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1. BACKGROUND

With the support from SPOT-Tanzania, CHAMAVITA has implemented the planned improvement of the water system in the two villages of Nkelei and Goka. The overall objective of the improvement was to improve the availability of regular supply of water in the area. The type of improvement required was identified in year 2012. Since then further other break downs have occurred .
This report covers the overall achievement of the improvement with physical and financial summary.

In year 2012 CHAMAVITA identified the following to be reconstructed

No.	Village		Improvement required	Quantity
1.	Goka	1.1	Re-construction of air valve and air valve chambers	2
		1.2	Re-construction of washouts and washout chambers	2
		1.3	Re-construction of pipeline (distribution)	
2.	Nkelei	2.1	Re-construction of standpipes and washing tables and gate valves	3
		2.2	Re-construction of new air valve and its chamber	1
		2.3	Re-construction of washout and its chamber	1
		2.4	Re-construction of a Break Pressure Tank (BPT)	1
		2.5	Re -construction of some pipeline	

2. PROJECT OBJECTIVES

The overall objective of the project was to improve the water supply at the water points in the two villages by improving the above parts of the pipeline system.

3. PROJECT LOCATION

The project site is part of the big Rangwi Water Supply Scheme covering 5 villages (Karumele and Mamboleo in Mbaru ward; Nkelei, Emao and Goka in Rangwi ward).
The Rangwi water supply scheme can be reached by two all weather roads: The Lukozi – Manolo – Nkelei and the Lukozi – Malindi – Emao – Nkelei each about 30 km long

4. SOCIO-ECONOMIC SITUTAION

The settlements in the two villages are scattered. The Nkelei village has a population (2012 National Census) of 2,428 people (502 households) while Goka has 2,030 people (433 households).
The livelihood of the people in the two villages depend on agriculture, especially along the valleys. Goka has two primary and one secondary schools while Nkelei has only a primary school. The two villages do not have electricity, some people have solar panels to light their houses. The people are either Muslims or Christians. They use the open market at Emao on Saturday. Through Nkelei 6 (of 65 passengers each) buses ply between Mtae and Arusha or Dar. The Goka accesses transport at Emao.

5. DRINKING WATER SITUATION BEFORE THE IMPROVEMENT

The condition of the water supply in the two villages before the improvement was not good .

The big tank (225 m^3) at Emao village receives water from two different sources (and hence from two transmission lines, a 6" ductile pipe built in the 70s and a 90mm (3") PVC built by CHAMAVITA in 2012.



The Goka village has tapped (on the 6" pipeline) at 6 points on the mainline for distributions to 6 water points. From these points are connected private connections (illustration below)



Of the 6 water points (DPs) only one is functioning. Tapping water before it reaches the tank has resulted into reducing the flow into the tank





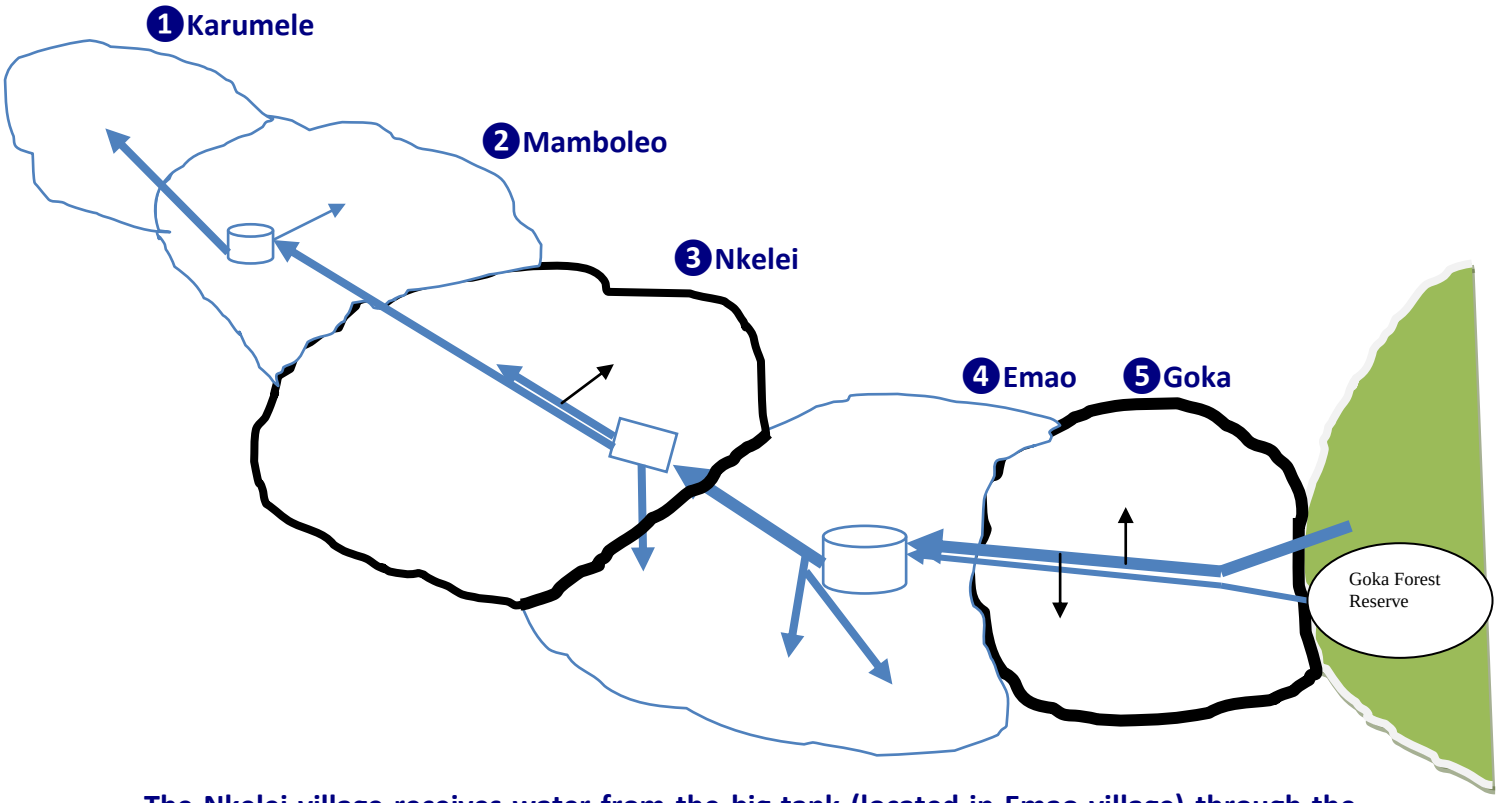
Function DP **Abandoned DP**

Most of the people are having private connections. It is estimated that there are between 72 and 135 private connections in the village. The blockage of the water flow in the pipeline (due to silt or air locks) and the private connections tapped on the mainline have caused the water not being able to reach the tank. That is the big tank now receives water from the 3” PVC pipe only.

The 3” pipeline is also not well attended. It has some breakdowns


Heavy leakage

Sketch of the Rangwi Water Supply Scheme



The Nkelei village receives water from the big tank (located in Emao village) through the distribution point (rectangular box in the sketch above). Unfortunately there are 4 public water points (DPs) and 21 private connections (within the Emao village) between the tank and the distribution point (see sketch above).



This situation reduces the amount of water earmarked for Nkelei. The mainline from the distribution point to Nkeli is a 3" pipe. There 5 washing tables and 8 domestic points within the village. The galvanized pipeline crossing the valley is rusted, damaged during cultivation and hence leaking all the time.

Most of the standpipe constructions are damaged. There are no taps. In some areas there are no distribution pipes.

6. ACHIEVEMENT OF THE PROJECT

In Goka we have constructed only 3 washouts and 2 air valves and repaired the leakages.
In Nkelei we have reconstructed one big BPT;



6 DPs and one washing tables.



We have replaced 20 old galvanized with 20 new HDPE pipes crossing the valleys.





We have reconstructed 5 distribution lines of a total length of 675m

However, for a total improvement of the water supply system in the village it is required to reconstruct the remaining 3 water points (DPs and Washing tables) (were not part of the just completed project) and their related distribution lines and to address the problem caused by the 4 water points and 21 private connection between the big tank and the distribution box.

6.1. FUNCTIONING OF WATER SCHEME COMMITTEE

The Rangwi scheme is run by a Water Board established in 2008 called ENGOMAKA (E =Emao, N = Nkelei, GO =Goka, MA =Mamboleo, and KA =Karumele). This board has been in power since that time. The Secretary of the board is collecting water fees from users, especially, from private connections. He is the one who decides where to use the collected revenue. There have been no management meetings to discuss the problems facing the scheme. In principle there 6 scheme attendants for the Rangwi scheme. Three are in Mamboleo and Karumele. Thre is one in Nkelei, one in Emao and one in Goka. That of Emao is very weak, he's no longer working. That of Nkelei is also weak but can manage small repairs. That of Goka is an old man and not able to carry heavy works. There are no plans to replace them because the collected money is not used to improve the scheme but only for minor repairs, especially to private lines. Hopefully, within this October there will be a re-election of the new board. Things might improve.

7. PROJECT COST

Budget Item	Estimated Project Cost (Tshs)	Actual Project Cost (Tshs)	Remarks
Nkelei Village Water supply Improvement			
Community contribution(in kind)- digging trenches, unskilled labor, collecting stones	6,844,000.00	**7,420,000.00**	
Donor contribution: purchase of construction materials: cement, sand, aggregates, reinforcement bars, etc Payment for supervision, fuel, skilled labour, etc			576,000.00 as contribution of community and Chamavita.
Chamavita contribution: car and motorcycles for transport within the project area			

Some Glimpses of Goka and Nkelei Village Water Supply Improvement




New standpipe
Old stand pipe


Pipeline without pillar supports


Constructed pillar supports


New air vlve
Old air valve


Washout