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**THE INSTITUTIONAL & LEGAL FRAMEWORK FOR PROTECTING POOR
COMMUNITIES' ACCESS TO WATER SUPPLY AND SANITATION IN THE
SENEGAL AND VOLTA RIVER BASINS**

Institute of Water and Environment

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Supervisor: Dr Peter Howsam

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ABSTRACT

Water is life. While access to water supply and sanitation facilities is considered as one of the most basic human needs, it is also today considered as a human right. Lack of access to safe, affordable, close and adequate water supply and sanitation facilities remains one of the leading causes of diseases and deaths in the world.

There are many reasons for this unacceptable situation. One key characteristic is the inadequate institutional and legal framework for water supply and sanitation provision in place.

The aim of this research is to gain an improved understanding of existing frameworks, to see what and how it makes the links between the local, regional, national and international levels for communities to access improved water supply and sanitation facilities. The hypothesis being that a framework which does not provide these linkages can have a negative impact on water supply and sanitation provision for poor communities.

The research focuses on the institutional and legal frameworks relating to the Senegal and Volta river basins, in West Africa and their constituent countries, one of which, Ghana, is the focus of a more detailed analysis.

The study identified that insufficient attention has been given to the establishment of an overall institutional and legal framework at all levels, and particularly to the establishment of regulatory and enforcement bodies at the local, regional, national and international levels and their inclusion in the formulation of water supply and sanitation policies at all levels.

A model institutional and legal framework has been developed as a benchmark against which existing frameworks can be evaluated. It draws out key features extending from the local to the international level.

The research argues that governments have a primary role to play in facilitating the provision of water supply and sanitation facilities to communities, in particular the poor.

Keywords,

Human right, water supply, sanitation, treaties, international (water law), poor communities, poverty, institutional, legal, framework, Senegal river, Volta river, river basin, transboundary and Ghana.

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LIST OF ACRONYMS

AISJ	Association Internationale des Sciences Juridiques
AOC-HYCOS	Système d'Observation du Cycle Hydrologique de l'Afrique de l'Ouest et Centrale, Niger
CCW	Consumer Council for Water – United Kingdom
CEDAW	Convention for the Elimination of All forms of Discrimination against Women
CRC	Convention for the Rights of the Child
CWSA	Community Water Supply and Sanitation Agency- Ghana
CWSD	Community Water and Sanitation Division - Ghana
DfID	Department of International Development - UK
DGH	Direction Générale de L’Hydraulique – Burkina Faso
DWI	Drinking Water Inspectorate -UK
DWST	District Water and Sanitation Team - Ghana
EA	Environment Agency - UK
EU	European Union
GEF	Global Environment Facility
GLSS	Ghana Living Standard Survey
GoG	Government of Ghana
GWCL	Ghana Water Company Limited
HR	Human Rights
IDWSSD	International Drinking Water Supply and Sanitation Decade
IHDP	International Human Dimensions Programme
IIED	International Institute for Environment and Development
ILF	Institutional & Legal Framework
MDG	Millennium Development Goals
MILF	Model Institutional & Legal Framework
MoWH	Ministry of Works and Housing - Ghana
NAO	National Audit Office - UK
NGO	Non governmental organisations
ODI	Overseas development Institute - UK
OFWAT	Office of Water Services - UK
OMVS	Organisation de Mise en Valeur du Fleuve Sénégal
O & M	Operation and Maintenance
ONAS	Office National de l'Assainissement du Sénégal
ONEA	Office National de L’Eau et de l’Assainissement - Burkina Faso
PO	Partner Organisation
pS –Eau	Programme Solidarité Eau
PURC	Public Utilities Regulatory Commission - Ghana
SAUR	Société d'Aménagement Urbain et Rural - France
SCF (UK)	Save the Children Fund - United Kingdom
SOAS	School of Oriental and African Studies - London
SODECI	Société de Distribution d'Eau de Côte d'Ivoire
SONEES	Société Nationale d'Exploitation des Eaux du Sénégal
UK	United Kingdom
UN	United Nations

UNCRC	United Nations Convention on the Rights of the Child
UNCEDAW	United Nations Convention on the Elimination of all forms of Discrimination Against Women
UNICEF	United Nations International Fund for Children
UNDTCD	United Nations Department of Technical Cooperation for Development
UNDP	United Nations Development Programme
UNWWAP	United Nations World Water Assessment Programme
VRA	Volta River Authority - Ghana
WATSAN	Water Supply and Sanitation
WB	World Bank
WEDC	Water Engineering Development Centre - Loughborough, UK
WRC	Water Resources Commission - Ghana
WUP	Water Utilities Partnership
WSSD	World Summit on Sustainable Development
WWC	World Water Council
WWC & JWRA	World Water Council & Japan Water Resources Association
WWSSCC	World Water Supply and Sanitation Collaborative Council

DEFINITIONS

What is a right?

“Just, morally or socially correct; a thing one may legally or morally claim”.

Dorling & Kindersley Oxford Dictionary (1988) Oxford University Press, Oxford, UK

“An interest which will be recognised and protected by a rule of law, respect for which is a legal duty, violation of which is a legal wrong”.

Dictionary of Law, Curzon, L. (1988) 2nd Edition, Longman Publishing, London, UK

“A lawful title or claim to anything. The word is frequently used to denote a claim to a thing of which one is not in possession”.

Ivamy E. (1993) Mozley & Whiteley Law Dictionary, Butterworths publishing, London, UK

The term right implies correctness, equity, justice, law, entitlement and general practice.

- A Human Right to water supply and sanitation facilities relates to the moral and legal entitlement to access clean, safe, affordable and close water supply and sanitation and with the provision of tools (legal and institutional framework) (Hausermann, 1999) , (Water Aid, 1999).
- The provision of improved water supply facilities means water for drinking and household uses includes water, which is used, or intended to be available for use, by people for drinking, cooking, food preparation, personal hygiene (body washing, hand washing, religious rituals) or other purposes (dish washing, socio-economic-cultural activities) (**Author’s own definition**).
- The provision of improved Sanitation or Sanitary facilities involves: the construction of a temporary, semi-permanent or permanent structure for the collection and disposal of human excreta and of wastewater from washing, bathing or any discharge of used water from the household (latrines, slabs, corporal and clothing washing units, water closet; septic tank, drainage systems, soak pits) to a sewage disposal points (sewer lines, collection pond or tank and treatment facilities); the provision/presence of water for personal hygiene and environmental cleanness within a household and the inclusion of hygiene promotion activities (**Author’s own definition**).

GLOSSARY

Cedi (pl. Cedis; ¢): Ghanaian unit of currency composed of 100 pesewas. Introduced after independence by Kwame Nkrumah.

Forex Bureaux Average Opening Rates		
Currency	Buying	Selling
USD	9,168.18	9,363.64
GBP	16,068.18	16,327.27
EUR	11,054.55	11,330.00
CFA(1000)	16,468.18	17,018.18

Source: Bank of Ghana, May 2006

Civil Rights: The rights of citizens to liberty and equality (for example, freedom to access information or to vote).

Civil and Political Rights: The rights of citizens to liberty and equality; sometimes referred to as first generation rights. Civil rights include freedom to worship, to think and express oneself, to vote, to take part in political life, and to have access to information.

Commission on Human Rights: A body formed by the Economic and Social Council (ECOSOC) of the United Nations to deal with human rights; one of the first and most important international human rights bodies.

Convention: A binding agreement between states used synonymously with treaty and covenant. Conventions are stronger than declarations because they are legally binding for governments that have signed them. When the UN General Assembly adopts a convention, it creates international norms and standards. Once the UN General Assembly adopts a convention, member states can then ratify the convention, promising to uphold it. The UN can then censure governments that violate the standards set forth in a convention.

Convention on the Elimination of All Forms of Discrimination against Women (adopted 1979; entered into force 1981): The first legally United Nations binding international document prohibiting discrimination against women and obligating governments to take affirmative steps to advance the equality of women. Abbreviated CEDAW.

Convention on the Rights of the Child (adopted 1989; entered into force 1990): A convention setting forth a full spectrum of civil, cultural, economic, social, and political rights for children. Abbreviated CRC.

Covenant: A binding agreement between states used synonymously with convention and treaty. The major international human rights covenants, both passed in 1966, are the

International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR).

Cultural Rights: The right to preserve and enjoy one's cultural identity and development.

Customary International Law: Law that becomes binding on states although it is not written, but rather adhered to out of custom; when enough states have begun to behave as though something is law, it becomes law "by use"; this is one of the main sources of international law.

Declaration: Document stating agreed upon standards but which is not legally binding. UN conferences, like the 1993 UN Conference on Human Rights in Vienna and the 1995 World Conference for Women in Beijing, usually produce two sets of declarations: one written by government representatives and one by NGOs. The UN general assembly often issues influential but legally non-binding declarations.

Economic and Social Council: A UN council of 54 members concerned principally with the fields of population, economic development, human rights, and criminal justice. This high-ranking body receives and discharges human rights reports in a variety of circumstances. Abbreviated ECOSOC.

Economic Rights: Rights that concern the production, development, and management of material for the necessities of life. See Social and Economic Rights

Human Rights: The rights people are entitled because they are human beings, irrespective of their citizenship, nationality, race, ethnicity, language, sex, sexuality, or abilities; human rights become enforceable when they are codified as conventions, covenants, or treaties, or as they become recognized as customary international law.

Inalienable: Refers to rights that belong to every person and cannot be taken from a person under any circumstances.

Indivisible: Refers to the equal importance of each human rights law. A person cannot be denied a right because someone decides it is 'less important' or 'non-essential'.

Interdependent: Refers to the complimentary framework of human rights law. For example, your ability to participate in your government is directly affected by your right to express yourself, to get an education, and even to obtain the necessities of life.

International bill of rights: The combination of these three documents (the Universal Declaration of Human Rights (UDHR), the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR)).

International Covenant on Civil and Political Rights (Adopted 1966, entered into force 1976): Convention that declares that all people have a broad range of civil and

political rights. One of three components of the International Bill of Rights. Abbreviated ICCPR.

International Covenant on Economic, Social and Cultural Rights (Adopted 1966, entered into force 1976): Convention that declares that all people have a broad range of economic, social, and cultural rights. One of three components of the International Bill of Rights. Abbreviated ICESCR.

Member States: Countries that are member of the United Nations.

Non-Binding: A document, like a declaration, that carries no formal legal obligations. It may, however, carry moral obligations or **eventually** attain the force of law as international customary law.

Ratification, Ratify: Process by which the legislative body of a state confirms a government's action in signing a treaty; formal procedure by which a state is bound to a treaty after acceptance. Ratification is an international act. It commits states to bringing their law, policy and practice into line with the standards set by a convention. An international committee of experts to whom states must report two years after ratification and every five years thereafter monitors implementation.

Sign: In human rights, this is the first step in ratification of a treaty; to sign a declaration, convention, or one of the covenants constitutes a promise to adhere to the principles in the document and to honour its spirit.

Social Rights: Rights that give people security as they live together and learn together, as in families, schools, and other institutions.

Social and Economic Rights: Rights that give people social and economic security, sometimes referred to as security-oriented or second-generation rights. Examples are the right to food, shelter, and health care. There is disagreement whether the government is obligated to provide these benefits.

State: Often synonymous with 'country'; a group of people permanently occupying a fixed territory having common laws and government and capable of conducting international affairs.

States Party (ies): Those countries that have ratified a covenant or a convention and are thereby bound to conform to its provisions.

Treaty: Formal agreement between states that define and modify their mutual duties and obligations; used synonymously with convention. When the UN General Assembly adopts conventions, they create legally binding international obligations for the member states who have signed the treaty. When a national government ratifies treaty, the articles of that treaty become part of its domestic legal obligations.

United Nations Charter: Initial document of the UN setting forth its goals, functions, and responsibilities; Adopted in San Francisco in 1945.

United Nations General Assembly: One of the principal organs of the UN, consisting of all member states. The General Assembly issues declarations and adopts conventions on human rights issues. The United Nations Charter governs the actions of the General Assembly.

Universal Declaration of Human Rights (1948): Primary UN document establishing human rights standards and norms. Although the declaration is intended to be non-binding, through time its various provisions have become so respected by states that it can now be said to be customary international law. Abbreviated UDHR.

Water policy: sets guidelines and actions to be taken or implemented.

Water legislation: supports a water resource management plan and water supply and sanitation policy.

Source: Adapted from Julie Mertus et al (2004), **Glossary of human rights, Local Action, Global Change and the Minnesota Partners in Human Rights Resource Notebook.** (Accessed 26 May 2004)

<http://gbgm-umc.org/umw/education/glossary.html>

CHAPTER 1

INTRODUCTION

1.1 Water supply and sanitation, human rights and poverty

A supply of clean, adequate, safe and close water supply and sanitation facilities are two of the most fundamental basic human needs and human right. Yet, according to UN estimates (UNWWAP, 2003), “*more than 1.1 billion people are estimated to lack access to safe drinking water while 2.4 billion people do not have adequate sanitation*”. Every minute, 10 people in developing countries die from water related-diseases and it is estimated that at any one time, half of the world’s hospital beds are taken up by people suffering from water related diseases associated with dirty water and poor sanitation (DfID & WEDC, 1998), (Water Aid, 2001).

The current water supply and sanitation situation for many poor people in the world is not acceptable. For many people in the developing world, whether in transition from centrally planned economies, emerging countries or semi-industrial countries of the world, access to water is a necessity, for some a daily struggle and in many cases a matter of life or death.

Very often, the water collected is dirty or contaminated causing poor health and water-related diseases. For poor/unserved people, the lack of clean water and adequate sanitation further intensifies their financial situation. As they lay in bed, they lose time in opportunities and money while coping with sickness and debilitating illnesses. In the poor countries, this means a total of up to 27,000 deaths each day (WWC, 1998).

Lack of access to water supplies and sanitation facilities becomes therefore an economic, social and cultural barrier to development.

Reaching poor/unserved communities is often difficult because these groups are remote, dispersed, and have little or no communication facilities. They are often silent, lacking the skills to make their voices heard, and unaware of their legal rights which are too often expensive to follow up.

There are still significant problems in enabling millions of people who lack access to affordable, safe, close and adequate water supply and sanitation facilities to gain these basic essentials for a decent standard of living - regarded by many as basic human rights.

One of the issues that are judged to constrain access and provision is the lack of institutional and legal framework which governs water supply and sanitation. While legislation and institutions may be in place, they are often weakly implemented, poorly enforced, and not accessible to those poor communities who suffer most from their inadequate effectiveness.

Under normal circumstances, the institutional and legal framework should range from local traditional rules usually applied by the community themselves, to multi-lateral international treaties applied by national inter-state and international agencies. While the latter in practice are often totally divorced from the daily lives of poor communities, each level of the institutional and legal framework has an impact on those above and below.

The effectiveness of national institutions and laws will be dependent to some degree on the implementation of any international treaties. Inadequate water supply and sanitation afforded to some poor downstream riparian communities can be made even more precarious by the implementation of international transboundary agreements which tend to be driven more by national politics and economics than by local needs.

A detailed study of the nature (in theory and in practice) of the different levels (local, national international) of the legal and institutional framework and their interaction is necessary to assess its impact on enabling or otherwise the poor in gaining access to, or being provided with, adequate, safe, close and affordable water supply and sanitation facilities.

Access to water supplies and sanitation facilities is a fundamental human right which has been explicitly supported by International law, conventions, declarations and agreements, and implicitly by United Nations declarations as part of "*as standard of*

living adequate for health and well being which is directly dependant on access to clean, safe and close water supplies for households'' daily needs (Gleick, 1996).

It is explicit in the United Nations Convention on the Rights of the Child¹ and in the United Nations Convention on the Elimination of All Forms of Discrimination against Women² (2006). However, in November 2002, a milestone was reached when 'the right to water' was explicitly recognised in the General Comment No 15 in Articles 11 and 12 of the International Convention on Economic, Social and Cultural Rights³ which sets out the basis of state responsibility towards the realization of the rights to health and to an adequate standard of living.

In light of growing international, regional, regional and local concerns (water stress, water competition, pollution, increase in water related-diseases), it is imperative to adopt water supply and sanitation policies (setting up effective institutions and legislations) at the local levels for the sustainable benefits of the poor communities (urban, small towns and rural) who have been neglected in their share to access clean, safe, affordable and close water supplies and sanitation facilities.

Although the general picture in the world is not acceptable, the situation in Africa is particularly bad and as such deserves the greatest attention as discussed at the Johannesburg World Summit on Sustainable Development (WSSD) in 2004 between African and European representatives (EU, 2006). This resulted in the framing of the European Water Initiative for Africa with objective of meeting the Millennium Development Goals (MDGs).

¹United Convention on the Rights of the Child Adopted and opened for signature, ratification and accession by General Assembly resolution 44/25 of 20 November 1989, entry into force 2 September 1990, in accordance with article 49.

²United Convention on the Elimination of All Forms of Discrimination against Women (2006) (Adopted and opened for signature, ratification and accession by General Assembly resolution 34/180 of 18 December 1979

³ General Comment no 15 in Articles 11 and 12 of the International Conventional on Economic, Social and Cultural Rights(Adopted and opened for signature, ratification and accession by General Assembly resolution 2200 A (XXI) of 16 December 1966 , entry into force 3 January 1976, in accordance with article 27

The importance of River Basin Management (a recently proposed European Union Initiative for Africa)⁴ and the need, in the case of transboundary waters, for inter-state agreements, has been recognised for some time (World Bank putting resources into training of water lawyers). Also, many countries in Africa have recently reformed, or are in the process of reforming their water supply and sanitation legislation and institutions.

At the local level, there is conflict and confusion between old and present traditions, rules and modern statutory regulations. Poor communities usually have little understanding of how the systems work and very often have limited or no input into the framing of these legal regimes, how institutions are implemented and their purpose which separately or in combination can have a negative impact on their livelihoods.

This research focuses on the Senegal and Volta river basins, covering nine countries in West Africa. The Senegal and Volta rivers are both international rivers with different stages of development of their river basins.

Communities have used water from the river for their daily household needs (drinking, bathing, laundry, and sanitation), other activities (drainage, recreation, income generating activities etc) and other beneficial opportunities (electricity, trade).

However, the management and development of the basins with the use of the rivers for navigation, irrigation with the construction of dams and for power supply has lead to multiple problems: pollution from agriculture, sewage waste and industries; diseases, poverty and mortality. As a consequence, these problems limit or deny the communities, in particular the poor their fundamental human right to access clean, close, safe and affordable water supply and sanitation facilities.

The Volta and Senegal river basins provide a suitable setting for this study - the results of which could be extrapolated to other parts of Africa and beyond.

⁴ European Union Water Initiative for Africa (2006) A declaration of Africa and Europe Partnership on Water Affairs and Sanitation has been signed at the World Summit on Sustainable development (WSSD) in Johannesburg by the Presidents of South Africa, Nigeria, the European Council, and the European Commission. The purpose of this partnership is to make a more effective joint (Africa - EU) contribution to the achievement of the water and sanitation related Millennium Development Goals (MDG)

1.2 Aim and objectives

1.2.1 Aim

The aim of this research is to gain an improved understanding of the institutional and legal linkages with regard to the human right to water supply for drinking and household uses and sanitation facilities for poor communities. It addresses the framework spanning from the local, regional, national and international levels and focuses on the general situation in the Senegal and Volta river basins and on Ghana in particular.

The purpose is to address the underlying assumption that ‘there are weaknesses or constraints in the international, national and local institutions and legal framework and this contributes to poor communities in the Senegal and Volta river basins not having adequate access to water supplies and sanitation facilities, thereby denying them their basic human rights’.

1.2.2 Objectives

The first objective is to identify and describe the conditions of poor communities who lack improved water supply for drinking and household use and sanitation facilities. The purpose is to identify and understand the complexity, interrelationship and multidimensional nature of poverty, human rights and access to water supply and sanitation facilities.

The second objective is to identify, describe the key features of local customary, national and international statutory water laws and associated institutions, relating to access to water supplies and sanitation which forms the development of the benchmark framework and to develop a model or benchmark institutional and legal framework against which circumstances in the Senegal & Volta river basins countries and Ghana in particular can be evaluated. A key issue will be the linkages in the framework between the local, regional, national and international levels.

The third objective is to review, against the benchmark framework, the institutional and legal framework in the Volta and Senegal river basins with regard to access to water supplies for drinking and household uses and sanitation facilities.

The fourth objective is to critically assess the situation in one country, within one of the basins, i.e. Ghana. The focus will be on the linkages between the institutional/legal frameworks in place and human rights and access to water supplies and sanitation facilities for poor communities.

The fifth objective is to attempt to develop or recommend new/modified approaches, which can assist policy makers, planners and governments in translating policies into actions and thereby improving the livelihood of poor communities.

1.3 Thesis structure

The thesis is divided in to seven chapters:

Chapter 1 provides an introduction to the research subject area, the research aims and objectives and the thesis structure.

Chapter 2 presents and explains the approach and methodology adopted. This includes the research methods, research planning and data collection.

Chapter 3 focuses on poverty and human rights, the causes of poverty and strategies to alleviate poverty in the 21st century, the Human Right based approach to water supply and sanitation. This chapter relates to the first objective.

Chapter 4 reviews current practices and draws out the key features of an institutional and legal framework required to support poor communities' access to water supply and sanitation facilities. A model benchmark framework is presented against which the situation in particular circumstances can be evaluated. This chapter relates to the second objective.

Chapter 5 describes the general physical characteristics, socio-economic circumstances in Senegal and Volta river basins and presents an assessment of the existing institutional and legal frameworks for water supply and sanitation provision. This chapter relates to the third objective.

Chapter 6 focuses on Ghana as a case study and deals with the socio-economic situation of the country, and critically assesses the legal and institutional frameworks in place for

poor communities in accessing water supply and sanitation facilities. This chapter relates to the fourth objective.

Chapter 7 concludes the research and provides recommendations for future research. This chapter relates to the fifth objective.

CHAPTER 2

APPROACH and METHODOLOGY

2.1 Approach to the research

In an ideal world, the author would consider the following:

- field visits to the nine countries (Senegal, Mali, Mauritania, Guinea, Burkina Faso, Ghana, Cote d'Ivoire, Togo and Benin) of the Senegal and Volta river basins in order to gain in situ understanding of the research's question problem. And also as (Marshall & Rossman, 1999) put it "*Fieldwork would be most appropriate for discovering the relevant variables and building a thorough, rich, detailed description ...*"
- organising extensive meetings with UK-based organisations working in the watsan sector in Africa, in particular in West Africa and with UK/Europe-based institutions (DfID, EU, etc.)
- securing sufficient funds for the whole of the research
- attending international seminars/workshops outside the UK. An international recent workshop on 'African Laws' was organised in Johannesburg in January 2006.

However, having considered all the above options, the following approach was adopted because it matched with my limited financial resources and parental responsibilities.

The research was based in United Kingdom and Senegal. Data was obtained from a range of sources:

- Government and Non Governmental Organisations' communications and publications provided important information documenting the watsan policies, activities and actions.
- Talking to people, this means of communication provided more interaction with the respondent, one is more attentive and the respondent more likely to be overt to questions than during an interview, discussions take place like in a dialogue. The respondent is knowledgeable, somebody who has experience living with poor communities and can relate the living conditions of communities; or someone who has gained knowledge through profession, general interest on the subject matter

- Desk study involves the sorting of the information in the various forms and codifying them in order of relationship. It precedes the literature review
- Interview, here, the author prepared a list of questions for the interviewee to be answered during a prearranged time. The type of interview used is unstructured allowing more flexibility in the questions as discussed later.

Visuals materials (film-videos, photographs, tapes) were not used because they were not available during the research.

Like any research, the steps involved are similar to a wheel of progress constantly adding, changing, omitting, and coming back to the initial idea, refining, analyzing, finding new ideas and concepts and developing new findings. The research planning was not fixed and involved a lot of activity. The research cycle as presented in Figure 2.1 involved several steps:

Phase A: Collection of Data from documents and public (academics, civil society)

Phase B: Field trip and Interviews in Senegal

Phase C: Desk study, Analysis and Development of research findings and new approaches for a benchmark

2.2 Methodology

This section covers in more detailed explanation of what I did, why and how – for example data collection, literature review, interviews and model framework development

2.2.1 Data collection

a) Desk-based data and information collection

The data was collected from library-based documents:

- in the UK at Cranfield University, Silsoe (UK), the School of African and Oriental Studies (University of London), Water Aid – UK (London), the United Kingdom Foreign and Commonwealth Office (London);
- in London and Paris(France) – based diplomatic representatives ;,
- international/national magazines and newspapers; the Internet and

- from direct communication with the public in the UK (through seminars – ODI and Water Aid);
- in Senegal (through meetings)
- email communications (academics at the University of Dundee (UK)/University of the Pacific (USA), International Water Academy(France), civil servants(Library services, private and public sectors operators) in Senegal and the United Kingdom.

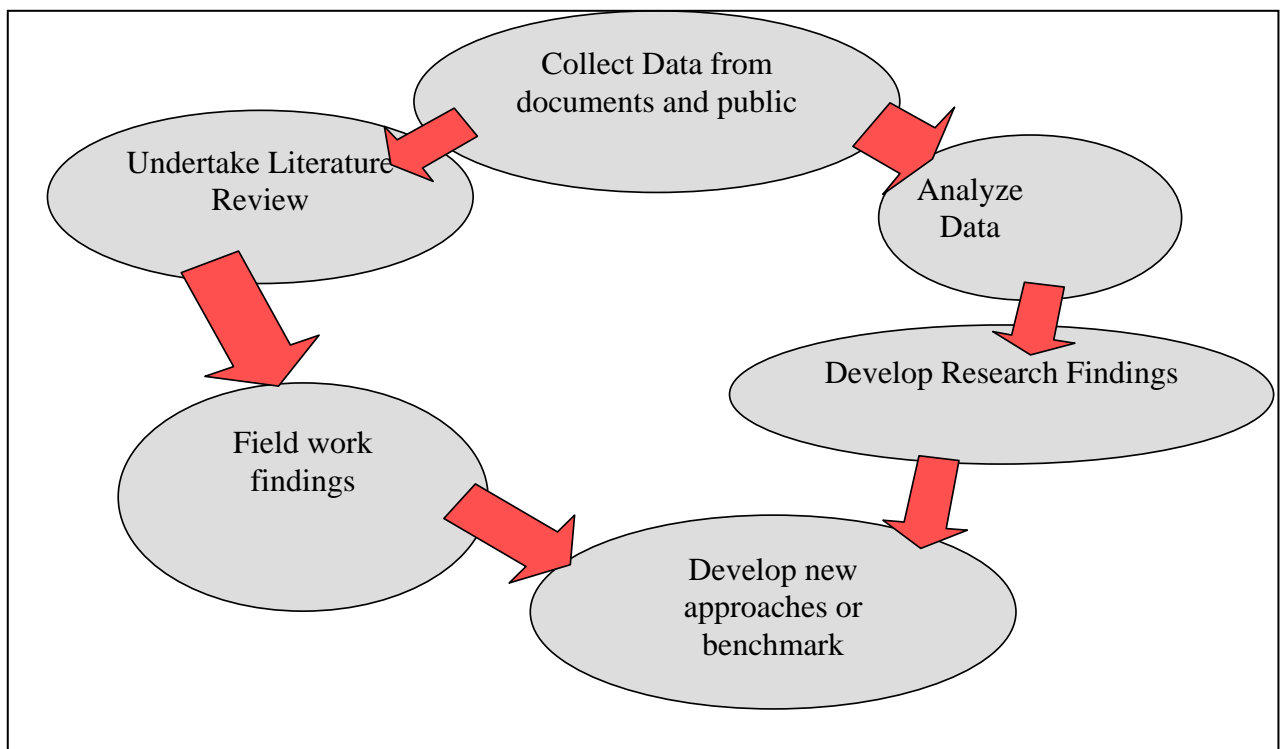


Figure 2.1: Schematic Diagram of Thesis Research Steps

In this first step, data was categorised into three types:

- General information on human rights, poverty, the water supply and sanitation (watsan) sector
- International river basins and institutional & legal frameworks
- Republic of Ghana, Government of Ghana, the watsan situation and related subjects

The first period of the research involved data collection and lasted for 15 months from June 2001 to September 2002 in the UK. The research focused primarily on a thorough

desk study and literature search in order to obtain basic information from local libraries, universities (in London (SOAS) and Cranfield (Silsoe), UK; from resource centres of London-based organisations (Water Aid -UK); from the World Wide Web (pS-Eau France and others); from Government departments based in London (Foreign and Commonwealth Office), London-based diplomatic **representatives** (Mauritania, Senegal, Ghana, Cote d' Ivoire); Paris -based embassies (Mali and Burkina Faso). Both London and Paris based diplomatic **representatives** welcomed (telephonic communication) the focus of the research and did provide general information on the respective countries and the water sector but publications were not available except from the Mauritanian Embassy in London.

The second period was spent in Dakar, Senegal and is referred to in part b) of this section.

The third period from January to August 2004 was spent collecting data on possible benchmarks for recommendations for future decision making and planning. This third part lasted approximately six months and was carried out in the UK. During this period, the focus was on the institutional and legal framework: its definitions and other related components such as - legal system, legislation, institutions, institutional framework, implementation, regulation, enforcement). I also developed a model institutional and legal framework, which can be used as a benchmark for assessing conditions in Ghana, other countries within the two river basins and worldwide. Finally, the last months were used for writing the thesis.

b) field-based data

The second period of the research was field-based.

The limited field-based **research** involved interviews with key informants as summarised in Appendix 2.1. The information gathered in Dakar was not taped but merely noted. Before conducting these interviews, the author arranged the meetings three to four days in advance.

An interview according to (Miller & Dingwall, 1997) *“is a turn-taking system that requires that the interviewer proposes topics and that the respondent seek to produce locally acceptable answers. This is true even of so-called unstructured interviews. The sequence may be flexible; the question wording may flexible; it may be dressed up like a*

conversation between friends". This is supported by (Marshall & Rossman, 1999) as "... *the purpose of which is to obtain valid and reliable information. An interview is a useful way to get large amount of data quickly*".

Face-to face interviews were carried out in the place of work of the interviewees. The method adopted during this period involved a series of topics to be raised and discussed during an agreed period of time, which lasted up to an hour.

However, according to (Marshall & Rossman, 1999) the interview technique as stated earlier has its limitations and weaknesses:

- *"interviews must involve personal interaction*
- *cooperation is essential*
- *interviewees may not be willing to share all information that is need with the interviewer*
- *the interviewer may lack expertise or familiarity with technical jargon*
- *interviewees may not always be truthful*
- *interviewer must have good listening skills and cope with concerns with data quality*
- *volumes of data may be obtained through interviewing, but such data may be difficult to manipulate*".

c) Review of literature

The objective of the review of the literature is to discover relevant material published in the chosen field. "*Finding the information involves reviewing the literature relevant to the research problem. This should start at the beginning of the research process and continue throughout the project*" (Walliman, 2001).

A literature review was an important tool for the baseline study as well for gaining overall regional and local knowledge of the various characteristics that represent the two river basins.

Reviews of the literature were carried out regularly during the research period as documents on the subject became available more often from libraries (books, journals, written reports and reproductions such as microfiche) and the Internet. As the research progressed, material that is more recent was collected and the research began to be more

focused. Literature reviewing was a useful data collection technique, and provided a ready source of knowledge of the regional and local settings.

In parallel with how the objectives will be achieved and the methods of getting information, analysing the information was equally very important when faced with vast amount of information. Analysis of the data starts from the very early stages when carrying out a literature search and of course as one carries along with reading, analysis does take place.

A substantial amount of information was gathered by reviewing literature concerning the Senegal and Volta river basins. The literature review provided information about the natural environment (hydrology, geology, climate, land use, maps...), population, demographics, housing characteristics, public infrastructure, economics, and history. All sorts of literature describing the local environment within the Senegal and Volta river basins written by a wide range of authors were used.

However, there are **some key documents**, which had an authoritative and argumentative effect on the author and in the understanding of the problem in the Senegal and Volta river basins as shown in (Table 2.2 and 2.3):

- The legal and institutional situation of the Senegal River is well described and discussed in (Godana, 1985) and (Ndiaye Keita, 1972) providing an extensive review of the Senegal river basin.
- The human right to water supply and sanitation and the adoption of a human right based approach are discussed by (Langley, 1999), (Gleick, 1999), (Hausermann, 1999) and (Heyns et al, 1996). All the authors provide good analysis expanding on the issue and also provide a good summary for the readers.

Table 2.2: Summary of Key Institutional and Legal Documentation

Documentation	Author (Year)
African water laws/ Anthologie du droit coutumier de l'eau en Afrique,	Ramazotti, M. (1996)
Africa's shared water resources: Legal and institutional aspects of the Nile, Niger and Senegal River systems	Godana, B. (1985)

Documentation	Author (Year)
Institutional reforms in the water and sanitation sector in Africa	Mwanza, D. (1999)
Legal and institutional factors affecting the implementation of the international drinking water and sanitation decade	United Nations Department of Technical Co-operation for Development, (1989)

Table 2.3: Summary of Key Human Rights and Water Supply Documentation

Encyclopaedia of Human rights since 1945	Langley, W. (1999)
The human right to water,	Gleick, P. (1999)
A human rights approach to development: some practical implications for Water Aid	Hausermann, J.(1999)
Human rights law in Africa	Heyns, C. et al (Eds) (1996)
Water Law, Water Rights and Water Supply in Africa	Howsam, P. (2000)
Kayes et le Haut Senegal, Tome I, II, III, éditions populaires, Bamako, Mali	Ndiaye Keita, R. (1972)

2.2.2 Development of model framework

The proposed model framework as described in Chapter 4 can be defined as a change in attitude towards the rights of all peoples in particular the poor. The framework extends from the local to the international context and aims to deal from poor local unserved communities to international treaties governing the management of transboundary waters.

The purpose of the Model Institutional and Legal Framework(MILF)) is to provide a guideline (how to prioritise water, how to adopt the “ *Putting the Last first*” approach (Chambers, 1983), how to decide on alternative approaches to find where the problem lies and how to solve it, how to take into account all administrative levels, normal and emergency situations and establishing linkages between institutions and legislation to ensure that poor communities do access water supply and sanitation facilities, as their fundamental human right.

In relation to water supply and sanitation, a human rights-approach relates to the right (moral) or entitlement (legal) to access clean, safe, affordable and close water supply

and adequate sanitation and to be provided with the tools (legal and institutional framework) to access water supply and appropriate sanitation.

2.2.3 Research method

The methodology is based on qualitative methods of investigation.

Marshall & Rossman (1999) define the term qualitative research methods as “*a variety of ways of collecting information that is less amenable to quantification and statistical manipulation*”. Qualitative methods differ from quantitative methods largely because their ultimate purpose is different. The goal of qualitative research is to arrive at some general, overall appreciation of a phenomenon and to highlight interesting aspects (Marshall & Rossman, 1999).

Qualitative research thus provides an initial description of a phenomenon, whereas quantitative research aims to investigate its various details. Some examples of qualitative methods include focus groups, surveys, naturalistic observations, interviews, content analyses of archival material, and case studies (Marshall & Rossman, 1999).

Qualitative research usually yields a lot of information. Although many researchers believe quantitative methods to be superior to qualitative methods, the two are probably best seen as complementary (Marshall & Rossman, 1999).

Qualitative research can suggest what should be measured and in what way, while controlled quantitative studies may be the most accurate way of doing the actual measuring (Marshall & Rossman, 1999).

However, according to (Tesch, 1990), strictly speaking, there is no such thing as qualitative research. There are only qualitative data. Qualitative data is any information the researcher gathers that is not expressed in numbers. If we then accept this definition, the range of qualitative data includes information other than words. Pictures, drawings, paintings, photographs, films, and videotapes are qualitative data.

2.2.4 Data analysis

Little sense can be made of a huge collection of data; therefore, an essential part of the research is the analysis of the data. Research is not a linear process, so it is not easy to predict exactly how many data will be enough. The major reasons are in order to:

- measure
- make comparisons
- examine relationships
- forecast
- test hypotheses
- construct concepts and theories
- explore
- control
- explain (Walliman, 2001).

In using the qualitative type for data analysis, the researcher according to (Walliman, 2001) “*can generate new concepts and theory or uncover further instance of those already in existence*”.

In a real field-based situation, data, which would have been collected from extended field visits and compared with collected literature-based would have been analysed using software, and thus in an ideal world would reflect aspects of grounded theory methodology. The steps to be taken are well described in (Walliman, 2001) giving the researcher ideas of its operation.

2.3 Critical analysis of the methodology

The short time in Dakar, Senegal was just a starting point for future research in the field and those interviewees could serve as important informants. The interviews were undertaken in an overt manner. Some of the information relating to government's involvement in the watsan sector, in Mauritania, Coted'Ivoire Senegal, Burkina Faso and Ghana, was obtained by contacting individuals (face-to-face and by telephone) here in London, Britain and in Dakar, Senegal.

In no case, did my informants feel the need to stop me taking notes (i.e. in Dakar, Senegal) or about the confidentiality of the information (i.e. in London, in Britain).

Civil servants are very often nervous about exposing public information especially when the named sector is not doing well.

However, I was provided with official information which unfortunately I had no means of verifying because of time constraints.

2.4 Definitions

As part of the research, the author developed some definitions of key terms which have been adapted for the purpose of the research. Very often, words mean different things to different people in different circumstances. These meanings resulted from the author's own understanding and perceptions of how a theoretical or ideal was an institutional and legal framework should be functioning in order for poor communities to fulfil their fundamental human needs and rights.

For the reader non conversant with international and legal terminology, the author provides some definitions relevant to the research in the glossary.

CHAPTER 3

AN UNDERSTANDING OF POVERTY AND HUMAN RIGHTS IN THE DESIGN OF A MODEL INSTITUTIONAL AND LEGAL FRAMEWORK TO ACCESS WATER SUPPLY & SANITATION FACILITIES

3.1 Introduction

This chapter explains why an understanding and acknowledgment of poverty and Human Rights (HR) are fundamental to the design and application of a Model Institutional and Legal Framework (MILF) for water supply and sanitation (watsan) facilities at all levels.

The following subjects are covered: The benefits of watsan facilities, the current situation of watsan around the world, an assessment of poverty in Africa, the international response to the crisis, a distinction between the three forms of rights, the adoption of a human rights approach and why an understanding of poverty, taking into account HR, is central to the design and application of an MILF.

Poverty and Human Rights are, the author believes, of equal importance in the design and application of an MILF because they focus on the target group who most need assistance for a better standard of living. The information collected and related to the target group can also be used as a guide for focused allocation of resources and can also influence decision makers. It is essential to take into account the status of the population who lack access to watsan in order to understand why a particular group is actually poor (Poverty has various dimensions as discussed later) and why they remain poor. The lack of access to facilities denies them of their fundamental human right which is a legal and moral entitlement.

The right to access safe clean, affordable, accessible (nearby) and reliable watsan is closely linked to poverty. If communities do not have knowledge of their HR to access these facilities, their physical and economic capabilities will be affected and therefore lead to poverty.

In their recent study, (Piron & O'Neil, 2005) highlighted the analytical value of human rights for identifying the structural and root causes of poverty because “*replacing the*

needs-based framework and programming from a human rights perspective will look at states' ability to meet their obligations, their capacity and political will and citizens' ability to claim and realise their rights and overcome constraints or cultural and social barriers that may exist".

The subject is discussed by (Hausermann, 1999) in greater depth and she advocates that *"by adopting a Human right-based approach, the state has the legal responsibility to assist in the provision of the services required"*.

Likewise, this approach *"puts an obligation on governments to progressively extend access to sufficient, affordable, accessible and safe water supplies and to safe sanitation"* (Freshwater Network Action, 2005).

Because the focus of the research is in sub-Saharan Africa, the author believes it is not only reasonable to provide a picture of watsan in Africa but also to compare the situation in Africa to the rest of the world. Broadly speaking, the situation in sub-Saharan Africa and in most rural areas is not good.

Accessible and specific information relating to West Africa is not currently available. There are many issues to be taken into account (for example, population, level of advancement in technology, physical resources, manpower) when making a comparison as to why sub-Saharan Africa is lagging behind other continents.

3.2 The benefits of water supplies and sanitation (watsan) facilities

"Water is life. It is essential for health and necessary for the production of food, economic growth and the support of the environment. The fulfilment of poor people's water-related needs is fundamental to the elimination of poverty" (DfID, 2000).

"Water-related diseases are the single largest cause of human sickness and death in the world and disproportionately affect poor people. Studies have shown that the provision of safe water and basic sanitation, accompanied by hygiene promotion, can reduce the incidence of diarrhoeal disease by as much as 25%. Sanitation can also dramatically reduce the spread of worm infection" (DfID, 2000).

Water-related diseases can be classified into four categories (Box 3.1), according to the environmental pathways by which the infection takes place: faecal-oral, water washed, water based and water-related insect vector (UN-HABITAT, 2003).

The burden of collecting, storing and managing water for household uses most often falls on girls and women, thus depriving them of education or training opportunities. Also, *“being ill with water related disease or caring for an ill family member, also consumes a lot of time and money for medical attention and medicines. The time and energy saved by improved watsan facilities could be used in economically productive or educational activities”* (DfID, 2000).

The benefits of clean, safe, close and available water supply and sanitation facilities cannot be over-emphasised as (DfID, 2000) clearly notes that *“improved access to safe water and appropriate sanitation can increase economic well being at the household level, mainly through saving large amounts of people’s time and energy”*.

According to UN-HABITAT (2003), good quality watsan provision not only brings major health benefits but also:

- *“for income earners, increased income for less time off work because of illness or the need to nurse sick family members, and less expenditure on medicines and health care;*
- *support for household enterprises that need water and that are important for income generation;*
- *better nutrition (i.e. fewer nutrients lost to diarrhoeal diseases and intestinal worms)*
- *less time and physical effort for water collectors”*.

Box 3.1 Water related diseases and non infections diseases

Water related diseases

- Faeco-oral infections that cause diarrhoea and include cholera, typhoid and dysentery. They can be spread by contaminated water or more often by poor hygiene. These are the most that account for a high proportion of infant, child and adult illnesses. Where water supplies and provision for sanitation are inadequate for much of a city's population, faecal-oral disease can be among the most serious health problems for the whole city.
- Water-washed diseases are associated with a lack of water supplies for washing and include skin and eye infection, including scabies and trachoma, which is major cause of blindness. These are also associated with poor hygiene
- Water-based diseases are from various worm infections, including guinea worm and schistosomiasis (bilharzia), many of which are caught by wading in contaminated water. Most of the 200 million people worldwide infected with bilharzias live in rural areas, since infection generally takes place as people work in irrigated fields or walk in streams or ponds.
- Water-related insect diseases are spread by insects such as mosquitoes that breed in water. Malaria is the commonest in both rural and urban areas and is associated with stagnant water, poor drainage and solid waste.
Lymphatic filariasis or elephantiasis, a parasitic worm infection, occurs where there is polluted water, including open sewage canals.

Non-infections diseases

There are also significant non-infectious diseases related to water, global attention is currently focused on poisoning due to high concentrations of arsenic in groundwater in the Ganges delta in Bangladesh.

Source: (DfID, 2000), (UN-HABITAT, 2003)

3.3 The situation around the world

This section provides a brief overview of the world watsan situation with information taken from various sources.

3.3.1 Sub-Saharan Africa

Africa, with only 64% of the population with access to improved water supply has the lowest proportional coverage of any region of the world (UNWWAP, 2003).

The situation is much worse in rural areas, where coverage is 50% compared to 86% in urban areas. Sanitation coverage in Africa is also poor, although Asia has even lower coverage levels (UNWWAP, 2003).

In terms of sanitation, only 60% of the African population has sanitation coverage, with 80% and 48% in urban and rural areas respectively. In global terms, the continent houses 27% of the world's population lacking access to improved water supply, and 13% without access to improved sanitation (UNWWAP, 2003).

3.3.1 Asia

Only 47% of the Asian population has improved sanitation coverage, by far the lowest of any region of the world. Water supply coverage is at 81%, the second after Africa (UNWWAP, 2003). Like sanitation, coverage is lower in rural areas (73%) compared with urban areas (93%) (UNWWAP, 2003). Asia is home to 80% of the global population without access to improved sanitation, and almost two thirds do not have access to improved water supply (UNWWAP, 2003).

Asia shows the highest number of people unserved by either water supply or sanitation; yet it is important to note that proportionally, this group is bigger in Africa because of the difference of population size between the two continents (UNWWAP, 2003).

3.3.2 Europe

In Europe, improved water coverage is high, with access provided for 97 % of the population. One 100% of the urban population has coverage, compared with 89% of the rural population. In terms of sanitation, 95 % of the population is totally covered, 99 % of the urban population and 78% of the rural population (UNWWAP, 2003).

Those without access to improved water supply represent 2% of the global population, and those without improved sanitation represent 1%⁵ (UNWWAP, 2003).

3.3.3 North America

The North America population, according to (UNWWAP, 2003), has the highest reported coverage of water and sanitation for any region of the world, at 99.9 % (UNWWAP, 2003). Urban coverage of water and sanitation are both reported to be 100% (UNWWAP, 2003), although there are cases of non accessibility to water supply and waste water facilities (Thompson, 2006).

⁵ Four European countries reported not having full watsan coverage in 2000, all in Eastern Europe (Estonia, Hungary, Romania and the Russian Federation). The greater need to meet water supply deficiencies rests in Eastern Europe (UNWWAP, 2003).

3.3.5 Latin America and the Caribbean

This region has relatively high service levels, but it is characterized by large differences from one area to the next (UNWWAP, 2003).

Total water supply coverage is extended to approximately 87% while total sanitation coverage is slightly lower at 78%. With respect to water supply, 94% of the urban population enjoys coverage, compared with only 65% of the rural population (UNWWAP, 2003).

However, a total of 68 million people are without access to improved water supply in the region and 116 million without access to improved sanitation – the vast majority in South America (UNWWAP, 2003).

Compared to the situation in Africa, the levels of watsan coverage are higher due to high levels of services and higher levels of industrialization. However, there are pockets of low coverage in some areas.

3.3.6 Oceania

Oceania is the least populated of the six regions described (UNWWAP, 2003).

The current coverage status is relatively good, with 94% of the population having access to improved sanitation and 87% to improved supply. However, these figures are strongly slanted by a well served Australia and New Zealand. With these two countries excluded, the coverage levels are much lower (UNWWAP, 2003).

3.3.7 Middle East

According to (UNA, 2005), 39.6 million people lack access to adequate water sources and 44.8 million people lack access to sanitation facilities.

3.3.8 Conclusion

It is important to note that (UNWWAP, 2003) does not define 'improved' or 'coverage' and it is not being evident whether this means pit latrines, septic tank and or centralised treatment plants which are fully functional.

From the above statistics, it can be said that coverage in watsan facilities in the sub-Saharan African continent is low and the situation deserves attention if the standard of living is to rise and poverty is to be eradicated in the continent.

The high level of coverage in Europe, the Americas and the Oceania (Australia and New Zealand mainly) is largely linked to a good service delivery and public health programmes.

“An example is the recent amendment to law (Water Act, 2003) and practice in England, which removes the right of water companies to disconnect the supply of residential premises and other premises such as schools, children’s homes, hospitals, etc...” (ODI, 2004).

The author is convinced that the establishment of a strong and robust institutional and legal framework is essential to ensure that the whole population has access to water supplies and sanitation and that to ensure that poor segments of the population access water supplies and sanitation facilities as their fundamental right.

3.4 An assessment of poverty in sub-Saharan Africa – A brief overview

Central to this thesis is the understanding of poverty. Poverty is an issue which is wider than watsan because the author believes that poverty is a denial of an individual’s human rights; a state of poverty is a breach of the international communities, ngos and governments’ responsibility and commitments to protect and provide of a decent standard of living. In terms of accessibility to and delivery of watsan facilities, it is usually the poorest that are the least well served. As discussed below, poor communities are far reaching and because of their circumstances this present the greatest challenges to governments, policy makers and service providers (private and public).

Human suffering has been exacerbated by the failure of the international community (continental and worldwide), ngos and governments to provide the basic human needs (water & sanitation, shelter, food, health, education and employment).

Therefore, the test of any framework is that it ensures the needs of everyone including the poor, are met. Provision and accessibility of watsan facilities are vital for everyone but it has a greater impact in poor communities.

The following section, describes the different definitions of poverty which are fundamental to take into account when considering the design of an institutional and legal framework: knowing who they are, why they are poor and defining poverty in the African context.

3.4.1 Definitions of poverty

Poverty is defined in different ways and world poverty is multi-faceted. One should not attempt to determine poverty by monetary income only, but rather by indicators such as access to safe water and adequate sanitation, literacy rates, life expectancy and infant mortality rates (Alicie, 2001), (Cross, 2002), (HakiKazi Catalyst, 2001).

“Material deprivation is at the core of poverty (low income and consumption levels resulting in poor nutrition, inadequate clothing, and low-quality housing). But poverty is not just about income or consumption. It also includes deficient command over productive assets and access to key public services” (World Bank, 2001).

“Poverty comes in pockets. Some parts of the country (Tanzania) are better off than others and some towns are better off than others. There is more poverty in the rural areas than in the towns but it is increasing in the urban areas and small towns” (HakiKazi Catalyst, 2001).

In the past governments and international agencies defined and measured poverty by income or consumption. But there are limitations to these approaches:

- *“the lack of attention to the assets on which most poor people rely for their livelihoods including access to resources (natural and financial), good health and capacity to work*
- *the extent to which income-based poverty indicators fail to capture many critical aspects of deprivation, including the health burden linked with poor housing and lack of basic services, and powerlessness of poor communities (political, civil and resource-using rights) etc...”*(Cross, 2002).

According to (Watt, 2000), “*a poor country is one that has a low per capita gross national product but this is also too simplistic approach as there are exceptions*”.

For (Vandemoortele, 1999), “*poverty manifests itself in many forms: in inadequate income, unmet basic needs, exclusion, and extreme vulnerability*”.

3.4.2 Critical Assessment: *Who are the poor?*

The poor are heterogeneous. It is misleading to talk of the poor as a single category of people. A major distinction is between urban and rural poverty. However, most of the poor of developing countries live in rural communities but the share of urban poverty is rising and urbanization of poverty is occurring (Killick & Asthana, 2000).

Poor communities are very often not visible, away from the tarmac, isolated remote, dispersed, with limited communications facilities (telephone, mobiles, email, and internet) silent, unaware about the institutional and legal assistance and processes, lack of training on how to make their voices heard, expensive to follow up and reaching poor/unserved communities is often difficult (Narayan, 2000).

3.4.3 Evaluation of Sub-Saharan African Poverty

The focus of this research is on poor communities in sub-Saharan Africa, both urban and rural. Although the majority live in rural areas there is a growing number of poor communities in urban areas. Thus, a MILF could benefit both the rural and urban poor. “*Out of a population of 580 million in the mid-1990s, more than 270 million Africans were living on daily incomes equivalent to less than one dollar a day and 250 million did not have access to safe drinking water. More than two million die before their first birthday*” (World Bank, 2001).

Professionals, technicians, business people, farmers, labourers and the unemployed need to take a positive interest in solving the water crisis. Women and men, as users of water, can assert their needs and advise on solutions, so they are integrated into policies and plans.

a) Dimensions of Sub-Saharan African Poverty

In a recent study the (World Bank, 2001) shows that the various dimensions of poverty interact in various ways. Poor education and ill health, which are common among children and parents of low income, restrict their earning potential.

The World Bank (2001) describes the most relevant categories of Poverty as follows:

- ❖ *“Chronic and Transitory: the chronically poor are those trapped in poverty from some which arises from a combination of factors, such as absence of political influence, few assets and lack of market assets.*
- ❖ *Transitory poverty by contrast, directs governments to measure that will reduce the incidence of or vulnerability to shocks such as harvest failures, fluctuations in prices, and ill health and offers the temporary safety nets. Transitory poverty may lead to irreversible poverty situations (death, premature deaths.*
- ❖ *Permanent and Temporary such as severe shocks from famine, AIDS/HIV etc... dependent and economically active poor (the case for many rural populations) in urban and rural settlements, gender-based poverty and the new poor, affecting mostly former government employees who have lost their jobs and the indirect income-generating opportunities their work made possible as result of measures introduced under the program of structural adjustment”.*

Africa is a vast continent and care should be taken not to over generalise.

There are vast diversities and differences in the continent from West, East, Central and South in terms of population growth (malaria area, HIV in southern Africa), levels of education , unemployment, low investment in research, weather conditions (droughts, floods, locust invasion), models/policies of employment, displacement of persons (Internal displaced persons-IDPs, refugees, rural exodus, wars), political awareness of watsan issues, strategic planning, and all these contribute to the depopulation of an area and therefore increase poverty levels in urban and rural areas.

Lack of clean, adequate, safe and affordable water supply and sanitation facilities increases the emergence of diseases and illnesses affecting all but those responsible for the collecting water i.e. women and children. But also a lack of rainfall can leads to crop

failures and increases the need of more support from the outside. Even with irrigation as an input to crops' growth, if people are sick because of lack of sufficient rainfall, productivity will also suffer. This in turn will have a dramatic effect on the income of the labourer or farmer leading to temporary or chronic poverty.

b) Causes of African Poverty

Based on its own methodologies, the (World Bank, 2001) identified the multifaceted causes of poverty:

- Economic (low growth/productivity, slow job creation/capital intensity, inadequate and political; international, national (macro) and micro depending on the context: productive assets, market failures, inequalities of income and wealth, globalisation)
- Situation allocation (remoteness, poor region), environmental degradation, proneness to shocks (Aids, disasters).
- Social and demographic (household composition, poor human capital, weak social services, personal dependence (disablement) plus weak traditional safety nets, gender biases) .
- Political (war, instability, displacement, disempowerment, social exclusion, and government failures).

The causes of sub-Saharan African's poverty are diverse and multifaceted.

There is a need to consider the climatic situation, the imbalance in the distribution of water resources within areas like the Congo and the Nile river basins with a lot of water and in other areas like the Senegal and Okavango river basins with limited water. Also West Africa, throughout the Sahel, has very high periods of sunshine, increasing evaporation rates and the ability to conserve water.

3.5 The International response to the crisis

International institutions and civil society have embarked on watsan programs in an effort to eradicate poverty and raise awareness. Some results have been positive but the situation is still critical.

At the United Nations conference in Mar del Plata (Argentina) in 1977 on water resources it was declared that “*everyone has the right to access to drinking water in quantities and of quality equal to their basic needs*” and that “*availability (of water) is essential ...to life*” (WWC & JWRA, 2003).

Despite all efforts over the Water Supply and Sanitation Decade (1980-1990) and during the nineteen nineties, the performance of the sector in terms of unserved numbers of population has worsened over the last decades (WWSSCC, 2005).

Agenda 21 of the United Nations Conference on Environment and Development in Rio de Janeiro (Brazil) in 1992 stated (with endorsement of Heads of States) that: “all people whatever their stage of development and their social and economic conditions, have the right to access drinking water in quantities and quality equal to their basic needs”. The United Nations Dublin (Ireland) Conference in 1992 recommended the need to provide water, sanitation and food for the “unserved millions still lacking basic service while emphasising the point that those in poverty should take priority as it is they who have greatest need, and especially women who make up to 70% of the poor. In the same year, the United Nations Conference on Environment and Development in Rio de Janeiro, Brazil, highlighted also a number of principles: “*water must be managed in a holistic way; institutional arrangements need to be adjusted to allow stakeholder participation in all aspects of policy formulation and implementation, including devolution of management to the lowest appropriate level; the central role of women; and the management of water as an economic resource as well as a resource for meeting basic needs*” (WWC & JWRA, 2003).

In 2000, the United Nations Millennium Development Summit set a target for water supply. In May 2000, the United Nations Committee on Economic, Social and Cultural Rights (UNCESCR), adopted a General Comment on the right to health. The latter states *inter alia*: “*water is fundamental for life in human dignity. It is a pre-requisite to the realisation of all other human rights*” (UNWWAP, 2003).

In 2002, the World Summit on Sustainable Development endorsed this target and set a corresponding target for sanitation. Together these targets (Millennium Development Goals - MDG) seek to halve, by 2015, the proportion of people without adequate safe

water and sanitation. According to (WWC & JWRA, 2003), the main obstacles to achieving the MDG are inadequate institutional and management capacity, insufficient financial resources, and (more rarely) hydrological and geographical limitations.

Also, in 2002 The UN International Committee on Economic, Cultural and Social Rights (ICECSR) declared that water to meet basic needs is a human right and a social and cultural good, not just an economic good. What does this mean in practice? For the poorest this will only have a real meaning if countries enshrine this right in their constitution, legal framework and policies. Or, in other words translating, water as a human right and the MDGs into national development targets and programmes for water (WWC & JWRA, 2003).

“Many countries have reformulated or are reformulating policies to recognize all people’s rights to these services” and moreover *“new laws and institutional structures have helped create an environment that allows water of sufficient quantity and quality to be delivered to everyone”* (WWC & JWRA, 2003).

The 21st century needs to redress the situation. As (Maxell & Kenway, 2000) write *“anti-poverty solutions need to be tailored to specific circumstances”*. There is a need for a genuine commitment to the poor/unserved by the governments of the developing countries. A more pro-poor/unserved approach should be attempted at the international, national, regional and local levels.

To date international water law in relation to the poor and watsan is very limited and great advances need to be made. At present the dialogue and understanding between the macro and local levels are non-existent. For poor/unserved rural communities to benefit from international legal processes, a two-way process needs to be established. Drafters of international watsan policies have very little awareness of the plight of poor/unserved rural communities and the absolute poverty that prevails in so many communities.

Likewise, for those poor/unserved communities, as Howsam (2000) puts it: *“there is little awareness of international water treaties and even if there were, there would be no concept that such legal provisions had any relevance to their plight”*.

Policies need to be supported by appropriate and up-to-date legislation. Inappropriate laws retained by post independence governments have created a widening gap between the law and reality (WUP, 2005).

Good government for watsan implies not only frameworks to ensure provision but also regulations to protect and promote health, to raise revenue (to pay for the system's functioning, maintenance and expansion) (UNHABITAT, 2003) and enforcement against non -delivery, abuse or misuse.

A person's right to something must, then, be coupled with another agent's duty to provide the first person with that something (Sen, 1999).

3.6 Understanding rights

An understanding of rights is central to the design and application of the MILF.

A legal framework defines both rights and responsibilities with respect to the declared rules. In a watsan situation, it defines the rights and responsibilities of both the service recipients (including the poor) and the service providers.

A human right is considered a fundamental moral right – which is taken as more of an absolute right, invoking the strongest compliance obligation. Thus a legal framework in watsan situation ensures compliance and does not permit much discretion/derogation from the rules.

Under international law, governments are obliged to provide the enabling environment - legal and institutional - for the populations to realize their right.

The underlying assumption of the research is that there are weaknesses and constraints in international, national, regional and local institutions and their legal systems and this contributes to poor communities(e.g. in the Senegal and Volta River Basins) not having adequate access to watsan facilities, thereby denying them their basic human right.

3.6.1 Why a right?

“Water is fundamental to human life and all people should have inalienable rights to water for their own survival” and there is worldwide conviction that the treatment of human beings anywhere is the concern of everyone, anywhere (Langley, 1999).

The concepts of Human right have captured the whole world with the emphasis on:

- * Being a human
- * A human right becoming an international concern
- * International standards need to be implemented (nationally, regionally and locally) and based on international agreements and meetings
- * Dignity and moral foundation (self-esteem and that mistreatment and suffering of human beings violates God's law or natural law)
- * State's policies should reflect and protect the rights of its entire population (Langley, 1999).

In Moslem and Sub-Sahara African customary law, flowing water, a precious commodity, is a gift of God or gods and therefore cannot be privately owned. It is regarded as a natural right of people to drink and water their animals at any water source (Caponera, 1973), (AISJ, 1971), (Pogucki, 1955).

3.6.2 State obligations regarding the Human Right to water supply and sanitation

In considering state obligations, it is important to bear in mind that human beings are responsible for themselves and their own well-being; the following principles have drawn from the work of (Vidar & Mekouar, 2001):

- Human rights do not automatically involve heavy government intervention or imply that individuals can unreservedly demand goods and services from the state. However, current international human rights law is a system of state obligations: ultimately, each sovereign state is responsible towards the persons within its jurisdiction, and towards other states and international bodies, for the level of enjoyment of human rights in the country.
- It is a state's responsibility to regulate the behaviour of all actors within its jurisdiction, to ensure that these respect human rights, and to interfere in case of abuses.

All human rights entail state obligations, which may be analysed at different levels the need to:

- Respect for human rights. The state must take legislative, administrative and other action progressively to achieve that every human being within its

jurisdiction has access to adequate water, to the maximum of its available resources (Article 2 of ICESCR). The primary duty of the state is not to interfere with or deprive people of their rights. This is referred to as an obligation to *respect* the right in question.

- Protection of human rights. At a second level, the state has an obligation to *protect* this right from the illegal interference of others.
- Fulfilment of human rights. The state must *fulfil* rights, by facilitating their enjoyment, or, as a last resort, by providing for them.

However, the above principles faced challenges as raised by (Vidar & Mekouar, 2001):

- The obligation to *respect* sets a limit to permissible actions by the state itself. A concrete example can be found in international humanitarian law, which forbids attacks on things essential for the survival of the population, including drinking water installations and supplies and irrigation works.

While such provisions apply directly only in situations of armed conflict, it seems obvious that action forbidden to an enemy state in war time should also be forbidden by the state towards its own citizens in conflict and peace, by reference to human rights law, rather than humanitarian law. Development projects provide another example where states may fail to respect the right to water, if such projects deprive the population of its water resources or render its water undrinkable through pollution. It would thus normally not be consistent with human rights law to deprive people of access to water that they have enjoyed, without compensation or finding alternatives.

- The obligation to *protect* relates to the duty of the state to regulate the behaviour of non-state actors, individuals, groups and enterprises.

Such obligation entails primarily the enactment of legislation and ensuring the effective functioning of the judicial system, for example in environmental legislation.

The protection of rights also implies, in the case of international water resources or transboundary basins, an obligation of equitable use by riparian countries through appropriate cooperation mechanisms.

- The obligation to *fulfil* is an obligation for a more positive action to facilitate and provide access to adequate water for those who do not have it.

This includes: the digging of wells, setting up and maintaining pipelines, cleaning up pollution. Such activities do not necessarily have to be undertaken by the state directly, but it should ensure that appropriate action is taken. User fees can be a practical way of regulating use and encouraging thriftiness. However, a water system that excludes certain groups who cannot afford to pay the user fees could be inconsistent with human rights. Therefore the user fees must be affordable for the poor, and even waived up to a certain limit, to ensure that minimum needs are met.

3.6.3 Types of rights related to water supply and sanitation

There are three principal legal forms of a right of water – respectively, as a human right, a contractual right and a property right. All three legal forms are intended to give rise to legally binding and enforceable rights of access (ODI, 2004).

“All are in process of conversion into practice, somewhere. Yet, at the same time as proponents of the latter two quite commonly disregard the human right or place it at a distance, advocates of a human right approach criticise- some bitterly- the manner of application of property and contract law in the water sector” (ODI, 2004).

a) Human right

“A human right (or Human Rights) is an international term, which refers to moral and legal entitlements, which all human beings are said to have” (Langley, 1999). The rights to which every human being is entitled include civil and political rights (right to life, liberty, security of person, equality before the law, privacy, thought, conscience and religion and nationality, freedom of movement and residence) and also economic, social and cultural rights (right to food-implying water, housing, health care, employment, education and participation in the cultural life of the community (Langley, 1999).

While access to clean water and sanitation, is considered as one of the most basic human needs, it is today considered as part of the individual and people's human rights (international agreements and declarations) but it has yet to be incorporated into the Universal Declaration of Human Rights article 25(1) (Gleick, 1999) . Although it is made explicit in some UN covenants (e.g. the International Covenant for Economic, Social and Cultural Rights, 1966, art 11(1) 12(1, 2) and recently(2002) in the General Comment of ICESCR no 15, the inclusion of the human rights approach in the design of the ILF however raises a number of issues (Guissé, 1998), (Mehta, 2000).

There are key debates to be held and issues to be addressed:

The competition between different users – agriculture, industry, household needs, power supply, navigation etc... Which use of water should take precedence over others? Should it be for drinking, agriculture, and industry or for conserving the environment?

The author believes that those responsible for water resources need to defend their resource and get a bigger share in the national budget. Water is the basis of all activities.

Many countries have changed or are on the way to reform their legislation and institutional framework with regards to access to watsan to communities, especially by the poor. *“How to balance individual and collective rights (and responsibilities)? Rights are largely assigned to individuals”* (ODI, 1999). There is tension between individual and collective rights. Legal texts on human rights generally focus on the individual rights to access services. In most parts of the world people live as a community. How much water should an individual and a community access? What responsibilities do individuals have in securing safe water supplies and adequate sanitation?

Governments do not have the overall capacity to provide for all. Communities need to work together with the private and public sector in order to achieve a better standard of living.

The human right to water also forms a central plank of advocacy by non-governmental organisations for extensions of improved watsan worldwide (ODI, 1999) How are the rights promoted? To who is the right allocated? The Child? Women? (Cunninghame et al, 1996)

The fundamental of human rights are that all are equal therefore all have the right to access water supply and sanitation whether rich or poor.

In essence, through consumers’ advocacy and awareness, communities can make their voices heard and have a greater responsibility in managing their water resources, for example through the following:

Payment. Water for the purpose of household use, sanitation and hygiene is treated in many places primarily as a social, cultural and economic good for all, free of charge.

“However, to access clean, disease-free water, a whole system of installation is needed and this will incur costs. The latter in return will have to be funded by someone. Not

free water but affordable water with freedom from arbitrary disconnection" (ODI, 1999). Should the poor receive watsan free of charge?

As stated earlier, poverty is multifaceted. The periodicity of people in poverty fluctuates depending on many factors. The author strongly believes that poor communities will be willing to pay for a service that is reliable, continuous and fair.

Free water. Does the human right to water mean that water will be free? This was a major point of debate during recent negotiations, but in the end it was decided that 'enjoying the Right to Water does not mean that it has to be delivered for free, but it must be affordable, as well as safe, accessible and sufficient' (Freshwater Network Action, 2005). However, "*through the acceptance of a right to water, there is explicit recognition that water is a social, as well as an economic good*" (Freshwater Network Action, 2005).

The financial cost of adopting a human rights approach. With very limited revenues to reinvest in public services, should the sole responsibility of delivery lie with the government? Does the inclusion of human rights approach to the legislative system increase the financial burden of the already debt ridden countries?

This situation is very challenging for some governments because they do not want to commit themselves financially as this mean the need to secure other means of income which in many cases are not well managed or difficult to recuperate due to corruption or poor accounting systems.

Accountability. Who should be responsible for ensuring that poor communities have access to clean, close and safe water and adequate sanitation? Governments? Civil society or local organisations? Current thinking on development focuses on empowering the poor to take greater control of their lives, can customary water law influence international water law?(Mehta, 2000)

Awareness and advocacy, at all levels, are the key methods to ensure that poor communities have access to watsan facilities.

Other questions and issues which need addressing include:

Can customary beliefs relate to access to water supplies and sanitation?

How can communities have their share of suitable water for household needs and adequate sanitation?

At the local levels, legal rules relating to water need to understand fundamental human rights and apply them accordingly to the benefit of the community's prosperity and well being.

The relationship between poverty and human right cannot be overemphasized. The inclusion of the concept of human right can enhance the design and impact in terms of poverty reduction goals by examining the structural and root causes of poverty, such as a focus on inequality and exclusion a major barrier for poverty reduction (Piron & O'Neil, 2005).

b) Contractual right

There are three principal legal forms of the right to water. This section discusses the contractual right. *"This second legal means of legalising a right to water is by contract or licence for the supply of water services between a service provider (public or private and a user, or household of users)"* (ODI, 2004).

The contractual right of access, typically for supply to (individual) households or premises at the "pipe end" or 'downstream' will depend on the (bulk) permits accorded to service providers, i.e. on the property water rights regime. The latter take effect 'upstream' (river-end) so in practice prior in time/space to the former (ODI, 2004). *"This makes the position of administrators to whom assessment and registration of property claims have been delegated (e.g. in a public water rights registry) powerful and subject to political power"* (ODI, 2004).

Water rights control the use water is put to, evolving from unwritten custom and common sense rules on the use of a shared resource, to become codified, recorded and ordered by law (Hendrickz, 1992). The general acceptance of recognising a water right is through an issued license (Hendrickz, 1992).

The creation and management of water rights involves institutional, administrative bodies such as law making bodies (for example in the United Kingdom, Parliament, the Environment Agency which manage the day- to- day implementation of laws and

directives), and judiciary structures like water courts in the case of Kenya and Swaziland (Caponera et al, 1979).

Water rights are needed for the control of use of water as human activity (storage, abstraction, addition and discharge) affects the hydrological cycle.

At the international level, rights to control water involve two principles:

- Intransigent affirmation of sovereignty, where states are masters of their own resources and territory and can do what they wish with no concern for effects outside its borders (Hendrickz, 1992). An example is the conflict between Senegal, Mali and Mauritania.
- Absolute territorial integrity where downstream states have an absolute right that the natural flow of international water reaching their territory must not be altered (Hendrickz, 1992). This is the case between Ghana and Burkina Faso.

With water resources in many parts of the world declining due to global warming and with economies eager to industrialise, the use of water will require better control and management in order to prevent conflicts which mostly affect the livelihoods of poor communities.

c) Right to water as a Property right

“A third legal form for assertion of a legal claim to access to water is as a property right, increasingly a right granted by the state to holders of official permits to abstract water from a water source” (ODI, 2004). *“Such so called formalisation schemes are operated or are being introduced in many developing countries and have been promoted by international development agencies like the World Bank in Brazil, Mexico, South Africa and Chile”* (ODI, 2004). A key objective is to provide security and certainty of legal title so that rights-holders may defend and assert their water rights vis-à-vis third parties, may trade them and use them as collateral for raising finance. For example the Mexican water rights regime introduced by the 1992 *Ley de Aguas nacionales* emphasises transferability (ODI, 2004).

3.7 Adopting a human rights based approach

According to (ODI, 1999), “*the distinctive feature of a rights-based approach is its legal foundation internationally, regionally and at the national level*”. However, the local level also needs to be included: it is this level which requires most attention because the majority of developing countries’ populations live at this level and are poor.

The economic, social and cultural benefits derived from clean water are well documented: reduction in the effort and time required to collect water, increased income generating activities, integrated health and sanitation hygiene, ability to perform rites or ceremonies etc...

In relation to watsan, “*a human rights-approach relates to the right (moral) or entitlement (legal) to access clean, safe, affordable and accessible watsan and to be provided with the tools (legal and institutional framework) to access that water supply and appropriate sanitation for the betterment of the conditions of the livelihoods of poor communities*” (Hausermann, 1999), (Water Aid, 1999).

Access to accessible, clean and affordable water supplies and sanitation is fundamental to the human well being. It is a fundamental human rights issue, supported by international covenants, and gives a person his or her moral and legal right to claim his or her entitlements from the state. It makes the state legally responsible to assist in the provision of the services required. Using a human rights- approach is central to the design of a model institutional and legal framework.

“*Whatever the legal situation is with respect to human right and watsan, one thing is clear, that effective on-ground initiatives are required to achieve the goals set by the Millennium Declaration to ensure access to watsan facilities of adequate quality, in sufficient quantity, in proximity to the user and safe, for the 1.2 billion people presently without access to safe drinking water*” (Freshwater Network Action, 2005).

However, the author believes that a human right approach is likely to be more sustainable than the MDGs which are politically-driven and can change according to circumstances. Adopting a human right approach to access improved water supplies and

sanitation facilities provides poor communities (who often do not know about their entitlements and how to claim them) with strong leverage for their defence, support and entitlement.

It is vital that laws are implemented and that governments, civil society and donors work together at all levels of society (Freshwater Network Action, 2005). In order to ensure that the most disadvantaged section of the population as a whole benefit from clean, safe and accessible watsan.

A leading advocate of the human rights approach, (Hausermann, 1999) states that the state is legally responsibility to assist in providing the required services. Therefore “*this right puts an obligation on governments to progressively extend access to sufficient, affordable, accessible and safe water supplies and to safe sanitation*” (Freshwater Network Action, 2005).

3.8 Why the acknowledgment of poverty and HR is fundamental to the design of a MILF

A human rights approach to watsan in a legally binding instrument, incorporating local, regional, national and international legislation, would strengthen its regulatory and enforcement capabilities and authorities, since each state is responsible for guaranteeing the enjoyment of human rights of its population (Freshwater Network Action, 2005). A few countries have acknowledged the right to water in their national legislation Box 3.2. These are South Africa, Gambia, Uganda, Ethiopia, Congo and Zambia in Africa (Freshwater Network Action, 2005), in the Americas (USA, Ecuador and Uruguay) and Europe (WWC, 2006).

By accepting the United Nations General Comment No 15⁶, Governments, stakeholders and civil societies, on the right to watsan are faced with the obligations and responsibilities to ensure that all people have access to safe, sufficient, affordable water.

⁶ The General Comment no 15 on the right to water, adopted in November 2002 by the Committee on Economic, Social and Cultural Rights sets the criteria for the full enjoyment of the Right to Water (WHO, 2006).

As such it is not a law in itself, but an interpretation of responsibilities. However, this situation has put pressure on many Governments who feel that they cannot meet yet the obligations.

However, as this right to water is used by governments and citizens, precedents will be set which will pass into law but there is also a warning that *“the existence of the right to water is not going to suddenly change the lives of poor people and this right now needs to be publicised, and the implications for poor people need to be fully understood by governments, civil society and any private sector operator responsible for the delivery of water services”* (Freshwater Network Action, 2005).

Piron and O’Neil, (2005) conclude that a human right-based approach requires a systematic approach and institutional change. *“HR needs to be challenged so there is a need for more evidence of the process or the impact on communities, thus legitimizing their voices”*.

Box 3.2 The right to water in national constitutions

AFRICA	
Congo	Constitution (Const.) (2005) Art.48 : Le droit à un logement décent, le droit d'accès à l'eau potable et à l'énergie électrique sont garantis.
Ethiopia	Const. (1998) Art.90 (1): Every Ethiopian is entitled, within the limits of the country's resources, to ... clean water.
Gambia	Const. (1996) Art.216(4): The State shall endeavour to facilitate equal access to clean and safe water.
Kenya	Draft Const (2005) Art.65: every person has the right to water in adequate quantities and of satisfactory quality. Art. 66: every person has the right to a reasonable standard of sanitation.
South Africa	South African Bill of Rights (1996), Section 27: (1) Everyone has the right to have access to (a) health care services, including reproductive health care; (b) sufficient food and water; and (c) social security, including, if they are unable to support themselves and their dependants, appropriate social assistance (2)The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realization of each of these rights
Uganda	Const. (1995) Art.14: The State shall endeavour to fulfill the fundamental rights of all Ugandans to social justice and economic

	development and shall, in particular, ensure that... all Ugandans enjoy rights and opportunities and access to education, health services, clean and safe water, decent shelter, adequate clothing, food, security and pension and retirements benefits.
Zambia	Const. (1996) Art.112: The State shall endeavour to provide clean and safe water.

AMERICA	
Ecuador	Const. (1998) Art. 23: Sin perjuicio de los derechos establecidos en esta Constitución y en los instrumentos internacionales vigentes, el Estado reconocerá y garantizará a las personas los siguientes:... 20. El derecho a una calidad de vida que asegure la salud, alimentación y nutrición, agua potable, saneamiento ambiental; educación, trabajo, empleo, recreación, vivienda, vestido y otros servicios sociales necesarios.
Uruguay	Const. (2004) Art. 47:El agua es un recurso natural esencial para la vida. El acceso al agua potable y el acceso al saneamiento, constituyen derechos humanos fundamentales.
United States of America	Massachusetts and Pennsylvania Constitutions recognise the right of people to pure water.

EUROPE	
Belgium	In Europe, Belgium will be the first state to include the right to water in his Constitution: on 19 April 2005, the Belgian federal government has adopted a law in which it recognises access to safe water as a human right that should be included in the Belgian constitution. Many other countries have used other rights enshrined in national legislation, such as the right to a healthy environment, to enforce the right to water

Source: (WWC, 2006)

In conclusion to this chapter, institutional and legal arrangements are vital, especially at the local level. It is essential that the human right of poor communities be protected by an effective institutional and legal framework.

In the next chapter, earlier studies on Institutional and Legal Framework (ILF) for watsan around the world are reviewed. An Institutional and Legal Framework is defined and key features of a Model Institutional and Legal Framework (MILF) are presented against which a given situation in particular circumstances can be evaluated.

CHAPTER 4

ADOPTING AN INSTITUTIONAL AND LEGAL FRAMEWORK (ILF)

4.1 Introduction

A critical factor that is judged to constrain access and provision of watsan facilities to poor communities is the institutional and legal framework (Gleick, 1999), (Mehta, 2000), (ODI, 2004), (Lankford & Mwaruvanda, 2005).

While institutions and legal systems may be in place, they are often weakly structured and implemented, poorly regulated and enforced, and not accessible to those poor communities who suffer most from their inadequate effectiveness “*due to lack of financing or institutional capacity*” (Mehta & Ntshona, 2004).

The provision of watsan services requires therefore a judicious balance of technological, organizational (or institutional – added by the author), managerial and also important legal processes (UNDTCD, 1989).

The intention, in this chapter, is therefore to develop a Model Institutional and Legal Framework (MILF); the purpose of which is to provide a benchmark against which to assess the situation in countries sharing a river basin. Such a framework ranges from local traditional rules usually applied by community to multi-lateral international treaties applied by sovereign states via national inter-state and international agencies.

This chapter (a) defines what an Institutional and Legal Framework (ILF) consists of and how it operates in general; (b) covers the review of literature on institutional and legal frameworks related to water supply and sanitation in Africa, Asia and Latin America; and (c) explains the approach in developing a Model Institutional Legal Framework (MILF).

4.2 Principles and components of an ILF

4.2.1 Principles of an ILF

An Institutional and Legal Framework is a framework built on institutions and legal systems. As (Nicol, 2000) puts it, the aim of the framework is to create “*linkages between the water sector and a range of parallel socio-economic and policy issues*”

(legislation, decentralisation, community based ownership, political representation and accountability) at all levels”.

The design of an ILF embodies therefore challenges:

- ✓ Making institutions (governmental, civil society, community-based, etc...) work with the laws and making the laws work with institutions.
- ✓ Implementing the human right to watsan by translating all agreements into actions.
- ✓ Securing a sustainable financing system; an issue not discussed in this research because beyond the scope.

In order words, there is a need for a strong agreement between the various water sectors such as irrigation, drainage, water supply and sanitation projects and the community as a whole (government, civil society, private sector).

Independent bodies, such as a regulator, an enforcement agency, a watchdog or ombudsman and a water audit, need to be included in the ILF. They work with the governmental institutions and need to act fairly and independently with the aim of ensuring that all parties involved in the delivery, supply, distribution and use of watsan facilities, are treated fairly.

Regulatory and enforcement mechanisms need to be in place to ensure by making sure that the means of communication are functioning.

Although the right to water supply and sanitation facilities is included in the constitutions and laws of many countries in sub-Sahara Africa, according to (WUP et al, 2006), many have weak regulatory capacity and few have regulatory agencies for water supply or sanitation. The majority of countries regulate water supply and sanitation through government agencies that lack sufficient staff, finances and motivation to carry out their functions effectively resulting in weak accountability and transparency to government and none at all to consumers (WUP et al, 2006).

4.2.2 Components of an ILF

Along the institutions and legal systems, the following bodies are also part of the ILF:

- a) A regulator

One of the responsibilities of the regulator for example in the water and human right context is to ensure that poor communities are not discriminated because of their social circumstances but also at the same time support the service providers in delivering the facilities while encouraging competition for better and quality service. An independent governmental body can take this role for example, in the case of the UK, The Office of Water Services (OFWAT) a regulatory body supervising and controlling the powers of water supply and sewerage companies but also the rights of the public.

The actions of the regulator can be to:

- Ensure that the regulations take into account the policies and law related to all users in particular the poor.
- Control water fees or charges through contracts depending on the circumstances
- Monitor the service that is provided to users
- To ensure that price increases are not affecting consumers' ability to pay but at the same time to raise awareness that services fees over a period of time have to increase because of the delivery of high quality water (safe, clean, close and affordable), removal and management of waste water can be an expensive business .

b) An enforcement agency

An enforcement agency will ensure that:

- There are mechanisms to enforce the regulations through fines, penalties or charges for non compliance to respect the procedures. For example, if the provider supplies poor quality water to the consumers
- the target communities are consulted regularly to hear about grievances and actions taken.

For example in the UK, The Drinking Water Inspectorate (DWI) and the Environment Agency (EA) can take enforcement actions against companies if they fail to comply with standards, waste and as well as water supply to consumers. The 2003 New Water Act has introduced mechanisms for poor customers and according to (Franceys, 2006 a), "*companies are expected to accept for water bills some payment arrangements for poor customers on low incomes*" and "*this should lead to significant improvements for the poor*" (Franceys, 2006 a & b) for example no banking charges to pay and also the

poor customers benefit from the ban on domestic disconnections however there is uncertainty as to who will not pay or can not pay.

c) A watsan auditor is responsible to make sure any donations, public, and private funds are well utilised and not diverted to other activities. Other tasks can include:

- assess the family's consumption (how , when, why, where) saving tips
- to ask how much water is used annually by consumers and checking the receipts of payment by private, councils and other users
- where it goes
- how accurate the current charges are
- who uses the facilities
- amount of fee collected.
- efficient use of water by water supply and sewerage companies and by consumers as well. Recent low rainfall has put restrictions on the amount of water use in the south of England.

Recently, as an example, The National Audit Office (NAO) examined how OFWAT is carrying out its responsibilities for regulating the way the twenty four water companies of England and Wales manage leakage and promote the efficient use of water to their customers (NAO, 2006). The Auditor General (AG) , the NAO and their staff are totally independent of Government. The AG has statutory authority to report to Parliament on the economy, efficiency and effectiveness with which departments and other bodies have used their resources (NAO, 2006).

d) A general watchdog or ombudsman is responsible to make sure that targets are achieved or groups are working towards achieving each targets and that water coverage is increasing in order to meet the Millennium Development Goals, that the poor communities are not left out from accessing the service, that any fee charged reflects the user capability to pay depending on income and also that user do not use income solely on paying services fees as this affect other household expenditure (school, food and shelter). Also, an ombudsman needs to investigate and resolve disputes between watsan customers and their services providers. For example, the CCW in the UK has "*the responsibility to provide information to the government on*

consumer matters affecting the areas of the relevant. "Consumers" includes both existing and future consumers".

e) The Courts or legal system need to record, translate divulgate all traditional practices/mechanisms relating to accessing water facilities, raise awareness, work with institutions and translate all laws enacted at the international, national, regional and local levels into actions. Also, the courts' legal authority (at all levels) can provide an *"effective push for the right to water supply and sanitation, when they rule against water cuts or when they require the supply of water and sanitation to populations living in squats and other forgotten neighbourhoods"*(WWC, 2006).

4.3 An Institutional and Legal Framework for water supply and sanitation

Few studies have focused on the prevailing institutional and legal arrangements for successful handling (collection, storage, management and distribution) of water supply, waste water evacuation , supply of sanitation and waste disposal facilities and *"not only the range of institutional models for dealing with water supply, wastewater and sanitation has not been studied systematically, but the application and effectiveness of these models in municipalities in developing countries has been neglected"* (WWSSCC, 2005).

A sound and effective ILF, coupled with regulatory and enforcement capabilities, is needed in the watsan sector, whether at local, regional, national or international levels for all communities and in particular the poor to fulfil their human needs and rights (in particular social, cultural and legal). The ILF also needs to take into account traditional or customary laws that may already be in place because customary laws are the foundation of any living community system and politicians need not view that they are inadequate(difficult to analyse), not in a written format (difficult to access) and therefore technically backward or irrelevant. Many communities rely on such laws in their daily lives. What is needed is better understanding of customary laws and its integration in modern laws, in so, customary laws need to evolve in the 21st century.

An institutional and legal framework for effective and sustainable watsan facilities for poor communities needs to possess the attributes stated earlier and also assign the functions of good administration of resources available, of the organisations involved, of policy, regulation & enforcement and the overall management of facilities at all

administrative levels. Legislation plays an important role in an ILF which enables poor communities' access water supply and sanitation facilities as their fundamental human right. Being poor and unserved with clean, safe and close water supplies and adequate sanitation in this new millennium is a violation of the human rights and human dignity.

4.4 Approach to the design of a Model Institutional & Legal Framework

The approach to studying the ILF and developing an MILF is primarily by literature review. However, because of the limited literature on a pro-poor model of an institutional and legal framework, only a basic model has been developed which has taken into account the issue of human right-based approach and poverty (as discussed in chapter 3), access to clean, safe, close watsan facilities and their linkages at all levels.

The model is not meant to be detailed but only provide an idea of key components and linkages. It is hoped that this model will be useful to policy makers and legal drafters at all levels and the results of which could be extrapolated worldwide.

4.5 Review of the Literature

My thinking of a MILF and its development has been influenced by reviewing the following:

- The UNDTCD (1989) report was my starting point as to what has been done earlier. It provides a list of constraints that were found in countries in Africa, Asia and Latin America. However, there is no information on how to solve the problem of poor communities not accessing watsan facilities. Furthermore, the issue of enforcement and regulation was not taken into account nor was the issue of human right addressed.

UNDTCD (1989) identified the following constraints in Africa (Ghana, Nigeria, Sudan and Sierra Leone); Asia (Iraq, India, Bangladesh, Malaysia and China) and Latin America (Argentina, Brazil, Colombia and Chile):

- a) In the institutional framework (organisational, managerial and regulations)

- * lack of planning, lack of continuity in plans and programmes and evaluation standards
- * proliferation of entities with entities functions
- * concentration of services in urban or other favoured areas
- * limitations on community and private sector participation
- * inadequate operation, maintenance and monitoring
- * inadequate cost recovery and pricing systems
- * ineffective promotion of public support
- * inadequate attention to groups such as women and children

b) In the legal framework

- * ineffective protection of supply sources
- * definition of priorities and preferences
- * inadequate and cumbersome rules
- * lenient application of sanctions and penalties
- * inadequacy of enabling legislation.

This list of problems in the implementation and design as identified by (UNDTCD, 1989) relates to a number of situations around the world. However, as no in-situ field surveys or visits were conducted in this research, it is therefore difficult to test these results.

- The Food and Agriculture Organisation (FAO) has produced useful series (electronic and paper-based materials) on water laws in selected Sub-Saharan African and Moslem countries, focusing mainly on integrated water resources management and water rights. However, the issue of human rights is not raised in the series.
- Based on a joint German-Ghanaian research and aimed at developing scientifically sound decision support system for the assessment, sustainable use and development of water resources in the Volta basin (GLOWA), (Van Edig et al, 2000) raise the issue of institutions and legal frameworks and international cooperation in the Volta basin between riparian states and emphasise the need for the setting of parallel national water institutions. The paper does not however address the issue of linkages at all levels, nor does it focus on access to watsan facilities.

- Regarding the Senegal River basin, research and studies on the activities and outcomes, linked with the development/management of the basin are well documented. Allissoutin, (1997), focussing on the water management of ponds, identified the institutional and legal framework for water resources. While a useful work, it does not address the issue of human rights. In his draft PhD, (Allissoutin, 2002) notes the challenges (translation from regional languages to the statutory language (French) and raises the issue of rural communities and the role of customary and statutory water laws in the rural setting.
- Godana (1985) made a comparative analysis of three international African rivers (Senegal, Niger and Nile). It is a very focused and in depth analysis but not specific to water supply for drinking and household uses and sanitation facilities.
- Ramazotti (1996) produced a compilation of local laws from many African countries but most of the information source has superseded. The contents of this book are not as a result of field research but from a search of references contained in the legal and anthropological literature.
- Howsam et al (2000) examined the issue of water rights and water policies in their scoping study which was conducted in five African countries (Ghana, Mozambique, Tanzania, Uganda and Zambia) and looked at the statutory and customary institutional / legal frameworks at local, national and international levels. The issue of human right is not covered but rather focused on other types of water rights. Also, the establishment of linkages at the various administrative is not raised.

4.6 A Model Institutional and Legal Framework (MILF)

The MILF has been developed to assist those involved in facilitating and coordinating activities relating to watsan facilities, in dispute avoidance and resolution at all levels. It includes linkages or strong alliances, communication at all levels, information sharing, formulation and coordination of watsan (technical, institutional) services, funding, networking, and other activities (e.g. construction, operation and maintenance, activities in normal and emergencies situations).

Figure 4.1 (below) starts at the local level and moves down to the international level. This is linked with (Chamber, 1983) “*Putting the last first*”. The author believes that this should be a prerequisite for those working or writing about the poor i.e. to approach the plight of the poor from a ‘bottom up’ perspective.

In the design of the MILF, four tiers are presented: local, regional, national and international levels with two columns (institutional and legal) under normal and emergency situation (plentiful of water, scarcity of water, drought, flooding, war, etc...) as below.

The local level institutions are responsible for:

- implementing activities or projects, management, operation and maintenance
- securing funds locally, nationally and internationally as (Smets, 2005) puts it: “... by adopting a rights-based approach in which a greater role would be given to water users and to elected representatives in the context of decentralisation and good governance”
- financial management for the sustainable development of their accessibility to watsan facilities. The regional level would have similar responsibilities as above but should also follow local guidelines.

At the national level, where more organisations - agencies are located, the authorities would be able to facilitate the acquisition and fair distribution of public and/or private funds and establish a plan for watsan facilities for the long term.

At the international level, it would be necessary to take into account all the inputs from the local, regional, national and international levels and include them in treaties and then to ensure that decisions are translated in to action. It is at this level that ‘Articles 11 and 12’ of the International Convention on Economic, Social and Cultural Rights (November 2002) (which sets out the basis of state responsibility towards the realization of the rights to health and to an adequate standard of living) is implemented.

The components and the linkages of the MILF are similar at all levels. The framework at the local, regional, national levels is flexible and responsive, so as to evolve with new developments. The institutions are governmental working together with non-

governmental organisations (NGOs) and all stakeholders. The national legislation includes international and local laws.

What is fundamental in this framework is ensuring that the role and responsibilities of each institution and legal bodies are clear. It does not matter what they are called as long as they know and carry out their functions in serving communities in particular the poor. Establishing linkages is crucial i.e. there need to be legislation which requires that these linkages be established.

One key factor for the MILF is the establishment of links at all levels, and especially between organisations and communities at the local levels. Linkages have to be established for the framework to work appropriately. For projects or programs in water supply and sanitation to be sustainable and act as a blueprint for future national activities, there is a need to establish an institutional and legal framework that would strengthen and promote involvement, responsibilities, regulation, and enforcement from the local level to the international level as the water source is an international river.

Linkages can be defined as any mode of transmission of information, establishing working relationships or alliances, establishing strong financial accountability, mobilization of human/technological/financial sustainability, material resources, collaboration with research institutions locally, regionally, nationally and internationally, capacity building, valuing local knowledge, collaboration with traditional leaders, respecting local resources in the community.

All these linkages should be a prerequisite when implementing activities to the benefit of the community. The poor communities have a lot to gain if these linkages are well established under normal and emergency situations.

Thus, the key message from the design of the MILF is about communication – between bodies and representatives of the stakeholders with clear institutionally and legally defined roles and responsibilities

The strength of the MILF depends greatly on how well activities are implemented with the combination of robust organisations and effective laws. The MILF will have the form of a permanent joint body; a joint commission convened on a regular basis say once a month, or regular meetings of international, national, regional and local

representatives. There is no blueprint of a successful MILF, but a well outlined and explicit language is essential for an effective, efficient and sustainable MILF.

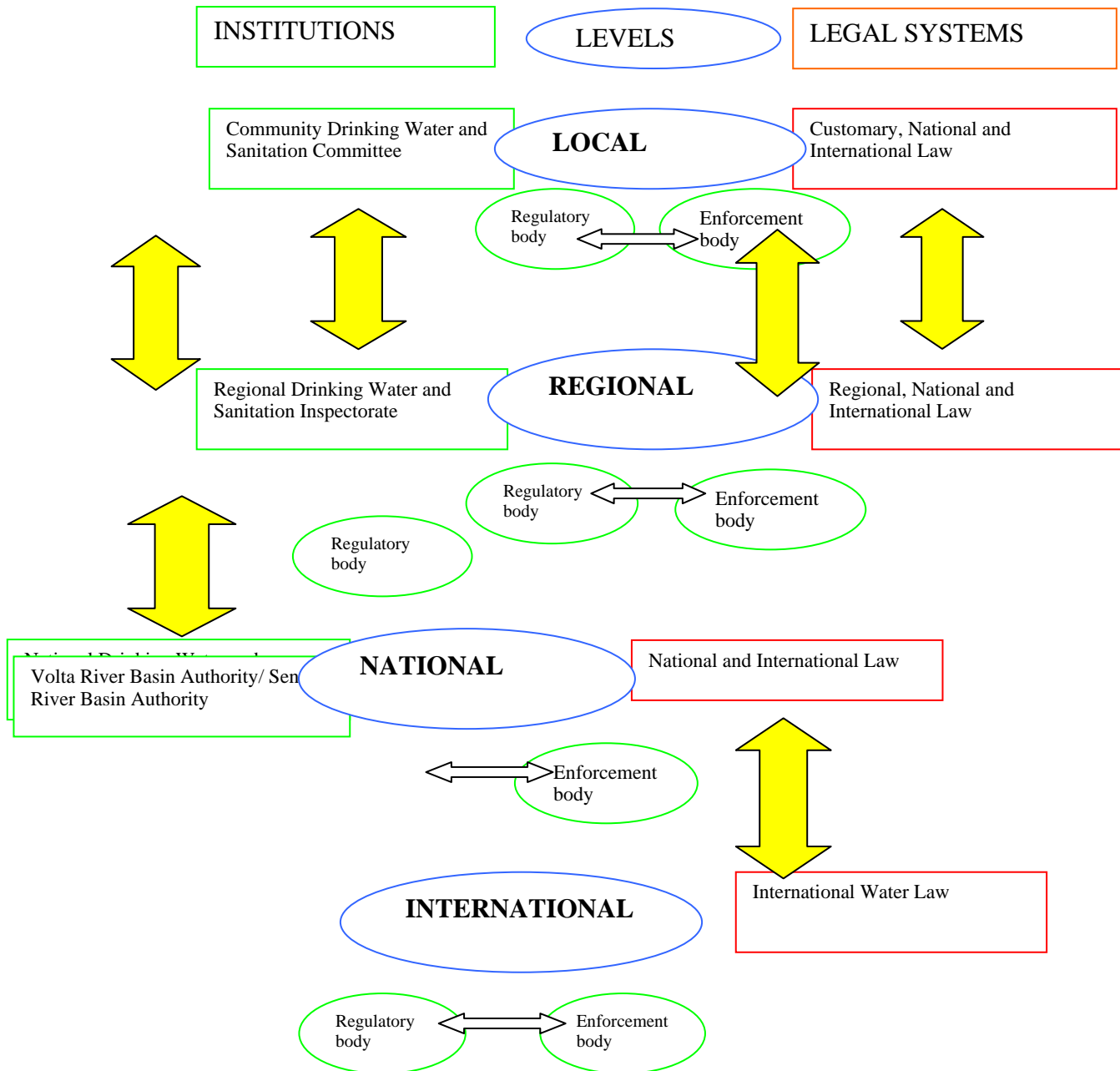
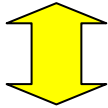
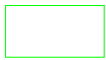


Figure 4.1: Elements of an Institutional and Legal framework

Key to Figure 4.1

This bi-directional arrow presents the two-way linkages (communications, stakeholder participation, advocacy, financial, research, donor assistance, etc...) between levels.



The rectangle boxes represent an organisation with a physical structure and adequate manpower to manage personnel, services, etc..., but also have the institutional capacity to meet and expand the demands of the communities, within an administrative division



The small oval shape represents a body such regulatory & enforcement at all levels to ensure that all the working essentials are in place and functioning.



This medium oval shape represents the different administrative levels (i.e. National).

Local level includes any administrative level below regional. (The divisions will depend on the country administrative divisions).

Regional level includes any administrative structure below national level.

National level includes any administrative structure below the international level.

International level indicates any administrative structure responsible for international cooperation

The need for a well structured institutional and legal framework in the watsan sector cannot be over-emphasised. Too often, a lack of clarity makes the implementation of watsan facilities programmes ineffective because there is often duplication of responsibilities, and some organisations are not clear about their relationship with other

bodies. This leads to confusion. Governments should be responsible for implementing programmes with the support of local, regional, national and international assistance.

A sound legal base (Table 4.1) is needed for effective watsan services for poor communities, in order to meet their basic human rights. The rights and responsibilities of users and service providers need to be well defined in the legislation. The legal framework should include the legislation, the legislative bodies at all levels encompassing international water law, statutory/national law and customary/traditional law (Allissoutin, 2002).

The legal framework needs to establish the regulations and principles regarding the human right to water supply and sanitation, of hygiene and waste disposal, for example, the law needs to stipulate the methods of payments in relation to the medical or socio-economic circumstances of the communities; also ownership/maintenance of the water supplies and sanitation facilities

The legislation need to be adapted and modernised to take into account the needs of the poor communities. *“New principles need to be introduced for example: public participation, incorporation of customary laws, polluter pays, and river basin approach”* (ODI, 2004). It has been argued, that *“communities will only invest and look after a water supply when they legally and effectively own it”* (UNDP, 1997).

The players	Levels	Process	Responsibilities	Limitations
Drafters	International	Treaties	Respect and Promote treaties at national/local levels/advocate the training of water lawyers, reform in the access of legal systems to the poor/unserved Facilitate dissemination of legal documents Facilitate financial accessibility	Lack of monitoring and proper evaluation on how policies are implemented, no consciousness about poverty, excluding and disempowering
Government	National / Regional	Policies/ laws	Respect/implement/incorporate human rights in water policies, good governance, improvement of legal administration Promote human rights Provide the enabling conditions for local legislation Have a stronger voice at international level Encourage sharing of information between countries	Lack of national campaigns on human rights issues, lack of personnel to transmit legal messages, lack of concern of water rights
Poor/unserved communities / households	Local	Rights	Awareness, training, legal aid, democratic participation, involvement in the planning of activities	Voiceless, defenceless Lack of communications
Non-Governmental Organisations	At all levels	Laws/ Rights	Advocates on behalf of the poor/unserved, supportive of the actions/attempts of the poor/unserved, act as a transmitting agent to the poor/unserved communities exchange information	Need more government interaction, lack financial means, must have the ability to understand agreement and translate it for the local communities

Table 4.1: Who is involved? Legal Framework for human rights for the poor/unserved, adapted from (Narayan, 2000)

According to (ODI, 1999), “*the distinctive feature of a rights approach is its legal foundation*” as stated earlier in Chapter 3. The edifice is incomplete, however: ratification is patchy and few countries have translated international obligations into national legislations (ODI, 1999). The protection afforded by law is therefore limited. Purists argue for legal frameworks, but others point to the weakness of legal systems in many of the countries which experience the greatest failures in delivering rights (ODI, 1999). There are alternatives:

- the very act of monitoring the fulfilment of rights acts a distinctive to back-sliding and helps to create a culture of compliance(ODI, 1999)
- publicity and advocacy help to create political structures, policy changes and budget allocations which favour the implementation of rights
- there is scope for providing accountability through administrative means- specifying service delivery standards, and holding public and private agencies to account if these standards are not met (ODI, 1999).
- many argue that the rights-based approach needs to be rooted in a participatory and political process. Such an approach, they argue, provides poor people with a ‘voice’ and contributes to empowerment and more active citizenship (ODI, 1999).

The planning of an ILF must include all stakeholders and have clear objectives in relation to the sector in question and long term sustainability. It is not only needed for those who are to access watsan facilities but also is needed for those who will supply or deliver the services and it also a matter of who will pay and how or when.

Independent /autonomous institutions or joint ones with a governmental ministry will greatly depend on the level of transparency and good governance policies in place and on the level of managerial capacity of local government. But whatever the case, it is important that poor communities can trust and depend on a body which ensures continuity of activities, stability, which has authority and leadership, which is free from political interference, is democratic and defends the rights of poor communities.

Governmental institutions (part of an ILF), are facilitators in the process and have to play a key role in ensuring that facilities are in place for communities, in particular the poor.

Governments have to assist in the, monitoring, community participation, coordination and planning of the activities involving all the players in the sector.

Despite the difference of coverage within the river basins, it is necessary to provide more equitable and balanced services which demand improving horizontal cooperation between the different agencies providing services within the same country and river basin (UNDTCD, 1989).

4.7 Use of the Model Institutional and Legal Framework

The proposed MILF is subsequently measured in chapters 5 and 6 which focus on the Senegal & Volta river basins and on Ghana respectively.

There are inevitable limitations in the MILF. However it is a starting point for the analysis of institutional and legal frameworks for watsan provision and has raised many issues which would otherwise not have been examined.

In summary, the following weaknesses of the MILF have been identified:

- identification of committed individuals to work with dedication and independent thinking
- securing sustainable funds for awareness at all levels
- customary laws versus modern laws
- sharing of information through the establishment of linkages

CHAPTER 5

THE SENEGAL AND VOLTA RIVER BASINS

Chapter 5 describes the general physical characteristics and socio-economic circumstances in Senegal and Volta river basins. It also provides an assessment of the existing institutional and legal frameworks for watsan provision. Most of the information (as described in Chapter 1) was gathered by reviewing literature relating to the Senegal and Volta river basins.

The importance of River Basin Management (a recently proposed European Union Initiative for Africa) and the need, in the case of transboundary waters, for inter-state agreements, has been recognised for some time. (The World Bank has put resources into training of water lawyers)

The Senegal and Volta rivers are both international rivers with different stages of development of their river basins⁷.

However, the management and development of the basins with the use of the rivers for agriculture, navigation, irrigation with the construction of dams and for power supply has lead to multiple problems: pollution from agriculture, sewage waste from towns and industries, diseases, poverty and mortality. All of these problems limit or deny the communities, in particular the poor their fundamental human right to access clean, close, safe and affordable watsan facilities.

The Volta and Senegal river basins provide a suitable setting for this study - the results of which could be extrapolated to other parts of Africa and beyond.

⁷ The Volta and Senegal rivers are international rivers. The term 'international river' was first referred to in the Act of Berlin 1885, with regard to the Congo and Niger rivers in Africa. It was based on the criteria of navigation but also the potential of other uses such as irrigation, hydroelectricity power production, timber floating etc... Subsequently 'international river' was defined by the International Law Association (ILA), as "one which flows through or between the territories of two or more States", in the Statements of Principles of the 1956 Dubrovnik Resolution. More recently definitions such as "an international river is one that flows through or separates two or more States; the former shall be called successive, and the latter contiguous" (F.A.O, 1998), (Wouters, 1997).

5.1 The Senegal & Volta River Basins – background

The location of the Senegal and Volta river basins in West Africa is shown in Map 5.1.

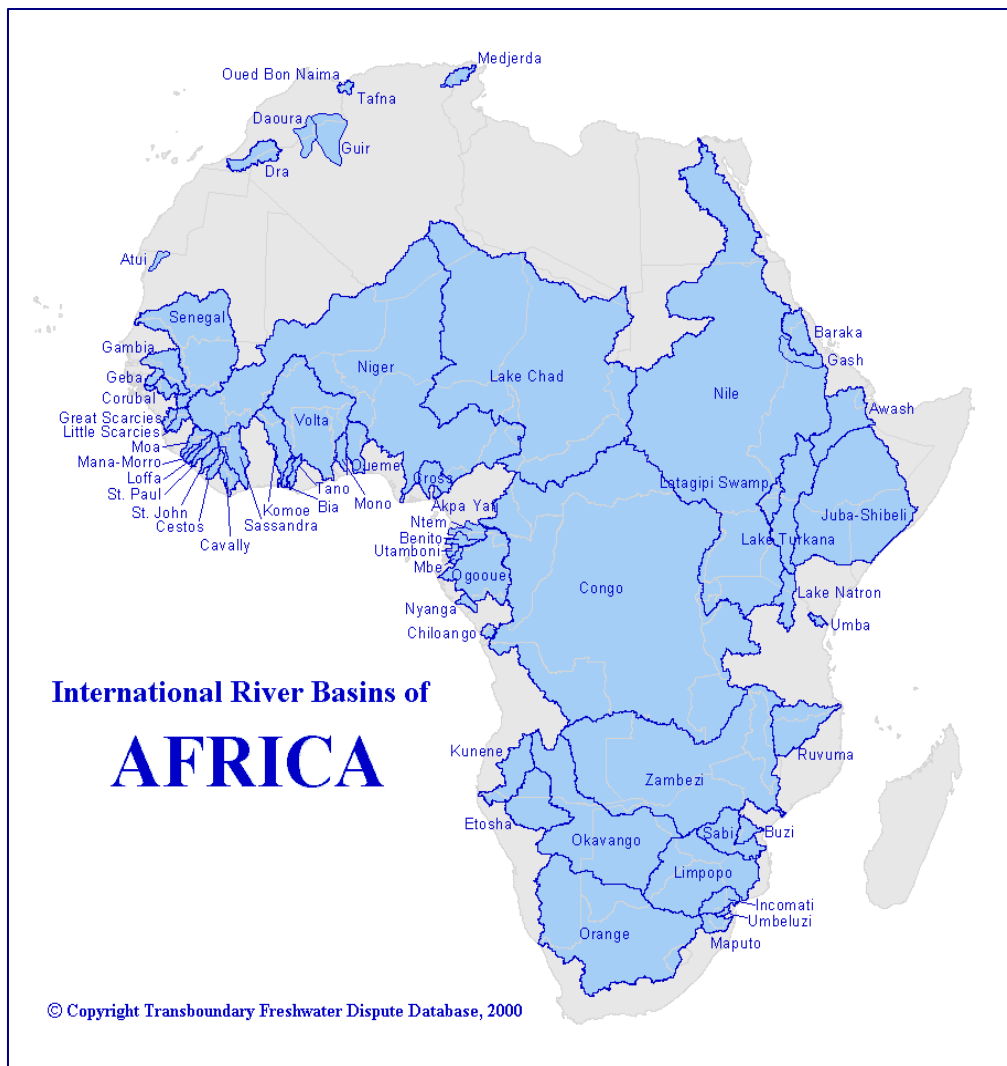
5.1.1 The Senegal river basin

The Senegal river is shared by Senegal, Mali, Guinea and Mauritania. The Senegal river basin, located in West Africa, covers 1.6% of the continent (Map 5.2 and Table 5.1) (F.A.O, 2002 a).

5.1.2 The Volta river basin

The Volta basin occupies almost 28% of the total West Coast of Africa and is shared between six countries - Ghana, Togo, Cote d' Ivoire, Benin, Mali and Burkina Faso (Map 5.3 and Table 5.2) (F.A.O, 2002 a), (Earthtrends, 2005). According to (Van der Giesenin, 2001), "*the watershed of the river is one of the poorest areas of Africa*". However, major developments in Ghana (the construction of the Akosombo dam and its multifunctional uses -irrigation, electricity, industries, water supplies, tourism) using the Volta river, have improved the economic development of Ghana which on the other hand could be affected with Burkina Faso's future plans for socio-economic development.

There is no international treaty on the utilisation of the Volta river for management of the basin at the time of writing.



Map 5.1: International River Basins of Africa.

Source: (Ilomäki, 2002)

5.2 Senegal River Basin

5.2.1 Physical features

The Senegal river⁸ is, after the Niger river, the second largest river of West Africa and has a length of 1800 km, depending on the author and point of reference. The Senegal river originates in Guinea and in the wetter south western part of Mali.

⁸ The Senegal River is formed by the junction of two smaller rivers, namely: the bahfing and the bahkoye whose confluence near Bahfulabeh (Republic of Mali). * In Mandingo language, Bahfing means black river and Bahkoye, white river. From there, it flows west, forming the border (as a contiguous river) between Mauritania and Senegal. It then pours into the Atlantic Ocean through a delta some 40 km from the former capita and port, St Louis, in Senegal. The rains falling in the Futa Djallon Mountains from April through October produce a flood season beginning in July and ending in October (GEF, 2002).

The basin is shared by Guinea (6.1%), Mali (28.8%), Mauritania (50.2%) and Senegal (14.9%). as shown in Table 5.1 (F.A.O, 2002 a)

Table 5.1: Senegal river basin: areas and share (%) in the basin

Country	Total area of the country (km ²)	Area of the country within the basin (km ²)	As % of total area of basin (%)	As % of total area of country (%)
Guinea	245857	29475	6.1	12.0
Mali	1240190	139098	28.8	11.2
Mauritania	1025520	242742	50.2	23.7
Senegal	196720	71866	14.9	36.5
For Senegal basin	2708287	483181	100.0	

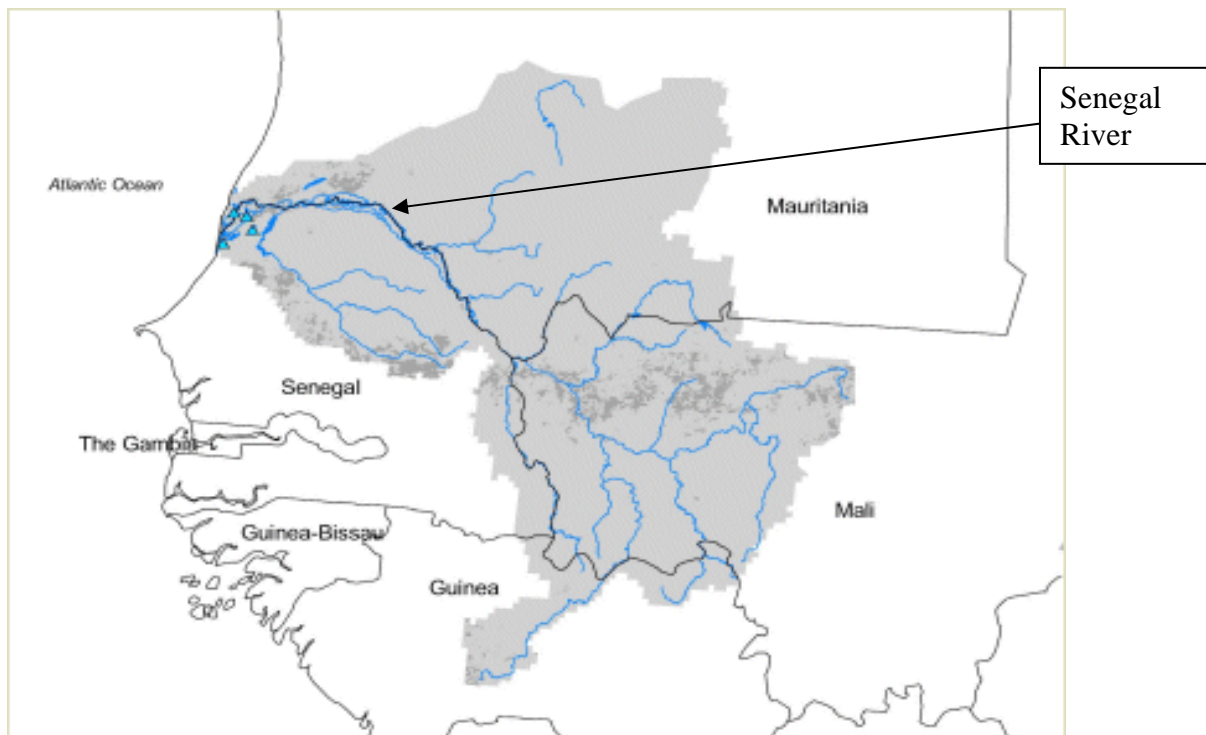
5.2.2 Socio-economic conditions

Almost two million people, 85% of which live near the river, inhabit the basin⁹.

Population growth rate is high (some 3% per year), partly due to migration into the lower valley and the delta in response to employment opportunities offered by the industries related to large-scale irrigation (GEF, 2002).

Communities spend a considerable portion of their daily lives fetching water (for drinking and major household uses) from the river, believing that the quality of the water is safe but, according to (GEF, 2002), the practice of drawing water from the river is becoming increasingly hazardous, particularly in the dry season, as the irrigated area expands and the use of agro-chemicals intensifies.

⁹The Upper Basin has largely remained an area of subsistence agriculture based on shifting cultivation. In the Valley and the Delta one finds side-by-side traditional production systems (flood-recession cropping, livestock raising, fishing) and the practice of modern irrigation with water pumped from the river(GEF, 2002).



Map 5.2: Watersheds of the World: Africa - The Senegal river basin

Source: (Earthtrends, 2005)

Local organizations and NGOs have persuaded the local population to stop drinking and collecting water directly from the river because of the medical and health problems as pointed out by (Allissoutin, 2002) “that *when boreholes breakdown or in recurrent droughts, the communities have no alternatives but to return to the river*”.

Although the question of the river’s water quality is being addressed in connection with major undertakings such as the Dakar Long Term Water Project (this is only on the left bank of the river i.e. in Senegal, it has never been the object of concern with respect to the riverside population, because of lack of information and dissemination of research programmes (GEF, 2002).

5.2.3 Institutional and legal frameworks

a) International framework - The Organisation de Mise en Valeur du fleuve Sénégal

The Organisation de Mise en Valeur du fleuve Sénégal (O.M.V.S) - Senegal River Development Authority- was established on 11 March 1972 by the states of Mali, Mauritania and Senegal.

The OMVS is the result of a long process of initiatives dating back to the colonial era and aimed at developing the basin of the Senegal river (see Box 5.1. and 5.2b). This orientation actually started shaping in 1935 with the establishment of the Mission d'Aménagement du Fleuve Sénégal (M.A.S.) which engaged in activities such as the development of rice perimeters etc. However, for the purpose of developing the river basin, it was only after the riparian states gained international sovereignty that a number of institutions were established, namely as shown in Box 5.2b (OMVS, 2002).

Box 5.1: Formation of the OMVS

1962-1968: The Inter-states Committee (ISC) for the Development of the Senegal River Basin grouping Guinea, Mali, Mauritania and Senegal. In 1962, following a conference involving Mali, Mauritania, Guinea and Senegal decided to undertake, with the assistance of the UN to, studies and works for the harnessing of the resources of the river basin. The following year, as a result of the conference a convention was drawn. The ISC replaced an earlier colonial organisation with only Senegal and Mauritania. The ISC was entrusted in improving navigation on the river and controlling the regime of the river so as to exploit its waters for agricultural and industrial purposes.

1968-1972: The Senegal River Riparian States Organization (OERS), which, with the same membership as above, advocated a wider economic cooperation with a step forward pan-African unity with the goal of regulating all economic, social, cultural and even military activities of the four, States. However, because of technical differences between Senegal and Mauritania over the border and political ideology differences between Senegal and Guinea, the Convention of 1964 was denounced. Despite these problems, the States of Mali, Mauritania and Senegal remained determined to form a new legal regime for the river basin and founded the Organisation de Mise en Valeur du fleuve Senegal (OMVS).

1972-to date: Two conventions (see below) established the Organisation de Mise en Valeur du fleuve Senegal (OMVS) comprising: Mali, Senegal and Mauritania. The OMVS contains also reference to the Charters of the United Nations and the Organisation of African Unity from the States members decided to make maximum uses of the international river.

In **1992**, Guinea and OMVS signed the *Protocole d'accord cadre de coopération entre la République de Guinée et l'OMVS* with a view to creating a framework for cooperation in actions of mutual interest concerning the Senegal River and its basin, including a provision allowing Guinea to attend OMVS meetings as an observer. (OMVS, 2002)

The objectives of the OMVS are:

- to improve, balance and guarantee the economic, social and cultural situation of those living in the basin
- to restore the equilibrium of the sub-region's eco-system

- to reduce the vulnerability of the three Member States' economies vis-à-vis of climatic and external uncertainties
 - to accelerate economic development in the Member States and Inter-state cooperation (OMVS, 2002).
- b) Legal texts

The three Member States (Mali, Senegal and Mauritania) have signed six conventions, which constitute the basic legal texts governing all the activities aimed at harnessing the Senegal river and at developing the resources of the river basin as shown in Box 5.2. (a and b)

Box 5.2 (a): Legal texts of the OMVS

- *Convention relating to the development of the Senegal River:* This agreement was signed on 26 July 1963 and became the first international legal instrument on the Senegal (see Godana page 218) river, grouping all four basin States.
- *Convention relating to the statute of the Senegal River:* Signed on 7 February 1964, this convention adopted in greater details the principles and modalities for the exploitation of the river's resources, both national and international uses. Thus, the Senegal River became a system for non-navigational purposes consisting of two legal regimes: national uses by individual basin States and joint or common uses by several basin States.
- *Convention on the creation of the Organisation des Etats riverains du Senegal – 2 March 1968 in Labe, Guinea*
- *Convention on the Establishment of the OMVS:* Signed on 11 March 1972 in Nouakchott (Mauritania) by the Heads of State of Mali, Mauritania and Senegal, this convention, amended a number of times, and defines the mandate as well as the competence of the Organization whose executive organ is the High Commission.
- *Convention on the legal status of the Senegal river*

Under this convention signed also on 11 March 1972, the Senegal River (including its tributaries) is declared an international waterway in the territories of the Republics of Mali, Mauritania and Senegal. The convention also guarantees free navigation and equal treatment for all member-states with respect to the various forms of utilization of the river water resources. This status does not apply to Guinea as not a party to the Convention and the internalisation does not extend to the portion of the river in Guinea.

On 21 December 1978 the Heads of State and of Government of Mali, Mauritania and Senegal signed this convention and adopted ever since 1974 the principle whereby the common interest structures constructed on the Senegal River shall be the joint ownership of the OMVS Member States. This completes the basic legal framework of the regime of the Senegal River basin.

In May 2002, the Senegal River water Charter was signed, establishing the legal and regulatory framework, clearly stating that river water must be allocated to the various use sectors. The resource is not allocated to riparian states in terms of volumes of water to be withdrawn, but rather to uses as a function of possibilities.

The various uses can be for agriculture, inland fisheries, livestock rearing, fish farming, urban and rural drinking water supply, health, industry and navigation. Source: (OMVS, 2002)

The statutory organs below (Box 5.2 b) are relevant here because they constitute the international institutions, responsible for the management of the Senegal river water but

also these are linked with regional, national and local institutions. This shows that there are institutions upon which the OMVS was formed as prescribed in the ILF and MILF in Chapter 4.

Box 5.2 (b): Legal texts of the OMVS

Statutory organs:

Under the amended convention of 11 March 1972, the OMVS is placed under the supreme authority of the Conference of Heads of State and of Government whose chairmanship is ensured for a two-year term by each of the member states and which define OMVS policies of co-operation and development. In addition to the Conference, the Organisation includes the following five standing organs:

- *The Council of Ministers is the concept and supervision body of the Organization. It is entrusted with the elaboration of the global development policy for the Senegal River basin with respect to the exploitation of its resources. Its chairmanship is ensured for a two-year term by each of the member states. It elaborates policy, planning and co-ordination.
- *The High Commission is the executive organ of the Organization and entrusted with the implementation of the policy. The High Commission is headed by a High Commissioner appointed for a four-year term and assisted by a Secretary General also appointed for a similar mandate. The High Commission includes the following Departments, Divisions and Advisers: the Administration and Accounts Department, the Technical Department, the Communication and External Relations Division, the Regional Documentation Centre, a legal Adviser, and a Coordination Adviser.
- *The Water Standing Committee, set up in 1975, is entrusted with defining the principles and modalities for the allocation of the river water resources among the member states and among the various utilization sectors, namely: industry, agriculture and transport. It has an advisory status before the Council of Ministers and meets as often as is necessary on the convocation of the High Commissioner.

Subsidiary organs:

- *The Consultative Committee
 - * The Regional Planning Committee
- Source: (OMVS, 2002)

The above box is of importance to the study as it is the international legal basis upon which the OMVS was formed but it also represents the basis on which communities and human rights campaigners can claim their legal, moral and social entitlements.

“The use of the river for consumption, household uses and sanitary uses is now on the agenda” - personal communication with OMVS, Dakar, 2003.

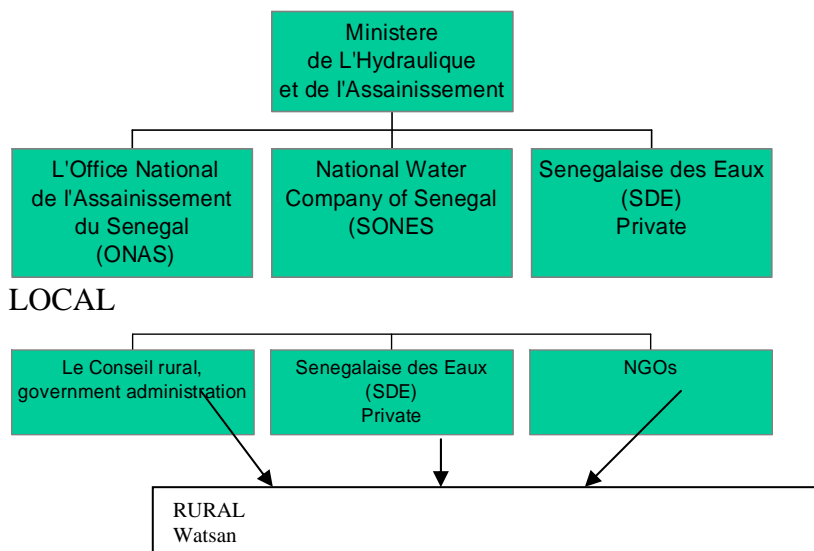
In summary, the OMVS has proved to be efficient and flexible in adapting to change and resolving conflicts among riparian citizens (Salem Murdock & Niasse, 1996) but according to (Niasse, 2002), these are some of the problems that undermine the merits of the OMVS as an internationally coordinated river basin management model and considers the need to *“establish clear linkages and communication channels between the various management levels”*.

- b) National frameworks
- i) Senegal

Watsan institutions

Watsan services are organised on a national basis in Senegal. Different operators provide both services with Public Sector Partnerships (PSP) in urban water supply (Allissoutin, 2002).

The reform of the water sector, started in December 1993 and completed on 23 April 1996, included the creation of a public asset holding company SONES (Societe Nationale des Eaux du Senegal) and a private operating company, SDE (Senegalaise des Eaux) who is contracted by the Government for a 10 year enhanced lease agreement with concession elements with respect to the renewal of the distribution network. In 1996, as part of the institutional reform of the urban water sector, the Government created Office National l'Assainissement Urbain (ONAS), an autonomous public office to operate and manage the sewerage networks and the urban storm drainage, mainly to create a vehicle to bridge the development gap with the urban water supply sub sector (World Bank, 2002 a). The ownership of SDE is SAUR - a French/international company for urban and rural water development specializing in the production and distribution of drinking water and the treatment of wastewater)-(51%), former staff of SONES (5%), state (5%), and national private operators (39%).



Senegal's watsan organigram

Source: (Allissoutin, 2002)

Rural water supplies and sanitation are the responsibility of the local government administration to ensure that rural populations have access to water supplies and sanitation facilities (WUP - Africa, 2002).

Sanitation services in five urban areas are provided by the Office National l'Assainissement Urbain (ONAS, an autonomous public office created in 1996 and responsible for both operations and investment in sanitation services (WUP - Africa, 2002).

Constitutional features

Water Code: article 75/76- on the principles of priorities of the use of water resources: *“supplying people with water for domestic consumption must in any case remain the first priority in allocating water resources... thereafter, stock rearing, agriculture, forestry, fish farming reforestation projects, then the needs of industrial and agro-industrial businesses”*.

Water legislation

The following laws cover the formation of institutions such as la Société Nationale d'Exploitation des Eaux du Sénégal (SONEES) and Office National de l'Assainissement du Sénégal (ONAS)

- Loi n° 99-81 portant dissolution de la Société Nationale d'Exploitation des Eaux du Sénégal (SONEES). Date of text: 03 September 1999. Source: Journal officiel n° 5883 du 25 Septembre 1999.
- Loi n° 96-02 autorisant la création de l'Office National de l'Assainissement du Sénégal. Source: Journal officiel n° 5676, 24 février 1996, p. 96.
- Loi n° 81-13 portant Code de l'eau (Water Code). Date of text: 4 March 1981. Source: Journal officiel n° 4829, 11 avril 1981, p. 411.

(F.A.O, 2002 b)

ii) Mauritania

Watsan institutions

Two entities under the authority of the Ministry of Hydraulics and Energy (MHE) are responsible for water supply in Mauritania:

* Department of Hydraulics (DH) supplies water to the rest of the country, 1.3 million, and 25% of whom live in small towns. Since 1994, the policy has been to delegate water supply management in rural areas and small towns to private providers, giving a clear relationship between private and public sector.

*A public utility, supplies to an estimated 1.3 million users in the 12 largest city of the country, including Nouakchott (World Bank, 2002 b).

Sanitation is one of the priorities of the government in an effort to achieve the policy of universal access to basic services. Priority is paid to insalubrious districts in major towns.

Under the Energy, Water, and Sanitation Sector Reform Technical Assistance Project, the government aims to “*restructure the legal and institutional framework of the water, sanitation, and energy sectors to create an environment for private sector participation*” and “*to prepare future investments in the water, sanitation, and energy sectors (urban and rural)*” (World Bank, 2002 c).

Constitutional features

The Mauritanian constitution proclaims in particular the inalienable guarantee of the following rights and principles:

- the right to equality
- the fundamental freedoms and rights of human beings
- economic and social rights;
- the rights attached to the family, the basic unit of Islamic society.

Water legislation

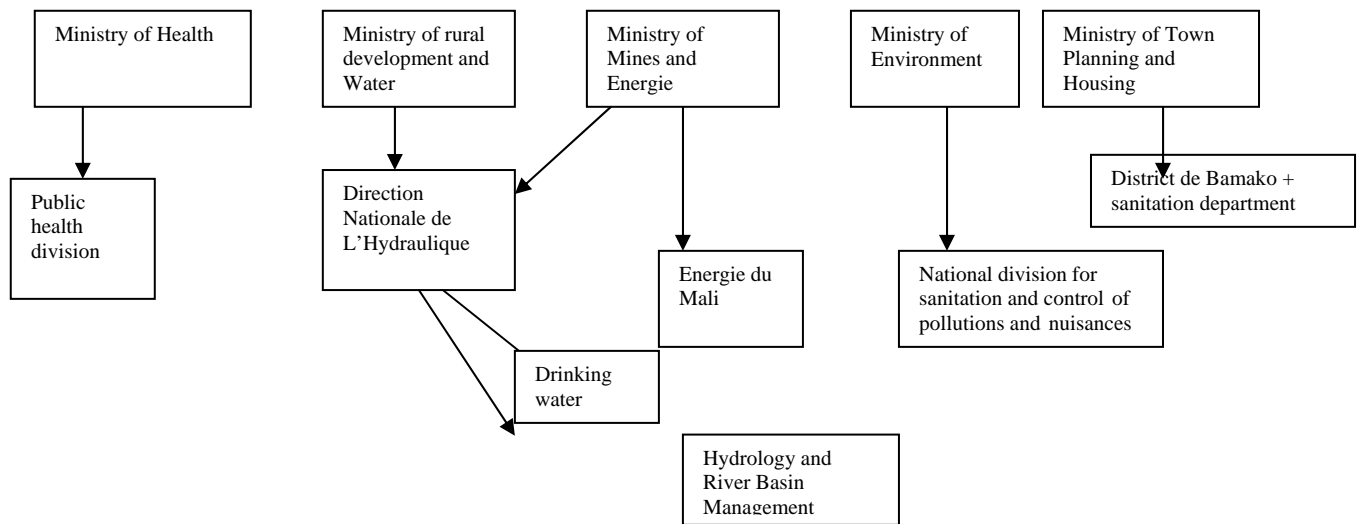
The objective is to allow all Mauritians access directly and permanently drinking water (pS -Eau, 1997).

iii) Mali

Watsan institutions

In 1995, the Government of Mali started the process of decentralization of the public administration so as to empower the population. To facilitate the decentralization process, a special Bureau has been set up under the Prime Ministry to consult the rural areas on the required reorganization. Within this context, the legal structure concerning the water law and land tenure is currently under review. The most salient environmental issues include inadequate supplies of potable water; deforestation; soil erosion and desertification (UNDP, 2002).

The responsibility of watsan is the Ministry of Mining, Energy and Hydraulics or Energie du Mali (Water and Electricity) is the parastatal body that supplies water in the urban sector. At the local level NGO's are those who play a role in the water sector For sanitation sector, the health structures play the major role. The Comité interministériel du secteur de l'Eau (Interministerial committee for water) has the role of coordination (WUP- Africa, 2002).



Mali's watsan organigram

Source: (AOC-HYCOS, 2002)

Constitutional features

Article 1: The human dignity is sacred and inviolable. Each individual has the right to life

Article 15: Every person has a right to a healthy environment. The protection and defence of the environment and the promotion of the quality of life is a duty of everyone and of the State.

Article 17: Education, instruction, training, employment, housing, leisure, health and social protection constitute some of the recognized rights.

These constitutional features confirm the government commitment to respect every citizen while safeguarding every person fundamental human rights.

Water legislation

The national policy (Loi n° 90-17/AN-RM fixant le régime des eaux. Date of text: 27 February 1990) of Water Supply, adopted in February 1996, has the following objectives:

- to provide water supply to urban and rural areas by 2002
- to establish an institutional and legal framework for the sector based on:
 - community participation involvement
 - decentralization and devolution
 - private sector participation.

Sanitation policy

The National policy of Hygiene was adopted in January 1996 and its main objectives are:

- the establishment of a long-term program for sanitation
- to give more finances to Public Hygiene program
- to enhance the sanitation coverage ratio.

iv) Guinea

Water legislation

Owing to its particular climatic and geographic characteristics, Guinea is called the 'Water reservoir' of West Africa.

As discussed earlier, institutions and legal systems do exist and function within the Senegal river basin, at the international, regional, national and local levels. However, information about the latter levels is not always made available and therefore this represents a constraint for researchers who may have to carry out field visits in order to ascertain the real situation. Also, as raised by (Allissoutin, 2002) and because of the lack of linkages at all levels and within levels as explained in Chapter 4, poor communities in particular are less likely to be able to exercise their fundamental human right to water supply and sanitation services because of institutional and legal weaknesses.

Thus, further research is needed to gain an understanding of the local level linkages with the Senegal river basin.

5.3 Volta River Basin

5.3.1 Physical features

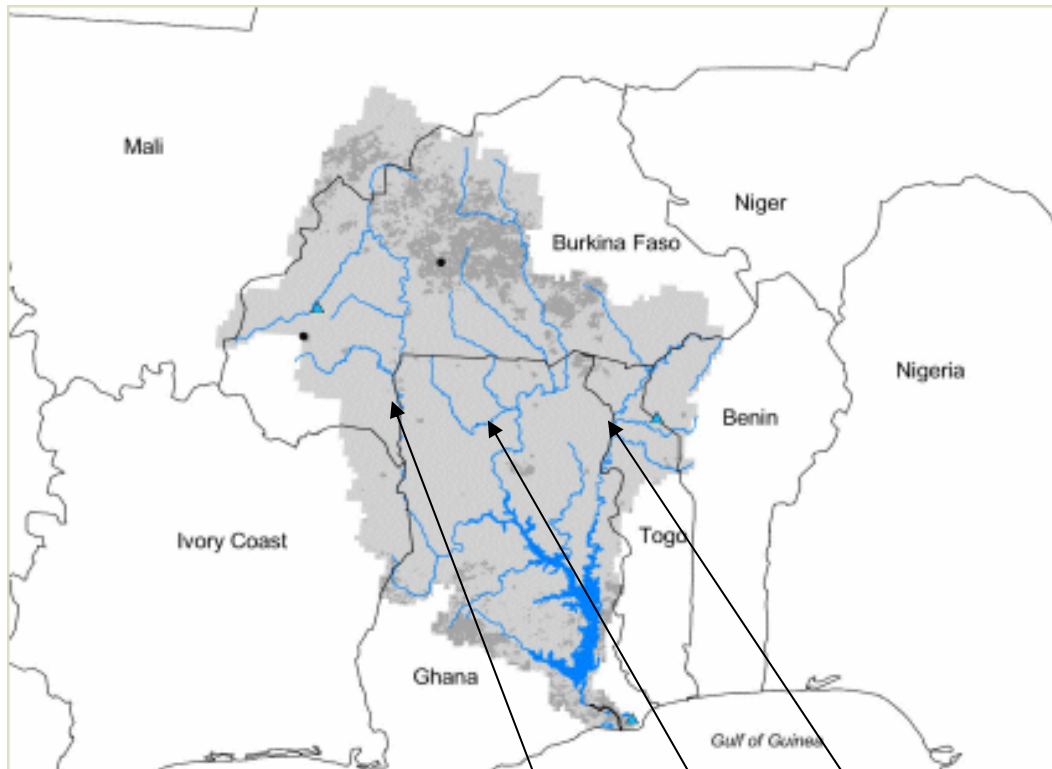
The Volta river is 470 Km long, formed in central Ghana, West Africa, by the confluence of the Black Volta (or Mouhon, 1,350 km long) and the White Volta (or Nakambe, 720 km long), both of which rise in Burkina Faso.

The river flows generally south, through a large delta, to the Gulf of Guinea at Ada, Ghana.¹⁰

The Volta river basin occupies almost 28% of the total West Coast of Africa and is shared between six countries - Cote d'Ivoire, Burkina Faso, Mali, Togo, Ghana and Benin (Map 5.3 and Table 5.3).

The Volta river basin, with an area of almost 400,000 km², is the ninth largest river/lake basin in sub-Saharan Africa and contains some of the sub-region's most important environmental, social, land and economic resources. The basin provides water for hydroelectric power generation, domestic and industrial supplies, irrigation, livestock watering, transportation, and fisheries (GLOWA, 2002).

¹⁰ The *Black Volta* originates in the southwest of the country, flows north eastwards and then turns south. In the south, it becomes the border, first between Ghana and Burkina Faso and then between Ghana and Côte d'Ivoire. The *Red Volta* originates in the central part of Burkina Faso, near Ouagadougou, and flows south eastwards to the border with Ghana. After crossing the border, it joins the *White Volta*. The *White Volta* originates in the north of Burkina Faso and also flows south-eastwards to the border with Ghana. The river Volta is consecutive river unlike the Senegal, which is contiguous, forming a border between two countries. Its major tributaries are the Afram and the Oti (Pendjari). The Pendjari River originates in the northwest of Benin. It flows north-east, then turns sharply to the west to become the border, first between Burkina Faso and Benin, then between Togo and Benin for just a short distance before entering Togo. In Togo, which it crosses in the north, it is called the Oti River. Further downstream it becomes the border between Togo and Ghana (F.A.O, 2002 a).



Map 5.3: Watersheds of the World: Africa - The Volta River Basin

Source: (Earthtrends, 2005)

Volta River (Black Volta, White Volta and Oti)

Table 5.2: Volta river basin: areas and share (%) in the basin

Country	Total area of the country (km ²)	Area of the country within the basin (km ²)	As % of total area of basin (%)	As % of total area of country (%)
Mali	1240190	9496	2.4	0.8
Burkina Faso	274000	183000	46.4	66.8
Benin	112620	16000	4.1	14.2
Togo	56785	26700	6.38	47.0
Côte d'Ivoire	322462	7000	1.8	2.2
Ghana	238540	152000	38.92	63.7
For Volta basin		394196	100.0	

Source: (F.A.O, 2002 a)

The water bodies in Ghana experience a high level of pollution particularly where they are located near human settlements industrial (including mining) estates and agricultural activities. In Kumasi, the capital of the central region of Ghana, within the Volta river basin, untreated industrial waste is discharged into streams, which pollute the water bodies downstream (UNDP et al, 1994).

5.3.2 Socio-economic conditions

In the case of the Volta River, the watershed of the river is one of the poorest areas of Africa (Van der Giesenin, 2001). Agriculture is the backbone of the largely rural society and the principle basis for development. Population growth exceeds 2.5% per annum, creating increased demand for natural resources (GLOWA, 2002).

5.3.3 Institutional and legal frameworks

As discussed earlier in the case of the Senegal river basin, institutions and legal systems do exist at the international, national, regional and local levels and constitute therefore the institutional and legal base upon which poor communities can claim their human right to water supplies and sanitation facilities. However, as presented below, in the case of the Volta river basin, no international institution and legal framework exist, putting the lives and future of poor communities at risk.

a) International framework

At the international level, there is, at the time of writing no basin-wide institutional or legal arrangement on the water use and management (Van der Giesenin, 2001).

Van der Giesenin,(2001) raised concern as at the national level that the” *Volta river Authority(VRA) only operates in Ghana and a research gap exists which makes it necessary to analyse the relative importance of the different institutions involved in water resource development, and which institutions actually decide upon water use and allocation processes*”.

Based on the above, it is important that an international agreement be signed among the countries sharing the Volta river basin for a better allocation and management of the water from the Volta River. The GEF and the GLOWA-project as cited above have initiated useful international (involving all of the riparian states) programmes of activities which could benefit policies and decision makers of the countries of the Volta river basin.

- b) National frameworks
- i) Ghana

Ghana as the case study is discussed in Chapter 6.

Watsan institutions

At the national level, the Volta River Authority only operates in Ghana.

The Water Resources Commission (WRC) serves as an umbrella-organization, granting water rights to various users and providing for research, information and coordination.

- ii) Burkina Faso

Watsan institutions

Burkina Faso is the only country, which has established a ministry dedicated to water and the environment. The three entities responsible for watsan are:

The Ministry for the Environment and for Water, the Office National de L'Eau et de l'Assainissement) - National Water and Sanitation Authority (ONEA) urban water and sanitation and the Direction Generale de L'Hydraulique (DGH).

The Ministry of Water, part of the Ministry for the Environment, is responsible for the overall planning of water supplies, sanitation and the management of wastewater. The Ministry of Environment and Tourism in collaboration with the Ministry of Health is responsible for the by-laws and the control of waste disposal in the environment.

NGO's are contracted with public institutions for the management of water supplies and sanitation programs.

Water legislation

The Water Code, 1984 is based on the following law: Loi no 002-2001/AN Loi d'Orientation relative a la Gestion de l'Eau, 8/2/2001-Decret no 2001-126/PRE.Source: Document de L'Assemblee Nationale, IVE Republique, Deuxieme législative.

- iii) Cote d'Ivoire

Watsan institutions

Watsan services are provided separately in the Côte d'Ivoire. For the most part, the provision of both services is organised on a national basis. However, in the water supply sector, there is a regional split between those areas supplied by private operator, SODECI (water distribution company) and those supplied by the public sector. Water

supply networks only exist in Abidjan and other urban centres. In these areas, there is a high level of coverage. Water is supplied by the public sector in rural areas, where coverage is significantly lower. Similarly, the absence of a sewerage network in most parts of the country means that, outside of Abidjan, the majority of the population do not have access to sanitation services (WUP -Africa, 2002).

Various Ministries are responsible for the supply, regulation and management of watsan services in Côte d'Ivoire, including the following:

- The Ministry of Infrastructure Economics (previously the Ministry of Public Works and Transport). This is arm of the government that designed, issued and signed the affermage contracts with SODECI.
- The Water Directorate, part of the Ministry of Infrastructure Economics, is the owner of the supply network, and is responsible for monitoring SODECI's compliance with the affermage contract. (WUP-Africa, 2002)
- The Ministry of Housing and Social Welfare is responsible for the wastewater sector. The ministry owns the sewerage network in Abidjan and is considering the options for an affermage contract in wastewater services in Abidjan.
- The Ministry of Environment is involved with matters relating to water pollution, drinking water quality and water-resource management. It works closely with other government departments to ensure that objectives of reducing pollution and improving sanitation services are taken into consideration in all economic and political decisions.
- The High Commission for Hydraulics is responsible for water management (WUP - Africa, 2002). Regulatory responsibilities lie with the Water Directorate (water supply) and the Ministry of Housing and Social Welfare (sanitation) (WUP -Africa, 2002).
- The Water Directorate is the owner of the supply network, and is responsible for monitoring SODECI's compliance with the affermage (contract SODECI, for water supply production, distribution, service management, facilities and network management and maintenance, renewals and extension of the network, as required by the government, and the collection of tariffs (WUP -Africa, 2002).

With reform in place in the water at the moment, the High Commission for Hydraulics has passed a new water bill which was developed after consultation with several stakeholders, including SODECI. A central remit of the bill is the establishment of a

National Water Authority and three decentralised river basin committees. These institutions will be responsible for dealing with integrated water-resources management and for mobilising finances to ensure that the organisations are self-financing (WUP - Africa, 2002).

Water legislation

Water legislation is based on the Law (Loi n°98-755 du 23 Décembre 1998 Portant Code de l'Eau) (FAO, 2002 b).

iv) Togo

Watsan institutions

The urban and peri-urban systems are run by the national water utility, Regie Nationale des Eaux du Togo. Small towns are not adequately supplied. The majority of urban and rural populations do not have access to adequate sanitation services (WUP -Africa, 2002).

Constitutional features

No information to date

Water legislation

No information to date

v) Benin

Watsan institutions

Only 56 percent of Benin's households have access to safe drinking water, and there are vast inequalities between the rates for urban and rural areas (71 percent and 46 percent, respectively) (WUP -Africa, 2002).

Central government and donors are responsible for the provision of water services. The Department of Mines, Energie and Hydraulique is responsible for water-resources management and rural water supply. A government department) is responsible for urban water supply (WUP -Africa, 2002).

With reforms taken place as in other countries in the water sector, the government has adopted a strategy to improve rural watsan. In two provinces, these are being

implemented with the assistance of the World Bank. The Government aims to cover the rest of the provinces in the sector (WUP -Africa, 2002).

Constitutional features

No information to date

Water legislation

The water legislation is based on the following law: Loi n° 87-016 portant sur le Code de l'Eau.

Date of text: 21 September 1987. Source: Publication séparée du Ministère de la Justice et de la Législation

Loi n° 87-015 portant sur le Code de l'hygiène publique. Date of text: 21 September 1987 (FAO, 2002 b).

In 1986, a water users' association was created. The creation of an association is in itself a step forward for consumers to claim their rights to water supply and sanitation facilities, also a link for communications and a voice for the consumers with all administrative levels (international, regional, national and local)

Finally, assessing the situation in the Volta river basin (existence of national watsan, limited legal systems, no international treaty), there is a need for a strong collaboration within the member states of the basin at international, national, regional and most importantly at the local/community levels wherever they reside. Governments, civil society, community-based organisations and all stakeholders need to raise awareness of the human right to watsan through sound, effective and flexible institutions and legal systems.

A detailed study of the nature (in theory and in practice) of the different levels (international, national and local) of the legal framework and institutions and their interaction, is necessary to assess its impact on enabling or otherwise the poor in gaining access, to or being provided with adequate water supply and sanitation.

5.3.4 International instruments by members states in the Senegal and Volta river basins

At the international level, the following table summarises the International covenants within the two river basins.

Table 5.3 Ratification of International Instruments by members states in the Senegal and Volta river basins

States	CRC	CEDAW	ICESCR	ICPCR
Burkina Faso	YES31/8/90	YES14/10/87	YES4/1/99	YES4/1/99
Ghana	YES5/2/00	YES2/1/86	YES8/9/00	YES8/9/00
Togo	YES1/8/90	YES26/9/83a	YES24/5/84a	YES24/5/84a
Benin	YES3/8/90	YES12/3/92	YES12/3/92	YES12/3/92
Cote d'Ivoire	YES4/2/01	YES18/12/95	YES26/3/92a	YES26/3/92a
Mali	YES21/9/90	YES10/9/85	YES16/7/74a	YES16/7/74a
Senegal	YES1/8/90	YES5/2/85	YES13/2/78	YES13/2/78
Mauritania	YES16/5/91	Yes10/5/01a	NO	NO
Guinea	YES13/7/90a	YES9/8/82	YES24/1/78	YES24/1/78

Source: Heyns et al (1996), UNHCHR (2001)

a = accession, an act whereby a state accepts the offer or opportunity to become a party to an agreement already negotiated and signed by other states.

CEDAW = Convention for the Elimination of Discrimination Against Women – includes explicit reference to right to water

CRC = Convention on the Rights of the Child – includes explicit reference to the right to water

ICESCR = International Covenant on the Economic, Social and Cultural Rights – includes implicit reference to the right to water

5.4 Understanding international, statutory, Islamic and customary laws

5.4.1 International water law

Legislation, as discussed earlier and in Chapter 4, is an important part of the ILF enabling poor communities to access water supply and sanitation facilities as their fundamental human right. Being poor and unserved with clean, safe and close water supplies and adequate sanitation in this new millennium is a violation of human rights and human dignity.

Law as stated by (Hausermann, 1999) “*is the stating point that provides the necessary foundation for the protection of the rights of the individuals*”. For that to happen, the international bodies need to be aware of the local conditions and make sure that the laws are implemented accordingly and that the voices of the poor/unserved are heard, recorded and actions taken at the local, regional, national and international levels.

To date international water law is very limited concerning watsan and poor communities. Also, the legal and institutional framework and processes that link international bodies and the poor/unserved communities are almost inexistent. For the poor/unserved rural communities to benefit from the international legal processes, a two – way process needs to be established.

Drafters of international water policies have very little awareness of the plight of poor/unserved rural communities and the absolute poverty that prevails in the communities. As (Howsam, 2000) puts it: "*there is little awareness of international water treaties and even if there was, there would be no concept that such legal provisions had any relevance to their plight*".

While legislation may be in place it is often weakly implemented, poorly enforced, and not accessible to those poor communities who suffer most from its inadequate effectiveness. In many circumstances, the legal framework ranges from local traditional or customary law usually applied by the community themselves, to multi-lateral international treaties applied at by national and inter-state agencies. While the latter in practice are often totally divorced from the daily lives of poor communities – each level of the legal framework has an impact on those above and below. That is the effectiveness of national law and will be dependent to some degree on the impact of any international treaties

Many countries in Africa have recently reformed, or are in the process of reforming, their water supply and sanitation legislation. However, at the local level, there is conflict and confusion between old customary rules and modern statutory regulations. Poor communities typical have little understanding of, limited access to and little or no input into the framing of these legal regimes which separately or in combination have a big impact on if and when they secure their water and sanitation entitlements.

Thus, the main objective of a watsan law is to establish a framework for the management, distribution and control of watsan facilities in a country. A water law defines the legal entitlement to watsan and recognize the rights and obligations of the consumers.

An example of best practice regarding the legal status of watsan is in South Africa, where “*Everyone has a right to basic water supply and basic sanitation (Water Services Act 97, 3.1.)*” and the legal framework in place protects and regulates the ability of the poor to have access to or be provided with, adequate and safe water supply and sanitation facilities.

5.4.2 Statutory Laws

The following descriptions introduce to the reader the different types of legislations in existence within the Senegal and Volta river basins.

Within the two river basins, the national legal traditions are varied.

At independence, African states were faced with the challenges of the application and administration of the different legal systems (Verhelst, 1968):

- The francophone countries adopted a French based legal system or civil law
- The anglophone countries adopted the English or common law
- The arabophone countries, such as Mauritania adopted a non-secular Islamic tradition or Sharia law (the sacred law) in all their national legislation.

Above all, these inherited legal systems from the former colonizers, some traditional or customary water laws still exist along side the statutory laws (Verhelst, 1968).

Although, some countries adopted and retained customary laws or adapted them to the challenges of the new constitutional status, some unfortunately, according to (Allissoutin, 1997), show little interest in building a constitutional legal system based on local traditions.

a) Civil law

Senegal, Guinea, Burkina Faso, Togo, Benin, Mauritania and Cote d’Ivoire

Civil law traditions, mainly drawn from the continental Europe and the Napoleonic Code, generally supported codified principles and eschew judge-made laws for historical reasons and because judges are not representative of popular will, elected or accountable like the legislature (Burch, 2000).

b) Common law

Ghana

In contrast, common law traditions, based on the English legal system, support uncoded principles and manifest themselves through a body of case law interpreting and applying the principles (Burch, 2000).

5.4.3 Islamic law

Mauritania

In countries like Mauritania, there is unique mixture of inherited colonial law (French), post-independence constitutional law, Islamic law (public and private) and a rich body of traditional laws or customs. Islamic law, unlike common and civil law traditions, which are secular, is of religious nature and social order.

In terms to access to water, Sharia law sets priorities on who has rights to water — i.e. how water should be allocated and imposes punishments for those who pollute water which in many North African (including Mauritania) and Middle East countries is scarce. According to (Faruqui 2006) water is a fundamental social good which *“is a gift from God and a part of, and necessary for, sustaining all life. Therefore, the first priority for water use is access to drinking water of acceptable quantity and quality to sustain human life, and every human being has the right to this basic water requirement”*.

5.4.4 Customary/Traditional Law

Customary law is generally unwritten law. It is a fixed practice in accordance with which people live because they regard it as the law. Water, in many cases attached to land, is itself regarded among many Africans customs, as a living force and medium for purification and healing. Designated bathing and laundering areas exist in many communities. In addition, springs and rivers considered sacred and preserved for ritual and religious ceremonies are protected by strict rules on use and maintenance (MacKay et al , 2001), (AISJ,1971).

Water, in the animist religion before the implementation of Islam and Christianity is based on the natural elements, among which water. In the Yatenga region of Burkina Faso, the customers use water with a religious sense in order to evoke the spirits of the dead so that they watch over the community (Akiwumi, 2002).

The framers of statutory texts need not be divorced from the circumstances they are intended to regulate, as very often the communities are not even aware of the existence of modern legal provisions relating to water resources (Allissoutin, 1997) , (Friederisken, 1998), (Maiga & Diallo,1998).

As said earlier, the views of the above-mentioned authors link with my analysis on the design of the MILF. Majority of the communities live in rural areas and are very often not aware of policies at the international, national and regional level.

Finally, **if rural communities have to play an active role in the socio-economic life of their environment it is important to equip them with the necessary legal means for the translation, interpretation, understanding of legal statutory texts which should take into account the realities of the local situations.**

As the demand for development and industrialisation increases in Ghana and Burkina Faso and also in the other countries of the Volta river basin and the sub region, conflicts are potentially likely to arise for the use of the water.

Reports and researchers on transboundary water management (IHDP, 2006) all over the world - Canada vs. United States of America(Missouri), Mexico vs. US (Colorado River), Egypt vs. Kenya (Nile), Germany vs. France (Rhine), Senegal vs. Mauritania (Senegal) - have raised the problem and suggest solutions to resolve the problem by:

- *“assisting countries in the way transboundary waters are administered (managed, planned and assigned)*
- *creating sustainable policies and flexible in design institutions”.*

Although legal systems can differ, the difference in legal systems should not be an impediment in establishing long term joint programmes. For example, some cooperation between countries has been positive despite some complex issues such as environment in France and Germany through the International Commission for the Protection of the River Rhine, an international river in West Europe.

CHAPTER 6

GHANA

6.1 Introduction

Because of the limitations in terms of finance, time scale and research resources, it was not possible to study all the nine (9) countries within the Senegal and Volta river basins in West Africa.

Thus, Ghana was chosen because of the author's familiarity of the country and established good international, national, regional and local contacts. It is hoped that by using Ghana as a case study this:

- will highlight the important issues raised earlier and address the underlying assumption that 'There are weaknesses or constraints in the international, regional, national and local institutions and legal framework which contributes to poor communities in Ghana within the Volta river basin not having adequate access to watsan facilities, thereby denying them their basic human right'
- will provide a suitable setting for this research - the results of which could be extrapolated to other African international river basins and beyond.

The purpose of chapter 6, therefore, is to critically analyse the Institutional and Legal Framework of the water supply and sanitation in one country, Ghana within the catchment area of an international river, the Volta.

6.1.1 Physical features

Ghana is situated in West Africa and has borders with Togo on the east, Cote d' Ivoire on the west, Burkina Faso in the north and to the south, is the Gulf of Guinea as shown in Map 6.1. The population of Ghana is approximately 22 million (45% of total population live in urban areas and 55% inhabit the rural areas) (Apoya, 2006).

Ghana is a country well endowed with water resources in the form of rainfall, lakes, perennial rivers and groundwater, although seasonal water shortages (low rainfall and droughts) are quite common (Adom, 2003). All of Ghana's rivers drain southwards to the Gulf of Guinea and the Volta River, with a catchment area of nearly 70% of the country, is by far the largest river, draining the entire north, centre and east of the

country. The remaining rivers are all in the south and south-west of the country (Adom, 2003).

6.1.2 Water Supply and Sanitation situation

a) Water supply

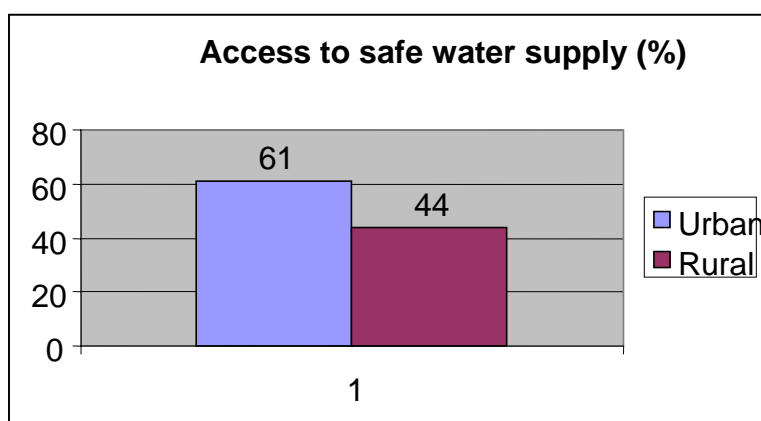


Figure 6.1 Access to safe water supply

Source: (Water Aid, 2006)

The above graph shows that 61% of the population has access to safe water supply in urban areas and only 44% in the rural areas. However, these figures can be overestimated or underestimated and need be used with caution. There is a need to conduct a country wide survey in order to find out the real situation at all administrative levels. The last survey conducted in 1995, found that in rural areas, hardly any households have indoor plumbing or standpipes. According to the (GLSS, 1995), “*the majority of rural households have to get their water from wells (37%) or from natural sources (49%)*”.

In the rural setting, the low coverage can be attributed to an inefficient institutional and legal framework but also with a lack of investment and awareness by the authorities and civil society of the needs of local communities’ right to adequate water supplies facilities.

It is important to note that the lack of overall coverage and irregular supply of quality water for drinking and household uses affect in many cases, school children (boys and girls) and women. The provision and the management of the water supply (for household uses and personal hygiene and sanitation), the burden of collection and

supporting the community in many cultural and social activities, still fall in many cases on girls and women, depriving them from valuable time which could be spent in educational, social and economical activities.

b) sanitation coverage

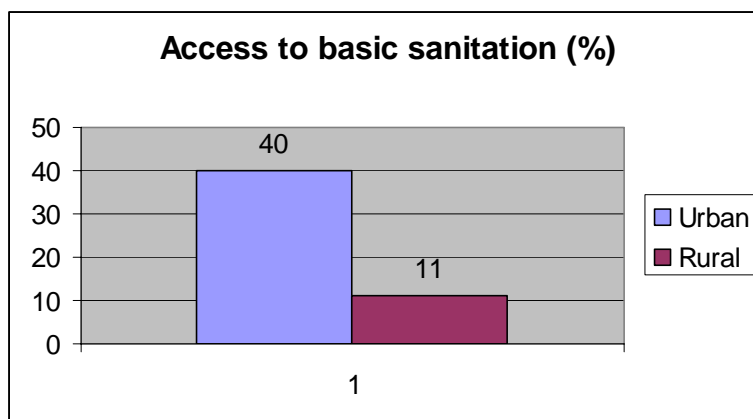


Figure 6.2: Access to sanitation facilities

Source : (Water Aid, 2006)

As shown in the graph in Figure 6.2, the situation to access to sanitation facilities is critical with only 40% of the population in urban areas accessing sanitation facilities and a lower percentage in the rural areas (11%). The lack of and deplorable sanitation facilities in many parts of the country has an impact on public health (Ayee & Crook, 2003) and according to (Water Aid, 2001) “*inadequate water and sanitation contributes to 70% of diseases in Ghana*” and it is a big social problem (GLSS, 1995), (Water Aid, 2002).

In the urban areas, only 7% of households have access to flush toilets and a further 7% use the Kumasi Ventilated Pit Latrine (KVIP) (GLSS, 1995), (Water Aid , 2002).The most common form of toilet used by at least 50% of the households is the pit latrine, while 11 % use a pan or bucket. In rural areas, the situation is worst, with only 29% of households having access to any kind of toilet facilities and having to relieve themselves in the bush (popularly known as “Free range”) (GLSS,1995),(Water Aid, 2002), (Ayee & Crook,2003).

6.2 Assessment of poverty

The principal source of information on the nature and scope of poverty in Ghana is the Ghana Living Standards Survey (GLSS), which was first carried out in 1987/88. So far, three (3) GLSS have been carried out using income and expenditure criteria to measure poverty. These surveys also expressed poverty in terms of locality, socio-economic groups and basic needs such as education, health, nutrition, housing, drinking water and sanitation. Data from these surveys have been used to develop a Poverty Profile for Ghana. The profile is expected to serve as a guide for future analysis of poverty and a baseline against which to measure changes in the incidence and characteristics of poverty over time.

The Poverty Profile in its latest report by (Baste et al, 1999) established poverty lines to measure the magnitude of poverty in Ghana as follows:

- The upper bound of the poverty line was set at two-thirds of average per capita consumption expenditure per annum or ¢132,230 per annum (at May 1992 prices)
- A lower bound, poverty line was set at one-third of average per capita consumption expenditure per annum or ¢99,173 per person per annum (at May 1992 prices). Persons falling below the lower poverty line are defined as very poor while those falling between the two lines are defined as poor. Two indices of poverty to define the incidence and depth of poverty were calculated on the basis of these poverty lines¹¹.

In terms of classification of the poor, the graph in Figure 6.3 shows that the poor in Ghana are predominantly located in rural areas. The incidence of poverty in rural areas is about twelve (12) times the incidence in Accra, the capital (Baste et al, 1999).

¹¹ The first index was a headcount measure, which gives the proportion of the population falling below the selected poverty line while the second index was the income gap ratio, which defines the depth and breadth of poverty in terms of the extent to which poor households are below the selected poverty line. The poverty profile indicated that 31% of the total Ghanaian population were poor in 1992 (Baste et al, 1999).

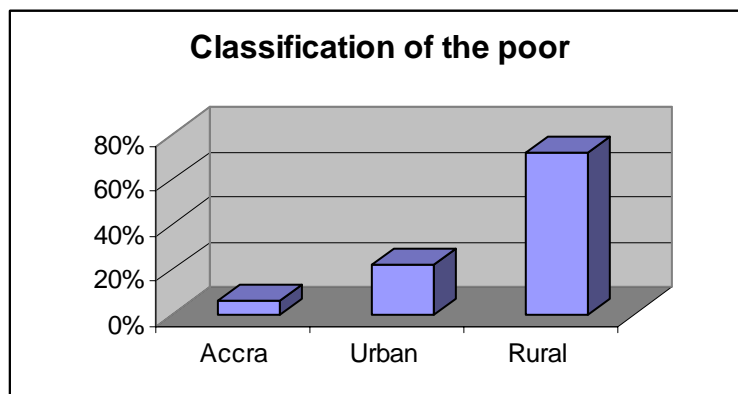


Figure 6.3: Classification of the Poor

Source: (Baste et al, 1999)

From the above graph and analysis, it can be deduced that about 60% of the poor communities live in the rural areas while about 20% of poor communities live in urban areas and that there is a difference in poverty in terms of the area of the country (i.e. urban/rural). The graph does not provide data on gender disparity in the areas as women are most likely to living in rural areas than men who leave those areas in search of employment and better prospects in the cities. The burden of caring for the family and collecting water for drinking and household uses fall on the children and women, reducing the time available for training or education the number. As shown in the graph, poor communities do exist in urban areas like Accra is about 5%. The imbalance between rural and urban areas is due to the lack of investment, the weaknesses in the implementation of decentralisation process and employment policies and access to credit for businesses in the rural areas.

It is also important to note that regional (the Volta basin, mid-Coast region and Northern Savannah) variations in the incidence of poverty exist as identified by (Baste et al, 1999). For instance, there is a marked variation between the north and south and between different ecological zones. The research also found that:

- * the incidence of poverty is more pronounced in the Northern Savannah regions, with a poverty incidence of 56%, accounts for 28% of total poverty in Ghana using the higher poverty line, and 31% of the very poor, even though it contained only 23% of the total population of Ghana.

* the above-mentioned regions together account for 64% of Ghana's poor although they account for only 32% of the total population (Baste et al, 1999).

The profile revealed that the poor constitute a large component of the self-employed engaged in agriculture; that is, about 86% of the incomes of the poor originated from self-employment predominantly based on agricultural activities. The level of education was also strongly linked to poverty status. Household heads that had no education were among the poorest. In contrast household heads that had a secondary or higher education constituted less than 1% of the poor (Baste et al, 1999).

One way to redress the imbalance in terms of the geography of the country is to distribute equitably the country's revenues and resources between the rural and urban area where the majority of the population lives as stated earlier. By eradicating poverty in the rural areas, poor communities will benefit from an improvement in the quality of their health and their living conditions and thereby not requiring the need to leave the rural areas.

In their study (Baste et al, 1999) identified the following characteristics of poverty in Ghana as outlined by the Technical Committee on Poverty in 1996

Table 6.2 Characteristics of Poverty in Ghana

<p>LOW PRODUCTION</p> <ul style="list-style-type: none"> -lack of access to land/assets -low productive inputs -low agricultural technology -lack of access to credit/capital -pricing and marketing constraints -climatic factors -low soil fertility -lack of research extension services -low productivity 	<p>LOW LEVEL OR LACK OF EDUCATION</p> <ul style="list-style-type: none"> -low primary enrolling rate -poor quality of education -inadequate resources -inability to pay school fees -inadequate classrooms -limited facilities -poor access (distance factor) -absenteeism
<p>LOW INCOME</p> <ul style="list-style-type: none"> -lack of marketable skills/untrained labour -lack of employment opportunities -lack of small enterprise credit -lack of farm to market transport -low wages (distance factor) -lack of income generating opportunities 	<p>POOR HEALTH</p> <ul style="list-style-type: none"> -food insecurity -poor nutrition -lack of access to potable water -poor access to health facilities -unsanitary conditions

<p>ENVIRONMENTAL DEGRADATION</p> <ul style="list-style-type: none"> -farming in environmentally sensitive areas -soil erosion -over-grazed/depleted ranges -fuel wood shortage -deforestation -bushfires -poor environmental sanitation 	<p>UNPLANNED UNCONTROLLED HUMAN SETTLEMENTS</p> <ul style="list-style-type: none"> -lack of threshold population services delivery -isolated settlements -lack of access to land -unaffordable housing rents -inadequate transportation -slums -lack of access to affordable housing -finance
<p>WATER</p> <ul style="list-style-type: none"> -poor quality water -water-borne diseases -inadequate supply -long distances to fetch water -environmental sanitation -inability to pay for potable water 	

The authors of the study identified some very important areas as characteristics of poverty but made no reference to the lack of institutional and legal framework needed to process all the above. However, the following characteristics are determinants factors in the design of a model ILF:

*lack of access to land and assets; in terms of watsan, facilities have to be constructed in communal land. Often, people with property rights, refuse access to facilities or charge users more. Here an institution is needed to prevent such problems

*low primary enrolling rate, inability to pay fees, limited facilities and absenteeism.

*lack of access to potable water, poor access to health facilities. With strong linkages , institutions and the legal system will exercise their responsibilities

*inadequate water supply, long distances to fetch water, environmental degradation and inability to pay for potable water. The regulatory and enforcement bodies have a here a greater role to play

6.3 Institutional framework

6.3.1 Historical Background

Before public intervention in rural areas took place, the majority of the people in Ghana then the Gold Coast, relied on traditional sources of water supply for drinking and household uses- rivers, streams, lakes, springs, dugouts and hand-dug wells.

Improvements to hand-dug wells and the construction of roof rain catchment system can be attributed to the work of early missionaries. The Frederick Gordon Guggisberg - *Governor of the Gold Coast (1919-1927)* - Government installed the first public water supply in Cape Coast. The system catered mainly for urban supplies (Blauer & Laure, 1999), (Amonoo, 1989). According to (Amonoo,1989), the “*then institutional framework covered only the urban water supply and the Government had a tendency to pay less attention to rural water supply*”.

In 1948, the Rural Water Department was created with its head quarters based in Tamale (North). However the work of the Rural Water Department was complemented by ‘self-help’ (Amonoo, 1989). Since gaining independence in 1957 from United Kingdom, the Water Supply and Sanitation sector was run by the then state-owned Ghana Water and Sewerage Corporation (GWSC) which provided urban and rural water supply and sanitation services (Clayton 1999).

However, in 1994 the GoG, under the Rawlings Government (1982/3-2000) adopted a national policy for the water supply and sanitation sector in the urban area and a community water and sanitation in the rural areas (Clayton, 1999).

Since 1995, the GoG has been working towards reforming the sector, involving both institutional change and Private Sector Partnership/Participation (PSP) in the water supply and sanitation sector. Reform was considered necessary by the Government as pointed out (Matz, 1995) “*to improve the availability of safe and affordable water supply to low-income areas, levels of service and operational efficiency*”.

In 1998, The GoG introduced a decentralisation policy that established 110 District Assemblies as decentralised legislative and administrative entities and the District assemblies were then established as the second highest constitutional power in Ghana (Matz, 1995).

Also further responsibilities for the Assemblies involve undertaking “*certain critical measures including rationalising and updating bye-laws to ensure safe management of liquid waste at household level , to embark on an aggressive marketing of the construction of domestic latrines and to enforce laws on the provision of sanitation facilities by landlords whether public or private*” (Ayee & Crook, 2003).

6.3.2 Organisations in the water and sanitation sector

As a result of the above policy, an institution was established for the implementation of the policy namely, the Government-funded Community Water and Sanitation Division (CWSD), which was then incorporated within the Ghana Water and Sewerage Corporation under the MoWH.

By 1998, a bill was enacted making the CWSD an independent institution and the name was change to CWSA. The CWSA¹² is responsible for monitoring, evaluating and managing the sector (Clayton, 1999) and one of its objectives according to (Mensah, 1999), “*is to facilitate the provision of safe water and sanitation services to rural areas and co-ordinates the activities of the NGOs, involved in the provision of rural water, sanitation and hygiene sanitation*”.

The overall role of DWST is to coordinate and monitor, not to implement. NGOs and private contractors, called P.Os carry out the actual implementation. The national policy gives the DWST the responsibility for monitoring the activities of the POs and follow up visits with the communities (Clayton, 1999).

¹²The CWSA has its headquarters in Accra the capital and has a Regional Water and Sanitation Team (RWST). Below the RWST, the administrative structure is the district assembly, which is responsible for establishing a District Water and Sanitation Team (DWST).

The administrative division is as follows as in (Mensah, 1999):

- Every village or community that is part of the programme must form a water supply and sanitation (Watsan) committee, responsible for all operations connected with the control of the water and sanitation facility.

- The District water and sanitation division, part of the local Government assists in facilitating the provision of water supply and sanitation.

- The Regional water and sanitation is responsible for implementing the programmes.

- At the National level, the CWSA based in the capital, Accra, makes recommendations to the Government about policies for rural water and sanitation (Mensah, 1999).
Also at the national level, an umbrella body, the Water Resources Commission (WRC) was set up to manage coordination of the policy and regulate the water resources of Ghana by allocating to various users with competing claims as shown in (Figure 6.4.) (Adom, 2003).

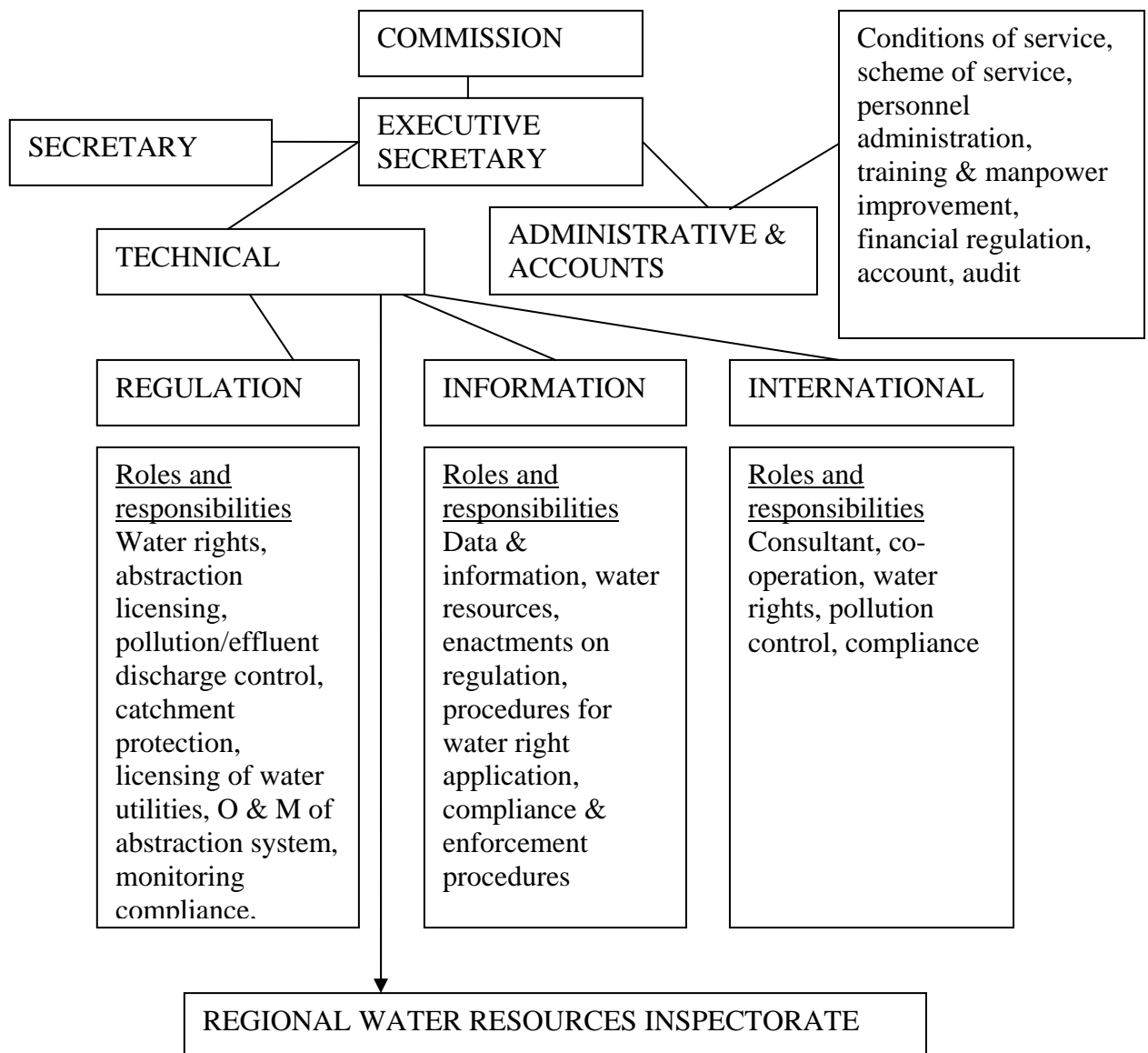


Figure 6.4 Organisational structure of the WRC

Source: (Nii Consult, 1997)

This organigram of the WRC provides basic elements of the institutional framework of water resources. It lacks, however, the administrative features like local, national, regional and international levels as featured in the MILF. Also the lines of communications are not well defined (there are no arrows pointing to who is doing what with who), there is also no differentiation between levels and roles and responsibilities (for example international is in the same position as regulation and information, both of which represent two different subjects. 'Regulatory' bodies need to be positioned side

by side with the institutions and legal systems. Likewise, 'information' needs to be a department within an institutional and a legal body.

In summary, the WRC is deficient in structure and lacks the linkages between the local, regional, national and international levels and their corresponding attributes.

6.3.3 Reforms in rural water supply

Following a review of the results achieved by Ghana at the end of the International Drinking Water Supply and Sanitation Decade (IDWSSD) in 1990, it became necessary to introduce reforms in the drinking water supply sector (Adom, 2003) "*in order to accelerate the coverage of the population with good drinking water and sanitation facilities*". A policy was introduced which required that supply of water to rural communities should be demand driven, and community managed, and the autonomous CWSA was set up to facilitate the implementation of this policy (Adom, 2003).

The Government's policy objective on rural water supply reforms includes:

- putting ownership and management of water supply and sanitation facilities in the hands of rural communities;
- strengthening the Community Water and Sanitation Agency to adequately address the water and sanitation needs of the rural population;
- adopting strategies for ensuring water supply services to vulnerable groups such as the poor rural communities and the urban poor (Adom, 2003).

6.3.4 Reforms in urban water supply

Reforms in the urban water sector included a Water Sector Rehabilitation Project that was begun in 1995 with the objectives to restore the systems to their original design capacities, to create favourable conditions for increased private sector participation, to improve efficiency in the development and management of the water supply facilities and thus attract more capital investment into the sector (Adom, 2003) with the corresponding policy objective of GoG to "*create the enabling environment, through legal, business and regulatory frameworks for private sector participation*".

As part of the reforms, the regulation of tariffs for potable water and other services have been shifted away from Government to an independent body, the PURC. The WRC is to ensure protection of consumer interests, while at the same time maintaining the balance between tariff levels and investment, operation and maintenance costs of the utility services that will encourage private sector participation in provision of these services (and international cooperation – added by the author) (Adom, 2003).

6.3.5 Privatisation

A lot of debate, discussions, demonstrations and civil disobediences over privatisation or private sector participation at all levels (local, regional, national and international) have taken place in Ghana and outside her borders - USA, India, Bolivia and UK (Thomson, 2006).

However, (Coleman, 2002) argued that the changes in Ghana's water supply administration do not amount to privatisation and will benefit the poor as: *“the core aim of the proposal reform is to increase the access of the poorest groups to clean water sources and to do so in financially sustainable way. Rural areas are to be operated through the CWSA, using Government and donor support to provide appropriate water systems to areas previously unserved”*.

But, the GoG lacks both the expertise and the funds and (Coleman, 2002) concludes that: *“if others have the funds, then surely government should concentrate on ensuring that the monitoring systems are in place to ensure that private sector participation will benefit consumers and that the contracts will provide the best possible deal.”*

Provision of adequate funding for development and effective maintenance for the water supply systems, regulation of services, co-ordination and supervision of NGOs/Donors were among some of the major constraints highlighted by (Aheto,2001), (Ayee & Crook, 2003).

According to (Water Aid, 2002), *“any water supply and sanitation scheme, whether or public, should provide a quality service which is reliable, affordable and accessible for the poor people”*. It however stressed that privatisation should not be a used as pre-condition for loans or aid and that insufficient consultation has occurred with the

people of Ghana and believes that privatisation is one option of a range of alternatives to consider when planning future water supply and sanitation schemes.

The author believes that privatisation is a good initiative and ambitious programme but necessary for sustainable living standards and requires technical capacity, political and social awareness and efficient, flexible and dedicated personnel in all institutions and legal systems at work for the betterment of poor communities.

Once established a public/private partnership, despite in many instances opposition, is needed to sensitize the public as a whole about this new arrangement whose main objective is “ *the pooling of resources(financial, human, technical and intangibles such as information and political support) from public and private sources to achieve a common agreed goal*” (Ayee & Crook, 2003). Rome was not built in a day!

An in-depth study of the effect of private sector participation or privatisation on poor communities’ human rights to access watsan facilities, as a complex and sometimes confusing political and legal agenda, is beyond the scope of this research. However it needs to be taken into account in future water policies, and in the reform of the institutional and legal framework for the sustainable future of the poor communities.

Given the religious, social, cultural, economical attributes of water (is a natural resource like air, wind and sunshine), the author believes that surface or ground water should be free and accessible to all who need it. However, as population increases, accessibility to quality and in quantity water for drinking purposes and household needs (hygiene and sanitation) requires technical input. The identification of water points (surface, underground and rain harvesting), collection, transport, delivering, operation and maintenance of potable water to households is a very expensive undertaking. It requires a multitude of parties to share the responsibilities whether morally or financially. As some governments are financially starved for investments for watsan facilities, they need to ensure that the lowest stratum of the population has access to watsan facilities.

With privatisation comes the requirement to pay for the services. Many communities do not have yet the understanding that payment is needed to meet the costs of delivery, maintenance and customer services.

6.3.6 Constraints in the institutional framework

According to (Mumbo, 2002), the main constraints or limitations within the institutional Watsan sector in Ghana are:

- *“low capacity of the Government to recruit national staff and equip it for the implementation of the programs*
- *low staff retention due to low salaries*
- *implementation is highly donor driven (up to 8 NGOs work in the Watsan sector throughout the country with various degree of success)”*

The author strongly believes that water supply and sanitation development and institutions and legal systems building require dedicated and independent professionals who want to pursue their ambitions. Therefore low salaries, lack of financial incentives, and weak establishment of the decentralisation processes in the country do have a detrimental effect on staff morale and interest thereby affecting the quality of their work.

The GoG need to invest in training, recruiting and retaining staff for implementation of watsan programmes.

6.4 Legal framework

6.4.1 Legal provisions with regards to water supply and sanitation

The following statutes are currently in place in Ghana:

□ **Water Resources Commission Act, 1996 (Act No. 522)**. *“An Act to establish a Commission, to provide for its composition and functions on the regulation and management of the utilisation of water resources in Ghana and for related matters The Commission is responsible for the regulation, management and coordination of the policy in connection with water. Its responsibilities (as a requirement and a duty) require comprehensive plans for the utilisation, conservation, development and improvement of water resources in Ghana. Under the WRC Act, the property and the control of water resources is vested in the President on behalf and in trust for the people of Ghana (12) (Mensah, 1999).*

□ **Community Water Supply and Sanitation Agency Act 1998 (Act No. 564)** focuses on rural areas. One of the objectives of the CWSA Act is *“to facilitate the provision of safe water and sanitation services to rural communities” (Mensah, 1999)*

□ **Ghana Water Company Act 1998** “*focuses on urban (5000+) and small towns (5000 or less)*” (Mumbo, 2002)

□ **Public Utilities Regulatory Commission Act 1998**(Act No 522) “*to regulate the tariffs charged by utilities and protects both the customers and utilities companies. According to Part III of the Act, the PURC is supposed to set up a complaint procedure for consumers dissatisfied with the services or actions of a utility provider*” (Mensah, 1999).

The above list of Acts represents a useful guidance on the availability of a legal process through the enactment of laws. It also highlights that steps are taken to redress the watsan situation and to comply with procedures.

6.4.2 Customary water laws

According to (Mensah, 1999), “*water is traditionally a treasured natural resource*”. Access to water and the amount one can collect depends on the time of the year. Water is plentiful during the raining season while in the dry season, members of the communities may have to walk long distances to collect water. This has serious health implications (physical injuries, water borne diseases from contaminated water) as stated earlier among school children and women.

According to (Ramatozzi, 1996) drinking and household use of water is controlled by the family and free of charge in many regions of Ghana. This situation is likely to have changed as new equipment and systems are introduced for the well being of all the communities, for example charge or fee for accessing clean, safe, affordable and close water supplies for drinking and household use and sanitation facilities.

6.4.3 Fundamental Human Rights and Freedoms

Although the Fundamental Human Rights and freedoms are enshrined in the Constitution, the Commission on Human rights and Administrative Justice, based in Accra with some branches in the regions, concentrate mostly on domestic violence (Mumbo, 2002).

According to (Mumbo, 2002), non-governmental organisations and consumers have taken the lead in the Human Rights issues of access to water supply and sanitation for the poor.

6.5 Analysis of the Institutional and Legal Framework

The above description in the context of Ghana watsan shows an established structure of institutions and legal systems but there are difficulties in the implementation at the administrative levels, regulation, enforcement and political and civil society awareness.

6.5.1 International issues

At the international level there are still no treaties with regards to the shared utilisation of the Volta River with the other five countries (Guinea, Mali, Burkina Faso, Benin and Togo).

The model framework proposes that institutions and legal bodies and counterparts need to exist at all levels: international, national, regional and local. As an international water resource, it is of utmost importance that an International Commission for the Utilization of the Volta River (named ICUVR) be founded.

Ghana has a great role to play in forging strong international relations with its neighbours for the equal benefit of the economic utilisation of the Volta River. This initiative is needed to prevent conflict over water supply for future development programmes. As with OMVS, a link committee should be established to promote partnerships in order for the communities to exercise their human right to clean, safe, close and affordable water.

In 2004, an agreement¹³ was signed. This is a further step forward in ensuring that communities especially the poor have access to watsan facilities. This may take a long time before a formal and binding international agreement between the six countries is signed. The political and social tension at present is not very good (Cote d'Ivoire).

¹³In April of 2004, the governments of Ghana and Burkina signed the *Ghana-Burkina Joint Declaration* which acknowledged common water and environmental issues and stated a desire to collaborate on management of shared water resources through a Volta Basin Technical Committee involving all riparian countries. This work was followed by a conference in Ouagadougou July 29 and 30, 2004, attended by representatives from Benin, Burkina Faso, Cote d'Ivoire, Ghana, Mali, and Togo. All six countries accepted a series of agreements which acknowledged the need for a transboundary management institution and accepting a timeline for its creation. The process was to begin with the launch of a Volta Basin Technical Committee (VBTC) in November of 2004, which would hold its first meeting in December of the same year (Lautze, J et al, 2005).

The Ghana-Burkina Joint Declaration¹² acknowledges the need for a transboundary management institution. The latter word “institution” is the important one as one supposes that it will have all or some of the attributes of the model that the author has prescribed.

What is important is the structure which will be adopted and follow as per the author’s model. Who will benefit from this institution? How will the supposed beneficiaries know of this institution? Will there be local participation in setting the institution? These questions need to be addressed by civil society, community-based organisations, policy makers and stakeholders in all the Volta river basins countries.

Any future agreements between the six countries need to be an international treaty with great emphasis on the inclusion of local systems (institutions and laws). Also, as described in Chapter 5 the need of a transboundary institution is of utmost importance in order to validate the claim for the UN human right to water supply and sanitation facilities to poor communities.

6.5.2 National issues

At the national level, Ghana has a number of institutions responsible for various sectors in the management of the water supply and sanitation in general. However, there are weaknesses.

An examination of the Institutional Framework reveals that important elements are missing:

- * local level agencies in all areas
- * independent regulatory agency
- * independent enforcement agency

Along with the regulatory body, an enforcement body needs to be established at all levels. In the allocation of water between different competing water uses/users (industry, navigation, tourism, agriculture, etc), there needs to be an efficient accessible body to protect the rights of the poor communities. This protection needs to be represented at all levels (international, national, regional, district and local) within the Volta river basin.

Currently the institutional and legal framework does lack mechanisms for pro-poor facilities to help the poor access watsan facilities; for example mechanisms for dealing with those who cannot afford to pay. Further work needs to be undertaken in order to assess what mechanisms are appropriate for the circumstances in Ghana.

Programmes in water supply and sanitation are currently demand –driven so if that community does not request a service, that community will not get a water supply and sanitation facilities. This means that their fundamental human right to access clean, affordable, close and safe watsan facilities is not fulfilled and their entitlement is denied. This leads to “*communities using unsafe water supplies and poor sanitation facilities and this resulting in the increase of water-related diseases and death in some cases*” (DfID & WEDC, 1998), (Water Aid, 2001).

Derived from the analysis of the existing framework in Ghana, the author recommends the following:

1. Communication is limited therefore access to information in the local language through the radio, pamphlets, schools, community centres, markets, cinemas, newspapers, television is necessary for the benefit of poor communities.
2. Further research at local level on customary laws with regards to access to water supply and sanitation facilities needs to be conducted to assess their impact on the communities.
3. There is also a need to integrate water supply and sanitation within any local, regional or international programme and the need to coordinate activities at all levels.
4. Legal aid is needed for the poor communities as their human right. There is a need to have local water lawyers who can protect poor communities and also help to promote the incorporation of traditional laws in international and national treaties.
5. Adopting a bottom up approach. The type of approach to reach poor communities need to be reviewed. Limitations in logistics, manpower and incentives may prevent such an approach taking place. Governments have to understand that it is their

responsibility to ensure that their citizens are cared for in a dignified and respectable way.

6. Implement a sustainable education campaign to mobilise the whole population at all levels about their rights to watsan.

6.5.3 Local issues

At the local level i.e. at the community level, in mainly rural areas, a majority of poor people are not taking advantage of their fundamental human right in accessing safe, close, affordable and clean watsan facilities. According to (Ramazotti, 1996), customary water laws, in the regions within the Volta river basin do exist and water plays a significant part in the rural setting, where a greater part of the population lives.

As in other parts of sub Saharan Africa, the situation in Ghana is such that local institutions and customary laws have been neglected and/or inadequately documented. There is also inconsistency between local issues, customary water law and their inclusion in national arrangements and international agreements with relevance to the rural poor communities (Verhelst, 1968), (Allissoutin, 2002).

Information is usually transmitted orally from generation to generation and this can lead to a substantial amount of loss of important information. Foremost, there is the need for countries like Ghana, in this case, to embark on a collection of customary values, rules and regulations, translate and put them into a written form and put in systems for easy retrieval by research students, academics and the public.

Also, further research is needed to bring to light how the institutions at the local, national and international levels can work in partnerships for the betterment of the rural communities, majority of who are poor.

For a successful implementation of the human right to water supply and sanitation facilities in Ghana, elsewhere within the two river basins and around the world, there is need for more political will, knowledge, promotion, informing people of their rights and entitlements. Ghana is fortunate to possess a highly literate population (70 %), according to (Water Aid, 2005). But that may not be the case in other parts of the Volta river basin (Burkina Faso, Benin, Togo, Mali and Cote d'Ivoire).

Therefore, communities, in particular the poor have to be empowered to exercise their human right to water supply and sanitation facilities as fundamental for a sustainable standard of living. This could take time but then Rome was not built in day. The local level should not be excluded from regional, national and international policy formulation.

Reforms (creation of new institutions, privatisation and decentralisation with the transfer of financial provision to the district assemblies) were essential in putting the watsan sector in Ghana in a position to attract investment. However, *the process of privatisation was carried out with no broad-based public discussion of alternatives to privatisation and with a marked lack of transparency in decision-making processes* (Mehta & Canal, 2004) and this situation had detrimental effects (disconnections, court cases, on the poor inability to pay charges set by different providers).

The regulatory framework in Ghana (PURG) although in existence is weak in its functioning. A good example of an effective regulatory body and its functioning is that of the Office of Water Service (OFWAT) in the UK. Although a complex regulatory system which took several decades to be set up in the UK, it has the mandate to *“play a key role in balancing questions concerning duties, rights and responsibilities in the social, economic, legal and environmental areas. Unfortunately, such regulatory frameworks are usually lacking in most developing countries* (Mehta & Canal, 2004).

Ayee & Crook (2003) also support the view that *“the provision of reasonable sanitation (and water supplies – added by the author) facilities may require: full public provision of the basic infrastructure; transparent, independent and rigorous regulation of any contracts for service provision ...; and the enforcement of conflict of interest laws”*

If access to water supplies and sanitation is going to be something of the past then an effective regulatory and endorsement system should be in place. In the past, as pointed out by (Ayee & Crook, 2003), the power of politicians and contractors in a patronage political system (conflict of interest) were hard to challenge and therefore recommends that *“regulation and monitoring of contract performance must be independent and*

rigorous and conflict of interest laws must be enforced and that communities should be able to challenge politicians”

The GoG need to provide the enabling environment(social and physical infrastructures) in partnership with all stakeholders, for poor communities to access water supplies and sanitation facilities “ *by implementing appropriate economic policy reforms and providing the necessary legal and regulatory framework”* (Ayee & Crook, 2003).

The author believes that Ghana has the resources and legislation as stated above but not the dedicated independent individuals and institutional and legal framework needed to provide a watchful eye on what is really happening to their fellow citizens for their health and sustainable livelihoods. Instead of depending on foreign donors, the GoG must make access to water supply and sanitation to all rural, urban, rich or poor a sustainable priority in their budget.

Finally, all stakeholders in local institutions and legal systems need to be prepared to take up their new responsibilities for the betterment of the poor communities.

CHAPTER 7

CONCLUSIONS

The aim of this research is to gain an improved understanding of the institutional and legal linkages concerning the human right to water supply for drinking and household uses and sanitation facilities for poor communities. It addresses the framework spanning from the local, regional, national and international levels and focuses on the general situation in the Senegal and Volta river basins and on Ghana in particular.


Throughout the research, the author gained a better understanding of the institutional and legal frameworks in relation to water supply and sanitation in the nine countries that constitute the Senegal and Volta river basins, in West Africa. The research has identified weaknesses in the frameworks which deny poor communities their fundamental basic human rights to safe, close, affordable and available water supplies and sanitation facilities.


The research addressed the complexity and multidimensional nature of poverty and the human rights approach in the design of a model institutional and legal framework.

The research has been carried to meet the following objectives of the research:

- The first objective is to identify and describe the conditions of poor communities who lack improved water supply for drinking and household use and sanitation facilities. This objective was partly achieved because there were no in situ field visits to identify the target group (i.e. poor communities). Their descriptions were based merely on literature review.
- The second objective is to identify and describe the key features of local customary, national and international statutory water laws and associated institutions and also to develop a model or benchmark institutional and legal framework against which circumstances in the Senegal & Volta river basins countries and Ghana in particular can be evaluated.
This objective was achieved and a model institutional and legal framework designed with key features.

- The third objective is to review, against the benchmark framework, the institutional and legal framework in the Volta and Senegal river Basins. This objective was achieved and the countries' frameworks and in particular that of Ghana were tested.
- The fourth objective is to critically assess the situation in one country Ghana. The study of institutional and legal framework of Ghana raised some fundamental issues with regards to the delivery and provision of water supplies and sanitation facilities to poor communities.
- The fifth objective is to attempt to develop or recommend new/modified approaches, which can assist policy makers, planners and governments in translating policies into actions and thereby improving the livelihood of poor communities.
In the final objective, the author made recommendations on Ghana, on the situation at the Volta river basin level, to policy makers (governments, civil societies) and the international community.

In conclusion, the author believes that the current institutional and legal framework in Ghana within the watsan sector is deficient and there is a need for restructuring in order to build stronger institutions coupled with robust legislations at all levels in order that poor communities access water supply and sanitation facilities as their fundamental human right. 

The local government needs to have the overall responsibility to ensure that water supplies and sanitation facilities are accessible, affordable, close, safe and accessible to all in the community. 

7.1 Recommendations

7.1.1 Focus on Ghana

Ghana is moving in the right direction but much more needs to be done.

The limitations below need to be addressed at all levels:

- Low priority given to water supply for drinking and household uses and sanitation facilities within the national policy and national plan and international water supply and sanitation.
- Competing demands and conflicts between and across users for example agriculture, industry, power, livestock, wildlife, hydroelectric power, wildlife, navigation etc...
- Lack of awareness of the importance of safe, clean and close water supplies and sanitation.
- Decentralization has been a key for good governance but can be expensive because of the lack of sustainable funding and experienced manpower, use of improved technology.
- Disassociation between water supply and sanitation because of the low status given to sanitation, as a taboo subject in many communities. Water supply is usually seen as a public good, a community activity when it comes to collecting it but sanitation is perceived as private and personal matter. The problem is the lack of understanding between the interrelationships between water supply, sanitation and hygiene.

7.1.2 At the Volta River basin level

The Volta River, from which Ghana derives most of its surface water, is an international river and the absence of an international institutional and legal basin-wide framework is a constraint on the Government of Ghana's ability to implement international policies on accessing improved water supplies and sanitation facilities.

The making of an efficient, sound and sustainable international framework is possible if there is greater awareness among policy makers, law drafters and civil society at all levels. With more awareness on the living conditions of poor communities in the Senegal and Volta River basins, reforms can take place in the institutional and legal framework through regulation, endorsement, advocacy and the implementation of the International conventions on Human rights and international water law at the local, national and international levels.

The Institutional & Legal Framework for access to water supplies and sanitation facilities need to be enshrined in the constitution of the river basin countries with input from the international, national, regional and local level, for current and future activities. There is a need to re-establish and incorporate customary laws which have been neglected in some countries after independence.

The need of a well structured institutional & legal framework in the water supply and sanitation sector cannot be over-emphasised. Arrangements (implementation, organisational, enforcement, regulation, linkages, control, planning, continuity of functions and responsibilities, operation and maintenance, mobilization of resources-financial, manpower, transport, information, technical training, record keeping , etc...) are needed for the efficient functioning of all organisations involved at all levels, international, national, regional or local.

The Government of Ghana and her citizens and its Volta river basin neighbours need to establish strong working relations by having counterparts in the other countries in order to exchange ideas and strengthen their capacity building(technical knowledge, networking, language skills and knowledge of local problems. The Water Resources Commission need to act as the leader in establishing international cooperation.

7.1.3 The role of governments

As many governments are embarking on decentralising their political and administrative power, local government has a greater role to play but also still do have to learn about its roles and duties whether in implementing or setting institutions and establishing local systems from which poor communities can benefit. New staff will need to adjust from being always over the control of central government and be able to implement programs and coordinate with regulatory and enforcement bodies. These bodies will be staffed by members of the communities with interest in watsan and its management and will be neutral in their decisions. The inclusion and participation of women is indispensable. Governments have an overall responsibility at the national, regional and local by ensuring that poor communities meet their fundamental Human Rights. However, the delivery of water in compounds, standpipes or water kiosks can be provided by the public or private sector.

In assisting governments, the international community and civil society can explore ways to use the General Comment no. 15 on the Right to Water to influence international, national and local policies on access to water supplies and sanitation facilities throughout the world.

Some African governments are to date, incorporating provisions within the water legislation reform, provisions on the rights of the communities, for example in the case of South Africa and Burkina Faso.

7.1.4 At the international level

International law has failed to ensure that poor communities have access to clean, accessible, safe and affordable water supplies and sanitation facilities because international river (water) law which is dealt in the Convention on the Law of the Non-navigational Uses of International Watercourses is not specific on the household needs and uses of water for communities and mostly for the poor communities, and only refers to vital needs in the event of a conflict between uses of an international watercourse.

7.2 Further research

Further research is required including field work to gain a better understanding of the institutional and legal systems at the local level per country within the two river basins; an assessment of the effect of international institutions and laws on poor communities in accessing improved water supplies and sanitation. For example, how are local watsan institutions organized and laws implemented and how much do the poor communities know about the international agreements?

A more detailed study on what should make institutions and legislation function to the benefit of the poor in all countries sharing the international river, under different circumstances (legislation, language, normal/emergency, seasons).

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Name	Title and Organisation	Location	Number of meetings
Dr Daniel Adom	Executive Secretary, Water Resources Commission, Ghana	AMCOW (African Ministerial Council on Water), Dakar, Senegal	2
Mr Francis Bougaire	Director General, Direction Générale de l'Inventaire des Ressources Hydrauliques, Burkina Faso	AMCOW, Dakar, Senegal	2
Mr Rosnar Allissoutin	A lawyer by training actively involved in the rights of riparian and has extensively written on statutory and customary law.	A member of a NGO focusing on human rights, Dakar-Fann, Dakar, Senegal	1
Mr Ababacar N'dao	Senegalese Coordinator	OMVS, Dakar, Senegal	1
Mr Ata Owusu	Chief Editor	Council for Development, Science and Research in Africa (CODESRIA), Dakar, Senegal	1
Mr Yorro Diallo	Charge d' Affaires, First secretary	Ambassade de la Republique Islamique de Mauritanie, Dakar, Senegal	1
Mr Cissohko	Charge d' Affaires, First secretary	Ambassade du Mali, Dakar, Senegal	1
Total			9

**Appendix 2.1: Meetings attended by the author in Dakar, Senegal.
(March-June 2003)**

