

# **Shisong Clean Water Access Project:**

Securing a Supply of Safe, Clean Water for a Cameroonian Farming Village

By: Patrick McCarville

"THE POOREST PEOPLE IN THE WORLD ACTUALLY PAY SOME OF THE WORLD'S HIGHEST PRICES FOR DRINKING WATER, AND THE WATER. THEY GET IS LESS CLEAN AND LESS PLENTIFUL. THE POOR PAY MORE IN THE FORM OF LOST TIME, HEALTH, EDUCATION, AND LIFE, BUT ALSO IN MONETARY TERMS. MORE THAN ANY OTHER FACTOR, WATER SCARCITY KEEPS THE "BOTTOM BILLION" ENTRAPPED IN A CYCLE OF EXTREME POVERTY. IN THE END ALL OF HUMANITY PAYS THE PRICE. THE GOOD NEWS IS THAT IT DOESN'T HAVE TO BE THIS WAY."

#### **SUMMARY**

Diarrhea and cholera are among the main killer diseases for children under 5 in Cameroon. Diarrhea kills 18,000 children between the ages of 0-59 months, according to UNICEF. Less than 45% of individuals living in rural

Cameroon have access to clean drinking water. Shisong, a village in the Northwest region of Cameroon has initiated a project that would allow for all of its 10,000 community members to have access to safe drinking water. They have begun building a safe and clean water distribution system in 2008. The project is designed to capture spring water in the hills high above the village and pipe the water the 8.4 Km to the town. The community has built three spring catchments basins and has laid 2 KM of piping. Funding is required to complete the pipe, to build a storage tank and to install 24 stand pipes.



<sup>&</sup>lt;sup>1</sup> Darilek, Paul. "A Closer Look: Water and Poverty." *The water Project*. www.thewaterproject.org

"Less than 45% of individuals living in rural Cameroon have access to clean drinking water."



#### WHAT IS THE ISSUE?

The Shisong community does not have a safe or consistent means of accessing water for bathing, agriculture, and most importantly drinking. During the dry season water to the community can be shut off for months. With the price of water steadily rising, the average family cannot afford clean bottled water. When clean water is not available, women and children are responsible for water collection. This requires them to travel on average 2 miles a day on foot.

#### HOW WILL THE PROJECT SOLVE THE PROBLEM?

The Shisong Clean Water Access Project will establish and build a community water supply system, run by a local elected water committee. The committee aims to incorporate all members of the community, including men, women, youth and traditional leaders who will help to provide safe and conveniently accessible water to all of the Shisong 10,000 community members. The project will fund a large storage tank that will hold enough water for all of the dry season, and will build 24 stand pipes so every member of the community will have a water supply close to their homes.

When the project is finished, all members of the community who use the water will pay fees to the water committee. This money will be used for maintenance and repairs.

#### WHAT IS THE LONG TERM IMPACT OF THE PROJECT?

Once completed, the project will provide clean water to the community for years to come. Access to clean water will result in an improvement in the health of the members of the community. In addition, easy access to water will allow community members to fully focus on their livelihoods and it will allow the children attend school.

#### PROJECT DETAILS

From 2009 to 2011, I worked as an Agro-forestry volunteer in a small farming village in the northwest region of Cameroon called Shisong. I assisted local non-governmental organizations (NGOs) and community leaders in agricultural advancement, educational training, and resource development. During this process, I quickly realized that the biggest threat to this small community faced was a lack of available clean water.

Community leaders in Shisong identified this problem prior to my arrival and had begun working on a solution in 2008. They formed a committee that located a safe water source 7 km from the town and had begun tapping the source to bring water to the community. Lenjo James Lukong, the project's technician determined that the best way to get the water to the community would be to build three spring catchments to collect the water, followed by 8.4 km of piping to get the water to a large storage tank in the town. From there, 24 stand pipes could be used to distribute the water throughout the village.

In my first few months of service, the water committee contacted me for assistance in the development of their project. I facilitated the drafting of a constitution; we then worked on community education and outreach which resulted in expanding the water committee to include additional elected members of the community. The committee then received a small grant from the US Embassy to buy gravel, sand, and cement to build the water catchments. Twice a week, 30 members of the community would

For less than \$2 per person, we can secure a lifetime of access to safe, reliable, drinking water for one rural village.

volunteer to work on the construction. In December, 2011 three water catchments were completed. A local Catholic Church heard of the work that Shisong had initiated and offered to donate enough piping to connect the catchments to the storage tank.

Since my return from Cameroon, the community has laid most of the piping required to connect the catchments to the storage tank and has excavated the site for the storage tank. However, progress has stalled due to a lack of funding. The community lacks the resources to complete the storage tank and finalize the piping to distribute the much needed water. They need \$5,300 to complete the storage tank, \$13,000 for the stand pipes and \$1,700 for the remaining piping, for a total of \$20,000. It is our hope that the final stages of this project aimed at bringing clean water to the village of Shisong will be supported through charitable donations.

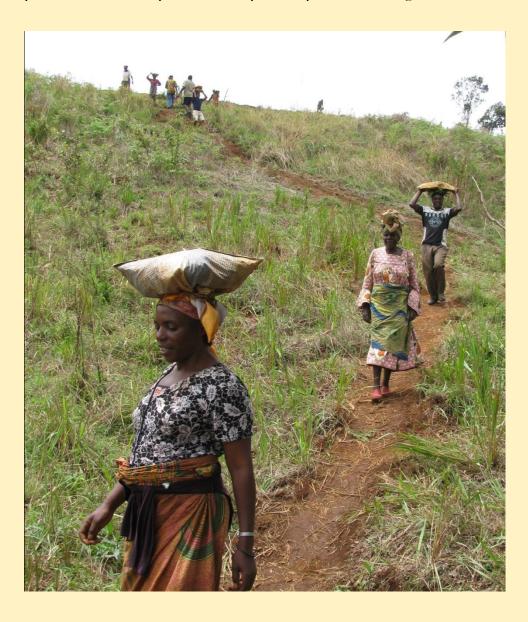


**Finished Spring Catchment** 

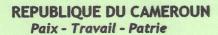
Community Work on piping

#### **HOW TO DONATE**

The community submitted this project to Globalgiving<sup>2</sup>. Globalgiving is a registered 501(c)3 organization and all donation are tax deductible. The donations will go directly from the website to Green Care Association (GCA), a Cameroon-based NGO with which I worked very closely during my Peace Corps service. Since its inception in 1998, GCA has targeted the promotion of proper environmental management and sustainable agriculture in the region surrounding Shisong and it will monitor and distribute money to the project. The NGO will use 100% of donations to buy material and hire technical labor. The rest of the project's costs will be through community contributions. Thank you in advance for any contribution you find yourself able to give.



<sup>&</sup>lt;sup>2</sup> http://www.globalgiving.org/projects/supply-safe-water-to-a-cameroonian-farming-village/



REPUBLIC OF CAMEROON
Peace - Work - Fatherland

# PROJECT PROPOSAL FOR SHISONG WATER SUPPLY PROJECT BY GRAVITY

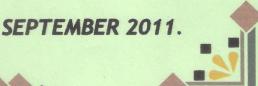


**TECHNICIAN:** 

**LENJO JAMES LUKONG** 







# ESTIMATED COST OF SHISONG WATER SUPPLY PROJECT

Figures in Central African Francs CFA (1 Dollar = 500 CFA)

ITEM	DESCRIPTION	UNIT	QTY	RATE	KIND	CASH	TOTAL
100	Site Installation	u	u	325,000	75,00	250,00	325,000
	SUB TOTAL				75,000	250,000	325,000
					75,000	250,000	323,000
200	CONSTRUCTION WORK						
201	Storage Tank 25m <sup>3</sup>						
202	Stones	Trip	12	40,000		480,000	480,000
203	Sand (River)	Trip	4	80,000		320,000	320,000
204	Cement	Bags	150	5,500		825,000	825,000
205	Irion Rods Ø 14 mm	No	3	9,500		28,500	28,500
В	Irion Rods Ø 12mm	No	3	5,800		17,400	17,400
С	Irion Rods Ø 10 mm	No	4	3,800		15,200	15,200
С	Irion Rods Ø 8 mm	No	10	2,750		27,500	27,200
D	Irion Rods Ø 6 mm	No	5	1,700		8,500	8,500
Е	Binding wire	Roll	3	3,000		9,000	9,000
206	Gravel	Trip	2	50,000		100,000	100,000
207	Labour					850,000	850,000
208	SUB TOTAL					2 (01 100	2 (01 100
			4.7	 25 000		2,681,100	2,681,100
300	Valve chamber/ low and High point	No	17	25,000	5,000	20,000	425,000
301	Construction of standpipe	No	24	250,000	50,000	200,000	6,000,000
302	SUB TOTAL				55,000	220,000	6,425,000

400	INSTALLATION WORK						
401	01 PVC pipe Ø 63 mm						
402	PVC pipe Ø 50 mn	n					
403	403 PVC pipe Ø 32 mm						
404	PVC pipe Ø 25 mn	n					
405	SUB TOTAL					8,926,900	8,926,900
500	<u>FITTINGS</u>						
501	G.1 pipe Ø 2"	No	4	26,000		104,000	104,000
502	G.1 pipe Ø $1^1/_2$ "	No	3	20,000		60,000	60,000
503	G.1 pipe $\emptyset$ $^3/_4$ "	No	10	7,500		75,000	75,000
504	G.1 pipe $\emptyset^{1}/_{2}$ "	No	7	5,000		35,000	35,000
505	Fittings/ Accessories	U	U	1,500,000		1,500,000	1,500,000
506	Excavation/ Back filling	MI	8441	500	4,220,500		4,220,500
507	Plumbing in pipeline	MI	8441	300		2,532,300	2,532,300
508	SUB TOTAL				4,220,500	4,306,300	8,526,800

ITEM	DESCRIPTION	KIND	CASH	TOTAL
100	Site installation	75,000	250,000	325,000
200	Construction work		2,681,100	2,681,100
300	Valve chamber/ low and High point	55,000	220,000	6,425,000
400	Installation work		8,926,900	8,926,900
500	Fittings	4,220,500	4,306,500	8,526,800
600	OTAL COST OF PROJECT SUPERVISI			5,376,960
	TRANSPORT 20%			

GRAND TOTAL COST OF PROJECT		32,261,760

## **SUMMARY**

#### Constitution for Shisong Water Association

#### **Article 1: PREAMBLE**

The purpose of this constitution is to provide guide line on which the collaboration of the Shisong water association, local water technicians, Shisong community and the authority is based. The constitution is based on council by-laws for the operation of water management committees, the water policy and strategies of the council and some major water scheme management principles that contribute to sustainable management of the water supplies.

#### **ARTICLE 2: NAME**

The name of the organization shall be Shisong Water Association

#### **Article 3: PURPOSES**

#### The purpose of the association shall be to

- a) Bring clean potable water to all of Shisong and surrounding areas.
- b) Expand and maintain basic water supply and sanitation services for the community.
- c) Improving access to basic water supply and sanitation services for the community.
- d) Improving the quality of life and poverty alleviation within Shisong Community.

For the purpose of attaining the aforementioned objectives the Association shall have the power to:-

- a) Promise and develop the aforesaid objectives;
- b) Assist or affiliate with other charitable or community associations;
- c) Raise funds and receive contributions;
- d) Buy, take on lease or in exchange any property of the Association
- e) Employ staff (who may not be members of the executive committee) as are necessary for the proper pursuit of the objectives.
- f) Do all such ;ayful things that shall further the objectives of the Association, providing such activities do not contradict, the aforementioned objectives, and the constitution of Shisong Water Catchment Association.

#### **ARTICLE 4: MEMBERSHIP**

- a) Membership shall be open irrespective of political party, nationality, religion, race, sexual orientation or gender to:
- i) Any person living in Shisong Community, specifically the five quarters: Tiymenkan, Mvem Shisong, Lun, Tashwer and Ndzenshai.
- ii) Individuals over 18 years of age living outside of Shisong but are still tied to the area through family shall be called Associate Members and who shall not have the right to vote at General Meetings of the Association.

There will be an annual memberships fee which will be agreed upon at the Annual General Meeting (AGM) and will be payable by all members.

A list of all members will be kept by the membership secretary.

#### **Article 5: OFFICES AND COMMITTEE**

The business of the group will be carried out by a committee elected at the Annual General Meeting. The Committee will meet as necessary and will not meet less than four times a year

The committee will consist of 10 members and be composed of 6 offices and 4 committee members. At all times one member from each of the five separate quarters (Tiymenkan, Mvem Shisong, Lun, Tashwer and Ndzenshai) will be on the committee. Two spots will be reserved to designated traditional leaders. Two spots will be reserved for women. One spot will be reserved for a youth.

The officers' roles are as follows:

- a) President who shall chair both general and committee meetings;
- b) Vice President, who shall assist the chair at both general and committee meetings;
- c) Secretary, who shall be responsible for taking of minutes and the distribution of all papers.
- d) Membership Secretary, who shall be responsible for keeping records of members,
- e) Treasurer, who shall be responsible for maintaining accounts;
- f) Publicity Secretary, who shall be responsible for spreading information to the public
- g) Any other position deem necessary at the annual general meeting can be elected at the

All officers are elected to a team of one year

Officers are limited to two consecutive terms, and committee members cannot serve longer than 5 years consecutively

In the event of an officer standing down or death during the year a replacement will be elected by the next General Meeting of members.

Any committee member not attending a meeting without proper excuse for three months will be contacted by the committee and asked if they wish to resign.

The committee meetings will be open to any member of the Shisong Watch Catchment Association wishing to attend, who may speak but not vote.

Membership of the committee shall be lost through:

a) Death

- b) Incapacity of a member due to the nature of the work, being transferred or through sickness
- c) Having embezzled the water scheme funds
- d) Vote of no confidence by the Annual General Assembly

Replacement of members shall be through:

- a) Co-opting by Committee in case of failure in duty by some members before the Annual General Assembly
- b) By vote in the Annual General Assembly

#### Article 6: ANNUAL GENERAL MEETINGS

An Annual General Meeting (AGM) will be held annually

All members will be notified in writing at least 3 weeks before the date of meeting, giving the venue, date & time.

Nominations for the Committee may be made to the Secretary before the meeting, or at the meeting.

The quorum for the AGM will be 10% of the membership or 15 members, whichever is the greater number.

At the AGM:

- a) The committee will present a report of the work of Shisong Water Catchment Association
- b) The Committee will present the accounts of Shisong Water Catchment Association for the previous year
- c) The officers and Committee for the next year will be elected
- d) Any proposals given to the Secretary at least 7 days in advance of the meeting will be discussed.

#### **Article 7: SPECIAL GENERAL MEETINGS**

The Secretary will call a special General meeting at the request of the majority of the committee or if at least 10 other members gives a written request to the chair or secretary, staling the reason for their request:

The meeting will take place within 21days of the request.

All members will be given two weeks notice of such a meeting, giving the venue, date, time and agenda, and notice maybe be telephone, letter or radio.

The quorum for the special general meeting will be 10% of the membership or 10 members, whichever is the greater number.

#### **Article 8: GENERAL MEETINGS**

General Meetings are mandatory for all committee members unless and a suitable excuse is submitted one week prior to the meeting.

General meetings are opened to all members and will be held at least once 4very 3 months or more often if necessary.

All members will be given one weeks notice of such a meeting, giving the venue, date, time and agenda, and notice may be by telephone or letter.

The quorum for a general meeting shall be 100% of the Committee unless prior excuse has been given. And 10% of the membership or whichever is the greater number.

#### Article 9: RULES OF PROCEDURE FOR MEETINGS

All questions that arise at any meeting will be discussed openly and the meeting will seek to find general agreement that everyone present can agree to.

If a consensus cannot be reached a vote will be taken and a decision will be made by a simple majority of members present. If the numbers of voters cast on each side are equal, the Chair of the meeting shall have an additional casting vote.

#### **Article 10: FINANCE**

An account will be maintained on behalf of the Association at a bank agreed by the committee. There cheque signatories will be nominated by the committee (one to be the treasurer). Any two of these must sign every cheque. The signatories must not be nor numbers of the same household or quarter.

#### 10.1 SOURCE OF FINANCE

The committee shall raise money to manage the science from

- a) Payment of annual rates by water users
- b) Payment of water leviers by defaulters
- c) Payment of private connection fees
- d) Contribution of the village and SHIDA
- e) Grants from government council, NGO's and other friendly donors
- f) Fund raising organized committee

Water funds shall be spent diligently back up receipts in purchases of tools materials and stationery, payment of caretakers, organizing seminars, updating, of water science etc.

#### 10.2 WATER RATES AND LEVIES

a)	Water construction levy stands at Frs. for men and for women
1	Private connection of water shall be through the completion of an application form obtainable from the committee at cost of
	Frs.
c)	The private connection fee stands at Frs.
d)	Maintenance rate per private tap household stands atFrs. per annum
e)	The annual maintenance rate for public tap users stand atFrs. per household.
f)	Private connection fees for establishments and churches and the rate will be determined by the committee.
g)	Latest date of payment of maintenance fees is the 29th December each year.
h)	Private connection of water and water use for other purposes must be through an application and defaulters to this shall pay for the
	evaluated water use and face disconnection until the issue is regularized with the committee. The reconnection fee stands at
	Frs.

#### **Article 11: DISTRIBUTION OF WATER**

The connection standpipes shall be approved by the committee after discussion with Shisong Development Association.

The connection of private taps shall be through application, which must be granted by the committee.

On approval, the applicant shall be responsible to : buy quality material approved by caretakers

The applicant shall dig and back fill the pipeline as pecked by the caretakers

The applicant shall make possible negotiation if he is to connect from a private line.

#### **Article 12: CARETAKERS**

Obligations of caretakers are:

- 1) They shall ensure the smooth functioning of the water scheme
- b) They shall ensure the water flows to all necessary quarters
- c) They shall check the water structures regularly to ensure sustainability
- d) They shall carry out all repairs to the scheme and report repairs that needs other assistance
- e) They shall request for material through a written note to the President
- f) They shall be over seer of the entire scheme and all the taps
- g) They will ensure ration of water in times of water shortage
- h) They shall connect and disconnect water at the other of the Committee
- i) They shall sign a contract of employment with the committee
- i) They shall keep records of all observations and breakdowns in the logbook
- k) They shall record all activities and sign in the logbook
- l) They shall wash the storage tank and catchments twice every year
- m) They shall make reports to the Committee and must make them available when needed
- n) They shall demarcate the pipeline
- o) They shall receive\_\_\_\_\_ Frs. for private connections from the applicant
- p) They shall attend seminars attend seminars and cooperate with other schemes caretakers

#### **Article 13: TAP REPRESENTATIVES AND USERS**

Obligation for:

- a) Tap representatives shall be elected for a period of one year renewable twice by the tap users
- b) Tap representatives shall conduct tap meetings and ensure their smooth functioning
- c) Tap representatives shall keep a list of all their tap users and financial contributions
- d) Tap representatives shall report to the Committee all defaulters at their tap
- e) Tap representatives shall ensure cleanliness and repairs of their tap
- f) Tap users shall always attend the tap meetings
- g) Tap users shall contribute for the repairs and running of their tap
- h) Tap users shall vote for the their representatives freely

#### **Article 14: MANAGEMENT AND GENERAL SANCTIONS**

Damage caused by any one to the scheme must be paid for and if not; the concerned shall pay plus a fine ranging from Frs. to
Any illegal connection shall carry a fine ofFrs. and disconnection for rectification by the Committee.
Anybody carr6ying water from a tap to mould brick, gardening or any commercial activity without authority shall face a fine ofFrs.
Defaulters to pay water maintenance rate shall be deprived of water until they pay
Defaulters during communal work shall pay a fine from to FRS
Anyone who embezzles or mismanages water funds shall repay all missing funds and pay a fine

#### **Article 15: AMENDMENTS TO THE CONSTITUTION**

Amendments to the constitution may only be made at the Annual General Meeting or a special General Meeting

Any proposal to amend the constitution will require two thirds majority of those present and entitled to vote.

#### **Article 16: DISSOLUTION**

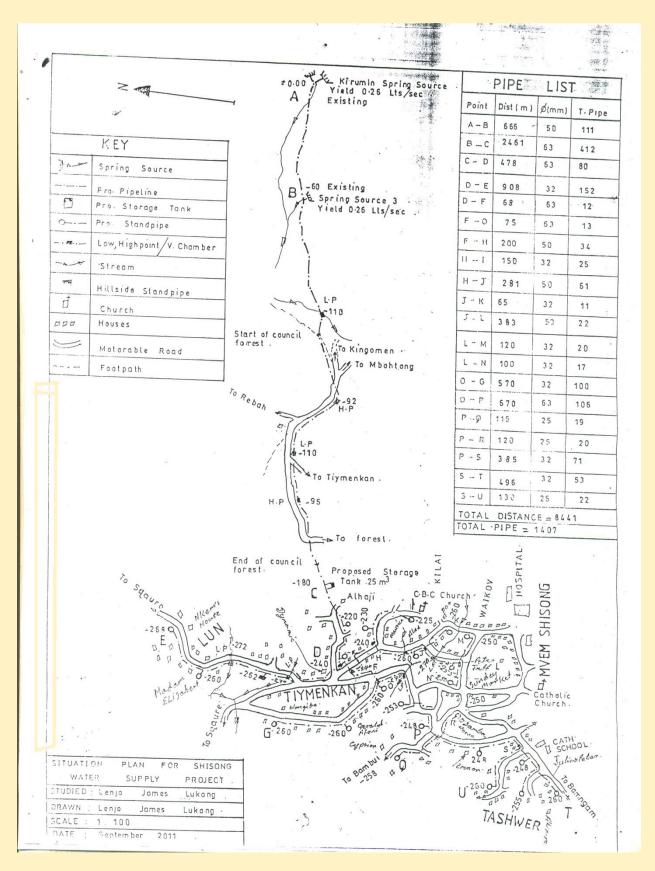
If a meeting, by 2/3 majority decides that it is necessary to close down the Association it may call a Special General Meeting to do so. The sole business of this meeting will be to dissolve the Association.

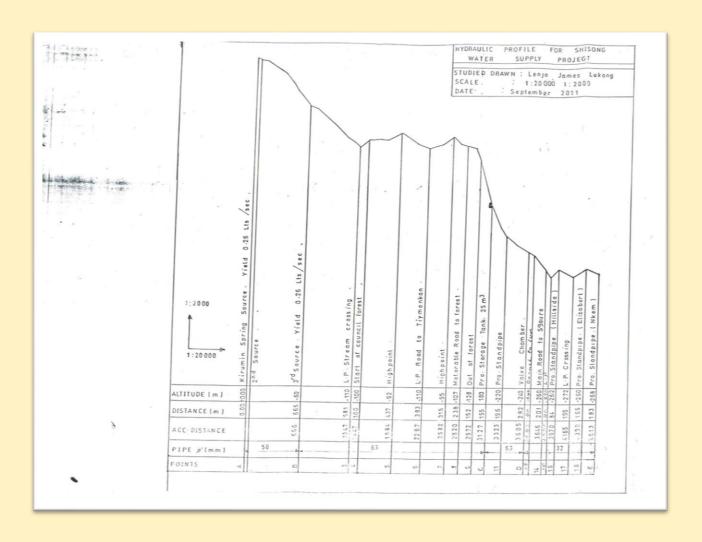
If it is agreed to dissolve the Association, all remaining money and other assets, once outstanding debts have been paid, will be donated to local charitable organization.

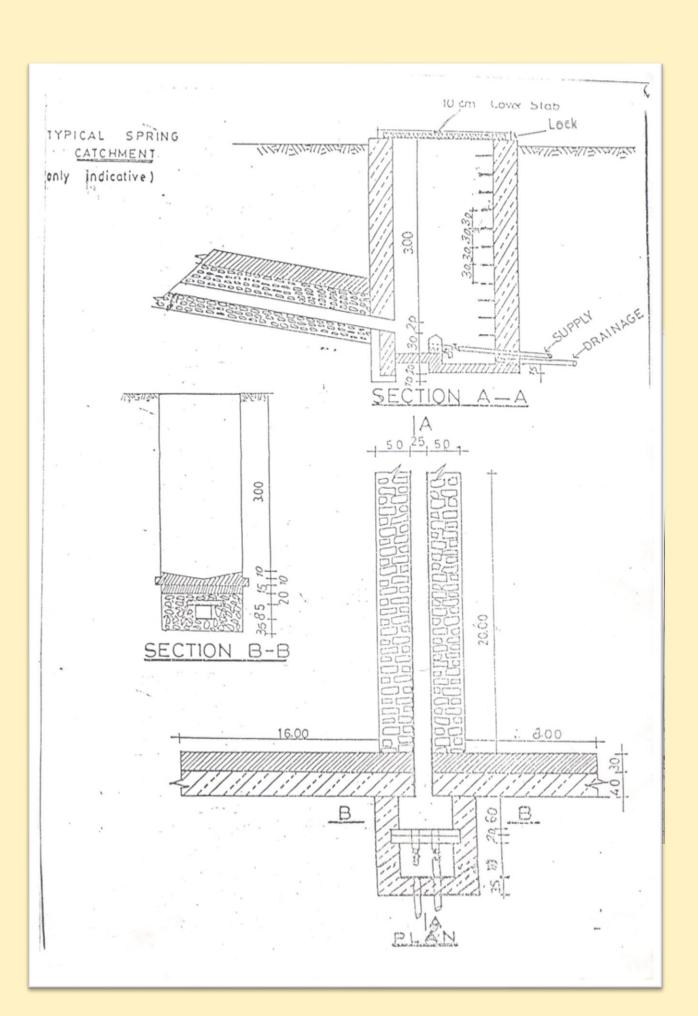
This constitution was agreed at the Inaugural General Meeting of the Shisong Water Association.

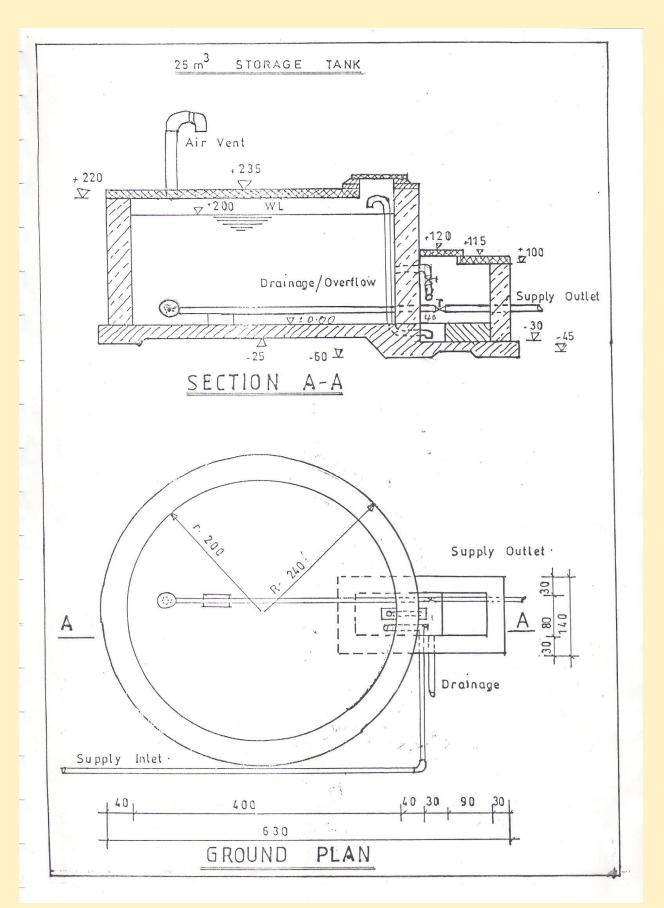
# **ANNEXES**

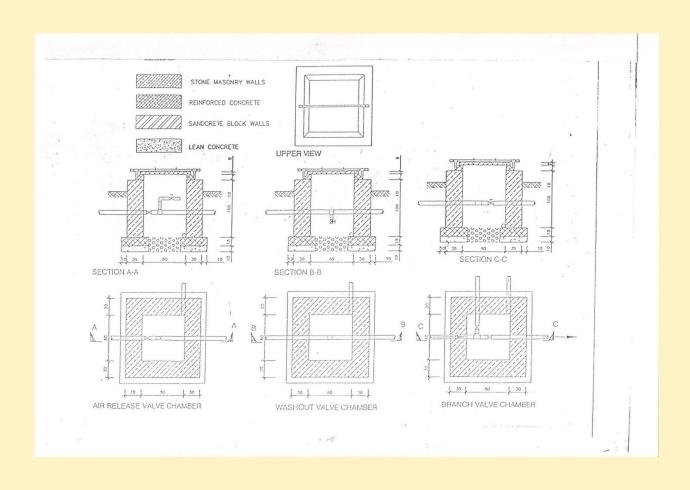
-	Page	16	Situation plan
-	Page	17	Hydraulic Profile
-	Page	18	Construction Plan
-	Page	19	Spring Catchment
-	Page	20	25m³ storage tank
-	Page	21	Low/High Point Chamber
-	Page	22	Valve Chamber
-	Page	23	Standpipe Plan

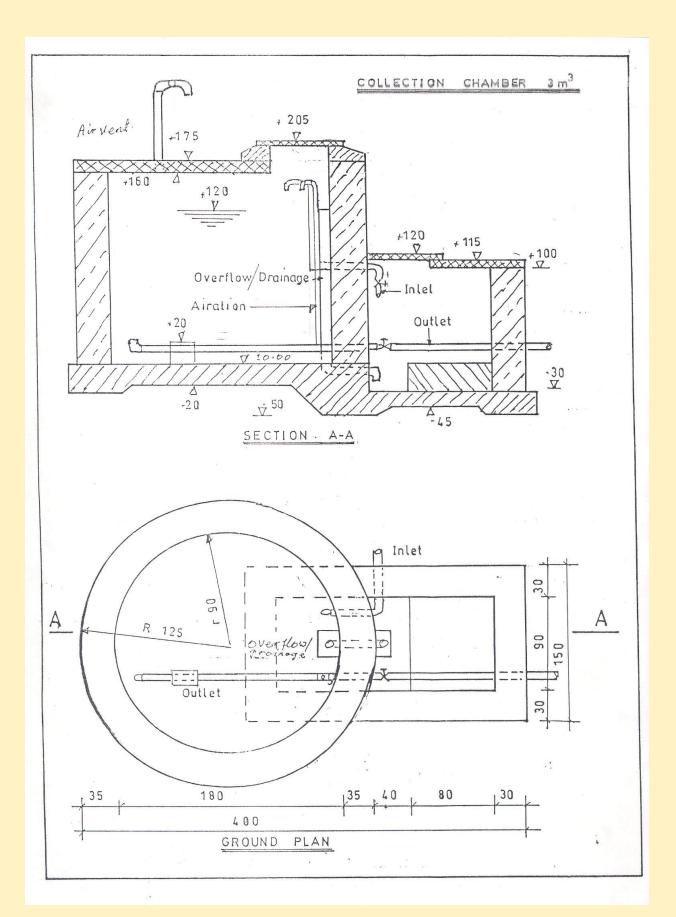


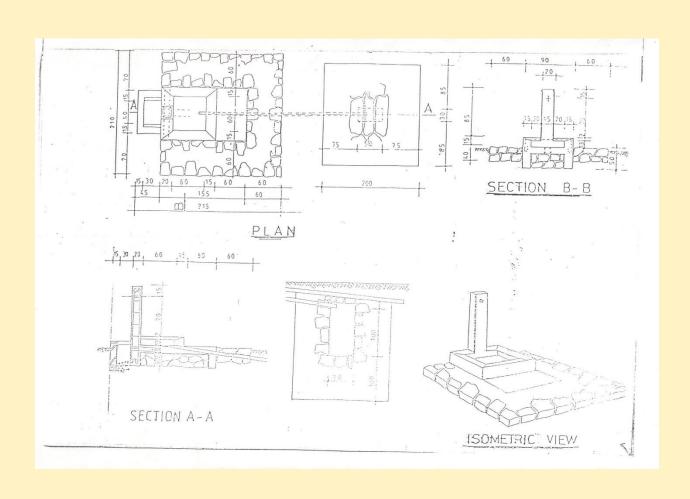












## Other photos



