



**INTERNATIONAL CONFERENCE ON WATER MANAGEMENT IN FEDERAL
AND FEDERAL-TYPE COUNTRIES**

***CONFERENCIA INTERNACIONAL SOBRE GESTIÓN DEL AGUA EN
PAÍSES FEDERALES Y SEMEJANTES A LOS FEDERALES.***

The Institutional Reforms in South Africa

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ABSTRACT: In South Africa, government is fragmented vertically between 3 spheres of government, namely national, provincial and local government, as well as horizontally between departments with different but inter-related mandates. With the challenges of implementation in an environment of shared responsibility, it is increasingly being recognised that public / government institutions must foster institutional cooperation and interaction for efficient provision of public services, both at the policy-strategy level and the operational-implementation level.

Intergovernmental relations have tended to focus on fiscal relations to promote coherent economic development through alignment of spending on social and infrastructure development. Poor cooperation between institutions in the implementation of their inter-related mandates has resulted in inefficient utilisation of scarce resources (through duplication of work or even opposing objectives) and/or endless disputes.

The National Water Act (Act 36 of 1998) enables the establishment of Catchment Management Agencies (CMAs) in the 19 Water Management Areas (WMA) established in South Africa. These CMAs will ultimately take responsibility for all activities required to enable and support water resources regulation, including authorising the use of water and ensuring that water related activities are performed in accordance with the Catchment Management Strategy (CMS) that is developed in the relevant WMA.

The recent Local Government demarcation process and the ongoing specification of the powers and functions between the District, Local and Metro Councils have further clarified the roles and functions of Local Government. Local Government is constitutionally responsible for the implementation and control of a range of activities that affect water resources. In particular, local government has key responsibilities related to water resources management (WRM) including ensuring provision of municipal services, rural development strategies, municipal spatial development and infrastructure planning, environmental management, including pollution control and waste management.

The South African Constitution requires all organs of state and spheres of government to observe and adhere to the principles and conduct their activities within the parameters of cooperative governance. Although there is general acceptance and support for this requirement, the water sector has not been particularly effective at pragmatically implementing these sentiments nor making them operational. As CMAs are established and local government continues to take on its Constitutional mandates, the need for cooperation between these two institutions will be critical to the effective, efficient and sustainable implementation of WRM.

KEY WORDS: *water reforms, catchment management agencies, equity, redress, cooperative governance*

LIST OF ABBREVIATIONS

WRC	Water Research Commission
MAR	Mean Annual Runoff
WSA	Water services Authority
DEAT	Department of Environmental Affairs and Tourism
DWAF	Department of Water Affairs and Forestry
WMA	Water Management Areas
CMA	Catchment Management Agencies
SALGA	South African Local Government Association
MEC	Member of Executive Committee of South African parliament
MINMEC	Minister and MECs
NIGF	National Intergovernmental Forum
NCOP	National Council of Provinces
IEC	Independent Electoral Commission
DPLG	Department of Local and provincial Government
IDP	Integrated Development plans
NWRS	National Water Resources Strategy, first edition of 2004
NEMA	National Environmental Management Act 107 of 1998
DFA	Development Facilitation Act, 1995
PPA	Physical Planning Act. 1991
CARA	Conservation of Agricultural Resources Act 43 of 1983
SSA	Sea Shore Act of 1935
MLRA	Marine Living Resources Act of 1998
NFA	National Forests Act of 1998
MA	Minerals Act of 1991
MPRDA	Minerals and Petroleum Resources Development Act 28 of 2002
NHRA	National Heritage Resources Act of 1999

1. GENERAL INTRODUCTION

South Africa's water law comes out of a history of conquest and expansion. The colonial law-makers tried to use the rules of the well-watered colonizing countries of Europe in the dry and variable climate of Southern Africa. They harnessed the law, and the water, in the interests of a dominant class and group which had privileged access to land and economic power. It is for this reason according to the (White paper, 1997) that the new democratic government has been confronted with a situation in which not only have the majority of South Africa's people been excluded from the land but they have been denied either direct access to water for productive use or access to the benefits from the use of the nation's water.

Hydrologically, South Africa is located in a predominantly semi-arid part of the world. The climate varies from desert and semi-desert in the west to sub-humid along the eastern coastal area, with an average rainfall for the country of close to 500 mm per year, which is well below the world average of about 860 mm per year. As a result, South Africa's water resources are, in global terms, scarce and extremely limited in extent. There are no truly large or navigable rivers in South Africa and the total flow of all the rivers in the country combined adds up to approximately 50 million m³ per year; less than half of that of the Zambezi River, the closest large river to South Africa. Although groundwater plays a pivotal role in rural water supplies, the country is generally underlain by hard rock formations with no major groundwater aquifers which could be utilised on a national scale (DWAF, 2004).

Attributable to the poor spatial distribution of rainfall, the natural availability of water across the country is also highly uneven. This is compounded by the strong seasonality of rainfall over virtually all of the country as well as the high within-season variability of rainfall and consequently of runoff. As a result, streamflow in South African rivers is at relatively low levels for most of the time, with sporadic high flows occurring; characteristics which limit the proportion of streamflow that can be relied upon to be

available for use. To aggravate the situation, most urban and industrial development, as well as some dense rural settlements, have established in locations remote from large watercourses; dictated by the occurrence of mineral riches and influenced by the peculiar political disposition of the past, rather than by the plentiful availability of water. As a result, the requirements for water already far exceed the natural availability of water in several river basins. Widely spread and often large-scale transfers of water have, therefore, in the past been introduced in South Africa.

These imbalances between the occurrence of and requirements for water are profoundly evident when comparing some basic parameters with respect to the different Water Management Areas, as presented by the statistics to follow. Of the 19 WMAs in the country, only the Mzimvubu to Keiskamma WMA is currently not linked to another WMA through interbasin transfers, giving effect to one of the main principles of the NWA which designates water as a national resource.

Four of the main rivers in South Africa are also shared by other countries. These are the Limpopo, Inkomati, Pongola (Maputo) and Orange Rivers, which together drain about 60% of the land area and contribute over 30% of the country's total surface runoff (river flow). Approximately 70% of the gross domestic product (GDP) of South Africa and a similar percentage of the population of the country are supported with water from these rivers, making the judicious joint management thereof of paramount importance to South Africa. Eleven WMAs share international rivers.

Reference to the location of the respective WMAs, schematically showing inter-WMA transfers, is given in **Figure 1.1**. A graphical comparison of the natural occurrence of water, the population and the economic activity per WMA is given in **Figure 1.2**, clearly demonstrating the exceedingly varied conditions among the WMAs.

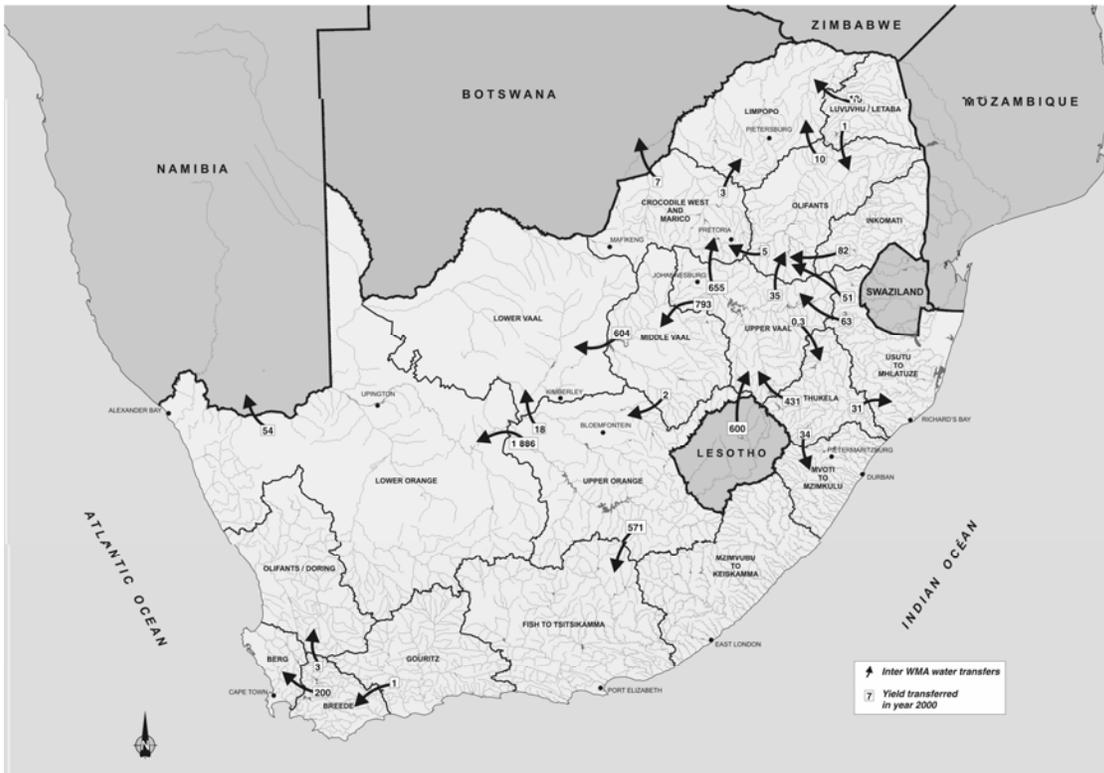


Figure 1.1 Location of WMAs and inter-WMA transfers

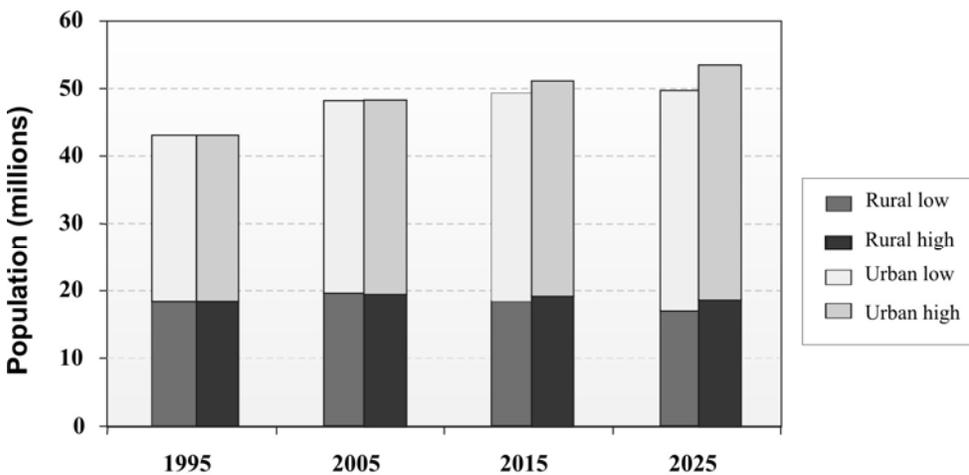


Figure 1.2 Comparison of the MAR, population and economic activity per WMA

The total mean annual runoff (MAR) of South Africa under natural (undeveloped) conditions is estimated at 49 500 million m³/a, which includes about 4 650 million m³/a which originates from Lesotho and approximately 2 500 million m³/a from Swaziland, that naturally drain into South Africa. This represents of the total renewable fresh water

resources occurring in the country, as a long term average. A portion of the MAR needs to remain in the river to satisfy the requirements for the ecological component of the Reserve, while only a portion of the remainder can practically and economically be harnessed as usable yield.

2. Drivers for water reforms (WRC, 2006)

The water crisis supply driven approaches have exhausted the limited available resources through the building of numerous large dams meant to supply the limited white population. With the end of apartheid, 10 fold water demands were to be satisfied. This promoted a demand driven approach which has redress and equitable water allocations as central themes (White paper, 1997). During the early 1980s, real data from national water quality monitoring networks which were established from 1970 onwards began to offer concrete evidence for the steady and in some areas rapid degradation in the quality of water resources in South Africa (Roux, et al 2006). This is at the time when the world started realizing the global climate threats and initial understanding of the causes brought increased emphasis on environmental sustainability as essential for sustained economic growth. It was evident that there were strong technical motivations for policy review and in this sense the political will provided the gap for a necessary technical review (MacKay, 2005)

The institutional reform referred to here pertains mainly to the policy and organizational transformation in South Africa which is meant to bring democratization to the management of water resources. More focus will be placed on Catchment Management Agencies (CMA); the processes for their establishment and the successes and challenges thereof.

“The reforms must reflect the requirements of fairness and equity, values which are cornerstones for South Africa’s new Constitution. It must also reflect the limits to the water resources available to us as a nation”, the White paper, 1997. The importance of access to water on an equitable basis has formed part of the political debate since the development of the Freedom Charter and the establishment of the new South African

Constitution. (WRC, 2004). The vision for water institutional reforms is hence to yield better management of water resources where processes are made more effective for achieving South Africa's development vision of "better life for all".

The purpose for the reform in South Africa as stated in Section 2 of the NWA is "to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways that take into account;

1. meeting basic human needs of present and future generations;
2. promoting equitable access to water;
3. redressing the results of past racial and gender discrimination;
4. promoting the efficient, sustainable and beneficial use of water in the public interest;
5. facilitating economic and social development;
6. providing for growing demand for water use;
7. protecting aquatic and associated ecosystems and their biodiversity;
8. reducing and preventing pollution and degradation of water resources;
9. meeting international obligations;
10. promoting dam safety and
11. managing droughts and floods.

And for achieving this purpose, to establish suitable institutions and to ensure that they have appropriate community, racial and gender representation.

The South African Constitution serves as the base for establishing and promoting cooperative governance between government institutions. The South African government systems of distinctive, interdependent and interrelated spheres of government serve as the other driver for cooperative governance. Based on these factors, a number of mechanisms and initiatives have been developed to promote cooperation between and within government institutions. These mechanisms are discussed later in the document.

The Constitution sets out three spheres of governance as independent and distinct but at the same time interdependent and interrelated. The three spheres are National, Provincial and Local Government. Different to the previous Apartheid Government System, the constitution recognises the independence of each sphere of governance while linked to central government. The *distinctive* character of each sphere of government, according to the constitution of South Africa means that each sphere has a degree of legislative and executive autonomy. Each sphere is distinguishable and has powers to make laws and execute them. The *interdependent nature* of each sphere, relates to the degree to which each sphere depends upon another for proper fulfillment of its constitutional functions. Within this character of interdependence there is a duty of monitoring other spheres, the responsibility for empowerment and oversight and intervention when a sphere is failing to fulfill its constitutional role. This happens in a hierarchical manner where national government monitors and intervenes at provincial level and provincial government does the same for local government. The *Interrelated nature* of the spheres of government fosters cooperation with one another in mutual trust and good faith for the greater good of the country as a whole.

The three characteristics (**distinctive, interdependent and interrelated nature**) on their own pose challenges to cooperative governance, as they require each sphere of government to have executive autonomy while depending on and cooperating with one another.

The implications of the above are that, even though the three spheres of governance may be distinct and independent of each other, they cannot function without cooperating as their planning and decision-making is influenced by each other. Further to this, Section 155(7) of the constitution gives the National and the Provincial spheres the executive authority to oversee the performance by the municipalities in relation to their functions, specifically matters indicated in schedule 4 and 5 of the constitution and any other matters assigned by legislation to local government institutions.

In achieving this cooperation, Section 41(1) of the Constitution sets out three specific principles that should guide cooperation between the institutions. These are:

- a. Unity
- b. Decentralisation
- c. Cooperation, which includes the following:
 - I. Fostering friendly relations between all levels of government;
 - II. Assisting and supporting one another;
 - III. Informing one another of, and consulting one another on, matters of common interest;
 - IV. Coordinating their actions and legislation with one another;
 - V. Adhering to agreed procedures; and
 - VI. Avoiding legal proceedings against one another.

The implications from the above is that all spheres of government and organs of state should work towards promoting good working relations with one another in order to effectively and efficiently deliver services to citizens. In working together the National and provincial government should support and strengthen local government institutions in performing their functions.

2.1 Types of Governmental Relations:

- (i) Inter-governmental Relations:
 - (a) Horizontal Inter-governmental Relations, i.e. the relationships between the two or more government institutions within the same sphere of governance, e.g. Department of Water Affairs (DWA) and Department of Environmental Affairs and Tourism (DEAT).
 - (b) Vertical Inter-governmental Relations, i.e. the relationships between the government institutions or agencies from different spheres of governance.

(ii) Intra-governmental Relations

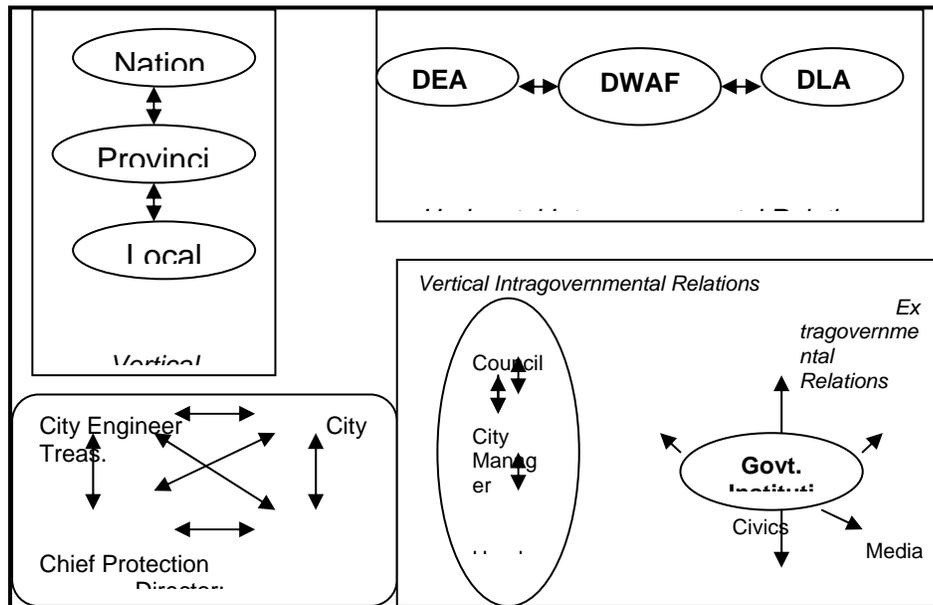
(a) Vertical Intra-governmental Relations, i.e. the relationships that exist within the hierarchy of the institution, e.g. Council, Municipal Manager and the heads of departments.

(b) Horizontal Intra-governmental Relations, i.e. the interaction of officials and functional sections within organisations.

(iii) Extra-governmental Relations

This refers to the relations and interactions between the officials of governmental agencies and external institutions, which include private sector institutions as well as non-governmental institutions. These relations manifest themselves in different, dimensions, depending on the functions and mandates of the department. The following may be the categories or dimensions of extra-governmental relations:

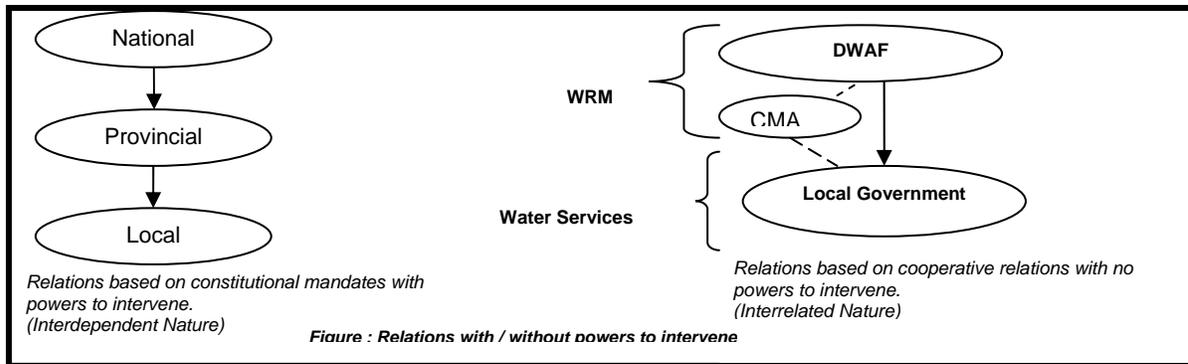
Figure: *Types of Governmental Relations*



Source: *Du Toit, Van Der Waldt, Bayat and Cheminai*s

The figure above gives reference to the various types of relations that could exist between and within institutions. Vertical intergovernmental relations present a case of constitutional mandate where relations are also governed by certain provisions of the constitution. These provisions are relations of hierarchy between national, provincial and local government. It is also the overriding powers granted to the parliament if there is proven failure by a sphere of governance to perform the expected functions. The implications are that the parliament, national government and province are granted powers to intervene and implement measures necessary to achieve the intended objectives.

Contrary to powers to intervene, water resource sector presents a different scenario. Both vertical and horizontal intergovernmental relations present a case where there are mandates that impact on another sphere or department yet there are no powers to intervene if certain obligations are not fulfilled. This refers to national mandates that interfere with local government mandates. Reference can be made to the subject of the study, i.e. water resource management mandate impacting on local government mandate and vice versa. The other reference can be environmental planning activities by DEAT requiring DWAF cooperation. The consequence of these instances is the need to create cooperative relations between institutions in order to complete the cycle of mandates. However these cooperative relations should not create an opportunity for other institutions to perform functions which they have no mandate for. Water resource management remains a national mandate and the CMA is mandated to perform this function on behalf of DWAF. Functions such as water services remain a local government mandate; no other institutions may perform it unless it is based on contract with the Water Services Authority (WSA).



The relations in this instance are not based on hierarchy, but it is based on cooperative relations that need to be developed and be complemented with relevant mechanisms. Cooperation that takes place between institutions should respect each others' autonomy and view each other as equal partners.

3. Current Mechanisms and Strategies for Cooperation

In the endeavors to encourage cooperation between the institutions, the government of South Africa has engaged in a number of mechanisms and strategies. However within these mechanisms and strategies there are a number of challenges that pose as major obstacles to the intended vision. Cooperation between government institutions occur at different levels, it is therefore important to note where there is interaction and the challenges that are faced.

3.1 Cooperation at political / management level

MINMEC

This is committee/ meeting between the minister of a specific department and the MEC of the department from the nine provinces. Depending on the nature of the department, the committee may include representatives of other intergovernmental structures, e.g. chairpersons of SALGA (South African Local Government Association) sitting on the Minmec of Provincial Affairs and Constitutional Development Minister and the MECs for Local Government. The Minmec's role is to ensure cooperative governance, consultation and cooperation at political level between the spheres of governance on matters relating to the ministry. The matters may relate to the legislative discussions, e.g.

white papers, development planning and strategies, etc. The overall objective of the Minmec is to manage partnership and institutional arrangements that go beyond boundaries.

The Challenge for MINMEC

In as much as the Minmec proves to be one of the major structures to achieve cooperation and coordination, it has been seen as overriding the autonomy of the provinces in certain aspects of governance. Currently seen as the main area of contention, are the provincial powers and the extent to which the Minimec overrides the provincial legislature and executive to determine the policy. In certain instances the Minmec tends to provide an alternative channel for policy making to the established provincial channels. The procedure in principle is that the provincial policy is determined by the executive headed by the Premier. The MECs are therefore bound by the decision at this level as well as by the provincial legislature. However in reality the policy issues agreed upon at the Minmec may result in pre-empting the work of the provincial legislature. The results are that the provincial executive may end up facing the need to implement policy that it has not approved. The challenge here is that, who are MECs answerable to between the minister and the provincial structures?

Inter-governmental Forums

A Forum that is comprised of political office bearers from the three spheres of governance. The forum serves to promote intergovernmental cooperation and decision-making between different levels of governance.

Inter-governmental Forum (National)

The National Intergovernmental Forum (NIGF) was established in 1994 to promote dialogue between the national and provincial governments as well as cooperation, consultation and consensus on matters of common interest. This body constitutes the state

president ex-officio, executive deputy president, premiers, all ministers and their deputies, MECs, NCOP chairperson, chairpersons of portfolio committees on (constitutional affairs, finance and fiscal committee, public service commission), chairperson of SALGA, director generals of all national departments and provincial governments, representative of the IEC (IGR audit, Dec 1999). Local government is represented by the Department of Provincial and Local Government (DPLG) and SALGA in this forum.

A number of challenges have been indicated as being faced by the NIGF. The IGR report, Dec 1999 indicates the following challenges and criticisms based on the audit that had been on the Forum:

- The outcomes of the NIGF meetings were not often clear;
- It lacked executive authority in that it does not make decisions thus becoming a “talkshop”;
- It mainly served as an information sharing platform;
- National government dominated the proceedings; and
- There were little or no substantive strategic policy discussions;
- There was limited interaction across spheres of government;
- The communication system between the national and provincial government was poor;
- It was said to be not cost effective;
- Inadequate linkages with other structures such as MINMECS;
- There was inadequate support from staff;
- It became a briefing session for government.

Based on these problems, the recommendation was the disestablishment of the Forum and a formation of a smaller body that could be used as an instrument to coordinate government programmes, enhance and add value to cabinet decisions.

Provincial Inter-governmental Forum

Provincial inter-governmental forums were established to assist provincial departments to look at issues that cut across their responsibilities. Their composition includes Members of Executive Committees (MECs), Mayors, chairpersons of district councils, regional directors, and organised local government (SALGA). The audit on IGRs key findings on the P-IGF was that they were often too big and their agendas too overloaded for them to be effective. Thus they have not been very successful in many provinces. An additional constrained is that the P-IGF is not a decision making body; members discuss and debate issues. However it was seen as an educational instrument where members assist each other to understand sensitive issues. They were also seen as good networking entities if coordinated properly.

The Presidential Coordinating Council

The Presidential Coordinating Council was established in October 1999 as a replacement of the Premiers Forum, which was disestablished. Its purpose and role is to bring together all premiers, the state president and the national department of provincial and local government to address issues of common interest. It was established to develop provincial policy, prepare and initiate legislation for the province, implement national legislation within the listed areas of Schedule 4 & 5, and promote the development of local government, with far-reaching powers and supervision and intervention as in section 155(7) of the Constitution (IGR audit report, Dec 1999). Local Government is represented by DPLG in this structure with the objective of carrying up issues that impact on local government at policy and strategic level.

3.2 Cooperation at Development and Planning level

Cooperative governance at planning level is governed by the same principles that govern cooperation at political level. These are principles stipulated in the constitution. However, the concept of cooperative governance at planning level is further broadened and put into perspective by the policies and strategies that govern planning in different institutions.

Most of these strategies and policies regard cooperative governance as central to the realisation of planning objectives. These policies and strategies include Integrated Development Planning (IDP) and the Municipal Systems Act. Water resource management planning strategies and policies include National Water Resource Strategy (NWRS) and National Water Act.

4. The Current Institutional Arrangements

The constitution and water; The first of the guiding principles states that South Africa's new water law shall be "subject to and consistent with the Constitution in all matters" and "will actively promote the values enshrined in the Bill of Rights". The need for the South African water law and for a fundamental change in the approaches to water management is underpinned by the Constitution, both in relation to the creation of a more just and equitable society and in relation to the broad need for more appropriate and sustainable use of our scarce resources, driven by the duty to achieve the right of access to sufficient water (The White Paper, 1997).

The Right to Equality; one of the rights which is important for the development of new water policy states that every person is not only equal before the law but also has the right to equal protection and benefit of the law. The Constitution defines equality to include "the full and equal enjoyment of all rights and freedoms", while also stating that in order to promote the achievement of equality, "legislative and other measures designed to protect or advance persons, or categories of persons, disadvantaged by unfair discrimination" may be taken.

The Right to Dignity and Life; water gives and sustains life. The failure of apartheid government to ensure the provision of sanitation and water for basic human needs such as washing, cooking and drinking, for growing crops and for economic development impacted significantly on both the right to dignity and the right to life amongst the black majority. The Constitution provides that every person has a right to life and guarantees the "inherent dignity" of all persons and the "right to have their dignity respected and

protected” and places a duty on the state to make sure that this right is respected, amongst other things, through access to water.

Environmental Rights; The Bill of Rights also gives all South Africans the right to an environment that is “not harmful to their health and well being”, as well as the right to have the environment protected for the benefit of present and future generations. It is therefore, the duty of the state to make sure that water pollution is prevented, that there is sufficient water to maintain the ecological integrity of the water resources and that water conservation and sustainable “justifiable economic and social development” are promoted. This is different from the old approach that pitted environmental goals against economic and development ones, and requires instead that they be integrated.

Property Rights; Although the Constitution guarantees certain protections in respect of property, there are different ways in which a person’s property right can be interfered with by the state. The Constitution makes distinction between deprivation and expropriation. The property clause also makes specific provision for corrective action. It states that no provision of the property rights clause may stop the state from taking legislative and other measures to achieve land, water and related reform, in order to redress the results of past racial discrimination.

The Right of Access to Sufficient Water; The property rights question cannot be understood without looking at the important provision of the Constitution which guarantees every person the right to access to “sufficient water and food” and to “health care services”. Government is instructed to “take reasonable legislative and other measures within its available resources to achieve the progressive realization” of these rights.

Cooperative Government; the management of water is, constitutionally, a national function and the role of the public trustee is ultimately a duty imposed on national government. But since water also address matters such as the environment and pollution

control, which are concurrent national and provincial functions, the national government will address these matters in the spirit of cooperative governance.

5. Formal policies dealing with water and related resources;

The National Water Act (NWA), 1998; The purpose of the NWA is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways which takes into account amongst other factors;

- meeting the basic human needs of present and future generations,
- promoting equitable access to water,
- redressing the results of past racial and gender discrimination,
- promoting the efficient sustainable and beneficial use of water in the public interest,
- facilitating social and economic development,
- providing for growing demand for water use,
- protecting aquatic and associated ecosystems and their biological diversity,
- reducing and preventing pollution and degradation of water resources,
- meeting international obligations,
- promoting dam safety,
- managing floods and droughts;

and for achieving this purpose, to establish suitable institutions and to ensure that they have appropriate community, racial and gender representation.

The National Environmental Management Act (NEMA); This Act was promulgated to implement the constitutional right to a healthy and protected environment (Constitution s24), and therefore to give practical effect to the constitutional principle of sustainable development. Its objectives are summarized in the preamble, and include the following: integration of social, economic and environmental factors in decision-making; integration of legislative input from all spheres of government; integration of good environmental management into all development activities. The principles of the NEMA are contained in section 2 (NEMA Chap 1), serving as the framework for decision-

making by all organs of state where the decisions significantly affect the environment. The principles further provide a basis for the interpretation and administration of all laws that affect environmental protection and management (s2(1)).

Land use and development; The Development Facilitation Act, 1995; Section 3(1) of the DFA states that policy; administrative practice and laws should give content to the fundamental rights of the Constitution. The effect is that environmental health should be pursued in the implementation of land development planning and decision-making.

Physical Planning Acts (PPA) 1967; and 1991 ; The 1967 Act provides for the establishment of statutory control measures to promote coordinated environmental planning and the utilization of resources (PPA, 1967, the Preamble, while the 1991 Act goes further by providing for the promotion and co-ordination of physical planning on a national and regional basis (PPA,1991 s2(2)).

Agricultural Fisheries and Fishery Resources Agricultural Resources; Natural agricultural resources are defined in the Conservation of Agricultural Resources Act (CARA), 1983 as soil, water courses (where a water course is a natural flow path in which run-off water is concentrated and along which it is carried away) and vegetation, excluding weeds and invader plants (CARA s1). The Conservation of Agricultural Resources Act is aimed at conserving natural resources by maintenance of the production potential of land, erosion prevention, protection of water resources and natural vegetation, and combating of declared invader plants (CARA s3).

Marine Resources; The Sea-Shore Act (SSA) of 1935 provides for the protection of the sea and sea-shore through regulations for the control of the removal of material therefrom; and for the control of activities which pose health risks (SSA s10(1)(c) and (d). Also see the regulations published in GN 1720 GG5542 of 2 September 1955; GN R2513 GG7318 of 5 December 1980. Section 38 of the Sea Fisheries Act (SFA), 12 of 1988 also provides for controlled removal of materials from the sea and shore).

The Marine Living Resources Act of 1998 (MLRA) is aimed at the conservation of the marine ecosystem, and contains the following principles and objectives: to achieve optimum utilization and ecologically sustainable development of marine living resources; to conserve marine living resources for present and future generations; to utilize marine living resources for economic growth, human resource development and sound ecological balancing consistent with the development objectives of national government; to protect marine biodiversity (MLRA, s2. Certain provisions of the Sea Fisheries Act (see note 34) were retained when this Act came into effect).

Forests The National Forests Act (NFA), 1998 is aimed at the promotion of sustainable management and development of forests for the benefit of all; and the promotion of the sustainable use of forests for environmental, economic, educational, recreational, cultural, health and spiritual purposes (NFA, s1). A policy for the management of forests must be developed and implemented by the Minister (NFA, s46). He may also develop criteria for measuring forest management against the principles of the Act (NFA, s4). These management tools are still in formative stages.

Mineral Resources; The Minerals Act (MA), 1991 regulates the optimal exploitation, processing and utilization of minerals and the orderly utilization and rehabilitation of the surface of land after mining operations in accordance with an environmental management programme, which must be approved by each department charged with the administration of any law relating to any matter affecting the environment. Regulations under the Minerals Act have been issued to address, inter alia, environmental matters (GN R992/2741/1, as amended). A White Paper on a Minerals and Mining Policy was published in 1998 (DME *A Minerals and Mining Policy for South Africa* (White Paper) 1998), in which the environmental impact of mining activities is addressed.

The Mineral and Petroleum Resources Development Act, 2002 (MPRDA), was recently published (GG 23922 of 10 October 2002). The objectives of this Act include the giving of effect to the state's sovereignty and custodianship over all mineral resources, and also the constitutional principle to ensure that the nation's mineral resources are developed

and managed in an orderly and ecologically sustainable manner, while optimizing justifiable social and economic development (MPRDA s2(a), (b) and (h)). This Act specifically accepts the application of the principles contained in section 2 of NEMA, which will apply to all prospecting and mining operations, and will serve as guidelines for the implementation, interpretation and administration of all environmental requirements under the proposed Act (MPRDA s37). It states further that all mining operations must be conducted in accordance with the generally accepted principles of sustainable development by integrating social, economic and environmental factors into the planning and implementation of projects, to ensure that the exploitation of mineral resources serves present and future generations (MPRDA s37(2)).

Heritage Resources The general principles for heritage resources (National Heritage Resources Act 25 of 1999 (NHRA) s2) management include an obligation on the State (by participative management) to carefully manage heritage resources to ensure their survival in the interests of all South Africans, and to promote, by policy, administrative practice and legislation, the integration of heritage resources conservation in urban and rural planning and social and economic development (NHRA s5).

No specific provision is made in the National Heritage Resources Act, 1999 for the integration of the management of cultural resources with management of natural resources. Emphasis is placed on the conservation (protection, maintenance, preservation and sustainable use) of heritage resources in spite of socio-economic development. Reference is, however, made to the principle that laws, procedures and administrative practices relating to heritage resources management must give content to the constitutional fundamental rights (NHRA s5(3)(c)).

Ad hoc conservation laws Various laws exist with ad hoc conservation purposes, such as the Game Theft Act 105 of 1991, Lake Areas Development Act 39 of 1975, Mountain Catchment Areas Act 63 of 1970, National Parks Act 57 of 1976, Sea Birds and Seals Protection Act 46 of 1973, Sea-Shore Act 21 of 1935, Antarctic Treaties Act 60 of 1996, Maritime Zones Act 15 of 1994, World Heritage Convention Act 49 of 1999,

Atmospheric Pollution Prevention Act 45 of 1965, Hazardous Substances Act 15 of 1973, Dumping at Sea Control Act 73 of 1980, Marine Pollution Acts 6 of 1981, 2 of 1986 and 64 of 1987; Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act 36 of 1947, and the provincial environmental and resources laws

Indigenous customary laws; In the past, the freedom to use common resources was subject to the local leader's power to regulate access, if and when this became necessary in the interests of the community as a whole. To preserve a diminishing water supply, for example, taking water for certain usage could be prohibited indefinitely or for a specified period. Customary law gave traditional authorities all the powers they needed to protect the environment, and there is ample evidence to show that they reacted when resources were in danger of running out (Thompson, 2006).

The creation of the new constitutional state in South Africa posed a variety of legal and political problems for the traditional leaders, since their undifferentiated powers of governance under customary law might be in conflict with many aspects of the new order. The Constitution of the Republic of South Africa Act, 1996 confirmed the status quo of traditional leaders with the qualification that the powers of the leaders are subjected to the fundamental rights and legislative control. These broad terms left all the details of compliance with the principles of constitutional government to be worked out by the courts and legislation. This process is far from complete. Within IWRM, traditional leadership institutions can play a very critical role in the development and implementation of IWRM strategies. The following can be identified as possible roles:

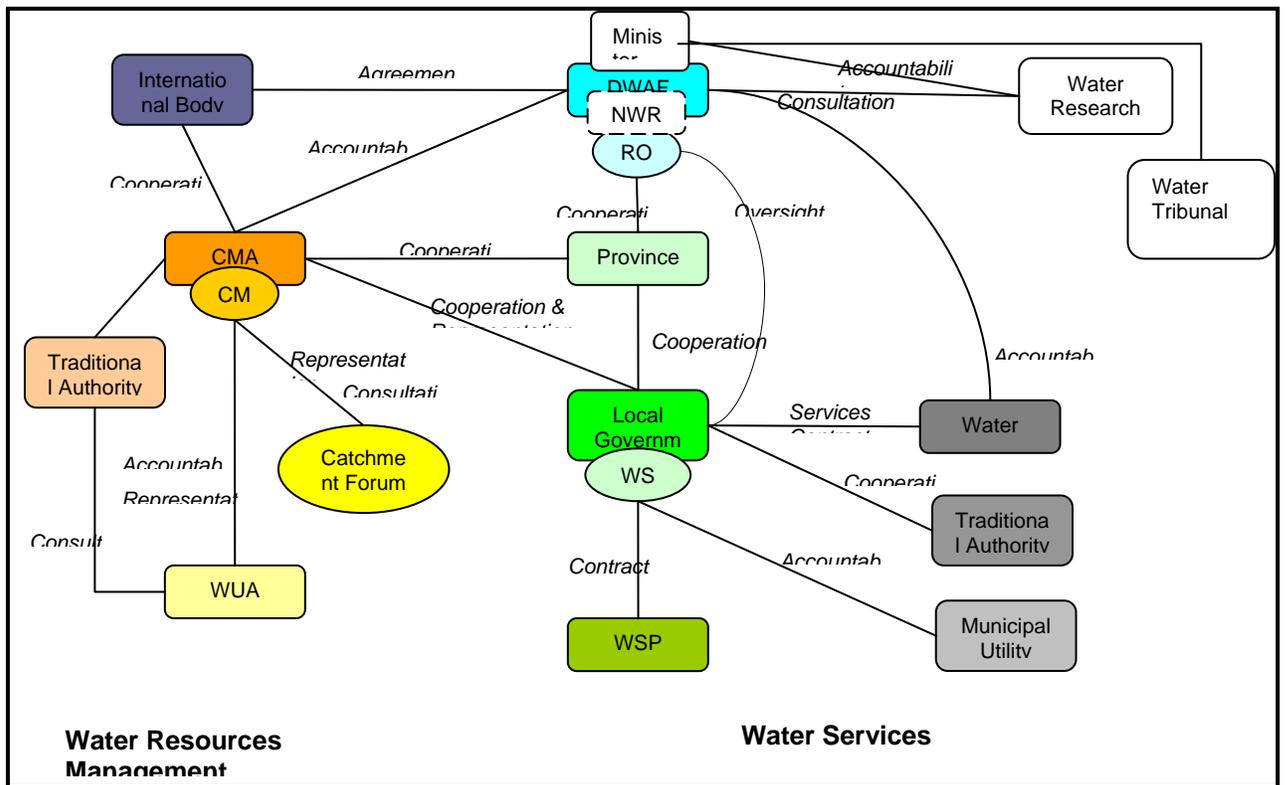
- Traditional leadership could be used by CMAs as a structure to ensure participation within a WMA, thus facilitating community involvement in WRM issues.
- The structure could be used as a source of empowerment for previously disadvantaged communities.
- Traditional leadership can be used as a platform to implement the IWRM strategies and most importantly implement and create an understanding of the CMSs.
- The leadership could also be used to identify community needs for IDP within a WMA.

6. The Organizational Framework for Water Management

The Minister of Water Affairs and Forestry; as the holder of the public trust and is the custodian of water resources who carries out public trust obligations in a way which (as cited in Thompson, 2006);

- Guarantees access to sufficient water for basic domestic needs
- Makes sure that the requirements of the environment are met
- Takes into account the interconnected nature of the water cycle, a process on which the sustainability and renewability of the resource depend
- Makes provision for the transfer of water between catchment
- Respects South Africa's obligations to its neighbours
- Fulfils its commitment as custodian of the nation's water

The Minister may in writing delegate a power vested in him or her to; An official of DWAF by name, The holder of an office in DWAF, A CMA, A WUA, A body responsible for international water management, A person who fulfils the functions of a water management institution, An advisory committee or to a water board. The delegation may be subject to conditions and limitations as specified. The Minister may not delegate the power to; Make a regulation, Authorize a water management institution to expropriate property, Appoint a member of a governing board of a CMA, or Appoint a member of the Water tribunal.



The National Water Tribunal; The Water Tribunal was established when the Act was promulgated in October 1998. It replaces the Water Court, which ceased to exist when the 1956 Water Act, in terms of which it functioned, was repealed.

It is not a water management institution in terms of the Act, but an independent body with a mandate to hear and adjudicate appeals on a wide range of water-related issues, mainly against administrative decisions made by responsible authorities and water management institutions. It will also adjudicate claims for compensation where a user considers that the economic viability of her or his water-use activity has been severely prejudiced by a refusal to grant a licence, or a reduction in water use when a licence is granted or reviewed. However, some alleged breaches of administrative procedures will be adjudicated by the courts in terms of the Promotion of Administrative Justice Act. The Tribunal has jurisdiction everywhere in the country and it may hold hearings in the areas where the cause of action arose. Its operations are funded from the National Treasury.

Institutions for Infrastructure Development

The Department has developed and owns, operates and maintains a number of water resources schemes comprising dams and related infrastructure such as pumping stations, pipelines, tunnels and canals. The schemes vary greatly in size. The infrastructure has an estimated replacement value of some R38 000 million and occupies some 2 500 departmental staff in its management (as in 2001).

The Department has developed and maintained considerable specialist design and construction capacity, which is of strategic importance given the high level of specialist expertise required for such activities and the limited alternative sources. The responsibility for operating and maintaining schemes that are of local importance, or mainly serve one user sector, such as agriculture or a single municipality, are being transferred to the appropriate water user associations and water services institutions. Subject to the agreement of National Treasury, the schemes may eventually be transferred into the ownership of the operating institution.

This will, however, not be the case for schemes that are of wider importance because they transfer water across national boundaries or between water management areas, serve multiple user sectors or large geographic areas, comprise several interconnected catchments, or serve a strategic purpose, such as the generation of electricity for the national grid. Examples are large systems such as the Vaal, Umgeni, Amatole and Riviersonderend-Berg River systems, major water transfer schemes such as Thukela-Vaal and Orange-Fish, and major dams such as Gariep and Van der Kloof. These schemes are regarded as national water resources infrastructure.

Currently, the South African national water resources infrastructure agency limited Bill is undergoing approval processes. The Bill provides:

For the incorporation and establishment of The South African National Water Resources Infrastructure Agency as a juristic person wholly owned by the State to be tasked with the responsibility to administer, fund, finance, develop, alter, maintain, rehabilitate,

refurbish, operate, manage and provide advisory services in respect of national water resources infrastructure; to provide for the disestablishment of the Trans-Caledon Tunnel Authority; and to provide for matters connected therewith.

Institutions for International Water Management

Internationally shared river basins comprise about 60 per cent of South Africa's land surface. The Act, together with the Revised Protocol on Shared Watercourses in the Southern African Development Community, commits South Africa to sharing water in international river basins with neighbouring countries in an equitable and reasonable manner. Accordingly, the Minister may, in consultation with the Cabinet, establish institutions to implement international agreements in respect of the development and management of shared water resources and to pursue regional co-operation in water matters.

Three existing bodies, the Trans-Caledon Tunnel Authority (RSA portion of the Lesotho Highlands Water Project), the Komati Basin Water Authority (RSA-Swaziland), and the Vioolsdrift Noordoewer Joint Irrigation Authority (RSA-Namibia), are regarded as international water management bodies in terms of the Act. Although not established in terms of the Act, the following international structures have been established to further the development and management of the four international river basins that South Africa shares with neighbouring countries:

- Lesotho Highlands Water Commission (LHWC) (Lesotho, RSA).
- Swaziland/RSA Joint Water Commission.

These were originally project-related and focused on the Lesotho Highlands Water Project and the Komati River Development Project respectively, but both now deal with other matters of common interest.

- Orange/Senqu River Basin Commission (Botswana, Lesotho, Namibia and RSA).
- Limpopo Basin Permanent Technical Committee (LBPTC) (Botswana, Mozambique, RSA and Zimbabwe).

The former is a river basin commission in terms of the Revised Protocol on Shared Watercourses in the Southern African Development Community. The Agreement to establish the Limpopo Watercourse Commission was signed in Maputo in November 2003. This will replace the LBPTC

- Botswana/RSA Joint Permanent Technical Water Committee.
- Mozambique/RSA Joint Water Commission.
- Permanent Water Commission (PWC) (Namibia, RSA).
- Swaziland/Mozambique/RSA Tripartite Permanent Technical Committee (TPTC).

These deal with matters of common interest.

The National Water Research Commission (WRC). Since 1971, the responsibility for leading water-related R&D on behalf of the government and water sector of South Africa has been vested in the Water Research Commission (WRC). Funded in terms of the Water Research Act of 1971 by water users through a levy on water usage, the WRC is an independent organization that reports to Parliament through the Minister of Water Affairs and Forestry. The WRC does not itself conduct research, but has traditionally assessed and prioritized research needs in close consultation with stakeholders, contracted research to meet these needs and disseminated resulting knowledge with a view to solving water-related problems. Inherent in the WRC's funding of research under contract has been the development of capacity and skills needed to continuously empower the water sector to support national growth and development objectives.

The Department of Water Affairs and Forestry; prior to 1998, the management of water resources and the supply of water and sanitation were the responsibilities of the National Department of Water Affairs and Forestry (DWAF) which has regional offices in every province in the country. Although the regional DWAF offices excluded the servicing of the old homeland areas (namely; Ciskei, Transkei and Venda), they had to be fully amalgamated post 1994. DWAF has undergone a number of serious reforms as a consequence of the government's new structures. At that stage, the DWAF collective grew in numbers and reached a critical mass of 36, 000 employees nationally.

At present the DWAF is responsible for administering all aspects of the Act on behalf of the Minister. The Department is responsible for the development and implementation of strategies and internal policies, plans and procedures, and regulatory instruments relating to the Act. It is also responsible for planning, developing, operating and maintaining state-owned water resources management infrastructure, and for overseeing the activities of all water management institutions. CMAs will be supported by lower tier institutions for furthering public consultations. Those are Catchment Advisory Committees, WUA, CMF, etc. Other relevant institutions include the Water Tribunal for users legal recourse, the Water research Commission under the Water Research Act of 1974 and the Ministers' National Advisory Council set under the 1956 Act.

The Department's role will, however, progressively change as regional and local water management institutions are established and the responsibility and authority for water resources management are delegated and assigned to them. The Department's eventual role will mainly be to provide the national policy and regulatory framework within which other institutions will directly manage water resources, and to maintain general oversight of the activities and performance of these institutions. The Department will continue to manage South Africa's international relationships and activities in water matters, although some aspects of this may eventually also be handled through institutions established with neighbouring countries.

In terms of the NWA, the Minister for DWAF may establish Water Management Institutions (WMIs) to support the mandate of managing water resources. The Act provides for a phased establishment of WMIs to undertake the WRM functions that are currently performed by DWAF. Operational policies define that there will be 19 Catchment Management Agencies (CMA), one for each Water Management Area. CMAs will represent the second tier of governance accountable to the Minister of DWAF. CMAs operate on hydrological boundaries and are governed by a Governing Board made up of the users in each locality. The Department's organisational structure will also continue to change in accordance with its new role and functions under the Act, and to

facilitate the development of well-defined relationships with other water-related institutions. The following principles and approaches are guiding the transformation process:

- The state will progressively adjust its role in water resources management to concentrate on policy and strategy issues, overall regulatory oversight, and institutional support, co-ordination and auditing. Its Regional Offices are currently responsible for direct service provision and their transformation will be particularly profound.
- The state may progressively withdraw from direct involvement in the development, financing, operation and maintenance of water resources infrastructure as this is at odds with the regulatory role. Alternatively, if the Department retains the development function, this role will be clearly separated from its policy and regulatory functions. The question of which institution(s) should be responsible for infrastructure development and operation is still under discussion, and is discussed below.
- The state will transfer the responsibility for operating and maintaining some infrastructure to water management institutions and water services institutions, but catchment management agencies may take on these responsibilities only if their regulatory role is not prejudiced.
- The establishment, capacitation and empowerment of catchment management agencies for all water management areas should proceed as rapidly as possible. The transitional period during which an agency and the relevant Regional Office are jointly responsible for water resources management must be carefully managed to reduce uncertainties around the division of functional responsibilities and accountability.

With the National Water Services Act, promulgated in 1997 the role of local government structures as the responsible authorities for water supply and sanitation provisions was redefined. The process of staff and water supply infrastructure transfers is still underway. The DWAF still retains the role of support, monitoring and evaluation over local government for water service delivery purposes.

Water Management Areas (from NWRS) After a countrywide process of public consultation, 19 water management areas covering the entire country were established in October 1999 by Government Notice No. 1160. The number of water management areas and the location of their boundaries were determined by considering factors such as -

- the institutional efficiency of creating a large number of catchment management agencies, each managing a relatively small area, compared with a small number of agencies, each managing a larger area;
- the potential for a catchment management agency to become financially self-sufficient from water use charges;
- the location of centres of economic activity;
- social development patterns;
- the location of centres of water-related expertise from which the agency may source assistance; and
- the distribution of water resources infrastructure.

It is important to note that the boundaries, firstly, do not coincide with the administrative boundaries that define the areas of jurisdiction of provincial and local government authorities. Secondly, the boundaries are not irrevocably fixed for all time, and can be changed if necessary as management experience and understanding of hydrologic systems grows, to achieve greater efficiency or effectiveness. Operational experience and interactions with water users and other stakeholders since the water management area boundaries were established in 1999 have indicated that minor amendments to the Gazetted boundaries will have benefits in terms of water resources management in general, and for billing for water use charges in particular. The proposed amendments address cases where, for instance, the area covered by a water user association, a groundwater aquifer or even an individual farm falls into two water management areas and where, without the amendments, charges would eventually be payable to two catchment management agencies.

Catchment Management Agencies (CMAs)

CMA are statutory bodies that will be established by Government Notice. They will have jurisdiction in defined water management areas, and will manage water resources and co-ordinate the water-related activities of water users and other water management institutions within their areas of jurisdiction. An agency begins to be functional once a governing board has been appointed by the Minister (see also Advisory Committees below) and is then responsible for the initial functions described in section 80 of the Act, as well as any other functions delegated or assigned to it. The governing board must represent all relevant interests in the water management area and must have appropriate community, racial and gender representation.

The initial functions of the agencies include the important responsibility of developing a catchment management strategy (CMS). This strategy, which may not be in conflict with the National Water Resources Strategy (NWRS) and must give effect to its provisions and requirements, provides the framework for managing the water resources of the area. In particular, it must determine the principles according to which available water will be allocated among competing user groups.

The delegation and assignment of duties and responsibilities will include the financial and administrative responsibilities of setting and collecting water use charges, the technical water resources management functions based on the issues identified in the catchment management strategy, and the responsible authority functions relating to the authorisation of water use. The timing of the delegations and assignments will depend on the capacity of the agency to undertake the functions.

An agency may, with the Minister's written consent, delegate powers to another statutory body, but it may not delegate the power to delegate, and the power to authorise water use may be delegated only to a committee established by the governing board on which a minimum of three board members serve. Agencies may contract public water management institutions or private sector organisations to carry out specified activities,

but preference must be given to local organisations, taking into account their capacity and representivity, and efficiency, quality, time and cost considerations.

In areas where agencies have not yet been established, or where they are not yet fully functional, all powers and duties vest in the Minister, and the Department will undertake the agencies' functions on the Minister's behalf (section 72).

Public involvement in the CMA establishment process is essential, because it contributes to establishing the legitimacy of the institution, assists the advisory committee in making nominations to the Minister for the governing board by identifying representative stakeholder groups, and builds a foundation for the agency to promote public involvement in water resource management. Accordingly, the extent to which stakeholders have been involved in the development of a proposal to establish an agency is one of the most important criteria against which the Minister will judge the merit of the proposal.

Ministerial approval of the proposal will pave the way for the appointment of the governing board and for the board to appoint the necessary staffing structure. Establishment and full empowerment of catchment management agencies in all water management areas will take some time to achieve. In the meantime the Department will manage the areas on the Minister's behalf.

The Department will provide support for the agencies, initially during their development, and subsequently when they are fully established. During the transition period between the establishment of the agencies and their empowerment as responsible authorities, the Department and the agencies will work closely together. The respective roles will change as powers and duties are delegated and assigned to the agencies and it will be essential for roles and functions to be clearly defined at each stage of the transition. Eventually the Department will be responsible only for ongoing oversight and general support of the agencies (NWRS, 2004).

Other water management institutions

In extending the objectives of WRM, the NWA provides for the establishment of other more localised WMIs whose role is to assist the CMA in managing water resources. Depending on their capacity, these institutions may assist the CMA in a number of functions, e.g. the use of Catchment Management Forums (CMF) to promote stakeholder participation and the use of Catchment Management Committees (CMC) to solve local water resource issues within a WMA. Water User Associations (WUA) are also defined in the Act as water management institutions which are in effect co-operative associations of individual water users who wish to undertake water-related activities at a local level for their mutual benefit.

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All public documents can be accessed from the official South African Government site; <http://www.info.gov.za/>
