental sector.

4.9 PROVISION OF WATER IN SOUTH AFRICA

According to Mirrilees et al (1994 : 3 - 4) it is estimated that 12 million people in South Africa do not have ready access to a safe and adequate supply of domestic water. The reasons for this are many and varied:

- overcrowding in underdeveloped rural areas where water is scarce;
- failure of water supply infrastructure in developing regions;
- high utilisation levels from other user sectors;
- the slow rate at which basic services are provided to informal settlements in urban areas; and
- rapid urbanisation.

Many South Africans, particularly those living in the middle to upper class suburbs, are unaware of just how scarce a resource water is. They will probably remain unaware unless their supplies suddenly dry up or become extremely expensive (Municipal Engineer 1995 : 42). Many people, therefore, take water for granted because it is so readily available (Forster 1995 : 42; Van Der Merwe 1995 : IR 1 - 31).

The people of a poor community - where a walk of several miles to obtain water from a polluted river or borehole is not unusual - are willing to pay a large percentage of their meagre income for access to a clean and adequate water supply. These people attach a higher value to water because their survival depends on it (Forster 1995 : 42).

The population in South Africa is expected to reach 70.08 million by the year 2025. International benchmarks put South Africa into the category of "periodic or regular water stress" at present, set to decline into "chronic water scarcity", where demand exceeds available water supply (South Africa Yearbook 1997 : 89).

Over 500 000 households (Table 4.3) were supplied with safe, clean water between April 1994 and September 1995, creating over 57 000 person-years of jobs through the former Community Water Supply and Sanitation Programme. Over 55% of these jobs went to women, and more than 25% to work-seekers between 16 and 25 years. This programme involved 1025 projects bringing basic water services to 4.9 million people (Department of Finance - National Expenditure Survey Budget 1999).

**TABLE 4.3 JOBS CREATED IN PERSON-YEARS ON THE WATER SUPPLY
PROGRAMME : APRIL 1994 TO SEPTEMBER 1995**

PROVINCE	PERSON-YEARS
Eastern Cape	5 840
Free State	1 880
KwaZulu Natal	13 820
Mpumalanga	7 250
North West	11 310
Northern Cape	1 380
Northern Province	15 200
Western Cape	450
Total	57 130

(Department of Finance - National Expenditure Survey Budget
1999)

4.9.1 THE IMPACT OF WATER ON SANITATION

Closely related to the provision of water, is the need for proper sanitation services. It is estimated that South Africa has 18 - 23 million people who lack access to adequate sanitation (White Paper on National Sanitation

Policy 1996 : 1). Those who have inadequate sanitation may be using the bucket system, unimproved pit toilets or the veld. In addition, there is a disturbing increase in poorly designed or operated water-borne sewerage systems. When these fail, the impact on the health of the community and the pollution of the environment are extremely serious.

In order to ensure that the sanitation improvement programme is a success, it is essential to provide sanitation systems that are affordable, appropriate and acceptable to the user communities (Davis et al 1993 : 10).

According to the Water Services Act, 1997 (Act 108 of 1997) basic sanitation means the prescribed minimum standard of services necessary for the safe, hygienic and adequate collection, removal, disposal or purification of human excreta, domestic wastewater and sewage from households, including informal settlements.

Where there is no improved form of sanitation, many people practice what has been called "open field" defecation. Custom may dictate location and the areas in which men and women use. Children may defecate in or near the household yard. Some of these traditional sanitation practices are uncontrolled and can pose serious health risks. Improved sanitation aims to contain and safely dispose of human excreta (Davis et al 1993 : 10).

The effects of the sanitation problem are threefold (National Sanitation Policy 1996 : 1) viz. health, economic and environmental. They are briefly described below:

(a) Health Impact

The impact of inadequate sanitation on the health of the poor is significant in terms of the quality of life and the education and development potential of communities;

(b) Economic Impact

Poor health keeps families in a cycle of poverty and lost income. The national cost of lost productivity, reduced educational potential and curative health care is substantial; and

(c) Environmental Effects

Inadequate sanitation leads to dispersed pollution of water sources. This in turn increases the cost of downstream water treatment as well as the risk of disease for communities who use untreated water.

4.9.1.1 LEVELS OF SERVICE OPTIONS

There are a number of sanitation systems which are widely applied in South Africa but do not meet the basic level of service requirements. Bucket latrines and unimproved pit latrines are the most notable, but problems have been

experienced with the operation and maintenance of other systems which would render them inadequate. Adequate service level options for sanitation include (Planact 1997 : 84):

- Ventilated Improved Pit Latrines (VIP) or equivalent dry, on-site, sanitation systems;
- Low Flow On Site (LOFLOS) systems;
- Septic tanks;
- LOFLOS or septic tanks with solids free sewers (septic tank effluent drainage - STED systems); and
- Full waterborne sanitation.

It must be noted that sanitation service levels need to be planned in conjunction with water supply. Where flush systems are required, sufficient water needs to be available and the viability of the system needs to take the cost of water supply into consideration (Wall, Shand & Jackson 1992 : 13 - 14; Lotter 1995 : 566).

4.9.2 RECONSTRUCTION AND DEVELOPMENT PROGRAMME (RDP)

The RDP is government's response to the serious social and economic problems of South Africa : mass poverty, gross inequality, a stagnant economy and enormous backlogs (The RDP - First year reviewed, April, 27 1995).

Nationally, there is currently a backlog of 3 million houses, there are 12 million people without access to safe drinking water and there are 21 million people without adequate sanitation facilities. Plans are being developed to remedy these situations, and the design of systems to help manage the construction and operational aspects of the programme will be a great challenge to all stakeholders (SA Water Bulletin 1995 : 6; Khuzwayo 1995 : FS 2; Municipal Engineer 1995 : 28).

The Reconstruction and Development Programme, recognises the importance of the water sector in any development programme, both its economic value and its role in the environment. A small amount is essential for people's physical survival. Beyond this, a limited amount is needed for basic personal hygiene and household uses (Lotter 1995 : 554).

The RDP has set the following goals with regard to water and sanitation :

The RDP's short term aim is to provide every person with adequate facilities for health. The RDP will achieve this by establishing a national water and sanitation programme which aims to provide all households with a clean, safe water supply of 20 - 30 litres per capita per day (lcd) within 200 metres and adequate sanitation facility per site

(A Basic Guide to the RDP 1994 : 9; Palmer & Eberhard 1994 : 6).

In the medium term, the RDP aims to provide an on-site supply of 50 - 60 lcd of clean water, improved on-site sanitation. Water supply to nearly 100 % of rural households should be achieved over the medium term, and adequate sanitation facilities should be provided to at least 75 % of rural households. Community/household preferences and environmental sustainability will be taken into account (Palmer & Eberhard 1994 : 6).

The RDP is committed to providing operating and maintenance which ensure minimum disruptions in service within two years (Palmer & Eberhard 1994 : 6).

Since water, in particular, can easily become a focus for conflict within and between communities, the development of effective delivery mechanisms must contribute to the RDP principle of achieving peace and security for all. Related to this, the very establishment of the goal of assuring that all South Africans have access to the basic services needed to ensure their health is a contribution to the process of nation-building (Water Supply & Sanitation Policy 1994 : 6).

The link between reconstruction and development remains a guiding concept. The RDP identifies the provision of infrastructure for services such as water supply and sanitation as one of the key elements of its strategy for developing the South African economy along its new path (Water Supply & Sanitation Policy 1994 : 6).

The way in which services are provided must ensure that they do not simply satisfy people's basic needs but also contribute to the growth of a dynamic economy, which is increasingly able to provide all South Africans with opportunities for a better life (Water Supply & Sanitation Policy 1994 : 6).

Water supply and sanitation should be integrated into programmes for the provision of other basic needs. The co-ordination of the various public organisations involved in the planning and delivery of basic services is, therefore, essential. It is necessary to consider at least four mutually related factors required for development (Water Supply & Sanitation Policy 1994 : 6):

- physical infrastructure such as water supply, sanitation, roads, electricity and communications;
- social infrastructure including schools, hospitals, clinics and welfare organisations;

- economic infrastructure which is the employment, production and trading base including access to markets and finance; and
- institutional infrastructure being organisational and civil administration structures at all levels.

An evaluation of the RDP goals with regard to water and sanitation proved to be slightly over-ambitious. The rate of progress fell short of that hoped for, with population growth, lack of absorptive capacity, overloaded bureaucracies and administrative bottlenecks outstripping progress (Khuzwayo 1995 : FS 2).

In many parts of South Africa, service rendering institutions currently lack technical, institutional, management and financial capacity to exercise their function. There is, therefore, an urgent need to build capacity of these institutions so that they can fulfil their obligations (Stewart 1997 : 16).

The RDP Office identified a number of problems that arose in RDP programme implementation. These include, inter alia, the following (Stewart 1997 : 17):

- lack of project management experience;
- lack of accountability in the form of business planning;
- lack of consultation with communities;

- slow development of management structures;
- the time lag between planning and delivery;
- political differences in the standard of delivery; and
- the effectiveness of the Masakhane campaign.

Although the RDP has raised people's expectations, the reality is that funds are insufficient to meet the needs that already exist for development. Therefore, the expectations that many people have of the RDP may, in many instances, be unrealistic (Khuzwayo 1995 : FS 2).

The RDP, did, however, succeed in focusing attention on core problems. It became clear that government could provide only a fraction of the resources needed and that communities themselves would have to carry much of the cost of service provision (Khuzwayo 1995 : FS 2).

A discussion on community participation and involvement in water follows.

4.9.3 COMMUNITY PARTICIPATION AND INVOLVEMENT IN WATER PROVISION

A distinction between participation and involvement is drawn by Jagannadham (1979 : 137) as follows:

"Participation" implies to "share in", while involvement implies that there is a feeling of belonging and that people become involved on the basis of their feeling.

In development, a feeling of belonging follows when people can identify with development efforts. They therefore feel that they "belong" to the various projects or programmes, and vice versa. Development can only take place with the preparedness of the local people and their desire to "possess" the development plans and to be permitted to make their own physical and economic input in implementing the plans (Kotze 1997 : 38).

According to the World Bank Discussion Papers (1987 : 3 - 4) community participation may be viewed as a process that serves one or more of the following objectives:

- Community participation may be thought of as an instrument of empowerment. Any water or sanitation project is a means of empowering people so that they are able to initiate actions on their own and thus influence the processes and outcomes of development.

- Community participation may serve an objective of building capacity in relation to a water or sanitation project. Developing capacity could also contribute to the sustainability of the water and sanitation project due

to interest and competence in project management.

- Community participation may contribute to increased project effectiveness. Community participation tends to enhance project effectiveness when the involvement of people contributes to better project design and implementation. This leads to a better match of project services with beneficiary/community needs and constraints.

- Another objective relates to the desire to share the costs of the water and sanitation project with the people it serves. Therefore, beneficiaries may be expected to contribute labour, money or undertake to maintain the water or sanitation project. Community participation may be used to facilitate a collective understanding and agreement on cost sharing and its enforcement.

- Finally, community participation may improve project efficiency. Project planning and implementation could become more efficient because of timely beneficiary inputs. Community participation could be used to promote agreement, co-operation and interaction among beneficiaries, and between them and the service delivery authorities so that delays are reduced, a smoother flow of services is achieved, and overall costs are minimised.

It is vital for both the beneficiaries or communities and the service rendering authorities to understand each other and design proposals and enter into agreements that are realistic, appropriate and workable.

Genuine participation requires institutional support. Most success stories are rooted in people's preparedness and their own initiatives. Notwithstanding the need for experts to help communities in planning, it is imperative for these experts to draw on people's capabilities and build their capacity and their self esteem (Khuzwayo 1995 : FS 3).

4.9.4 MASAKHANE CAMPAIGN

In February 1995, the Government launched the Masakhane Campaign to motivate all South Africans to take part in building the country. It is a Campaign which calls on people to work together to create a society which can develop and grow (The Daily News, 17 September 1998).

According to former President Nelson Mandela (Speech on 24 February 1995):

Masakhane is a partnership between a community determined to take responsibility for its own upliftment; and a government which has assumed the responsibility of planning for the most efficient use

of the country's resources in order to address the legacy of the past. The Masakhane will build partnership, so that we can build one another ..."

The Masakhane Campaign is part of the broad national strategy to create conditions necessary for the success of the RDP. It is aimed at mobilising all sectors of society to be actively involved in redressing imbalances of the past and creating new values and norms, a new consciousness and sense of responsibility among all citizens to transform governance and build a united nation (South Africa Yearbook 1997 : 53).

With sharing in government comes sharing in responsibility. The Campaign focuses on accelerating delivery of services at a local level, in ways which stimulate economic development and create jobs. It encourages local communities to form economic development forums to find ways of using public and private sector investments to build the local economy (The RDP - The first year reviewed 1995 : 18).

The responsibility for the maintenance of the services and infrastructure will then depend on the local community with the local government. People will have to pay for services (The RDP - The first year reviewed 1995 : 18).

In order to succeed, Masakhane must have the full support of all sectors of government, business, labour and non-governmental organisations, and most importantly, the communities (Masakhane Annual Award Submission 1998 : 3).

The Centre for Development & Enterprise (1998 : 6 - 7) criticises the White Paper on Local Government for its lack of clarity on the progress on the Masakhane campaign:

... other than a passing mention of the Masakhane Campaign, progress with respect to this absolutely critical component of local government viability is not documented. How is this campaign going? What exactly are the measures it encompasses? What impact is it having and in which spheres of a multi-faceted campaign? ... What does it tell us about government capacity to implement major initiatives?

The Masakhane Campaign is, however, ongoing and encourages citizens to be responsible and play their part in building the country by paying for services. There are different kinds of services but each one of them helps to keep the engine of society in motion. Without water, electricity and roads, for instance, it would be difficult for factories to manufacture and transport goods and for people to have access to a healthier environment (The Daily News, 17 September 1998).

Therefore, a culture of payment should prevail in order for government initiatives to be successful. Government needs to market this Campaign more vigorously and intensively to educate the masses about the importance of paying for basic services.

4.9.5 SOURCES OF FINANCE

The financing of water supply and sanitation services within the unique social, economic and political circumstances of the urban areas of South Africa presents some very real challenges to the Government of National Unity, to local governments and to the water industry (Jackson 1995 : 2).

The question of how to pay for the construction, running, maintenance and replacement of services, is a complex issue.

Sources of finance include (Palmer 1994 : 20 - 21; Water Supply & Sanitation Policy 1994 : 19; Jackson 1995 : 4):

- consumers, through their cash contributions and tariff payments;
- government, at all levels, which can give grants and transfers from money it raises from taxes and other sources;

- loans, which can be obtained from the "money market" although a government agency may be needed to assist small communities and organisations to obtain such funds;
- donations and cheap or concessional loans may be available from local or foreign sources from some projects; and
- privatisation which can raise funds for service provision in a number of ways.

The basic policy of Government is that services should be self-financing at a local and regional sphere. Government may subsidise the cost of construction of basic minimum services but not the operating, maintenance or replacement costs (Water Supply & Sanitation Policy 1994 : 19).

4.9.6 TARIFF STRUCTURE AND POLICY

According to Best (1995 : IR 4 - 19) water is increasingly being regarded as a scarce resource in South Africa and it is important that its price should reflect the scarcity value in the national economy. However, is also indispensable for survival and it is therefore essential that those who cannot afford the full cost be accommodated to a reasonable extent. A balanced and frequently reviewed water management strategy, including a well structured tariff policy, is a prerequisite to achieve this.

Tariffs are the price paid for services. A sound tariff policy is essential if user contributions to the cost of service provision and operation are to be collected in a rational and systematic manner. While an overall national tariff would be virtually impossible to establish, since every water supply and sanitation system has a different cost, there is an urgent need for clear guidelines for the setting of tariffs for service provision (Water Supply and Sanitation Policy 1994 : 23).

The White Paper on Local Government (1998 : 117) sets out principles to guide tariff policy:

- **Payment in proportion to the amount consumed.** Consumers should pay in proportion to the amount of service consumed.
- **Full payment of service costs.** All households, with the exception of the indigent, should pay the full costs of the services consumed.
- **Ability to pay.** Municipalities should develop a system of target subsidies to ensure that poor households have access to at least a minimum level of basic services.
- **Fairness.** Tariff policies should be fair in that all people should be treated equitably.

- **Transparency.** Tariff policy should be transparent to all consumers and any subsidies and concessions which exist must be visible and understood by all consumers.

- **Local determination of tariff levels.** Municipalities should have the flexibility to develop their own tariffs in keeping with the above principles.

- **Consistent tariff enforcement.** A consistent policy for dealing with non-payment of tariffs needs to be developed. This must be targeted and enforced with sensitivity to local conditions.

- **Ensure local economies are competitive.** Local tariffs must not unduly burden local business through higher tariffs, as these costs affect the sustainability and competitiveness of such businesses and firms.

4.9.7 WATER SUPPLY POLICY PRINCIPLES

The following water supply principles are presented (Water Supply and Sanitation Policy 1994 : 8; Planact 1997 : 38):

1. Development should be demand driven and community based.

Decision making and control will be devolved as far as possible to accountable local structures. There is a reciprocal obligation on communities to accept responsibility for their own development and governance, with the assistance of the State.

2. Basic services are a human right

This will be interpreted, in terms of the Constitution, as a right to a level of services adequate to provide a healthy environment. They do not imply the right of an individual person or community to demand services at the expense of others.

3. "Some for All" rather than "All for Some"

To give expression to the constitutional requirements, priority in planning and allocation of public funds will be given to those who are presently inadequately served.

4. Equitable regional allocation of development resources

The limited national resources available to support the provision of basic services should be equitably distributed among regions, taking account of population and level of development.

5. Water has economic value

The way in which water and sanitation services are provided must reflect the growing scarcity of good quality water in South Africa in a manner which reflects their value and does not undermine long term sustainability and economic growth.

6. The user pays

This is a central principle to ensure sustainable and equitable development, as well as efficient and effective management.

7. Integrated development

Water and sanitation development are not possible in isolation from development in other sectors. Co-ordination is necessary with all tiers of government and other involved parties and maximum direct and indirect

benefit must be derived from development in, for instance education and training, job creation and the promotion of local democracy.

8. Environmental integrity

It is necessary to ensure that the environment is considered and protected in all development activities.

4.9.8 STRATEGIES FOR SOUTH AFRICA TO MEET THE WATER CHALLENGES IN THE NEW MILLENNIUM

South Africa should formulate a sector development strategy, defining, inter alia, sector objectives, institutional responsibility and authority, resource allocation, and cost recovery policies (Palmer 1994 : 83):

- Investments should be based on effective demand and long term sustainability. Tariffs, set to recover the costs of the service, should ensure financial viability of the service organisation, economic efficiency and social equity.

- Priority should be given to the rehabilitation and maintenance of existing assets.

- Community participation should be an integral part of all project development and implementation.
- Institutional arrangements should promote accountability to the end user, the use of market principles and the financial autonomy of institutions as far as is possible.
- Technologies should be applied appropriately taking into account, amongst others, social-cultural preferences, affordability and long term sustainability.
- Water and sanitation investments should be integrated with primary health care strategies and solid waste and sullage disposal and storm-water drainage.
- There should be regular regional meetings to promote the exchange of experience and expertise among African countries.
- Government needs to work in partnership with other stakeholders (private sector, non-governmental sector and international investors) to quicken the pace of water and sanitation service delivery to impoverished communities.

4.10 PROVISION OF WATER IN KWAZULU NATAL

Dr Frank Mdladlose, highlighted the inequalities in the distribution of water in urban and rural areas (KwaZulu Natal Economic Workshop 7 - 8 November 1994):

In the area in which I grew up potable water was unheard of and rivers and streams the only source of drinking water. The gap between poor and affluent has grown steadily wider and the disparities in facilities and infrastructure between the few developed urban areas and the rest of the province is greater than ever. ... Why this major disparity between a few developed nodes, and the rest of the province? The answer is that the situation has occurred for a number of reasons, not least being the policy of previous governments which equated urbanisation of any kind with growth and progress. But as George Santayana once said - those who speak most of progress measure it by quantity and not by quality.

Over 50% of the province's population are crowded into a few urban conglomerations which do not have the capacity to provide the steady stream of new arrivals with employment, decent shelters and housing, and basic needs such as sanitation, adequate transport network, schooling, health

care and recreational facilities. The consequent rise in crime, violence and social diseases such as prostitution and the AIDS pandemic are only to be expected in the vast, sprawling slum-like informal settlements which ring many of the developed urban centres, including this city (KwaZulu Natal Economic Workshop 7 - 8 November 1994).

According to Census in Brief (1996) the main water supply in households in KwaZulu Natal are:

- piped water in dwelling;
- piped water on site or in yard;
- public tap;
- water-carrier or tanker;
- borehole/ rain-water/well; and
- dam/river/stream/spring.

According to (Emmett 1996 : 81) the access to safe drinking water and sanitary disposal of wastes are not only recognised as basic needs, but are also intimately tied up with the health and productivity of developing communities. Inadequate water supply and sanitation also have major environmental implications.

The costs of getting water and sanitation to people living in remote and often inaccessible areas is high. These communities rely on natural sources which can involve up to

six hours of walking a day (the burden of water carrying lies with the daily chores of females) to obtain water supplies for the household . Often this water is unfit for human consumption and the incidence of waterborne disease is high in the communities where poverty and low education levels are the norm (New Water World 1995 : 52).

The purification of water is an essential but potentially costly and the situation is exacerbated as raw water becomes highly contaminated by bacteria from human and animal faeces and the demand for potable supplies increases from communities not serviced.

It is feared that water may soon become prohibitively expensive to the very communities who need it most and ironically, these are the same communities which will continue to pollute the water and land if they are not supplied with basic infrastructure such as safe water and adequate sanitation (New Water World 1995 : 52).

The establishment of large informal settlements around the city has resulted in the overloading of many existing water and sewage reticulation systems and created havens for disease and despair (Els 1995 : IR 2 - 32; New Water World 1995 : 52).

The growing demands from cities and surrounding areas have raised the potential for water quality to deteriorate as suppliers seek to satisfy demand at the lowest cost. To date, all tap water has been safe for human consumption and at a price that is one of the lowest in the world (New Water World 1995 : 52).

4.10.1. PROVISION OF WATER IN THE DURBAN METROPOLITAN AREA

The provision of water is an essential function of local government in Durban. There are 609 356 number of households in the Durban Metropolitan Area. Approximately 444 171 households have access to water and 165 185 households are unserviced. This means that some 27% of households do not have access to piped water on their premises (UNICITY COMMITTEE November 1999 : 17). The demand for water is directly related to urbanisation patterns (Ward 1995 : IR 3 - 31).

The management of water resources traditionally has been along provincial lines with central government controlling the legislation and allocation and distribution of water supplies (New Water World 1995 : 52).

Generally, there is a three tier system of water supply. The Department of Water Affairs and Forestry is responsible for the control of the country's water resources and the

supply of raw water to various water boards and other water authorities (New Water World 1995 : 52).

4.10.1.1 UMGENI WATER AND DURBAN METRO WATER SERVICES

In the Durban metropolitan area, the water board (Umgeni Water) is responsible for the purification of the water and bulk supply to local authorities (Durban Metro Water Services), who is then responsible for the local reticulation and distribution to domestic and industrial consumers (Els 1995 : IR 2 - 32).

Umgeni Water and Durban Metro Water Services are major providers of potable water in KwaZulu Natal.

Umgeni Water is a public utility which operates as a commercial organisation raising its capital needs on the open market through the issue of marketable stocks, and has two highly successful gilt megabonds trading daily on the Johannesburg Stock Exchange. Joint ventures with development agencies have meant that a larger number of people have been supplied with water in recent years than was financially possible beforehand. South Africa's water supply rank with the best in the world and the treatment facilities are mostly modern (New Water World 1995 : 52).

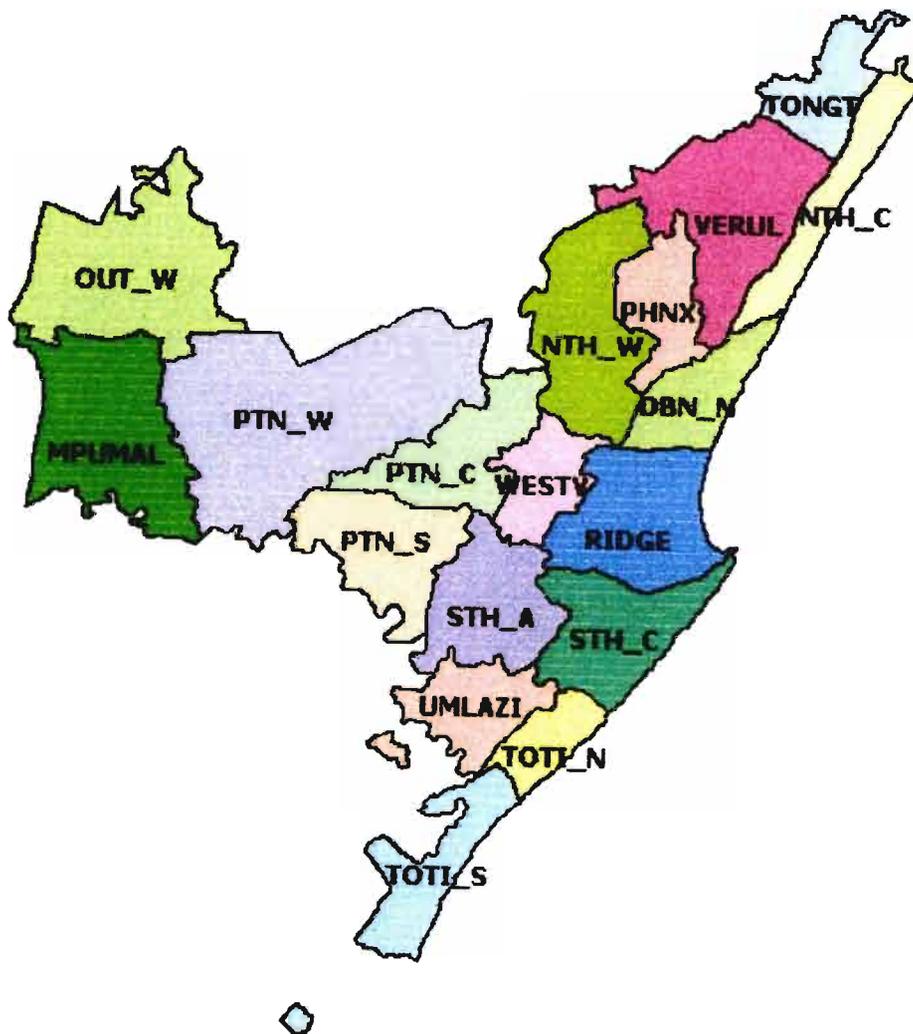
The water operations branch of the Durban Metro Water Services is responsible for the operation of the bulk supply system and for the distribution of water to all consumers. The operation of the bulk water supply system relies principally on the telemetry system. It is a sophisticated computer controlled system that monitors and controls bulk water distribution to various storage reservoirs in the Metro region. It also monitors the demand for water and enables operators to regulate valves and pumping equipment by remote control. The telemetry system is in line with the best in the world and the most sophisticated in Africa (<http://www.durban.gov.za>).

In 1996, Durban Metro Water Services provided water of international quality to over 295 000 customers and made a commitment to provide water to an additional 200 000 customers within ten years (Robbins & Watkinson 1999 : 122).

Umgeni Water and Durban Metro Water Services have recognised the urgent need for water to be supplied to informal settlements where desertification and poverty are increasingly eroding the quality of life of the communities (New Water World 1995 : 52).

Map 4.1 provides an overview of the operational boundaries of the Durban Metro Water Services.

**MAP 4.1 OPERATIONAL BOUNDARIES -
DURBAN METRO WATER SERVICES**



4.10.1.2 WATER DELIVERY ARRANGEMENTS

Durban Metro Water Services use four water systems (Robbins & Watkinson 1999 : 130):

- full pressure (250kpa) reticulation only available for a full water-borne waste water system;
- semi-pressure (30kpa) system that supplied water from the street main to a 250l tank on the roof of the house in order to reduce the cost of delivery and spread out peak consumer demand;
- low-pressure system that supply water to a 200l tank near the home from a central manifold managed by a community appointed water bailiff; and
- regular tanker-delivered supply to community-managed water tanks in areas without bulk infrastructure.

The term "water delivery" is used to describe the combination of the technology and sales procedure used to deliver water to consumers (Palmer & Eberhard 1994 : 8.5).

In the Durban Metropolitan Region, various water delivery arrangements can be found. The following common arrangements are described below (Palmer & Eberhard 1994 : 8.5):

(a) COMMUNAL STANDPIPES

A single standpipe, often with a single tap, is shared by a number of households (See Appendix 1) . The number of households per standpipe will depend on the density of dwellings in the settlement. A ratio of 25 households per tap is typical (Planact 1997 : 80; Palmer & Eberhard 1994 : 8.8).

The payment arrangement for access to water from public standpipes is a critical factor and is associated with the level of service. There are a number of options (Planact 1997 : 80; Palmer & Eberhard 1994 : 8.8):

- Water provided free of charge (where this can be afforded by the municipality);
- Fixed monthly charge per household using the public standpipes;
- A "concession" system whereby the standpipe is located in the yard of a selected individual who then sells the water to others at an agreed rate and generates an income from this for the service they provide in operating the system.
- A coupon system where people buy coupons for a fixed volume of water and hand them in to a person supervising the public standpipe. This system has not been in operation as yet.

- Electronic prepayment meters - there is new technology available to allow water to be dispensed from public standpipes using an electronically encoded token. This system is currently being tested in several pilot projects in South Africa.

Advantages

- Public standpipes are the least expensive water supply option for a reticulated water supply system, in terms of both capital and operating costs; and
- Consumption is comparatively low and pipe sizes can be kept to a minimum, unless some form of upgrading is likely in the near future.

Disadvantages

- Customers have to carry water in containers to their houses which is inconvenient;
- Water is stored in the house, often in open buckets where it could be contaminated unless proper care is taken;
- Poorly designed standpipes can create messy surroundings;
- Payment arrangements are difficult, leading to a reduced cost recovery for the service; and
- Free or fixed charge arrangements frequently lead to higher consumption and wastage.

(b) YARD TANKS

A tank is provided to the household and installed in the yard (See Appendix 2). This tank is filled every day from a central point. Customers pay a fixed sum upfront on a monthly (or weekly) basis. If they do not pay, their tank can be isolated from the mains (Planact 1997 : 81).

It is possible for more than one tank to be provided per customer and it may also be feasible for tanks to be mounted above ground to allow water to be piped into the house (Planact 1997 : 81).

Advantages

- The upfront payment arrangement ensures that people pay for the service;
- People know how much water they are using;
- The fact that storage is provided "on site" reduces the required capacity of the connector and internal reticulation principles and the distribution reservoirs;
- Low capital cost, particularly if people pay the capital cost of the tanks themselves; and
- A good upgrade option minimising requirements for new connector infrastructure.

Disadvantages

- Consumption is constrained and tanks can run dry during the course of the day; and
- Tanks need to be cleaned on a regular basis.

(c) YARD TAPS

A single tap is provided on each plot, either as part of a private standpipe or mounted on the wall of a toilet if a water borne sanitation system is used (See Appendix 3). Although this has not always been done in the past, it is essential that a meter is provided (Planact 1997 : 82).

Advantages

- Water is available "on site".

Disadvantages

- A meter reading and billing system is required.

(d) ROOFTANKS

This is an upgrading option for yard tanks and yard taps (See Appendix 4). Here is a tank provided in the roof of the house and is supplied via a "trickle feed" arrangement,

controlled, for example, by an orifice (restriction in the pipe to reduce the flow rate). Payment can be made on a flat rate basis or the supply can be metered. The key advantage is to the service provider as they save on reticulation and distribution storage costs when compared to a normal house connection system. For the consumer, it can control consumption and monthly bills, and it can compensate for variations in water pressure and periods during the day when water is not available (Planact 1997 : 83).

(e) HOUSE CONNECTIONS

This option has a metered supply to the plot with a connection to the house and several taps in the house (See Appendix 5). It requires a waste water system such as a septic tank or sewerage (Planact 1997 : 83).

Advantage

- Highest level of convenience.

Disadvantages

- High cost;
- High levels of water use;
- Difficulty in controlling amount used; and

- Needs a complementary wastewater system.

4.10.1.3 COSTS OF WATER SUPPLY

What are the costs of water supply ? The answer depends to a significant extent on what the term "cost" mean.

According to Ryneveld (Water SA 1995 : 1) cost is a sacrifice that must be made in order to do or acquire something. The nature of the sacrifice - i.e. what is given up - may be tangible, objective or subjective, and may take one or more of many forms such as money, goods, leisure time, income, security, prestige, power or pleasure.

The cost of water arises from the need to abstract it from a source, treat it and bring it to where it is required. This cost of water (or a sanitation system) is made up of three basic components (Ryneveld 1995 : 1; Planact 1997 : 39):

- Capital costs: the money required to build the water scheme. These costs vary depending on the nature of the scheme. They may include the costs of storage facilities such as dams and reservoirs, water treatment plants, pump stations, main pipe lines, reticulation, bore hole drilling and equipping, or simple spring protection.

Capital costs are usually covered by municipalities, water boards and infrastructure investment programmes and consumers.

- Operation and maintenance costs: are the costs of keeping the services running. These costs are also known as "recurrent costs", they include the costs of maintenance and operating staff, fuel or electricity for pumps, replacement of broken pipes and fittings, the costs of chemicals for treating the water and the like. The operation and maintenance costs are usually paid by the consumer. Sometimes these costs are funded by central government grants, when consumers cannot pay.

- Replacement costs: this refers to the money required to replace an engine or a pipeline when it reaches the end of its useful life. These costs are usually covered by government grants, water boards or municipalities.

The financial position of the Durban Metropolitan Council is reputed to be among the best in the country. In the 1998-1999 financial year, it approved a budget of over R4.3 billion. Of this, approximately 20 % (R820 million) was to be directed towards capital expenditure and 80 % (R3.6 billion) towards operating expenses. The 20 : 80 ratio of capital to operating expenditure has been a characteristic of the Durban Metropolitan Council's budgets since the

formation of transitional structures (Robbins & Watkinson 1999 : 122).

The water service provider had to increase its tariffs by approximately 15% overall in order to improve the financial viability (Robbins & Watkinson 1999 : 122). Table 4.4 illustrates the water tariffs for the Durban Metropolitan Area.

Table 4.4 WATER TARIFFS

Type of water supply →	Ground tank. Low pressure.		Roof tank. Semi-pressure system.		Domestic. Full pressure.		Industrial, commercial and other users	
Monthly Consumption ↓								
(prices excl. VAT)	old	new	old	new	old	new	old	new
Old to Old	3,16	nil	1,17	nil	1,17	nil	2,13	2,53
from Old to 30ld	-	-	1,53	1,76	2,13	2,53	2,13	2,53
more than 30k	-	-	3,19	5,06	3,19	5,06	2,13	2,53
Fixed charge	nil	nil	nil	nil	10,20	18,00	10,20 - 1020,00	18,00 - 1800,00
							varies according to size	

(<http://www.durban.gov.za>)

4.11 CHALLENGES IN WATER PROVISION

There are currently problems with service delivery systems and payment for services in urban areas in South Africa. There are a variety of reasons for this. In some cases, people are not prepared to pay for services because they are poorly managed or maintained. Some municipalities have not yet begun to improve the level of service. Most communities are therefore not willing to start paying without seeing an improvement (Planact 1997 : 39). In other cases, service charges are beyond the means of many of the people most needing the services. Therefore, it is important to bridge the technical, financial and institutional gaps that prevent the extension of conventional services to low-income users (Kalbermatten 1999 : 14).

There is also a need to reduce operating costs (obtain a greater level of delivery for a limited pool of money) as well as to improve the ability of households to generate income and strengthen the demand for services, which would render bulk infrastructure development viable (Robbins & Watkinson 1999 : 129).

Local government is left to its own devices to expand service provision while cutting its costs and / or forming partnerships with both the private sector and the national government. In Durban, a private public partnership task

team is already in place to explore (Robbins & Watkinson 1999 : 129):

- partnerships for new services;
- partnerships for existing services; and
- bids for any functions currently performed by the Durban Metropolitan Council.

The extension of bulk infrastructure and related services is likely to be severely constrained in the short to medium term by a mix of financial and human resource capacity constraints, costly and inefficient policies and poor economic conditions. Central government initiatives in the field of infrastructure development, such as concessionary finance and subsidies to poor households, are likely to only partially improve conditions for better delivery by local government. Cities in developed and developing countries alike have faced similar challenges. In almost all cases, significant national resources were injected into local government, based on a recognition that generating the required resources within the local government environment was unlikely to fully transform living conditions. The improved planning framework developed through mechanisms such as integrated development plans will allow for a more transparent relationship between central and local government, so as to develop significant co-operative programmes to bring services to the majority without placing

unsustainable resource burdens on local government (Robbins & Watkinson 1999 : 129).

Chapter five provides an in-depth discussion on the role of the private sector in the provision of water to the people in South Africa.

4.12 SUMMARY

Water is one of the basic ingredients of life, without which no form of life would exist. Water is a commodity with which South Africa is not richly endowed. However, the water that does exist, is not evenly distributed throughout the country. The water supply situation is one of contrasts: a first world standard in the greater urban areas and third world standard in rural and remote regions.

There are more than 12 million people who do not have access to an adequate supply of potable water; nearly 21 million lack basic sanitation. Lack of access to basic water supply does not exist in isolation from other poverty-related issues. It forms part of the poverty cycle and is both a cause and a consequence of impoverishment.

Some South Africans take water for granted because it is readily available. A large proportion of people walk many miles to polluted rivers to collect water and are willing

to pay for access to a clean and adequate water supply.

The goal of government is to ensure that all South Africans have access to essential basic water supply at a cost which is affordable both to the household and to the country as a whole. This provision is entrenched in section 27 of the Constitution of the Republic of South Africa (Act 108 of 1996).

The central government is entrusted with the main task of managing the nation's water resources whilst the role of regional governments is to share the responsibility for assuring service provision through the promotion of effective local government.

Local government is assigned the daunting and mammoth challenge of making water provision accessible to all, especially the poor amidst social, economic and political constraints. More often than not, local government is poorly equipped with the necessary resources (financial, human and technical) to effectively address this function. It is therefore imperative that local government receive continuous support, expertise and assistance from the other spheres of government.

In the Durban metropolitan area, the water board (Umgeni Water) is responsible for the purification of the water and

bulk supply to local authorities (Durban Metro Water Services), who is then responsible for the local reticulation and distribution to domestic and industrial consumers.

To provide an adequate and safe supply of water services to all of South Africa's urban residents is an achievable and affordable aim. The key to achieving this, is the development of a coherent national and regional policy framework, the development of sensible financial policies for the construction and ongoing operation of water supply infrastructure, the establishment of economically sustainable water tariffs with proper cost recovery and the rationalisation of institutions so that these goals can be most effectively achieved.

There is a further need for development to be people driven and a shared responsibility to conserve water resources for the future generations.

CHAPTER FIVE

PRIVATE SECTOR PARTICIPATION IN WATER PROVISION

Competitive markets are the best way yet found for efficiently organising the production and distribution of goods and services. Domestic and external competition provides the incentives that unleash entrepreneurship and technological progress. A consensus is gradually forming in favour of "market friendly" approach to development.

(World Bank 1991 : 1).

5.1 INTRODUCTION

Urban water supply systems are facing acute crisis in many countries. Rapid urbanisation has substantially increased the demand for water and the supply of services have not kept pace with this increasing demand. A significant percentage of the population still does not have access to piped water. Even where it is available, systems have often been severely degraded due to chronic under-investment and inadequate maintenance, resulting in excessive water loss through leakage, poor water quality

and unreliable flow.

In recent years, public sector participation or privatisation of State Owned Enterprises (SOEs) has attracted attention from the media, academia, governments and financial institutions. This reflects a worldwide interest in reducing the role of the State in the management of national economies while enhancing the scope of private ownership and the private sector. The growing appeal of privatisation embraces both the ideological desire for a smaller government and the strong belief in the superior economic performance of the private sector. It has come to be accepted as a panacea for achieving a stable, efficient and well-managed economy.

Although privatisation became widespread in Africa in the 1990s, it is an old concept going back to the early 1960s. Today, almost all countries, including South Africa under the government led by the African National Congress, are engaged in some form of privatisation.

In this chapter, an attempt is made to examine the role of the private sector in service delivery. Various definitions of privatisation are cited and international lessons are reviewed as a basis for South Africa's path to efficient service delivery.

In this study, "public sector participation" and "privatisation" have been used synonymously.

5.2 DEFINITION OF PRIVATISATION

According to Musambachime (1999 : 13) privatisation has been given several definitions by various writers who see it as a reflection of a new policy initiative geared to meet the altering balance between private and public sectors.

For Hemmingway & Mansour (1989 : 31 - 32) privatisation is,

the transfer of public sector activities to the private sector.

Scott & Wellons (1995 : 1049 - 1050) provide a comprehensive definition of privatisation:

... the process of transferring operations and assets from the public to the private sector. Broadly defined, privatisation is more than the selling of an enterprise to the highest bidder, as it includes contracting out leasing, private sector financing of infrastructure, projects liquidation, mass privatisation, etc. There is no single best approach to privatisation; the appropriate path depends on the goals that the government is seeking to attain, the

individual circumstances facing the enterprise and the [social], economic and political context of the country.

It can be deduced that privatisation is a general effort to encourage the public sector to adopt efficiency enhancing techniques induced by market forces and the transfer of ownership and control of productive assets from the public to the private sector.

5.3 MOTIVES FOR PRIVATISATION

A government has three principal objectives to privatise (Savas 1982 : 14):

- (a) to seek improvement in the functioning of economies, improve living standards and increase productivity because a country's prosperity is directly linked to it. The more goods and services produced, the greater the reward. It is believed by privatising SOEs, resources will be used more efficiently and the quantity and quality of production will rise;
- (b) by transferring the ownership and management of commercial enterprises from governments, they will then concentrate their resources on the provision and

improvement of vital social services; and

- (c) by privatising, SOEs, governments hope to reverse their increasing budgetary expenditures and stem inflation.

In shifting responsibilities from government to market forces, privatisation potentially alters the institutional framework through which citizens normally articulate, mediate and promote their individual and shared interests.

Privatisation is therefore an intensely political phenomenon (Utt 1993 : 4 - 5).

The motives for privatisation may be divided into five different categories as follows (Cowen 1999 : 18):

- introducing a market economy;
- increasing economic efficiency by promoting competition;
- boosting state revenues and reduce budget deficits;
- removing political interference in commerce; and
- establishing a political system based upon private property rights and individual freedoms.

A government's real incentives to privatise include the following (Vorhies & Leach 1990 : 23; South African Labour Bulletin 1995 : 65 - 73; Klein & Roger 1996 : 13; Dnes 1996

: 17; African Business, March 1996; ; White & Bhatia 1998
: 27):

- political change and stable management;
- the need to generate proceeds;
- the precarious state of some public enterprises;
- the need to maintain employment levels;
- improvement in service efficiency;
- at times, the need to satisfy vested interests; and
- the need for World Bank, IMF and other donor financial assistance and private capital.

From the aforementioned, it can be summarised that the primary reasons for governments to privatise are to enhance efficiency, effectiveness and economy, foster competition, generate more funds, improve the economy and reduce budget deficits.

An exposition of the constraints facing public water authorities follows.

5.4 CONSTRAINTS FACING PUBLIC WATER AUTHORITIES

In most countries, water is still regarded as public property. Public officials decide who gets it, at what price and how it is used. The track record of such administered systems of water allocation has not been

impressive (Idelovitch & Ringskog 1995 : 8).

Public water services and other state enterprises are plagued by poor performance and low productivity (So & Shin 1996 : 12; Musambachime 1999 : 17). These problems may be classified into four categories:

- technical and operational aspects;
- commercial and financial problems;
- human and institutional capacity; and
- environmental issues.

The aforementioned problems will be deliberated upon.

- TECHNICAL AND OPERATIONAL ASPECTS

Operational practices are inefficient, regular maintenance is inadequate and preventive maintenance does not exist. Unaccounted-for water is high. This is partly due to physical losses through old pipes, which are neither properly maintained nor replaced in a timely manner. Under such circumstances, service expansion is rather limited and cannot cope with population growth (Idelovitch & Ringskog 1995 : 8; So & Shin 1996 : 12).

- COMMERCIAL AND FINANCIAL PROBLEMS

Consumption metering is limited and sometimes does not exist at all. Regular meter reading and billings based on actual consumption, are rarely practised. In many cases, water charges are based on lot size and property value, regardless of the amount of water consumed. The unmetered system creates distortions in consumer charges, which result in legitimate consumer protests. The amount of water produced is usually estimated and not metered (ODI Briefing Paper 1986 : 1; Idelovitch & Ringskog 1995 : 8; So & Shin 1996 : 12).

Poor consumer records, combined with inefficient billing and collection practices, create commercial losses - the main reason for the high levels of unaccounted water. Tariff policies add to the financial problems. In an effort to reduce the costs of water consumed by low-income groups, tariff structures with large cross-subsidies are the rule. The unfortunate result has been the opposite of what was intended: in unmetered systems with underpriced water, the wealthy who consume more water enjoy the largest subsidies. The poor are rarely connected because utilities view them as commercially unattractive at the low prevailing tariffs (Idelovitch & Ringskog 1995 : 8; So & Shin 1996 : 12).

- HUMAN AND INSTITUTIONAL CAPACITY

Public departments are plagued by political appointments and excessive political intervention. Political appointments and non-competitive wages result in frequent turnover of high-level staff, shortage of competent managers, low productivity, inefficiency and lack of discipline of the labour force. Many civil servants are poorly trained and lack motivation and initiative (ODI Briefing Paper 1986 : 1; White & Bhatia 1998 : 27 - 28; Musambachime 1999 : 17).

Another institutional problem is the lack of clear regulatory responsibility. Many large, water departments run the risk of a potential conflict of interest by being both operator and regulator. Consequently, when the water quality obtained at a treatment plant, for example, is below the expected standard, the easiest regulatory measure is adopted, lowering the standard, rather than improving the operation of the treatment plant (Idelovitch & Ringskog 1995 : 8; So & Shin 1996 : 12).

- ENVIRONMENTAL ISSUES

Public water departments have traditionally favoured connecting the population to the water system but have been slow in connecting them to the public sewerage system.

Large numbers of households not connected to the public sewerage system dispose of their sewage through cesspools and septic tanks which contaminates shallow ground-water aquifers where some cities withdraw their potable water supply (Idelovitch & Ringskog 1995 : 8).

It can be stated that the combination of all these problems - technical, financial, institutional and environmental ultimately results in unreliable service and unsatisfied consumers and exposes the urban population to unnecessary and unacceptable health hazards.

As a result, many public authorities have looked for alternative ways of providing water services more efficiently. They are moving away from being owners and operators of infrastructure services such as water, transport and telecommunications. More often, they are acting as regulators of infrastructure services provided by private firms (Public Policy for the Private Sector 1996 : 1).

5.5 OPTIONS OF PRIVATISATION

There are four broad options that cover a range of possibilities for improving infrastructure, provision and performance and expand the capacity to provide infrastructure services. They are as follows (Guidelines

for Private Sector Participation in Municipal Service Delivery 1999 : 2):

- public ownership and public operation;
- public ownership and private operation;
- private ownership and private operation; and
- community and user provision.

Public ownership and public operation describes infrastructure that is owned and operated by a public entity and controlled by the central, regional or local government. This can be successful when the public entity operates the infrastructure service on sound economic principles (Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 3).

Public ownership and private operation can be achieved through concessions and leases which allow the municipality to delegate the operation of infrastructure facilities and the responsibility for new investment - along with the commercial risk - to the private sector (Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 3).

Private ownership and operation are most attractive to the private sector where there is high potential for securing revenues from user charges when commercial risk and

political risk are low (Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 3).

For municipal and local services, user provision or community self help arrangements that provide smaller-scale infrastructure can offer effective and affordable services in many areas when those who contribute are the primary beneficiaries (Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 3).

Service contracts, management contracts, leases and concessions are the main forms of public ownership and private operation (ODI Briefing Paper 1986 : 2; White & Bhatia 1998 : 18 - 19).

5.5.1 SERVICE CONTRACTS

Service contracts are the simplest form of private sector participation, whereby the public authority retains overall responsibility for operation and maintenance of the system (Nickson 1996 : 8; White & Bhatia 1998 : 18 - 19).

The public authority also bears all the commercial risk and must finance fixed assets as working capital. The responsibility of the private contractor is limited to managing its own personnel and services efficiently.

Service contracts can cover a wide range of activities such

as maintenance, emergency repairs, meter reading, billing and collection, upgrading of existing or construction of new facilities and equipment rental (Idelovitch & Ringskog 1995 : 14; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 3).

Public authorities that plan to use service contracts extensively may need to undergo some changes to fulfil their new role, which shifts from execution to supervision.

For example, institutional reforms may be required to decentralise control, to provide technical assistance at the local level, to enforce standards for quality and control, and to manage staffing changes (Idelovitch & Ringskog 1995 : 14; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 3).

Service contracts are usually set for periods of one or two years and are usually renewable. These contracts require little or no fixed investment on the part of the private firm. The contract period is short, therefore, contractors are subject to frequent competition, which encourages efficient performance (ODI Briefing Paper 1986 : 1). In large urban areas, different firms can be contracted in separate geographical areas to deliver the same services. Multiple contracts ensure adequate competition and enable the water authority to compare costs and performance on an

ongoing basis (Idelovitch & Ringskog 1995 : 14; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 3).

A major benefit of service contracts is that payments to the other contractor are linked to the work performed, instead of guaranteed wages paid to a worker. For example, a contract for meter reading would stipulate that the operator be paid a set amount for each meter read (Idelovitch & Ringskog 1995 : 14).

5.5.2 MANAGEMENT CONTRACTS

Management contracts are a more comprehensive arrangement, where the public authority transfers responsibility for the entire operation and maintenance of a system to a private company. This gives the public company the freedom to make day-to-day management decisions without assuming any commercial risks. Under this arrangement, the contractor has no direct legal relationship with the consumer. The private contractor acts at all times on behalf of the public authority, and it will not get paid unless rates are collected from the consumers. The government or public authority retains financial responsibility for the service and has to provide funds for working and investment capital (Idelovitch & Ringskog 1995 : 14; Nickson 1996 : 9; White & Bhatia 1998 : 18 - 19; Guidelines for Private Sector

Participation in Municipal Service Delivery 1999 : 4).

Payments to a management contractor are usually proportional to some physical parameters, such as improved efficiency, volume of water produced, improved collection rates, or reduction of unaccounted-for water. Such a payment system creates an incentive for increasing productivity (Idelovitch & Ringskog 1995 : 14; White & Bhatia 1998 : 18 - 19; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 4).

Management contracts do not require the contractor to make large investments with long payback periods. Their duration is generally from three to five years (Idelovitch & Ringskog 1995 : 14; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 4).

5.5.3 LEASE CONTRACTS

Lease contracts, also known as affermage, are arrangements whereby a private operator rents the facilities from the public authority for a certain period and is responsible for operation, maintenance, and management of the system. The public authority, which remains the sole owner of the assets, is responsible for capital expenditures for new projects, replacement of major works, debt service, and tariffs and cost-recovery policies (Idelovitch & Ringskog

1995 : 15; Nickson 1996 : 9; White & Bhatia 1998 : 18 - 19; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 4).

Leaseholders are responsible for all operation and maintenance functions, including offices, vehicles and spare parts, renewals, replacements, billing and collection. In many cases, leaseholders pay the owners a rental fee sufficient to service the debt and finance part of the investment program (Idelovitch & Ringskog 1995 : 15; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 4).

Lease contracts can be medium or long-term in duration. They usually last five to ten years but can be extended for as long as twenty years (Idelovitch & Ringskog 1995 : 15; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 4).

The risks involved in a lease arrangement tend to be limited, making them a low-risk private sector participation option, which allows a private firm to become acquainted with the system and may pave the way for more extensive involvement in the future. When risks are limited, there is more competition from potential private partners, which benefits the public authority (Idelovitch & Ringskog 1995 : 15; Guidelines for Private Sector

Participation in Municipal Service Delivery 1999 : 4). In most cases, the public authority assumes the capital investment risk, and the leaseholder assumes the commercial risk.

The lease contract states the penalties that will apply in the case of poor performance. Lease contractors usually put up a security deposit that can be called in by the public authority if performance is unacceptable. If, for example, a major goal of involving the private sector is to reduce pollution, penalties for not meeting quality standards can serve as a contractually backed incentive. A common performance indicator is the level of unaccounted-for water (Idelovitch & Ringskog 1995 : 15; White & Bhatia 1998 : 18 - 19; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 4).

5.5.4 CONCESSIONS

In a concession, the private contractor, or concessionaire, has overall responsibility for the services, including operation, maintenance, and management, as well as capital investments for the expansion of services. The fixed assets, however, remain the property of the government or public authority. The assets are entrusted to the concessionaire for the duration of the concession contract and must be returned in the same condition at the end of

the concession period (Idelovitch & Ringskog 1995 : 16; Guislain & Kerf 1996 : 21; Nickson 1996 : 10; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 4).

The advantage of combining responsibility for operations and investments in the same entity is that it provides an incentive to the operator to make efficient investments decisions (Idelovitch & Ringskog 1995 : 16; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 4). It also provides an incentive for technological innovations because the operator will benefit directly from any efficiency improvements.

Concession contracts usually run for twenty to thirty years, depending on the level of investments and the payback period needed for the concessionaire to recover investment costs. The concessionaire retains exclusive rights for the duration of the contract. When the contract expires, all works and equipment are turned over to the government or public authority (Idelovitch & Ringskog 1995 : 16; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 4).

Under concession contracts, the contractor is paid for its services directly by the consumer, based on the contractually set price (Idelovitch & Ringskog 1995 : 16;

Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 4). The contractor retains the balance of revenues after paying back any taxes and charges levied on consumers by the public authority. If expenses exceed revenues, the private company suffers losses, which is the largest risk it assumes.

Penalties in concession contracts are levied if the concessionaire fails to meet either the targets for service coverage or the quality of service specified in the contract (Idelovitch & Ringskog 1995 : 16; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 4).

A brief discussion on other forms of public-private partnerships practised internationally follows.

5.5.5 BUILDS, OWNS, OPERATES and TRANSFERS (BOOT CONTRACTS)

Under a BOOT contract, a firm or a consortium of firms finances, builds, owns, and operates a specific new facility or system. After a predetermined period of time, ownership of the facility is transferred to the public authority. BOOT arrangements are attractive mostly for new plants that require large amounts of financing - for example, large water treatment plants or wastewater

treatment plants - but they are not suitable for water distribution or wastewater collection systems (Idelovitch & Ringskog 1995 : 17).

5.5.6 REVERSE BOOT CONTRACTS

In countries where economic or political risks are high, private sector firms either may not be interested in participating in a BOOT bidding process or may request very high risk premiums in return for their participation. In these cases, it may be preferable for the public sector to finance and build the plant itself and then to contract a private firm to operate the plant over a long period of time. To acquire the plant gradually, the private firm pays an annual fee to the public authority, which usually covers the full debt service of the entire investment cost. The lower risk of reverse BOOT, as compared to BOOT, may encourage more private sector firms to participate (Idelovitch & Ringskog 1995 : 17).

5.5.7 JOINT OWNERSHIP

In some cases, it may not be feasible to pass full responsibility for investment and operations to the private sector, particularly during the initial stages of a sector reform programme. If the country's environment is risky, capital investments may have to be separated from

operations in order to attract private involvement in operations. In such cases, where it is desirable to maintain a higher degree of private sector participation than service or lease contracts allow, joint ownership may be a good solution (Idelovitch & Ringskog 1995 : 19).

Under joint ownership, a private sector firm and the public authority have equal or almost equal shares. The public authority may sell off its shares at a later stage. (Idelovitch & Ringskog 1995 : 19; Bhatia 1998 : 18 - 19).

The private partner has majority representation on the board of directors of the new firm, even though the public and private equity shares are equal. In this case, the private sector partner prevails in the day-to-day management of the new firm. More substantial decisions are made by a qualified majority, as required by law (Idelovitch & Ringskog 1995 : 19).

5.5.8 OUTRIGHT SALE (DIVESTITURE)

The sale and private ownership of water supply and sewerage systems may be prompted by the desire to completely separate ownership from operations and maintenance. It is also a way for the public sector to raise revenues. The attraction to private buyers depends mainly on the rates they are permitted to charge, because the installations

themselves have virtually no alternative value. Even when water supply and sewerage systems are privately owned, it does not follow automatically that the water resources are also private (Idelovitch & Ringskog 1995 : 20; Nickson 1996 : 12).

5.6 RISKS INVOLVED IN PRIVATISATION

There are risks involved in private sector participation for both the public and private sector.

There are two primary risks for the public authority (Idelovitch & Ringskog 1995 : 20) :

- (a) the risk that services supplied by the private sector will not be in accordance with the desired standards; and
- (b) the risk that the cost of such services will be much higher than that currently charged by the public entity.

The risks for the private investor include inter alia, (Chapman & Cuthbertson 1996 : 93):

- COMMERCIAL RISKS

The commercial risks are that the private investor will not be paid for its services at all times or will not make a reasonable profit.

- FINANCIAL RISKS

The financial risks are related to currency devaluations and convertibility of local to foreign currency. The issue of convertibility is an important risk, because revenues will be in local currency and part of the investments and borrowings will be in foreign currency.

- TECHNICAL RISKS

The technical risks are related to the lack of sufficient knowledge about the state of the installations, the need for replacement, rehabilitation and expansion. The resulting operational risk that the installation will not perform as expected. The construction costs may escalate beyond what is planned because of unit price escalation beyond expectations and delays in the construction timetable. The construction risk is better borne by the private sector. Many experiences have shown that the private companies are better qualified to execute investments within the budget and timetable envisaged.

- LEGAL AND POLITICAL RISKS

The legal risks are related to the ways in which contractual disputes will be resolved, and the main political risk is that the government will expropriate the assets or change its policy toward privatisation in the future. Another political risk is the reluctance of governments to raise tariffs, particularly before elections. Successful private sector participation will be conditioned to a great extent on how well these risks can be quantified and mitigated. Despite the risks involved, government officials are more open than ever to new ideas for improving water management (Easter, Rosegrant & Dinar 1999 : 99).

5.7 INTERNATIONAL PERSPECTIVE

An international perspective on private sector participation in water provision can provide valuable lessons for South Africa.

The experiences of Buenos Aires and Guinea are presented because:

- both countries are third world in nature and experience problems similar and comparable to the South African situation;

- the provision of water was the primary function of government until the private sector assumed responsibility;
- more than half of the total population do not have access to a basic need, viz. an adequate supply of water; and
- the strengths and weaknesses of private sector involvement in water provision in developing countries are highlighted.

5.7.1 BUENOS AIRES

In 1990, the Government of Argentina embarked on a massive and ambitious privatisation programme. The operation of the water supply and sewerage systems of the large Buenos Aires metropolitan area was transferred from an inefficient public company to a competent consortium of private foreign operators and local investors (Idelovitch & Ringskog 1995 : 3).

The model adopted was a thirty year full concession, whereby the government remained the owner of the assets, but the concessionaire was responsible for operating, maintaining and managing the system, investing in rehabilitation and expansion work, and alleviating contamination of water resources caused by the disposal of

domestic sewage. The regulation and control of the concession were accomplished through a regulatory agency established specifically for this purpose (Idelovitch & Ringskog 1995 : 3).

Four main stages were necessary for achieving a successful transition from a public company to a private concession. They were as follows (Idelovitch & Ringskog 1995 : 3):

STAGE 1

The initial activities which were undertaken prior to the decision on how to privatise.

STAGE 2

The preparation of bidding documents and background materials required for selecting a qualified operator.

STAGE 3

The bidding and contracting process, which culminated with the signing of the respective contract.

STAGE 4

The actual transfer of services to the private operator and the setting up of the regulatory agency.

Numerous conclusions may be drawn from the successful privatisation of the water supply and sewerage systems in Buenos Aires. A summary of the conclusions are briefly presented below (Idelovitch & Ringskog 1995 : 3):

- political commitment to privatisation at the highest level should be ensured;
- privatisation should preferably be part of a comprehensive program of economic reforms;
- consensus building among all stakeholders is important;
- all types of risks (political, economic, commercial, technical and legal) should be assessed and appropriate mechanisms to alleviate them should be adopted;
- participation of multilateral agencies, such as the World Bank, enhances the transparency and credibility of the process;
- all private sector participation options must be analysed prior to selecting the preferred privatisation mode. The ownership of the system may remain with the public sector and the assets do not necessarily have to be privatised to promote efficiency and attract private capital;
- successful privatisation cannot be accomplished overnight, even if the political decision is taken; careful preparation and reasonable time are required;

- a full regulatory framework and the regulatory institutional setup should be clearly established, before starting the actual bidding process;
- the technical and financial feasibility of the concession should be carefully studied prior to bidding;
- specialised, experienced consultants should be contracted to assist in various aspects of the preparation process; hiring a single, multi-disciplinary consulting firm is preferable to contracting two or more firms;
- adequacy of water rates should be examined, and, if necessary, rate increases should be adopted prior to bidding;
- pre-qualification of potential bidders should be conducted to ensure that only qualified bidders eventually submit bids;
- reduction of staff - probably the most sensitive of all privatisation issues - is achievable, with the help of promotion of early retirement packages to be financed by the government, the concessionaire, or both;
- a residual public company must continue to function in parallel with the private operator, until the orderly transfer of all services is accomplished and the nonconcession services are liquidated;

- political pressure to impose priorities can still be exerted on the private operator, through the regulatory agency, which is a public entity;
- the concession contract must be realistic and specific to avoid disappointment and minimise conflicts. At the same time, it should be flexible, because it is expected that the targets, indicators, and other aspects of the contract can be more realistically determined after the first year of operation.

The Buenos Aires model of private sector participation in water supply and sanitation can be useful to other countries (Idelovitch & Ringskog 1995 : 3).

However, privatisation cannot be regarded as a universal panacea to problematic water companies. Its applicability and probability of success must be analysed in the specific context of each country, in conjunction with other relevant measures and reforms that must accompany it (Idelovitch & Ringskog 1995 : 3).

5.7.2 GUINEA

Until the late 1980s, Guinea had one of the least developed urban water supply sectors in West Africa. Less than 40 % of urban dwellers had access to piped water through either connections or standpipes. Where connections existed,

service was often interrupted, and water treatment inadequate. In 1989, the government entered into a lease arrangement for private sector operation of water services in the capital city, Conakry, and sixteen other towns (Cowen 1996 : 89; White & Bhatia 1998 : 92).

Two organisations are central to the lease arrangement:

- a state-owned national water authority *Societe Nationale des Eaux de Guinee* (SONEG) ; and
- a water management company, *Societe d'Exploitation des Eaux de Guinee* (SEEG).

SONEG owns the water supply facilities in the cities and towns covered by the lease and is responsible for new investments and tariff setting (Cowen 1996 : 89; White & Bhatia 1998 : 92).

SEEG is jointly owned by the state (49 %) and a foreign private consortium (51 %). SEEG holds a ten-year lease contract with SONEG under which it is responsible for operating and maintaining urban water supply facilities, billing customers, and collecting charges (Cowen 1996 : 89; White & Bhatia 1998 : 92).

At the start of the lease, the consumer tariff was raised from US \$0.12 to US\$0.25 per cubic meter. This tariff was still too low to cover operating and debt servicing costs. The difference between tariff revenues and costs was funded by an International Development Association credit (IDA) (Cowen 1996 : 89; White & Bhatia 1998 : 92).

In the contract's first five years, connections increased from 12,000 to 30,500. Metering has increased from about 5 % to 95 % of all connections. Investments in new supply capacity (external to the lease), combined with rehabilitation and maintenance, have brought about a substantial increase in the population with access to safe water, from 15 % in 1980 to 52 % in 1994. SEEG's water revenues rose almost tenfold between 1989 and 1994, and the operating ratio (the ratio of operating costs to operating revenues) improved from 122 % to 71 %. In an environment in which earlier attempts to secure reliable access to safe water had foundered, and in which financial sustainability had seemed unreachable, these achievements were truly impressive (Cowen 1996 : 89).

According to (Cowen 1996 : 89) despite these gains, two broad concerns arise about the performance of Guinea's lease contract:

First, the water supply system, particularly in Conakry, has not improved and expanded as fast as had been hoped. Unaccounted-for water remains high and new connections to the system have been added slowly - though the lease did not specify targets.

Second, the relationship between SONEG and SEEG has not been smooth, lessening the efficacy of SONEG's monitoring and regulation.

Both SEEG and SONEG have some capability to influence the rate of new connections and reducing unaccounted-for water. However, each tends to attribute slow progress to failures by the other (Cowen 1996 : 89).

Attempts to improve co-ordination between SEEG and SONEG are unlikely to resolve concerns about unaccounted-for water and new connections. The co-ordination of new investment with operation and maintenance will remain problematic as long as commercial risks are shared between the two entities and SONEG remains the principal financier of works that contribute to SEEG's effectiveness as an operator. The problem is further aggravated by a lack of clear separation between SEEG's activities as an operator, for which it theoretically bears some commercial risk, and its activities as a service contractor to SONEG for rehabilitation and extension works, which are performed on

a cost-plus basis (Cowen 1996 : 89).

In Guinea, the government has had limited success in bringing clear commercial incentives to bear on the private sector company in its operation and maintenance roles. Weakness in SONEG's monitoring of SEEG could have broad repercussions. For example, in the absence of adequate reporting and monitoring, SONEG would have difficulty assessing the soundness of SEEG's requests for increases in the overall tariff and in its share. To the extent that SONEG responds passively to proposals from SEEG for tariff increases, SEEG's commercial risk is lessened. At the limit, if the tariff is set on a cost-plus basis, the lease will approximate a management contract (and one without specific performance targets and enforcement mechanisms) and commercial risk will be borne exclusively by the government (Cowen 1996 : 90).

A second cost of weak monitoring and enforcement is a reduced capacity to enforce separation between SEEG's extension and rehabilitation activities and its operation activities. For example, where monitoring is weak, financial transfers between activities putatively subject to commercial risk and those performed on a cost-plus basis might go undetected. Again, the result could be a reduced capacity by SONEG to control its own commercial risk (Cowen 1996 : 90).

- LESSONS LEARNT

The Guinea lease represents an innovative and broadly successful attempt to draw on the strengths of the private sector to improve water services. It would be unfair, and inappropriate, to use hindsight to criticise arrangements that are a major advance over earlier attempts to improve water service delivery in low income countries and that have produced real gains for consumers (Cowen 1996 : 90).

However, hindsight can provide guidance for ongoing improvements in Guinea and for future projects in other countries. Many low income countries, from the transition economies of Central Europe to African nations share Guinea's problems in improving water services. To improve and expand service requires large investments. The government's capacity to undertake the required investments directly or to oversee their implementation is limited.

Private sector companies, however, have been assumed to be unwilling to make large investment commitments in the water sector in very poor developing economies. Water sector assets amortize over long periods and have limited or no resale value. Where capital markets are underdeveloped, an investor who wants to sell out may have limited ability to dispose of its shares. The water sector is also prone to government intervention. In this environment, the

credibility of the government as a long-term contractual partner or regulator, or both, is critical to the willingness of private companies to invest in the sector, and to the price tag that the private sector will, one way or another, place on its involvement (Cowen 1996 : 90).

Guinea sought to resolve these problems by introducing private sector involvement and commercialising the water business in a gradual and stepwise manner. By using a lease arrangement, rather than a full-fledged concession or asset sale, meant that the private sector was not required to commit any investment funds. Using an IDA credit to smooth the process of tariff increases meant that the operating business could function on a quasi-commercial basis from the beginning. The government's minority share in the operating company presumably gave assurances that there would be some local share in the benefits from improved services. The expected benefits were twofold:

- early and lasting gains in the availability and efficiency of service delivery; and
- the creation of an environment more attractive to private sector investment and risk taking (Cowen 1996 : 90).

The Guinea approach, while producing important gains, has not worked out exactly as planned. The risk sharing implied by a stepwise process has proved difficult to

implement and enforce, with the result that gains to consumers have been less than hoped for and much suspicion remains between the public and private sectors (Cowen 1996 : 90).

The question then arises: What can other countries do to replicate the gains of the Guinea approach while avoiding some of its shortcomings ? Two broad options present themselves (Cowen 1996 : 90) :

- privatisation by less ambitious steps than were attempted in Guinea, or
- a larger step toward privatisation (Cowen 1996 : 90).

From the foregoing, it is apparent that policy-makers in South Africa can heed to the valuable lessons learnt from Guinea.

5.7.3 EVALUATION OF PRIVATE SECTOR PARTICIPATION IN SERVICE DELIVERY IN AFRICA

White and Bhatia (1998 : 1 - 7) have conducted extensive research on the impact of privatisation in Africa. A synopsis of their useful findings are presented below:

- The process of privatisation has been prompted in many cases by economic necessity and enabled by the political changes occurring in the world. It is no longer a question of whether or not - or what to privatise; it is how and when to privatise. Today, most governments are committed to the process, but they have to do more to demonstrate it.

- Commitment is essential, but so too is consensus, and in most countries, there has been a lack of consensus in favour of privatisation. This has been the main factor inhibiting its pace. Here, too, the picture is changing: privatisation is widespread and is regarded as inevitable and consensus is growing as governments become more open and the public becomes more informed.

- A number of approaches have been adopted for planning and implementing privatisation, including a variety of institutional models, nevertheless, many programmes have been characterised by inadequate design and preparation. Some authorities generally suffer from a lack of sufficient legal authority and insufficient resources , on the one hand, and from governmental interference and delay, on the other. If the process is to be efficient and transparent, a strong central agency should be established that is empowered, independent and provided with adequate resources.

- Despite a myriad of constraints facing governments and their implementing agencies, privatisation is moving ahead. As more major enterprises enter the process, the economic impact of privatisation will become obvious and the process has brought some tangible benefits. However, job losses in the privatisation process is inevitable. While a small number of privatised businesses have failed, the overall impact of privatisation is encouraging.

White & Bhatia (1998 : 6 - 7) offer the following recommendations for government to improve the privatisation process:

- demonstrate commitment by providing the framework within which the process can be carried out expeditiously;
- governments must provide more public information, allow more debate on privatisation and deal with labour issues up front. There should be open recognition that the majority of the population may be unable to participate as owners of privatised enterprises. To gain and maintain the confidence of those who do not directly participate, information on the direct and indirect benefits realised by the privatisation programme should be disseminated;

- introduce post-privatisation monitoring and reporting on the performance of privatised enterprises;
- make the process as transparent as possible. Transparency should be ensured not only in the privatisation procedures but also in providing information on how proceeds have been used; and
- pay attention to broadening ownership. This calls not only for capital market development in tandem with privatisation but also for methods that can extend ownership while being consistent with the need for investment capital and improved corporate governance.

5.8 SUCCESSES AND FAILURES OF PRIVATISATION

The co-operation between the public and private sectors must be of mutual benefit, and the public must be informed and educated about the reasons for involving the private sector in what is perceived as a public sector monopoly (Idelovitch & Ringskog 1995 : 21).

The selection of the most suitable private sector participation option must take into account the political, legal and cultural circumstances of the country involved as well as the institutional, financial, and technical characteristics of the water and sewerage system or project

involved (Idelovitch & Ringskog 1995 : 22).

The contracts with the private sector must be robust to resist time and public scrutiny, and the public sector must be capable of supervising these contracts. The targets set in the contracts must be realistic so that they translate into reasonable and affordable rates (Idelovitch & Ringskog 1995 : 22). In order to achieve these objectives, experienced advisors (technical, financial, and legal) must be retained by the public sector authority, if necessary. Some of the main obstacles to private sector participation are (Idelovitch & Ringskog 1995 : 22):

- resistance to what is perceived as loss of control;
- lack of adequate legislation;
- bureaucratic inertia;
- lack of confidence in the private sector, based on the sometimes prevailing misconception that it "just wants to make money";
- lack of knowledge about private sector methods;
- reluctance to face labour problems;
- lack of interest on the part of the private sector;
- unfavourable public opinion; and
- fear of foreign operation.

In most private sector participation options, some of these obstacles can be overcome by procuring the services required through a transparent bidding and award process. The bidding procedures should include, at a minimum, establishment of sound pre-qualification criteria and procedures, clear definition of evaluation criteria, and preparation of the documents well enough in advance to permit open and universal bidding (Idelovitch & Ringskog 1995 : 23; Klein & Roger 1996 : 14).

An effective agreement to provide a service should clearly define the geographical area; the specific services to be provided; the standards to be met for quality, service coverage, or effluent standards; the financial, accounting and management objectives; the employer's obligation that the concessionaire must follow; the conditions for terminating the contract and applicable penalties and the right to arbitration (Idelovitch & Ringskog 1995 : 23).

Some type of regulatory framework is necessary to monitor and control the private sector operations. In this context, lack of regulatory systems or failure to enforce existing regulations are two of the main causes of unreliable service provided by public water utilities (Idelovitch & Ringskog 1995 : 23; Klein & Roger 1996 : 14; Guislain & Kerf 1996 : 23).

In all private sector participation options, the central or local government retains its important regulatory role and can therefore oversee the sector and provide the guidance it may need. Private sector participation does not mean that the public sector loses control, but rather that it adopts a new division of tasks between public and private partners based on the comparative advantage of each. The main objectives of the regulatory system are to: ensure compliance with standards of acceptable service, protect the rate payer from monopolistic behaviour, and create a business environment that promotes commercial viability and attracts the private sector (Water Supply & Sanitation Policy 1994 : 13).

5.9 NATIONAL PERSPECTIVE : SOUTH AFRICA

One of the most momentous political events of the 1990s was the political transformation in South Africa (Cameron 1999 : 1). Forty-six years of unbroken National Party (NP) rule ended when the country's first non-racial elections in April 1994 saw the African National Congress (ANC), with 62.65 % of the votes, become the majority party in the Government of National Unity (GNU) (Daily News, 12 May 1994).

The recent successful elections (June 1999) in the country saw the African National Congress take up a second term in office. During the past five years, legislation has made an about turn to ensure that the principles of the Constitution of South Africa and its Bill of Rights are entrenched. The needs of the public are becoming more sophisticated and their demands for a quality service more pronounced (Journal of Public Administration 1999 : 73).

The public sector is faced with the daunting challenge to reconsider its focus and based on comparisons with the private sector, transform its administration into institutions with the ability to balance the interests of politicians and the needs of their customers. The greater and more rapid availability of information about the activities, successes and failures of private enterprises puts the public sector in an ideal position to benchmark its performance and adapt its focus and processes to pre-empt the needs of the public (Journal of Public Administration 1999 : 73).

5.9.1 REASONS TO PRIVATISE IN SOUTH AFRICA

According to Finance Week (March 1995 : 30 - 31) there are a number of good reasons to privatise in South Africa:

- to free government of the burdensome day to day management of even profitable commercial concerns;
- to avoid fiscal drain of money-losing state enterprises;
- to tease underground into the legitimate economy, as was the case in China;
- to enhance the efficiency of state enterprises;
- to improve the regulatory environment by separating the commercial and regulatory functions of government owned enterprises;
- to raise revenue through the sale of state assets;
- to raise money from overseas donors by conforming to their real or perceived ideological demands;
- to show commitment to economic liberalisation and so attract favourable overseas financing terms;
- to attract foreign investment;
- to form strategic public/private joint ventures;
- to broaden participation in the local capital markets through mass share ownership;
- to reduce the role of government in the economy as an end in itself;
- to speed the introduction of pricing mechanisms in formerly command economies;
- to foster a culture of entrepreneurship; and
- to increase export earnings.

Today, privatisation is being advocated as a universal panacea, an all-embracing, solution to the multi-faceted problems of the efficiency, fiscal, monetary, unemployment and growth crises confronting many developed and developing countries (Zarenda 1990 : 43).

5.9.2 PRIVATISATION TRENDS AND THE CURRENT SOUTH AFRICAN DEBATE

The transfer of ownership and control of state-owned enterprises to the private sector has become a global phenomenon during the last decade. Since intense political debates have accompanied privatisation in most countries - South Africa being no exception - the worldwide upsurge in asset restructuring activity is imminent (Nomvete, Maasdorp & Thomas 1997 : 52).

The question is now being asked whether South Africa has not reached a stage in its development where some of the public services could be farmed out to private businesses (Hilliard 1995 : 14).

There are a number of conflicting views on the issue. Firstly, there are the arguments being advanced for the retention of public goods and services in the hands of the government i.e. so-called nationalisation and secondly, the reasons put forward for the transference of some of the

less essential services from the public domain to the private sector in order to reduce the burden on the taxpayers and/or ratepayers and simultaneously to "depoliticise" certain of the public services (Hilliard 1995 : 14).

Most debates have centred around the essential contradiction that exists between the commercial aims of privatisation and the promotion of social aims, such as universal service, which have traditionally been of importance in public utility sectors. While it is generally accepted that privatisation produces greater incentives to be efficient and responsive to the demands of customers, the concern is that reliance on the profit motive may put at risk non-commercial or social objectives. A strict emphasis on profit in a newly privatised enterprise will create an incentive to withdraw from serving uneconomic customers and to resist extending services to potentially uneconomic areas. These concerns are in the forefront of the debate in South Africa, where, by virtue of its inheritance, the provision of public services is grossly imbalanced and the apparent contradiction between the commercial aims of privatisation and the promotion of social objectives is thrown into sharp relief (Nomvete et al 1997 : 52).

5.9.3 ADVOCATES OF NATIONALISATION

Given the apartheid legacy with which South Africa still has to contend, especially at the local government level, where the provision of services became highly politicised, the above school of thought claims that privatising even the most rudimentary public goods and services may be not be well received (Hilliard 1995 : 14).

There may be vehement reaction to this move, particularly from the trade union movements who may fear the loss of jobs (Hilliard 1995 : 14; Finance Week 1995 : 30 - 31).

South Africa has saddled itself with a "cradle to grave" philosophy which was initiated by the previous regime and which was fashionable at that stage, especially in the east-bloc countries. These attitudes may take decades to eradicate. After the 1994 elections, the "expectancy-entitlement" syndrome was reinforced even further. Therefore it may become an exceedingly difficult task to alter the dependency mindset which has evolved over the years (Hilliard 1995 : 14).

It is constantly remarked by private entrepreneurs that South Africans should become self-sufficient: but attaining this goal is easier said than done. Self-reliance may be difficult to achieve if one takes into account the fact

that 16 million inhabitants live below the breadline and furthermore, that the average unemployment rate is around 46 %. Citizens cannot but expect the government to provide for their basic needs (Hilliard 1995 : 14).

Advocates of nationalisation therefore aver that basic services must, if needs be, be freely available even to the poorest of the poor in society. Consequently, in terms of their viewpoint, it is inopportune to privatise on a larger scale because it could spell disaster for most impoverished communities (Hilliard 1995 : 14).

5.9.4 PROPONENTS OF PRIVATISATION

It is remarked by the peddlers of privatisation that the role of government in society should not be that of philanthropist, but that privatisation should be practised in order to lighten the load of the taxpayers/ratepayers.

Services ought to be transferred into private hands because this will ensure greater efficiency in service delivery and will remove the public goods and services from the purview of the political arena (Hilliard 1995 : 14; Zarenda 1997 : 46).

Privatisation adherents urge the State to sell off its "assets", sometimes also seen as "liabilities" by the latter. This is usually done by offering "company" shares to the public (Hilliard 1995 : 14; Fine 1995 : 2).

Other basic services may simply be transferred "voetstoots" to the private sector. The charges set for such services now become user-related. It is then incumbent upon the private entrepreneur to explain why essential services have failed or broken down (Hilliard 1995 : 14).

Unfortunately, the privatisation proponents often lose sight of affordability and ability to pay principles because one cannot ignore the social and economic realities of society (Hilliard 1995 : 14).

One of the major fears of nationalisation advocates is that privatised public services may become out of reach of the ordinary citizen. Considerable sensitivity should be exercised when a particular public service is privatised so that it does not cause undue hardship to the poor (Hilliard 1995 : 14).

Privatisation may be perceived as the government attempting to shrug off its responsibilities towards its people and these attempts are not surprising if one considers that the percentage of public sector employees increased from 18 %

in 1970 to almost 27 % in 1994 (Hilliard 1995 : 14).

South Africa therefore finds itself in a catch 22 situation. It would seem that the only solution to some of these difficulties would be to economically empower all communities so that they reach the requisite economic levels where they can afford to pay for their own services, instead of relying on state subsidisation or on entirely free services. This can only be achieved through sustained economic growth, increased job creation programmes, proper training and development to improve skills and expertise (Hilliard 1995 : 14).

A thorough assessment of each good and service must be made to ascertain whether it can be taken out of the hands of the public sector and confidentially be entrusted to private enterprise (Hilliard 1995 : 14).

Privatisation matters are serious societal concerns and cannot be brushed aside lightly. The whole of South African society are in a process of nation-building and reconciliation. Hasty decisions about allocating public services to private providers could hamper attempts at bringing about a cohesive and harmonious society (Hilliard 1995 : 14).

Against this background, it is therefore apt to examine the effects of privatisation of water provision. The following legislative frameworks are described below:

5.9.5 POLICY AND LEGISLATIVE FRAMEWORK GOVERNING PRIVATISATION OF WATER IN SOUTH AFRICA

The following framework provides a foundation for the discussion on privatisation of water in South Africa:

- White Paper on Water Supply and Sanitation Policy;
- Reconstruction and Development Programme (RDP) and Growth Employment and Redistribution (GEAR) Strategy;
- Water Services Act, 1997 (Act 108 of 1997); and
- Municipal Service Partnerships (MSPs)

These aspects are described below:

- WHITE PAPER ON WATER SUPPLY AND SANITATION POLICY

The White Paper on Water Supply and Sanitation is openly supportive of a participatory climate between the private sector and the government. The Department of Water Affairs and Forestry is already engaged with the private sector on a variety of levels. The department employs a wide range of consultants and much of its constructive work is carried out by the private sector contractors. Management of

certain installations, particularly those inherited from the former homelands, is carried out under construct by the private sector (Water Sewage & Effluent 1995 : 27).

In the words of the former Minister of Water and Forestry, Prof K Asmal (Water Sewage & Effluent 1995 : 27):

... it is unlikely in the near future, that there will be a massive transfer of water management assets to the private sector. To understand why not, it is necessary to review the benefits offered by new forms of private sector involvement. These are two-fold, to raise capital and to bring management expertise ...

It is essential that all sectors of South African society be involved in partnership with the government, particularly those, where the resources and skills of the country have been vested in the past (White Paper on Water Supply & Sanitation Policy 1994 : 12).

The private sector represents a vast resource which must be harnessed to contribute to the implementation of this policy in a variety of areas including (White Paper on Water Supply & Sanitation Policy 1994 : 12):

- capital investment;
- operation and maintenance;
- training and capacity building;
- organisation development; and
- financing and commercial services.

**- RECONSTRUCTION AND DEVELOPMENT PROGRAMME (RDP) AND GROWTH,
EMPLOYMENT AND REDISTRIBUTION (GEAR)**

The African National Congress Government has followed two economic programmes, the Reconstruction and Development Programme (RDP) and Growth, Employment and Redistribution (GEAR) (Houston, Mpanyane & Liebenberg 1999 : 75). Fundamentally, the RDP is a basic needs programme that linked the satisfaction of basic needs with economic growth. The RDP aimed to provide (RDP 1994 : 7):

- at least 1 million low-cost houses between 1994 and 1999;
- electricity for an additional 2.5 million households by the year 2000;
- clean water and adequate sanitation for everybody;
- improved and affordable health; and
- a substantial redistribution of land in rural areas.

GEAR is a set of policy objectives which determine the levels and rates of economic variables such as: output (GDP), wages and prices, employment, government expenditure and revenues, money, foreign exchange, savings, investment and the like (Ecumenical Service for Socio-Economic Transformation 2 August 1996; Nomvete et al 1997 : 20 - 21).

The choice and prioritisation of policies depend on the government of the day. Once chosen, these policies constitute the boundaries within which the macroeconomic policy framework will operate. It is within this framework that economic programmes and annual budgets are worked out (GEAR 1996 : 1).

There are two main macroeconomic approaches which differ in their assumptions about the way the economy works and the role of the government in the economy (GEAR 1996 : 1):

- Neo-classical/liberal

A flexible and unregulated market is able to distribute resources most efficiently and will lead to the full utilisation of both labour and resources; and

- Keynesian/neo-Keynesian

The economy is not a self-regulating system and under-employment of labour and resources are not merely short-term adjustments.

It was held that GEAR would lead to an increase in domestic and foreign investment, leading to a growth in gross domestic product (GDP), an increase in formal employment and an increase in RDP-related spending (Houston et al 1999 : 83).

GEAR (1996 : 1) emphasises that economic development will be led by the private sector; there will be privatisation of state owned enterprises; government expenditure (especially social services) will be reduced; exchange control regulations will be relaxed and there will be a more flexible labour market. Some have described GEAR as a home-grown structural adjustment programme.

GEAR is criticised by the labour movement for neglecting the goals of reducing poverty, the redistribution of wealth and job creation which were central to the RDP (Nedlac 1998 : 1). The South African Communist Party warned that the unfettering of market forces alone were inadequate to generate growth and development: there is not a single example this century of a third world society breaking out of under-development by simply sending market-friendly macro-economic signals into the ether. A coherent public sector investment is the way in which to move out of GEAR and in the real growth and development. Genuine economic development is not simply business growth, but rather should focus on improving the material and social well

being of all members of a society (Maharaj 1999 : 252).

- GEAR AND PRIVATISATION

The argument that privatisation is a critical factor in reducing the budget deficit is highly contentious (Ecumenical Socioeconomic Transformation 2 August 1996; Maharaj 1999 : 252):

- selling of government assets means the loss of a future income stream and this has to be set against any revenues which might accrue from the sale of public assets;
- many of the potential candidates for privatisation are in principle able to raise finance independent of the government and therefore constitute an additional and important source of funding and are not necessarily a burden on the fiscus;
- privatisation is wasteful in converting state assets into finance. The international record suggests that the process could cost as much as 10 % of the value of the revenue raised in terms of consultancy, fees, share issues and advertising; and

- privatisation is a complex policy to implement and makes substantial demands on scarce resources and skills in management and government which could be used more productively to implement the RDP directly.

Given the record of South African industry which is characterised by a lack of investment, lack of capacity in intermediate and capital goods and lack of integration across different sectors of the economy, privatisation will only worsen these problems (Houston et al 1999 : 83).

The Government's new macroeconomic strategy has been surrounded by much controversy and the debate has been heated. One critical concern is that the strategy has not been based on the realities of the South African economy and the requirements of reconstruction and development (Nedlac 1998 : 1).

There is growing concern that the strategy and framework is premised on a model that is neo-liberal in its conceptual approach to the workings of the economy and will therefore serve the interests of the wealthy business sector and foreign investors at the expense of the development objectives for the majority (Maharaj 1999 : 252).

- WATER SERVICES, 1997 (Act 108 of 1997)

The Water Services Act, 1997 (Act 108 of 1997) requires municipal councils to consider "all known" public sector providers that are "willing and able" to provide water services before it may consider private sector providers. This provision of the Water Services Act, 1997 (Act 108 of 1997) creates uncertainty regarding the nature and extent of the council's obligation to identify and evaluate public sector water services providers before it has the legal right to consider private sector providers.

The Water Services Act, 1997 (Act 108 of 1997) also requires councils to publicly disclose their intention to enter into a contract for water services before entering into the contract. However the Water Services Act, 1997 (Act 108 of 1997) does not specify the timing or the contents of such disclosure, nor the consequences of non-compliance with the disclosure requirement.

The Water Services Act, 1997 (Act 108 of 1997) requires a council to adopt bylaws providing for, among other things, " ... the standard of service ... the determination and structure of tariffs [and] the payment and collection of money due for the water services ... " Such bylaws must provide that "basic" water services may not be cut off to a consumer who fails to pay because of inability to pay.

The Water Services Act, 1997 (Act 108 of 1997) authorises the Minister of Water Affairs and Forestry to prescribe norms and standards for water services, including a definition of "basic" services. However, provinces and municipalities may also adopt legislation, regulations, or bylaws with respect to the definition of basic services, as long as such provincial legislation or regulations do not conflict with national legislation or regulations and as long as such municipal bylaws do not conflict with national or provincial legislation or regulations.

In terms of the Water Services Act, 1997 (Act 108 of 1997), service consumers must prove their inability to pay for "basic" water services ... "to the satisfaction of the water services authority". Municipal councils are therefore free to adopt bylaws defining "inability" to pay for "basic" water and other services. Department of Constitutional Development is currently developing guidelines for an indigence policy that can be utilised by municipal councils in developing their own policies regarding "inability" to pay for "basic" services.

Water service providers, before entering into a contract or joint venture for the provision of water services with a municipality, must "... disclose and provide information on ... any rate of return on investment it will or may gain by entering into such a contract or joint venture." Although

such requirements are fairly common in other countries, and private sector water services providers generally do not object to them in principle, the Water Services Act, 1997 (Act 108 of 1997) does not specify how this rate of return is to be measured (for example, return on assets, return on equity, or some other measure).

The Minister of Water Affairs and Forestry may, after consultation with the Minister for Provincial Affairs and Constitutional Development, prescribe matters which must be regulated by a contract between a water service provider (such as a MSP service provider) and a water services authority (such as a municipal council) and compulsory provisions to be included in such a contract. However, the Water Services Act, 1997 (Act 108 of 1997) contains very little guidance to the Minister regarding matters to be considered in prescribing such regulations, providing only that such contractual requirements must ensure that "... water services are provided on a fair, equitable, cost-effective and sustainable basis ... " and that "the terms of the contract are fair and equitable ..." to the parties and to the consumers.

- MUNICIPAL SERVICE PARTNERSHIP (MSPs)

The policy framework for municipal service partnerships spells out how partnerships for the delivery of municipal services between municipal councils and the public sector, the private sector and community and non-governmental organisations should be carried out. South Africa is facing daunting challenges for municipal service delivery. Government has implemented a range of public infrastructure programmes which have contributed significantly to increasing access to services for all South Africans.

However, the backlog of municipal infrastructure (one of the legacies of apartheid) and the community's growing need for basic services have created a demand that cannot be satisfied from government finances within any reasonable time frame. Municipalities should look at other options and innovative ways of providing and accelerating service delivery (Municipal Service Partnerships Policy 1999 : 1).

Municipal service partnerships are not intended to be a substitute for traditional methods for direct service delivery. Nor should municipal service partnerships be viewed as an alternative to the ongoing effects of many councils to improve the efficiency and accountability of public-sector municipal service delivery by the council

itself. Instead, municipal service partnerships are intended to be a means of providing councils with greater flexibility for addressing service delivery needs in their municipalities (Municipal Service Partnerships Policy 1999 : 5).

The following forms of municipal service partnerships can be identified (Municipal Service Partnerships Policy 1999 : 6):

- Public-Private Partnerships

A contract between a council and an individual or a privately-owned or controlled partnership, company, trust, or other for-profit legal entity.

- Public-Public Partnerships

A contract between a council and any public sector entity; including another council or a parastatal;
or

- Public-Non-governmental/Community Based Partnership

A contract between a council and a not-for-profit non-governmental organisation (NGO) or community-based organisation (CBO).

It must be stated that each form of municipal service partnerships have benefits and limitations. However, the outcome of the partnership must be to enhance the quality of life of people through effective service delivery.

5.9.6 PRINCIPLES GOVERNING PUBLIC PRIVATE PARTNERSHIPS IN WATER PROVISION AT THE LOCAL LEVEL

The municipality in Durban has achieved considerable efficiency gains in urban water supply without excessive private sector participation. The Water Directorate has maintained a close linkage between revenue and expenditure through extensive use of a "cost centre" approach to management and accounting (Tandy 1995 : 18).

However, the following principles should be adhered to as the municipality decides what delivery mechanisms is best for the provision of services such as water (White & Bhatia 1998 : 129 - 136; Guidelines for Private Sector Participation in Municipal Service Delivery 1999 : 7):

- Municipal Responsibility

The engagement of the private sector in water provision does not relieve the municipality of responsibility for service provision. The municipality remains ultimately responsible for the provision of the service whether this has been delegated to a third party or not. The

municipality will always remain the regulator of the infrastructure service and must monitor it closely.

- Service providers must be accountable to the people served
Whether it is the public or the private sector, the organisation that is providing the service must be accountable to the people that are being served. Mechanisms that enhance accountability to the end-user must be developed.

- Provision of infrastructure must be sustainable

The provision of infrastructure must be undertaken in such a way that the service will be provided in a sustainable manner. This means that as the service is extended to all sectors of the population, the revenues obtained will allow for the continued operation and maintenance of the service at an agreed upon level and standard.

- Equitable coverage

Services must be extended as fast as possible to historically disadvantaged sectors of the population. These services must be affordable to those sectors and must be sustainable. Options include multi-level tariffs which will allow for cross-subsidisation from higher income areas to lower income ones.

- Service providers must adhere to sound environmental principles

The services need to be provided in a manner that does not cause the degradation of the environment.

- Technology and Capacity Building

Adequate measures must be incorporated to ensure that skills developed during the execution of the contract are transferred to individuals where applicable. The capacity of new employees to undertake the relevant tasks must be built up to create competency.

- Worker displacement and other negative social impact mitigation

Displacement of current municipal employees should be minimised. Mechanisms for compensating and retaining those workers that are displaced should be incorporated in the project, and where possible, these workers should be given new opportunities. A variety of options exist for handling current employees, including transfer of workers to the private sector entity, contracting workers out for use by the private sector, worker retraining and placement in other city jobs, and provision of severance packages to those workers not wishing to participate.

- Procedures for engaging the private sector must be transparent

The steps to engage the private sector should be taken in such a way that all stakeholders are aware of what is being done and why. They need to be aware of how it is being done and what the benefits will be. Transparency of the part of both local government and investors helps build sustainability.

- Competition

Competition among service providers - including the municipality itself - is the driving force behind reasonable costs and good service. The involvement of the private sector in the opportunity to provide infrastructure services promotes competition in service provision.

Competition in awarding contracts is crucial for a municipality to be able to test the market and get the best possible deal for its residents. Competition obliges those competing to set lower prices, which can be done if the enterprise becomes more efficient.

Project contracts must be competitive in order to withstand public scrutiny. They must be transparent in the short term at the time of the transaction, and must remain transparent for the duration of their contract period. Transparency itself promotes competition.

Competition need not be introduced everywhere. The municipality must identify the elements of a given service that would respond best to competition. Judgements must be made about the level of risk, about basic pricing principles and methodologies, and benchmarks must be established.

- Performance of service providers is to be monitored

The standards of the service that is being provided should be maintained at an acceptable level. The required standard must be defined and monitored. The results of the performance evaluation must be published whether the service provider is a private or public sector entity.

- Service providers must respond to the needs and problems of customers

Mechanisms that allow rapid response to customer needs must be developed and introduced. The extension of existing infrastructure networks, for example, is going to place considerable pressure on customer complaint handling systems. The introduction of the necessary support systems to accommodate these needs will be an essential prerequisite for any service provider. It is in the interests of the end users to make known what they require from the service industry and for the service providers to respond in a manner that fully meets these requirements.

- Stakeholders must participate in decisions

Consumer participation in effective delivery of local public goods is central to community provision of services. As decisions are made regarding improvements to service delivery, municipalities must also ensure worker involvement and maintain a dialogue with organised labour. There are three key aspects to using participation to improve project performance:

- * involve the beneficiaries directly;
- * seek their early consensus on the project; and
- * gear in additional resources from them.

- Long term sustainability should be planned

Expansion of infrastructure to meet basic needs should be affordable to both households and municipalities and not compromise the long-term financial viability of third tier government. Municipalities therefore will need to carefully analyse the long-term financial implications of their proposed infrastructure plans. In order to make decisions regarding the long-term affordability of different combinations of service levels, municipalities will need to focus on financial sustainability, including tariff policy and user charges, institutional capacity and spatial efficiency.

- Successful restructuring depends on capacity building

Successful restructuring of the infrastructure service delivery system will depend on significant capacity building. This strengthening should focus on:

- * administering the delivery of services;
- * strategic planning;
- * financial modelling;
- * infrastructure investment planning;
- * assembling financial packages for projects which includes loans from and contracts with the private sector;
- * appropriate tariffs and levels of service;
- * managing contracts and ensuring contract compliance;
- * establishing and promoting payment for service; and
- * re-prioritising budgets in light of new development priorities.

- Development impact should be maximised

The development impact of construction projects should be maximised to the greatest degree possible. Therefore, in designing their infrastructure service delivery programmes, municipalities will want to consider factors such as job creation, development of entrepreneurs and transfer to communities.

5.10 SUMMARY

Developing countries are increasingly implementing economic reforms designed to change the balance between the public and private sectors in economic activity. This reflects a worldwide interest in reducing the role of the State in the management of national economies while enhancing the scope of private ownership and the private sector. Today, almost all countries, including South Africa, are engaged in some form of privatisation.

Private sector involvement in service delivery can result in benefits such as stable management, improved access to private capital and significant improvement in service efficiency and responsiveness; boosting state revenues and reducing budget deficits.

Water in many countries is regarded as a public service rendered by an instrument of government. Public officials decide who gets it, at what price and how it is used. The track record of such systems of water allocation has been poor. Public authorities are plagued by poor performance and low productivity. As a result, many public authorities have looked for alternative ways of providing water services more efficiently. A trend involving private sector involvement in the delivery of water has emerged in many developing countries.

Privatisation involves 4 broad options viz. public ownership and public operation, public ownership and private operation, private ownership and private operation and community and user provision. Service contracts, management contracts, leases and concessions are the main forms of public ownership and private operation.

There are various risks involved for both the public and private sector. International examples of Buenos Aires and Guinea have been cited in the literature.

The question is now being asked whether South Africa has not reached a stage in its development where some of the public services could be farmed out to private businesses.

There are a number of conflicting views on the issue. Firstly, there are the arguments being advanced for the retention of public goods and services in the hands of the government i.e. so-called nationalisation and secondly, the reasons put forward for the transference of some of the less essential services from the public domain to the private sector in order to reduce the burden on the taxpayers and/or ratepayers and simultaneously to "depoliticise" certain of the public services.

The public sector in South Africa is faced with the daunting challenge to provide water services to the community amidst social, political and economic limitations and constraints. In light thereof, the South African government welcomes private sector involvement in water. There is growing consensus that some functions related to the management of water can be entrusted to the private sector. The White paper on Water Supply and Sanitation Policy, RDP, GEAR, Water Services Act, 1997 (Act 108 of 1997) and the

Municipal Service Partnerships contain provisions for the involvement of the private sector in service delivery.

Effective guidelines have been created for the smooth facilitation of private sector involvement in service delivery. However, the government remains cautious and prefers overall responsibility for the provision of water to communities.

Some type of regulatory framework is necessary to monitor and control the private sector operations. The central and local governments play an important in this regard. However, privatisation does not mean the public sector loses control but rather that it adopts a new division of tasks between public and private sectors based on comparative advantage of each sector.

CHAPTER SIX

RESEARCH METHODOLOGY

6.1 INTRODUCTION

The empirical investigation focuses on the impact of urbanisation on water in the Durban Metropolitan Area. The study aims to formulate urbanisation strategies in order to address the acute shortage of water services. It is also envisaged that the provision of water would enhance the quality of life of the people, especially in informal settlements.

With the emergence of a new democratic government, the call for effective service delivery has become more pronounced. Seen against this background, an empirical study was undertaken in conjunction with the literature review, in order to determine the knowledge and attitudes of senior officials in public institutions and residents of the informal settlements with regard to urbanisation and its impact on water.

6.2 OBJECTIVES OF THE STUDY

In Chapter one, the following key questions are raised:

- (i) What does the term "urbanisation" mean in the South African context ?
- (ii) How does the provision of water improve the quality of life of the community ?
- (iii) Is it possible for a local authority to finance basic services such as water provision with a culture of non-payment for the service ?
- (iv) Can a local authority fund the provision of water to the magnitude that is required without the assistance of other spheres of government ?
- (v) What role can the private sector play in providing water to the people ?
- (vi) Should privatisation be encouraged as a development strategy to alleviate the water shortages ?

(vii) How can the Reconstruction and Development Programme influence the provision of water to disadvantaged people at the local authority sphere ?

The above stated questions are an integral part of the research methodology to evaluate urbanisation and its impact on water in the Durban Metropolitan Area.

The secondary aims of the study are:

- (a) to test the attitudes of the community with reference to urbanisation and its impact on water.
- (b) to test the attitudes of high ranking officials with reference to urbanisation and its impact on water.

In this chapter, possible answers to the above stated questions will be based on the results of the empirical survey on urbanisation and its impact on water.

The investigation procedure used in the study will be discussed. The sample will first be described and an analysis will follow. The statistical tests used in this study will also be presented.

6.3 SAMPLE PROCEDURE AND SAMPLE DESCRIPTION

The sampling procedure entailed drawing a representative sample which included all the elements of the universe which can be finite or infinite. According to Loubser (1996 : 251) " a population or universe is the aggregate of elements from which the sample is selected". The target population refers to the group of people or officials who form the object of the survey and from which conclusions are drawn. The sampling unit refers to the entity which is the focus of the survey.

The study was undertaken with a total sample of 200 subjects randomly selected from the informal settlements, residing on the outskirts of the Durban Metropolitan Region.

Respondents from the following informal settlements were drawn namely :

* Cato Crest/Cato Manor;

This area is a sprawling informal settlement with a diverse network of people. Cato Crest experiences problems similar to those of other disadvantaged communities - inadequate facilities, infrastructure and services. Community based

organisations are functional and urban renewal programmes and projects are under way.

Cato Manor is an evocative name in the province of Natal, and has powerful connotations with the history of the dispossessed in South Africa (Maharaj 1994 : 3). It has been described as one of the uglier of the urban scabs caused by apartheid (Daily News, 25 April 1997).

* Inanda/Phoenix

This area is one of the largest and most complex informal settlements in the Durban Metropolitan Area. These communities represent a rich amalgam of people subscribing to diverse social, political and economic groups drawn to the settlement for various reasons. Inanda has become home to a huge influx of people escaping poverty and violence or disease and death, or simply looking for work.

* Clare Estate / Reservoir Hills;

A large percentage of the informal residents are jobless, and have come to urban areas to escape the collapse of agriculture, violence and poverty. The area is characterised by poor infrastructure and lack of basic services.

* Umlazi

This township is located approximately 15km south of Durban Central Business District and is one of the largest townships in South Africa. Umlazi was designed as a dormitory township to accommodate cheap labour. It is estimated that there are some 19 000 informal households and all formal areas in Umlazi have informal settlements.

Separate questionnaires were also administered to high ranking officials in public institutions namely :

- Durban Metro Water Services; and
- Urban Strategy Unit.

According to Sekaran (1992 : 226) " a sample is a subset of the population, however, not all the elements of the population would form the sample". By studying the sample, the researcher would draw conclusions or make inferences that would allow generalisations about the target population. The reason for selecting a sample can be attributed to various factors, the most important being, it is simply not possible to study every element in the population or to engage in a laborious exercise to collect data from the entire population. Even if it were possible, the financial costs entailed would be enormous and quantifying the voluminous data would become a slow and

arduous task. Therefore, studying a small sample is likely to yield reliable results and facilitate data collection whilst lessening the error impact. The population parameters cannot be determined precisely in a sample survey since not every element in the target population is included in the research design. However, the fundamental premise for choosing a good sample is it should be representative of the target population.

6.4 DATA COLLECTION TECHNIQUES

According to Varkevisser (1991 : 142) "data collection techniques enable researchers to systematically collect information in order to answer questions in a conclusive way". A survey is conducted to either answer certain questions, test certain hypothesis or serve an exploratory study and it is essentially a method of obtaining information from a group of respondents by means of direct contact, namely, either through personal interview, telephone interview or self administered questionnaires.

6.4.1 DATA COLLECTION THROUGH IN-SERVICE TRAINING

The researcher undertook in-service training at Durban Water and Waste during December 1995 and January 1996 in an attempt to collect data on water.

The researcher was placed in the Human Resources Section under the control of the Manager: Training, Mr Stanley Armugam. This window of opportunity allowed the researcher to frequent the library at Durban Water and Waste and review the literature, including research reports, books and journals published in the water sector. This information assisted the researcher in the construction of the questionnaire directed to Durban Water and Waste.

6.4.2 DATA COLLECTION USING FOCUS GROUP SESSION

The researcher made contact with Mr C Allen, Manager of Information - Urban Strategy Unit, to assist with the construction of the questionnaire. An appointment was made for 20 March 1998 at 8h30 at the Urban Strategy Unit offices in Shell House, Smith Street, Durban.

The researcher took down notes and was given a framework within which to work. The questionnaire went through several drafts before it was finalised by the promoter.

Approximately five copies of the constructed questionnaire was delivered to members of staff at the Urban Strategy Unit.

6.4.3 DATA COLLECTION USING PERSONAL INTERVIEWS

The researcher took down notes while Mr Williamson spoke about the Urban Strategy Unit and the pace of urbanisation in the Durban Metropolitan Region.

The data collection method adopted for the survey on informal settlements entailed the use of personal interviews using field research assistants to administer the questionnaires to each respondent. Although the financial cost implications were high, the length of the questionnaire and more importantly, the magnitude of the survey, far outweighed other considerations. According to Sharma (1995 : 137) when compared to mail surveys or telephone interviews, selecting the personal interview method enjoys the potential advantages:

- most accurate;
- generate the most amount of data;
- highest response rate;
- most flexible method;
- maximum control over sample respondents; and
- optimal questionnaire return rate.

In evaluating the data collection technique used for the survey, Sharma (1995 : 137) suggests no method can be taken as being the best, although personal interviews enjoys

maximum advantage to other methods. The method therefore selected also depends on the research project undertaken, the geographic spread of the target population and the length of the questionnaire.

Four main geographic locations were identified. These were:

- Cato Crest / Cato Manor;
- Phoenix / Inanda;
- Umlazi; and
- Reservoir Hills / Clare Estate.

6.5 CRITERIA FOR THE SELECTION OF THE RESEARCH ASSISTANTS

The researcher selected the research assistants from the respective geographic areas. The direct cost of the survey employing the field assistants for the administration of the questionnaires using personal interviews was borne by the researcher, who was funded by the School of Public Policy and Development Management. The survey was controlled by the researcher from its inception. The main criteria for the selection of the field research assistants were that they should be:

- senior students in the Department of Public Administration who were able to converse fluently in Zulu;
- familiar with conducting interviews and administration of precoded questionnaires;
- in possession of sound communication and interpersonal skills; and
- residents from the respective geographical areas.

Each research assistant was supervised by the researcher for the duration of the survey. Every research assistant was to ensure the questionnaire was fully completed in every respect.

Sample copies of the questionnaires were also given to the field research assistants with instructions to complete the questionnaire themselves to be fully au fait with the nature of the survey. This useful exercise was also important to determine the time taken to fill the actual questionnaire.

The questionnaires were in English but the meeting was conducted in English and Zulu. Many respondents preferred to respond in Zulu and the assistants translated the responses to English.

6.5.1 PROCEDURE

The administration of questionnaires to members of the informal settlements took place by field research assistants in person. Participation was voluntary and the respondents were assured to confidentiality. They were also assured of anonymity.

The respondents were clearly informed about the purpose of the research. This investigation is consequently based on a sample of 178 respondents. The research instruments used will be described. The fieldwork was undertaken during the period of June to July 1998, when 200 questionnaires were distributed to members of the informal settlements and 20 questionnaires to senior officials.

6.6 RESPONSE RATE

There was a 100% return rate of all questionnaires administered to residents of the informal settlements.

However, eighty nine percent (89 %) of the returned questionnaires were considered fully complete. Eleven percent (11 %) of the questionnaires were poorly answered, inadequate or incomplete, hence these responses were not taken into account.

In total, three senior officials from Durban Metro Water Services responded to the questionnaires in detail namely:

- * Director : Human Resource
- * Manager : Water Research and Development
- * Manager : Waste Water Management

One questionnaire was answered by the Executive Director of the Urban Strategy Unit.

6.7 DESIGN OF THE QUESTIONNAIRES

The questionnaires developed was used to collect the primary data from the respondents for the study. According to Tull & Hawkins (1984 : 252) " a questionnaire is a formalised set of questions for eliciting information" and is generally associated with survey research to obtain primary data regardless of the form of administration. The construction and design of the questionnaire took the form of several drafts which entailed a fair amount of time for refinement until the final research instrument was

formulated. In designing the questionnaire, the aims of the study was borne in mind relevant to the stated objectives of the investigation.

The questionnaires comprised structured questions using the Likert scale. According to Zimbardo & Ebbeson (1969 : 125) this method measured a person's attitude score as the sum of his individual ratings.

Bi-polar questions were included e.g. "State yes or no". Open-ended questions gave the respondents an opportunity to make broad comments on the aspects of urbanisation and water.

The questionnaires included option type questions, where the respondents were allowed to add a criterion or response of their own to the list provided.

Multiple choice questions with multiple answers which allowed the respondent to select more than one response.

Checklists where the respondent is requested to rate the responses in terms of the criteria given in accordance with its importance.

Ranking was used when the respondent was asked to rank a set of items in order of importance in terms of a given set of criteria.

Some of the key elements in a sound questionnaire design as postulated by Simon & Burstein (1985 : 302) and Melville & Goddard (1996 : 43) are :

- Keep the study's purpose clearly in mind at all times. This will help ensure that all questions related to the study area are asked and that unnecessary questions that are irrelevant to the study are left out.
- Begin by jotting down the topics which require information without worrying about wording and logic.
- Number the topics in a logical order.
- Pretest the questionnaire by personally going out and asking the questions in an open-ended manner.
- Rewrite ambiguous questions, reorganise the questionnaire where necessary, convert some open-ended questions to closed-ended questions and generally tighten up the questionnaire.
- Give clear instructions and ask only relevant questions;
- Write an introduction that will persuade potential respondents to participate.
- Improve the questionnaire.
- Go into the field for part of the interviews.

- Check the preliminary results for the satisfactory completion of the work.

The above elements of a sound questionnaire design were given due recognition for proper phrasing of the questions to avoid ambiguity and to facilitate questionnaire administration with active respondent co-operation.

6.7.1 DESCRIPTION OF THE QUESTIONNAIRES

The instrument used for this survey consisted of precoded questionnaires which was carefully constructed to facilitate maximum responses and at the same time obtain more detailed information.

6.7.2 QUESTIONNAIRE ONE (See Appendix 6)

- DIRECTED TO URBAN STRATEGY UNIT

The Urban Strategy Unit questionnaire for this study comprised of the following three sections:

- SECTION A

*** *Profile of Urban Strategy Unit***

It was necessary to gain a composite picture of the functioning of Urban Strategy Unit in their daily

activities.

- SECTION B

* *Impact of Urbanisation on Water*

It was important to determine the impact that urbanisation had on municipal services delivery such as water.

- SECTION C

* *Alternative Courses of Action*

The theme of this section was to find alternative courses of action in order to manage the urbanisation process effectively and efficiently.

6.7.3 QUESTIONNAIRE TWO (See Appendix 7)

- DIRECTED TO DURBAN METRO WATER

Durban Metro Water Service questionnaire comprised the following four sections:

- SECTION A

* *Profile of Durban Metro Water*

It was necessary to draw a composite picture of Durban Metro Water and its role in service delivery.

- SECTION B

* *Water Supply - Financial Implications*

Finance is a golden thread that runs through all the activities in providing water to local people. In view thereof, it was imperative to analyse the financial implications in delivering such services.

- SECTION C

* *The Private Sector*

Partnership action would enhance the efficient and effective delivery of water and sanitation. This section examined the impact of the private sector in delivering water and sanitation to the people.

- SECTION D

* *Reconstruction and Development*

It was necessary to evaluate the progress of the RDP in relation to the development process.

6.7.4 QUESTIONNAIRE THREE (See Appendix 8)

- DIRECTED TO MEMBERS OF THE INFORMAL SETTLEMENTS

The informal settlement questionnaire for this study

comprised the following four sections:

- SECTION A

* *Demographic Details*

To put a discussion of the aspects of urbanisation into perspective, it was necessary to analyse the demographic profile of the local people.

- SECTION B

* *The Urbanisation Process*

This section traced the urbanisation process and its implications for urban development planning and management.

- SECTION C

* *Part A: Service Delivery : Water and Sanitation*

This section aimed to examine the provision of water and sanitation to the local people and its effect on their quality of life.

- SECTION D

* *Part B: Role of Local Government in Service Delivery*

The purpose of this section was to critically evaluate the role of local government in the provision of basic services

and the constraints they experienced in their daily activities.

- SECTION E

*** *Reconstruction and Development***

The aim of this section was to provide an overview of people's expectations of the RDP and its effect on the development process.

6.8 STATISTICAL ANALYSIS OF THE DATA

In order to provide empirical evidence to support or refute theories which have been mentioned, statistics has been used. Statistics is "a collection of theory and methods applied for the purpose of understanding data" (Maharaj 1993 : 87).

Data was analysed using both descriptive and inferential statistics.

6.8.1 DESCRIPTIVE STATISTICS

The characteristics of location, spread and shape describe distributions. Their applications and formulae are included under the heading of descriptive statistics (Cooper & Emory 1995: 681).

6.8.1.1 Mean

The mean measures central tendency and is the arithmetic average. It is the sum of the observed values in the distribution divided by a number of observations. It is the location measure most frequently used for interval-ratio data but can be misleading when the distribution contains extreme scores, large or small (Cooper & Emory 1995 : 681).

6.8.1.2 Variance

The variance measures dispersion and is the average of the squared deviation scores from the distribution's mean (Cooper & Emory 1995 : 681).

6.8.1.3 Standard Deviation

The standard deviation is also a measure of dispersion. It is the positive square root of the variance and is perhaps the most frequently used measure of dispersion as it improves interpretability by removing the variance square and expressing deviations in their original units. Like the mean, the standard deviation is affected by extreme scores (Cooper & Emory : 681).

6.8.2 INFERENCEAL STATISTICS

Inferenceal statistics are used for the purpose of estimation of population values and for testing statistical hypothesis.

6.8.2.1 t-test

The t-test takes into consideration the means and standard deviations of the two groups on the variable and examines if the numerical differences in the means is significantly different from 0 as postulated in the null hypothesis. The t-test may be used with tow independent samples of two different groups on a variable. The decision rule would be to accept the alternate hypothesis if the t value is significant at the $p < 0.05$ level (one tail test). If the results are significant at the 0.05 level when the hypothesis is stated directionally, one would conclude that there is a significant mean difference between the two groups as hypothesised (Cooper and Emory 1995 : 681).

6.8.2.2 Analysis of Variance (ANOVA)

Anova indicates whether or not there is a significant mean difference in a dependent variable between two or more groups. The decision rule applied is that, if the statistics obtained is significant at the 0.05 level or

better, accept the alternate hypothesis that there are significant mean differences among the groups. If the F statistic is not significant, retain the null and reject the alternate hypothesis (Cooper & Emory 1995 : 681).

6.8.2.3 Chi-square Analysis

A simple technique for describing sets of relationships is the cross-tabulation. A cross-tabulation or contingency table is "a joint frequency distribution of observations on two or more sets of variables" (Maharaj 1993 : 91).

The tabulation of subgroups serves as a measure of comparison. The statistical significance of contingency tables is tested using the chi-square. "The chi-square analysis of a contingency table is an extension of the test to compare more than two percentages". It is used when the data consists of categorical variables, that is, when data is presented in table or column form, whereby the different rows and columns frequently represent categorical variables.

According to Maharaj (1993 : 91) in the chi-square test, "a hypothesized population distribution is compared with a distribution generated by a sample". The objective of chi-square analysis "is to determine if the differences observed in two sets of data can be attributed to sampling

variation".

6.8.2.4 Correlation

Correlation is applied when one wishes to see the nature, direction and significance of the relationship between two variables. Pearsons correlation matrix indicates the direction, strength and significance of the bivariate relationship among the variables in the study. To determine if the correlation is significant or not, one examines the level of significance. For example, at the 5% level of significance, one can say that 95 times out of 100, one can be sure that there is a significant correlation between the two variables and there is only a 5% chance that the relationship does not exist. The range of correlation is between -1.0 to + 1.0. The decision rule will be to accept the alternate hypothesis and reject the null hypothesis if $p < 0.05$ and reject the alternate hypothesis and accept the null hypothesis if $p > 0.05$ (Cooper & Emory 1995 : 681).

6.9 QUANTITATIVE ANALYSES OF THE DATA

Once the collection of data using the field assistants to administer the questionnaires to the selected respondents and the responses from senior officials is completed, the data would be edited and captured on the computer by the

researcher for statistical analysis. The questionnaires would also be collated, checked for completeness and numerically referenced to facilitate the process of data capturing. The relevant statistical techniques will be applied to test the hypotheses formulated.

It is necessary to formulate the main hypothesis impacting on the study and specifically focusing on the research instruments to determine the appropriate statistical tools applicable.

6.10 SUMMARY

The research design and methodology embodied, rendered a succinct procedure in elucidating the objectives of the survey, the description of the target population and how the sample was drawn. It also highlighted the sampling technique employed, the description of the questionnaires and how it would be administered. Descriptive and inferential statistics are deemed to be sufficient for the purposes of the research study.

Finally, the analysis of the questionnaires was conducted by the researcher with assistance from specialists based at the University of Durban-Westville and guided by the promoter.

CHAPTER SEVEN

PRESENTATION AND ANALYSES OF RESULTS

7.1 INTRODUCTION

The research method of the study outlined the procedures followed by the researcher using various descriptive and inferential statistical techniques. The analysis of results enables the presentation of the findings.

This chapter is divided into three parts, *viz.*

PART A : Analyses the data obtained from the Urban Strategy Unit;

PART B : Provides a discussion on the responses from senior officials from Durban Metro Water Services;

PART C : Focuses on the responses of residents from informal settlements in the Durban Metro Region.

PART A

7.2 URBAN STRATEGY UNIT

This part of the chapter is based on the input provided by Mr Williamson (Executive Director) of Urban Strategy Unit, from the constructed questionnaire, including his own views of the urbanisation process in the Durban Metropolitan Area.

Responses from Mr Allen (Manager of Information), during the focus group session, would also be highlighted.

7.2.1 PROFILE OF URBAN STRATEGY UNIT

A review of the vision of the Urban Strategy Unit revealed that there is a common vision of all Councils in the Metropolitan Area.

By the year 2015, metropolitan Durban will be a thriving world class industrial and commercial centre, an attractive tourist destination and the gateway to KwaZulu Natal and Southern Africa.

It will be a clean and safe environment with full, effective employment, with its residents living in acceptably serviced housing, and with a generally high quality of life that can be sustained.

Democracy and tolerance will be an established way of life in a united metropolitan area, with a high level of service and development orientation and civic pride.

The Urban Strategy Unit respects and abides by the above vision.

The Metro Mission provides direction for the Urban Strategy Unit in its day-to-day activities viz.

To ensure that the metro vision is attained by application of the development principles to upgrading the quality of life of all our people by:

- * the provision, upgrading and maintenance to an acceptable level of infrastructure and community services for all,
- * facilitating the creation of jobs and the growth of the economy,
- * providing greater access to housing opportunities,

* undertaking processes to make the metro area a safe, secure and spatially efficient and equitable place.

With respect to the mission statement, the Urban Strategy Unit would facilitate the application of strategic planning in the management of urban change within the Durban Metro Area.

The focal point of the Urban Strategy Unit is that it has identified and analysed the critical needs and aspirations of the local communities. In this way, the Unit would assist in creating better and tolerant communities willing to pay for services rendered to them and to maintain a better quality of life.

- GOALS AND OBJECTIVES OF URBAN STRATEGY

The Unit has varied objectives to meet the challenges of its environment viz.

Long term goals: focuses on the attainment of the Metro vision.

Medium term goals: involves the attainment of the Metro area's interim development objectives.

Short term goals: transforming the way local government in the Metro Area conducts its business.

- LEGISLATIVE AND POLICY FRAMEWORK

There is a legislative framework that gives effect to the activities of the Urban Strategy Unit. The Unit works within the legislative framework governing the Durban Metro Council. The White Paper on Local Government and Integrated Development Plans were key legislation governing the Urban Strategy Unit.

Policy initiatives have been introduced to address urban problems. These include, amongst others, :

- to reduce crime levels in order to create a safer and cleaner Central Business District (CBD);
- encouraging small, medium and large enterprises to return to the city;
- entice people of diverse cultures and traditions to frequent the CBD;
- to be able to provide a faster, more efficient service to the local communities; and

- to educate people about the need to pay for basic services.

- STAKEHOLDERS IN THE PLANNING PROCESS

Various stakeholders play an active role in the planning process. Each of the role-players mentioned below impact directly or indirectly on the activities of the Durban Metro as a whole. Urban Strategy attempts to unite all these parties when facilitating urban development planning. Table 7.1 lists the role of stakeholders in the planning process.

TABLE 7.1 STAKEHOLDERS INVOLVED IN THE PLANNING PROCESS

<i>Members of the public</i>
<i>Non-Governmental Organisations</i>
<i>Business/Private Sector</i>
<i>Representatives from Central Government</i>
<i>Representatives from Provincial Government</i>
<i>Representatives from Local Government</i>
<i>Organised Labour</i>
<i>Parastatals</i>

- FINANCIAL CONSTRAINTS

The Urban Strategy Unit functions according to a budget. An amount of R5.5 billion has been budgeted for the 1998 financial year to manage the urbanisation process and facilitate development programmes.

Financial resources are known to be limited and scarce, it is expensive to undertake development research and surveys to ascertain the needs, wants and desires of people. Thus,

the utilisation of funds must be undertaken with utmost caution, with appropriate accounting procedures and sound financial management.

- COMMUNICATION CHANNELS

The public needs to be aware of development programmes and activities. As a result, the Urban Strategy Unit conducts workshops and meetings to inform councillors of the development programmes and activities. Councillors, being representatives of the people they serve, would impart this information to their respective constituencies. Urban Strategy also uses other forms of media, for example, the radio and daily newspapers to communicate with people.

- LINKAGES

Urban Strategy Unit is a small unit. It seldom undertakes research on its own. It establishes and maintains links with other research institutions, for example, Institute for Social and Economic Research based at the University of Durban-Westville, University of Natal and other private sector institutions.

**- TECHNOLOGICAL INNOVATIONS AND MANAGEMENT PRACTICES :
LESSONS FOR SOUTH AFRICA**

First World countries possess appropriate technological innovations. They also follow proper management practices. These factors assist in evaluating urbanisation patterns. South Africa, on the other hand, is not fully equipped with the necessary technological means, thereby creating difficulty in managing the urbanisation process.

Management practices in South Africa should be reviewed and updated on a continuous process to keep abreast of the changing environment.

Third World countries present valuable lessons for South Africa with respect to the following:

- poverty alleviation; and
- resource management.

- POVERTY ALLEVIATION AND RESOURCE MANAGEMENT

It is often argued by development analysts that rural poverty will be replaced by urban poverty in the 1990s. Governments in developing countries can therefore, address poverty alleviation using the experiences of many countries on the African continent.

Resource management forms an integral part of the development process. In South Africa and in many parts of the world, water is a scarce resource. By the year 2020, there will be a possible shortage of 17 and 18 billion m₃ of water. Steps must therefore, be taken to ensure its sustainability and conservancy in the next millennium.

7.2.2 IMPACT OF URBANISATION ON THE PROVISION OF WATER

According to Mr Williamson, urbanisation is not accelerating and Durban is not the fastest growing city in the world as is assumed by many. However, Durban's pace of growth is rapid. It has not reached population levels as high as Mexico City. The population of Durban is lower than initially estimated. Population levels have been influenced by natural population growth. In-migration is approximately fifty percent. The current settlement pattern of the 1990s compared with that of the 1980s and 1970s are more or less the same.

The South Africa Yearbook (1997 : 8) does indicate that Durban is one of the fastest-growing urban areas in the world.

The DMA Spatial Development Plan (1998 : 7) shows a decline in the rates of increase in population growth, attributable largely to the general decrease in family size as well as

the impact of AIDS. Current growth rate is estimated to be approximately 2 % but this varies across racial groups, with the growth rate for the white population being 0.01% and the black population 3.78%.

Statistics cited in Census in Brief (1996) confirms that 3 628 268 (43.1 %) of KwaZulu Natal's population live in urban areas (cities and towns).

According to Pillay (1999 : 202 - 203) black people comprise close to 70% of metropolitan Durban's total population of 3.2 million (Indians make up 18% of this total, followed by Whites at 10 % and Coloureds at 2.5%).

Statistical data is collected generally through surveys, research and information exchange in order to monitor the urbanisation process for future provision of basic services, such as, water and electricity. Ongoing quality of life surveys also assist in this endeavour.

- INFORMAL TRADING

Rapid urbanisation, in the absence of comparable economic growth, gives rise to informal trading on the streets of the city centre with a further loss of income for the Durban Metropolitan Council.

- UNEMPLOYMENT AND IMPLICATIONS FOR PAYMENT OF SERVICES

An increase in urbanisation patterns has caused a decline in job opportunities and has added pressure to infrastructure. There are approximately two and half million people in the Durban Metropolitan Region that are currently unemployed and this region has a fairly young age structure. Jobs will not be provided overnight, in light of the decline in economic growth and high inflation rates.

This situation has huge implications for the payment of services rendered by the local authority. People disadvantaged through this circumstance (i.e. being unable to pay for services) are the "poorest of the poor". In most instances, women and children become victims in this vicious cycle.

The local authority is trying to provide "more services for less money".

- ENABLING ENVIRONMENT

Infrastructure is expensive; the provision of housing, water, sanitation, electricity and street lighting requires large sums of money. These infrastructures, if provided, can bring benefits to those who are unemployed. It can also provide an enabling environment to many

unemployed people, for example, a women who is unemployed can become self-employed. She can use electricity as a means to generate personal income. She can buy a sewing machine and sew articles and sell them to people; she can also bake and sell goodies to the local people. In this way she improves her standard of living.

Urbanisation has created difficulties in undertaking effective town and regional planning.

- LOCAL GOVERNMENT RESOURCES

According to Mr Williamson, local government does have the resources (financial, human, technical) to provide water and electricity to the urban poor.

7.2.3 ALTERNATIVE COURSE OF ACTION

Mr Allen prescribed the formation of a school to teach the "urban way of life" and an "urbanised culture".

Many people from the rural areas are influenced by the "bright lights" concept of the city. On arrival, they are prone to hijackings, petty theft and other criminal activities.

PART B

7.3 DURBAN METRO WATER SERVICES

This part of the chapter focuses on the input provided by senior officials in Durban Metro Water Services viz.

- * Director - Human Resources
- * Manager - Water Research and Development

The responses regarding the provision of water (from Durban Metro Water) will be presented first followed by responses for the provision of sanitation (from Wastewater Management).

7.3.1 PROFILE OF DURBAN METRO WATER

An investigation into the vision of Durban Water revealed that there is a common vision of all Councils in the Metro Area.

By the year 2015, metropolitan Durban will be a thriving world class industrial and commercial centre, an attractive tourist destination and the gateway to KwaZulu Natal and Southern Africa.

It will be a clean and safe environment with full, effective employment, with its residents living in acceptably serviced housing, and with a generally high quality of life that can be sustained.

Democracy and tolerance will be an established way of life in a united metropolitan area, with a high level of service and development orientation and civic pride.

The Metro Mission provides direction for Durban Water in its day-to-day activities namely:-

To ensure that the metro vision is attained by application of the development principles to upgrading the quality of life of all our people by:

- * the provision, upgrading and maintenance to an acceptable level of infrastructure and community services for all,
- * facilitating the creation of jobs and the growth of the economy,
- * providing greater access to housing opportunities, and
- * undertaking processes to make the metro area a safe, secure and spatially efficient and equitable place.

With respect to the mission statement, Durban Metro Water would provide a constant supply of water and services related to the provision of water to the satisfaction of consumers in the Durban Metropolitan Region.

- DEVELOPMENT PRINCIPLES

Durban Metro Water adheres to the following Metro Development Principles:-

- * supportive of economic development;
- * supportive of human development;
- * supportive of community development;
- * supportive of community participation;
- * supportive of affirmative action;
- * democratic and transparent;
- * co-operative and co-ordinated;
- * equitable;
- * fair to all;
- * goal-oriented;
- * accountable;
- * effective and efficient;
- * environmentally sustainable;
- * financially sustainable;
- * affordable to the consumer; and
- * address historical imbalances.

- GOALS AND OBJECTIVES

The goals and objectives of Durban Metro Water are:

Long term goals: for all people in the Durban Metro to have access to safe drinking water at affordable tariffs.

Medium term goals: to start the process of achieving the long term goals within a specified period of time.

Short term goals: to provide water to the most disadvantaged people as soon as possible and to ensure a healthy environment.

- LEGISLATIVE AND POLICY FRAMEWORK

There is a legislative framework that gives effect to the activities of Durban Metro Water. Durban Metro Water also functions within the legislative framework governing the Durban Metropolitan Council. The White Paper on Local Government, National Water Supply Regulations, Water Act, Water Services Act provide a legal foundation for Durban Metro Water.

There are policy initiatives that have been introduced to address water shortages for example:

- * Consumers who use excessive amounts of water pay higher tariffs;
- * Metro Water is replacing old and faulty systems as quickly as possible.

- SERVICE UNITS

Durban Metro Water has three main service units, namely: -

- * Department of Water - the provision of water
- * Wastewater Management - provision of sanitation
- * Solid Waste Department - refuse removal.

- FUNCTIONAL STRUCTURE

The functional structure comprises the following:

An executive director who oversees the overall operation of Durban Metro Water followed by a director of water and seven departments headed by a manager (that is, research and development, design, construction, operations, plant, administration and services). All these department work in harmony to provide water to the communities.

The structure of Durban Metro Water can be found in Appendix 9 of this study.

- RESOURCES

Durban Metro Water has limited financial resources. Durban Metro Water has to provide some one hundred and twenty thousand (120 000) connections in the next ten years. Limited funding will not permit faster delivery.

There is a restriction on staff numbers. A reorganisation is in progress and it is hoped that Durban Metro Water will soon be permitted to fill required number of posts.

Technological resources are adequate. State-of-the-art equipment (for example, telemetry) and computer methods are being employed. Technological innovations are comparable to international standards. This has a positive impact on the pace of service delivery.

- ACCESS TO WATER

There are over 250 000 people who do not have "easy" access to water in the Durban Metropolitan Region ("easy" means that everyone has some access or else they would die in four days).

It would take between one and five years to effectively and efficiently deliver water to those in informal settlements. and the Department receives between fifty one to one hundred queries for the provision of water per day.

- OBSTACLES TO SERVICE DELIVERY

The proper delivery of water has been hampered by many factors. These factors are ranked in terms of the following scale: -

- * 1 - greatest impact
- * 8 - least impact

The lack of finance has been identified as the key factor that inhibits the delivery of water to communities. Durban Metro Water would like to abide by their vision and mission of providing water to communities at affordable prices, however, dire financial constraints hinders them from realising their goals. This state of affairs is further compounded by the need to carry out daily repairs and maintenance on old, leaking and faulty piping and water infrastructures.

Violence and crime has affected many industries in South Africa; Durban Metro Water is no exception. Informal settlements have become high risk areas in terms of

violence and crime. This has impacted negatively on employees of Durban Water who have become afraid to carry out their functions and duties for fear of their persons and belongings. Hijackings and murders have become a way of life which takes prime coverage in the media, highlighted in audio, visual and print media. The vehicles and equipment of Durban Metro Water have become prone to these hijackings and to theft.

High construction costs is linked to financial constraints. Due to the fact that Durban Metro Water has a limited financial base, the daily rise in the costs of construction material and equipment has added pressure to the inadequate service supply.

Owing to the movement of people from rural to urban areas, Durban Metro Water is inundated with queries for service provision and is entrusted with a huge task of attempting to deliver drinking water to these large numbers. Other service providers are also affected, for example, housing, schools, electricity and hospitals which are used collectively by the community as a whole.

- DEMAND FOR WATER

With its increasing population, the demand for water is critical. All life depends on water and in South Africa,

population growth will, undoubtedly, impact on the need and demand for basic services.

In the application of a population policy, the primary objective is not only that there should be fewer children, but that the children should be better equipped and skilled, and enjoy a higher quality of life.

The demand for clean drinking water far exceeds the capacity of Durban Metro Water to adequately supply these services. Therefore, Durban Metro Water is continuously investigating ways and means of supplementing the water supply.

- LABOUR SUPPLY

In South Africa, there is a shortage of highly skilled workers especially in technical fields and an oversupply of unskilled workers.

Education, training, re-training, in-service training and apprenticeships should be directed to improving the level of skills of the workforce. Durban Metro Water offers in-service training to students studying in the engineering and technical fields in order to better equip them with the necessary knowledge, skills and attitudes.

Durban Metro Water has a high labour turnover, where a number of technocrats have been attracted to the competitive conditions of service in the private sector.

The public sector need to re-examine their remuneration to their employees in an attempt to secure quality personnel.

High calibre manpower is the ingredient of a successful organisation, whether public or private.

Generally, the poor are fatalistic. They expect others to take the lead in development. But development starts with people and people themselves must take the initiative to improve their own situations. The Reconstruction and Development Programme makes specific provision for community participation in development projects.

Inadequate community participation has been identified as a hampering factor to proper service delivery (Table 7.2).

TABLE 7.2 FACTORS HAMPERING THE PROVISION OF WATER

1	<i>Lack of finance</i>
2	<i>Violence and crime</i>
3	<i>High construction costs</i>
4	<i>Accelerated urbanisation</i>
5	<i>High population growth rates</i>
6	<i>Shortage of skilled labour</i>
7	<i>Inadequate community participation</i>

Durban Metro Water has policies in place that can best address the structural and functional problems associated with the current backlog in water.

- COMMUNICATION CHANNELS

It is imperative that Durban Water embarks on an open door communication policy for the people it is designed to serve. The following communication channels are utilised, namely:-

- * regular meetings with councillors;
- * on-going community liaison in the form of meetings, presentations, video's and demo trailers; and
- * distribution of leaflets.

Water is a basic service and a right which needs to be afforded to all irrespective of race, sex, gender or social status. In light thereof, Durban Metro Water aims to become more accessible to the people through the following means:-

- * community liaison teams interact with communities on an ongoing basis;
- * training school established to introduce and train communities (for example, construction or maintenance of a project);
- * offering different levels of service using appropriate technology; and
- * extension of high quality services previously confined to white areas to black communities through the implementation of a metro concept in local government.

7.3.2 WATER SUPPLY - FINANCIAL IMPLICATIONS

Over twenty million rands (R20 m) is required to make water accessible to those who require it. Between one and five million rands (R1m - 5 m) would be received from central and provincial levels of government. However, this amounts of money would be insufficient to provide water to communities, especially the poor and disadvantaged ones.

Owing to scarce financial resources, the culture of entitlement, that is, not paying for the services used, must come to an end. Difficulty is being experienced with revenue collection and there is a need for legal action to improve sanctions for non-payment. When communities falter with the payment, the financial viability of Durban Water is adversely affected.

- STRATEGIES AND TECHNIQUES

Various techniques/strategies can be adopted to assist those who cannot afford to pay for essential services. These techniques/strategies can be ranked using the following scale: -

* 1 - most effective * 5 - least effective

TABLE 7.3 VARIOUS STRATEGIES THAT CAN BE ADOPTED TO ASSIST THOSE WHO CANNOT AFFORD TO PAY FOR ESSENTIAL SERVICES (WATER)

1	<i>Flat rate</i>
2	<i>Lower cost</i>
3	<i>Subsidies</i>
4	<i>Card system</i>
5	<i>Credit facilities</i>

Flat rate is a set rate charged for an average amount of water consumed during a particular period of time. Any amount over and above the average, would have to be paid for aside from the flat rate.

Another strategy to assist those who cannot afford to pay for services is to lower the cost of the service. In this way, water becomes more affordable to the poor.

Subsidies are schemes that are provided by government to a particular sector of the population. Government provides a certain amount of money to recover cost and a portion is paid by the people it is designed to serve.

The provision of water through the card system has been introduced. A "box" is installed by Durban Water and cards can be purchased from the Customer Service Centres. The card has a predetermined monetary value (prepaid) that enables a customer to buy water for a particular period of time. When the card is inserted into the "box", water becomes available to the customer. Over time, the value of the card diminishes and a new card can be purchased. However, vandalism and tampering with the meters are the main obstacle related to this method.

Credit facilities allows people to be connected to water and payment is made over a period of time. However, this is not the most effective or viable option. Some people start their payment without delay and make regular payments. However, others do not meet their commitments and this cripples the financial base of Durban Water, which in turn, buys its water in bulk from Umgeni Water.

Owing to the skewed distribution of services to the historically disadvantaged people, the government is determined to provide water to everyone by the year 2004. Hopefully, there would be adequate funding from National and Provincial Government to enable Local Government to enhance the quality of service delivery to all the communities.

- OBSTACLES

The following factors hampers the provision of water to informal settlements viz.

- * crime, hijacking, violence;
- * culture of non-payment for services;
- * culture of entitlement;
- * lack of adequate funding from central and provincial government; and
- * unwillingness to accept appropriate levels of service.

- STRATEGIC PLANS

Durban Metro Water have embarked on the following strategic plans to meet the challenges of the twenty first century, viz.

- * implementation of a mega city concept;
- * working with councillors to promote payment campaign for service delivery;
- * implementation of projects through the engagement of local labour force;
- * long term planning for bulk supplies;
- * co-ordination with other service providers, for example housing and roads; and
- * metro area presently being zoned for future reservoir planning.

7.3.3 THE PRIVATE SECTOR

There are mixed responses with regard to the private sector being better equipped than the public sector in terms of resources (financial, human and technical) to provide water to the people. There are also mixed responses, that in five to ten years time, there is a possibility that water would be provided by the private sector.

What is, however, evident is that there are shortcomings in allowing the private sector to deliver basic services, such as, water to the people in a postapartheid South Africa.

These viewpoints can be attributed to:

- * privatisation excludes the majority of poor people from gaining access to a particular service. The poor will get poorer and this will widen the gap between the haves and have nots;
- * customer dissatisfaction with quality being compromised;
- * absence of regulatory mechanisms; and
- * motivation for profit maximisation.

7.3.4 RECONSTRUCTION AND DEVELOPMENT PROGRAMME

The available RDP funding for water is inadequate. The RDP will not work amid economic stagnation which impacts on people's ability to pay for services. Masakhane, a Zulu word for building together, is a RDP project which encourages people to pay for services. This campaign has come to a standstill.

- SUCCESSES OF RDP

The success of RDP in relation to the provision of water include: -

- * some twenty water related projects were undertaken in the metro area between 1994 - 1997;
- * some water projects are still in operation; and
- * providing bursaries/financial assistance to those previously disadvantaged, to pursue a career in the water engineering sector.

- FAILURES OF RDP

The following constitute failures in relation to the provision of water:-

- * Inadequate community liaison prior to RDP funding. Projects being passed on to Durban Water and this eventually delayed projects up to two years;
- * RDP funding suddenly cut off. This resulted in a number of projects being curtailed or cancelled; and
- * Lack of proper financial regulations and requirements.

7.4 DURBAN WASTEWATER MANAGEMENT

This part of the chapter focuses on the input provided by the Manager : Strategic Planning in Durban Wastewater Management.

7.4.1 PROFILE OF DURBAN WASTEWATER MANAGEMENT

Durban Wastewater Management abides by a vision to provide a sewer connection to all sub-divisions existing in the Durban Metropolitan Region as at 26 June 1996 in accordance with an approved programme.

With regards to the mission statement, Durban Wastewater Management aims to be the Metropolitan Department ensuring the provision of affordable and acceptable sanitation services for the disposal of sewage, including conveyance and treatment where appropriate, control of water and air pollution and provision of ancillary services, operated in accordance with sound engineering, business and community and environmental health principles.

- GOALS AND OBJECTIVES

The objectives of Wastewater Management include:-

Long term goals: the objective is to achieve the Department's vision in terms of the recently developed long-term strategic plan for sewerage of the whole metropolitan area.

Medium term goals: to start the process of achieving the long term goals within a specified period of time.

short term goals: to achieve the vision in terms of the three year capital programme.

LEGISLATIVE AND POLICY FRAMEWORK

There is a legislative framework that provides meaning and direction to the activities of Durban Wastewater management. These include the Water Act and Water Services Act.

The Department has policy initiatives in respect of the reclamation and recycling of treated wastewater for industrial re-use which could contribute to alleviating water shortages in the future.

- ORGANISATIONAL STRUCTURE

There is a director of wastewater management followed by six managers (strategic planning, business, design, mechanical and electrical, systems and works). The design branch and systems branch are directly involved in the provision of sanitation to the local people.

These units/sections/departments are equipped with financial resources but not "adequately" in terms of the requirements as indicated in the strategic plan.

Adequately trained staff of the right calibre is difficult to obtain and there is a limit on human resources as the financial resources dictate.

- ACCESS TO SANITATION

There are over 250 000 people who do not have proper sanitation. (NB. "proper sanitation" is taken to mean VIP latrines). A time frame of greater than five years is appropriate for effective and efficient delivery of sanitation systems to those in informal settlements. The department receives between one and fifty queries for the provision of sanitation systems per day.

The proper delivery of sanitation services has been hampered by many factors. These factors are ranked in terms of the following scale: -

* 1 - greatest impact

* 8 - least impact

TABLE 7.4 FACTORS HAMPERING THE PROVISION OF SANITATION SERVICES

1	<i>Lack of finance</i>
2	<i>High construction costs</i>
3	<i>Unco-ordinated/unplanned development</i>
4	<i>Violence and crime</i>
5	<i>Accelerated urbanisation</i>
6	<i>High population growth rates</i>
7	<i>Shortage of skilled manpower</i>
8	<i>Inadequate community participation</i>

The basic economic problem revolves around unlimited needs, wants and desires but limited financial resources to satisfy them. The provision of sanitation services is affected by a lack of financial resources (Table 8.4). This is further exacerbated by people's inability to pay for such services. The Masakhane Campaign has been introduced by government to encourage service recipients to pay for basic services. This Campaign has achieved partial success.

The second factor that hampers the provision of sanitation services is high construction costs. Infrastructure is expensive. This point of view has also been highlighted by the Urban Strategy Unit. It is difficult to gain access to shanty towns and informal settlements in light of overcrowding, congestion and the close proximity of each household. There is insufficient space to manoeuvre equipment, such as, cranes, heavy trucks and machinery to start construction.

Unco-ordinated or unplanned development also inhibits prompt sanitation provision. Driven by poverty and the vain lure of work, an endless human wave has swelled the population of Durban's shack settlements from 50 000 in 1970 to some 2 million today - roughly half the city's total population.

If action is not taken to accelerate sanitation provision, epidemic outbreaks of diseases, such as, cholera is inevitable in the city centre.

Violence and crime has been rampant in the KwaZulu Natal Province. This state of affairs has a negative impact on development initiatives. It can be deduced that the provision of sanitation systems has been slow in some areas due to looting and criminal activities, such as, theft of equipment, hijacking of vehicles, robbery which has caused

grave concern for the welfare and safety of employees deployed in the townships.

Accelerated urbanisation creates a situation where more and more people move to urban areas on a daily basis. These people exert pressure on already overstrained infrastructure. The local authority has a moral obligation to cater for the needs of urban dwellers as well as those coming from rural areas. This creates backlog in service delivery. However, Durban Wastewater has structural and functional policies in place to address service delivery.

High population growth rates have been influenced by natural population growth. Durban Metropolitan Region has a young age structure and this situation has been reiterated by the Urban Strategy Unit. Like urbanisation, population growth impacts directly on service delivery.

The level of service increases on a continuous basis to meet the challenges of the environment.

Shortage of skilled manpower and labour adversely influences the provision of services. This factor can be ascribed to the fact that highly qualified engineers, technicians and other line and staff personnel are attracted by the incentives and salary structures offered by companies in the private sector. If employers have to

pay a higher salary, it can lead to higher productivity and greater performance. In view thereof, the public sector needs to review and upgrade its salary structure to become more competitive and retain staff with the necessary skills and expertise.

Another factor that inhibits the provision of sanitation services is inadequate community participation. Communities are hesitant to provide input, ideas and suggestions with regards to service provision. Furthermore, they are unwilling to take some initiative to start development projects. The Reconstruction and Development Programme together with other policy documents explicitly states that development must be demand and people driven.

When communities participate in development projects, they have a sense of belonging and regard it as their own. Communities must become part and parcel of development processes. Development is about and for people.

- COMMUNICATION CHANNELS

Durban Wastewater communicates to the local people in order to ascertain their needs, wants and desires through the following channels: community liaison through local councillors, liaison officers, consultants and educational programmes.

Wastewater management has a toll-free number and area offices opened in order to make them more accessible to the people.

7.4.2 SANITATION - FINANCIAL IMPLICATIONS

Over twenty million rands (R20 m) are required to provide sanitation services accessible to those who require it. In order to provide sanitation to the local people, the following amounts have been budgeted for the 1998/99 financial year:

Capital (R 32 m + R30 m carryover from JSB).

Operating (R 226 m).

An amount of R23 m would be received from provincial sphere of government.

To alleviate financial difficulties in service delivery, the culture of entitlement, that is, not paying for the services used, must come to an end. There is difficulty with revenue collection and there is need for legal action to improve sanctions for non-payment.

Affordability is a relative term. Due to varying socio-economic backgrounds of people residing in the Durban Metropolitan Area, what is affordable to some, is not

affordable to others.

- TECHNIQUES AND STRATEGIES

Various techniques/strategies can be adopted to assist those who cannot afford to pay for essential services.

These techniques/strategies can be ranked using the following scale: -

* 1 - most effective * 5 - least effective

TABLE 7.5 VARIOUS STRATEGIES THAT CAN BE ADOPTED TO ASSIST THOSE WHO CANNOT AFFORD TO PAY FOR ESSENTIAL SERVICES (SANITATION)

1	<i>Lower cost</i>
2	<i>Lifeline Tariff</i>
3	<i>Subsidies</i>
4	<i>Credit facilities</i>

The most effective strategy that can be adopted to assist those who cannot afford to pay for essential services is to lower cost. In this way, sanitation services becomes more affordable to the poor.

Lifeline tariff is another strategy to assist impoverished communities to have access to basic services. For example, from 1 - 25 kl, the cost of providing water will be 20c p\kl.

Everyone needs access to this service, at the same time, there is affordability constraints. As a result, making service accessible means 25 kl is the ceiling price. If consumers want to utilise more of the service, they must ensure that they are able to pay more for the service. For example, 25 kl and onwards, they would pay R1,00 per litre. This is to ensure there is cross subsidisation.

Subsidies are schemes that are provided by government to a particular sector of the population. Government provides a certain amount of money to recover costs and a portion is paid by the people it is designed to serve.

Credit facilities is a process whereby people have access to sanitation systems and payment is made over a period of time. However, this is not the most effective and viable option. Non-payment affects the financial viability and sustainability of the service.

The main obstacles that hampers the provision of sanitation to informal settlements include the following:-

- * cost;
- * difficulty of access;
- * informal nature of the development; and
- * ownership.

A long term strategic plan has been devised to meet the challenges until 2050. Having a plan in place is important, putting the plans into action is however, more important.

7.4.3 THE PRIVATE SECTOR

There are advantages and disadvantages in allowing the private sector to deliver water and sanitation to local people. These, however, need to be weighed against each other.

7.4.4 RECONSTRUCTION AND DEVELOPMENT PROGRAMME

Available RDP funding for wastewater services is non-existent. The RDP will not work amid economic stagnation which impacts on people's ability to pay for services.

- SUCCESSES OF RDP

Little successes have been achieved with regards to sanitation services, viz.

- Certain communities work hand in hand with wastewater management to upgrade their sanitation systems.

- FAILURES OF RDP

With regards to the failure of RDP in relation to sanitation:

* RDP funds have been all but totally withdrawn for sanitation-type projects;

* Specific projects have failed due to :

- community rejection of the level of service;

- crime and violence; and

- unrealistically short implementation periods which were set for the expenditure of all capital date of approval and when the capital funding was withdrawn.

PART C

7.5 INFORMAL SETTLEMENTS

This part of the questionnaire focuses on the responses provided by 178 respondents from the informal settlements in the Durban Metropolitan Region.

7.5.1 DEMOGRAPHIC DETAILS

The following demographic details would be interpreted:

TABLE 7.6 AGE

AGE	FREQUENCY (N)	PERCENTAGE (%)
20 - 29	48	27.0
30 - 39	53	29.8
40 - 49	55	30.9
50 - 59	11	6.2
60 AND OVER	11	6.2

- AGE (in years):

The results (Table 7.6) indicate that 30.9 % of the people who reside in informal settlements fall in the age category of 40 - 49. This was followed by 29.8 % in the age category of 30 - 39, whilst 6.2 % of the people who reside in the informal settlements were between the ages 50 to 59 and 60 and over respectively.

This finding reveals that people of all ages reside in informal settlements.

TABLE 7.7 GENDER

GENDER	FREQUENCY (N)	PERCENTAGE (%)
Male	77	43.3
Female	101	56.7

- GENDER:

Table 7.7 reveals that there are more females than males that reside in informal settlements. There are 56.7 % females compared to 43.3 % males.

FIGURE 7.1 GENDER

Male	43.30
Female	56.70

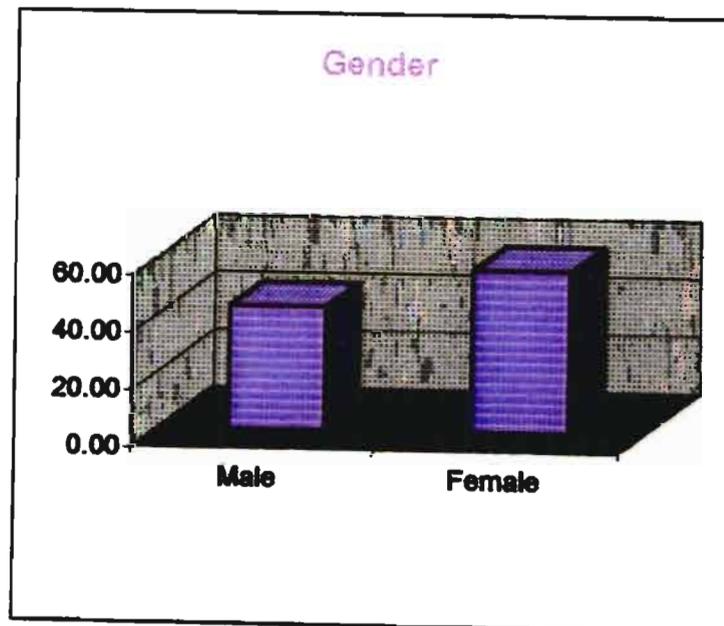


TABLE 7.8 MARITAL STATUS

MARITAL STATUS	FREQUENCY (N)	PERCENTAGE (%)
Single	80	44.9
Married	73	41.0
Divorced	11	6.2
Widowed	14	7.9

- MARITAL STATUS:

Table 7.8 reflects that the majority of residents in informal settlements are single (44.9%), followed by married residents (41.0 %), widowed (7.9 %) and divorced (6.2 %).

FIGURE 7.2 MARITAL STATUS

Single	44.90
Married	41.00
Divorced	6.20
Widowed	7.90

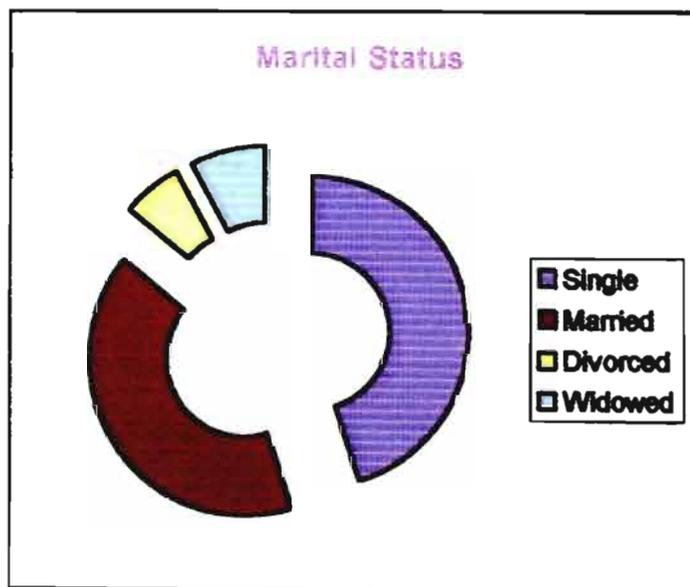


TABLE 7.9 EDUCATION

EDUCATION	FREQUENCY (N)	PERCENTAGE (%)
Primary	92	51.7
Secondary	84	47.2
Tertiary	2	1.1

- EDUCATION:

With respect to education (Table 7.9), 51.7 % of those residing in informal settlements have primary education followed by 47.2 %. Only 1.1 % have tertiary education.

FIGURE 7.3 EDUCATION

Primary	51.70
Secondary	47.20
Tertiary	1.10

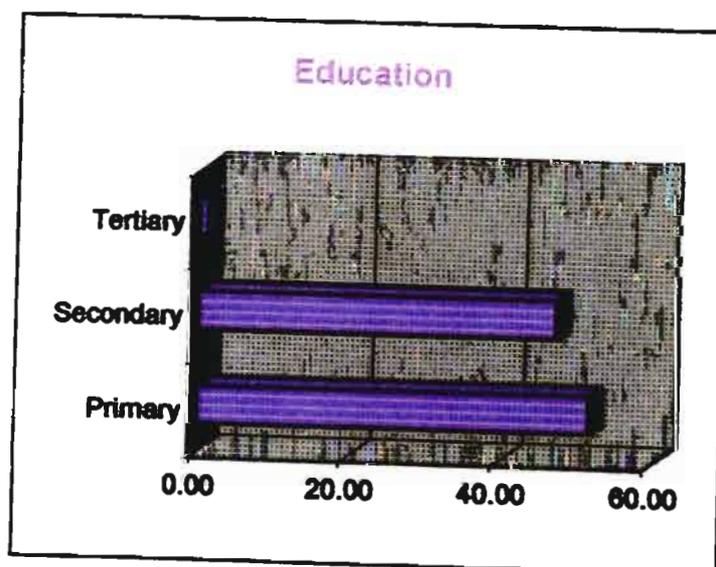


TABLE 7.10 OCCUPATION

OCCUPATION	FREQUENCY (N)	PERCENTAGE (%)
<i>Domestic workers</i>	20	11.2
<i>Housewives</i>	10	5.6
<i>Machinists</i>	7	3.9
<i>Labourers</i>	9	5.1
<i>Self employed</i>	17	9.6
<i>Cleaners</i>	11	6.2
<i>Unemployed</i>	55	30.9
<i>Pensioners</i>	9	5.1
<i>Gardeners</i>	5	2.8
<i>Hawkers</i>	6	3.4
<i>Other</i>	29	16.2

- OCCUPATION:

The results indicate that the majority of people residing in informal settlements are unemployed (30.9 %).

Table 7.10 illustrates that the type of jobs that the residents occupy (domestic workers, gardeners, hawkers, labourers etc) are menial, routine, casual, temporary and

poorly remunerated. This factor can also be attributed to the level of education, that is, 51.7 % had primary education only - see Table 7.9. However, this does not imply that these people do not have skills.

TABLE 7.11 INCOME

INCOME	FREQUENCY (N)	PERCENTAGE (%)
R 100 - R 500	140	78.7
R 501 - R1000	28	15.7
R1001 - R 1500	8	4.5
R1501 - R2000	1	.6
Over R2000	1	.6

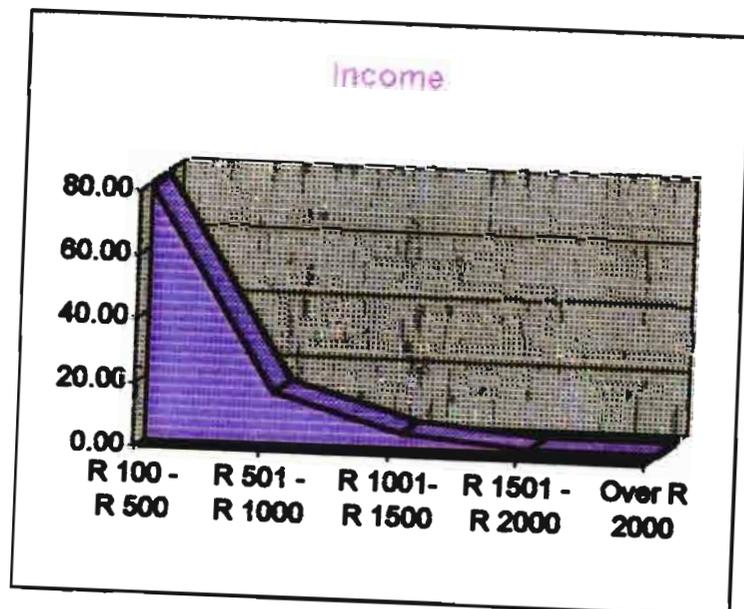
- INCOME:

With respect to income, Table 7.11 show that the majority of people (78.7 %) earn between R100 - R500 per month, followed by 15.7 % who earn between R501 - R1000. The results indicate that two people earn above R1500, that is, one person earns between R1501 - R2000 and another earns over R2000.

Owing to adverse economic conditions, the decrease in the value of the rand and the high inflation rate, these income levels would not allow the residents to maintain a high standard of living. They would not have sufficient money to cater for their basic needs. These people would ultimately, find it extremely difficult to make ends meet at the end of every month.

FIGURE 7.4 INCOME

R 100 - R 500	78.70
R 501 - R 1000	15.70
R 1001- R 1500	4.50
R 1501 - R 2000	0.60
Over R 2000	0.60



- NUMBER OF CHILDREN AND NUMBER OF DEPENDENTS:

On average, each household has 3 children and 2 dependents.

7.5.2 THE URBANISATION PROCESS

The majority of people were born in rural areas and moved to urban areas in search of a better life. These areas include :-

- Greytown, Port Shepstone, Richmond, Ixopo,
- Eastern Cape, Scottsburg, Umkomaas, Mawoti,
- Kranskop, Port Edward, Harrismith, Empangeni,
- Ndwedwe, Eshowe, Mtubatuba, Nkandla, Umsinga,
- Lusikisiki, Msinga, Mahlabathini, Kwanyuswa,
- Nquthu, Umgababa, Kwambonambi, Nongoma, KwaDumisa.

TABLE 7.12 FLOW OF PEOPLE TO DURBAN THROUGH THE YEARS

YEARS	NUMBER OF PEOPLE
1950 - 59	3
1960 - 69	15
1970 - 79	25
1980 - 89	36
1990 to Date	90
Since Birth	9

During the 1990s larger numbers of people started flocking to Durban in light of the political changes taking place, for example, unbanning of political parties, move to a democratic order and preparation for the 1994 elections.

Table 7.13 presents the reasons why people came to Durban.

TABLE 7.13 REASONS WHY PEOPLE CAME TO DURBAN

REASONS WHY PEOPLE CAME TO DURBAN	RESPONSE
<i>Job Opportunities</i>	<i>160</i>
<i>Safer Environment</i>	<i>49</i>
<i>Better Quality Education</i>	<i>25</i>
<i>Provision of Housing</i>	<i>38</i>
<i>Provision of Water and Sanitation</i>	<i>16</i>
<i>Provision of Electricity</i>	<i>18</i>
<i>Provision of Health Services</i>	<i>18</i>

Table 7.13 shows that the majority of people came to the Durban Area in search of better job opportunities. The situation is somewhat different today. Job opportunities are bleak in light of economic stagnation and lack of investments.

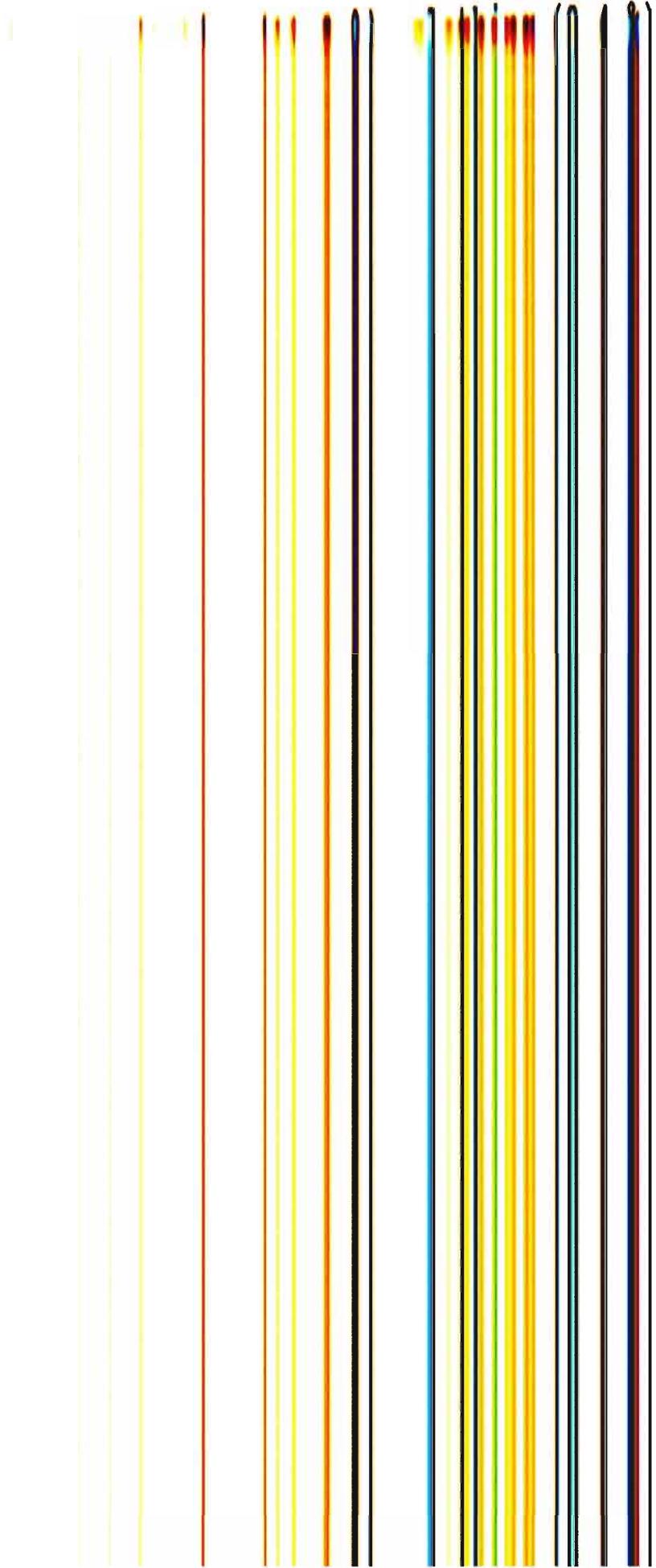
Owing to violence and political faction fighting in rural areas, people prefer to come to the cities where it is politically more stable and where there are better security and protection services.

The provision of housing and other basic services is also evident in an urban environment. People are attracted to these services and wish to maintain better standards of living even if it means that people live in overcrowded "mjondolo's" in the city centres.

TABLE 7.14 NEEDS IN TERMS OF ITS LEVEL OF IMPORTANCE

MOST IMPORTANT	FREQUENCY (N)	PERCENTAGE (%)
<i>Nutrition</i>	5	2.8
<i>Housing</i>	26	14.8
<i>Health</i>	21	11.8
<i>Water & Sanitation</i>	20	11.2
<i>Electricity</i>	23	12.9
<i>Education</i>	25	14.0
<i>Transport</i>	7	3.9
<i>Employment</i>	36	20.2
<i>Clothing</i>	15	8.4

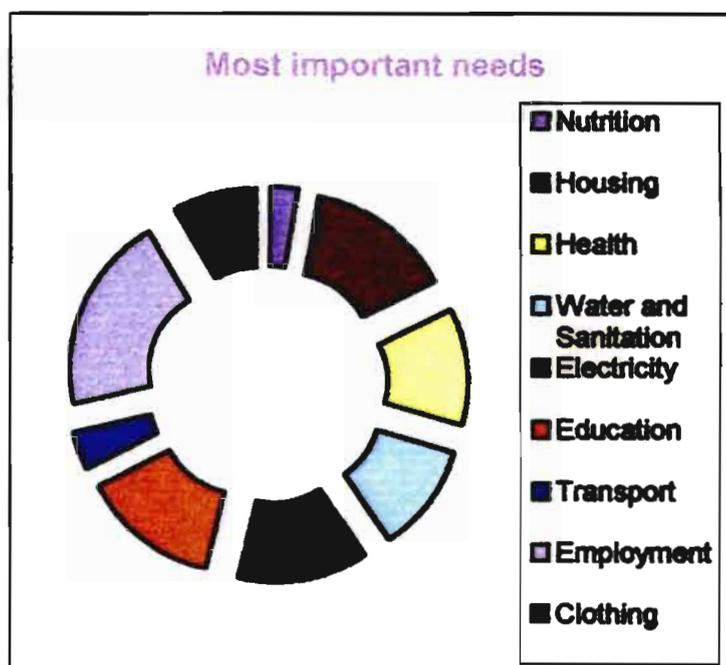
Table 7.14 reveals that employment has been identified as people's greatest need (20.2 %), followed by housing (14.8 %), education (14.0 %), electricity (12.9 %), health



(11.8 %), water and sanitation (11.2 %), clothing (8.4 %), transport (3.9 %) and lastly nutrition (2.8 %).

FIGURE 7.5 MOST IMPORTANT NEEDS

Nutrition	2.80
Housing	14.80
Health	11.80
Water and Sanitation	11.20
Electricity	12.90
Education	14.00
Transport	3.90
Employment	20.20
Clothing	8.40



The Human Science Research Council Survey (1999) presents the following statistics on the kinds of services most important according to race:

TABLE 7.15 HUMAN SCIENCE RESEARCH COUNCIL - MOST IMPORTANT NEEDS

SERVICE	BLACK	COLOURED	ASIAN	WHITE	TOTAL SAMPLE
	%	%	%	%	%
Running Water	30	19	16	26	27
Housing	20	25	28	14	20
Electri -city	18	3	10	20	16
Health care	13	25	18	22	16
Police service	4	6	15	14	6
Roads	5	9	4	2	4

According to Table 7.15, 30% of Blacks noted that running water is a kind of service that is most important. The service priorities among Coloureds tended to focus on affordable housing and health care (25% each). About a quarter of Whites indicated that running water (26%) followed by health care (22%) and electricity provision (20%). A larger proportion of Asians indicated affordable housing (28%) as the most important service in their area.

TABLE 7.16 NEEDS IN TERMS OF ITS LEVEL OF IMPORTANCE

LEAST IMPORTANT	FREQUENCY (N)	PERCENTAGE (%)
Nutrition	0	0
Housing	0	0
Health	2	1.1
Water & Sanitation	8	4.5
Electricity	8	4.5
Education	13	7.3
Transport	24	13.5
Employment	8	4.5
Clothing	115	64.6

Table 7.16 reflects that clothing is perceived to be the need that is least important (64.6 %), followed by transport (13.5 %), education (7.3 %), water and sanitation, electricity and employment (4.5 %) respectively, health (1.1 %) and nutrition and housing (0 %).

FIGURE 7. 6 LEAST IMPORTANT NEED

Nutrition	0
Housing	0
Health	1.1
Water and Sanitation	4.5
Electricity	4.5
Education	7.3
Transport	13.5
Employment	4.5
Clothing	64.6

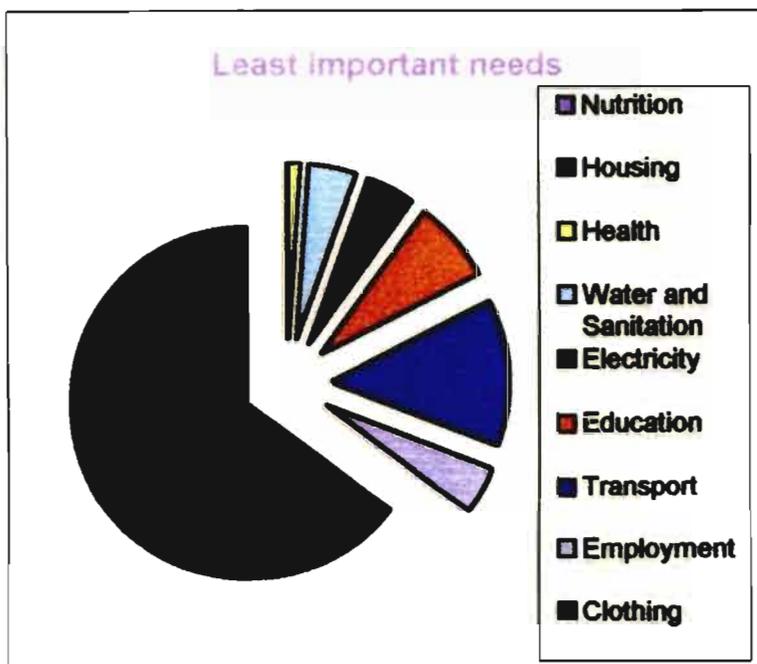


TABLE 7.17 INCOME TO PAY FOR SERVICES

VARIABLE	YES (1)	NO (2)
Water	94 (F)	84 (F)
	52.8 (%)	47.2 (%)
Electricity	43 (F)	135 (F)
	24.2 (%)	75.8 (%)
Education	43 (F)	135 (F)
	24.2 (%)	75.8 (%)
Transport	65 (F)	113 (F)
	36.5 (%)	63.5 (%)
Nutrition	72 (F)	106 (F)
	40.4 (%)	59.6 (%)
Health	48 (F)	130 (F)
	27.0 (%)	73.0 (F)
Housing	19 (F)	159 (F)
	10.7 (%)	89.3 (%)

NB.

F = FREQUENCY

% = PERCENTAGE

With regards to income and the ability to pay for services, the following results were analysed (Table 7.17):

- WATER

Fifty two percent (52.8 %) of the respondents indicated that they would pay for water, whilst 47.7% indicated that they could not afford it.

According to the Human Science Research Council Survey (December 1998) perception of access to running water differs by income. Of the 34 % of those who indicated improvement on the supply of running water, the majority are those earning R2 500 and under per month. This supports the contestation that the primary new beneficiaries of the provision of running water are low-income groups. There is a close relationship between those who indicated high levels of improvement and those earning low wages, or were unemployed.

- ELECTRICITY

Twenty four percent (24.2 %) of the respondents indicated that they would pay for electricity, whilst 75.8% indicated that they could not afford to pay for it.

The Human Science Research Council Survey (December 1998) indicated that some 48% of those earning less than R2 500 per month felt that the delivery of electricity has improved as compared to 14% who indicated otherwise. As with other services, the new government, under the auspices of ESKOM, embarked on a programme of rural and school electrification. The survey results indicate that the beneficiaries of the programme are largely the poor low-income groups.

- EDUCATION

Twenty four percent (24.2 %) of the respondents indicated that they would pay for education, whilst 75.8 % indicated that they could not afford it.

- TRANSPORT

Thirty six percent (36.5 %) of the respondents indicated that they would pay for transport, whilst 63.5 % indicated that they could not afford it.

- NUTRITION

Forty percent (40.4 %) of the respondents indicated that they would pay for nutrition, whilst 59.6 % indicated that they could not afford it.

- HEALTH

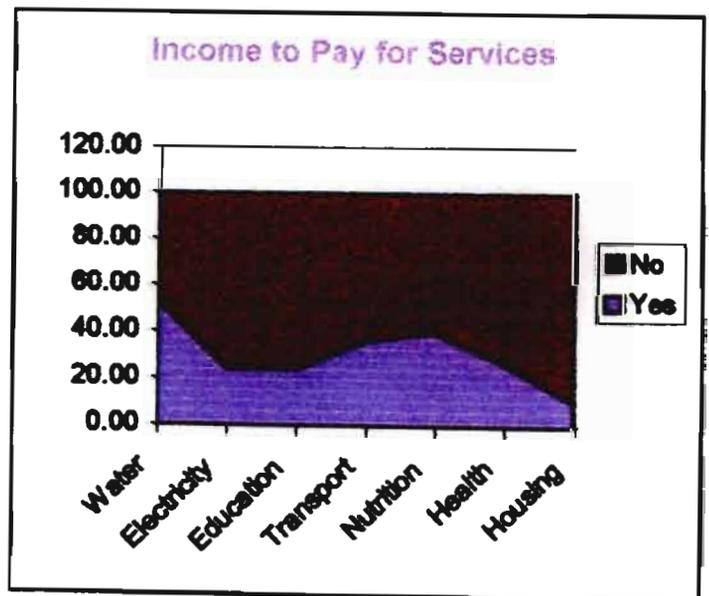
Twenty seven percent (27.0 %) of the respondents indicated that they would pay for health, whilst 73.0 % indicated that they could not afford it.

- HOUSING

Ten percent (10.7 %) of the respondents indicated that they would pay for housing, whilst 89.3 % indicated that they could not afford it. These statistics are illustrated below:

FIGURE 7.7 INCOME TO PAY FOR SERVICES

	Yes	No
Water	52.80	47.20
Electricity	24.20	75.80
Education	24.20	75.80
Transport	36.50	63.50
Nutrition	40.40	59.60
Health	27.00	73.00
Housing	10.70	89.30



HYPOTHESIS 1 :

There is a significant relationship between the availability of income to pay for services (water, electricity, education, transport, nutrition, health and housing) and each biographical variable (age, gender, marital status, education and income) respectively.

TABLE 7.18 Chi-square : AVAILABILITY OF INCOME FOR PAYMENT OF SERVICES AND AGE

VARIABLE	VALUE	D.F.	SIGNIFICANCE (p)
Water	2.4755	4	0.6490
Electricity	4.4147	4	0.3528
Education	7.0846	4	0.1315
Transport	1.9133	4	0.7517
Nutrition	10.3679	4	0.0347*
Health	1.3970	4	0.8447
Housing	4.5430	4	0.3375

* p < 0.05

Table 7.18 indicates that there is no significant relationship between the availability of income to pay for services (water, electricity, education, transport, health and housing) and age. However, there is a significant relationship between the availability of income to pay for services (nutrition) and age.

TABLE 7.19 Chi-square : AVAILABILITY OF INCOME FOR PAYMENT OF SERVICES AND GENDER

VARIABLE	VALUE	D.F.	SIGNIFICANCE (p)
Water	1.7276	1	0.1887
Electricity	0.0451	1	0.8317
Education	0.3203	1	0.5715
Transport	0.0768	1	0.7817
Nutrition	0.1248	1	0.7239
Health	0.5810	1	0.4459
Housing	0.7613	1	0.3829

Table 7.19 indicates that there is no significant relationship between the availability of income to pay for services (water, electricity, education, transport, nutrition, health and housing) and gender.

**TABLE 7.20 Chi-square : AVAILABILITY OF INCOME FOR
PAYMENT OF SERVICES AND MARITAL STATUS**

VARIABLE	VALUE	D.F.	SIGNIFICANCE (p)
Water	4.2450	3	0.2362
Electricity	5.2078	3	0.1572
Education	6.7336	3	0.0809
Transport	7.3722	3	0.0609
Nutrition	3.2343	3	0.3569
Health	2.4906	3	0.4770
Housing	3.1306	3	0.2655

Table 7.20 indicates that there is no significant relationship between the availability of income to pay for services (water, electricity, education, transport, nutrition, health and housing) and marital status.

**TABLE 7.21 Chi-square : AVAILABILITY OF INCOME FOR
PAYMENT OF SERVICES AND EDUCATION**

VARIABLE	VALUE	D.F.	SIGNIFICANCE (p)
Water	2.6806	2	0.2618
Electricity	0.6782	2	0.7124
Education	1.4354	2	0.4879
Transport	1.2573	2	0.5333
Nutrition	1.3864	2	0.5000
Health	0.5665	2	0.7533
Housing	0.4491	2	0.7989

Table 7.21 indicates that there is no significant relationship between the availability of income to pay for services (water, electricity, education, transport, nutrition, health and housing) and education.

TABLE 7.22 Chi-square : PAYMENT FOR SERVICES AND INCOME

VARIABLE	VALUE	D.F.	SIGNIFICANCE (p)
Water	14.2690	4	0.0065*
Electricity	45.0964	4	0.0000*
Education	16.7925	4	0.0021*
Transport	38.5294	4	0.0000*
Nutrition	4.2314	4	0.3756
Health	19.3805	4	0.0007*
Housing	19.1080	4	0.0007*

Table 7.22 indicates that there is no significant relationship between the availability of income and payment for the services relating to nutrition. However, there is a significant relationship between the availability of income and the payment of other services (water, electricity, education, transport, health and housing) respectively.

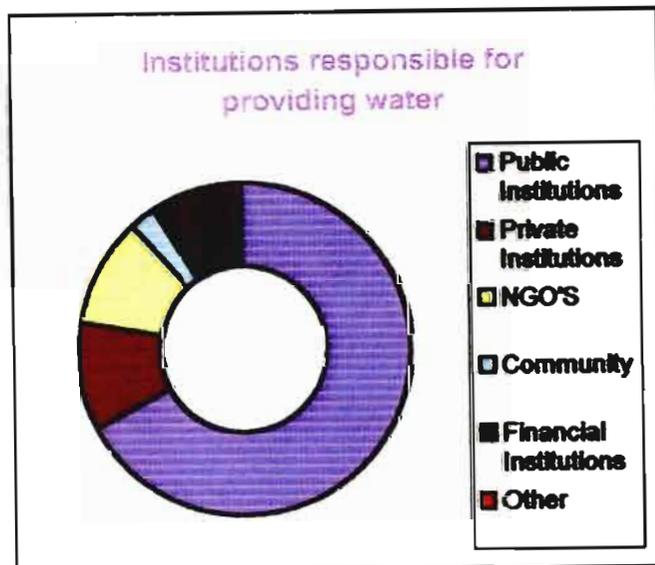
TABLE 7.23 INSTITUTIONS RESPONSIBLE FOR PROVIDING BASIC SERVICES SUCH AS WATER AND SANITATION

VARIABLE	FREQUENCY (N)	PERCENTAGE (%)
<i>Public institutions</i>	159	89.3
<i>Private institutions</i>	25	14.0
<i>Non-Governmental Organisations</i>	25	14.0
<i>Community</i>	7	3.9
<i>Financial institutions</i>	21	11.18
<i>Other</i>	1	0.6

Table 7.23 reflects that 89.3 % of the respondents believe that public institutions are responsible for the provision of basic services. These respondents also identified private institutions and non-governmental organisations (14.0 % respectively) as having a role to play in service delivery. Financial institutions (11.18 %) can assist in the provision of services through credit facilities and loans. The community (3.9 %) must take the necessary steps to make service delivery accessible to them (for example, paying for services). Some respondents indicated that international donors (0.6 %), through funding, skills transfer and qualified manpower can impact on the provision of basic services.

FIGURE 7.8 INSTITUTIONS RESPONSIBLE FOR PROVIDING WATER AND SANITATION

Public Institutions	89.30
Private Institutions	14.00
NGO'S	14.00
Community	3.90
Financial Institutions	11.18
Other	0.60



7.5.3 SERVICE DELIVERY - WATER AND SANITATION

The majority of respondents (97 %) strongly agreed that the provision of clean water and proper sanitation improves the quality of life of the community.

TABLE 7.24 PRIMARY FUNCTIONS OF WATER IN THE HOUSEHOLD

FUNCTIONS OF WATER	RESPONSE	PERCENTAGE (%)
<i>Bathing</i>	172	96.6
<i>Drinking</i>	147	82.5
<i>Washing</i>	170	95.5
<i>Cooking</i>	172	96.6
<i>Sanitation</i>	53	29.7
<i>Irrigation</i>	18	10.1
<i>Other</i>	10	5.6

With respect to the primary functions of water in the household (Table 7.24), 96.6 % of the respondents indicated that water is essential for bathing and cooking, 82.5 % emphasised that water is vital for drinking, 95.5% required water for washing, 29.7 % used water for sanitation and 10.1 % needed water for irrigation purposes. A few respondents (5.6 %) mentioned that water was also needed for cleaning.

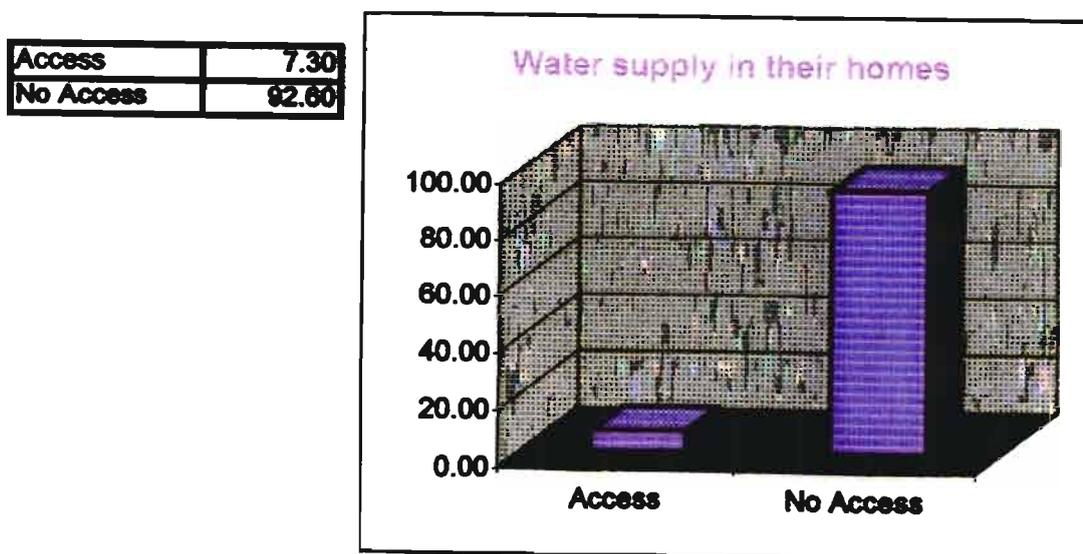
It is therefore evident that water plays a vital role in daily life. It fulfils primary and secondary needs and ultimately promotes the quality of life of people.

Access to water was recognised in the Constitution as a fundamental human right to the provision of which government committed itself.

A small percentage of respondents (7.3 %) indicated that they had access to water supply in their homes. However, the majority of respondents (92.6 %) did not have access to water supply in their homes. These people made use of communal water stands, water from boreholes, rivers and streams. Some people collected rain water in drums and other containers. These water collection methods are not the safest or healthiest.

Others purchased water from nearby homes, businesses and garages. This was a tedious, time consuming and expensive task.

FIGURE 7.9 WATER SUPPLY IN THEIR HOMES



According to the Human Science Research Council Survey (December 1998), some 35 % South Africans felt that the provision of running water had improved in the areas compared to 14 % who felt that this had worsened since 1994. The percentage of those perceiving improvement increased from 25 % in February 1998 to 35 % in December 1998. These figures suggest that the delivery of running water was extended to a substantial proportion of the population during the period February and December 1998. During the same period, the number of people who had indicated worsening of delivery of running water declined from 24 % to 14 %.

Analysis of the Human Science Research Council Survey (December 1998) results suggests that perceptions of the delivery of running water differ by race. For instance, the desegregation of the data by race reveal that about half (47 %) of Blacks feel that there has been an improvement in the delivery of running water compared to 15 % who feel the situation has worsened. The proportion of Blacks indicating improvement increased from 31 % in February to 47 % in December 1998. In contrast, Blacks indicating worsening of situation declined from 31 % to 15 % in the same period.

The percentage of Whites who felt that water provision had improved increased only marginally from 5 % to 7 % in the same period. These figures are not surprising as the majority of Whites had access to water prior to the 1994 elections. Those Whites indicating worsening situation increased from 3 % in February to 10 % in December 1998. What emerges from this is that the perceptions of Whites on the provision of service delivery has worsened. These results suggest that access to running water has improved in general, but more so on the part of those who were historically disenfranchised and did not have access to running water during the apartheid period. The generally better off White population would be comparing the already high standard of water delivery to which it had access prior to the commencement of the transformation in 1994, with a substantially similar standard five years later.

According to the Development Bank of Southern Africa (1998 : 30) infrastructure and service backlogs exist in most sectors and the distribution of infrastructure services is very unequal. Whereas the richer part of the population generally enjoys relatively higher standards of services, many people, especially rural women and the majority of Blacks, lack the basic ones. The number of South Africans with access to water amounts to 22 980 000 or (59% of the population) while 18 162 000 (or 47% of the population have access to sanitation).

TABLE 7.25 QUANTITY OF WATER REQUIRED PER DAY

QUANTITY OF WATER REQUIRED PER DAY	PERCENTAGE
0 - 100 litres	48 %
101 - 200 litres	29 %
201 - 300 litres	1.3 %
301 - 400 litres	2.8 %
401 - 500 litres	10 %
Over 500 litres	8.9 %

Table 7.25 reveals that 48 % of the respondents required between 0 - 100 litres of water per day, 29 % required between 101 - 200 litres of water per day, 1.3 % required between 201 - 300 litres of water per day, 2.8 % required between 301 - 400 litres of water per day, 10 % required between 401 - 500 litres of water per day and 8.9 % required over 500 litres of water per day. The quantity of water required per household varies according to its usage.

TABLE 7.26 PERCEPTIONS REGARDING THE PRICE OF WATER

VARIABLE	FREQUENCY (N)	PERCENTAGE (%)
<i>Too High</i>	67	37.6
<i>High</i>	46	25.8
<i>Neither High nor Low</i>	43	24.2
<i>Low</i>	7	3.9
<i>Too Low</i>	15	8.4

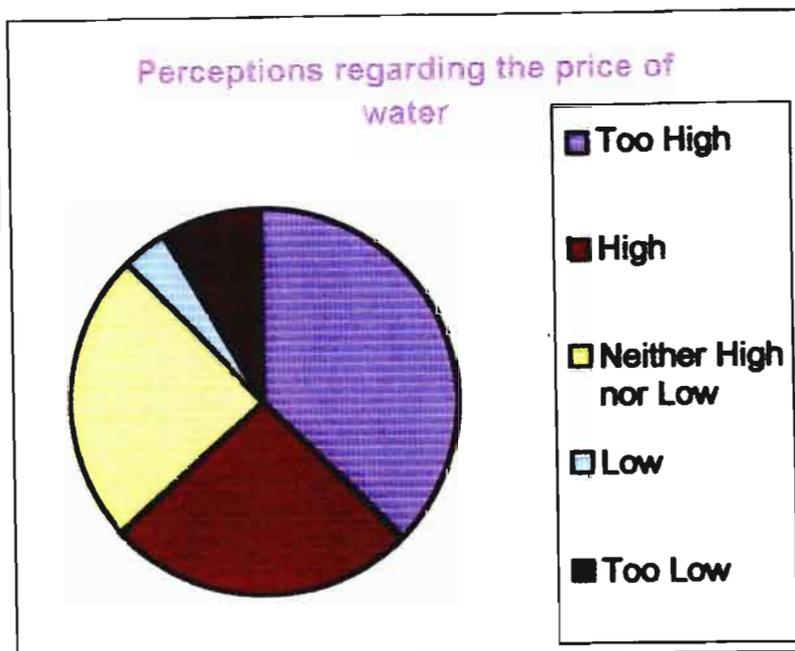
With regards to the price of water (Table 7.26), 37.6 % of the respondents believed that the price of water was too high, 25.8 % believed that the price of water was high, 24.2 % believed that the price of water was neither high nor low, while 3.9 % believed that the price of water was low and 8.4 % believed that the price of water was too low.

These viewpoints can be attributed to the different levels of income in the various households. Some households are able to pay whilst others cannot afford to.

Some argue that water is a basic need and thus, is an essential component of life. They are therefore, willing to pay for it whilst others do not view water in this manner.

FIGURE 7.10 PERCEPTIONS REGARDING THE PRICE OF WATER

Too High	37.6
High	25.8
Neither High nor Low	24.2
Low	3.9
Too Low	8.4



HYPOTHESIS 2:

There is a significant difference amongst respondents differing in biographical data (gender, age, marital status, education, occupation and income) regarding their attitude to the price of water.

TABLE 7.27 t-test : ATTITUDE TO PRICE OF WATER

VARIABLE	t	p
Gender	4.221	0.041*

* p < 0.05

Table 7.27 indicates that males and females differ in their attitude to the price of water.

TABLE 7.28 ANALYSIS OF VARIANCE : ATTITUDE TO PRICE OF WATER

VARIABLE	N	p
Age	0.525	0.717
Marital Status	0.312	0.817
Education	1.845	0.161
Occupation	1.748	0.200
Income	2.145	0.077

Table 7.28 reflects that there is no significant difference in the attitudes of respondents varying in age, marital status, education, occupation and income respectively regarding the price of water.

HYPOTHESIS 3 :

There is a significant relationship between the prices of services (electricity and water) and the ability of the residents to pay for these services.

TABLE 7.29 CHI-SQUARE : PRICE - ABILITY TO PAY FOR THE SERVICE

<i>SERVICE PROVIDED</i>	<i>VALUE</i>	<i>D.F.</i>	<i>SIGNIFICANCE (p)</i>
<i>Water</i>	<i>16.5987</i>	<i>4</i>	<i>0.0023*</i>
<i>Electricity</i>	<i>6.8211</i>	<i>3</i>	<i>0.0778</i>

* $p < 0.05$

Table 7.29 indicates that there is no significant relationship between the price of electricity and the ability to pay for the service. However, there is a significant relationship between the price of water and the ability to pay for the service.

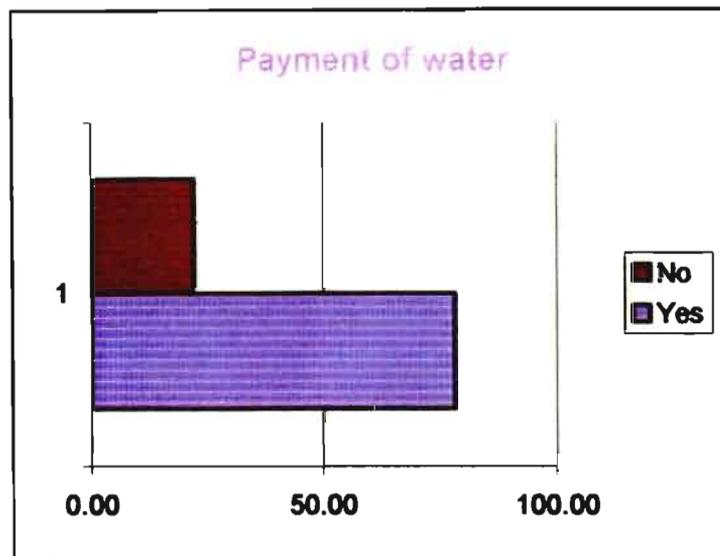
TABLE 7.30 PAYMENT OF WATER

<i>RESPONSE</i>	<i>FREQUENCY (N)</i>	<i>PERCENTAGE (%)</i>
<i>Yes</i>	<i>139</i>	<i>78.1</i>
<i>No</i>	<i>39</i>	<i>21.9</i>

Table 7.30 illustrates that the majority of respondents (78.1 %) were prepared to pay for water whilst 21.9 % indicated that they could not afford to pay.

FIGURE 7.11 PAYMENT OF WATER

Yes	78.10
No	21.90



With regards to sanitation systems, none of the respondents indicated that they had flush inside systems, 0.08 % indicated that they had flush outside systems, whilst the majority of respondents (78 %) indicated that they made use of pit or bucket systems. A further 21.92 % indicated that they used the bush. The majority of respondents (84 %) believed that their sanitation system was unacceptable while 16 % believed that it was acceptable.

The respondents indicated that they would like to see the following developments/improvements in their sanitation systems :-

- the local community should form a committee that will lobby government to upgrade existing sanitation systems;
- the people should not rely solely on government to provide sanitation services. Instead, local people must hold a charity function to raise funds to build proper toilets;
- the government has a moral obligation to provide squatter settlements with flushable toilets;
- there must be toilet inspectors to ensure hygiene; and
- if there are improvements in the provision of sanitation systems, many people would not be in a position to pay for them.

The majority of respondents (87 %) agreed that people often become ill in their areas, while 13 % believed that people did not become ill in their areas.

Reasons for their illnesses were cited as follows:

- unclean water;
- poor sanitation;
- lack of basic health services;
- malnutrition; and
- poverty.

Common illnesses included the following:

- cholera;
- tuberculosis;
- common cold / flu;
- scabies; and
- aids.

7.5.4 ROLE OF LOCAL GOVERNMENT IN SERVICE DELIVERY

The impact of local government in service delivery would be presented under the following sub-headings:

- PERFORMANCE OF LOCAL GOVERNMENT

The majority of respondents (59.6 %) believed that local government is there to serve the interests and needs of the local people.

They further agreed (46 %) that local government is efficient and effective in delivering services, such as, water and electricity to the local people.

However, 34.3 % disagreed that local government is doing its best to provide basic services such as water and electricity to the people.

- PAYMENT OF SERVICES

The majority of respondents (47.2 %) agreed that people should pay for services rendered by the local authorities. In addition, the respondents (37.6 %) agreed that local authorities do not want to upgrade services because people refuse to pay for them.

Furthermore, 46.6 % of the respondents agreed that the municipality should assist those people who cannot afford to pay for essential services.

- COMMUNITY PARTICIPATION

Some of the respondents (32 %) agree that there are opportunities for the local people to participate in local government matters affecting them.

In addition, the majority of respondents (52.2 %) agreed that the local authority should encourage community participation and involvement in rendering basic services.

Furthermore, some respondents (38.2 %) agreed that there is constant contact between the councillor in charge the area and the local community.

The following channels have been identified by the community as a means to inform the local authority of their needs, wants and desires:-

- through meetings between the local councillor and the community;
- through the induna;
- there is a community representative that informs the councillor of our needs, wants and desires;
- we contact the local authorities personally;
- local authorities work in isolation - they do things on their own without our input;
- the local people should have their announcements placed in nearby shops where the local authorities can be informed of our needs;
- we do not meet with the councillor because we do not know him/her; and
- we do not meet with the local authorities because they insist we pay for services.

Some respondents did not know the channel of communication between the people and the local authority.

The respondents (43.8 %) agreed that the local authority can learn from people's experiences and knowledge.

- PRIVATE SECTOR

The respondents (30.9 %) agreed that the private sector should play an important role in assisting local authorities in providing basic services to the community.

The respondents (41.6 %) agreed that the private sector is equipped to deal with the basic needs of the people while 42.7 % agreed that the private sector would be more efficient and effective in rendering basic services to the local people.

7.5.5 RECONSTRUCTION AND DEVELOPMENT PROGRAMME

Many respondents (32.5 %) did not have any understanding of the Reconstruction and Development Programme. However 25.2 % of the respondents indicated that it meant delivery of services to the historically disadvantaged people and impoverished communities.

Others cited the following:-

- a failed government policy;
- African National Congress tool to get votes;
- programme to level the imbalances of the past;
- instrument of government to assist the poor;
- policy directed at black empowerment;

- plan to improve the living standards of people; and
- a document to bring equality and job creation.

TABLE 7.31 IMPLEMENTATION OF RDP PROJECTS

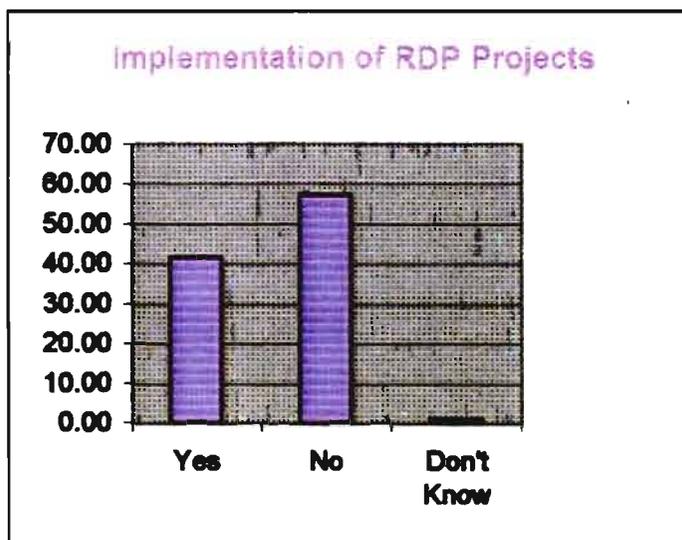
<i>RESPONSE</i>	<i>FREQUENCY (N)</i>	<i>PERCENTAGE (%)</i>
<i>Yes</i>	<i>74</i>	<i>41.6</i>
<i>No</i>	<i>102</i>	<i>57.3</i>
<i>Don't know</i>	<i>2</i>	<i>1.1</i>

Table 7.31 shows that 41.6 % of the respondents indicated that RDP projects have been implemented in their areas, while 57.3 % indicated that RDP project have not been implemented in their areas and 1.1 % did not know.

As at September 1997, 1020 water supply projects had been identified, were under way or had been completed. These would provide some 8.9 million people with access to water supply and 100 000 people to adequate sanitation. By the end of October 1997 the water supply programme had provided water supply and sanitation to about 1.2 million people (Race Relations Survey 1998 : 329)

FIGURE 7.12 IMPLEMENTATION OF RDP PROJECTS

Yes	41.60
No	57.30
Don't Know	1.10



Many projects were required by the community. These include:-

- housing;
- hospitals;
- electricity;
- schools;
- transport;
- water; and
- sanitation.

Some respondents (18 %) did not have any expectations of the RDP, while others believed that the RDP was too slow and ineffective in addressing the needs of the poor (26%). Others were hopeful that the RDP would bring jobs, housing, schools, clinics, water and sanitation (48%). Yet others believed that the RDP was a policy of empty promises during the elections (8%).

- SUCCESSES OF RDP

The successes of the RDP in relation to the provision of water has been cited as follows:

- toilets have been provided;
- a dam was built;
- the card system has been installed; and
- water is accessible to anyone provided they pay for the service.

However, 61 % of the respondents did not believe that there were any successes. They believed that their standard of living has been the same despite the new democratically elected government.

FAILURES OF RDP

The failures of the RDP in relation to the provision of water has been cited as follows:

- the government did not honour its promises;
- RDP projects are not directed to the poor;
- the implementation of RDP projects are too slow;
- poor delivery of services; and
- price of water is escalating in light of the high unemployment rate.

Many respondents (30.5 %) believed that the RDP is a total failure.

Khosa (1999 : 143) presents some RDP funding recommendations:

- There is a need for clear criteria in the allocation of RDP discretionary funds. The objectives of the RDP should be articulated in an unambiguous manner;
- In KwaZulu Natal, it appears that poverty is concentrated in some geographical areas. A most useful mechanism to alleviate poverty is to target those magisterial districts which are poverty stricken;

- It is important to link RDP discretionary funds with other provincial and national programmes. This could avoid duplication in the use of resources and expertise; and

- The sustainability of projects is critical. One of the most effective ways to ensure that the projects do not collapse in the long run is to introduce institutional aftercare. There are a number of institutions which could assist the RDP discretionary fund projects.

7.6 SUMMARY

In this chapter the presentation and analysis of results was described and interpreted against the background of the questions raised in Chapter one.

The findings arising from the empirical evidence, has been contextualised within the broader framework of the study. The analyses of the data under the relevant themes gave an integrated and holistic overview of the study as a whole.

A detailed summary of the research report is contained in Chapter eight.

CHAPTER EIGHT

CONCLUSION AND RECOMMENDATIONS

8.1 INTRODUCTION

The research seeks to build a conceptual framework that can help to guide the process of urbanisation and its impact on water delivery. This framework emphasises looking beyond local governments themselves as the cause of poor performance and seeks to highlight the range of incentives that may determine the quality and responsiveness of local services.

In order to meet the objectives of this investigation a literature study was undertaken. Salient themes regarding urbanisation and service delivery were located in existing public administration texts, in management theories and in urban geographical research studies.

The aims of the study, as discussed in Chapter one were to ascertain:

- (1) What does the term "urbanisation" mean in the South African context ?

- (2) How does the provision of water improve the quality of life of the community ?
- (3) Is it possible for a local authority to finance basic services such as water provision with a culture of non-payment for the service ?
- (4) Can a local authority fund the provision of water to the magnitude that is required without the assistance of other spheres of government ?
- (5) What role can the private sector play in providing water to the people ?
- (6) Should privatisation be encouraged as a development strategy to alleviate the water shortages ?
- (7) How can the Reconstruction and Development Programme influence the provision of water to disadvantaged people at the local authority sphere ?

Information was obtained with regard to all of the above mentioned aims via the preceding chapters:

Definitions of key terms was proposed in Chapter one. This gave effect to the context in which urbanisation and service delivery was discussed throughout the course of the

study.

Chapter two provided an insight into the concept of local government and the legislative framework governing it. An attempt was made to trace the historical development of local government in South Africa and the restructuring process was highlighted. The relationship between the different spheres were also analysed. The role of local government in service delivery was outlined and an evaluation of the capacity of local government to meet basic demands amidst financial constraints were presented.

In Chapter three, urbanisation as a continuous and complex process was analysed. It was highlighted that the lack of urban infrastructure, facilities and services exacerbate the living conditions of many dwellers commensurate a lagging and declining economic climate. Global trends in urbanisation was used as a basis for comparison between first and third world countries. An effort was made to reach an appropriate comprehension of urbanisation strategy in South Africa.

Chapter four provided an in-depth description of the inequalities prevalent in the water sector in South Africa. The institutional, legislative and financial implications of water delivery was reviewed. The benefits of an adequate water supply and its implications for health,

hygiene and the environment was discussed. Attention also focused on the impact of water provision on sanitation services. It was affirmed that a culture for the payment of services and community participation was key ingredients to ensure the success of water provision.

Chapter five examined the role of the private sector as a key roleplayer in service delivery. Various definitions of privatisation was offered and the different forms of privatisation were explained. An exposition of the outcomes in Guinea and Buenos Aires provided useful lessons for South Africa's privatisation programmes. Principles for the effective implementation of privatisation was also offered.

Chapter six related the empirical study that was undertaken in order to determine the knowledge and attitudes of senior officials in public institutions and residents of selected informal settlements with regard to urbanisation and its impact on water. This research revolved around the backdrop of questions that were posed in Chapter one.

In Chapter seven data was processed, measured and presented by using structured questionnaires and various statistical analyses.

This chapter will draw conclusions from the themes which emerge from the literature study and finally, appropriate and relevant recommendations will be discussed.

8.2 THE LITERATURE STUDY

The broader issues covered in the literature study are summarised through the use of the following themes:

- Urbanisation;
- Role of Local Government in Service Delivery; and
- Water Provision.

These aspects will be deliberated upon.

- URBANISATION

It was found that urbanisation is proceeding rapidly and this process will continue for several decades. The phenomena of urbanisation vary markedly from country to country and from place to place. Internal growth is an important factor in the growing size of urban settlements. Migration from rural to urban regions is also an important factor.

Ample evidence shows that urban populations will continue to grow and the shifting incidence of poverty will increase the needs of poor households concentrated in cities at a rate that will far outpace the capacity of governments to adequately extend the coverage of basic services.

Cities will continue to play an important role because they are engines of growth and a mecca for commercial activities. Research shows that employment opportunities and enhanced service delivery in urban areas are two of the factors that attract people to the cities.

The study highlights that the steady stream of new arrivals in cities present formidable challenges to urban local governments to deliver amidst socio-economic constraints.

The literature shows that the policy of separate development impacted on the flow of people to urban areas in South Africa. This resulted in unbalanced and uneven urbanisation patterns among the different race groups. A large percentage of Whites lived in well serviced urban areas, whilst the majority of Black people lived in under-serviced remote regions in rural areas.

During the mid-1980s and early 1990s large numbers of people moved to urban areas in search of a better life. They exerted pressure on existing municipal infrastructure

and services. It was found that the local authorities were not in a position to deliver services in the required amounts to these new arrivals. Squatting and informal settlements became the order of the day. Today, a large percentage of urban residents do not have potable water near their homes, basic sanitation is often lacking and access to other basic services such as health and education pose serious problems.

- ROLE OF LOCAL GOVERNMENT IN SERVICE DELIVERY

It was found that local authorities in urban areas are the natural custodians of the urban sphere. Their activities, more than those of other governments, address the distinctive features of urban settlements: planning, providing housing, water, parks and a range of social and community services.

It is critical that local authorities are therefore recognised as legitimate and fundamental actors in the quest for urban development and effective service delivery.

It has, however, been argued that local governments lack adequate administrative and technical capacity to plan, finance and carry out greatly expanded service delivery programmes. In light thereof, local governments:

- depend heavily on the centre for funds both to construct and to maintain local facilities;
- have poorly trained officials;
- lack adequate legal authority to raise revenue from new sources;
- spend their budget resources without proper controls and constraints; and
- lack control over many types of urban services and facilities that are under the jurisdiction of provincial or central agencies.

Limited financial resources will make it difficult for municipal governments to extend needed services rapidly. In many cases, the resources devoted to urban services are substantial but used inefficiently.

- WATER DELIVERY

The data shows that the challenges which the government faces are multi-faceted, as potable water supplies in this country are entangled in socio-political complexities, compounded by the volume of a backlog which must be addressed within a rapidly changing environment.

In this study, the provision of water highlights the plight of the "have-nots" who, in the past, were not prioritised by authorities for the installation of public utilities.

It was found that there are acute deficiencies in amounts and quality of water available, especially, to the poor.

The research shows that it is the poor that acknowledge the value of water in daily life. Lack of access to water impairs their health, impacts on their quality of life, lower their productivity and degradate their environment. Ironically, water is also being polluted by the very same people who need it most.

A significant finding is that it is difficult for government alone to provide water to millions of South Africans. This mammoth task necessitates the support of the private sector, non-governmental organisations as well as multinational corporations such as the World Bank, European Union, European Bank for Reconstruction and Development and African Development Bank. However, government must be cautious of conditionalities that are attached to such aid.

Water agencies in South Africa must strengthen the institutional and legislative framework to identify and prepare high priority investment projects. Bureaucratic overlaps, delays and inconsistencies must be reduced.

Water agencies must promote community led water projects, especially in informal settlements and shanty towns. Commitment, local capacity building and a sense of ownership and belonging should permeate development projects.

It is important for South Africa to work closely with its neighbours in support of a co-ordinated approach to deliver water to its people. Coupled with water, it was found that there is a dire need for the provision of other basic services such as health, housing, employment and education.

The following principles guide the provision of water in South Africa:

- Consultation: users and consumers of public services are entitled to be consulted about the level and quantity of services they receive.

- Service Standards: users and consumers of public services are entitled to be told what level and quality of service they can expect to receive.

- Courtesy: users and consumers of public services are entitled to be treated with courtesy and consideration.

- Information: users and consumers of public services are entitled to expect full, accurate information about the services for which they are eligible.

- Openness and Transparency: the public are entitled to know how public sector organisations are run, how much they cost, and who is in charge.

- Responsiveness: users and consumers of public services are entitled to expect that, when the promised standard of service is not delivered, they will be offered an apology, a full explanation and a speedy and effective remedy. Any complaint will produce a sympathetic and positive response.

- Value for money: the public are entitled to expect that public services will be provided as economically and efficiently as possible.

8.3 RECOMMENDATIONS

Recommendations will be discussed under two sub-headings:

- recommendations based on the methodology of the study; and
- recommendations based on the results of the study.

8.3.1 RECOMMENDATIONS BASED ON THE METHODOLOGY OF THE STUDY

The following recommendations are proposed:

8.3.1.1 FURTHER RESEARCH AND STUDIES

It is recommended that further research and studies be undertaken to assess the impact of urbanisation on municipal service delivery with particular emphasis on the provision of water in the Durban Metropolitan Region. Results of these studies need to be integrated with the authors findings.

8.3.1.2 GEOGRAPHICAL LIMITATION

The study be replicated to other informal settlements in the Durban Metropolitan Region. It would also be useful to simultaneously assess the needs and conditions of people in rural areas.

8.3.1.3 TIME FRAME

Interviews and questionnaires were conducted in 1998. Subsequent research needs to be undertaken in light of the implementation of RDP Projects in various informal settlements in KwaZulu Natal. The aim of this exercise would be to determine whether perceptions regarding service

delivery is static or has changed.

8.3.2 RECOMMENDATIONS BASED ON THE RESULTS OF THE STUDY

The following recommendations are offered:

8.3.2.1 NATIONAL COMMISSION ON URBANISATION DEVELOPMENT

It is recommended that a national commission on urbanisation development be created:

- this commission can be used as an advisory body so that the government can make informed decisions about urban management and development;
- the composition of this commission should comprise representatives from central, provincial and local spheres of government. The powers, functions and scope must be set out explicitly by the government of the day; and
- the commission must work jointly with universities, research institutes and planning departments of public institutions in an attempt to carefully manage urbanisation and its impact on service delivery.

8.3.2.2 ROLE OF CENTRAL GOVERNMENT IN THE PROVISION OF SERVICES

It is critical for central government in South Africa to play a crucial role in service delivery. In this regard, they are obliged to inter alia :

- Strengthen the authority of municipal governments to raise adequate revenues to meet rising urban service needs by:
 - * expand taxing and revenue-raising authority for the larger cities;
 - * create special funds for urban development that can be replenished from national revenue sources such as customs, excise or import taxes that are set aside from line agency budgets; and
 - * provide statutory payments to local governments from fixed percentages of recurrent revenues of central government agencies for state or provincial government budgets as grants, therefore giving local administrations more flexibility to meet local needs and demands.

- Central government must also provide technical assistance and training to local officials in improving tax administration and collection procedures and increasing revenues from existing sources by:
 - * allowing local governments to draw loans from national development banks or credit authorities to provide services and facilities for which users can be charged and which generate revenue that can be used to repay the loans; and
 - * giving local governments more flexibility to spend their revenues to meet local needs and demands, without overly constraining rules and regulations that prevent or inhibit them from using the resources available to them.

8.3.2.3 IMPROVEMENTS IN LOCAL GOVERNMENT PERFORMANCE

It is important to recognise the fundamental role of local government in service delivery. However, this role is almost meaningless unless they have the capacity to act effectively. It is recommended that:

- local authorities must be entrusted with decentralisation of power, autonomy, appropriate geographical boundaries and adequate resources commensurate with their mandates. This can be achieved if provincial authorities and

central government commit themselves to capital injections, legislative and other institutional support. What is also needed is a realistic appraisal of resource levels and needs, deliberate strategies to increase resource availability and informed choices with respect to the most efficient way of deploying scarce resources.

- financial management principles and procedures must be improved. In view thereof, the appointment of financial management experts is essential to draw up strategic business plans, manage, monitor, check and control budgets, encourage proper record-keeping in an attempt to stamp out corruption, improve tax collection, establish new sources of revenue and advise local government on investment opportunities and other income generation activities. Criteria must also be defined by which to assess whether institutional arrangements, policies and techniques have achieved these goals.

- an important element of good governance is a recognition by local authorities that they have to act in partnership. In this regard, the involvement and participation of all stakeholders, namely, the community, private sector, non-governmental organisations and community based organisations in service delivery is inevitable. It is vital therefore to define the appropriate roles for the private sector, government and voluntary sector.

- an essential ingredient in improving the performance of local government is the motivation of employees. It is increasingly recognised that the system of formal and informal rewards and sanctions that affect those involved in urban service delivery is an important determinant of performance. Therefore salaries and benefits given to employees must be competitive and market - related. Conditions of service must provide for career advancement and where deficiencies are apparent, training programmes must be provided.

- administrative structures and practices should be designed according to the services to be provided and the policies to be implemented. The structure should also allow proper evaluation of employee performance in relation to policies and standards.

- clarity in responsibility to provide services is important. A clear linkage between a particular sphere of government and a specific service (such as water) is crucial if constituents are to hold that sphere of government accountable for providing water services efficiently and effectively.

8.3.2.4 LOCAL ECONOMIC DEVELOPMENT (LED)

Local governments face critical financial problems and will have to find new financing strategies together with the provincial authorities and national government.

There should be an increased emphasis on local and regional economic strategies as South African cities try to alleviate the high levels of unemployment and poverty in the country. The strategies can include promotion of small, medium and micro-enterprises (SMMEs), encouraging public-private partner-ships, promoting tourism, fostering an entrepreneurial culture, promoting spatial development initiatives and creating conditions to attract investment.

LED should be about creating quality jobs, improving living standards and increasing the capacity of a community to become economically self-sufficient. This can be done by implementing linkage policies which guarantees that benefits are channelled directly to the disadvantaged communities.

The key policy requirements for LED , if it is to succeed, are:

- LED policy must acknowledge and encourage the participation of a wide range of actors in the local economy. Current policy stresses the role of local government. The place and functions of the private sector, NGOs, CBOs, unions and partnerships between key stakeholders must be properly acknowledged and encouraged;
- A LED fund is necessary to "kickstart" development at the local level. In other countries, tax rebates and start-up and training funds are available to either local governments or agencies active in the local development field; and
- The establishment of a formalised LED structure such as a LED Institute may go a long way to broadening the potential and scope of LED activities.

8.3.2.5 BUILDING RESPONSIVE AND FLEXIBLE ORGANISATIONS

Service rendering institutions need to underpin efforts to build more responsive and flexible institutions with new administrative and management processes. These institutions need to affirm their belief in the equality of all human beings and its opposition to any form of discrimination in service delivery.

8.3.2.6 PUBLIC-PRIVATE PARTICIPATION IN SERVICE DELIVERY

The success of the poor can often be increased and the cost of extending services for municipal governments can be reduced if service delivery programmes are designed to create opportunities for participation by the private sector.

The involvement of the private sector can help to improve performance in the delivery of a variety of municipal services. Governments should actively seek out the opportunities for mobilising private sector expertise and finance. Enhanced private sector involvement in the delivery of infrastructure services are highly relevant and complementary to reforms in service delivery.

The following principles are important:

- the engagement of the private sector does not relieve the public authority of responsibility for service provision. The public authority will remain the main regulator of the service and monitor it closely;
- the private organisation must be accountable to the people being served. Mechanisms must be in place to ensure and enhance accountability;

- services must be provided in a sustainable manner and extended to all sectors of the population. The revenue obtained must allow for the continued operation and maintenance of the service at an agreed upon level and standard;
- services must be extended as fast as possible to historically disadvantaged sectors of the population. These services must also be affordable. Affordability can be achieved through multi-level tariffs which will allow for cross-subsidisation from higher income areas to lower income ones;
- services must be provided without causing degradation of the environment;
- displacement of employees should be addressed and minimised. Employees could be offered severance packages, given new opportunities or worker retraining and placement in other jobs;
- the privatisation process must be an open and transparent one. This builds confidence and trust amongst the people;

- competition is the driving force behind reasonable costs and good service. However, an agency must not lose sight of the basic principle in service delivery i.e. to cater for the low income earners as well;
- performance of service providers must be monitored. Standards must also be defined and monitored; and
- service providers must respond to the needs of customers and stakeholders must participate in decision-making.

8.3.2.7 ROLE OF NON-GOVERNMENTAL ORGANISATIONS AND COMMUNITY GROUPS IN SERVICE DELIVERY

The access of the poor to urban services can be extended most effectively by public policies that promote co-operation through non-governmental and community organisations.

NGOs have a role to play in expressing community needs, fostering community organisations, in acting as catalysts for action and change and in acting as intermediaries. They may, in certain circumstances, become involved in direct service provision or project implementation instead of, or in addition to the public sector. However, their potential must be realistic - a supportive public sector is still necessary for the successful functioning of many

community projects. Their role should be seen as complementary rather than a substitution for public service delivery.

Therefore national and municipal governments should encourage administrative practices and organisational arrangements that allow voluntary and community groups to participate effectively in improving services, especially in poorer neighbourhoods.

8.3.2.8 REVITALISING THE MASAKHANE CAMPAIGN

South Africa is not unique in having to resolve payment problems for services. Most of the South African end-users are responsible citizens. What is needed is to fully rehabilitate payment for the services through the following ways:

- service-rendering institution must provide quality services and function as a business entity;
- they must be responsive and sensitive to people's needs and queries by adhering to a "customer satisfaction approach";

- tariff policies must remain affordable and at the same time ensure the economic sustainability of the service itself. A mixed tariff structure covering social realities and economics has to be implemented;

- effective communication between the service rendering institution and the client is necessary. In this regard, vigorous campaigns must be undertaken to inform people of the need to pay for services and share information about the functioning of a service rendering institution;

- institutions of higher learning can also participate in revitalising the Masakhane Campaign. This can be achieved by running training programmes for community leaders on financial administration with emphasis on the payment for services, dynamics of local government and administration and other related themes. These leaders would share the information with their communities and the information can be filtered down to grassroots levels.

The initiation, development and implementation of these recommendations will undoubtedly serve the interests of all people in South Africa.

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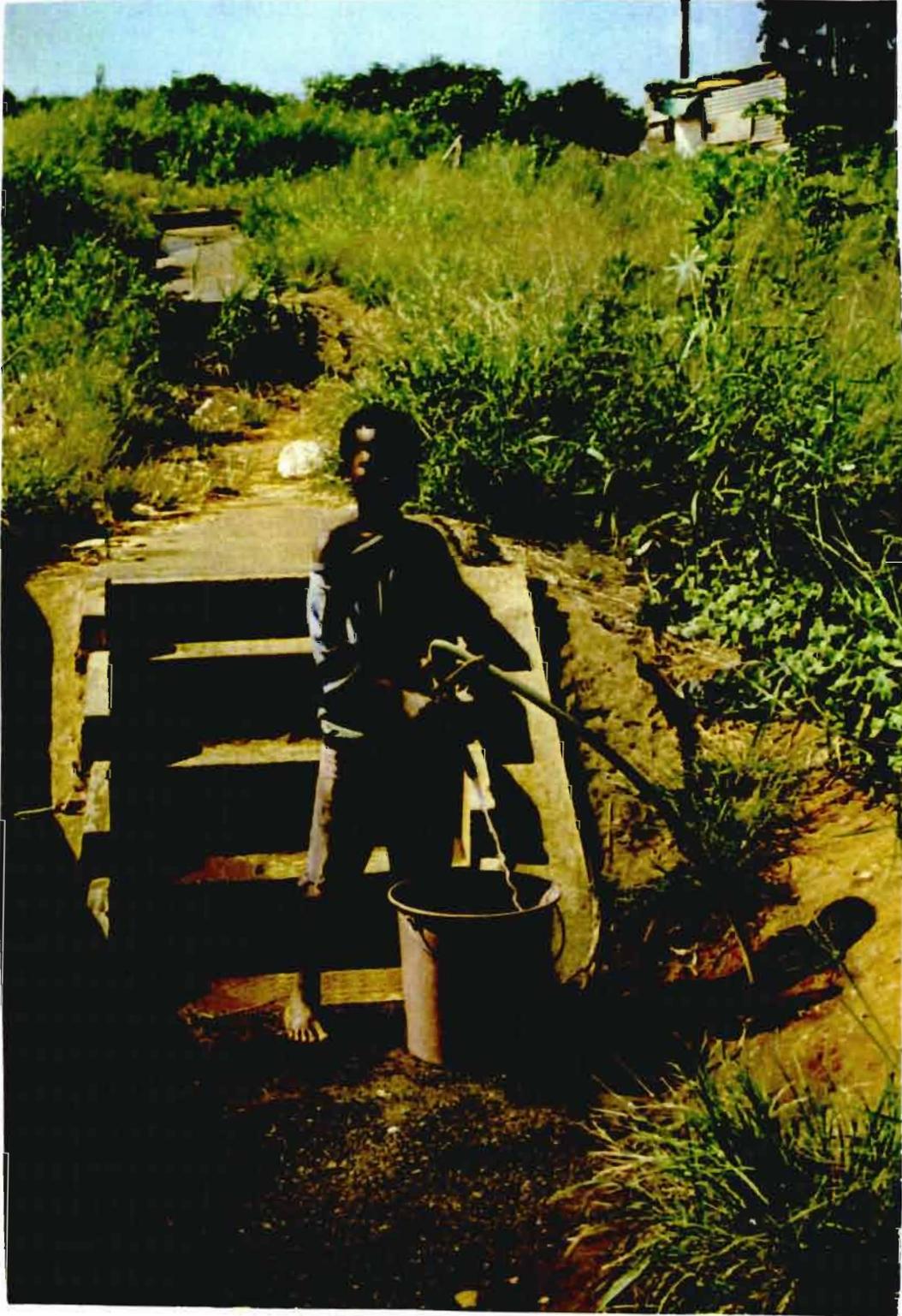
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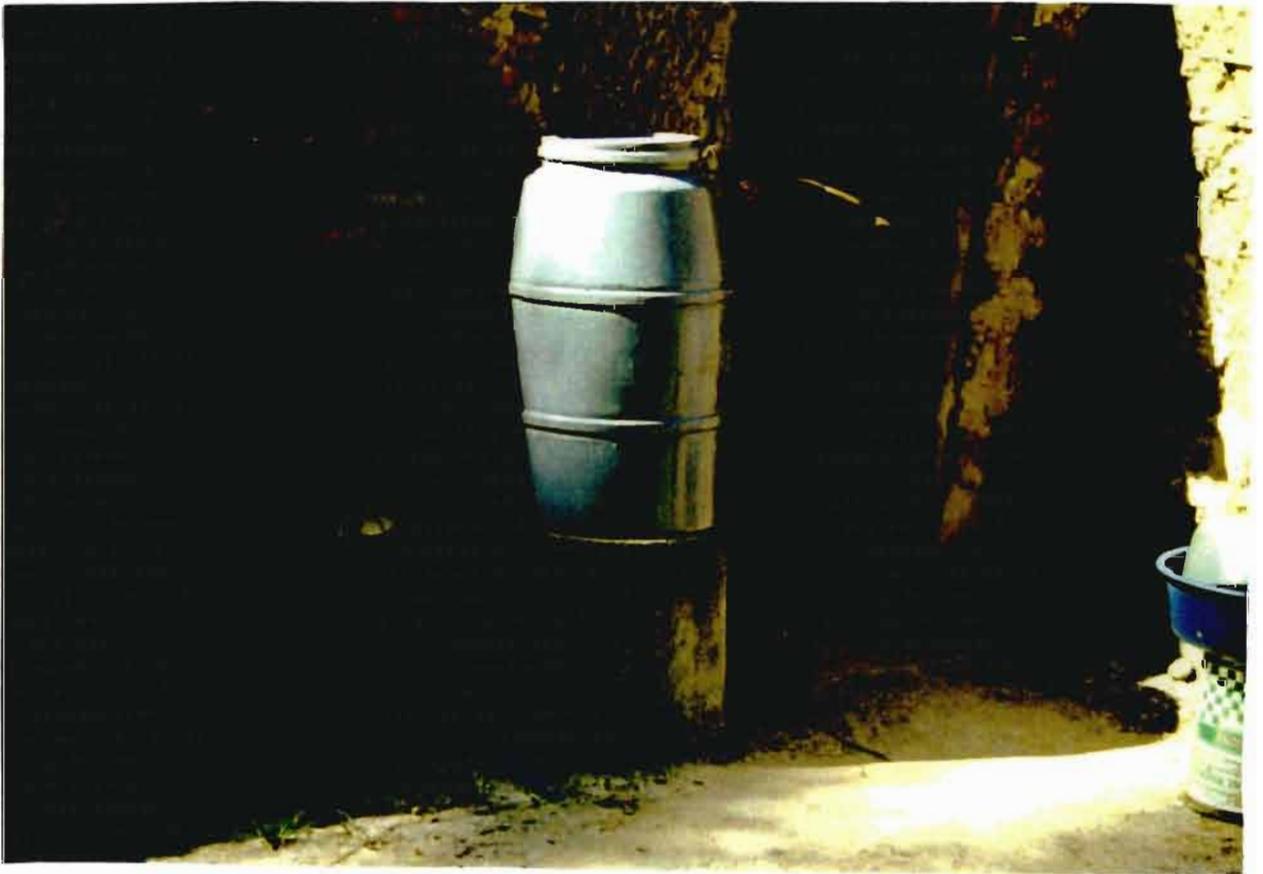
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APPENDICES

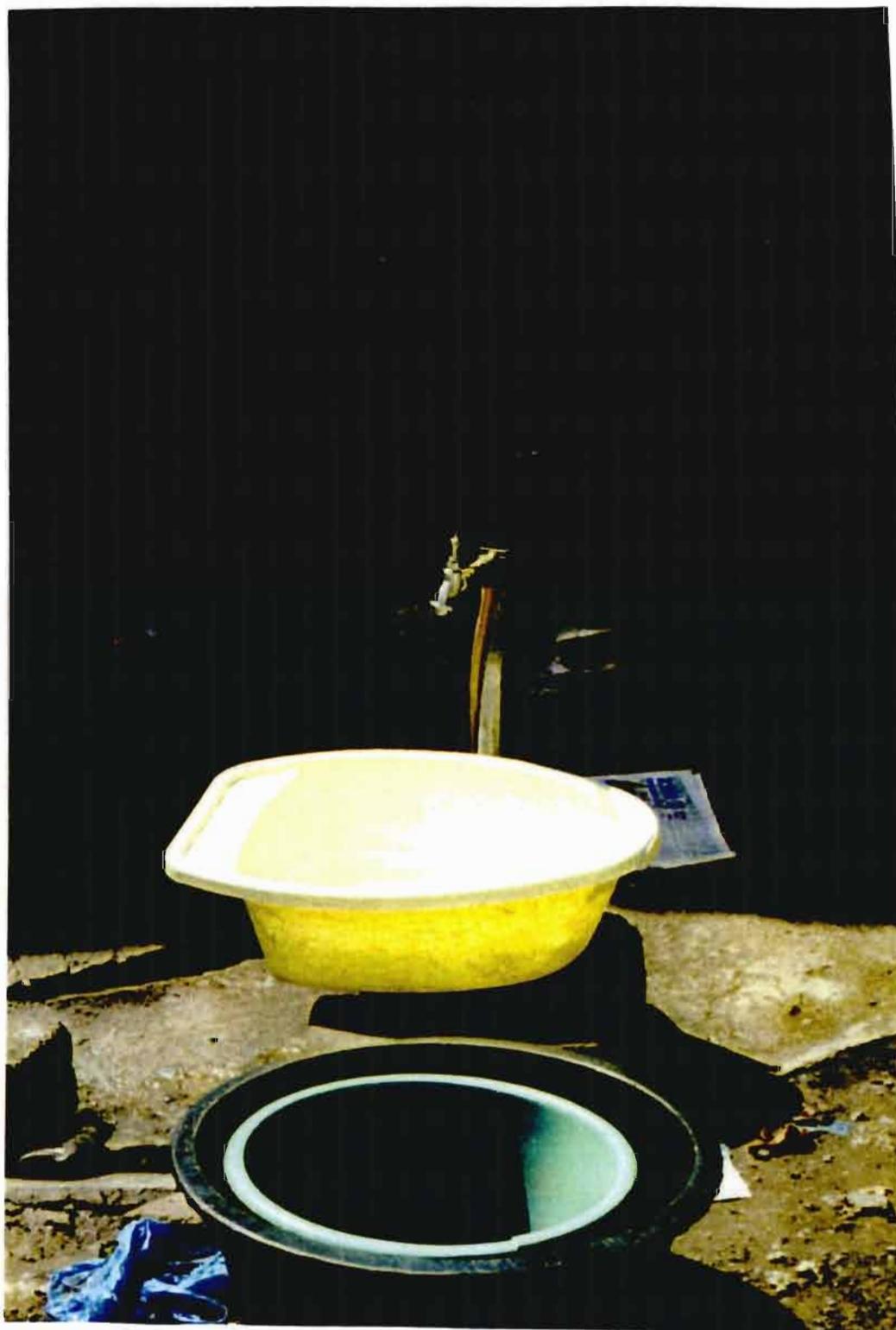
APPENDIX ONE: COMMUNAL STANDPIPE



APPENDIX TWO: YARD TANK



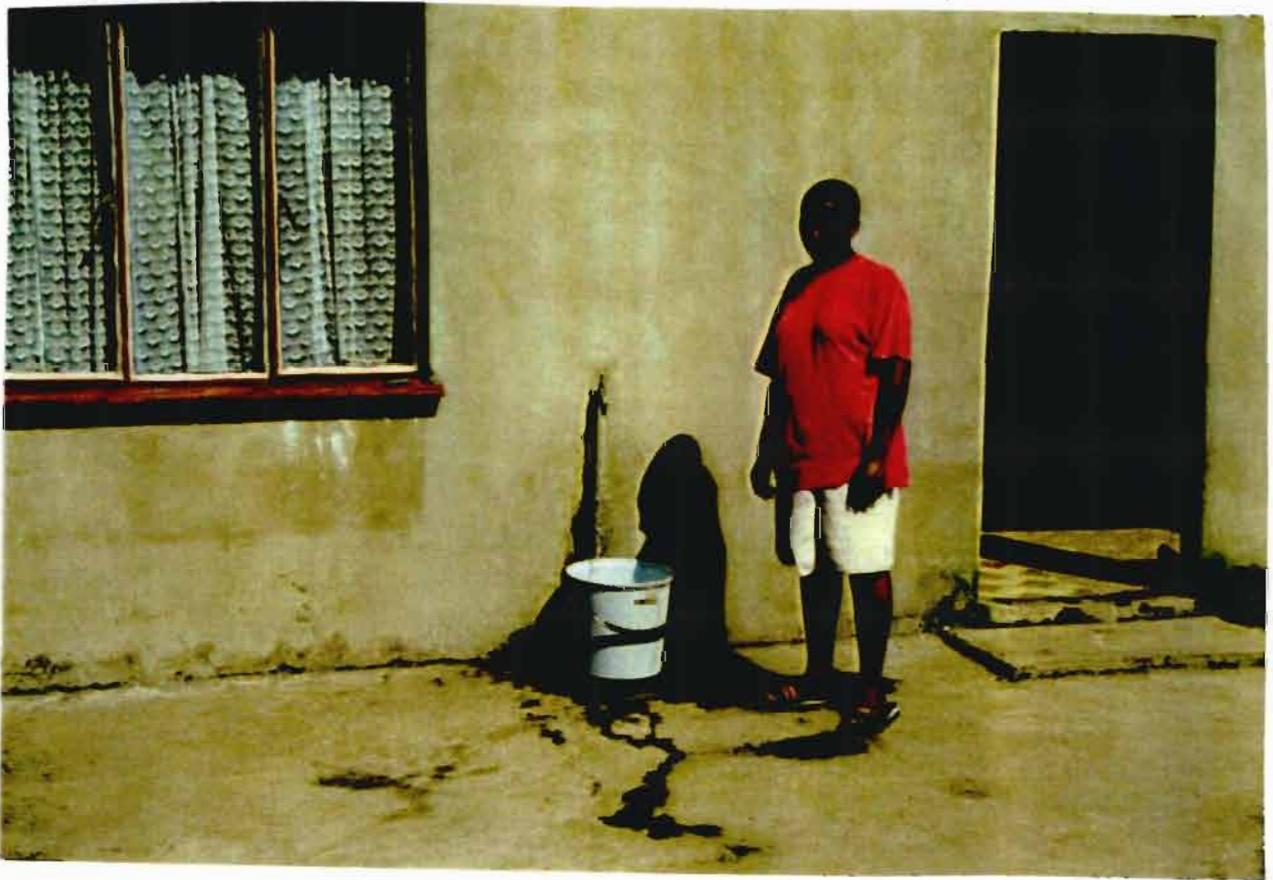
APPENDIX THREE: YARD TAP



APPENDIX FOUR: ROOFTANK



APPENDIX FIVE: HOUSE CONNECTION





University of
Durban-Westville

PRIVATE BAG X54001 DURBAN
4000 SOUTH AFRICA
TELEGRAMS: 'UDWEST'
TELEX: 6-23228 SA
FAX: (031)204-4383
☎ (031)204-4111

Faculty of Law, Economics and Management
Discipline : Public Administration

SCHOOL OF GOVERNANCE

Tel: (031) 204-4756
Fax: (031) 204-4577

E-mail: sadhnam@pixie.udw.ac.za

APPENDIX SIX:

QUESTIONNAIRE TO URBAN STRATEGY UNIT

IMPACT OF URBANISATION ON MUNICIPAL SERVICES DELIVERY WITH PARTICULAR EMPHASIS ON THE PROVISION OF WATER IN THE DURBAN METROPOLITAN AREA

Dear Sir/Madam,

The developing world is being transformed into a world of cities and towns. In 1960 less than 22 percent of its population was urban. By 1990, the proportion had increased to 34 percent. Urbanisation is proceeding rapidly, and it is projected that by the year 2000 more than half the population of the developing world will live in cities and towns.

Durban is one of the fastest growing cities in the world and proper attention must be given to the social ills that are emerging over a steady period of time. Adequate steps must be taken to devise intensive development management and planning strategies to prevent chaotic situations experienced by overcrowded cities like Mexico City, Bangladesh and Sao Paulo.

This survey aims to examine how municipal service delivery can be improved and to provide meaningful directions to policymakers and practitioners alike in promoting urban development.

Furthermore, this study calls for innovative ideas and solutions to manage the accelerating process of urbanisation in an effective and efficient manner.

INSTRUCTIONS FOR THE COMPLETION OF THIS QUESTIONNAIRE

This questionnaire has been designed for computer analysis and requires you to respond by placing an "X" in the appropriate block or blocks.

Should you be of the opinion that additional information is necessary for the open-ended questions, please use the space provided at the end of the questionnaire.

The information that you provide is extremely valuable, and it will be treated in the strictest of confidence.

Should you have any queries or difficulty in answering the questionnaire, please contact me at the following telephone/fax numbers:

Tel: (031) 2044576
Fax: (031) 2044577

Your co-operation is greatly appreciated.

Ms P PILLAY
DOCTORAL CANDIDATE

Dr S MOODLEY
PROMOTER

PLEASE COMPLETE THE FOLLOWING DETAILS:

NAME OF RESPONDENT:	
DEPARTMENT/SECTION:	
QUALIFICATION:	
EXPERIENCE:	

**KINDLY RETURN COMPLETED QUESTIONNAIRE BY
1 JULY 1998**

SECTION A: PROFILE OF URBAN STRATEGY UNIT

It is necessary to gain a composite picture of the functioning of Urban Strategy Unit in their daily activities.

1. What is the vision of the Urban Strategy Unit in addressing the urbanisation process ?

2. What is the mission statement of the Urban Strategy Unit ?

3. The Urban Strategy Unit has identified and analysed the critical needs and aspirations of the local community.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

4. What are the objectives of the Urban Strategy Unit in terms of the following:

- (a) long term goals:

(b) medium term goals:

(c) short term goals:

5. Is there a legislative framework that gives effect to the activities of the Urban Strategy Unit ?

Yes	01
No	02

COMMENTS :

6. Are there any policy initiatives that have been introduced to address urban problems ?

Yes	01
No	02

COMMENTS :

7. What kind of organisational structure is in place to effectively address urban development ?

8. Which of the following stakeholders play an active role in the planning process :
(You may cross (x) more than one category)

Members of the Public	01
Non-governmental Organisations	02
Business/Private Sector	03
Representatives from Provincial Government	04
Representatives from Local Government	05
Other (Please specify)	06

9. Does the Urban Strategy Unit have an "Urban Development Action Plan" ?

Yes	01
No	02

COMMENTS :

10. How much of money has been budgeted for the 1998 financial year to manage the urbanisation process ?

11. What marketing strategies does the Urban Strategy Unit use in order to inform the public of development programmes and activities ?

12. Explain the major constraints experienced by the Urban Strategy Unit in relation to:

(a) financial resources

(b) human resources

(c) technological resources

13. What kind of research has the Urban Strategy Unit undertaken to provide guidelines and recommendations for government to effectively address urban development ?

14. What type of strategic planning has the Urban Strategy Unit embarked upon to meet the challenges of the 21st century ?

15. What lessons can be learnt from First World Countries in an attempt to effectively manage South Africa's urbanisation patterns for the future ?

16. What lessons can be learnt from Third World Countries in an attempt to effectively manage South Africa's urbanisation patterns for the future ?

17. How does the Urban Strategy Unit communicate with the local people to ascertain their needs, wants and desires ?

18. What steps have been taken to make the Urban Strategy Unit more accessible to the people ?

SECTION B: IMPACT OF URBANISATION ON WATER

It is important to determine the impact that urbanisation has on municipal services delivery such as water.

1. What is the current settlement pattern of the Durban Metropolitan Area ?

2. How does the current settlement pattern of the 1990s compare with that of the 1980s and 1970s ?

3. How is statistical data collected in order to monitor the urbanisation process for future provision of basic services such as water ?

4. How does the process of urbanisation impact on municipal services delivery in a post-apartheid South Africa ?

5. Accelerating urbanisation has resulted in :

5.1 Overcrowding	Yes	01	No	02
5.2 Traffic Congestion	Yes	01	No	02
5.3 Pollution	Yes	01	No	02
5.4 Urban Violence	Yes	01	No	02
5.5 Other (Please specify) _____	Yes	01	No	02

COMMENTS:

6. The process of urbanisation has influenced the development of further informal settlements in the Durban Metropolitan Region.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

7. Urbanisation has led to the loss of income for the Durban Metropolitan Council in terms of rates and levies.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

8. Rapid urbanisation gives rise to informal trading on the streets of the city centre with a further loss of income for the Durban Metropolitan Council.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

9. An increase in urbanisation patterns has caused a decline in:

9.1 Economic growth	Yes	01	No	02
9.2 Fewer job opportunities	Yes	01	No	02
9.3 Added infrastructural pressure	Yes	01	No	02
9.4 Other (Please specify) _____	Yes	01	No	02

COMMENTS:

10. Accelerating urbanisation has created difficulties in undertaking effective town and regional planning.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

11. Local government does not have the resources (financial, human, technical) to provide water to the urban poor.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

12. The backlog in services such as water and electricity is set to escalate commensurate with urbanisation patterns.

Yes	01
No	02

COMMENTS :

SECTION C: ALTERNATIVE COURSES OF ACTION

The theme of this section is to find alternative courses of action in order to manage the urbanisation process effectively and efficiently.

1. There is a need for a Commission on Urbanisation to advise government on urban management and development.

Yes	01
No	02

COMMENTS :

2. The composition of the Commission should include:
(You may cross (x) more than one category)

Representatives from Central Government	01
Representatives from Provincial Government	02
Representatives from Local Government	03
Representatives from Community Based Organisations	04
Representatives from Tertiary Institutions	05
Representatives from Private Sector/Business	06
Other (Please specify) _____	07

3. The duties of a Commission on Urbanisation should include: (You may cross (x) more than one category)

Undertaking Urban Research	01
Advising on Urban Issues	02
Investigating Urban Problems	03
Introducing new Urban Strategies	04
Promoting Urban Development	05
Other (Please specify) _____	06

4. Local government requires the knowledge and skills of academics from universities and technicians in shaping an urbanisation policy.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

5. To prevent urban decay, national government must focus on the following courses of action:
(You may cross (x) more than one category)

Develop Rural Areas	01
Encourage Investments in Rural Areas	02
Create Tourist Attractions in Rural Areas	03
Market Rural Areas Overseas	04
Other (Please specify) _____	05

6. What solutions can you recommend to promote urban development in the Durban Metropolitan Region ?



University of
Durban-Westville

PRIVATE BAG X54001 DURBAN
4000 SOUTH AFRICA
TELEGRAMS: 'UDWEST'
TELEX: 6-23228 SA
FAX: (031)204-4383
☎ (031)204-4111

Faculty of Law, Economics and Management
Discipline : Public Administration

SCHOOL OF GOVERNANCE

Tel: (031) 204-4756
Fax: (031) 204-4577

E-mail: sadhnam@pixie.udw.ac.za

APPENDIX SEVEN:

QUESTIONNAIRE: TO DURBAN METRO WATER SERVICES

IMPACT OF URBANISATION ON MUNICIPAL SERVICES DELIVERY WITH PARTICULAR EMPHASIS ON THE PROVISION OF WATER IN THE DURBAN METROPOLITAN AREA

Dear Sir/Madam,

South African cities are a particular heritage of apartheid, which created dualism in urban areas. There has been a lack of vision, environmental expertise and a holistic approach to plan and manage the urban environment in a sustainable manner. As a result, black communities are victims of industrial pollution, are located close to toxic waste dumps and are subjected to dense settlement patterns with no green spaces, and have inadequate service delivery such as water.

The questionnaire aims to investigate the extent to which urbanisation has impacted on the provision of water to informal settlements in a post-apartheid era.

Furthermore, this survey attempts to analyse the steps taken by Durban Metro Water to bring water to all of the city's residents commensurate with the provisions of the RDP.

INSTRUCTIONS FOR THE COMPLETION OF THIS QUESTIONNAIRE

This questionnaire has been designed for computer analysis and requires you to respond by placing an "X" in the appropriate block or blocks.

Should you be of the opinion that additional information is necessary for the open-ended questions, please use the space provided at the end of the questionnaire.

The information that you provide is extremely valuable, and it will be treated in the strictest of confidence.

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Ms P PILLAY
DOCTORAL CANDIDATE

Dr S MOODLEY
PROMOTER

PLEASE COMPLETE THE FOLLOWING DETAILS:

NAME OF RESPONDENT:	
DESIGNATION:	
SECTION/DEPARTMENT:	
QUALIFICATION:	
EXPERIENCE:	

**KINDLY RETURN COMPLETED QUESTIONNAIRE BEFORE
1 JULY 1998.**

SECTION A: PROFILE ON DURBAN METRO WATER

It is necessary to draw a composite picture of Durban Metro Water and its role in service delivery.

1. What is the vision of Durban Metro Water in relation to the provision of water and sanitation to the people ?

2. What is the mission statement of Durban Metro Water ?

3. What are the objectives of Durban Metro Water in terms of the following:

- (a) long term goals:

- (b) medium term goals:

(c) short term goals:

4. Is there a legislative framework that provides meaning and direction to the activities of Durban Metro Water?

Yes	01
No	02

COMMENTS :

5. Are there any policy initiatives that have been introduced to address water shortages ?

Yes	01
No	02

COMMENTS :

6. What kind of organisation structure is in place to effectively address water services ?

7. Which units/sections/departments are directly involved in the provision of water and sanitation to the local people ?

8. Are these units/sections/departments adequately equipped with the following resources:

(a) financial resources:

(b) human resources:

(c) technological resources:

9. How many people do not have access to water in the Durban Metropolitan Region ?

10 000 - 50 000	01
51 000 - 100 000	02
101 000 - 150 000	03
151 000 - 200 000	04
201 000 - 250 000	05
Over 250 000	06

10. How many people do not have proper sanitation systems?

10 000 - 50 000	01
51 000 - 100 000	02
101 000 - 150 000	03
151 000 - 200 000	04
201 000 - 250 000	05
Over 250 000	06

11. What time frame is appropriate for the effective and efficient delivery of water and sanitation to those in informal settlements ?

Short Term (0 - 1 year)	01
Medium Term (1 - 3 years)	02
Long Term (3 - 5 years)	03

12. How many queries for the provision of water and sanitation does the department receive per day ?

1 - 50	01
51 - 100	02
101 - 150	03
150 - 200	04
201 - 250	05
Over 251	06

13. The proper delivery of water and sanitation has been hampered by many factors. Rank order the extent to which the following factors have influenced the effective provision of water and sanitation. Use the following scale:-
 1 - greatest impact
 8 - least impact

High population growth rates	
Lack of finance	
Shortage of skilled labour	
Inadequate community participation	
High construction costs	
Accelerated urbanisation	
Violence and crime	
Other (Please specify)	

14. Durban Metro Water has policies in place that can best address the structural and functional problems associated with the current backlog in water.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

15. How does Durban Metro Water communicate with the local people in order to ascertain their needs, wants and desires?

16. What steps have been taken to make Durban Metro Water more accessible to the people ?

SECTION B: WATER SUPPLY - FINANCIAL IMPLICATIONS

Finance is a golden thread that runs through all the activities in providing water to local people. In view thereof, it is imperative to analyse the financial implications in delivering such services.

1. How much of money is required to make water and sanitation accessible to those who require it ?

R 1 million - R 5 million	01
R 6 million - R10 million	02
R11 million - R15 million	03
R16 million - R20 million	04
Over R20 million	05

2. How much of money has been budgeted for water and sanitation for the 1998/99 financial year ?

R 1 million - R 5 million	01
R 6 million - R10 million	02
R11 million - R15 million	03
R16 million - R20 million	04
Over R20 million	05

3. How much of this money would be received from central level of government ?

R 1 million - R 5 million	01
R 6 million - R10 million	02
R11 million - R15 million	03
R16 million - R20 million	04
Over R20 million	05

4. How much of this money would be received from provincial level of government ?

R 1 million - R 5 million	01
R 6 million - R10 million	02
R11 million - R15 million	03
R16 million - R20 million	04
Over R20 million	05

5. The culture of entitlement, i.e. not paying for the services used, must come to an end.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

6. Difficulty is being experienced with revenue collection and there is need for legal action to improve sanctions for non-payment.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

7. Various techniques/strategies can be adopted to assist those who cannot afford to pay for the essential services. Rank order the extent to which you believe Durban Metro Water can use the following techniques in assisting those customers. Use the following scale :-
 1 - most effective in offering help
 5 - least effective in offering help

Lower Cost	
Subsidies	
Credit Facilities	
Card System	
Other (Please specify)	

8. Is the government overambitious in trying to provide water to everyone by the year 2004 ?

Yes	01
No	02

COMMENTS :

9. What are the main obstacles that hampers the provision of water and sanitation to informal settlements ?

10. What type of strategic plans has the Department embarked upon to meet the challenges of the 21st century ?

SECTION C: THE PRIVATE SECTOR

Partnership action would enhance the efficient and effective delivery of water and sanitation. This section examines the impact of the private sector in delivering water and sanitation to the people.

1. The private sector is better equipped than the public sector in terms of resources (financial, human, technical etc) to provide water and sanitation to the people.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

2. In five to ten years time, there is a possibility that water would be provided by the private sector.

Yes	01
No	02

COMMENTS :

3. Are there shortcomings in allowing the private sector to deliver basic services such as water and sanitation to the people in a post-apartheid South Africa ?

Yes	01
No	02

COMMENTS :

4. What policies need to be in place to monitor water services provided by the private sector ?

SECTION D: RECONSTRUCTION AND DEVELOPMENT PROGRAMME

It is necessary to evaluate the progress of the RDP in relation to the development process.

1. The available RDP funding for water is inadequate.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

2. The RDP will NOT work amid economic stagnation which impacts on people's ability to pay for services.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

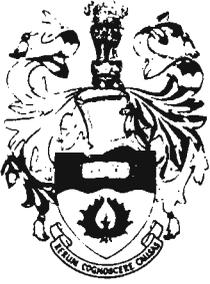
3. Masakhane, a Zulu word for building together, is a RDP project which encourages people to pay for services. This campaign has failed.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

4. What are the successes and failures of the RDP in relation to the provision of water and sanitation in the Durban Metropolitan Region ?

SUCSESSES:

FAILURES:



University of
Durban-Westville

PRIVATE BAG X54001 DURBAN
4000 SOUTH AFRICA
TELEGRAMS: 'UDWEST'
TELEX: 6-23228 SA
FAX: (031)204-4383
☎ (031)204-4111

Faculty of Law, Economics and Management
Discipline : Public Administration

SCHOOL OF GOVERNANCE

Tel: (031) 204-4756
Fax: (031) 204-4577

E-mail: sadhnam@pixie.udw.ac.za

APPENDIX EIGHT:

QUESTIONNAIRE: TO MEMBERS OF THE INFORMAL SETTLEMENTS

IMPACT OF URBANISATION ON MUNICIPAL SERVICES DELIVERY WITH PARTICULAR EMPHASIS ON THE PROVISION OF WATER IN THE DURBAN METROPOLITAN AREA

Dear Sir/Madam,

The past few decades in South Africa have witnessed a significant and serious reduction in the State's capacity to provide basic services. This may partly be attributed to a sharp decline in economic growth, population explosion and rapid urbanisation. The economic mismanagement by the apartheid government has also had a devastating effect on the social fabric of the historically disadvantaged communities.

The aim of this questionnaire is to find solutions to the urban crisis and review strategies to improve integrated urban development and planning.

The questionnaire tries to ascertain the extent to which urbanisation has impacted on the service delivery functions of local government in a post-apartheid era.

Furthermore, this survey attempts to analyse the basic needs of the people in informal settlements with a view to prioritise government spending and budgetary allocations.

INSTRUCTIONS FOR THE COMPLETION OF THIS QUESTIONNAIRE

This questionnaire has been designed for computer analysis and requires you to respond by placing an "X" in the appropriate block or blocks.

Should you be of the opinion that additional information is necessary for the open-ended questions, please use the space provided at the end of the questionnaire.

The information that you provide is extremely valuable, and it will be treated in the strictest of confidence.

Your co-operation is greatly appreciated.

Ms P PILLAY
DOCTORAL CANDIDATE

Dr S MOODLEY
PROMOTER

SECTION A: DEMOGRAPHIC DETAILS

To put a discussion of the aspects of urbanisation into perspective, it is necessary to analyse the demographic profile of the local people.

PLEASE COMPLETE THE FOLLOWING DETAILS:

1. AGE (in years):

20 - 29	30 - 39	40 - 49	50 - 59	60 and over
01	02	03	04	05

2. GENDER:

MALE	01
FEMALE	02

3. MARITAL STATUS:

SINGLE	MARRIED	DIVORCED	WIDOWED
01	02	03	04

4. LEVEL OF EDUCATION:

PRIMARY	01
SECONDARY	02
TERTIARY	03

5. OCCUPATION:

6. INCOME CATEGORY PER MONTH:

R100 - R500	01
R501 - R1000	02
R1001 - R1500	03
R1501 - R2000	04
OVER R2000	05

7. NUMBER OF CHILDREN:

8. NUMBER OF OTHER DEPENDENTS:

SECTION B: THE URBANISATION PROCESS

This section traces the urbanisation process and its implications for urban development planning and management.

1. Where were you born ?

2. Where did you move to ?

(a) First move:

(b) Second move:

(c) Third move:

3. When did you come to Durban ?

4. With whom did you stay when you came to Durban ?

Relative	01
Hostel	02
Shack	03
Other (Please specify) _____	04

5. Why did you come to Durban ?
(You may cross (x) more than one category)

Job opportunities	01
Safer environment	02
Better quality education	03
Provision of housing	04
Provision of water and sanitation	05
Provision of electricity	06
Provision of health services	07
Other (Please specify) _____	08

6. How many other people live with you in this shack /
mjondolo?

1 - 4	5 - 8	9 - 12	More than 12
01	02	03	04

7. Rate the following needs in terms of its level of importance to you. Use the following scale :
- 1 - extremely important
 - 5 - least important

Nutrition	
Housing	
Health	
Water and Sanitation	
Electricity	
Education	
Transport	
Employment	
Clothing	
Other (Please specify) _____	

8. Does your present income allow you to pay for services such as:

8.1 Water	Yes	01	No	02
8.2 Electricity	Yes	01	No	02
8.3 Education	Yes	01	No	02
8.4 Transport	Yes	01	No	02
8.5 Nutrition	Yes	01	No	02
8.6 Health	Yes	01	No	02
8.7 Housing	Yes	01	No	02
8.8 Other (Please specify) _____	Yes	01	No	02

COMMENTS:

9. Which institution do you think should be responsible for providing basic services such as water, sanitation, electricity, education, housing, transport and health? (You may cross (x) more than one category)

Public Institutions (central, provincial, local govt)	01
Private Institutions	02
Non-Governmental Organisations	03
Community	04
Financial Institutions	05
Other (Please specify)	06

SECTION C. SERVICE DELIVERY: WATER AND SANITATION

This section aims to examine the provision of water and sanitation to the local people and its effect on their quality of life.

1. The provision of clean water and proper sanitation improves the quality of life of the community

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

2. What are the primary functions of water in your household ?
(You may cross (x) more than one category)

Bathing	01
Drinking	02
Washing	03
Cooking	04
Sanitation	05
Irrigation	06
Other (Please specify) _____	07

3. Do you have access to water supply in your home ?

Yes	01
No	02

COMMENTS:

4. What type of water supply do you have ?

Piped water inside dwelling	01
Piped water on stand	02
Water from borehole	03
Spring Water	04
Water from river / stream	05
Rain water collected in drums/containers	06
Other (Please specify) _____	07

5. What quantity of water is required by your household per day?

0 - 100 Litres	01
101 - 200 Litres	02
201 - 300 Litres	03
301 - 400 Litres	04
401 - 500 Litres	05
Over 500 Litres	06

6. How do you feel about the price of water ?

Too high	01
High	02
Neither High nor Low	03
Low	04
Too Low	05

7. If water is supplied by the local authority to your area, would you be prepared to pay for the service ?

Yes	01
No	02

COMMENTS:

8. What kind of sanitation system do you use ?

Flush inside	01
Flush outside	02
Pit / Bucket	03
Other (Please specify)	04

9. Is your sanitation system acceptable ?

Yes	01
No	02

COMMENTS:

10. What do you think should be done to improve the sanitation system ?

11. Do people often become ill in this area ?

Yes	01
No	02

COMMENTS:

12. What do you think are the reasons for these illnesses?
(You may cross (x) more than one category)

Unclean Water	01
Poor Sanitation	02
Lack of Basic Health Services	03
Malnutrition	04
Poverty	05
Other (Please specify)	06

13. What type of sicknesses/illnesses are common in the informal settlements ?
(You may cross (x) more than one category)

Malaria	01
Dysentery	02
Cholera	03
Polio	04
Tuberculosis	05
Scabies	06
Other (Please specify) _____	07

14. What improvements/developments would you like to see in the provision of water and sanitation to the community ?

SECTION D. ROLE OF LOCAL GOVERNMENT IN SERVICE DELIVERY

The purpose of this section is to critically evaluate the role of local government in the provision of basic services and the constraints they experience in their daily activities.

1. Local government is there to serve the interest and needs of the local people.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

2. Local government is efficient and effective in delivering services such as water and electricity to the local people.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

3. Local government is doing its best to provide basic services such as water and electricity to the people.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

4. People should pay for services rendered by the local authorities.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

5. Local authorities do not want to upgrade services because people refuse to pay for them.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

6. The municipality should assist those who cannot afford to pay for essential services.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

7. There are opportunities for the local people to participate in local government matters affecting them.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

8. The local authority should encourage community participation and involvement in rendering basic services.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

9. There is constant contact between the councillor in charge of this area and the local people.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

10. How do the local people inform the local authority of their needs, wants and desires ?

11. The local authority can learn from people's experiences and knowledge.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

12. The private sector should play an important role in assisting local authorities in providing basic services to the community.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

13. The private sector is equipped to deal with the basic needs of the people.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

14. The private sector would be efficient and effective in rendering basic services to the local people.

Strongly Agree	01
Agree	02
Neither Agree nor Disagree	03
Disagree	04
Strongly Disagree	05

SECTION E. RECONSTRUCTION AND DEVELOPMENT PROGRAMME

The aim of this section is to provide an overview of people's expectations of the RDP and its effect on the development process.

1. What do you understand by the Reconstruction and Development Programme (RDP) ?

2. Has any RDP projects been implemented in your area ?

Yes	01
No	02

COMMENTS :

3. What types of projects are required by the local people ?
 (You may cross (x) more than one category)

Housing	01
Hospitals and Clinics	02
Schools	03
Transport	04
Water and Sanitation	05
Electricity	06
Other (Please specify)	07

4. What are your expectations of the RDP ?

5. Do you think that the RDP process has been slow in meeting people's needs ?

Yes	01
No	02

COMMENTS :

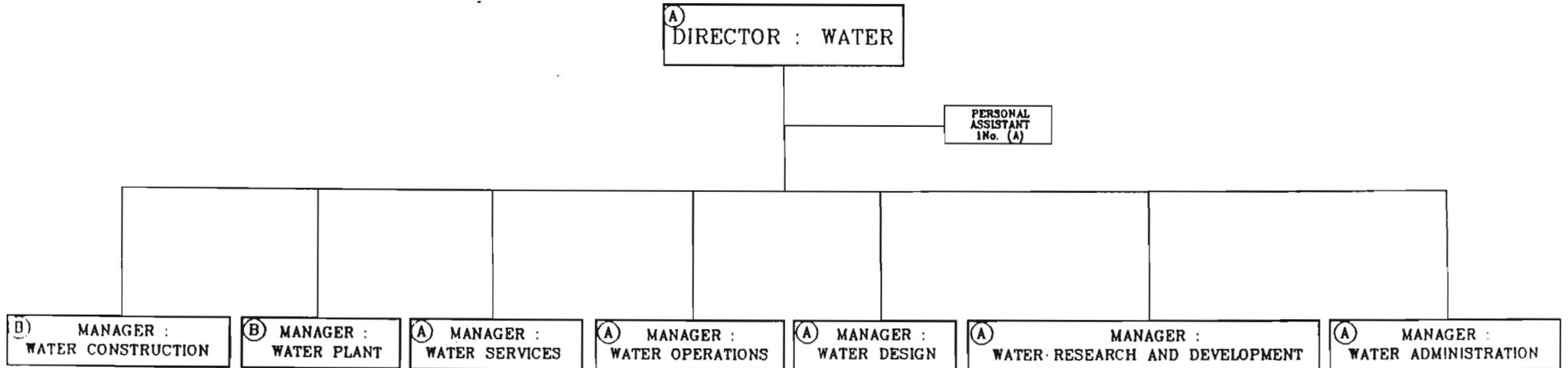
6. What are the successes and failures of the RDP in relation to the provision of water and electricity in your area ?

SUCSESSES:

FAILURES:

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DATE :	26/02/97

METRO WATER

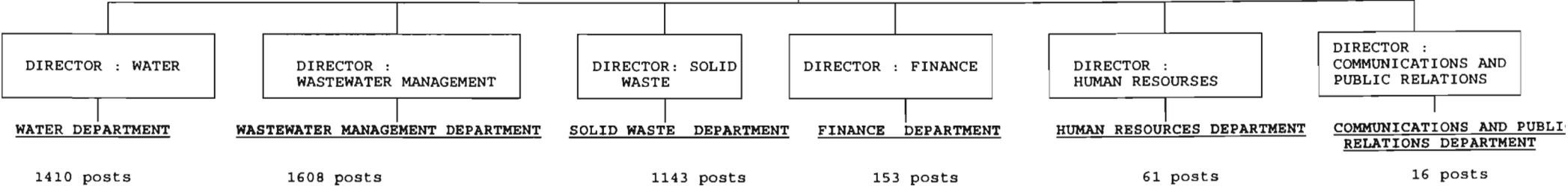


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 Total Establishment : 1410 Post

METRO WATER SERVICES

EXECUTIVE DIRECTOR
(WATER SERVICES)
(1)

PERSONAL ASSISTANT
(1)



TOTAL POSTS : 4393

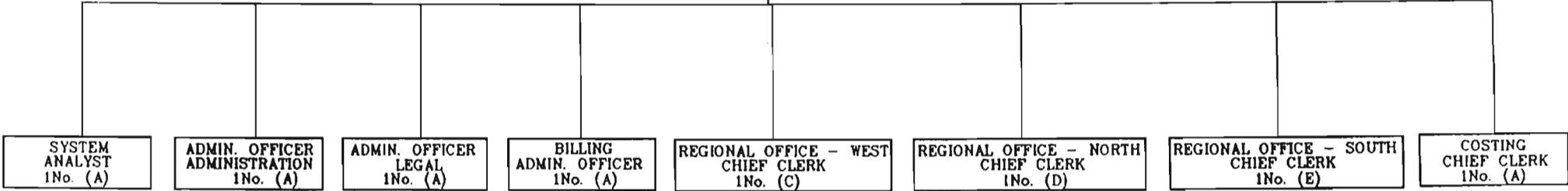
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REV.	0
DATE :	26/02/97

WATER ADMINISTRATION

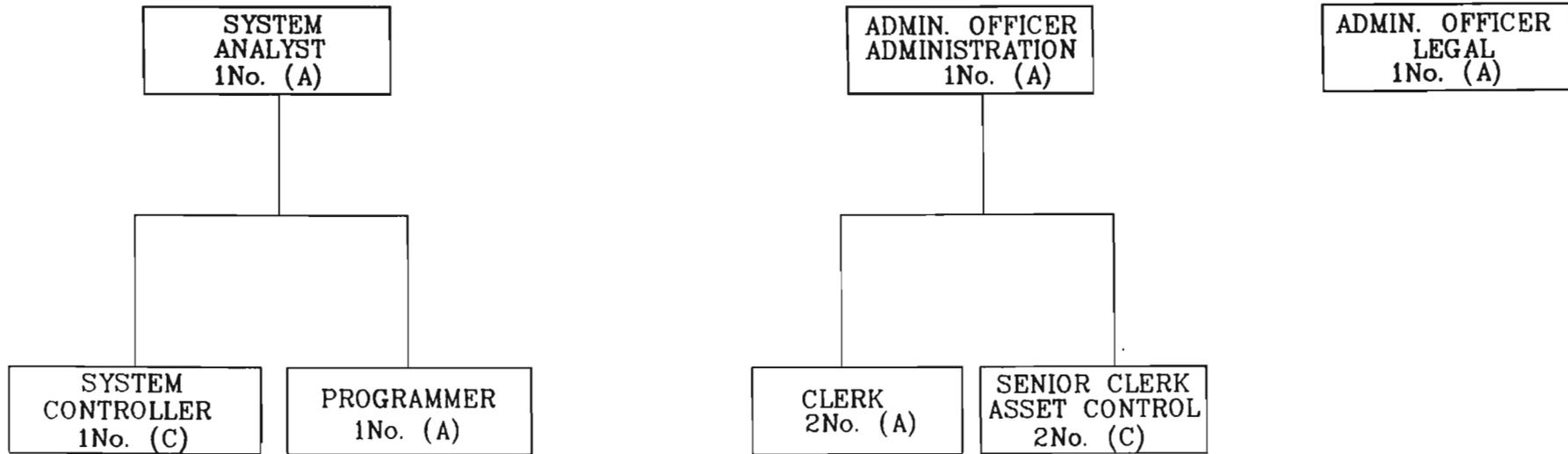
MANAGER : WATER ADMINISTRATION

PERSONAL ASSISTANT
1No. (A)



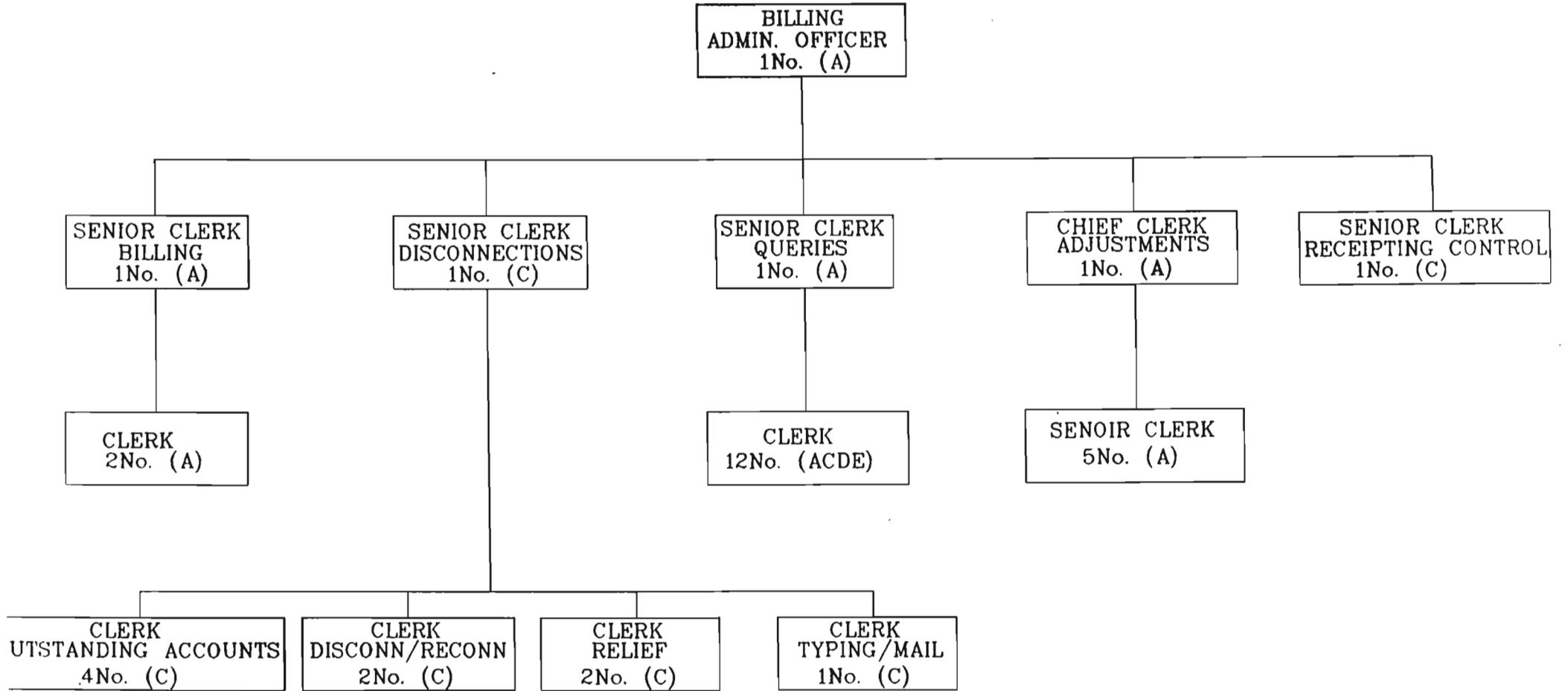
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WATER ADMINISTRATION



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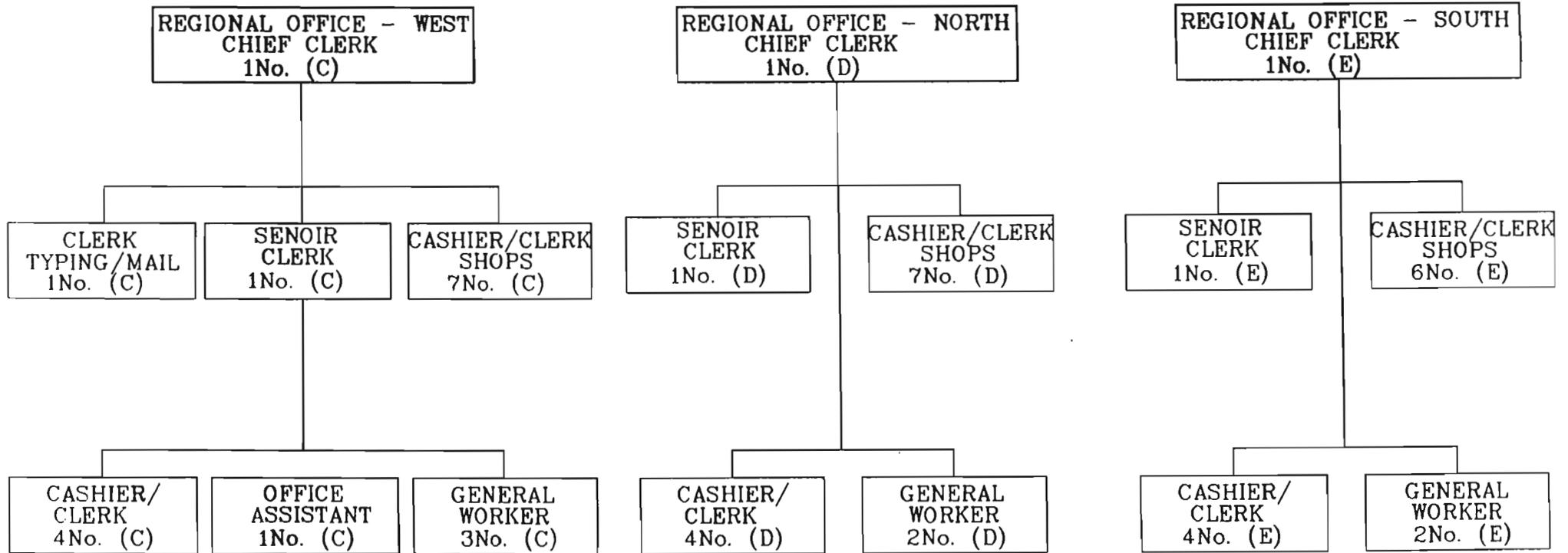
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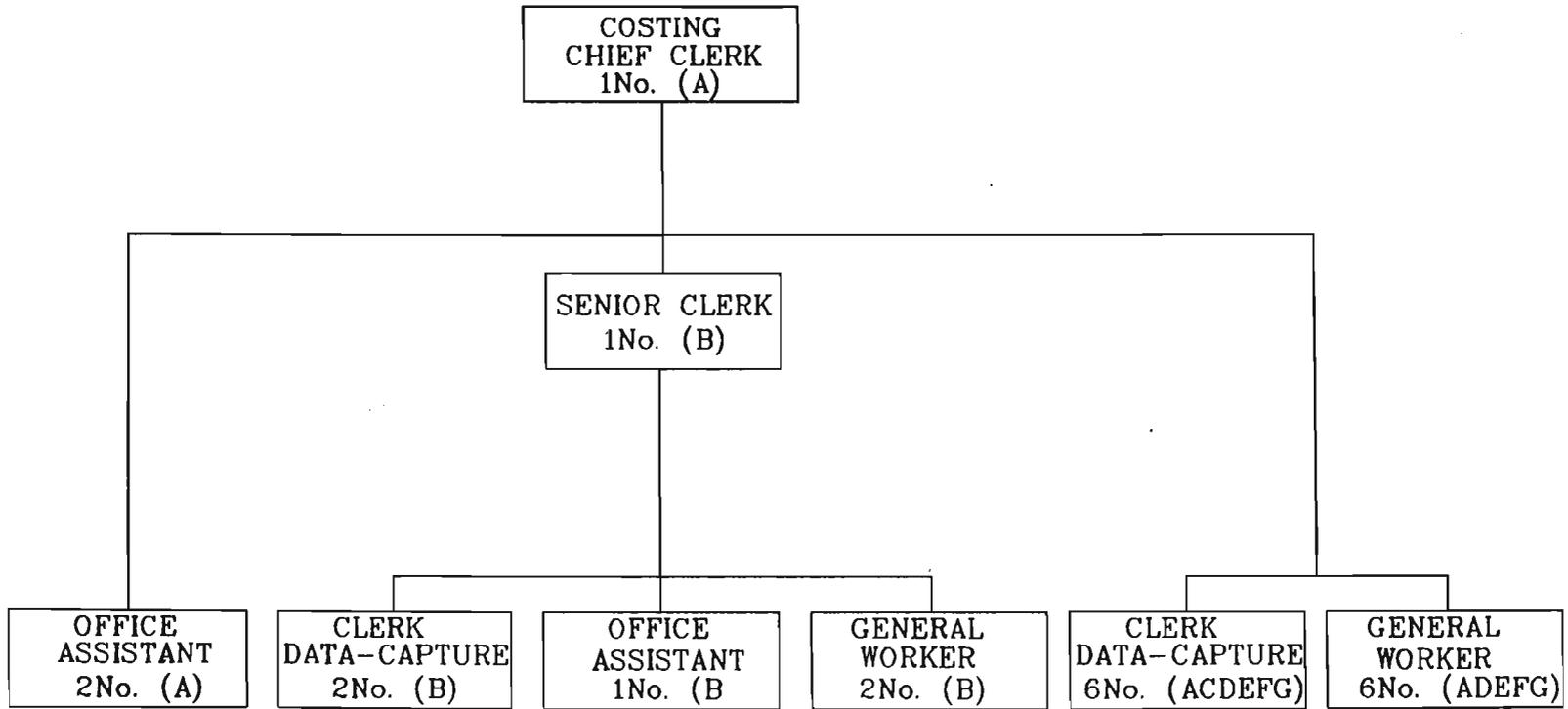
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DATE :	26/02/97

WATER ADMINISTRATION



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DATE :	28/02/97

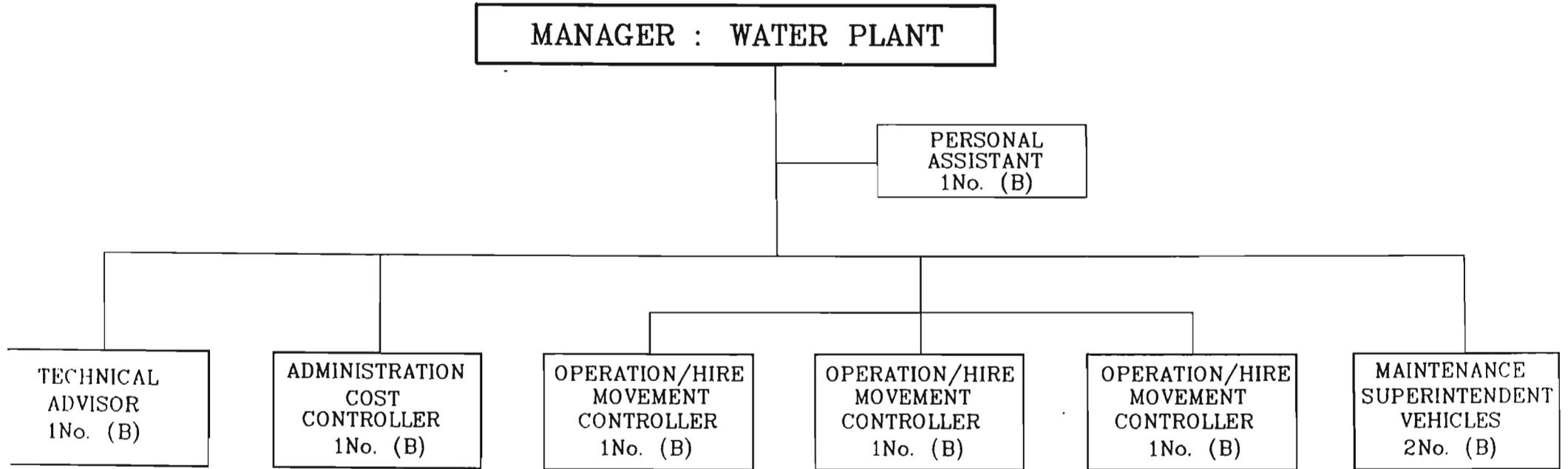
WATER ADMINISTRATION



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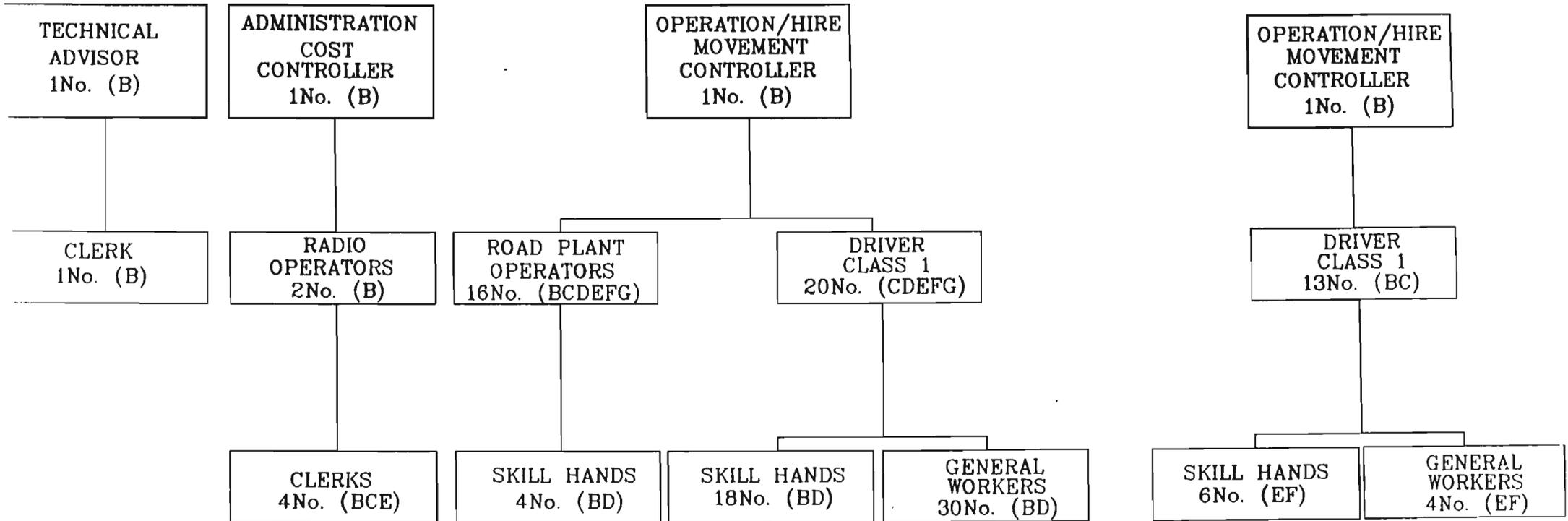
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WATER PLANT



DATE :	28/02/97
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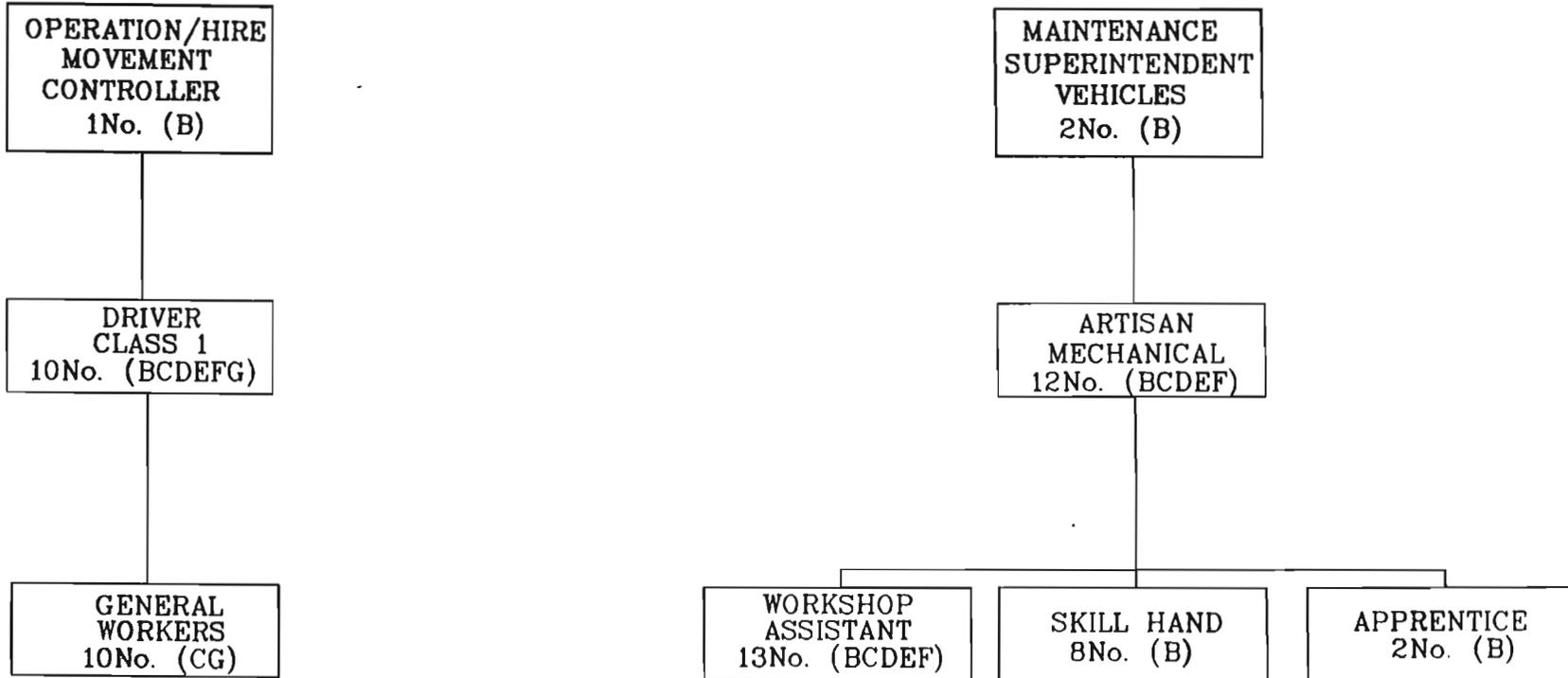
WATER PLANT



Establishment : 122 Post

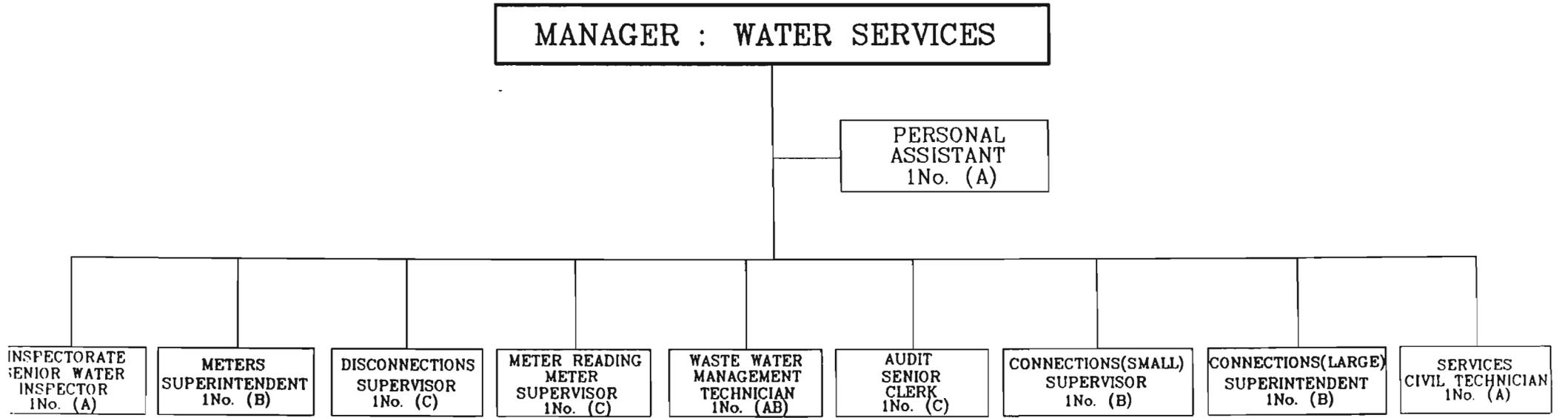
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WATER PLANT



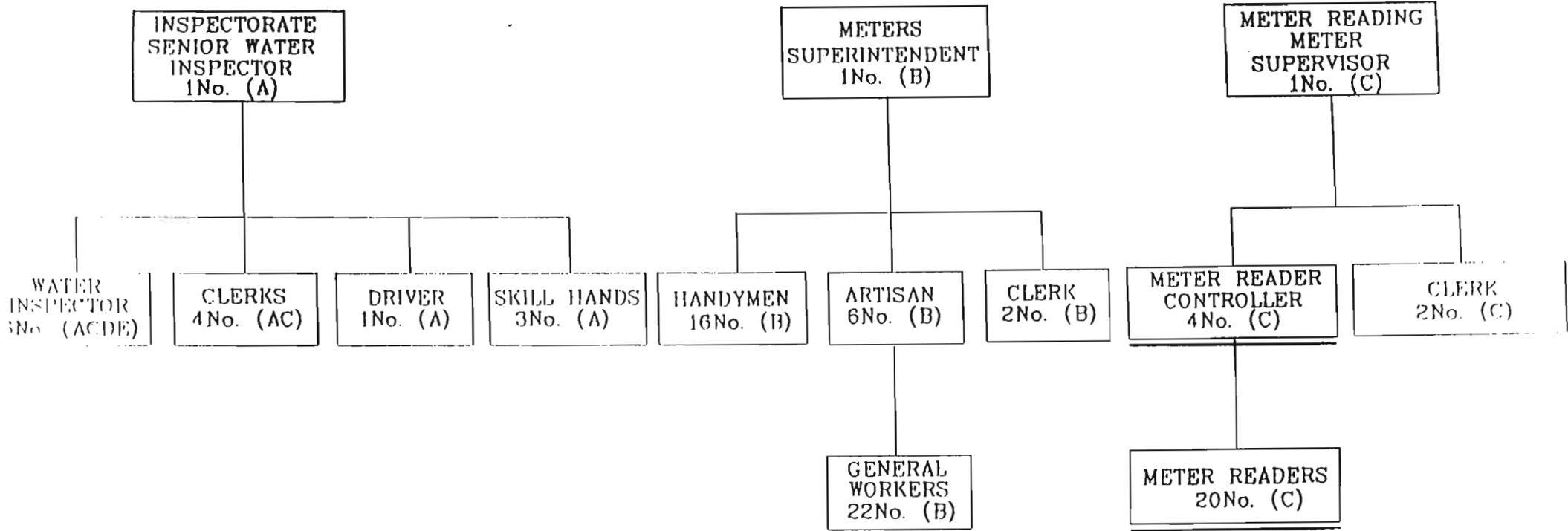
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DATE :	28/02/97

WATER SERVICES



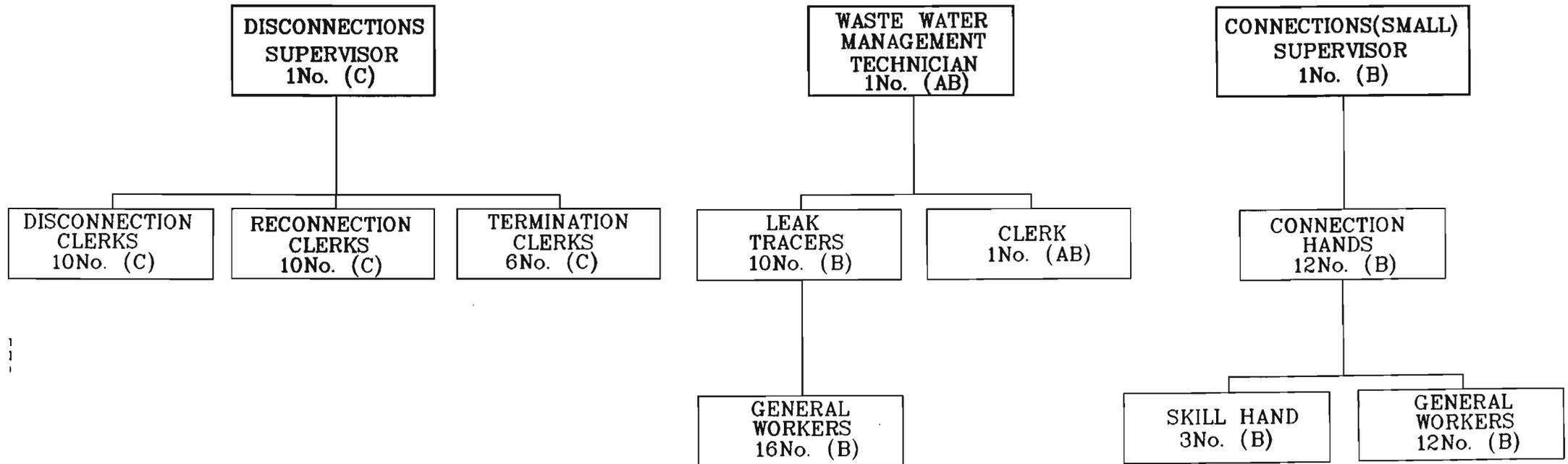
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WATER SERVICES



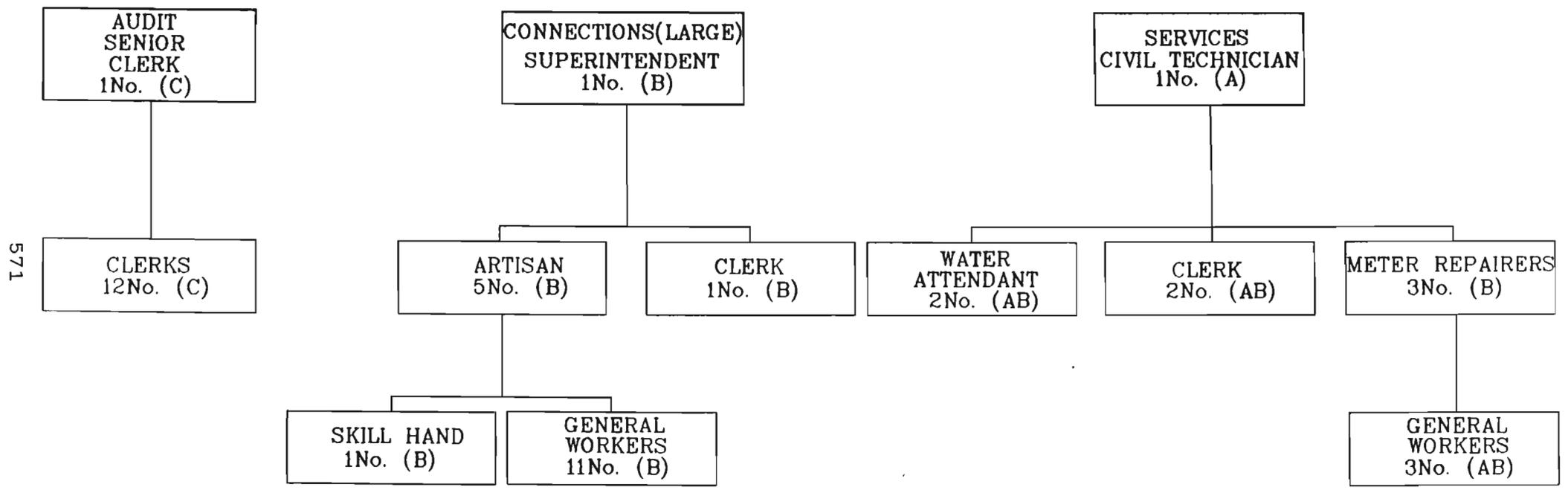
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WATER SERVICES



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DATE :	28/02/97

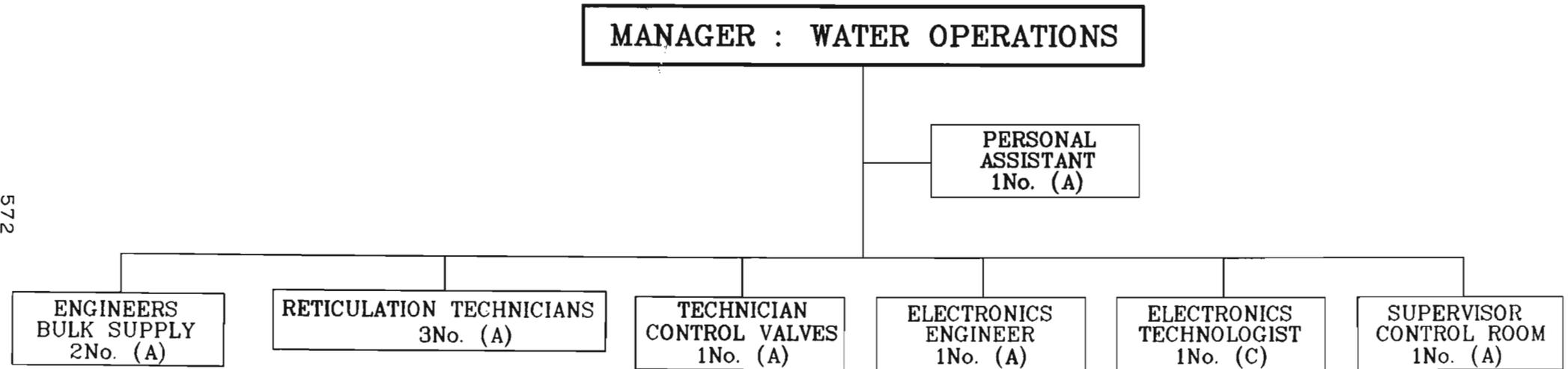
WATER SERVICES



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DATE :	08/08/97

WATER OPERATIONS

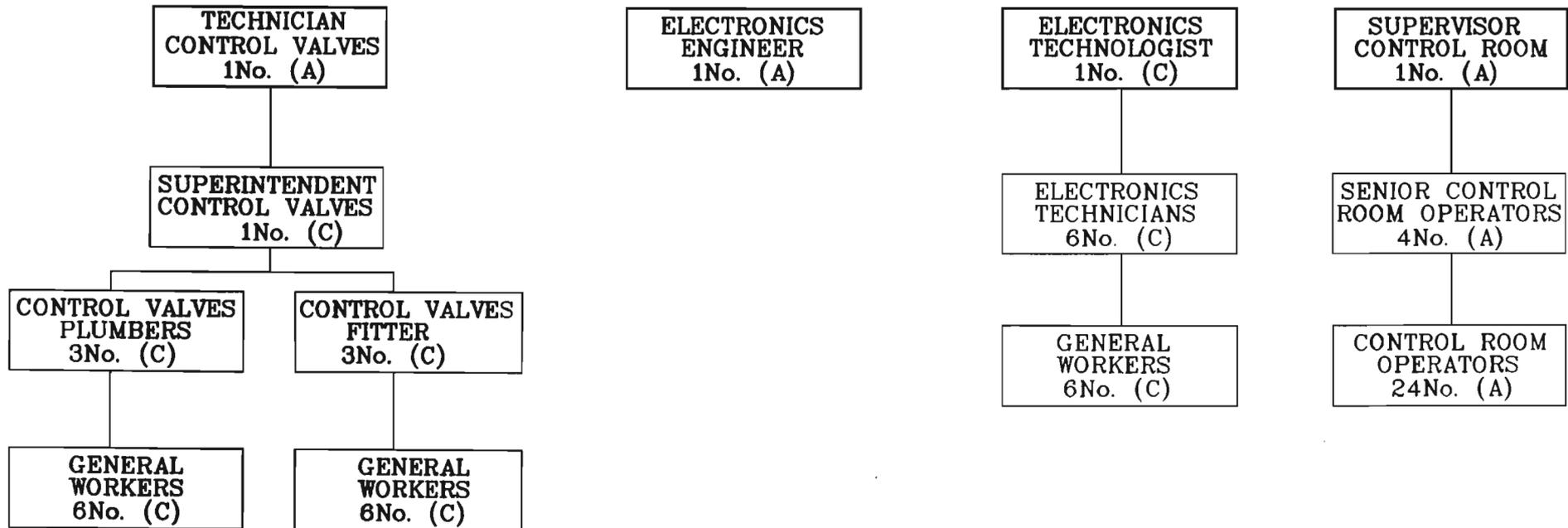


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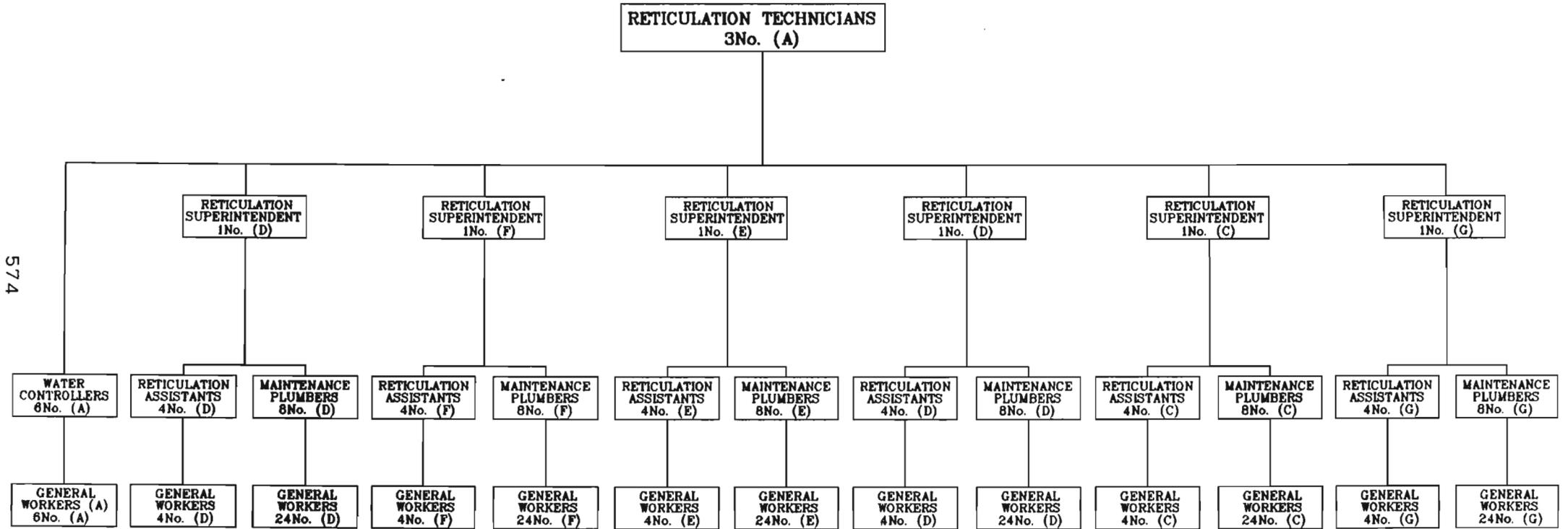
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573



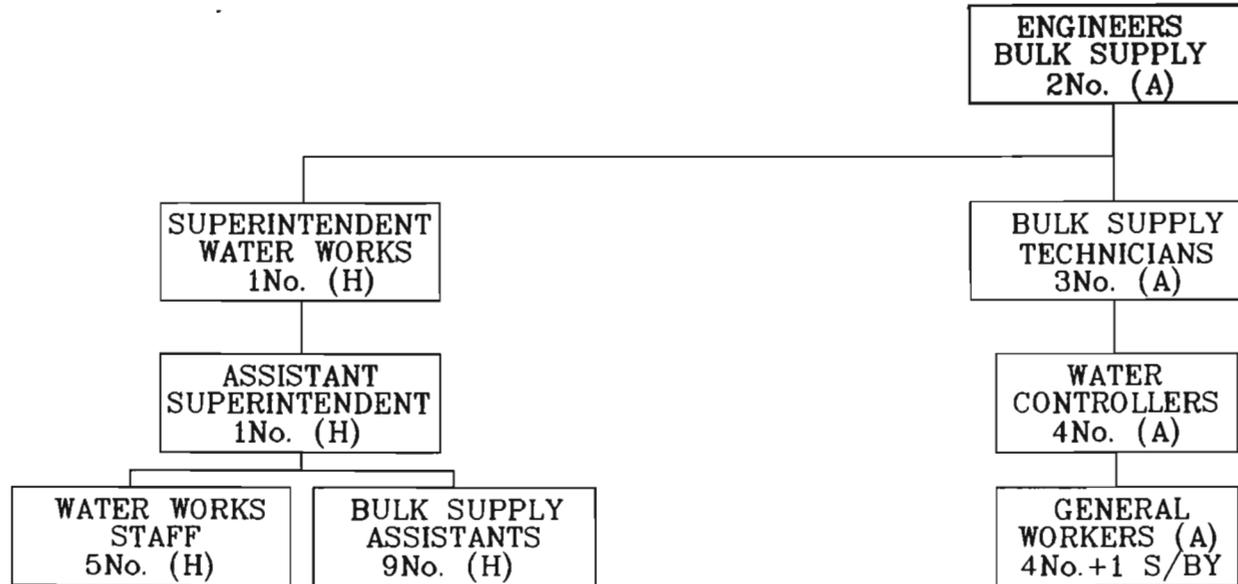
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WATER OPERATIONS



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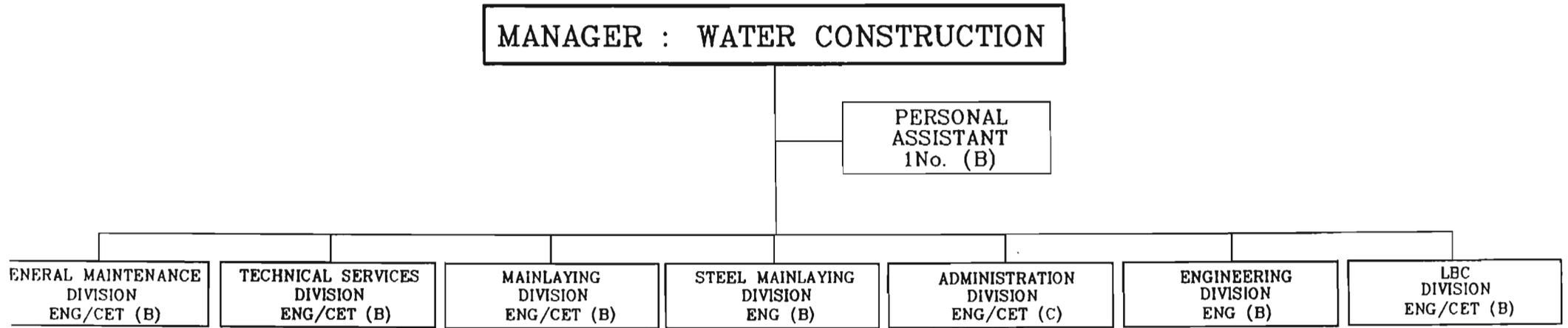
WATER OPERATIONS



Establishment : 30 Post

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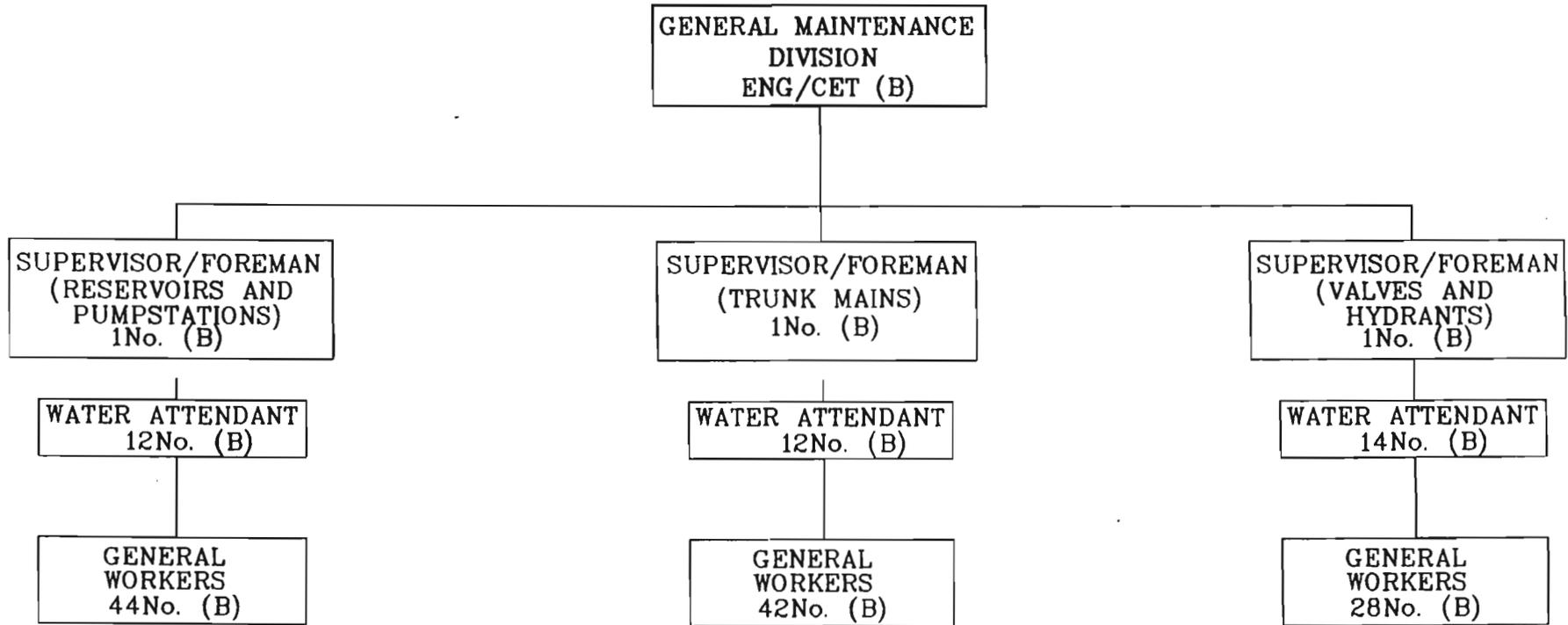
WATER CONSTRUCTION



Establishment : 2 Post

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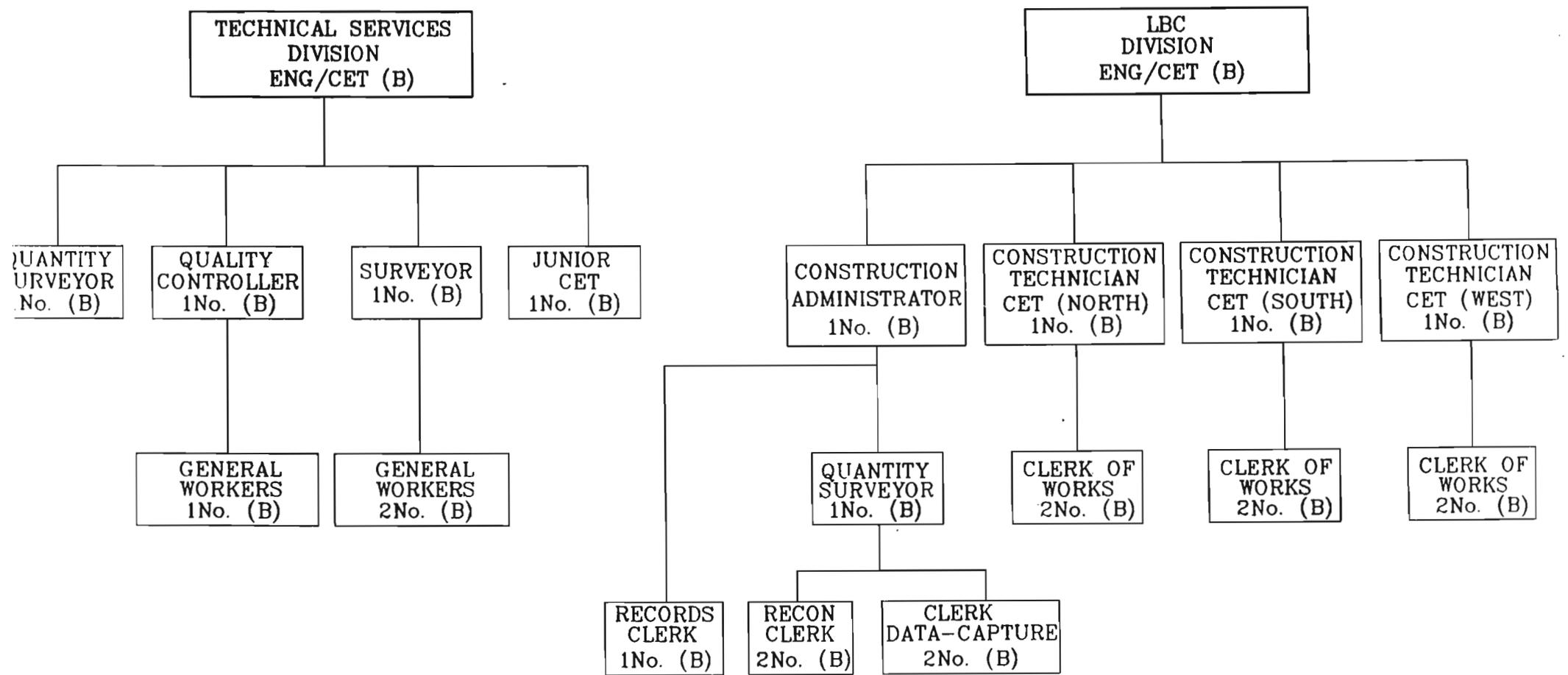
WATER CONSTRUCTION



Establishment : 156 Post

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DATE :	26/02/97

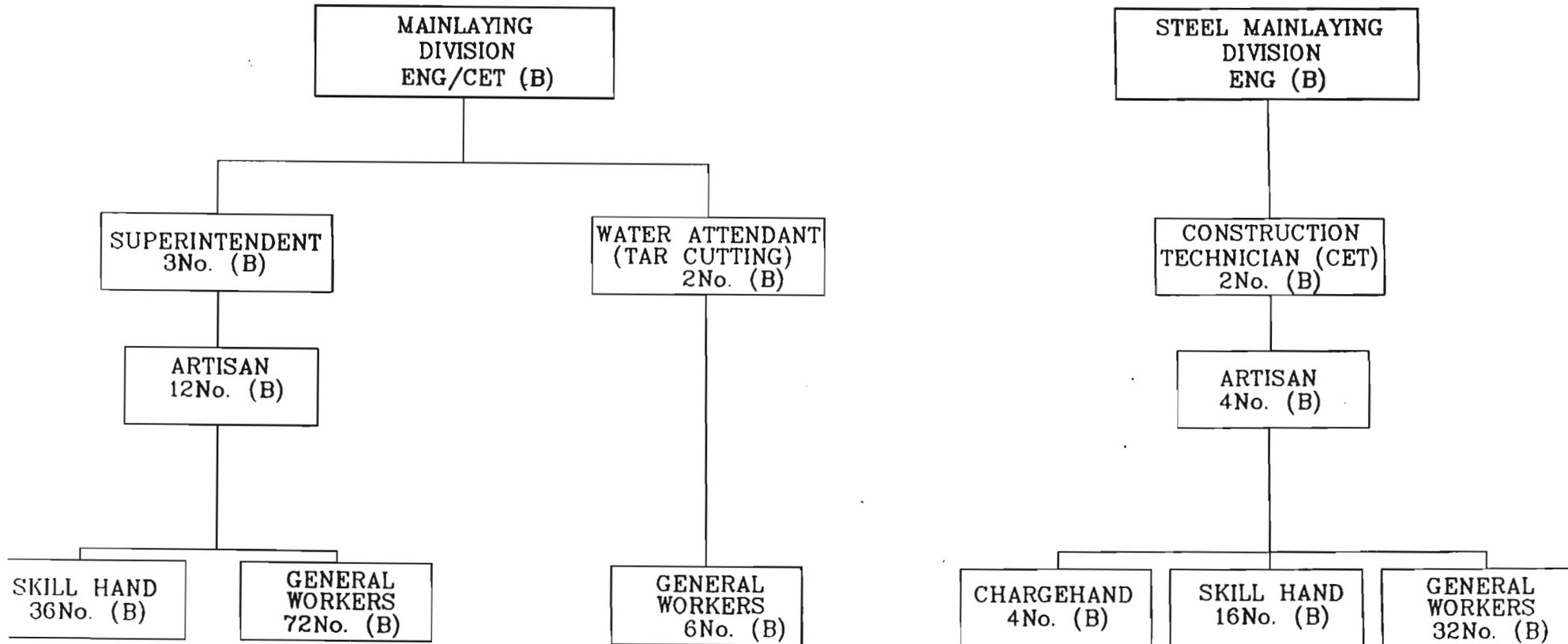
WATER CONSTRUCTION



Establishment : 25 Post

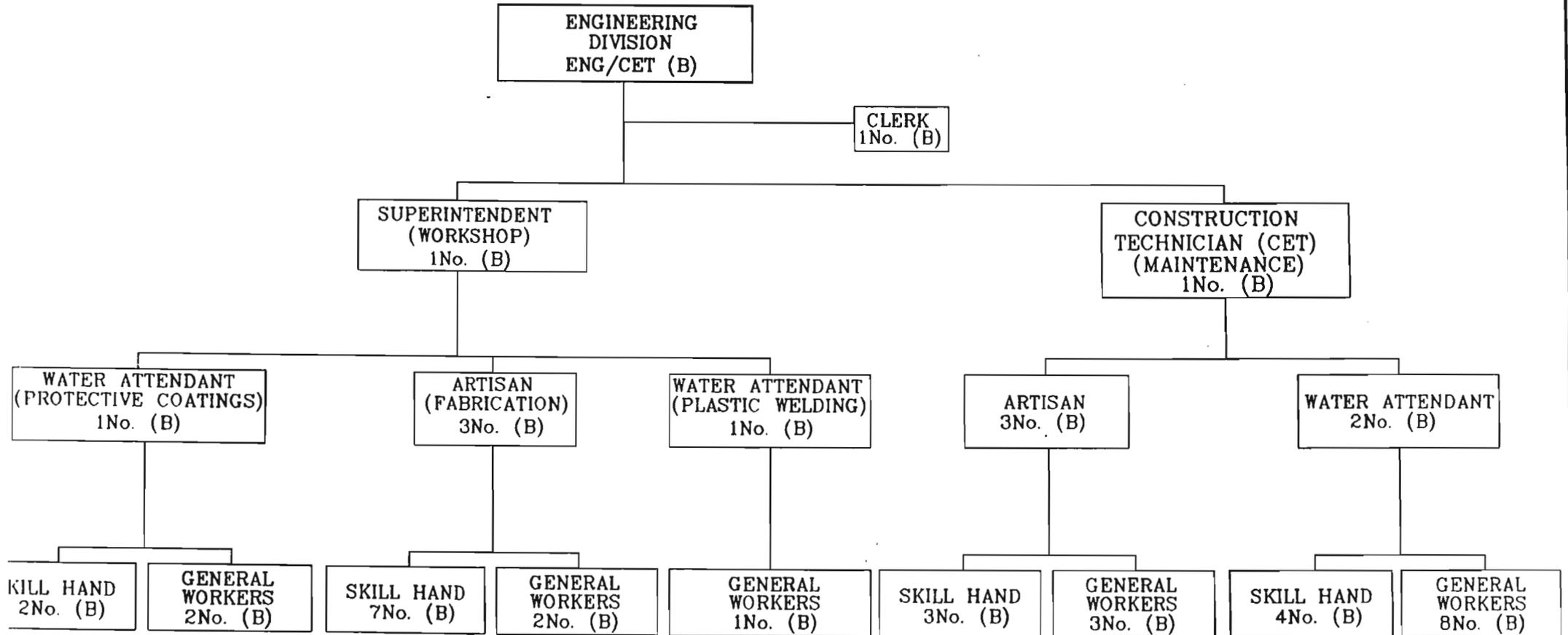
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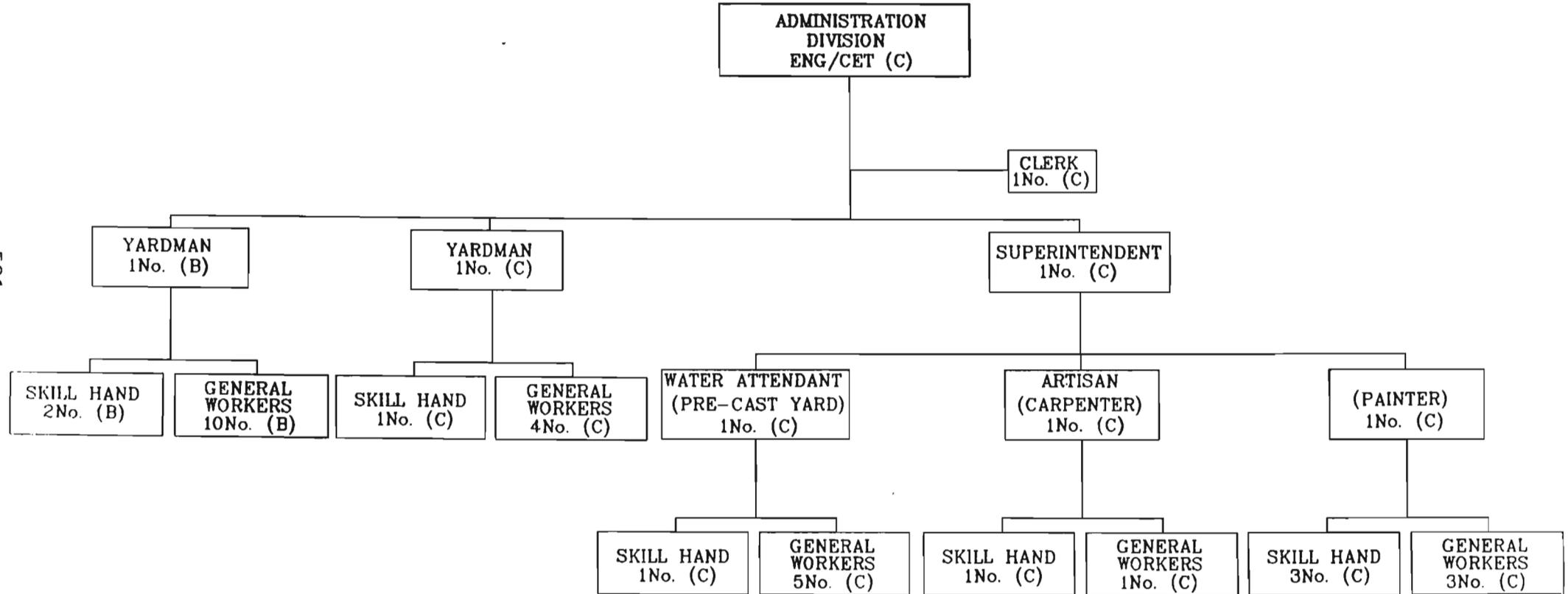
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WATER CONSTRUCTION



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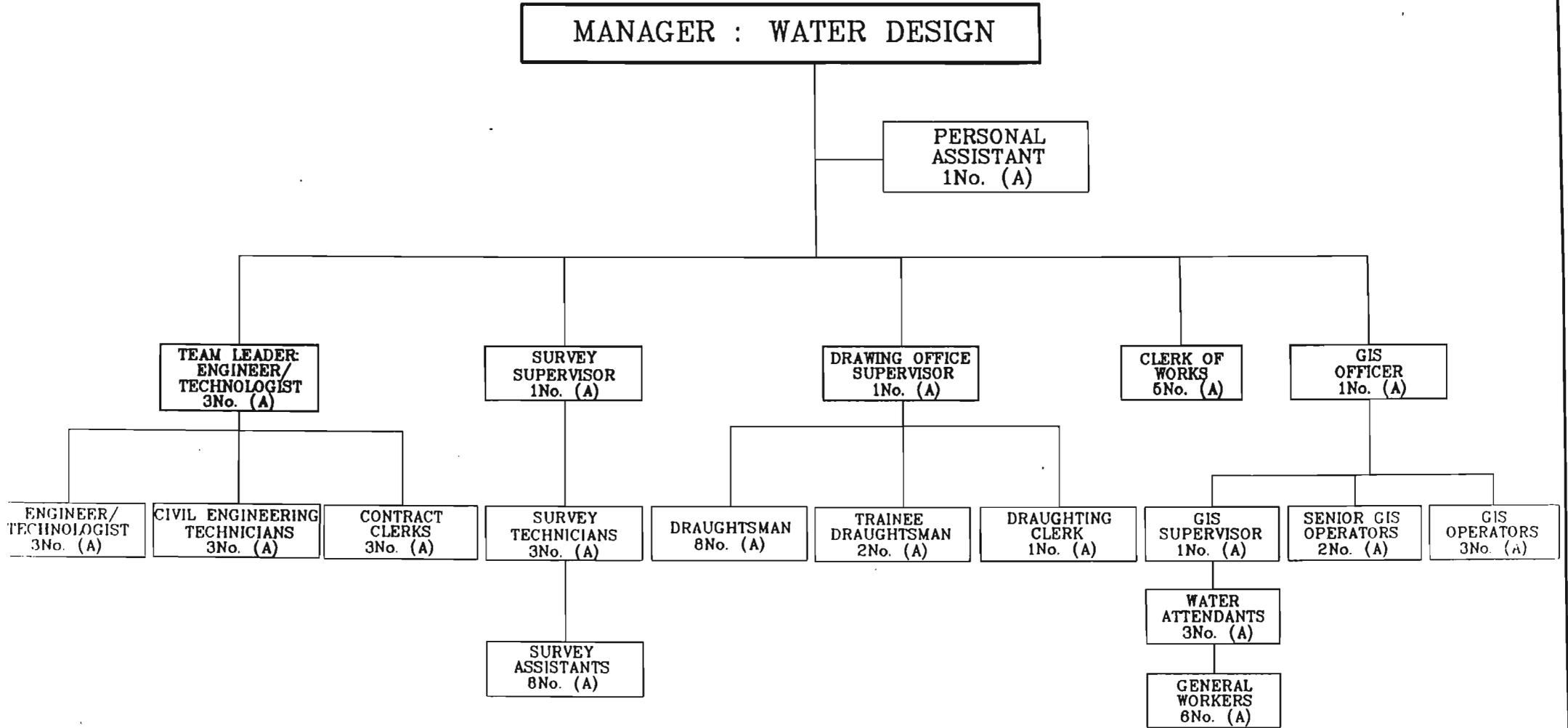
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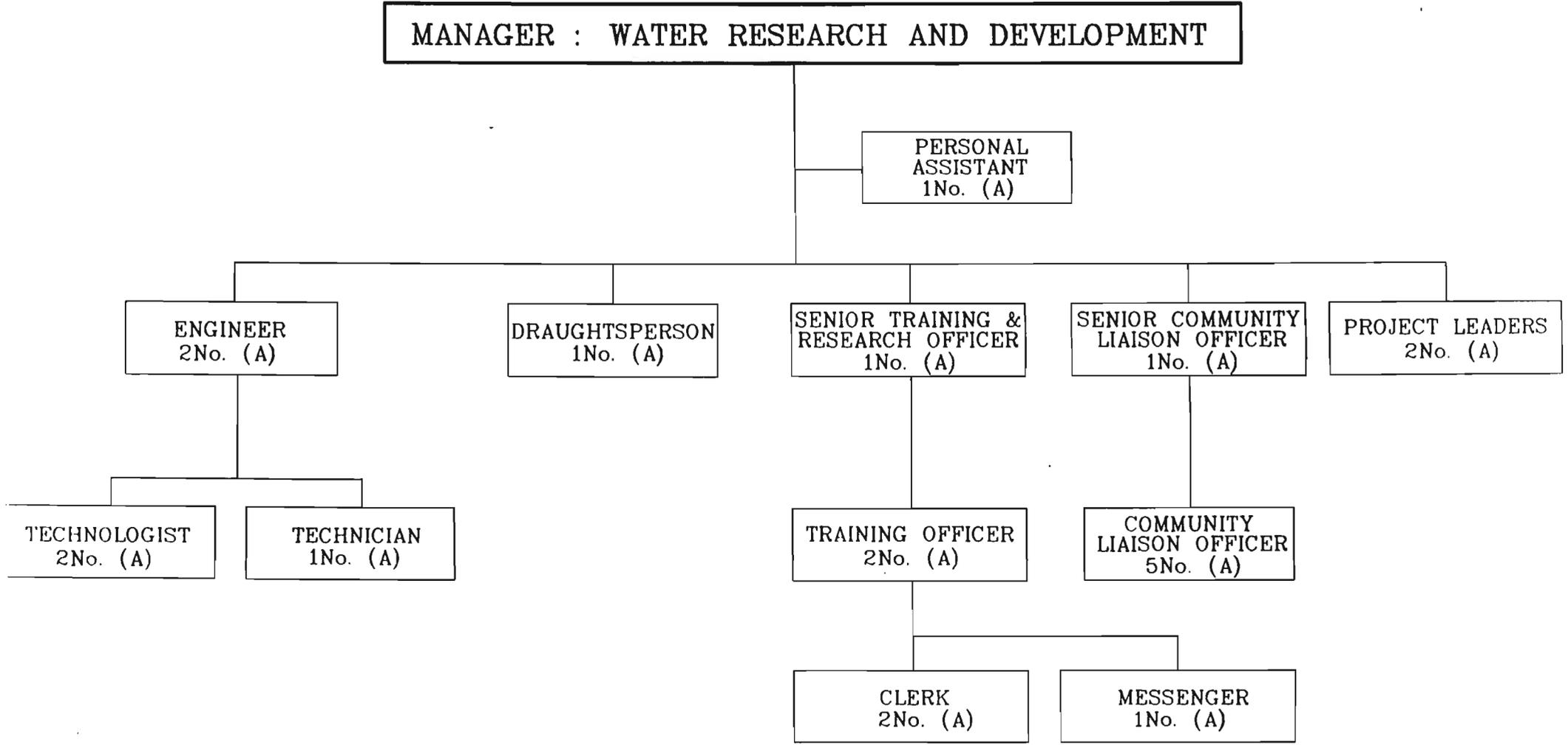
REV.	1
DATE :	28/02/97

WATER DESIGN



REV.	1.
DATE :	26/02/97

WATER RESEARCH AND DEVELOPMENT



Establishment : 22 Post



