

The Development of Water Management Institutions and the Provision for Water Delivery in Cameroon: History and Futures¹⁶

Saidou Baba Oumar and Devi Datt Tewari

School of Accounting, Economics and Finance

University of KwaZulu – Natal,

Durban, South Africa

Email: saidoubo@yahoo.com or devitewari@yahoo.com

DOI:<http://dx.doi.org/10.4314/gjds.v9i2.5>

Abstract

This paper examines past scenarios and future prospects for the development of water management institutions and provisions for water delivery in Cameroon. The major aim of the paper is to reconstruct the history of water management that led to the current water delivery system in Cameroon using the exploratory approach of data analysis supported with diagrams. As a result, data obtained from personal observation and secondary sources were used to capture the objectives of the inquiry. The paper observed that despite the classification of Cameroon as a water surplus country; the country's 18 million inhabitants confront the hardships from day to day and experience a low level of standard of living. This is due to the piecemeal occurrence of water development process over time from pre-colonial period to present. The non-existence of proper water policy and water law in the presence of water structures that are not properly developed in a young democracy have, thus, reinforced the situation of poor provisioning of water in the country. Consequently, the paper concludes that the poor provisioning of water in Cameroon is attributed to the lack of development of water management institutions and structures; it suggests a set of broad guidelines for developing water institutions.

KEY WORDS: Water management, water institutions, water delivery, policy, Cameroon

Introduction

With total renewable water resource supplies of 285.5 Km³ per year, Cameroon accounts for 15 percent of the total annual water resources of the Central Africa Region (Food and

¹⁶ An earlier version of this paper was presented to the International Business Management Conference 2009 on Business Management Challenges in Turbulent Economic Times, University of Kwazulu Natal, Durban South Africa, 5-7 November 2009.

Agriculture Organization [FAO], 2003). Among African countries, Cameroon ranks second in water resources potentials after the Democratic Republic of Congo (Sigha-Nkamdjou, Sighomnou & Lienou, 2002). Therefore, the estimated per capita available water in the country comes to about 15983 cubic meters per annum; of which only 31 cubic meters or 0.20 percent of the total available water are used and some 80 percent of it (25 cubic meters) is channeled to agriculture and domestic uses (Kulshreshtha, 1993:107). However, despite the abundance of water in the country, the resource is not being harnessed efficiently to satisfy the needs of her 18 million inhabitants (United Nations International Children's Emergency Fund/World Health Organisation [UNICEF/WHO], 2008). The water developmental works are taking place in pieces and chunks and progress is not always continuous and guaranteed. To an extent, the success of water projects has depended on the community's investment and interest in the schemes. The Water Development Project in Mutengene town in the Southwest Region of Cameroon has not yielded significant results due to poor institutional and developmental policies although the Kumbo Community Water Supply Scheme in the Northwest Region has shown good results (Njoh, 2006).

Furthermore, the lack of uniform policies and institutional structures in the country disables prospective water development schemes (Kouam, Mpakam, Ndonwy, Bopda & Ekodeck, 2006). Water management is done by the declaration of decrees from time to time, however a comprehensive water law does not exist even to date (Kouam et al., 2006). Up to now, the declaration of decrees has been the major authoritative means to manage water in the country. Also, there is the absence of serious follow-up and implementation of these decrees by the government. Besides, there is no single authority that controls the management of water and associated issues in the country. Rather, four major ministries are involved in water management in the country: the Ministry of Energy and Water Resources, Ministry of Agriculture and Rural Development, Ministry of Environment and Nature Protection, and Ministry of Health. Moreover, the lack of coordination among them results into their working at cross purposes. In other words, the absence of legal and institutional frameworks for the management of water in Cameroon shows the extent to which the government has neglected its water resources (Kouam et al., 2006). As a result there is a general shortage of potable water for domestic use, heavy dependence of farmers on rain for their crops and over-reliance on personal boreholes by industries. In brief, there is a need for understanding the historical evolution of water management institutions and provision for water delivery in the country. This would enable policy makers and planners to fill up the gap in policy making, especially with reference to water delivery.

The paper analyses the processes for water provision, protection and delivery to users in Cameroon. More specifically, it

- examines the water management frameworks created in Cameroon from pre-colonial times to 2010;

- reviews the water management structures put in place in Cameroon from pre-colonial times to 2010 and;
- identifies policy gaps with respect to water management and delivery in the country.

The paper used both primary and secondary data to achieve the objectives of the investigation. The primary data were generated through personal observations. The secondary data were derived from the records of Cameroon National Assembly, Cameroon National Archives in Buea and Yaounde, and the government of Cameroon. The paper adopted the exploratory approach of data analysis to reconstitute past models of water management that culminated in the contemporary system of water provisioning using explanatory tools such as diagrams.

The paper is organized in five sections. Section 2 discusses the water management frameworks. The discussion on water management structures is covered in section 3. The analysis of water policy gaps is done in section 4; followed by conclusions and policy lessons in section 5.

Water Management Frameworks

Several groups participate in the management of water resource in Cameroon. Among them are the government, traditional authority, community, water users associations and independent organizations. Other candidates include the agricultural, industrial, domestic and commercial sectors of the economy. Another set consists of the environment, animals and plants. However, these groups can be tied to two broad appellations such as water administrator and water user. The way in which the water administrator relates with the water user has necessitated a framework with an articulated set of laws and reliable machinery. This forms the basis of the discussion on water management legal and administrative framework.

Legal Framework

In Cameroon, all natural resources belong to the state. The government administers these resources through laws and deliberations of the National Assembly (NA). Water is no exception to the rule. Considered as a common good to which people in the country are entitled in order to live a decent life, parliamentarians who represent the people debate issues of water resource management at the plenary session of the NA, approve deliberations and pass laws for the country. The different laws and deliberations put in place by the Parliament to address issues of water resource and sanitation management in the country over time are explored below.

Deliberation No.18/50 as adopted in the plenary session of 24th January 1950 of the Cameroon Representative Assembly (CRA) approved the convention project regarding

the exploitation of water distribution service for the city of Douala by *La Société Eaux et Assainissement* and the guidelines applicable to subscribers as of 1st January 1950 (Cameroon National Archives, Yaounde [CNAY], French Cameroon Official Gazette [FCOG]-1950:244). Within the same framework, Deliberation No.428/51 of 29th October 1951 of the CRA adjusted water rates for ships in Cameroon ports and wharfs to between 80 and 320 FCFA per tonne depending on delivery station with effect from 01/01/1952 (CNAY, FCOG-1951:1846). Also, Deliberation No.335/51/B of the plenary session of 29 October 1951 of the CRA fixed water rates in Cameroon on the average to 22 FCFA for households, 20 FCFA for industries, 14 FCFA for public services and 60 FCFA for ports (CNAY, FCOG-1952: 47).

Furthermore, Deliberation No.193/53 as approved in the plenary session of 13th May 1953 of the Cameroon Territorial Assembly (CTA) supported Agreement No.5 to the convention of 9th December 1947 signed between the Territory and the Colonial Electric Power Company (CEPC) to grant the city of Nkongsamba a public potable water supply system (CNAY, FCOG-1954: 21). Equally, Deliberation No.195/53 as adopted in the plenary session of 13th May 1953 of the CTA approved Agreement No.5 to the convention of 9th December 1947 signed between the Territory and the CEPC to avail a public potable water supply system to the city of Yaounde (CNAY, FCOG-1954: 22). In addition, Deliberation No.282/55 as accepted in the plenary session of 22nd November 1955 of the CTA endorsed Accord No.6 to the convention of 9th December 1947 for the management of the electric power and water supply network in the city of Nkongsamba (CNAY, FCOG-1956: 2062). Also, Deliberation No.281/55 of the plenary session of 22nd November 1955 of the CTA backed up Accord No.6 to the convention of 9th December 1947 for the management of the network for a supply of electric power and water in Yaounde (CNAY, FCOG-1956: 2065).

Beyond the colonial era, Law No.64/LF/3 of 6th April 1964 outlined the relation between the owner and exploiter of a mineral substance and conditions for the acquisition and occupation of land applicable *mutatis mutandis* to the exploitation of springs and mineral waters in Cameroon (Cameroon National Assembly [CNA], 1964). In pursuance of the cause for adequate water delivery in the country, the West Cameroon Urban Water Authority Law of 15th March 1971 established the Urban Water Authority in western Cameroon province to provide water for domestic and industrial uses along the development and planning of water services to communities. This Law conferred onto the water authority the responsibility to fix water rates and charges for misuse of the resource and water systems in the province (Cameroon National Archives, Buea [CNAB], Western Cameroon Official Gazette [WCOG]-1971: Part C). Two years later bold steps, as epitomized by Law No.73/16 of 7th December 1973, were taken to improve the living standard of people across the country. Therefore, Law No.73/16 of 7th December 1973 laid down rules and regulations governing spring and spa waters considered spring and spa waters as government property, and subjected the exploration, exploitation and bolting of such waters by industries to authorisation duly obtained from the ministry of mines. The same Law prosecutes contraventions for 3 years jail, 1000000 FCFA fine or both (United Republic

of Cameroon [URC], 1973). These were some of the laws enacted during the first decade of independence period of the country to manage water resource.

In the second decade of independence, more matured ideas were conceived and implemented. For instance, Law No.84/13 of 5th December 1984 laying down regulations governing water resources entrusted the management and protection of natural resources to the state. Dispositions of the Law categorized water into state waters including groundwater, rivers, lakes and sea and non – state waters consisting of water from wells, springs and boreholes harnessed in favor of the public and rain water falling on private land. However, non-state waters may be declared public and incorporated into state waters after due compensation of the owner by the state if the need arises. More so, the Law gave every citizen the right to public water use provided that the latter would not prevent other users the access to water and also would not cause any harm to the fauna and flora. In addition to this, the law subjected the use of water for non-domestic activities to declaration, authorization or grant of concession from the state and charges users based on the intensity of pressure of their economic activities on water resources. Also, the Law provided penalties ranging from 5 days to 6 months imprisonment, fines ranging from 10 thousand to 100 thousand FCFA (20 to \$ 2000) or both on contraveners (Republic of Cameroon [RC], 1984). In the same vein, Law No.88/17 of 15th December 1988 defined the rights and royalties relating to the exploration and exploitation of springs, spa and thermal waters and subjected parties interested in the exploration and exploitation of such waters to payment of rights and royalties to the state. The Law held the Ministry of Water and Energy responsible for its execution and assigned penalties worth 10 thousand FCFA (\$ 20) fine for delay in payment of royalties and payment of 50 percent of total value of royalties for false declaration to the state (RC, 1988).

The third decade of sovereignty presents unusual tendencies that warranted prompt attention, openness and collaboration between water resource stakeholders. Owing to stiff competition for water use among users, degradation of the environment quality around the globe and high degree of water courses sharing between neighboring countries as exemplified between Cameroon and Nigeria on the *Benoue* River, Cameroon and Chad on the *Logone* River, Cameroon, Chad, Nigeria and Niger Republic on Lake Chad; the risk for water wars across the world has tremendously amplified. The situation is worrying today and everyone tries to look for solutions through accredited institutions.

The following laws are attempts towards moderating the anticipated danger of water confrontation. Within this perspective, Law No. 90/016 of 16 August 1990 on mineral waters and sources modifying law No. 73/016 of 7th December 1973 and building up Law No. 88/018 of 16th December 1988 described the rights and claims relating to the exploration and exploitation of mineral waters and spring waters (Kouam et al., 2006: 6). Besides this, Law No.95/06 of 30th January 1995 authorized the President of the Republic of Cameroon to ratify the minutes on international boundaries demarcation in the Lake Chad. This Law sought to foster cooperation and sympathy in the use of Lake Chad waters

by populations of Cameroon, Niger, Nigeria and Chad living in the vicinity of the lake to minimize the risk of conflicts in the region (RC, 1995).

More interestingly, Law No.98/005 of 14th April 1998 embraces a broader view of water management scenario to lay down regulations governing water resources within the principles of environmental management. The Law proclaimed water as a common national resource to be directly managed and protected by the state or indirectly administered by regions and councils on behalf of the state. Then, the Law compelled the use of underground or surface water for commercial and industrial purposes to authorization and payment of royalties based on evaluation and conditions of withdrawals excepting companies that have obtained approval from the state to exploit and dispense potable water to the public. Furthermore, the Law prohibited the pollution of water in any form that is prone to modify its quality, the quality of the environment and affect the life of animals and plants. Thus, the Law enjoined any party with services that may pollute water to take apt measures to control the side effects of such services in the society. Thus, any moral or physical entity that causes damage in the society owing to poor quality of water dispensed for consumption is liable for repairs in compensation of the affected party. Other corrective measures of the Law apply in the form of fines ranging from 5 to 20 million FCFA (\$10000 to \$ 40000) and imprisonment from 2 to 15 years. Yet, this Law repealed all previous provisions of Law No. 84/13 of 5th December 1984 to lay down regulations on governing water resources (RC, 1998).

After the endorsement of laws by the representatives of the people at the national assembly, the executive arm of the government uses administrative procedures to enforce these laws and deliberations across the country. This arouses the discussion on water management administrative framework.

Administrative Framework

Various administrative acts were taken at different levels of the government to respond to water resource and sanitation management concerns in Cameroon. These acts were signed in the form of decrees and ordinances by the President and Prime Minister of the Republic, and decisions or service notes by the Governor General, Minister, Governor, Senior Division Officer and Division Officer. These are discussed in the following paragraphs.

Order No.04 of 11th February 1950 to implement Deliberation No.18/50 of 24th January 1950 of the Cameroon Representative Assembly (CRA) approved the convention signed between the Territory and *La Societé Eaux et Assainissement* relating to the exploitation of water distribution service for the city of Douala as of 1st January 1950 (CANY, FCOG-1950: 244). Besides, Order No.65 of 4th January 1952 enforced Deliberation No.335/51 of 29th October 1951 of the Permanent Commission of the CRA to fix water rates in Cameroon as of 1st January 1952 (CNAY, FCOG-1952: 47). Furthermore, Order No.813 of 29th November 1954 executed Deliberation No.19/54 of 22nd May 1954 of the CTA on the convention signed between the Territory and *La Societé Eaux et Assainissement* for the installations and

distribution of potable water in Douala after revision of the final texts (CNAV, FCOG-1954: 1803). These were part of the administrative acts undertaken by authorities to manage water in the colonial Cameroon.

The independence era was characterized by the move towards the creation of a National Water Corporation company for the country. In line with this philosophy, the Federal Decree No.64/DF/326 of 14th August 1964 of the Federal Republic of Cameroon extended the convention between the country and the company *Electricité du Cameroun* to the *Société Nationale des Eaux du Cameroun* [SNEC](CNAV, Federal Republic of Cameroon Gazette [FRCG]-1969: 1537-1538). Also, the Provincial Order No.003/PO/G/GWS.16/S.2/SG/CAE of 30th March 1992 of Southwest Provincial Office set up a local project committee for the follow up of the execution of the Bwassa, Likombe, Mapanja water supply project in the province (CNAB, File Rd [1991]1: 233 – 234). Likewise, Sub-divisional Order No. 97/93 of 16th July 1993 of Akwaya Sub-division specified conditions for tapping water from the main pipe lines of Akwaya water supply system (CNAB, File Rd [1991]1: 76). Equally, the Service Note Ref. No.G.38/03/220/001 of 21st March 1997 of Eyumojock Sub-division appealed to transporters on the Mamfe-Ekok-Otu road to contribute monies for the rescue of human lives from the havocs of irregular provision of drinking water in Eyumojock town (CNAB, File Rd [1991]1: 379).

In line with government's pledge to protect water resources, Order No. 315/PO/G.42/114/PS of 15th November 2000 of Kupe Muanenguba Division prohibited farming and felling of trees around water catchment areas in the division (CNAB, File Rd [1991]1: 528-529). Furthermore, Decree No.2001/161/PM of 8th May 2001 of the Prime Ministry defined the roles, organisation and operation of the National Water Committee under the tutelage of the Ministry of Water Resources thus revoking earlier dispositions of Decree No. 85/758 of 30th May 1985 on the creation of National Water Committee (RC, 2007). Besides, the Service Note No. 198/MINEE/DEAU of 4th January 1999 of the Ministry of Water Resources instituted an ad hoc committee to study and match text proposals for the execution of Law No.98/005 of 14th April 1998 to lay down regulations governing water resources in Cameroon (Kouam et al., 2006: 6).

Accordingly, Decree No.2001/164/PM of 8th May 2001 of the Prime Ministry set up the withdrawal conditions of surface and underground waters for commercial and industrial uses, while Decree No.2001/165/PM of 8th May 2001 of the Prime Ministry outlined guidelines for protection of surface and underground waters against pollution. Also, Decree No.2001/216/PM of 2nd August 2001 of the Prime Ministry set up a special trust fund for financing sustainable water and sanitation development projects, whilst Decree No.2005/494 of 31st December 2005 of the Presidency of the Republic of Cameroon created a patrimony company – the Cameroon Water Utilities Corporation to plan, maintain infrastructures and ensure good delivery of potable water and sanitation services in urban and semi-urban centers in Cameroon (RC, 2007).

water resources to fulfill minimum quality and quantity requirements for a decent life in order to accelerate the exploitation of natural economic resources. The colonial administration, thus, put in place a network for water resources development and management to create more water supply points across the country.

The colonial government developed a three – tier model to organize and manage the delivery of drinking water in the country. At the top tier, the Secretary General of the Colony (SGC) had the oversight of the entire scheme in the country and controlled the budget. The operationalization of the scheme was devolved to the High Commissioner (HC) at the provincial level. The HC was made responsible for overall management of drinking water in the province. This constituted the second tier. The third tier was at the district level where activities were supervised and monitored by District Officers (DOs) in both rural and urban areas. Furthermore, to facilitate the development of water structures for drinking water delivery, the colonial administration created the Public Works Department (PWD) to provide engineering and other technical support to the community. For this purpose, the groundwater was considered as a major source for drinking water supply and emphasis was heavily placed on digging boreholes and supplying necessary technology to the community. An examination of the process of water provisioning and delivery in the foundation phase portrays a top-bottom approach where communities are usually confronted with decisions from their administration in which they have little or no inputs as epitomized in the three-tier model of administration shown in Figure 2.

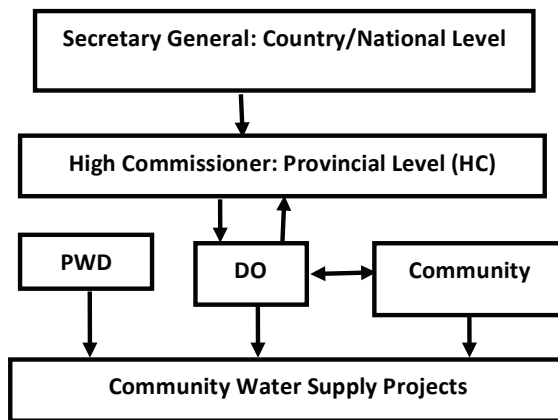


Fig 2: Three-tier Model of Administration

DO: District Officer PWD: Public Works Department

Intermediate Phase: 1960 –2005

Cameroon got its independence in 1960 and a new era in water management began. To better understand the struggle of water management institutions towards the provision and delivery of drinking water in Cameroon during the intermediate phase, two real cases

that display the shortcomings and strengths of such institutions are discussed. These cases are the Mutengene and the Kumbo water schemes/projects.

Until the mid 1970s, the residents of Mutengene town in the Southwest Region of Cameroon lived on distant, poor, unhygienic and erratic sources of water. Due to acute shortage of drinking water in the area, the community contributed 2733353 FCFA (\$6013,377 at 1FCFA = \$0.0022)¹ or 12.60 percent of the total cost of the project and 100 percent labor input on government directives to build a water supply point on a spring close to Ekande village. The Mutengene water project witnessed several hurdles among which two were significant in delaying its completion. At the beginning of the execution of the project, the Divisional Officer (DiO) of Tiko town encouraged the minority native population's action plan to exclude the non-native population from the project decision-making processes. As a result of this, the non-natives withdrew their financial contribution and physical participation towards the realization of the project. Furthermore, the personal conflicts among the executive members of the 1967 ad hoc committee led to organizational decline as personal issues dominated over social needs. This finally marred the development of water structures in Mutengene town (Njoh, 2002).

The Kumbo community water supply scheme in the Northwest Region of Cameroon is an exemplar of community's efforts on developing water structures in the village. From the creation of the town in 1700s to 1974, the people of Kumbo relied on local rivers as sources of water supply for their survival needs. From 1974 to 1983, the project was entirely managed by the PWD. During the 1990s, the government handed over control of the scheme management to SNEC so as to harmonise the water provision, delivery and billing system across the country. This did not last long due to community's resistance which in 1991 opposed the government's decision to hand-over the management of the Kumbo Water Scheme to SNEC. The resistance resulted into violence and the community burned to ashes the SNEC office, expelled workers of the corporation out of the town and took over the control of the scheme. The Kumbo community was claiming ownership of the scheme as it was able to generate the additional 372 million FCFA (\$818400 at 1FCFA = \$0.0022) required for the completion of the project which assisted in mitigating the problem of unpredictable and poor quality of drinking water of the community. The realisation of the community water project suggested a sense of awareness and share of a common feeling about the negligence of Cameroon Government towards the residents of Kumbo who, despite all odds, exhibited a high sense of unity to achieve a collective goal (Njoh, 2006).

The Kumbo community capitalised on two political events to channel her grievances. In the 1961 plebiscite, the residents of Kumbo voted for the Kamerun National Democratic Party (KNDP) on the reunification with French Cameroon anticipating improvement in their welfare from the then government of the Federal Republic of Cameroon but received no positive response, until they decided to start the water project in 1965. The community also took advantage of Bernard Folon who was then Deputy Minister of Foreign Affairs to push forward her case beside the government and request international assistance from

the then Canadian Prime Minister (Njoh, 2006). Table 1 shows the failures and successes of water management projects in the country.

Table 1: Determinants of failure and success of water management projects, Cameroon

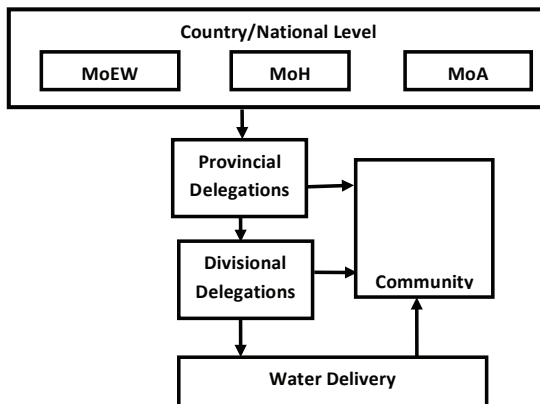
Parameter	Project	Water Access Background of Locality	Determinants
Failure	Mutengene	- Reliance on poor, distant, filthy and erratic sources of water to 1970	<ul style="list-style-type: none"> - Conspiracy and pride from local elites to exclude non indigenous people from decision making process of the water project - Support of local administration for discrimination against non-native people - Retreat of non-natives from financial and physical contribution towards the water project - Personal conflicts between executive members of the committee in charge of execution of the water project
Success	Kumbo	<ul style="list-style-type: none"> - Reliance on local rivers between 1700s and 1974 - Water supply by PWD between 1974 and 1983 - Take off of water project in 1965 - Taker over of water supply by SNEC in 1990s 	<ul style="list-style-type: none"> - Community contribution of 372 million FCFA for completion of the water project - Community lobby through a son of the soil and member of government in the person of Bernard Folon for government and international support towards realisation of the water project - Unity of the community towards achievement of the collective goal of water supply - Community initiative and abnegation

Source: Njoh, 2002; 2006.

From 1960 to 1980s, the post-colonial government continued the colonial water management policy but also engendered gradual changes to reflect its vision on the future of the country. The government took the task of planning for water provisioning and delivery for the country. Some important landmarks of these changes include the following.

- Three ministries were entrusted with the management of water resources. These included (1) the Ministry of Energy and Water Resources (MoEW), (2) the Ministry of Health (MoH), and (3) the Ministry of Agriculture (MoA). The MoEW was responsible for the provision and delivery of drinking water and better sanitation services through SNEC. The MoH was in charge of guaranteeing sanitation services where and when necessary, whilst the MoA was involved in providing drinking water to rural areas through the Department of Rural Engineering and Improvement of Living Environment in Rural Areas (DEIE).
- A four-tier administration was used to manage and operationalise the water management goals in the country (Figure 3). At the country level, the government enforced the water management plan through three ministries as mentioned above. At the provincial level, the national water and sanitation strategy is executed through provincial delegation from respective ministries; whereas at the divisional level, the task of carrying out the national water and sanitation program was assigned to divisional delegations from corresponding provincial headquarters. The community and other institutions such as the Non-Governmental Organisations (NGOs), religious bodies and village associations were at the bottom of the structural arrangement to generate or accelerate the process of water provisioning and delivery in the country. At a point in time, NGOs and religious bodies constructed boreholes and wells to serve the need for drinking water of urban and rural population. In extreme cases of drinking water shortages, village associations mobilised resources to avail communities with drinking water.

A careful observation of the process of water provisioning and delivery in the intermediate phase describes a top-bottom approach where decisions from administration are implemented with limited inputs from the masses who, however, may be allowed to initiate water development projects subject to government's approval and supervision. The administration behaves in this manner to express its power and authority over the country through some form of structural arrangement such as the four-tier model of administration as depicted in Figure 3.



MoEW: Ministry of Energy and Water Resources MoA: Ministry of Agriculture

MoH: Ministry of Health

SNEC: Cameroon National Water Corporation

DEIE: Department of Rural Engineering and Improvement of Rural Living Environment in Rural Areas

Figure 3: The process of water provisioning and administration in Cameroon, 1960-2005

Integration Phase: 2006–2010

The effects of the 1980s economic slump continued to torment the Cameroonian economy even in the 1990s. The depreciation of the US dollar, fall by 45 percent in the price of primary export products in the world market, and the diminution in oil reserves in mid 1980s led to a 50 percent decrease in the country’s export earnings between 1985 and 1987 (Njoh, 1997). In 1988, the government of Cameroon embarked on a structural adjustment programme to revamp the economy of the country by slashing public sector spending, cutting public sector employment and banning recruitment into public service. Nevertheless; these austerity measures ended up worsening the condition of the country as external debt swelled up from 35 percent of the gross domestic product (GDP) of the country in 1985 to 91 percent of its value in 1994 (DIALOGUE, 1996; Amin & Awung, 2005). Further, the salaries of civil servants were revised downward by 65 percent in 1993 and the FCFA was devalued by 50 percent in 1994 (Amin & Awung, 2005; United States Department of State [USDoS], 2009). Despite these measures, the country continued swimming in financial commotion. The perceived last resort for the country was the adoption of the International Monetary Fund (IMF) and World Bank poverty reduction strategy in 2003, which qualified her for admission into the category of Highly Indebted Poor Countries (HIPC) in April 2006 and subsequent subscription to the privatisation drive of public owned enterprises in the same year (World Bank, 2009).

The aforesaid economic details affected all stated-owned enterprises and significantly decreased the revenue collection base of SNEC due to massive failure of consumers to settle their water bills. In an attempt to redress the situation, SNEC had sometimes reminded customers to pay their water bills and on extreme cases interrupted water delivery to users. However; both approaches failed to improve the financial position of the corporation, which ultimately affected its performance on the field. A brief report on bad debts of SNEC from only two councils – the Buea Rural and Limbe Urban Councils in 1999 is given in Table 2, which shows that the two councils owed 1009658952 FCFA (\$ 2399449.694) to SNEC in 1999 out of which the Buea Rural Council accounted for 61 percent as against 39 percent for the Limbe Urban Council. The greater share of the unpaid water bills instead came from the rural council because people in rural areas had limited access to private pipe water connection as compared to city dwellers, hence the over-reliance of rural residents on the water delivery arrangement of the council. One can gage the severity of the financial crisis facing the company. The magnitude of the bad debts registered by SNEC from only two councils in a year indicates that the option of free access to potable water is impracticable notwithstanding complaints from the general public about the intention of the government to privatize water supply and delivery in the country. However, despite the private-public mixed strategy of provisioning and delivery of drinking water, the government continued to hold the responsibility of defining the overall water planning activities for the country.

Table 2: An account of bad debts of SNEC, 1999 in million FCFA

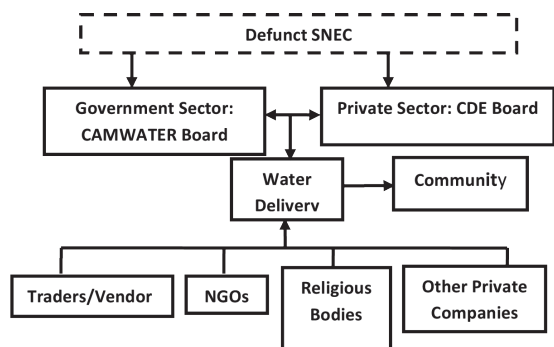
Year Debtor	1999	Percentage
Buea Rural Council	614.7	61
Limbe Urban Council	395.0	39
Total	1009.7	100

1. All FCFA values are converted into US dollar at the rate of 1FCFA = \$0.002

Constructed from: CNAB, File Rd [1991]1: Water supplies SNEC –1991, pp. 466 – 467 & 473.

After the takeover of water supply by the private sector, SNEC broke into the Cameroon Water Utilities (CAMWATER) and *La Camerounaise des Eaux* (CDE). Under this dispensation; CAMWATER represents the government sector, while CDE symbolizes the private sector. The government maintains full control over CAMWATER management board and appoints its members. In the case of CDE, the management board is private but absorbs experienced members of the defunct SNEC. On the field, CAMWATER organises the operationalization of networking system of water infrastructures and CDE undertakes the management of water resources from exploitation to final commercialization of water

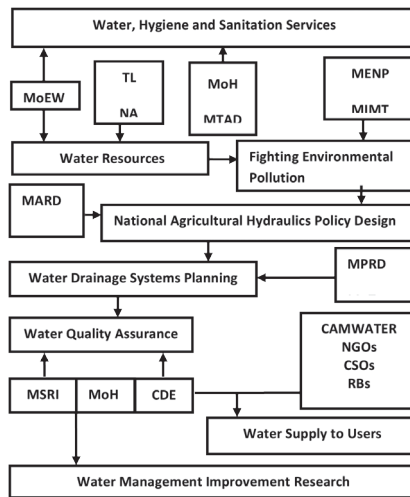
to private households and commercial taps in urban centers. For CDE is unable to satisfy the entire market demand for drinking water in the country, another group of drinking water suppliers consisting of water traders and vendors, NGOs, religious bodies and other private companies provide potable water to households that have no access to water supplies. The water traders are subscribers from CDE intending to trade water; vendors are people who buy water from traders or fetch it free of charge from other private companies' supply points to sell to people in cities. The water traders retail water at 50 FCFA (\$0.11) to 100 FCFA (\$0.22) per jerry can of 20 liters, whilst vendors charge between 100 FCFA (\$0.44) and 500 FCFA (\$1.10) per jerry can of 20 liters depending on the distance where water is being acquired and the place where it is to be delivered. Remote areas receive no attention from CDE and get drinking water from boreholes or wells drilled by NGOs and religious entities. The new setup for water supply and distribution in the country is presented in Figure 4.



SNEC: Cameroon National Water Corporation CAMWATER: Cameroon Water Utilities
 CDE: "Camerounaise des Eaux" NGOs: Non-Governmental Organisations

The Cameroon collective water resources management system involved various institutions. Yet, the functions of these institutions sometimes overlapped on the field. For instance; the Ministry of Energy and Water Resources, the Ministry of Health, the Ministry of Territorial Administration and Decentralisation, the Ministry of Urban Development and Housing competed on the field to guarantee the availability of drinking water, hygiene and sanitation services to people in the country. In the area of water resources protection, the Ministry of Energy and Water Resources, traditional leaders, National Assembly and National Water Committee were on the race. Likewise the Ministry of Industry, Mines and Technological Development competed with the National Environmental Commission and the Ministry of Environment and Nature Protection in fighting against environmental pollution. Similarly, the Ministry of Agriculture and Rural Development overlapped with the Ministry of Livestock, Fisheries and Animal Industries in managing water resources in the agricultural sector. Elsewhere, the Ministry of Town envied the Ministry of Planning and Regional Development in the area of planning water drainage systems in urban centres of the country. Besides, National Laboratories attached

to the Ministry of Scientific Research and Innovation disputed the potable water quality assurance to CDE and beside that the same Ministry of Scientific Research and Innovation confronted the Ministry of Higher Education in the struggle to improving water resources management situation in the country. More so NGOs, civil society organisations, religious bodies and companies worked individually in parallel to challenge the joint effort of CAMWATER and CDE in the area of drinking water delivery to users in cities and villages across the country. This scenario is sketched in Figure 5 with a corresponding key guide.



- | | |
|---|------------------------------------|
| MUDH: Ministry of Urban Development and Housing | MoT: Ministry of Town |
| NEC: National Environmental Commission | COs: Companies |
| MSRI: Ministry of Scientific Research and Innovation | MoHE: Ministry of Higher Education |
| MARD: Ministry of Agriculture and Rural Development | CSOs: Civil Society Organisations |
| MINENP: Ministry of Environment and Nature Protection | NWC: National Water Commission |
| MLFAI: Ministry of Livestock, Fisheries and Animal Industries | TL: Traditional Leaders |
| MTAD: Ministry of Territorial Administration and Decentralisation | NA: National Assembly |

Water Policy Gaps

In order to harness and distribute water efficiently and effectively to all users in a country, there are three indispensable issues to consider. These include the drafting of a water policy, development of a water law and putting in place of water administrative structures to address water issues as shown in Figure 6 (Saleth & Dinar, 2004). In Cameroon, the first two components – water policy and water law are non-existent; and the third component exists but is not properly developed should the other two components had evolved historically. However, it is pertinent to note even the United Kingdom (UK) which

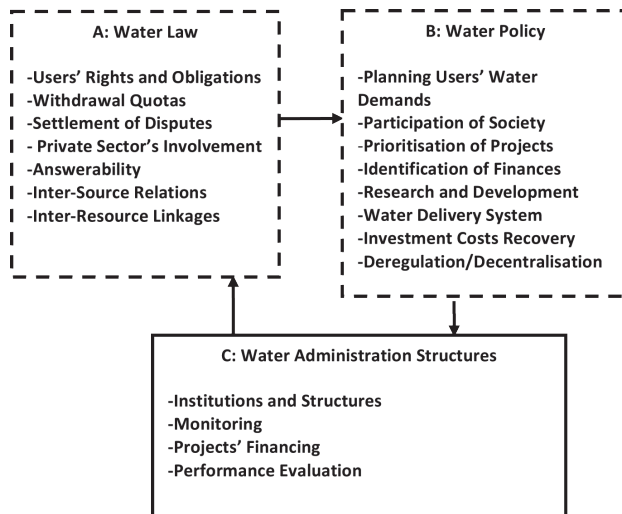
was one of the colonial masters of Cameroon did not have a proper water policy before the advent of the Water Act 1973 that created regional water authorities to manage the resource (Bailey, 2002; Water UK, 2010) but both her private and public water companies efficiently distributed water to users for decades. For UK is an old democracy with well-structured and established system of administering public affairs, it is not surprising to witness the achievement of good governance as opposed to Cameroon where democracy is young, subjugated to and practiced on the basis of trial and error to protect the interest of the minority ruling class at the expense of the masses. Further, development is yet to manifest fully in Cameroon as is clearly noticeable in the UK.

The socio-economic and water resource management implications of these missing institutional structures are both enormous and numerous. Lack of appropriate water development policies can deteriorate the resource and lead to its mismanagement. In the foundation phase for example, the deficiency in water policy development incapacitated local populations against the take over and control of natural resources of their communities by the colonialists. The absence of the policy also exacerbated the over-reliance of communities on waters from doubtful sources for their basic and sanitation needs. In the intermediate phase, the water policy deficit heated up discrimination in the provisioning of drinking water between native and non-native people in one hand and promoted selfish interest over social concern between indigenous people on the other hand. Similarly, the shortfall in the policy stimulated social protest on the limited access of people to drinking water and sanitation services in the 1980s and 1990s against the government in the then Southwest and Northwest Provinces of the country. As alternative option to reduce the hardships of limited access to water, people are digging personal well in their compounds. As a result, it is observed that in the quarters of Bonaloka, New Town Aéroport and Song-Mahop in Douala city for example, almost every family has a well in its compound. The scantiness of water policy in this case may in the long run translate into lowering the underground water table and depletion of the volume of water resource in the areas. Furthermore, the absence of a water law presumably gives equal water withdrawal rights to users irrespective of their size, uses and needs, volume to extract, ability to exploit and to pay for water. This may deprive a larger section of the economy from its fundamental right of access to water.

In view of the above, it is necessary for Cameroon to support its water management structures with a water law and water policy so that water rights and obligations of users are defined; the withdrawal of quotas of each user group are clearly specified and eventual water disputes between users are easily settled through confrontation of facts with defined norms. Along the same line of reasoning, the water law can delineate the scale of the private sector's involvement in the water delivery business to control for the emergence of a natural monopoly in the country. Furthermore, a well-developed water policy provides an opportunity for planning towards present and future water needs of users based on the principles of fairness and equity, meaning that the utilisation of available water resources has satisfactorily accounted for water demands of the current and future generations. Also, the decentralization of water activities through

involvement of civil society and non-profit organizations is an important component for the formulation of a water policy that reflects the views and aspirations of the society. Consequently, the decentralization of water activities gives room for the prioritization of water uses and execution of water projects. Further, it can serve as the basis for identifying ways and means of financing water projects and recovering costs of water provision and delivery (Saleth & Dinar, 2004).

Lastly, the existing water management structures need to be closely monitored by the government in order to generate sufficient and reliable information or feedback on water issues and, instill financial discipline and good governance. If this happens, more water projects can be financed to satisfy the demand for water and the performance evaluation of water delivery programme in the country can be achieved through establishment of sound policy framework that can accommodate unforeseen circumstances all the time (Saleth & Dinar, 2004). In short, it is imperative for Cameroon to establish an up to date water resources data bank, foster research and development departments in institutions, enhance capacity building, mobilize human resources towards the understanding of the challenges of water resources, and enforce the ethics of good governance in the management of public affairs in order to achieve better results in the management of her water resources. However, the discussion of these aforesaid points is out of the scope of this study.



Source: Adapted from Saleth & Dinar (2004: 102).

Figure 6: A suggested framework for water resources management, Cameroon

Conclusions and Policy Lessons

This paper argues that water development in Cameroon has occurred on piecemeal basis. In the pre-colonial period everybody in the community participated in the provisioning of the communal water supply point. There existed no documented procedure as such and it was primarily controlled by the supreme chief of the village. The development, provision and delivery of drinking water were sporadically done and a common water networking system was missing. This means that communities worked in isolation from each other to address their water needs. The supreme chief of the community controlled all waters of the community through appointed delegates and imposed sanctions on people who made use of the community water to fulfill non-domestic needs where water was scarce.

In the colonial era, the absolute power of the supreme chief of the community broke down and the colonial government instituted a network for water resources development and management for the country. All the same, the provisioning of water for the community involved indigenous people but required them to follow documented procedures. Consequently, the supreme chief of the community leased part of his prerogatives to the district officers and the resident who became prominent in managing and planning water needs of the communities.

At independence, the indigenous government tried to demonstrate its ability to cater for the needs of its population. Three key ministries featured on the government's plan on water resource management for the country. The Ministry of Energy and Water Resources and the Ministry of Health were charged with the responsibility of ensuring proper delivery of drinking water and sanitation services through respective delegations at provincial and divisional levels. The Ministry of Agriculture through its Department of Rural Life Improvement (DEIE) provided drinking water to rural areas. Moreover, the representatives of the SNEC (Cameroon National Water Corporation) at each level and village associations regulated users' misconduct in water use through fines and in extreme cases water supply cuts. This arrangement yielded unsatisfactory results that paved the way to the private sector intervention in water supply business.

Following the takeover of water supply by the private sector, SNEC split into the Cameroon water utilities and *La Camerounaise des Eaux*, where the former handled the management, maintenance and networking system of infrastructures of the corporation and the latter undertook the exploitation, treatment, provision, delivery and commercialization of water to private households and the general public in urban centers. Remote areas received little attention from the corporation and acquired drinking water from boreholes or wells drilled by Non-Governmental Organizations and religious entities. Overall, the different structures involved in the management of water resources seriously overlap with each other on the field. This conspicuously created confusion and retarded the advancement of users' right to water and sanitation amenities in Cameroon.

From pre-colonial times to present, three approaches with different institutional involvement have been applied in addressing the problems of water development, provision and delivery in Cameroon. The top-bottom approach with three and four levels of participation characterized the foundation phase and the intermediate phase. The mixed strategy, drawing from the public and private sectors' efforts, was prominent in the integration phase. Furthermore, it is observed that despite the globalization agenda, the supporting water regulation and water strategy are missing in Cameroon. The lack of these sustaining pillars coupled with overreliance on decrees and orders for the management of water resources elevates the vulnerability of water management structures to the whims and caprices of the authority that enacts such declarations in the country. Finally, the creation of a financially autonomous water structure from which a good water policy and sound water law can be drafted to account for the present poor water management system is timely for the country.

References

- Amin, A.A. & Awung, W.J.** (2005, November). Economic analysis of private returns to investment in education in Cameroon, pp.1-16, Regional Conference on Education in West Africa: Constraints and Opportunities, Dakar, 25-26 November, Cornell/CREA/INRA/ Ministry of Education-Senegal (online). Available: www.saga.cornell.edu/saga/educcon/amin.pdf. Date Accessed: 19 December 2009.
- Bailey, P.** (2002). Regulation of the UK water industry, Centre for the Study of Regulated Industries (CRI) Industry Brief. CRI, School of Management, University of Bath, United Kingdom. Available: www.bath.ac.uk/management/cri/pubpdf/Industry_Briefs/Water_Peter_Bailey.pdf. Date Accessed: 23 April 2010.
- Cameroon National Assembly [CNA]** (1964). Law No.64/LF/3 of 06/04/1964, Legislative year 1964/1965, Yaounde: Cameroon National Assembly (CNA). Date Accessed: 16 February 2009.
- CNAB** (1971). West Cameroon Official Gazette No.7, Vol.II of 13/02/1971, Part C, Buea: Buea: Cameroon National Archives, Buea (CNAB). Date Accessed: 04 February 2009.
- CNAB**, File Rd [1991]1. Water supplies – SNEC 1991, pp. 76, 98 –101, 379, 466–467, 473 & 528-529, Buea: Cameroon National Archives, Buea (CNAB). Date Accessed: 04 February 2009 & 25 February 2009.
- Cameroon National Archives – Yaounde** (CNAY), French Cameroon Official Gazette No.765 of 28/02/1950, p.244, Yaounde: Cameroon National Archives, Yaounde (CNAY). Date Accessed: 19 February 2009.

- CNAY**, French Cameroon Official Gazette No. 865 of 19/12/1951, p.1846, Yaounde: Cameroon National Archives, Yaounde (CNAY). Date Accessed: 19 February 2009.
- CNAY**, French Cameroon Official Gazette No. 869 of 16/01/1952, p.47, Yaounde: Cameroon National Archives, Yaounde (CNAY). Date Accessed: 19 February 2009.
- CNAY**, French Cameroon Official Gazette No.982 of 13/01/1954, pp.21 & 22, Yaounde: Cameroon National Archives, Yaounde (CNAY). Date Accessed: 19 February 2009.
- CNAY**, French Cameroon Official Gazette No.1040 of 29/12/1954, p. 1803, Yaounde: Cameroon National Archives, Yaounde (CNAY). Date Accessed: 19 February 2009.
- CNAY**, French Cameroon Official Gazette No.1153 of 05/12/1956, pp. 2062 & 2065, Yaounde: Cameroon National Archives, Yaounde (CNAY). Date Accessed: 19 February 2009.
- CNAY**, Federal Republic of Cameroon Gazette No.15, Vol.2 of 15/08/1969, pp.1537-8, Yaounde: Cameroon National Archives, Yaounde (CNAY). Date Accessed: 19 February 2009.
- DIALOGUE** (1996). An overview of DIAL's work on the economy of Cameroon, *DIALOGUE*, 5, pp. 1-14. Available: www.dial.prd.fr/dial_publications/PDF/Dialogue/vieux_numerosGB/dial5/art1.htm. Date Accessed: 19 December 2009.
- Food and Agriculture Organization [FAO]** (2003). Review of world water resources by country. Water Reports 23. Rome: FAO. Available: [ftp.fao.org/agl/aglw/docs/wr23e.pdf](ftp://ftp.fao.org/agl/aglw/docs/wr23e.pdf). Date Accessed: 13 March 2008.
- Kouam, K.G-R., Mpakam, H.G., Ndonwy, S.A., Bopda, S.L.D. & Ekodeck, G.E.** (2006). Gestion intégrée des ressources en eau et objectifs du millénaire pour le développement en Afrique: Cas du Cameroun. *Vertigo*, 7(2), pp.1-19. Available: www.vertigo.uqam.ca/vol7no2/art11vol7no2/vertigovol7no2_kouam_et_coll.pdf. Date Accessed: 20 July 2008.
- Kulshreshtha, S.N.** (1993). World water resources and regional vulnerability: Impact of future changes. Laxenburg, Austria: International Institute of Applied Systems Analysis [IIASA]. Available: www.iiasa.ac.at/Publications/Documents/RR-93-010.pdf. Date Accessed: 15 June 2008.
- Njoh, A.J.** (1997). Colonial spatial development policies, economic instability and urban public administration in Cameroon, *Cities*, 14(3), pp. 133 – 143. Available: www.sciencedirect.com/science?. Date Accessed: 19 December 2009.
- Njoh, A.J.** (2002). “Barriers to community participation in development planning: Lessons from the Mutengene (Cameroon) self-help water project.” *Community Development Journal*. 37(3), pp.233–248.

Njoh, A.J. (2006). "Determinants of success in community self-help projects: The case of the Kumbo water supply scheme in Cameroon." International Development Planning Review. 28(3), pp.381– 406.

Saleth, R.M. & Dinar, A. (2004). The institutional economics of water: A cross-country analysis of institutions and performance. UK, USA: The International Bank for Reconstruction and Development/The World Bank, Edward Elgar Publishing Limited.

Republic of Cameroon [RC] (1984). Law No.84/13 of 05/12/1984, Legislative year 1984/1985, Yaounde: Cameroon National Assembly (CNA). Date Accessed: 18 February 2009.

RC (1988). Law No.88/17 of 15/12/1988, Legislative year 1988/1989, Yaounde: Cameroon National Assembly (CNA). Date Accessed: 18 February 2009.

RC (1995). Law No.95/06 of 30/01/1995, Legislative year 1994/1995, Yaounde: Cameroon National Assembly (CNA). Date Accessed: 20 February 2009.

RC (1998). Law No.98/005 of 14/04/1998, Legislative year 1997/1998, Yaounde: Cameroon National Assembly (CNA). Date Accessed: 20 February 2009.

RC (2007). Letter de politique sectorielle de l'hydraulique urbaine. Available: www.camwater-cm.com/francais/agenda.php. Date Accessed: 14 July 2009.

Sigha-Nkamdjou, L., Sighomnou, D. & Lienou, G. (2002). Vers une approche globale de la gestion de la ressource comme solution aux crises d'eau dans les dernières décennies au Cameroun, pp. 337–343, Regional hydrology: Bridging the gap between research and practice. Proceedings of the Fourth International Friend Conference on Regional Hydrology, Cape Town, South Africa. Available: books.google.co.za/books?....PA337&dq=snec+in+cameroon&ots=v19ws.... Date Accessed: 24 February 2008.

United Nations International Children's Emergency Fund/World Health Organisation [UNICEF/WHO] (2008). Progress on drinking water and sanitation: Special focus on sanitation, Joint Monitoring Programme for Water and Sanitation. New York: UNICEF and Geneva: WHO. Available: www.unicef.org/media/files/Joint_Monitoring_Report_-_17_July_2008.pdf. Date Accessed: 03 August 2008.

United States Department of State [USDoS] (2009). Background note: Cameroon, pp.1-9, BPA/BAA. Available: www.state.gov/r/pa/ei/bgn/26431.htm. Date Accessed: 19 December 2009.

United Republic of Cameroon [URC] (1973). Law No.73/16 of 07/12/1973, Legislative year 1973/1974, Yaounde: Cameroon National Assembly (CNA). Date Accessed: 18 February 2009.

Water UK (2010). Working on behalf of the water industry towards a sustainable future: Water companies and the law, pp.1-3. Available: www.water.org.uk/home/policy/positions/legislation?. Date Accessed: 19 April 2010.

World Bank (2009). Cameroon-country brief, pp.1-2. Available: web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/CAMEROON...htm. Date Accessed: 19 December 2009.