
Water Law, Water Rights and Water Supply (Africa)

ZAMBIA - study country report

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STUDY REPORT

STUDY SUMMARY REPORT

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Ghana

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SUMMARY

Introduction

Over the past two decades, a number of international declarations have sought to ensure access to safe water and sanitation for the majority (or all) of the world's people. Despite the declarations, however, the reality is that clean water and safe waste disposal remains a life-and-death problem in much of the world – that on the threshold of the 21st century. It is estimated that 1.4 billion people still do not have access to clean water. 2.8 billion have no access to appropriate sanitation. In Africa, more than half of the population is without access to safe drinking water and two thirds lacks sanitary means of excreta disposal. This is both morally and practically unacceptable, for such widespread deprivation in parts of the global village affects us all. It is evident that “business-as-usual” – continuation of the same policies, strategies, funding levels, implementation methods, etc. – will not even result in keeping pace with population growth. A higher level of effective effort and innovation is required to face the challenge of universal coverage.

It is against this background that a collaborative scoping study between Cranfield University, UK; University of Dundee, UK; and the Institute of Hydrology, UK on the one hand and 5 African countries (Zambia, Uganda, Tanzania, Mozambique and Ghana) on the other was conceived.

The specific background to the research is the fact that whereas there is no shortage of government rhetoric in developing countries (and no shortage of international consensus) about the importance of providing clean drinking water to all, extremely rarely is an individual's basic right to an adequate water supply enshrined in law. Water rights and legal issues are often neglected or ignored by governments, funders and implementers of community water supply projects. Indeed there is very little information on water rights and water laws in relation to community water supply provision.

The objective of the study was to identify (and promote awareness and understanding of), the constraints and enabling conditions provided by existing water laws (statutory and customary) with regard to the poor having access to, or being entitled to, a safe and reliable supply of water and sanitation facilities.

The list of rights that society considers basic changes with time. There is probably not much debate about the now generally accepted political and civil rights as enshrined in the US Constitution's Bill of Rights, for example. There is however a second generation of rights about which there is much debate – the economic, social and cultural rights. These are sometimes called “subsistence” rights and the right to water may be considered one of them. Suffice it to state that humanity has set itself a noble goal – about which there is not much debate – the goal of universal access to safe water and sanitation.

Zambia's population stands at 9.4 million with a high urbanisation rate resulting in over 50% of the population living in urban and peri-urban areas. The WHO/UNICEF Monitoring Programme (1995) put Zambia's population covered with water at 43% and the population with access to sanitation at 23%. The estimates tend to vary from agency to agency but the overall picture is roughly the same. This is so despite commendable investment programmes being implemented with the support of donor agencies during and

after the International Drinking Water Supply and Sanitation Decade (IDWSSD). One major lesson has been that solutions to community water supply and sanitation should be sought less in technology and products, and more in social, institutional and financial domains, etc. In other words, more in the “software” domain. Unfortunately, even in this new awakening, water laws/rights have so far been considered peripheral.

The Policy and Statutory Legal Framework for Water (and Sanitation)

The overall objective of Zambia’s Water Policy is stated thus:

“ To promote sustainable water resources development with a view of facilitating an equitable provision of adequate quantity and quality of water for all competing users at acceptable cost and ensuring security of supply under varying conditions”.

In line with the water policy, an interministerial coordination body, the Programme Coordination Unit (PCU) was established to spearhead the reorganisation of the water supply and sanitation sector. A close examination of the policy shows some obvious incoherencies. With regard to the goal of universal coverage, the policy does not provide a functional focus on extending services to the unserved as a matter of urgency.

The major legal enactments relating to water are the Water Act and the Water Supply and Sanitation Act. Other related legislation include the Natural Resources Conservation Act, the Environmental Protection and Pollution Control Act, the Local Government Act, the Lands Acquisition Act, the Lands Act and the Public Health Act. The Constitution of Zambia (Zambia’s supreme law) and the International River Basin Treaties also have a bearing on water supply access/provision.

Generally speaking, the current policy and statutory legal framework is unsatisfactory in as far as attempting to address the urgent task facing Zambia – providing universal access to safe water and appropriate sanitation – is concerned.

Nature and Status of Customary (Traditional) Water Rights

It is noted that in traditional African society (south of the Sahara), a man knows himself in the first place as a member of his community with duties, responsibilities and certain privileges in connection with his communal body and in the second place, he is an individual anxious to protect his individual sphere of interest and pursue his individual aims. In the Western society and perhaps in modern African society, man knows himself both as a private individual and a member of the community in which he lives and strives, regards himself in the first place as an individual self, holding and exercising his individual rights and protecting his individual interest, and in the second place he also acknowledges his position as a member of a wider and widening community; accepting (sometimes reluctantly) his obligations, responsibilities and privileges as such. Of course the dichotomy is not perfect. Similarly, there are differences in the manner in which the adjudication of conflicts is handled. It is also important to note that there is no African jurisprudence, no systematisation of legal institutions, not even a clear distinction between “civil” and “criminal” law. Customary African law is unwritten and without writing, it survives in oral tradition. If the written word is vague and ambiguous, how much more is the spoken word, especially when distorted by a lapse of time?

African customary law still carries some weight, however, and will remain important for many decades. The law emphasises community interests and private ownership of water is not recognised except to the extent that water is owned by the tribe as a whole. Modern practices on water resources policy, administration and legislation require the people's participation in the management of water resources, which is generally achieved where a more community-oriented approach prevails in respect of ownership, distribution and use of water. Such an approach is easily applied in the African (Zambian) environment where the existence of traditional forms of community organisations, associations, resources ownership and right of use, may greatly facilitate its institutionalisation.

Nature and Status of Water Supply (and Sanitation) Provision

There are many ministries and government agencies which have interests or are involved in water in Zambia. The Water Development Board and the Department of Water Affairs are the major organisations in water resources development while the resource conservation function is discharged by the Ministry of Environment and Natural Resources and the Environmental Council of Zambia. The Ministry of Local Government and Housing is responsible for providing water supply and sanitation. The present set up is characterised by duplications, overlaps, inertia, insufficient funds, lack of technical and administrative personnel, inefficient communication and a host of other classical problems associated with lack of capacity and underdevelopment.

According to the "Social Sector Rehabilitation and Development Programme, 1993-1996", only 43% of the urban population of Zambia has access to safe water and sanitation structures. In rural areas, less than 30% of the population has access to safe water. Coverage ratios for rural water supply (point water sources) range from 1:249 to 1: 569 depending on whether one considers all water points, water points in use only or reliable water points only. The reliability factor for rural water supply (point sources) is 44%.

It has been estimated that, nationally, there will be a rural population of about 7.1 million people in Zambia by the year 2000. To achieve 50% coverage by that time will require an estimated 8930 new water points to be constructed and 4860 to be rehabilitated at a total capital cost of about US\$29 million. The estimates for national sanitation coverage range from 23 to 30%. Detailed information is scarce.

Impact of Water Law and Water Rights on Water Supply and Sanitation Provision/Access for the Poor

There are a number of constraints and enabling conditions in Zambia's unwritten and written water law/rights regimen. Furthermore, it is recognised that in order to achieve equitable access to water services, the provision of funds and the regulation and direction of institutions whose task is to provide water services are important. Changing the rules of access is but one element of attempting to quicken the pace of providing water supply and sanitation to all.

The Constitution of South Africa shows how the right to water can be embedded in a country's constitution. The basic right to water can thus be subsequently reflected in national water policies and laws.

In the case of Zambia, access to water at source is fairly well enshrined in law. The Constitution of Zambia, however, does not explicitly provide for the right to receive water for the people of Zambia. Consequently, whereas policy statements come close to “conferring” that right, enshrining that right into subordinate laws (Water Act, Water and Sanitation Act, Local Government Act, etc.) is a technical impossibility. The enabling or framework legislation to provide for the legal entitlement to receive or access water is inadequate and incoherent. Consequently the focus on the goal of universal coverage is not secured in law. There is general recognition, however, among stakeholders, that access to water and the right to receive/access water should be considered basic human rights.

Conclusions

There are more constraints than enabling conditions provided to domestic water supply and sanitation (provision and access) for the rural/urban poor by written and unwritten local/national laws and water rights (and related) issues in Zambia. Enabling conditions include the widespread perception that access to safe water and appropriate sanitation are basic human rights. Constraints include the general ignorance about water rights and water laws issues, the ambivalence among stakeholders on the efficacy of achieving universal access soon – recognised as desirable – by legislative means; the absence of the “right to water” in the Constitution of Zambia and the relevant subordinate laws. Incoherent national water policy, fragmented “regulatory” (as opposed to “enabling”) legislation; and the inadequacy of demonstrable political will and sustained focus on universal coverage are the other notable constraints.

Recommendations

In view of the low levels of awareness about water law, water rights and water supply provision, it is recommended that, apart from widely disseminating the results of this study, information and education through targeted workshops and symposia be conducted as soon as possible. It is also important that networks be created to facilitate access to water law and water rights information and expertise in Zambia and the region.

In view of the importance of shared water courses as sources of water supply in Zambia and the region, it is important that the water laws in the riparian countries and the various water course agreements are studied and the findings appropriately disseminated.

It is also recommended that linkages among water law, water rights, water supply and water institutions be studied; as well as the mechanisms for integrating the above elements within a framework of poverty alleviation.

1. INTRODUCTION

1.1 BACKGROUND

Over the past two decades, a number of international declarations have sought to ensure access to safe water and sanitation for the majority (or all) of the world's people. Yet to date, millions of people do not have access to even the most basic levels of service. It is beginning to dawn upon many involved in water supply and sanitation provision that the key constraint to providing water to the majority of the world's people may – after all – not be lack of financial resources per se but the political decision by states to implement the rights of citizens. Indeed there are calls for a rights-based approach to financing water supply. The African Consultative Forum on Water Supply and Sanitation in its “Africa Statement” of November 1998 lists access to safe drinking water as a basic right.....and therefore a responsibility for all governments. There have been several other international declarations including the United Nations Water Conference (1977), the Global consultation on Safe Water and Sanitation for the 1990s(1990), Plan of Action- World Summit for Children (1990), Dublin Statement (1992), Agenda 21 (1992) and the Convention on the Rights of the Child – Article 24(1989).

Despite all the above declarations, the reality is that clean water and safe waste disposal remains a life-and-death problem in much of the world on the threshold of the 21st century. According to the Director of WaterAid, Jon Lane, approximately 1.4 billion people – in both rural and urban areas – still do not have access to clean water. 2.8 billion have no access to appropriate sanitation. In Africa today, more than half of the population is without access to safe drinking water and two thirds lacks sanitary means of excreta disposal. This is both morally and practically unacceptable, for such widespread deprivation in parts of the global village affects us all. And what is more, many countries in Africa are affected by slow or even negative economic growth and the stresses of structural adjustment. At the same time, overseas development assistance which had hitherto been fairly steady, has declined. It is clear that “business as usual” – continuation of the same policies, strategies, funding levels, implementation methods, etc – will not even result in keeping pace with population growth. Clearly a higher level of effective effort and innovation is required to face the challenge of universal coverage.

It is against the above background that a collaborative study (between Cranfield University, UK; University of Dundee, UK and the Institute of Hydrology, UK one the one hand and 5 African countries (Zambia, Uganda, Tanzania, Mozambique, Ghana) on the other was conceived.

The specific background to the study is the fact that whereas there is no shortage of government rhetoric in developing countries (and no shortage of international consensus) about the importance of providing clean drinking water to all, extremely rarely is an individual's basic right to an adequate water supply enshrined in law. Water rights and legal issues are often neglected or ignored by governments, funders and implementers of community water supply projects.

In the short to medium term, what we need is increased awareness and a clearer understanding of the constraints or enabling conditions provided to community water supply and sanitation project implementation by local and national laws and prevailing

water rights issues. But there is little information on water rights and water laws in relation to community water supply provision.

The objective of the study therefore, was to identify and promote awareness and understanding of, the constraints and enabling conditions provided to domestic water supply and sanitation provision for the rural/urban poor by written and unwritten local/national water laws and water rights issues – in order to enable the adoption of improved, effective, accessible and enforceable legislation in line with improved water supply and sanitation implementation policy and strategy.

1.2 WATER LAW, WATER RIGHTS AND WATER SUPPLY

The traditional objective of water law has been to establish a framework for the protection and control of water resources in a country. Zambia, whose laws were influenced by the United Kingdom, follows the common law system which, whilst recognising no ownership and declaring water a resource common to all, confers upon the riparian owner, the right to “reasonable use” of the water. Ideally water law should define water rights – in a broad sense - and this may be according to the traditional legal system in the country. It has been said that, “The line that divides those with adequate access to water from those without is the same line dividing the rich from the poor; and the hungry from the well-fed”.

Listening to politicians, one might assume that being a basic need, access to water would be a basic human right. A review of the literature however, suggests otherwise. Indeed there is some confusion over what water rights are. To most people, a water right, if it means anything at all, means a riparian right – a right to water related to the ownership of land. Riparianism is based on principles of polity rather than fundamental legal principles which, based on notions of equity and rights and duties, might aim to secure basic needs and the right to life. It should therefore not be difficult to defend the concept that basic water supply and sanitation needs are basic human rights – rights not contingent upon the ownership of land, for example. But then what are basic human rights?

The list of rights that society considers basic changes with time. The Bill of Rights that consummated the writing of the Constitution of the United States is one of the supreme achievements of human political consciousness, and the list of rights it contains stretched the limits of what could be reasonably demanded at the time. But people now are vulnerable to all kinds of threats and need forms of protection that were inconceivable in the eighteenth century.

There is a second generation of rights about which there is much debate – the economic, social and cultural rights. These rights appear in the International Bill of Rights and the International Covenant on Economic, Social and Cultural Rights. Even this widely accepted body of international law is nonetheless subject to broad intellectual criticism. There are those who feel that, perhaps, the coinage of rights is being cheapened; that rights “inflation” is taking place. Perhaps, in particular, acceptance of the alleged economic, social, and cultural rights endangers the status of the civil and political rights embodied in the US Bill of Rights and the Universal Declaration of human Rights. In the context of this discussion, we shall call the core economic, social, and cultural rights “subsistence rights”. Where subsistence includes “unpolluted air, unpolluted water, adequate food, adequate clothing, adequate shelter, and minimal public health care”. It is also worth noting that the

pedigree of civil and political rights stretch es further back in time than the pedigree of economic, social and cultural rights; but the pedigree of one is not thus any more genuine than the pedigree of the other - it is simply older. The temptation therefore to consider “subsistence” rights as rights in quotation marks, as rights lacking authenticity, genuineness and legitimacy; or as merely objectives and aspirations, needs to be fought. It is, indeed, absurd to consider social, cultural and economic rights less basic than political and civil rights.

It can be useful then to think of a human right as providing “(1) the rational basis for a justified demand (2) that the actual enjoyment of a substance be (3) socially guaranteed against standard threats”. “Substance” is merely a vague place-holder for whatever a right is a right to: access to water, freedom of the press, due process, etc.

In as far as access to safe water and sanitation is concerned, we have a goal to fulfil: the goal of universal access to safe water and sanitation. Unfortunately, the perceived absence of the means for fulfilling that goal, is being used as the excuse for not fulfilling it, when we should be working on creation of the necessary bridges from here to there. We have a duty, correlative to the basic right to basic water supply, to do what must be done for our fellow men to enjoy their right.

In Zambia, we have realised that whereas it is true that there is no consensus on the best approach to be adopted, it is equally true that Zambia’s inadequacies in the provision of safe water supplies are chronic as evidenced by the frequency of television coverage, consumer complaints, newspaper headlines, or just the common sight of women carrying water in containers to their homes. The statistics also speak for themselves. Zambia’s population is estimated at 9.4 million with a high urbanisation rate resulting in over 50% of the population living in urban and peri-urban areas. The WHO/UNICEF Monitoring Programme (1995) put Zambia’s population covered with water at 43% and the population with access to sanitation at 23%. The estimates tend to vary from agency to agency but the overall picture is roughly the same.

This is so despite some very commendable investment programmes being implemented with the support of donor agencies during and after the International Drinking Water Supply and Sanitation Decade (IDWSSD). One major lesson has been that solutions to community water supply and sanitation should be sought less in technology and products, and more in social, institutional and financial domains; etc. In other words, more in the “software” domain. Unfortunately, water law/rights have so far been considered peripheral even in this new awakening. The current water sector reforms in Zambia, for instance, have tended to focus more on the fashionable “softwares” and cursory, uncoordinated amendment of Acts. This is despite policy statements supporting basic human rights. The reality remains (and is likely to remain) that the basic water and sanitation needs of the poor are neglected and not supported by existing water laws, which are not effective, enforceable or accessible to those that need them most. This situation is not satisfactory.

2. THE POLICY AND STATUTORY LEGAL FRAMEWORK FOR WATER (AND SANITATION)

2.1 NATIONAL WATER POLICY

In November 1994, the Government of Zambia adopted a National Water Policy. The main aim of the policy is to promote a holistic management approach to the water sector. For the water supply and sanitation sector, the policies and strategies are aimed at improving the quality of life and productivity of all people by ensuring an equitable provision of an adequate quantity and quality of water to all competing user groups and sanitation services to all, at an acceptable cost, on a sustainable basis. The policy does recognise the critical role that water plays in national development (poverty alleviation?).

The overall objective of the National Water Policy is:

“To promote sustainable water resources development with a view of facilitating an equitable provision of adequate quantity and quality of water for all competing users at acceptable cost and ensuring security of supply under varying conditions. This entails establishing a well defined institutional structure that will achieve the intended policy objectives.”

The specific policies and strategies for each sub-sector are described below:

(a) Water Resources Management – Policy Measures and Strategies

- Recognising the important role of the water sector in overall socio-economic development of the country
- Vesting ownership of water resources under state control
- Promoting water resources development through an integrated management approach
- Defining clear institutional responsibilities of all stakeholders in the water sector for effective management and coordination
- Developing an appropriate institutional and legal framework for effective management of the water resources
- Promoting a state of disaster preparedness to mitigate impacts of extreme occurrence of water (floods and drought)
- Recognising water as an economic good

(b) Rural Water Supply and Sanitation (RWSS)

The overall national goal is universal access to safe, adequate and reliable water supply and sanitation services. The policy measures and strategies are:

- Ensuring that RWSS programmes are community-based
- Developing well defined investment programme for sustainable RWSS
- Promoting appropriate technology and research activities in RWSS
- Developing emergency and contingency plans to mitigate impacts of drought and floods in rural areas

- Developing a cost recovery approach as an integral part of RWSS which will ensure sustainability
- Development and implementation of well articulated training programmes

(c) **Urban Water Supply and Sanitation (UWSS)**

The aim of the policy is to provide adequate, safe and cost effective water supply and sanitation services with due regard to environmental protection. The specific policies and strategies are:

- Maintaining strategic reserves or stockpiles of water treatment chemicals
- Implementation of a well planned delinkage of water resources management from water supply and sanitation management
- Development and implementation of a National Water Conservation Strategy
- Creation of an autonomous body to review and oversee the tariff structure of the UWSS sector
- Providing sufficient central government grants for operation and maintenance of UWSS schemes
- Encouraging investment in the rehabilitation of UWSS schemes
- Carrying out investigations regarding regionalisation of operations and management of UWSS schemes
- Formulating a well articulated training programme which addresses basic needs of the UWSS sector
- Carrying out investigations regarding regionalisation of operations and management of UWSS schemes
- Enacting and enforcing council by-laws and other existing pieces of legislation to prevent water pollution
- Establishing a water sector devolution trust fund to assist the transformation of local urban water and sanitation operations into commercial enterprises
- Ensure that water tariffs take account of all economic costs

As a long term measure, an interministerial coordination body, the Programme Coordination Unit (PCU) was established to spearhead the reorganisation of the water supply and sanitation sector. The PCU was specifically mandated to undertake:

- Sector policy reforms
- Clarification of sector principles
- Sector reorganisation reforms
- Framework for planning, project development and operation and maintenance
- Proposals for institutional strengthening

The PCU mandate is guide by the 7 sector principles adopted by the Government of Zambia, namely:

1. Separation of water resource management from water supply and sanitation
2. Separation of regulatory and executive functions
3. Devolution of authority to local authorities and private enterprise
4. Full cost recovery in the long run
5. Human resource development leading to more effective institutions

6. Technology appropriate to local conditions
7. Increased government priority and budgetary allocation to the sector

The policy has some obvious incoherencies such as the separation of water resources management from water supply and sanitation while at the same time espousing a holistic approach to the management of water sector. There is no functional focus on extending services to the unserved poor as a matter of urgency.

2.2 NATIONAL WATER LEGISLATION

Major legal enactments related to water in Zambia are as follows:

- (a) Water Act
- (b) Water Supply and Sanitation Act

2.2.1 The Water Act

The Water Act is the supreme law on water resources issues in Zambia. The Act stipulates the ownership of water and the procedures of authorisation and invalidation of water use. Under the Act, the Water Development Board has been established as the authorising entity for water use. The use, diversion and apportionment of any water in Zambia except water in the Zambezi River, the Luangwa River and the portion of the Luangwa River which constitutes the boundaries between Zambia and Mozambique, shall be made in terms of this Act. The Water Act and its subsidiary legislation stipulate the following provisions, from (a) to (k):

- (a) **Ownership of Water**
Ownership of water is vested in the President, provided that a landowner maintains his right to take “private water” free of charge, which is situated wholly within the boundaries of the land legally occupied by one person and is not naturally discharged into a water course beyond the boundary or which is brought to the surface of the aforesaid land.
- (b) **Water Right**
The Act allows for any person to use “public water” which is defined as all water other than private water, for domestic purposes and support of animal life (“primary use”) where the access to the land may be lawful. Any person may make application to the Secretary of the Water Board for permission to impound and store or to divert water from a public stream for (1) primary use, (2) secondary use and (3) tertiary use

For the purposes of the Act, the various uses are defined thus:

“Primary use” means the use of water for domestic purposes and the support of animal life (including dipping of cattle).

“Secondary use” means the use of water for the irrigation of land and aquaculture.

“Tertiary use” means the use of water for mechanical or industrial purposes or for the generation of power.

- (c) **Priorities among different users**
Applications for water rights on public water are permitted only after an examination of the effect on “primary use” and existing water rights

(d) Order of the Water Board

The Water Board may, at its discretion, grant, refuse or modify an application in whole or in part; or attach conditions to the granting

- (e) **Renewal of Water Right**
Every water right shall be renewable. Every renewal shall be deemed to be a continuation of the original grant
- (f) **General Powers of the Minister**
The Minister, currently the Minister of Energy and Water Development, may make regulations, by statutory instrument, for effective administration of the Act.
- (g) **Forfeiture of Rights**
Any water right or appurtenant right not registered under the provisions of the Act within proper time shall be declared null and void. Failure to make full beneficial use of water for a consecutive period of 3 years or failure to comply with attached conditions may lead to the forfeiture of the right.
- (h) **Pollution**
Any person who wilfully or through negligence, pollutes or fouls any public water so as to make it harmful to man, beast, fish or vegetation shall be guilty of an offence.
- (i) **Water Rights (Procedure and Application) Rules**
This sections provides details of the required procedures
- (j) **Water Board (Charges and Fees) Regulations, 1993**
The regulation stipulates the various charges that applications attract.
- (k) **Water board (Works) regulations, 1993**
The regulations cover the design, approval of the design, supervision and inspection of works to be constructed or installed on public streams for the execution of a water right

The current Water Act has some deficiencies and a major revision is being drafted by the Water Development Board. One major addition concerns the provisions on abstraction of groundwater with respect to conditions, registration of borehole construction, water rights and inspection; and clarification of the general rules regarding the application, issue, registration, and exercise of water rights.

2.2.2 The Water Supply and Sanitation Act

“An Act to establish the National Water Supply and Sanitation Council and define its functions and powers; to provide for the establishment, by local authorities, of water supply and sanitation utilities; to provide for the efficient and sustainable supply of water and sanitation services under the general regulation of the National Water Supply and

Sanitation Council; and to provide for matters connected with or incidental to the foregoing”.

Objectives:

- (a) establish the National Water Supply and Sanitation Council and establish its functions
- (b) provide for the establishment by local authorities, of water supply and sanitation utilities
- (c) provide for the efficient and sustainable supply of water and sanitation services under the general regulation of the National Water Supply and Sanitation Council; and
- (d) provide for matters connected with or incidental to the foregoing

Under “obligation to provide water supply and sanitation services”, the Act contains the following sections:

- 10(1): Notwithstanding any other law to the contrary and subject to the other provisions of this Act, a local authority shall provide water supply and sanitation services to the area falling under its jurisdiction, except in any area where a person provides such services solely for that person’s own benefit or a utility or a service provider is providing such services
- 10(2) Notwithstanding sub-section (1) and any other law to the contrary, and subject to the other provisions of this Act, where a local authority is unable, for whatever reason, to supply water and sanitation services to a locality within its jurisdiction, and no such services are being provided by a service provider, the local authority may contract any person or other service provider to do so.
- 10(3) A utility or service provider contracted to provide services under sub-section (2), shall have power to enforce by-laws relating to the provision of water supply and sanitation services as may be issued to the local authority.

Utilities or service providers can only operate in accordance with the Act and under authority of a licence issued under this Act. As we will see later in the report, the Act does not squarely address the issue of universal coverage with any deliberate urgency. There appears to be no special consideration of the urgency of serving the unserved poor. There is in fact some confusion over what is meant by “obligation to provide water supply and sanitation services”. It is very much a “business as usual” Act – but perhaps a useful step.

2.3 OTHER RELATED LEGISLATION

2.3.1 Associated Land and Environment Legislation

Natural Resources Conservation Act

The Natural Resources conservation Act provides the fundamental rules for the conservation and improvement of natural resources. The minister, currently the Minister of Environment and Natural Resources, may give written orders, by statutory instrument, after paying due regard to the circumstances, to a land occupier to undertake necessary and equitable measures to ensure a conservation plan related (only) to the following:

- (a) Allocation of land and preservation of water catchments
- (b) Construction and maintenance of works for water, soil and for the preservation and improvement of natural resources
- (c) Prohibition or restriction of cultivation of any part of the land
- (d) Methods of cultivation and other farming system of the land
- (e) Manner of watering, managing, pasturing and moving livestock
- (f) Preservation and protection of the source, course and banks of any stream
- (g) Control of water including storm water, drainage water and floods
- (h) Prevention of pollution or fouling of public water, as defined in the Water Act
- (i) Preservation of trees and other vegetation, and methods or system of forestry
- (j) Measures to prevent, control or combat fires
- (k) Measures to be taken to ensure compliance with a registered conservation plan

Environmental Protection and Pollution Control Act

The main objectives of the Environmental Protection and Pollution Control Act are:

- (a) To set provisions for the protection and control of pollution
- (b) To establish the Environmental Council of Zambia (ECZ) and to prescribe the functions and powers of council
- (c) To provide for matters connected with or incidental to the Act, covering water, air, waste, pesticides and toxic substances, noise, ionising radiation and natural resources conservation

The ECZ, established under the Act is an advisory and regulatory body for environmental protection and pollution control. Its responsibilities were previously carried out by several government entities.

Local Government Act

The roles and responsibilities of local governments are stipulated in the Local Government Act, No. 22 of 1991. Regarding water resources development and management, the following are provided in the Act. The items listed below are provided not as responsibilities or duties, but as functions which a local authority may discharge:

- (a) to take and require the taking of measures for conservation of natural resources and prevention of soil erosion, including the prohibition and control of cultivation
- (b) to establish and maintain ponds for agriculture
- (c) to exercise general control, care and maintenance of all public roads, streets, avenues, lanes, sanitary lanes and foot walks forming part thereof, bridges, ferries, and water courses (canals) and to remove all obstacles there from
- (d) to close or divert ferries and water courses
- (e) to prepare and administer schemes for the encouragement of participation and community development
- (f) to control persons and premises engaged in or used for the manufacture, preparation, storage, handling, sale or distribution of items of food or drink
- (g) to prohibit and control the development and use of land and buildings and the erection of buildings, in the interests of public health, public safety, and the proper and orderly development of the area of the council
- (h) to establish and maintain environmental health services

- (i) to take and require the taking of measures for the preservation and improvement of public health and the prevention and abatement of nuisances including measures for the extermination of mosquitoes and insects, rats, mice and vermin
- (j) to establish and maintain drains, sewers and works for the disposal of sewage and refuse
- (k) to provide and maintain supplies of water and, for that purpose, to establish and maintain waterworks and water mains
- (l) to take and require the taking of measures for the conservation and prevention of the pollution of supplies of water

Lands Acquisition Act

The Lands Acquisition Act makes provision for the compulsory acquisition of land in the interests of the Republic. The President may determine the acquisition of land and property in the interests of the Republic. No compensation shall be payable for undeveloped or unutilised land, except where the absentee landowner, who is the owner or has interest in or right over the land or property and is not ordinarily resident in Zambia, has made unexhausted improvement. Land shall be deemed undeveloped if it is not adequately developed in view of national needs.

At the time of independence, all land (including water), was vested in the Government. Prior to the colonial period, as under customary law, ownership of land was theoretically vested in the tribe with the paramount chief as custodian. Land rights could be conveyed to the individual by means of formal hierarchy, from paramount chief to subordinate chief, to village headman or head of kinship group.

Customary land tenure has evolved under a system of subsistence agriculture with little constraint on available land. Historically, these systems were well integrated into the cultural and economic conditions of the area, and resulted in ecologically sustainable use of natural resources. However, increased population, improved transportation and the growth of the urban markets has caused more intensive use of land resources in some areas. Therefore there has been increasing pressure to convert customary land tenure to a system better suited to the intensive use of capital investment.

Statutory land tenure was introduced during British colonial rule to encourage commercial agriculture and mining but was restricted to areas designated as Crown Land. All land was originally held freehold or leasehold but, under the Land (Conversion of Titles) Acts of 1975 and 1985, it was all converted into leasehold, with the state assuming the ownership. Leases of up to 99 years can be granted by the President through the Commission of Lands.

“State Land” is only 6% of all land and is concentrated mainly in urban areas. National Parks make up 8% of the land area, while reserve land or trust land cover the remaining 86%. Reserve and trust lands were originally areas where customary land tenure remained under the control of traditional leaders. The control, however, has been steadily eroded with many of the powers to allocate natural resources, such as wildlife, forests and water, now assumed by the central government.

Lands Act

“An Act to provide for the continuation of leaseholds and leasehold tenure; to provide for the continued vesting of land in the President and alienation of land by the President; to provide for the statutory recognition and continuation of customary tenure; to provide for the conversion of customary tenure into leasehold tenure; and to provide for matters connected with or incidental to the foregoing”. The Lands Act is the major Act on the administration of land in Zambia. Under the Act:

- (a) All land in Zambia is vested in the President and is held by him in perpetuity for and on behalf of the people of Zambia
- (b) The President may alienate land vested in him to any Zambian and subject to certain conditions being met to a non-Zambian
- (c) The President may also alienate “customary” land subject to certain conditions

The Act also provides for a Land development Fund, a Lands tribunal and other general incidental matters, among other things.

The Public Health Act

“An Act to provide for the prevention and suppression of diseases and generally regulate all matters connected with public health in Zambia”.

Under Part IX – Water and Food Supplies, it is the duty of local authorities to take all lawful, necessary and reasonably practicable measures:

- (a) for preventing any pollution dangerous to health of any supply of water which the public within its district has a right to use and does use for drinking or domestic purposes (whether supply is derived from sources within or beyond its district);
- (b) for purifying any such supply which has become polluted; and
- (c) and to take measures (including, if necessary, proceedings at law) against any person so polluting any such supply or polluting any stream so as to be a nuisance or danger to health.

It is evident that the above pieces of legislation are characterised by fragmentation, overlaps, duplication and potential conflict. Indeed in practice there have been problems with enforcement and in many cases the responsible agencies have, understandably, tended towards inertia.

2.3.2 The Constitution of Zambia

Part III – Protection of Fundamental Rights and Freedoms of the Individual, reads in part:

“It is recognised and declared that every person in Zambia has been and shall continue to be entitled to the fundamental rights and freedoms of the individual, that is to say, the right, whatever his race, place of origin, political opinions, colour, creed or marital status but subject to the limitations contained in this Part to each and all of the following, namely:

- (a) life, liberty, security of the person and the protection of the law;
- (b) freedom of conscience, expression, assembly, movement and association;
- (c) protection of young persons from exploitation; and

- (d) protection for the privacy of his home and other property and from deprivation of property without compensation;
and the provisions of this part shall have effect for the purpose of affording protection to those rights and freedoms subject to such limitations designed to ensure that the enjoyment of the said rights and freedoms by any individual does not prejudice the rights and freedoms of others or the public interest”.

The Constitution of Zambia does not have a Bill of Rights. Social, Economic and Cultural rights are not explicitly enshrined in the Constitution.

2.3.3 International River Basin Treaties

About 70% of the land area of the Southern African Development Community (SADC) is occupied by water course systems that are shared by two or more member states. The waters of these systems although renewable, are increasingly causing competition among the riparian countries through which the rivers flow. Since these international watercourse systems are common resources that are shared by riparian countries, their development and utilisation should be governed by the principles of international law where each of these states has the right to an equitable and reasonable share in the conservation, protection, management, allocation and utilisation of these international water resources. This is in accordance with the Helsinki and other international conventions and the Articles on International Law of Non-Navigational Watercourses.

Article 5 of the Treaty establishing SADC says one of the Community’s major objectives is to “achieve sustainable utilisation of natural resources and effective protection of the environment”. There are currently several water cooperation activities in SADC including commissions, the Protocol on Shared Water Course Systems, water resources management agreements and massive joint projects.

The Protocol on Shared Water Course Systems in the SADC region was signed by most countries at the SADC summit of heads of state in August 1995, as an agreement under the SADC Treaty. Its objectives are spelt out in the preamble, as to:

- develop close cooperation for judicious and coordinated utilisation of the resources of the shared watercourse systems in the SADC region;
- coordinate environmentally sound development of the shared watercourse systems in the SADC region in order to support sustainable socio-economic development;
- have regional conventions on equitable utilisation and management of the resources of shared water course systems in the SADC region;
- consolidate other agreements in the SADC region regarding the common utilisation of certain watercourses; and
- promote the SADC integration process in accordance with Article 22 of the Treaty establishing SADC.

The Protocol is the main instrument of regional cooperation in water resources and environmental management of the shared watercourse systems of the SADC region.

In addition to the Protocol, there are several bilateral and/or multilateral agreements between/among SADC countries. The major international watercourse systems agreements in SADC are as follows:

Table 1: Major Rivers Covered by International Watercourse System Agreements in SADC

NAME OF RIVER	COOPERATING COUNTRIES
1. Zambezi	SADC
2. Songwe	Malawi, Tanzania
3. Cunene	Angola, Namibia
4. Okavango	Angola, Botswana, Namibia
5. Orange	Lesotho, Namibia, S. Africa
6. Limpopo	Botswana, Mozambique, S. Africa, Zimbabwe
7. Incomati	S. Africa, Swaziland, Mozambique

2.4 CURRENT STATUS AND PRACTICE

Generally speaking, the current policy and statutory legal framework is unsatisfactory in as far as attempting to address the urgent task facing Zambia – providing universal access to safe water and appropriate sanitation – is concerned. The process of translating policy principles into law is on-going but with the passing of the Water and Sanitation Act, it would appear that an opportunity to address the challenge has almost slipped our hands. The “slip” may partly have been facilitated by the fact that the supreme law (the Constitution) is silent on Social, Economic and Cultural Rights.

More specifically, the current Water Act has some deficiencies and a major revision is being drafted by the Water Development Board. The proposed revision contains the following:

- Review of areas where the Act is to be applied
- Shift of provisions, from subsidiary regulations, on procedure for approval and reporting regarding construction of dams or other facilities for storage and abstraction, etc
- Clarification on general rules covering application, issue, registration, and the exercising of water rights
- Substantial additions of provisions on abstraction of groundwater in respect to conditions, registration of borehole construction, water right and inspection
- Additional powers of Minister for emergency measures during drought and flood, and for establishment of river committees

The current Water Act provides that the concession of water rights in “African Areas”, (comprising reserves, trust land and other areas) for the exclusive use of indigenous African natives, shall not be granted without the agreement of the minister. The provision might hinder the overall water resource development and river basin management. The revision of the Act mentioned above contains cancellation of this section so as to place all water under the management of the water development board. There are close

relationships between water and land in traditional areas and both are regulated mainly by customary laws which are under the control of chiefs.

The current Water Act is not applied to the Zambezi River, the Luapula River and the portion of the Luangwa River which constitutes the boundary between Zambia and Mozambique. This means that those parts of the Zambezi and Luapula Rivers which do not constitute the boundaries between neighbouring countries are not covered by the Act. Out of the three international rivers in Zambia, only an agreement between Zambia and Zimbabwe on the Zambezi River has been concluded. The main concern of the agreement is hydropower generation. No water use controls exist in the main streams of the remaining two rivers.

After the above revisions, Zambia's water resources legislation will be generally comparable to any in the region. But to be of any value, the new legislation will have to be followed by detailed statutory instruments, regulations, standards and administrative arrangements. Otherwise inertia, lack of enforcement and failure to achieve objectives will be the results.

In moving away from single-mission Acts, it is important that steps are taken to progressively harmonise all existing water-and environment related legislation in order to ensure efficiency and effectiveness. National objectives should be seen to weave through the national laws starting with the supreme national law – the Constitution.

3. NATURE AND STATUS OF CUSTOMARY (TRADITIONAL) WATER RIGHTS

3.1 DESCRIPTION OF CUSTOMARY (WATER) LAWS

In traditional Zambian society, a man knows himself in the first place as a member of his community (whether small or big) with duties, responsibilities and certain privileges in connection with his communal body and in the second place, he is an individual anxious to protect his individual sphere of interest and to pursue his individual aims.

In the western society and perhaps in modern Zambian society, man knows himself both as a private individual and a member of the community in which he lives and strives, regards himself in the first place as an individual self, holding and exercising his individual rights and protecting his individual interests, and in the second place he also acknowledges his position as a member of a wider and widening community; accepting (sometimes very reluctantly) his obligations, responsibilities and privileges as such.

In the West (and modern Zambian society), adjudication of conflicts between individual persons is brought to a recognised, impersonal and impartial forum (an organ of the state) which is concerned with the question of right and wrong, strictly according to the rules of law, between the parties only (one of the parties may, of course, be the state).

In traditional Zambian society, it is not only a question of right and wrong between parties, but the conflict inevitably affects the community with which the parties, as well as the adjudication body, are identified in a closer unity than in the West. Arbitration by the

Headman, for instance, is far from impersonal. One finds displayed a deep interest in, or even anxiety about, the wider communal aspect of the conflict.

Undoubtedly traditional Zambian law recognises individual rights and interests. The strongest of these rights is ownership of land under actual cultivation or a man's cattle. Are these rights individual? They are not. African ownership relating to land (and water) is apparently controlled by the Village Headman, but actually held by the village community he represents. In traditional Zambian society, one usually talks of Communal Rights or (more satisfactorily rendered) – Rights of Avail.

There is no African jurisprudence, no systematisation of legal institutions, not even a clear distinction between “civil” and “criminal” law. African customary law is not a set of rules of law, but rather traditional expressions relating to law.

Customary law has certain obvious qualities that make it different. In the first place, it is unwritten and without writing, it may survive in an oral tradition. If the written word is vague and ambiguous, how much more is the spoken word, especially when distorted by a lapse of time?

It is important to end this section by alluding to the fact that traditional Zambian law is not homogeneous. There are over 70 tribes in Zambia and each body of “law” associated with these tribes has its peculiarities. The above discussion is merely a general overview.

3.2 DISCUSSION OF PREVAILING PRACTICES

African customary law still carries some weight and will remain important for many decades. The customary law probably still has more direct impact on African people than any other land or other law, particularly in rural areas.

African customary law has relevance for indigenous tribes in land tenure, grazing, cultivation, animal watering and fishing rights, water users association; land resettlement and redistribution, succession, as well as in the procedure relating to recording, registration, adjudication and settlement of disputes on such rights. This law emphasises community interest, and private ownership of water is not recognised except to the extent that the water is owned by the tribe as a whole.

Modern practices on water resources policy, administration and legislation require the people's participation in the management of water resources, which is generally achieved where a more community-oriented approach prevails in respect of ownership, distribution and use of water as well as within the organisation of water user's associations or cooperatives. Such an approach is easily applied in the African environment where the existence of traditional forms of community organisations, associations, resources ownership and right of use, may greatly facilitate its institutionalisation. Customary laws are therefore useful at this time when communities are increasingly being called upon to participate in water resources management.

4. NATURE AND STATUS OF WATER SUPPLY (AND SANITATION) PROVISION

4.1 OVERVIEW OF INSTITUTIONS/AGENCIES INVOLVED

There are many ministries and government agencies which have interests or are involved in water resources development, management or administration. The Water Development Board and the Department of Water Affairs (DWA) in the Ministry of Energy and Water Development (MEWD) are the major organisations in water resources development while the resource conservation function is discharged by the Ministry of Environment and Natural Resources and the Environmental Council of Zambia (ECZ). The Ministry of Local Government and Housing is responsible for providing water supply and sanitation. Ministries with substantial relevance to water resources and their related portfolios are shown in the table below:

Table 2: Ministries with Substantial Relevance to Water and their Portfolios

ORGANISATIONS	ACTIVITIES AND/OR RESPONSIBILITIES
Ministry of Energy and Water Development	<ul style="list-style-type: none"> • Water affairs (in consultation with the Ministry of Environment and Natural Resources for Pollution Control) • Development and administration of energy policy • Electricity (provision, control and administration)
Ministry of Environment and Natural Resources	<ul style="list-style-type: none"> • Environmental Protection and Pollution Control • Coordination of all national activities related to environmental control • Forestry
Ministry of Agriculture, Food and Fisheries	<ul style="list-style-type: none"> • Agricultural policy, administration and research • Fisheries • Cooperatives
Office of the President	<ul style="list-style-type: none"> • Chiefs affairs • Constitution of offices
Office of the Vice President	<ul style="list-style-type: none"> • Resettlement • Contingency
Ministry of Local Government and Housing	<ul style="list-style-type: none"> • Coordination of Local Government Administration

	<ul style="list-style-type: none"> • Town and Country Planning • Rates
Ministry of Communications and Transport	<ul style="list-style-type: none"> • Transport policy • Ports, harbours and shipping • Meteorological services
Ministry of Commerce, Trade and Industry	<ul style="list-style-type: none"> • Industrial policy
Ministry of Community Development and Social Services	<ul style="list-style-type: none"> • Community development policy • Social development and welfare
Ministry of Lands	<ul style="list-style-type: none"> • Land policy and administration • Land use planning • Land survey and mapping
Ministry of Mines and Minerals Development	<ul style="list-style-type: none"> • Mines and Mining policy • Geological surveys
Ministry of Tourism	<ul style="list-style-type: none"> • National Parks and Wildlife • Policy (administration), promotion and marketing of tourism
Ministry of Science, Technology and Vocational Training	<ul style="list-style-type: none"> • Scientific research • Technologist training and coordination of technical training
Ministry of Legal Affairs	<ul style="list-style-type: none"> • Laws of Zambia • Law revision and reform • Legal aid

Source: The Study on the National Water Resources Master Plan in the Republic of Zambia, 1995

4.2 ORGANISATIONAL PROBLEMS

Overall, water resources management should embrace the following tasks:

- (a) Water allocation
- (b) Surface water assessment and development
- (c) Groundwater assessment and development
- (d) Domestic water supply schemes
- (e) Irrigation schemes
- (f) Fishing and aqua-culture schemes
- (g) Hydropower generation
- (h) Industrial water supply schemes
- (i) Inland navigation
- (j) Wastewater treatment

- (k) Pollution control
- (l) Watershed improvement, soil erosion and sedimentation control
- (m) Ecosystem conservation
- (n) Drought relief
- (o) Flood plain management
- (p) Urban storm water drainage
- (q) Multipurpose water facilities

Government involvement in water resources development and management can be conducted through:

- (a) Data collection and dissemination
- (b) Planning
- (c) Design
- (d) Construction and supervision
- (e) Operation, maintenance and registration
- (f) Regulation

In the current set-up, some responsibilities are conspicuously absent due to a number of factors including lack of capacity, enabling conditions (legal and other) and resources generally. There are many organs involved in domestic water supply (and sanitation) without a defined order of involvement. None of the entities works completely and each suffers from a lack of technical and administrative personnel and insufficient funds. There are duplications in the allocation of regulatory and operational functions (inertia?). It is the hope of water sector stakeholders that the current reform process will address some of these shortcomings.

4.3 WATER SUPPLY FOR DOMESTIC PURPOSES

4.3.1 Coverage

According to the “Social Sector Rehabilitation and Development Programme, 1993 – 1996”, only 43% of the urban population of Zambia has access to safe water **and** sanitation structures. In rural areas, only about 30% of the population has access to safe water. According to the 1990 census, 2.75 million people or 37% of the total population then (7.38 million) were served by piped water systems in the country. Of the served population, 0.97 million people or 35% were served by internal connections. 1.37 million or 50% were served by communal taps around their homes. The rest (0.41 million or 15%) were served by communal taps but their service points were located more than 100metres away from their homes. In urban areas, 2.46 million people or 85% of the urban population were covered by the piped supply system. In rural areas, however, only 0.29 million people or 6.5% of the rural population were covered by the piped systems. 2.32 million or 52% of the rural population was served by well or borehole water sources. Thus 2.61 million or 58% of the total rural population was covered by safe water sources. JICA estimated that the safe water coverage in rural areas was only 24%. As mentioned earlier, the figures vary depending on the source (and probably definition of access). It is however the general picture that is important.

4.3.2 Management

In principle most urban water supplies are run by local authorities and most rural supplies are managed by the Department of Water Affairs (DWA). The supplies run by DWA are being handed over to local authorities – in line with the current water sector reforms.

4.3.3 Financial Status/Viability

According to financial statements of local governments issued by the Ministry of Local Government and Housing in 1990, 33 district councils among the 55 districts were managing water supply schemes for the people in the districts. Of the 33 district councils, only nine councils got surplus from the water undertaking. The other 24 councils managed the water undertaking in deficit.

Water supply services in 2 urban centres, Lusaka and Chipata, are managed by private companies. They were originally established as municipal undertakers of the respective councils. Plans are underway to establish more water commercial undertakings in other parts of the country.

4.3.4 Accessibility

Accessibility to adequate and safe drinking water supply among the Zambian people is very low. Accessibility to water and sanitation is illustrated below in:

Table 3: Accessibility to Water and Sanitation

	ACCESSIBILITY	REPRESENTATIVE POPULATION
Drinking Water	Urban: 70%	2.59 Million
	Rural: 33%	1.68 Million
	TOTAL: 49%	4.27 Million
Sanitation	Urban: 43%	1.59 Million
	Rural: 30%	1.53 Million
	TOTAL: 35%	3.12 Million

Source: Study of the Water Supply and Sanitation Sector, 1991 (these are the figures adopted in the on-going sector reforms)

4.4 RURAL WATER SUPPLY – A NATIONAL PERSPECTIVE

In discussing rural water supply, perhaps it is important to begin by defining a few key terms. The definitions are adopted from “ Coverage Parameters for Rural Water Supply in Zambia, 1996”.

4.4.1 Definitions

Safe drinking water coverage: Proportion of population with **access** to an **adequate amount** of **safe** drinking water located within a **convenient distance** from the user's dwelling.

Access: A person is considered to have **access** to a source of water if water is available all day every day with a maximum queuing time, a peak demand, of 15 minutes.

Adequate amount: The minimum adequate amount available per person per day should be 20 litres.

Safe For a water supply to be **safe** it should be free from:

- Visible suspended matter
- Excessive colour
- Taste and odour
- Objectionable dissolved matter
- Aggressive constituents

And from a bacteriological point of view:

- In the case of hand dug wells (bucket and windlass), 0-10 faecal coliform per 100ml in 75% of cases analysed (60% of these having a faecal coliform count of 0 per 100ml);
- In the case of tube wells (bucket pump): 0-10 faecal coliform per 100ml in 94% of cases analysed (78% of these having a faecal coliform count of 0 per 100ml);
- In the case of sources fitted with a hand pump: the bacteriological quality of water should be consistently better than the above.

Convenient distance: For the parameter convenient distance to be met, a person should not have to walk more than 30 minutes, both ways to fetch water, within a distance of about 1Km

Technology distribution: Represents a simple count of the number of water points by technology type.

Reliability factor: The reliability factor is an indication of how reliable the water points are. Calculated by counting all the water points that were in use but do not go dry at any one time of the year and then expressing this number as a percentage of the total number of water points identified.

Crude coverage ratio, all water points: calculated by dividing the total rural population by the number of identified water points

4.4.2 Background

Zambia has an area of almost 729 000 square kilometres with an estimated population of about nine million (1996), almost five million living in the rural areas. Rainfall varies between 1500mm in the north to less than 700mm in the south. Many diverse social, cultural, agricultural and environmental situations can be found in Zambia and these have

a recognised effect on water resources. Against this profile, national coverage must be considered with caution as it:

- Assumes that the rural population is equally distributed. In reality, the population density varies from just one person per square kilometre in Mufumbwe District to about thirty six in Katete District (1990)
- Assumes that the water points are equally distributed and again the density varies considerably from one district to the next
- Does not consider varying environmental situations such as desert or densely forested areas
- Does not consider land use issues such as mining, agricultural practices or animal husbandry patterns, etc
- Does not consider high/low rainfall patterns
- Does not consider water priorities, for example water to meet basic needs versus agricultural (irrigation) needs versus animal needs
- Does not consider varying hydrogeological situations
- Does not consider the great variations in support for water supplies and the capacity to manage them at district level

All these issues can affect the amount of water that is available and how it is used. For the purposes of this document, these issues have been ignored, the assumption being that all things are equal across the country.

4.4.3 Technology Distribution

As at 8 December 1996, a total of 24020 water points had been identified, surveyed and added to the national water point inventory data base. These are made up of the following technology types:

Table 4: Technology Distribution

CLASS	Description	In use	Not in use	Total
A	Hand dug well with bucket and windlass	6690	3266	9956
B	Tube well with bucket and windlass	109	60	169
C	Jetted well with hand pump	215	105	320
D	Borehole with hand pump	2144	1030	3174
E	Hand dug well with hand pump	476	338	814

F	Tube well with hand pump	5	9	14
G	Hand dug well/borehole with windmill	39	46	85
H	Protected Spring	31	5	36
P	Private well (usually unprotected)	7701	6610	9452
TOTALS		17410	6610	24020

Water points A,B,C,D,E and F are all considered to be protected water points, suitable for communal water supply. Type P water points or privately owned wells are usually unprotected and the yield is limited. Therefore they are not considered suitable for communal water supplies. However, type P water points account for almost 39% of rural water points and because of this, they should be recognised as a major source. Nationally, private wells contribute 8% to actual coverage.

4.4.4 National Coverage Ratios

Table 5: National Coverage Ratios

Coverage Parameter	Ratio
Crude coverage ratio, all water points	1:249
Crude coverage ratio, water points in use only	1:344
Crude coverage ratio, reliable water points	1:567
Actual coverage ratio, all water points	43%
Actual coverage ratio, water points in use only	29%

4.4.5 Performance and reliability of Water Points

Approximately one third of all protected water points were found not to be in use at time of survey. When private water points are included in this calculation, the number of water points not in use drops to about 27%. This is however dependent on type of technology. The private well seems to perform best (in terms of being used) followed by the jetted well with hand pump.

Nationally, the reliability factor for all water points is calculated as being 0.44 or 44%.

4.4.6 National Investment Requirements

It has been estimated that, nationally, there will be a rural population of about 7.1 million people in Zambia by the year 2000. To achieve 50% coverage by that time will require an estimated 8930 new water points to be constructed, 4859 to be rehabilitated at a total capital cost of about US\$29 million. The estimates do not consider costs related to “software” or capacity building at any level, a component which is considered fundamental for water supplies which are to be community-based.

4.5 SANITATION

The estimates for national sanitation coverage range from 23% to 30%. Detailed information is very scarce. There is however in place a National Environmental Sanitation Strategy for Rural and Peri-Urban Areas dated 1997. The strategy is an attempt to raise the profile of sanitation in sector programming.

The long term sector objective is “to improve national access to appropriate, acceptable and affordable excreta and domestic waste disposal facilities through sustainable approaches that are demand-driven and promote hygiene behaviour changes that bring about health and well-being of people”.

The National strategy objective is stated thus: “to create an enabling environment with support mechanisms to facilitate individuals, households and communities to effectively improve their environmental sanitation conditions and hygiene practices to prevent the transmission of disease”.

Sanitation, for the purpose of the strategy, is defined as “a process of collection, treatment and disposal of human excreta and domestic waste in a safe and hygienic manner (behaviour) which is affordable and sustainable”.

5. IMPACT OF WATER LAW AND WATER RIGHTS ON WATER SUPPLY AND SANITATION PROVISION/ACCESS FOR THE POOR

5.1 GENERAL

If we accept that people have a right of access to a limited resource (water), on an equitable basis, in a sustainable manner, now and in the future; then it is not very difficult to define the enabling legal conditions that would lead to a quickened pace towards universal coverage. Fairness, equity and sustainability would have to be key concepts.

Most of the international consensus on the right of all citizens to water and sanitation has focussed on the need for the extension of services to the unserved poor as a matter of urgency – not as an act of philanthropy, but in recognition of humanity’s common duty and the fact that the lack of services to the poor is in itself a serious environmental problem. The consensus has highlighted the fact that people have to be kept at the centre of the concern for sustainable development and that water management and development should be conducted on a participatory basis with decision making occurring at the lowest appropriate level. There have been other lessons. These include the understanding that support for policy development, institutional reform and capacity building is as important

as capital development. Furthermore, it is recognised that in order to achieve equitable access to water services, the provision of funds and the regulation and direction of institutions whose task is to provide water services are important. Changing the rules of access is but one element of the process of attempting to quicken the pace of providing water supply and sanitation to all.

In this regard, it is perhaps appropriate to refer to the South African law reform process before turning to the specific case of Zambia. South Africa's post-apartheid efforts to address water law and policy in a structured and principled way have attracted much interest of late.

The starting point is the Constitution of South Africa. The Bill of Rights, Constitution of South Africa, section 27(1) (b), reads in part, "Everyone has the right to have access to sufficient water". That spirit, enshrined in the Constitution, permeates the South African Water Policy, Water Act and the Water Services Act. For example, the Water Policy lists, as principles, the following:

- Water Law shall be subject to and consistent with the Constitution in all matters including the determination of public interest and the rights and obligations of all parties, public and private, with regard to water. While taking cognisance of existing uses, the water law will actively promote the values enshrined in the Bill of Rights.
- All water, wherever it occurs in the water cycle, is a resource common to all, the use of which shall be subject to national control
- There shall be no ownership of water but only a right (for environmental and basic human needs) or an authorisation for its use
- The location of the water resource in relation to land shall not in itself confer preferential rights of usage. The riparian principle shall not apply.

There are also other principles under the headings: Water Cycle, Water Resources Management Priorities, Water Resource Management Approaches, Water Institutions and Water Services. Under Water Services, the following principles are listed:

- The right to all citizens to have access to basic water services (the provision of potable water supply and the removal and disposal of human excreta and wastewater) necessary to afford them a healthy environment on an equitable and economically and environmentally sustainable basis shall be supported
- Water services shall be regulated in a manner which is consistent with and supportive of the aims and approaches of the broader local government framework
- While provision of water services is an activity distinct from the development and management of water resources, water services shall be provided in a manner consistent with the goals of water resources management
- Where water services are provided in a monopoly situation, the interests of the individual consumers and wider public must be protected and the broad goals of public policy promoted

Similarly under Water Resources Management Priorities, the following are some of the principles:

The objective of managing the quantity, quality and reliability of the nation's water resources is to achieve optimum, long term, environmentally sustainable and economic benefit for society from their use". The responsibilities of national government therefore include:

- (a) guaranteeing access to sufficient water for basic domestic needs
- (b) making sure that the requirements of the environment are met
- (c) taking account of the interconnected nature of the water cycle
- (d) making provision for the transfer of water between catchments
- (e) respecting South Africa's obligations to its neighbours
- (f) fulfilling the Government's commitments as custodian of the nation's water resources

The two Acts that transform the above intent into law are the Water Services Act and the Water Act. Brief extracts from the Acts are presented below:

Water Services Act

An Act "to provide for the right of access to water supply and basic sanitation; to provide for the setting up of national standards and norms and standards for tariffs; to provide for water services development plans; to provide for a regulatory framework for water services institutions and water services intermediaries; to provide for the establishment and disestablishment of water boards and water services committees and their powers and duties; to provide for the monitoring of water services and intervention by the Minister or by the relevant Province; to provide for financial assistance to water services institutions; to provide for certain powers to the Minister; to provide for gathering of information in a national information system and the distribution of information; to repeal certain laws; and to provide for matters connected therewith".

The Act has this to say under "Rights of Access":

*"Everyone has a right to access to basic water supply and sanitation".
"Every water services authority must
(a) take reasonable measures to realise the right; and
(b) provide for those measures in the development plan"*

Under "Water Services Authorities" the Act has this to say:

"Every water services authority has a duty to all consumers or potential consumers in its area of jurisdiction to progressively ensure affordable, efficient, economical and sustainable access to water services".

Water Services Authorities are required to give a time frame within which they will achieve universal coverage as well as five-year plans. Water Services Authorities are required to make the plans public.

In the same spirit, the Water Act reads thus:

" To provide for fundamental changes to the law relating to water resources; to provide for the responsibility of national government towards the nation's water resources; to provide for the continued availability of sufficient water for basic

human and ecological needs; to promote, regulate and otherwise provide for the protection, use development, conservation, management and control of water resources; to promote the integrated management of water resources; to provide for the establishment of catchment management agencies and other water management institutions; to provide for charges for all forms of water use; to provide for the systematic collection, evaluation and dissemination of information relating to water resources; to control dams with a safety risk; and to provide for related matters”.

Sustainability and equity are identified as central guiding principles in the protection, use, development, conservation and management and control of water resources.

What the South African case demonstrates is the fact that it is possible to ingenuously and effectively enshrine water rights in national laws contrary to popular opinion. The enshrining of the rights to water and sanitation provides focus and sustained commitment which, it can be argued, is likely to provide a basis for progressive (and quickened) realisation of basic rights. There will be a lot to learn from the South African experience.

5.2 ENABLING CONDITIONS AND CONSTRAINTS IN ZAMBIA – FACT AND PERCEPTION

In Roman Law, rivers were seen as resources which belonged to the nation as a whole and were available for common use by all citizens, but which were controlled by the state in the public interest. These principles fit very well with African (Zambian) customary law which sees water as a common good used in the interests of the community. We see in the Zambian Water Act :

- (a) a link between the right to use water and the ownership of land (riparian principle)
- (b) a separation between private and public water

Whereas access at source seems to be well enshrined (save for unregulated groundwater extraction), the other critical elements namely, infrastructure, technical and management skills; adequate funds are not availed.

It is also clear that the Constitution of Zambia does not explicitly provide for the right to water for the people of Zambia. Consequently, whereas policy statements come close to “conferring” that right, enshrining that right into subordinate laws (Water Act, Water and Sanitation Act, Local Government Act, etc) is a technical impossibility. We see that in the South African case, for example, the process of conferring the right to water is very straightforward. Since the Right is already provided for in the Constitution, the right simply permeates the Water Policy and the associated water laws as a matter of course. The enabling or framework legislation to provide for the legal entitlement to receive or access water in the case of Zambia is inadequate and incoherent. Consequently the focus on the goal of universal coverage is not secured in law. The only hope is that probably, the auxiliary regulations within the framework of the Water and Sanitation Act will provide not only regulation but the enabling environment for serving the poor and achieving the goal of universal access. That is yet to be seen.

During the discussions and interviews with stakeholders the following perceptions (and facts?) emerged:

- a general recognition that indeed access to water and the right to receive water should be considered basic human rights and treated as such
- there was a general misunderstanding (or lack of understanding) of the meaning of “duty” and “obligation” to provide water to residents in the current Local Government; and Water and Sanitation Acts respectively. Most saw it as a function and not a legal obligation. Yet others felt that much as the legal entitlement to receive water is desirable, the practicalities weighed against enshrining the entitlement in law. They cited institutional, legal, planning and financial difficulties. Some further felt that, in general, legislation tends to protect the rich at the expense of the rural poor.
- There was amazing ignorance about customary water law save for the fact that under customary water law, water is regarded as a free gift from God. Most people felt that with respect to water supply provision that concept had impacted negatively since most people did not want to pay for water. Some traditions also consider certain potential water sources as sacred and therefore not to be tapped.
- There was also a feeling that the allocation of funds to the sector was insufficient and did not reflect the “basic human right” profile of water. It was noted however that the WASHE concept had gone some way in tackling the needs of the rural poor.
- Stakeholders (including professionals) tended to confuse policy with national law
- Noted the inadequacy of the current Water Act particularly in so far as it did not regulate groundwater abstraction (hand dug wells and boreholes). Private water? It was also felt that the current Water Act needs to address the internationally shared water courses more adequately
- Most stakeholders however felt that the legal entitlement to access water was fairly well enshrined in the current water act although the implementation appeared to have some serious problems
- There was an isolated but strong feeling that the legal entitlement to receive water could have negative consequences in that consumers may get into a “passive and demand” culture – waiting for government to provide.
- There was general ignorance about water law and water rights issues among officials, professionals and communities. Sensitisation therefore should not only be limited to the general public.
- Some lawyers felt that the legal entitlement in the statutes was for regulatory purposes and not for the creation of rights
- On a positive note, it was noted that some strategies were being developed for peri-urban and rural water supply. These strategies would feed into the Water Supply and Sanitation Act (as regulations?) possibly providing some hope for the poor.

The above constraints and enabling conditions apply to both access to water and sanitation. In looking at the impacts of aspects of customary and statutory law (entitlement, supply, environment and conservation, gender, etc) on poverty alleviation, it is apparent that, in most cases, the impact could be better. The improvement of the impact is a matter that requires further study.

6. CONCLUSIONS

The study has identified the following as the major constraints and enabling conditions provided to domestic water supply and sanitation (provision and access) for the rural/urban poor by written and unwritten local/national water laws and water rights (and related) issues in Zambia:

(a) Enabling Conditions

- The perception that access to safe water and appropriate sanitation are basic human rights
- Fairly acceptable legislation on access to water at source, supported by an accommodating traditional (customary) law regimen
- High profile rights-based approach adopted by some NGOs (and other organisations) of late

(b) Constraints

- Ambivalence among some stakeholders on the efficacy of achieving universal access soon – recognised as desirable - by legislative means
- The perception that water is a free gift from God and therefore should be provided free of charge
- Inadequate political will (to confer rights?) beyond the fashionable rhetoric
- The absence of “subsistence” rights or simply the right to water in the Constitution of Zambia
- Incoherent “business-as-usual” Water Policy
- Traditional “regulatory” as opposed to “enabling” water services legislation
- Weak delivery mechanisms or institutions – rendering even the good laws ineffective
- Poor funding
- Inadequate research and development – legal, socio-economic, technical, etc
- Disjointed, overlapping, potentially conflicting legislation- lacking focus on global goals, equity, sustainability and basic rights
- The now ingrained perception that the extension of water services is necessarily a costly and complex intervention, that Zambia can not afford to achieve goals for universal access. This weakens the rights-based approach
- Inadequate facilitative, enabling legislation in which the state would focus more on goal setting, implementation and monitoring; promotion, coordination and mobilising critical and catalytic support to the sector
- Inadequate and ineffective advocacy on (water) rights issues
- Unfavourable national and international (donor?) priorities/dogmas (e.g. wholesale privatisation)
- Inadequate feedback into policy and legislation of past lessons (lack of research and monitoring?)
- Inadequate, sustained and honest focus on the goal of universal coverage by politicians and decision makers
- Inadequate, sustained legislative or regulatory focus on cost recovery and financing mechanisms for equity and sustainability

- Fresh memories of the failure to achieve the declared goal of universal access during the International Drinking Water Supply and Sanitation Decade (IDWSSD) (1981-1990). Once bitten twice shy?

We have also seen that water laws and water rights issues have been recognised as significant influences elsewhere (e.g. South Africa) in the provision of water supply and sanitation to the unserved populations. It has also been demonstrated that those rights can be enshrined in national laws. In Zambia, it is evident that the regulations that will accompany the implementation of the Water Supply and Sanitation Act will have to specifically address the issues of goal setting (for water authorities), development plans, equity and rights if Zambia is to achieve universal coverage early in the next century. Greater equity in access to services is likely to accelerate progress towards universal access.

While the commercialisation that Zambia's Water and Sanitation Act seeks to support (and privatisation) may bring many benefits in terms of incentives for service delivery, it is not necessarily a comprehensive solution and risks further marginalizing the poor. Low incomes and limited "voice"(rights) mean that the poor can bring little pressure to bear. Second, privatisation particularly in monopoly services, has brought to the fore the need for regulation of price and service quality, with special consideration to the prices and service levels of the poor. Good governance is a prerequisite for effective regulation, and Zambia is still in its infancy in that area.

It is also important to note that despite the law reform, institutional models remain autocratic, bureaucratic, authoritarian and top down. The ethos of government institutions needs to be revisited in order to embed the hallmarks of empowerment and capacity building: transparency, partnership, flexibility, respect and empathy.

It is important to record here that Zambia's declaration of intent presented during the launching of the IDWSSD (1981-1990) on 10 November, 1980 at the 35th session of the UN General Assembly in New York accepted the objective of providing safe water supply and adequate sanitation for all its citizens by 1990. The Plan of Action dated December 1983, had the general aim of ensuring 100% coverage by 1990 or 2000 at the latest. Well, that is now history.

Less than one year to the year 2000, only 43% of the urban population of Zambia has access to both safe water and appropriate sanitation. In rural areas only 30% of the population has access to safe water. The actual figures could be lower. Pundits agree that a "business-as-usual" approach will not even help keep pace with population growth.

But then there is good news from elsewhere in the global village. Several low-income countries including Bangladesh, Burkina Faso, Cuba, India and Mauritania, exercising political will (rights-based approach?) and adopting appropriate priorities (equity and rights) and strategies achieved a high rate of coverage and are on their way to meeting the goal of universal access by the year 2000.

It is important to close this chapter by referring to the Universal Declaration of Human Rights, Article 25:

“Everyone has the right to a standard of living adequate for health and well-being of himself and his family including food, clothing, housing and medical care and necessary social services, and the right to security of employment in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control”.

That was declared in 1948. On the threshold of the 21st century, the world is still a far cry – even just for the case of water!

7. RECOMMENDATIONS

7.1 ACTION

- In view of the low levels of awareness about water law, water rights and water supply provisions, public information, education and participation is extremely important
- Given the unfavourable legal environment, Zambia, through the Water and Sanitation Act, may have to seriously address the “equity” and “basic rights” factors through serious regulation
- Regional collaboration, cooperation and information exchange on water law and water rights issues and impacts thereof must be encouraged
- Implementation of programmes aimed at strengthening analytical, legal and policy formulation skills among decision makers (institutional capacity building) must be supported
- Advocacy activities
- In the case of Zambia and Southern Africa, the Southern African Development Community’s Water Sector is likely to be a suitable vehicle for leadership
- Harmonisation of water laws (access) in the region in view of the significance of internationally shared watercourses in national water supply provision
- Generation of knowledge and dissemination of information on success stories
- Creation of networks to facilitate access to water law and water rights information and expertise in the region
- Incorporate water law and water rights issues in Local Agenda 21 activities
- Hold symposia and workshops on water law and water rights issues involving all stakeholders
- Wide dissemination of the results of this research in order to promote awareness, understanding and further debate

7.2 FURTHER STUDY

- In view of the importance of internationally shared watercourses as sources of water supply in Zambia and the region, it is important that the water laws in the riparian countries and the various water course agreements are studied and the findings appropriately disseminated
- Success stories such as Bangladesh, Burkina Faso, India, etc need to be studied so as to clearly identify the enabling factors or critical success elements – may or may not be water laws/rights – but it is important to know

- It is important to study linkages among water law, water rights and water institutions
- It is important to study how water rights, water laws and water supply can be effectively integrated within a framework of poverty alleviation
- Finally, it will become important to monitor and evaluate the South African rights-based approach to water supply and sanitation and document the results for the benefit all.

APPENDICES

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C : Fact Sheet – Zambia

Geography

Area: total area:	752 610 sq km, land area: 740 720 sq km
Climate:	tropical; modified by altitude; rainy season (October to April)
Terrain:	mostly high plateau with some hills and mountains, lowest point: Zambezi River 329m, highest point: Mafinga Hills 2301m
Natural Resources:	copper, cobalt, zinc, lead, coal, emeralds, gold, silver, uranium, hydropower potential
Landuse:	arable land: 7%, permanent crops: 0%, meadows and pastures: 47%, forest and woodland: 27%, other: 19%
Irrigated land:	320 sq km (1989 est)
Environment:	current issues: air pollution and the resulting acid rain in the mineral extraction and refining region; deforestation; soil erosion; desertification; lack of adequate water provision presents, health risks; natural hazards: tropical storms (November to April)

People

Population:	9,159,072 (July 1996 est.)
Age Structure:	0-14 years:49%, 15-64 years:48%, 65 years and over: 3% (July 1996 est)
Population Growth Rate:	2.11% (1996 est)
Life expectancy at birth:	36.31 years (1996 est)
Ethnic divisions:	African 98.7%, European 1.1%, other 0.2%
Religions:	Christian 50-75%, Muslim and Hindu 1%, Indigenous beliefs 24-49%

Economy

Economic overview:	Despite continuing progress in privatisation and budgetary reform, Zambia's economy is showing little improvement. Inflation, while slowing somewhat, continues to be a major concern to the Chiluba government. Four of Zambia's 20 banks collapsed in 1995, and the nation's debt stood at \$7 billion. Zambia's copper mining sector, which accounts for over 80% of the nation's foreign currency intake, is struggling. Production rates are down as are world copper prices. Food production is insufficient to meet the country's needs due to droughts and an end to government subsidisation of agriculture. While the government's
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	economic program aims for a 6% growth in the next three years, a growth rate of 3-5% is more likely.
GDP:	purchasing power parity -\$8.9 billion (1995 est); GDP real growth rate NA%; GDP per capita \$900 (1995 est)
Inflation rate:	55%(consumer prices, 1995 est)
Labour force:	3.4 million, by occupation: agriculture 85%, mining, manufacturing/construction 6%, transport and services 9%
Unemployment:	22% (1995 est)
Industries:	copper mining and processing, construction, foodstuffs, beverages, chemicals, textiles, and fertiliser
Agriculture:	corn, sorghum, rice, peanuts, sunflower seed, tobacco, cotton, sugarcane, cassava(tapioca); cattle, goats, beef, eggs
Exports:	\$1.075 billion (f.o.b., 1994 est): copper, zinc, cobalt, lead, and tobacco
Imports:	\$845 million (f.o.b., 1994 est): machinery, transportation, equipment, foodstuffs, fuels, others
External debt:	\$7 billion (1995 est.)