

Easy Access to Sanitation Materials in Rural Nepal

An Evaluation of a SaniMart Pilot Project



By Nepal Water for Health
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1 Summary

The National Census (2001) estimates that sanitation coverage in Nepal is 47%, which means that 12 million people practice open defecation resulting in widespread disease and death. If Nepal is to meet the various national and international targets set for increasing sanitation coverage innovative approaches need to be developed to accelerate coverage.

Nepal Water for Health began piloting a SaniMart approach in Panchawati VDC in Udayapur district in Eastern Nepal in 2003 in partnership with a local NGO, Panchawati Rural Development Center (PRDC). The SaniMart is a small shop located in an accessible bazaar, where all materials required to construct a latrine can be purchased. A trained sanitation promoter staffs the SaniMart and sanitation mistris were trained in surrounding villages.

The pilot was evaluated after 15 months during which time 74 households had purchased materials to construct a latrine and another 75 people had purchased materials to improve or upgrade their existing latrine or water supply systems. These people did not have to make the expensive trip to larger towns to purchase these materials. The latrines constructed through the SaniMart were found to be of high quality, in use, well maintained and clean, the chances of their sustainability high and their cost to NEWAH far lower than in other NEWAH sanitation programmes.

In order to have a greater impact the rate of sale of materials needs to increase and this could be achieved by greater emphasis on social marketing of the SaniMart and the benefits of improved sanitation in the surrounding villages.

2 Introduction

2.1 Background

The National Census (2001) estimated national sanitation coverage in Nepal at 47%. This means that 53% of the population, 12 million people, practice open defecation. At the World Summit on Sustainable Development (2002) Nepal committed to the Millennium Development Goal (MDG) of halving the proportion of people without access to sanitation by 2015. It has been estimated that if this target is to be reached in Nepal *14,000 latrines need to be constructed every month for the next 12 years*¹.

It is clear that if this target is to be reached innovative approaches need to be developed to accelerate sanitation coverage in uncovered areas. One model that has been promoted in developing countries is the SaniMart – a shop where a wide range of sanitation materials and skills area available, including everything needed to construct a household latrine. NEWAH staff visited a SaniMart on a study visit to Southern India and were impressed by what they saw and decided to pilot the approach in Nepal.

¹ Source: WaterAid Nepal, 2004.

2.2 Rationale for a SaniMart Approach

In Nepal there is a wide gap between water coverage and sanitation coverage.

Table 1: Estimated water and sanitation coverage in Nepal

	Sanitation coverage %	Water coverage %	Sanitation gap % (water less sanitation)
Terai	38	89	51
Hills	56	75	19
Mountains	40	72	32
National	48	82	34

Source - Census 2001

This sanitation gap means that many of the 12 million people without access to sanitation live in communities where there is already a drinking water system. Due to the existing access to drinking water government and non-government organizations rarely support sanitation projects in these communities and therefore new approaches are needed to serve these communities with sanitation.

Many of the 12 million people without a toilet are not the poorest of the poor and **do** have the resources to construct a latrine. Over the last decade awareness on the need for improved sanitation has increased and many of these people feel that they should construct latrines. However despite having the resources and the desire to construct latrines many people do not do so. One of the reasons is because the materials required to construct latrines are not available in remote rural areas. Arranging for transportation of sanitation materials to the community is a difficult logistical activity for an individual household to undertake. It involves traveling to a market town, choosing what to buy, carrying materials to a bus and making sure they are transported safely. All this takes time and can involve significant cost in transport, food and an overnight stay, not to mention the income foregone from time away from work. SaniMarts make these materials available at the local level.

2.3 Goal and Objectives

The goal of the pilot was **to increase sanitation coverage in rural areas**. The following objectives were set.

- To pilot a new way of increasing sanitation coverage in rural areas;
- To make sanitation materials available to community people at affordable prices and reduce the burden on rural people purchasing sanitation materials and skills;
- To increase the technical skills for latrine construction available at the community level;
- To reduce the subsidy on NEWAH's sanitation programme and make the sanitation programme more cost effective;

- To improve the sustainability of water supply schemes by making spare parts available at the local level; and
- To create a clean environment in the villages.

2.4 Selection of a Site for the Pilot

The pilot is being implemented in Panchawati VDC in Udayapur district in the Eastern Development Region. The VDC is located 55km from the district headquarters, Gaighat, and there is a dirt road to the area that is only open for a few months of the year. Sanitation materials and spare parts for water supply schemes are not available anywhere in the area – there are no shops selling these materials anywhere nearer than the district headquarters and even there not all materials are available and for some items the nearest shop is in Lahan, 80km away. Trips to these towns incur the cost of travel, food and accommodation, and time that could otherwise have been spent on productive activity.

There are about 1,500 households in the VDC of which 500 are estimated to have a toilet. NEWAH has supported 7 projects in the VDC over the last 5 years, which has raised the coverage to its current level – prior to these projects only a handful of houses had a latrine.

There is a lack of skilled human resource in the areas of the VDC where the NEWAH projects have not reached – both mistris with knowledge of latrine construction and sanitation promoters.

NEWAH's long-term partner organisation, Panchawati Gramin Bikas Kendra (PRDC), is based in the area and has the capacity to run the programme with little NEWAH support.

2.5 A pilot for Learning

NEWAH considers this project to be a learning experience. The project was designed as a pilot to be monitored on a regular basis and changes made to the process as required. The pilot would be evaluated after 15 months and the findings would be shared throughout NEWAH. If successful the model may be replicated in other regions.

3 Methodology

The evaluation was carried out in May 2004. The study was carried out using a simple questionnaire administered to households who had built a latrine from the SaniMart (6 households) and households without a latrine (5 households). In addition, visits were made to more than 30 households who had constructed latrines using materials purchased from the SaniMart to observe the status and cleanliness of the latrines. Discussions were held with key informants including the SaniMart staff, PRDC members, and the ex-VDC chairperson.

4 Processes followed in the Pilot

4.1 SaniMart Working Processes

NEWAH ERO and PRDC began working on the SaniMart concept in February 2003. Discussions were held between NEWAH and PRDC to clarify the SaniMart concept and consider its feasibility. The concept was then shared with a few potential users. Both PRDC and the users were confident that the concept would be successful and the following steps were followed.

- Formation of a sub-committee within PRDC to focus on this programme.
- The sub-committee selected a local person, Mr Krishna Kumar Giri, for the role of the SaniMart sanitation promoter.
- The sanitation promoter is paid Nrs 1,000 per month – for this he must open the office for a minimum of 2 hours per day. He is also given Nrs 50 for every latrine that is built with his support and subsequently used.
- The sub-committee selected the location for the SaniMart on the basis of accessibility for the greatest number of surrounding villages. A small market called Nepaltar bazaar was chosen. People from the surrounding villages often visit the bazaar for medicine, to go to the VDC office or bank and to access other services. The SaniMart was named Panchawati Sanitation Promotion Center.

Panchawati Sanitation Promotion Center



- A small room was rented in Nepaltar bazaar to house the SaniMart. It has been furnished with 2 racks (new) and 1 chair (from PRDC office). The office rent is Nrs 500 per month and is paid for by NEWAH. The SaniMart is open for two hours in the morning and two hours in the evening and all day on a bazaar day.
- Sanitation mason training was provided for 7 people (3 women and 4 men) from the surrounding villages who now act as sanitation mistris. NEWAH provided tools to the

mistris. They are paid Nrs 180 by the house owner for installing a latrine up to ground level. Superstructures are made by the households themselves – normally of wood and stone.

4.2 Purchase and Sale of Materials

Materials are purchased from Lahan and Gaighat from a number of outlets. Initially PRDC, NEWAH and the sanitation promoter collected quotations for materials. Now the promoter has the authority to buy the materials himself as long as the rate remains the same. If the rate increases NEWAH and PRDC must be involved in collecting and reviewing quotations. Initially 15 sets of materials were purchased. The promoter sells all materials from the SaniMart. Initially materials were sold to the community at the same rate as they are purchased and more recently a subsidy had been introduced (see below). NEWAH covers the cost of the transportation of materials to the SaniMart.

4.3 Monitoring

The PRDC sub-committee and NEWAH undertake monitoring. The sub-committee holds a meeting once a month and minutes are taken. NEWAH receives a monthly report from the center. In addition a sample of households is selected and visited for monitoring. Staff making monitoring visits to check on latrine construction are reimbursed Nrs 75 per day if they have to stay overnight. After each monitoring visit a report is given to the center listing the names of the houses that have built a latrine.

5 Main Findings

5.1 Materials Sold

The type and quantity of materials sold through the SaniMart are presented in the table below. During the evaluation the stock value was estimated at Nrs 51,000.

Table 2: Materials sold and in stock

S.N.	Item	Unit	Rate (Nrs)	Quantity			Stock value
				Purchased	Sold	Balance	
1	Ceramic Pan	piece	400	101	74	27	10,800
2	Cement	bag	365	202	190	12	4,380
3	Rod	kg	50	253	142	94	4,700
4	Polythene Pipe	m	100	226	126	100	10,000
5	T'	piece	70	47	35	12	840
6	Bend	piece	48	40	19	21	1,008
7	Pan Brush	piece	45	40	31	9	405
8	Shop Case	piece	9	20	15	5	45
9	Red Oxide	kg	80	13	10	3	240
10	Hinge	piece	12	60	22	38	456
11	Handle	piece	15	35	13	22	330
12	Chain for Lock	piece	15	32	20	12	180
13	CGI sheet	piece	360	25	20	5	1,800
14	Binding Wire	kg	38	3	3	0.5	19
15	Nail	kg	56	32	25	7	392
16	Plastic Sheet	m	10	50	25	25	250
17	Tap	piece	290	31	21	10	2,900
18	Gate Valve	piece	250	2	0	2	500
19	Caw ale	piece	35	50	28	22	770
20	Brass Union	piece	68	5	2	3	204
21	Improved Stove	piece	364	10	0	10	3,640
22	Plain Sheet	piece	290	20	10	10	2,900
23	Harpic	bottle	55	8	5	3	165
24	Phenol	bottle	30	8	5	3	90
25	Gift Material	set	200	30	10	20	4,000
26	Coal Stove	set	165	42	42	0	0
	Total			1,385	893	476	51,014

Note - some length of rod has been wasted during cutting.

5.2 Financial Aspects

At the start of the pilot NEWAH made a fund available for the SaniMart for material purchasing, furniture, rent, SaniMart staff salary and supervision monitoring. Expenditure is made on the basis of a fixed budget. Double entry accounting system is followed. PRDC accounts section is responsible for managing accounts. Money raised from the sale of materials is given to PRDC by the SaniMart staff and then put in the bank.

Table 3: SaniMart Income and Expenditure

S.N.	Description	Expenditure		Income	
		Nrs	%	Nrs	%
1	Materials purchased	193,593	66%		
2	Material transportation	16,235	6%		
3	Salary for SaniMart staff	15,000	5%		
4	Daily substance allowance	12,430	4%		
5	Office rent	7,500	3%		
6	SaniMart setup costs	6,660	2%		
7	Training to mistri	5,744	2%		
8	Monitoring	4,875	2%		
9	Tools	2,820	1%		
10	Incentive to SaniMart staff	2,750	1%		
11	Furniture	1,500	1%		
12	Bank Balance	13,913	5%		
13	Cash	8,900	3%		
14	Fund from NEWAH			173,527	59%
15	Materials sold			118,397	41%
	Total	291,924		291,924	

The revenue generated from the sale of materials is used as a revolving fund and materials are sold and purchased from this fund. The SaniMart does not run on a cost recovery basis as NEWAH bears the cost of the subsidy on the pans, material transportation costs and office set up costs and office rent, the SaniMart staff salary and the cost of monitoring and supervision visits.

Table 4: Current financial position of SaniMart

	Nrs
Stock value	51,014
Bank balance	13,913
Cash	8,900
Total	73,827

Initially NEWAH provided the SaniMart with a fund of Nrs 173,527. The total resources available to the SaniMart at the time of the evaluation were valued at Nrs 73,827, equivalent to 43% of the original fund. Since the start of the pilot the fund has reduced by approximately Nrs 100,000 and 74 latrines have been constructed. Therefore it is estimated that the cost to NEWAH of a latrine constructed through the SaniMart model is

Nrs 1,350. At this rate NEWAH anticipate that an additional 50 latrines can be constructed before the revolving fund is finished.

5.3 Rate of Sale of Materials and Latrine Construction

In the 15 months since the pilot began 74 households have purchased a set of materials for constructing a latrine and 75 users have purchased materials to upgrade their existing latrines (for example new pans, phenyl, CGI roofing sheet, buckets, cement) or drinking water systems (for example taps, washers, brass union). Representatives of Water and Sanitation User Committees have been visiting the SaniMart to purchase supplies for their waters supply systems. The rate of sales of materials slowed during the monsoon due to engagement of local people in farm work and difficulties in digging pits in the rain.

Table 5: Number of latrines sets sold over time

Period	No. of latrine sets sold	Sets sold per month	Cost of pan (Nrs)
February to September (8 months)	34	4.3	375 to 400
October to April (7 months)	40	5.7	200
May to June (2 months)	13	6.5	200

At the start of the project pans were sold at the actual retail price (between Nrs 375 to 400). In October 2003 a subsidy was introduced on the pans and they are now sold at Nrs 200. This has resulted in an increase in demand. 34 sets were sold at actual retail prices in eight months and in the seven months after the subsidy was introduced 40 sets were sold. Since the evaluation PRDC has reported that 13 latrine sets have been sold in the last two months. A 'ripple' effect is taking place whereby villagers notice their neighbor's new or upgraded latrine and then visit the SaniMart and purchase materials themselves.

5.4 Latrines Constructed through the SaniMart

All the latrines visited during the evaluation, some of which had been constructed up to a year ago, were found to be in use and to be clean with a water bucket and brush visible in the latrine. All households had built high quality permanent superstructures.

**Latrine constructed with materials purchased from the SaniMart
(Total cost Nrs 2,500)**



74 households have purchased sanitation components of which 57 households have built and are using the latrine and the other 17 households are in the process of constructing or upgrading their latrines. There is no wastage of materials. This is a contrast to many distribution oriented sanitation programmes where unused slabs and rings littered around a village are a common sight.

People in the area are now aware that a latrine can be made at low cost and understand that they do not need to spend large sums of money. People were previously unaware about the concept of dry wall lining of pits and thought that latrines had to have an expensive septic tank. The trained mistris have demonstrated how dry walls can be constructed at low cost.

5.5 Incentives

An incentive system was introduced in September 2003 to encourage households to buy sanitation materials and construct a latrine. Each household purchasing materials and subsequently constructing a latrine was given one bar of soap, one tube of toothpaste, one toothbrush, a small plastic bucket (5 litres) and a plastic jug. The total value of this gift was round Nrs 200. Users gave feedback to the SaniMart staff that rather than providing a gift a discount should be given on the cost of the pan. From October 2003 the subsidy was introduced on the pan and the gift incentive was stopped.

5.6 Reasons for not Building a Latrine

In the evaluation households who had not yet constructed a latrine were also visited. The main reason for no constructing latrines was that the cost of materials was too expensive, even with the subsidy on pans. The households purchasing materials from the SaniMart are relatively well off.

6 People's Voices

Mrs Gurung of Napaltar, “It used to be very difficult for us when we needed to go to the toilet. Our father used to request a neighbor for the key to their toilet and then use their toilet. But my daughters and I were too embarrassed to do this we used to go to the stream when we needed the toilet. Now we have made a toilet and we feel so happy – the day we built our latrine we were happier than the day we built our house. My son helped to construct the toilet and it only cost us only Nrs 2,500”.

Mr Santa Bahadur Gurung, ex VDC chairperson, “I used to use my neighbor’s toilet but it used to be very difficult for my wife and daughter to go to the toilet by the stream. When there are no toilets in a household woman suffer much more than men”.

Mrs Anjana Bhattarai, wife of government officer, “We are quite well off but we did not know how to build a latrine or where we could get the materials. This used to be a burden for us. When the SaniMart was established this solved our problem and we easily made a latrine. This has made a great change in our lives. We used to be very embarrassed when we invited relatives to our house and they had to go to the jungle when they needed the toilet. My husband is busy in his office and could not help to construct the latrine so we hired laborers to do everything from digging the pit to building the superstructure and it cost us around Nrs 6,000”.

7 Conclusions

Improved access to sanitation materials, the presence of skilled sanitation mistris and awareness of the relatively low cost of latrine construction has resulted in increased sanitation coverage in Panchawati VDC. People from surrounding villages are visiting the SaniMart to purchase sanitation materials and are then constructing latrines. Latrines constructed through the SaniMart were found to be clean and well maintained and are likely to be sustainable as households have made investments from their own resources, averaging Nrs 2,500. The cost to NEWAH of a latrine supported through the SaniMart is around Nrs 1,350 which is significantly lower than the cost to NEWAH of latrines constructed in Sanitation Stand Alone projects.

While these findings are encouraging there remain areas for improvement. The rate of sale of materials remains relatively slow - only 6 households are purchasing sanitation materials each month. At this rate it will take another 20 years for all the households without a latrine in Panchawati VDC to construct a latrine. The rate of sale could be

increased by more social marketing of the SaniMart and promotion of the health and non-health benefits of improved sanitation. Poor people are not able to make use of the SaniMart. Even with the introduction of a subsidy on pans the cost of materials is too high for the poor. This could be addressed in a number of ways - an increased subsidy could be provided for the poorest; the SaniMart could promote lower-cost designs; the SaniMart could form links with savings and credit organisation in the area to enable to the poorest to access credit for latrine construction; NEWAH could decide that the poorest will not be served through this sanitation mechanism and introduce stand alone sanitation projects to serve the poorest of the poor in the area.

On the basis of the evaluation NEWAH have decided to continue with the pilot in Panchawati with increased emphasis on marketing of sanitation, especially through local schools. At the same time NEWAH is beginning another SaniMart pilot in Simle bazaar in Dhading district. This pilot will differ slightly in that NEWAH will work with an existing businessperson to stock and promote sanitation materials rather than establishing a new shop.

8 Recommendations

Based on the findings of the evaluation the following recommendations have been made:

- Give greater emphasis to social marketing of improved sanitation by running an awareness campaign in the surrounding areas using local committees, hoarding boards, street drama, cultural programs and pamphleting. Special emphasis should be given to promoting the non-health related benefits of improved sanitation.
- Run sanitation awareness camps in the 13 schools in the VDC to encourage children to persuade their parents to invest in improved sanitation.
- Explore linking the SaniMart with saving and credit groups to provide credit to households to construct latrines.
- Increase coordination with VDC and DDC and encourage them to promote the objective that every family in the VDC should have a latrine and an improved stove.
- Hold discussions with NEWAH, PRDC and the VDC to work out if and how the SaniMart can serve the poorest of the poor with sanitation in Panchawati. Options to be considered include introducing a greater subsidy for the poorest; promoting lower-cost designs; forming links with savings and credit organisation in the area to enable to the poorest to access credit for latrine construction; deciding that the poorest will not be served through this sanitation mechanism and introducing stand alone sanitation projects to serve the poorest of the poor.
- Replicate the pilot in a Terai district, where sanitation coverage is far lower than in the hills and new approaches are most needed.
- Conduct a thorough review of the cost effectiveness of all NEWAH sanitation programmes (regular water and sanitation projects, sanitation stand alone projects, SaniMart).