Lamjura Water Supply Project

HCDO-Project Committee Serial Number 002
Kathmandu November 2004

PROJECT PROPOSAL

Project Site

Solu-Khumbu District, Sagar-Bakanje V.D.C., Ward no 3, Lamjura

Preface

Lamjura Pass is an important traffical point on the road between Jiri – Junbesi – Namche. It is the high Pass on the way (3.660 m), where many porters, locals and tourists are passing.

2,5 km before the Pass are 3 lodges and in the very Pass 2 lodges accommodating the wayfarers with meals, refreshments and bed for the night.

As Lamjura is situated very high on the ridge there is no natural water source close to about Lamjura. The lodges are taking the water from the stream twenty minutes below the village, carrying it up and filing it into individual water tanks in each lodge, by themselves or by employed porters.

In November 29, 2003 an application from Lamjura Water Supply Committee were send for HCDO applying for support to establish water supply. But due to lack of efficiency at HCDO, this report was not worked with before one year later. (see appendix by end of this Proposal).

In spring 2004 the New Lodge belonging to Sonam Sherpa close to the Pass bought a water pipe on 200 meters length to supply the lodge from a small stream on the North East side of the Pass. He bought this pipe with a Micro-loan from Himalayan Project.

The stream has a size equivalent to 800 mm tube and the inlet of the water pipe is placed in 14400 feet height. From here the water pipe is running for 2000m for the New Lodge in West side of the Pass which is in 13420 feet again from here 10 years old water pipe is running 2500 meter for the main village of Lamjura, which is in the 12900 feet. The capacity of this pipe is low as only 20mm pipe is used.

In late Autumn, Winter, early Spring the temperature goes below freezing point leading to a risk of freeze blowing of the pipes and other equipment containing water. The villagers suppose that digging 30cm under surface with covering by natural insulation of grass and sticks will be enough to prevent freezing. The heights are measured by arm wrist altimeter, which means that the measurements are not precise. And the measure of the intake from the stream is measured from a previous location. Since then the source has shifted but estimated as the same altitude, but not accurate.

On 2nd November 2004 the three villagers Sonam Sherpa, Ngawang Samden Lama and Domi Sherpa applied Himalayan Project, by Chairman Kurt Lomborg, Denmark, to support establishing a more durable water supply of Lamjura. The project was discussed and it was decided that Kurt Lomborg should investigate for the project when returning for Kathmandu.

Discussion

At the moment two to three porters are employed to carry up water from the stream below the village. Their Salary is only accommodation and food. By asking one of the porters he said he would be happy not to do this work any longer. He would find a better life in lower altitude.

It seems like Sonam Sherpa was a little rushing when he bought his personal pipeline. He should already at that time have pushed to HCDO for a decision. But now the villagers will anyway buy his pipe for a little reduced price so his loss will not be big. But on the other hand this will force the villagers to use the 20mm pipe for the three lodges in the village instead of having a 30mm pipe for their supply. This should be considered.

The main problem of the project is the low temperature at wintertime. When the pipe is digged down it will be difficult to make repair if freeze blowing occur. Also method of repair shall be considered. People with experience in water pipe and high altitude should be consulted.

All expenses from water tanks to each lodge shall be by their own means.

The villagers are saving a lot of time and money not to have the water carried up anymore therefore they should contribute substantially. And also they should contribute substantially because this project is a little risky due to the freeze blowing problematic so they will not be careless in the preparation work.

As HCDO already have supported this project with a personal Microloan for Sonam Sherpa, this loan should becleared before the project can run, by repayment or a firm and strict agreement. The loan was given with 27.000 Rs on 3. December 2003. Per 3. December 2004 it has been added interest per agreement on 5.670 Rs.

District Water Supply Office, Solu-Khumbu, Salleri provide logistic support and also financial support for pipes and transportation. They should be consulted by the Lamjura Water Supply Committee for any kind of support, before HCDO can decide about their support.

Project details

A) At water intake in 14400 meter on North West side of Lamjura Pass a 300 liter Dam tank will be digged down in the stream, in which the intake of the pipe shall be submerged.

B) A 25/32mm source water pipe shall be digged at least 35cm under the surface covered with branches and sticks from the small bushes in the surroundings. As the pipe can't go directly between the intake and the first lodge at the Pass, but has to bend around the rocks and other obstacles it has to have a length on 2000 meter. The pipe is delivered in 100 meter rolls (or 50 m) and has to be connected by sockets for straight connection, or by elbow for a bend connection.

C) In the scree above the New Lodge West and just beneath the Pass in 13420 feet a 500-liter reservoir tank shall be digged down, in such a way that the top of the tank is 35 cm under surface. Here the source water pipe will end.

D) The overflow from reservoir tank will be lead away by watertight connection to a tube big enough and connected tight enough to make sure that no water will collect around and under the reservoir tank. For extra security a tube shall lead eventual overflow away from the bottom of the hole in which the tank are situated. This can be done by 110 mm PVC tube.

E) From the outlet hole of the reservoir tank, a tube will lead will lead to a Circular Box with three outlets, one for each of the two lodge in the Pass, and one for a 20mm pipe

leading to the village of Lamjura. Also this pipe will be digged down at least 35cm covered with insulation materials and bending around rocks and others for 2500 meters.

F) In the scree above Lamjura village another reservoir tank will be digged down as mentioned in C) and D).

G) Like in E) the tube from outlet will lead to a Circular Box with 3 outlets, to which the three lodges of the Lamjura can connect.

Materials

Sanjay Rajesh Hardware, Mitrapark, Kathmandu, POB 11118, 4481092

300-liter dam tank: Nepali standard quality plastic - Weight: 9,2 kg - Price: 1,800 NRS

500-liter reservoir tank: Nepali standard plastic – Weight: 18,5 kg – Price: 3,000 NRS

30mm water pipe: HTP-pipe, heavy, 10 kg pressure – in 50 / 100 meter rolls

Size (inside/outside):	25/32 mm	32/40 mm	40/50 mm
Weight per meter:	334 gram	514 gram	800 gram
Price per meter:	54,5 NRS	84,5 NRS	130,0 NRS

Connections: all for 25/32 mm galvanized iron

	Socket	Elbow	T-shift
Price per pcs:	23,20 NRS	30,40 NRS	43,20 NRS

Circular box w 3 outlet in LDP (same material as pipe)

Price per pcs: 12,00 NRS

20mm water pipe: Sonam Sherpa will sell the water pipe, which he bought 2004 for the project. And the old pipe can also be used in some places.

110mm tube: PVC-pipe 110mm 6 meter long - Weight: 6 kg – Price: 780 NRS

Water taps: 20 mm metal with nozzle – Price: 110 NRS per piece

All Prices included VAT 10%

Project Budget

EXPENSES:

A)	300 liter dam tank	1,800 NRS
B)	2000 meter 25/32 mm pipe in 100 m rolls	109,000 NRS
	19 Socket connections	440 NRS
	4 Elbow connections (just in case)	122 NRS
C)	500 liter reservoir tank	3,000 NRS
D)	Tube for overflow (6 m 110mm PVC tube)	780 NRS
E)	Circular Box with 3 outlets	12 NRS
	2500-meter 20mm pipe	40,000 NRS
F)	500 liter reservoir tank	3,000 NRS
	Tube for overflow (6 m 110mm PVC tube)	780 NRS
G)	Circular Box with 3 outlets	12 NRS

5 Water Taps		550 NRS
Total for Materials		**159,496 NRS**

Transportation of materials from Kathmandu to Jiri (Lila Sushi, Tel.2040032):

35/32mm water pipe:	668 Kg a 1,2 Rs	800 NRS
300-liter tank:	9 Kg a 1,2 Rs	11 NRS
2 pcs 500-liter tank:	37 Kg a 1,2 Rs	45 NRS
Other equipment:	25 Kg a 1,2 Rs	30 NRS
Handling charge load and unload		500 NRS
Total Truck	**739 Kg a 1.2 NRS**	**1,386 NRS**

Transportation of materials from Jiri or Shivalaya to Lamjura:

30mm water pipe:	668 Kg a 25 Rs	16,700 NRS
300-liter tank:	9 Kg a 25 Rs	225 NRS
2 pcs 500-liter tank:	37 Kg a 25 Rs	925 NRS
Other equipment:	25 Kg a 25 Rs	625 NRS
Total Porter	**739 Kg a 25 Rs**	**18,475 NRS**

Labor of digging down pipe:

5 person 20 days a 150 Rs per day for salary	15,000 NRS
5 person 20 days a 65 Rs per day for food	6,500 NRS
Total Labour	**21,500 NRS**

Total Expenses: 200,857 NRS

INCOME:

Sonam Sherpa	NRS
Lhakpa Sherpa	NRS
Ngawang Samden Lama	NRS
Pemba Sherpa	NRS
Domi Sherpa	NRS
Total Village r contribution:	**NRS**

Selling 10 years old 20 mm water pipe	NRS
Support from District Water Supply Office, Salleri	NRS
Support from Himalayan Project, Denmark	NRS
Support from Sue McConnell, South Africa (not confirmed)	**5.500 NRS**

Total Income: NRS

Recommendation

District Drinking Water Office in Salleri should be consulted for logistic advice and possible financial support.

Per 28. November 2004 this Project Proposal will be send for Lamjura Water Supply Committee for further discussion. Most important is to find the income for the project. The more income can be found locally by the Committee the more possible it will be for HCDO and Himalayan Project to find the rest of sources. It shall be emphasized that the support from the beneficiaries shall be substantial.

After decision by the villagers the Report Proposal shall be sent back for Himalayan Community Development Organization for further discussion or final decision.

After HCDO decision the final project application will again be sent for Lamjura for approval and signature.

Signed by

Kurt Lomborg
Himalayan Project, Denmark
Kathmandu 28. November 2004

Pemba Dorji Sherpa
Himalayan Community Development Organization
Kathmandu 28. November 2004

Appendix:

Minuting Report of Lamjura Water Supply Committee

Todays date 2060 Mangshir 13 (29. November 2003), Committee meeting was held at the Bakanje V.D.C, about the Drinking Water near by Lamjura ward no 3 under the chairmanship of Mr. Sonam Sherpa following committee was formed, following resolution was discussed and the decision was made.

Presence:

1) Sonam Sherpa-Chairman
2) Ngawang Samden Lama -Vice-chairman
3) Pemba Galygen Sherpa-Member
4) Dali Sherpa – Member
5) Maya Sherpa – Member
6) Karma Sherpa – Member
7) Dolma Sherpa – Member
8) Pasang Sherpa - Member
9) Dome Sherpa – Executive Member

Resolution:

1. About drinking water
2. To form a water supply committee near by Lamjura

Resolution 1. When discussing on resolution 1. Realizing that the entire villagers are very much in need of the drinking water the committee decided to put forward for requesting Himalayan Community Development Organization, Kathmandu in providing a Density polyethylene pipe 3,800 meter long and the board passed the resolution.

Resolution 2. When discussing on resolution 2. As mentioned in the resolution.1 under the responsible participants related for nearby Lamjura, a water supply committee was formed and the board passed the resolution.

The water supply committee, Solukhumbu District, Bakanje V.D.C, ward no:3 Lamjura made a decision of the entire details of the tools and materials that will be included for the drinking water supply. And the details are as follows:

1. Pipe 3800 meter 20 mm

2. To construct the Dam tank – Cement 900kg
3. To construct the reservoir tank - Cement 1000kg
4. To construct water tap for each individual house per 200 kg to construct water tap in four places - cement 800 kg.
5. rod needed for 4 water tap 20mm at the rate of 4 meter would be 16 meter and 4 pcs of on and off tap.

We kindly request the concern department to buy all the equipment as mentioned above.

Heights of the water supply Dam – 4100meter
Heights of the water supply location near by Lamjura – 3500 meter
Name of the Dam – Menjung

Signed by Sonam Sherpa, Ngawang Samden Lama and Dome Sherpa