



# LAMPATE DRINKING WATER SUPPLY PROGRAM

## Completion Report

AAN

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## 1. Introduction

Nepal is rich in natural resources and second largest in terms of water potential. There are several mountains, rivers and underground water as main sources of water. However difficult terrain, disperse settlement and topography makes it hard for many villages for access to drinking. According to Government of Nepal economic survey's report 2075/2076 (2019 AD), only 88% of the population have access to drinking water. The flow of water from source to village household requires proper infrastructure development.

Lampate village lies at ward no.1 of Dupcheswor rural municipality, Nuwakot district, Province no.3. The village lies inside Langtang National park bordering to Rasuwa district. The coordinates of village are 27°59'9.54"N and 85°25'19.62"E.

Lampate village is isolated as there is no access to transportation, electricity, health centers and schools. The nearest school and health center are around 2.5 hours walk for the villagers. The economic situation of villagers is worse as there are no jobs for any of them. For livelihood, few of the villager's herd sheep and goats, make local cheese. Maize, barley, mustard and potatoes are the only crops which is not even sufficient to feed their families. Only Sherpas and Tamang live in village. Health and hygiene are very bad of all the people. There are no toilets at all in the village and it seems no one take care of their hygiene. Almost all the students drop out at an early age of 10-12 years. In short it is one of the most remote places in country.

## 2. Feasibility study and survey

AAN team visited the project location as recommended by Dupcheswor Rural Municipality. It was found that the community had no access to transportation and electricity. Surveyors had to walk around 1 km vertical way and 5.5 km distance uphill from nearest road (Kudum village). The existing source of water found to be around 1.3 km away from nearest household with 100m vertical height. The discharge 57.6 ml/s. Hence, It is technically feasible to built a proper intake at source, an reservoir tank and distribution through pipelines. After conversation to executives of Dupcheshwor municipality, they encouraged our team to start the project as soon as possible

## 3. Design of drinking water supply

During design and estimation of the project, supply of the system was designed as shown in figure below. RVT stands for reservoir tank initially designed as ferrocement tank of 7000 liters capacity. The red lines are the pipelines through which water will be distributed from source to RVT to H1 (house 1), H2....H10. At each house a water tap will be constructed.

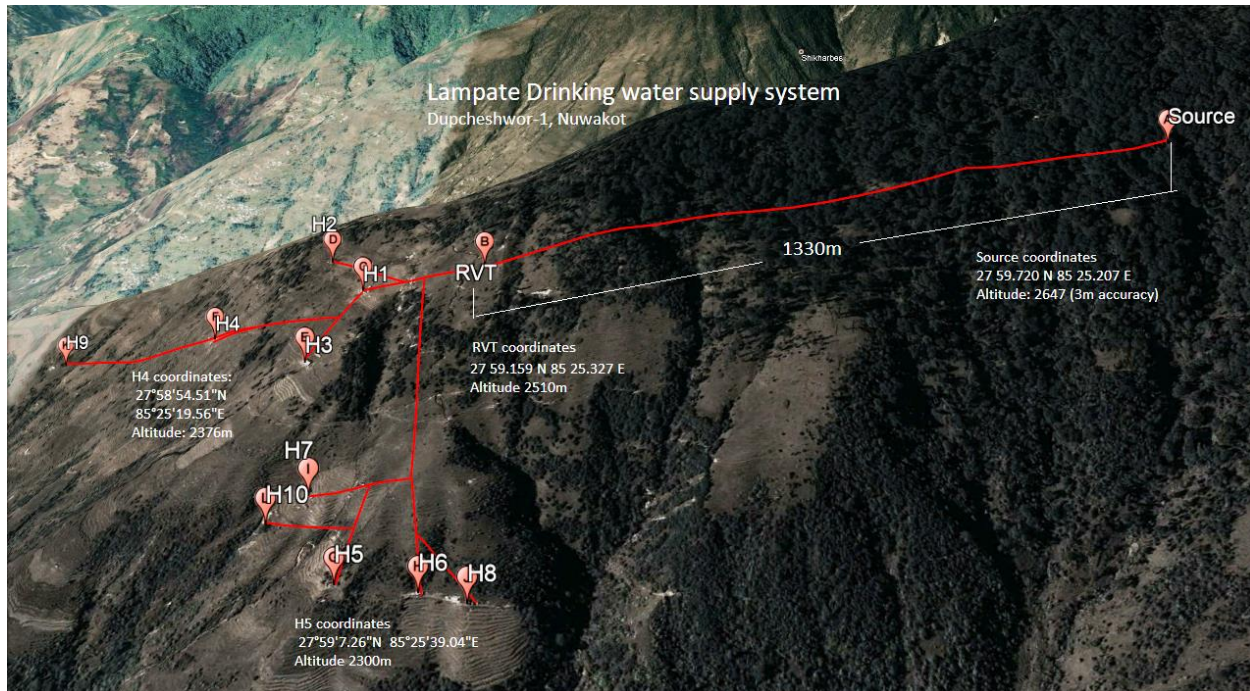


Figure 1: design of water supply system

#### 4. Implementation of drinking water system

There were major changes during implementation/construction of system. Ferrocement reservoir tank were replaced by PVC Tank of 5000 liters capacity. Four small tanks of 300 liters were added were required. The reason for choosing PVC tank was due to the transportation of raw materials required. Iron bars and cement estimated for construction of ferrocement tank would require a lot of time and manpower as they had to be carried out 4 hours uphill walk. A man could only transport a bag of 50 kilogram cement a day. Following are details of the construction activities

##### Intake

At source, small collection tank has been constructed which can collect up to 500 liters. Near intake, PVC tank of 300 liters were placed as secondary tank. Small pond was also built for animals to drink water. A 32 mm pipes were used for flow of water to Reservoir tank. The total length of pipes used from source to RVT was 1750 meter.





Figure 2: Intake works





#### 4.1 Reservoir Tank

RVT of 5000 liters has been situated at a point which is near to the house that is at the highest altitude. As the village lies at altitude where fog, frost and sun could easily damage RVT, we build a house of stones and cement around the tank to protect it from wearing and tearing.



Figure 3: RVT works

#### 4.2 Distribution and pipelines

Three different sizes of pipelines were used for distribution of water. From source to RVT, pipeline of size 32mm were used. For distribution from RVT to houses, 25mm and 20mm of pipe were used. 1800 meters of 32mm, 1600 meters of 25mm and 900m of 20mm pipes were used. A total of 4300m PVC pipes were used. In addition to design of system as shown in figure 1, two separate back up intakes were constructed for (h5,h6, h8) and (h3,h4) respectively. Hence 3 intakes, 1 RVT and 4 small storage tanks were used with 4300m pipes and 9 taps were used in completion of drinking water supply program.





Under construction of intake for h5,h6 and h8



Digging works for pipelines



Under construction of intake for h3 and h4



Figure 4: Distribution of pipelines



#### 4.4 Construction of taps

8 household have water taps on their houses and 1 public tap for visitors and tourist were constructed.



Figure 5: Construction of tap stand



## 5. Outcome of program


1. All the household now have a tap at their houses. Women and children are no longer forced to walk for water and store water at buckets. This will definitely make huge impact on their life, health and hygiene.
2. Villagers were completely depended on rain-fed crops such as maize, barley etc. With water easily available, villagers can now grow vegetables at their farm. In fact, most of the villagers have developed a system to use waste water from taps towards their kitchen garden.
3. Livestock and agriculture are only sources of income for villagers. Water are also very important for cattles.



Figure 6: Usage of water


## 6. Beneficiaries Detail

Lamapate village consists of 9 households. Among them 2 household shared a tap and 1 tap was built for public and tourists. Toal population of village is 47. Below in table details of each household in given.


<b>Recipient No.</b>	1			
<b>Name</b>	Pasang Gyalbu Sherpa			
<b>Date Of Birth</b>	2044-12-20			
<b>Citizenship No.</b>	251018/83			
<b>Permanent Address</b>	Nuwakot/ Dupcheswor/Lampate/01			
<b>Marital Status</b>	Married			
<b>Family Type</b>	Nuclear	<b>No. of Family Member</b>	8	
<b>No. of Kids</b>	06			
<b>Telephone No.</b>	9808687584			
<b>Children Information</b>				
<b>Name</b>	<b>Age</b>	<b>Name of School</b>	<b>Grade</b>	
Nema Wangdi Sherpa	18	-	-	
Phurpa Wankel Sherpa	16	-	-	
Nema Singi Sherpa	13	Shree Ghyangfedi Secondary School	4	
Mingmar Gyalbu Sherpa	12	Shree Gyangfedi Secondary School	3	
Pasang Lamu Sherpa	4	-	-	
Milan Sherpa	18 month	-	-	
<b>Main Source of Economy</b>	Agriculture , Live stock and seasonal labour		<b>Job Status</b>	Yes
<b>Job Position</b>	-		<b>Documents Included</b>	
<b>Monthly Family Average Income</b>	NRs 6,000			Citizenship Card








Recipient No.	2			
Name	Irman Tamang			
Date Of Birth	2038-05-09			
Citizenship No.	98284			
Permanent Address	Nuwakot/ Dupcheswor/Lampate/01			
Marital Status	Married			
Family Type	Joint	No. of Family Member	7	
No. of Kids	5			
Telephone No.	-			
Children Information				
Name	Age	Name of School	Grade	
Laxmi Tamang	13	-	-	
Kusum Tamang	11	-	-	
Kamang Singh Tamang	9	-	-	
Sukumaya Tamang	5	-	-	
Pasang Tamang	3	-	-	
Main Source of Economy	Agriculture and livestock	Job Status	No	
Job Position	-	Documents Included	Citizenship Card	
Monthly Family Average Income	NRs 10,000			




<b>Recipient No.</b>	3			
<b>Name</b>	Sancha Bahadur Tamang			
<b>Date Of Birth</b>	2031-9-2			
<b>Citizenship No.</b>	706213			
<b>Permanent Address</b>	Nuwakot/ Dupcheswor/Lampate/01			
<b>Marital Status</b>	Married			
<b>Family Type</b>	Nuclear	<b>No. of Family Member</b>	7	
<b>No. of Kids</b>	06			
<b>Telephone No.</b>	9808880339			
<b>Children Information</b>				
<b>Name</b>	<b>Age</b>	<b>Name of School</b>	<b>Grade</b>	
Ram Bahadur Tamang	20	-	-	
Dawa Chiring Tamang	17	-	-	
Bir Bahadur Tamang	15	-	-	
Man Singh Tamang	8	Aadar Shastha Ma.Wi	4	
Somar Singh Tamang	5	-	-	
Marmi Tamang	9	Aadar Shastha Ma.Wi	5	
<b>Main Source of Economy</b>	Agriculture		<b>Job Status</b>	No
<b>Job Position</b>	-		<b>Documents Included</b>	
<b>Monthly Family Average Income</b>	NRs 8,000			Citizenship Card






Recipient No.	4			
Name	Ram Sherpa			
Date Of Birth	2016-1-1			
Citizenship No.	14124			
Permanent Address	Nuwakot/ Dupcheswor/Lampate/01			
Marital Status	Married			
Family Type	Nuclear	No. of Family Member	3	
No. of Kids	1			
Telephone No.	9818387155			
<b>Children Information</b>				
Name	Age	Name of School	Grade	
Furbiki Sherpa	25	-	-	
Main Source of Economy	Agriculture and Live Stock	Job Status	Yes	
Job Position	-	Documents Included		
Monthly Family Average Income	NRs 5,000		Citizenship Card	
				

Recipient No.	5			
Name	Chosang Sherpa			
Date Of Birth	2014-7-20			
Citizenship No.	3760			
Permanent Address	Nuwakot/ Dupcheswor/Lampate/01			
Marital Status	Married			
Family Type	Joint	No. of Family Member	08	
No. of Kids	06			
Telephone No.	9611098447			
Children Information				
Name	Age	Name of School	Grade	
Phurpa Nema Sherpa	39	-	-	
Karsamu Shepa	31	-	-	
Ghurmi Sherpa	29	-	-	
Tenjin Sherpa	22	-	-	
Yangzeng Sherpa	21	-	-	
Tiquemi Sherpa	16	-	-	
Main Source of Economy	Agriculture , Live stock and seasonal labour		Job Status	Yes
Job Position	-		Documents Included	
Monthly Family Average Income	NRs 4,000			Citizenship Card











Recipient No.	6			
Name	Nema Chiring Tamang			
Date Of Birth	2048-10-8			
Citizenship No.	25-02-73-00850			
Permanent Address	Nuwakot/ Dupcheswor/Lampate/01			
Marital Status	Unmarried			
Family Type	Nuclear	No. of Family Member	6	
No. of Kids	0			
Telephone No.	9823815854			
<b>Children Information</b>				
Name	Age	Name of School	Grade	
Ful Maya Tamang	9	Katunji Ma.Wi	2	
Main Source of Economy	Agriculture , Live stock and seasonal labour	Job Status	Yes	
Job Position	-	Documents Included		
Monthly Family Average Income	NRs 3,000		Citizenship Card	
				



Recipient No.	7			
Name	Bir Bahadur Tamang			
Date Of Birth	2008-1-20			
Citizenship No.	3292			
Permanent Address	Nuwakot/ Dupcheswor/Lampate/01			
Marital Status	Unmarried			
Family Type	Nuclear	No. of Family Member	3	
No. of Kids	1			
Telephone No.	-			
<b>Children Information</b>				
Name	Age	Name of School	Grade	
Main Source of Economy	Agriculture	Job Status	Yes	
Job Position	-	Documents Included		
Monthly Family Average Income	NRs 5,000		Citizenship Card	



<b>Recipient No.</b>	8			
<b>Name</b>	Padindu Sherpa			
<b>Date Of Birth</b>	2059-12-3			
<b>Citizenship No.</b>	-			
<b>Permanent Address</b>	Nuwakot/ Dupcheswor/Lampate/01			
<b>Marital Status</b>	Married			
<b>Family Type</b>	Nuclear	<b>No. of Family Member</b>	2	
<b>No. of Kids</b>	0			
<b>Telephone No.</b>	9843384295			
<b>Children Information</b>				
<b>Name</b>	<b>Age</b>	<b>Name of School</b>	<b>Grade</b>	
<b>Main Source of Economy</b>	Agriculture	<b>Job Status</b>	Yes	
<b>Job Position</b>	-	<b>Documents Included</b>		
<b>Monthly Family Average Income</b>	NRs 3,000		Birth Certificates	
 				



## 7. Financial Report

This project have been funded bu Stichting Project Nepal ([www.angelnepal.nl](http://www.angelnepal.nl)) . Since 2002, Stichting Project Nepal have been helping people of Nepal. All Angels Nepal is vey thankful to people of the Netherlands for their support to poorest of Nepal.

### Summary of Income

Date	Amount (Euros)	Amount (NPR)
5/7/2019	7225	891755

### Summary of Expenses

S.N	Particulars	Amount (NPR)
1	Construction Materials (cement, pipes, tank, CGI sheet, fittings)	646279
2	Labour and Mason works	75000
3	Transportation, fuel and bike repair	95245
4	Travelling and accommodation expenses	70000
5	First Aid and Medicines	4500
	Total	891024

## Photographs



Clothes distributed to villagers made at AAN and sent by Dutch people



Preparation of lunch at working site







Cement transport



Construction of safe house for RVT



Storage of goods at Gyangfedi. From this point, goods have to be carried by villagers.



House used by AAN officials





Transportation of goods







Cattles grazing



Farm and household





Handover to villagers. This is a public tap