Report

WaterAid

WEDC

Sustainability and equity aspects of total sanitation programmes

A study of recent WaterAid-supported programmes in Nepal

Contents

A WaterAid report

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Front cover image: WaterAid/Marco Betti

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Abbreviations

CHV	Community Health Volunteer
CLBSA	Community-led Basic Sanitation for All
CLTS	Community-led Total Sanitation
DWSS	Department of Water Supply and Sewerage
FGD	Focus Group Discussion
GoN	Government of Nepal
HH	Household
NEWAH	Nepal Water for Health
NOD	No Open Defecation
ODF	Open Defecation Free
SLTS	School-led Total Sanitation
SWAP	Sector-wide Approach
VDC	Village Development Committee
WAN	WaterAid Nepal
WATSAN	Water and sanitation
WEDC	Water, Engineering and Development Centre
WSUC	Water and Sanitation User Committee

Glossary

Dalit	'untouchable' caste
Dum	occupational caste of sweepers, scavengers and pit latrine emptiers
Janajati	occupational trade caste
pukka	term used to describe a 'permanent' latrine
NRs	Nepal rupees. 1GBP = 117 NRs; 1 USD = 80 NRs
Tarai	Nepal's plain area

Executive summary

Introduction

WaterAid has been closely associated with Community-led Total Sanitation (CLTS) since the early stages of its development in Bangladesh. Since then WaterAid has gained wide experience of implementing CLTS-type approaches to sanitation. The common characteristics of this implementation are; (a) they attempt to work with the entire community rather than selected individuals and households; (b) the focus is on the elimination of open defecation rather than on the construction of latrines.

This report presents the findings of research carried out in Nepal, as part of a study into the equity and sustainability of WaterAid's CLTS programmes in Bangladesh, Nepal and Nigeria. The study's main focus was to explore the extent to which CLTS-type approaches have collectively led to a change in behaviour from open defecation to fixed place defecation which can be maintained and can grow over time, resulting in the long-term use and maintenance of hygienic latrines by the entire community.

Five communities were included in the study – two from the hills and three from the Tarai. Data was collected through a combination of focus group discussions, household and key informant interviews and direct observation of latrines.

NOD achievement

All of the communities visited had previously declared No Open Defecation (NOD). At the time of the study, three CLTS communities still had 82% latrine coverage or greater but, taking sharing into account, latrine use was at least 95%. In none of the five communities did the study find 100% change to fixed place defecation – everywhere a minority of individuals remained who still practised open defecation for different reasons. In Devisthan, a low-performing hill community, the majority of the population had reportedly returned to open defecation in 'hidden' locations.

Equity of outcomes

The poorest households tend to build latrines with unlined pits and low-cost superstructures. These temporary latrines are more easily damaged and need frequent maintenance or replacement. There was little information available at community level about low-cost technologies to make temporary latrines more durable and hygienic.In three communities, there was clear evidence that the poorest and most disadvantaged households were more likely to be using unhygienic latrines or practising open defecation.

Reasons for this included:

- A very small group of mainly elderly people still resisted latrine use, in spite of the community's efforts
- Households where no one participated in project activities showed less understanding of sanitation and were more likely to return to open defecation
- A few frail elderly or disabled people were physically unable to access or use latrines
- Lack of land was an issue in all projects, particularly in the Tarai where many immigrants were living on rented or donated land with only room for a house

Strategies to improve equity

In every community examples were given of support from other community members to the poorest, including the donations of materials, labour, and technical advice.

Well-being ranking had been used in three communities to identify households in most need of support. In Amarkhu and Darbesha ultra-poor households received a subsidy package of latrine materials and one day's skilled labour from the sanitation mason/s. In Chisapani support was provided to households in need by other community members on a case by case basis.

In these three communities, the majority of the poorest households had, or would soon have, hygienic latrines. It was clear however that the more finely tuned and locally appropriate the criteria used for ranking, the better targeted the subsidy at those who need it. Well-being ranking was not carried in two communities and there households were found without latrines due to poverty.

Sustainability of outcomes

Of the 61 latrines observed, 93% were in use and 77% were considered to be hygienic.

Pit emptying

In both hill and Tarai communities unlined latrine pits are simply covered with soil and a new pit is dug. Most people had thought about what they would do when the pit was full and had dealt with full pits, both lined and unlined, although some owners appeared uncertain about this. Informed choice needs to be ensured so that households are aware of different technology options and their implications (cost, space, reuse, etc).

Upgrading

This was only an issue in the two older projects. In Ekta Chok upgrading was still continuing three years after NOD. Although the total number of latrines had fallen since NOD, the number of pukka latrines had almost trebled in the previous three years. By contrast, in Devisthan no significant upgrading appears to have taken place.

Problems upgrading

Of the 20 households interviewed with unlined pits that had become full or damaged, 11 had upgraded to a lined pit. Of the remaining nine households, four were poor and five ultra-poor. Six had dug at least one more unlined pit, three were temporarily sharing other people's latrines and three had returned to open defecation.

Costs

A pukka latrine (lined pit, concrete slab and concrete/ceramic pan, brick or concrete superstructure) costs US$62-100 in the Tarai and US$150-187 in the hills. This cost could be reduced by households using locally available materials and carrying out the labour, such as construction and portering, themselves. A temporary latrine (unlined pit, wooden or no slab, no pan, low-cost superstructure) costs much less,US$6.25-12.50. These costs are much higher than in nearby Bangladesh.

Programme cost-effectiveness

Based on the number of households that had built a new or upgraded latrine at NOD, the cost per latrine in the hills was $68 and in the Tarai $126. Based on the number of new or upgraded latrines currently in use at the time of the study, the cost per latrine in the hills is $108 and in the Tarai $122. Assuming that every household in the target community benefits from CLTS, whether or not they own a latrine, the cost per beneficiary household in the hills is $58 and in the Tarai $84.

Discussion

Pressure and coercion from the community to build latrines, for example imposing penalties for non-compliance, had proved effective in changing the behaviour of the majority of the community at NOD, particularly when combined with incentives and support.

Evidence that NOD was seen not just as an individual household problem but as a whole community concern was demonstrated by the two recent communities. In Chisapani there was evidence of strong intra-community support and in Amarkhu community mechanisms for ongoing financial support for upgrading were planned. In the two older CLTS communities however latrine upgrading was left up to individual households.

Eliminating public OD as a first step: In Devisthan defecation on roads, paths and verges had ceased, resulting in cleaner surroundings than before CLTS. Open defecation was still being practised by most of the community but now people were using the jungle or other 'hidden' places. The community nevertheless reported health benefits following the increased cleanliness. In such a scattered community this may be an acceptable result for now.

Pro-poor approach: Support based on well-being ranking had provided benefits to the majority of the poorest. Any problems that have arisen resulted from weaknesses in the way the ranking was carried out. A process is needed at all stages of the project implementation process, to map on the one hand the human and material resources of households and also their needs in term of accessing latrines.

If CLTS is supposed to promote community action, the community needs to understand how to allocate resources effectively.

Long-term monitoring and follow-up mechanisms

In the more recent projects, the sanitation committees were still monitoring and supporting latrine construction and upgrading. This had discontinued in the two older projects. The role of follow-up and visits by outsiders was valued as a way of re-energising and motivating the community. This indicated the need to build external visits into long-term project monitoring.

'Pukka' versus 'hygienic' status of latrines

Reporting formats used by the sanitation committees are currently determined by technology, ie pukka versus temporary. For communities to move into line with JMP reporting based on hygiene status, such as hygienic/shared/unhygienic/open defecation, would require monitoring in the form of periodic direct observation to take place.

Maturity of the sanitation market

The sanitation market in Nepal appears to be characterised by high cost latrines and a lack of innovation. Demand for different technologies is still low, which may be why there are no entrepreneurs promoting alternative technologies. Advice on construction techniques and technical options need to be made more widely available to households to help them to make small-scale low cost improvements and upgrade the hygienic status of their latrine.

Section 1

Introduction

WaterAid has been closely associated with Community-led Total Sanitation (CLTS) through its long term support of the Village Education Resource Center (VERC) since the early stages of the development of CLTS in Bangladesh. WaterAid has subsequently also been at the heart of efforts to disseminate the experience (see for example, WaterAid 2006) and WaterAid country programme staff and their partners have travelled widely on exposure visits between countries.

WaterAid now has fairly wide experience of implementing community-wide ODF sanitation programmes based on this CLTS experience. The common characteristics these programmes are; (a) they all attempt to work with the entire community rather than selected individuals and households; (b) their focus is on the elimination of open defecation rather than on the construction of a particular type of latrine. Three countries with the widest experience are Bangladesh, Nepal and Nigeria. WaterAid are now in a position to contribute to the empirical basis of understanding around CLTS and its variants, building on the rich body of experience in these three countries.

Section 2

Purpose and objectives

The main focus of this study commissioned by WaterAid is to explore the extent to which community-wide ODF sanitation approaches have collectively led to a change in behaviour from open defecation to fixed place defecation, which can be maintained and can grow over time and which result in the entire community using and maintaining hygienic latrines in the long term. In other words the focus of this study is on sustainability of behaviour change over time and equity of access.

The study will test the following hypothesis:

Achieving ODF status is a necessary but not sufficient condition for the entire community to use and maintain hygienic latrines in the long-term

As far as possible the study will also explore what are the additional factors which enhance the probability that ODF status will indeed translate into entrenched behaviour change and the capacity of communities to move onwards up the 'sanitation ladder'.

2.1 Key questions

1. To what extent is community-wide sanitation actually achieved?
   a. Are there certain groups who, despite initial willingness to participate are more likely to continue to practice open defecation, at least some of the time?
   b. Are there groups who are unable or unwilling to use any of the facilities for fixed-place defecation, either for physical or cultural reasons?
2. Are there some groups who are disadvantaged by the process, whether because of relative poverty or because they are subject to inappropriate coercion in order for the wider community to achieve its objective?
3. Are sanitation facilities available for use throughout the course of the working day? Even where community members move away from the home, to school, work, the market or the fields?
4. To what extent is the elimination of open defecation a behaviour that is entrenched and becoming permanent?

5. To what extent are communities willing and able to move on towards behaviours which may have greater health benefits? For example, the use of sanitary latrines, and hygienic behaviours.

2.2 Structure of the research

In each country the study had three phases as follows:

Inception phase:
Data review and design of field work (two weeks)
WaterAid country teams collected all relevant records and data on project communities, and carried out a preliminary analysis. This initial work was undertaken by the Country Sanitation Specialists – in Nepal by the two WaterAid staff responsible for sanitation in rural areas. The Country Researcher provided support for this analysis and the inception phase ended with a consultation meeting with the Country Consultative Group. The purpose of the inception consultation meeting was to cross check the data analysis and to finalise the selection of communities for fieldwork. At the close of the inception phase the Country Researcher produced a brief inception report summarizing the data analysis and outlining the design of the research.

The inception phase identified a set of five communities for detailed field study. The communities were selected from among the 'programme villages' where WaterAid and its partners have carried out community-wide ODF sanitation programmes. The selection included communities where the period since the intervention is as long as possible, with comparable contexts (social, economic, geographic). At least one community was from a group considered to be 'high performers' (ODF) and one a 'low performer' (non-ODF).

Fieldwork phase:
Fieldwork and preparation of case studies for selected study villages (two weeks)
Fieldwork was carried out by the Country Researcher and the Country Research Team over a period of two weeks, with up to two days spent in each community. See Appendix Two for detailed field-work schedule.

Analysis phase:
Review of results and writing pp (three weeks)
At the end of the fieldwork phase the Country Researcher and Country Research Team presented their preliminary findings to the Country Consultative Group at a half day workshop. The group discussed the general findings from the study. A draft final report was written up by the Country Researcher for comments by the group and a final report was produced after two weeks.

2.3 Terminology used

A number of terms are used in this report that have meanings specific to Nepal.

Ultra-poor – elsewhere known as the poorest of the poor, chronic or hardcore poor. The majority of people in the communities visited are 'poor', whilst those who are better-off are described as 'medium'. Communities' own definitions and judgements of who was ultra-poor were used. An example of criteria being used to define the ultra poor is food sufficiency, for example three months/year of rice or less.

Types of latrines are described as either 'pukka' (permanent) or temporary. The definition varied slightly from one community to another, but the terms refer mainly to the construction up to slab level. In the Tarai, a pukka latrine consists of a concrete ring-lined pit, with a concrete slab and ceramic or concrete pan. Whereas in the hill communities, it consists of a stone lined pit, with a concrete slab, cement platform and ceramic or cement pan. Flies should be prevented from entering and smells reduced by either covering the toilet hole or by using a water seal pan.

A temporary latrine is anything else, for example an unlined pit, either direct or offset, with or without some kind of slab or platform or, in the case of an offset pit, earth floor.

Definitions used by the community in Chisapani

Permanent latrine – pit with concrete rings, slab and pan, superstructure with adequate privacy and roof.

Temporary latrine – pit with bamboo lining. No concrete slab and pan.

Hygienic latrine – clean with no flies, no smell inside or outside, excreta separated from human contact and the pit is not full.
The community was of the view that a temporary latrine can be hygienic.

Definitions used in Amarkhu

Pukka latrine – concrete slab and ceramic pan, tin roof, pit minimum seven foot deep with stone lining (no cement)

Hygienic latrine – use of slippers inside, no mud, water and soap available.

The term No Open Defecation (NOD) is used in Nepal to mean the same as ODF (Open Defecation Free). In general, it means no faeces visible in public places or household compounds and that all households have access to, and use, fixed place defecation, either at individual household level or shared between households.

Section 3

Background to WaterAid in Nepal programme

During the inception phase, collation and review of relevant documentation (listed in One) were carried out by WaterAid in Nepal sanitation programme staff Oliver Jones and Kamal Kunwar, supplemented by staff knowledge and experience and a discussion meeting with staff of NEWAH, WaterAid Nepal's main implementing partner.

3.1 Nepal background and Context

3.1.1 Coverage and targets

Nepalese sanitation coverage targets are ambitious, particularly the national goal which aims to achieve "basic sanitation for all" (100% sanitation coverage) by 2017.

There is significant debate and disagreement over the actual sanitation coverage figures in Nepal. The Government of Nepal (GoN) claim only 2% of the Nepalese had access to latrines till 1980, which increased to 6% in 1990, 15% in 1997, 25% in 2001 and finally to 39% in 2004 (Ministry of Physical, Planning and Works, 2006). The GoN's latest figures claim 48% of people has access to latrines. Under this reckoning the GoN claim that they are on track to reach the 53% coverage by 2015 needed to meet the MDG on sanitation. WaterAid in Nepal is one of only a few agencies to both challenge the GoN's figures and also advocate to a shift in the way coverage is calculated. This would mean counting the communities achieving and sustaining ODF status and not counting latrines installed, many of which are never used.

Sector figures show significant disparities in sanitation service delivery, particularly between the poor and the rich, and in the rural and urban context. Access to improved sanitation among the richest quintile is about 79%, while access among the poorest quintile is nearly eight times lower, with only 10% of the poorest households having access to improved sanitation (UNICEF 2006). The gap between the rural and the urban areas is also noteworthy, with access to improved sanitation in urban areas at 36.9%, almost double that of rural areas which is at 19.8% (Ministry of Health & Population, New ERA, & Macro International Inc, 2007). In view of both the low sanitation figures in rural Nepal and the fact that 88% of Nepalese people reside in rural areas, achieving total sanitation in rural Nepal in the near future will be a very challenging task.

3.1.2 Policy

A number of provisions were made in the Eighth Plan (1992-97), Ninth Plan (1997-2002) and the Tenth Plan (2002-2007) to increase the sanitation coverage in the country. The Tenth Plan targeted to achieve 50% latrine coverage (Tenth Plan, 2002).

The GoN approved the National Water Plan (NWP) 2005-2027 (2005), whose overall target is to achieve 100% sanitation coverage by 2027. The Three Year Interim Plan (2007-2010) has set a target to increase sanitation coverage to 60% – in line with the NWP. The role of local agencies and user groups in achieving the target is emphasised in the plan. During this plan period, the government will initiate a structural, policy and regulation reform process in order to move forward for implementing a Sector-wide Approach (SWAP). The plan has emphasised human resource development to strengthen Monitoring and Evaluation systems.

The most recent policy regulating sanitation activities is the 2004 Rural Water Supply and Sanitation National Policy and Strategy. After the first SACOSAN conference, attempts were made to update the Nepalese National Sanitation Policy from 1994. However, the draft of the new national hygiene and sanitation guidelines failed to be approved in 2004. Through the endorsement of the Dhaka Declaration, the GoN also committed to the development of a National Sanitation Master Plan (NSMP) aimed at guiding a national sanitation programme and establishing the main principles to be followed by the organisations delivering sanitation services in the Nepalese context; however this is yet to materialise.

WaterAid in Nepal gathered key sector stakeholder together in May 2007 to commence a push to support the Department of Water Supply and Sewerage (DWSS) to develop a National Sanitation Master Plan. Following a series of formal and informal meetings and discussions, a draft TOR for the NSMP was developed in June 2008. A consultant has been identified to lead sector consultation and draft the NSMP. DWSS produced a draft document for SACOSAN III, held in Delhi in November 2008 and hope to have the document finalised in early 2009.

The lack of a finalised Sanitation Policy or Master Plan is seen as a significant barrier in promoting more uniformity and coordination in the sector.

3.1.3 Sector stakeholders and programmes

A large number of stakeholders are involved in sanitation and hygiene promotion activities in Nepal. Every year numerous sanitation programmes are launched with common aspirations but with different implementation models, which sometimes results in overlap and inefficient distribution of the limited resources available. Partnerships and bilateral relationships among funding agencies; government agencies; and international, national and local NGOs are diverse, with some organisations implementing programmes unilaterally and others working in a wide range of partnerships, cooperative and contractual relationships. This means that financial support for sanitation flows through a number of different channels, both within and outside of official government budget lines, making tracking investment in the sanitation sector problematic.

The DWSS, under the Ministry of Physical Planning and Works, is the main government agency responsible for delivering water supply and sanitation services. Other concerned ministries playing roles include Local Development, Health and Population, Education and Sports and Women, Children and Social Welfare.

The two largest programs of the sector, both initiated in 2004, are run by semi-autonomous governmental institutions with the support of international development banks. The World Bank is currently supporting the second Rural Water Supply and Sanitation Fund Development Board Program (RWSSFDBP-II) and the Asian Development Bank (ADB) is supporting the Community-Based Water Supply and Sanitation Sector Project (CBWSSSP). International development agencies (such as the Government of Finland (formerly as FINNIDA), the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO) and international NGOs (such as Care, Plan, the Centre for International Studies and Cooperation (CECI), Helvetas and WaterAid) are also supporting the sanitation sector in Nepal.

3.1.4 Sector coordination and monitoring

In an attempt to coordinate sector stakeholders and promote hygiene and sanitation activities, a Steering Committee for National Sanitation Action, chaired by the director general of DWSS, was formed at the central level in 2000. Although this Committee meets regularly, its main function is a forum for sharing and, on an annual basis, the development of plans for the National Sanitation Week. Despite WaterAid Nepal's attempt to stimulate discussion in this area, the Committee currently performs no role of monitoring or reviewing different actors' approaches or activities in the sanitation sector. No formal system of sector monitoring has yet been established, but it is hoped that the NSMP will put a framework for this in place.

As per the last sector policy, responsibility is given to local government bodies and local communities to play a growing role in sanitation programmes. The Rural Water Supply and Sanitation Sector Policy 2004 states that, "Consumer groups and community organisations will be made responsible to provide water supply and sanitation services effectively by designating proper work to the local bodies as per the decentralisation policy" and that, "The Government of Nepal and local bodies will play the role of regulating, monitoring and facilitating the implementation of projects."

At the district level and according to current policy a District Water Supply and Sanitation Coordination Committee (DWSSCC), chaired by the Local Development Officer, should be formed to coordinate concerned stakeholders and prepare an action plan for the district. However, the reality in the field shows that donor agencies and international, national, and local NGOs are the primary designers and implementers of sanitation programs. The role that local bodies play in coordinating, implementing and monitoring activities is still very weak in many districts, which is partially a result of the continued absence of elected officials at the local level. The reality is that the DWSSCC is only functional in a few districts where external support and incentives (by UNICEF and WaterAid Nepal) have been put in place.

3.1.5 Community-led approaches in Nepal:

Community-led approaches in Nepal are still not mainstream and although some agencies, including NEWAH, UNICEF and Plan, have made moves in recent years to implement these approaches across their programmes, most agencies have not. Significantly, the two largest rural water supply and sanitation programmes in Nepal, mentioned above, have not adopted Community-led Total Sanitation approaches, although the ADB claims to have incorporated some CLTS elements.

3.1.6 Tarai versus hill communities

The geographical and social difference of the Tarai (Nepal's plain land) and the hill regions of Nepal create varying contexts for the delivery and promotion of sanitation services in the country. In hill regions social cohesion is strong and fostering the sense of unity for common goals within a community is easier than in Tarai locations.

Communities in the Tarai are mostly made up of a variety of ethnic, religious and cultural groups who have often migrated from different parts of Nepal and even India. As a result the feeling of community and social ties are not as strong as found in hill communities, which have been together for a number of generations.

In hill communities building materials such as stone, sand and wood can normally be found locally and at relatively little cost. However in remote locations, accessing other sanitation materials often needed for the promotion of latrines, such as pans, cement and pipes, is a significant challenge. The lack of road access in remote areas, as well as lack of demand for sanitation services, has prevented the development of supply chains and markets. When materials are brought to remote locations the transport and porterage costs are significantly high. The lack of such materials to maintain or upgrade latrines can impact on the sustainability of latrine use and demonstrates the need for agencies promoting sanitation in these remote areas to encourage the use of local materials and/or development of appropriate local supply chains.

The situation in the Tarai is almost exactly the opposite. Pans, pipes and cement are readily available in local markets but most people don't have access to locally-sourced natural materials, such as stone and wood. Bamboo and sand are two natural materials that some communities or individuals have access to at little cost. As a result, superstructures are often made from a mixture of bamboo and plastic sheeting or sack materials. These less robust superstructures generally require more maintenance which can impact on sustainability of use.

Another significant issue in the Tarai is the high water table which causes water-logging and seasonal flooding. Rising water levels in the monsoon season often floods latrine pits, making latrines unusable. As a result, the soil conditions in the Tarai are not conducive to the building of lined latrine pits and so the risk of collapse is increased. The lining of latrine pits increases the construction costs which then places the building of this type of latrine beyond the financial capacity of many people, jeopardising the sustainability of construction.

The transient nature of Tarai communities results in increased issues of space and land. Many people do not live on their own land in crowded conditions which means that there is limited space or land for households to construct latrines. Those that do have space to build a latrine often live close to tube-wells, risking water contamination. Solutions to this have been the construction of shared and community latrines. However, social factors which prevent different groups, such as father and daughter-in-law, sharing the same latrine have in some cases hampered these initiatives.

3.2 WaterAid Nepal's sanitation programme

Before 2003/04, WaterAid Nepal's sanitation approach had been based on a graded subsidy model. Influenced by the CLTS findings of WaterAid Bangladesh's partner (VERC), WaterAid in Nepal and its partner Nepal Water for Health (NEWAH) visited VERC in June 2003 to gain further insight into the approach. The knowledge gained was translated into action by the design and implementation of pilot CLTS projects in Karki Danda, Dhading District, in October 2003. Between 2003 and 2007, WaterAid in Nepal has supported its rural partner NEWAH to implement CLTS projects in 19 communities in five Districts – a population of approximately 1,000 people.

For a complete list of WaterAid in Nepal supported CLTS, School-led Total Sanitation (SLTS) and CLBSA projects, see Appendix Two. Some attempts have also been made to adopt CLTS approaches in urban areas with mixed success – a detailed review of this work has not been conducted.

WaterAid in Nepal has also supported a Government-led programme to achieve total sanitation coverage in the District of Chitwan through the SLTS approach, see below for more details. However based on this experience, NEWAH and WaterAid in Nepal are likely to continue in the future with community-led rather than school-led as the main focus of sanitation.

Community-led Basic Sanitation for All (CLBSA)

Following the recommendations of an external review conducted in 2006/07 (CETS, 2007) of the implementation of NEWAH's CLTS projects supported by WaterAid Nepal, NEWAH and WaterAid in Nepal decided to adapt the CLTS approach for the Nepal context based on their experience to date. As a result, a new approach was developed, Community-led Basic Sanitation for All (CLBSA), which built on the strengths and lessons learnt from both CLTS and the graded subsidy system.

The approach is based on the basic principle of total sanitation and uses many of the same motivational tools of CLTS. However, financial incentives at the community level have been added to reward the achievement of key sanitation outcomes (for example reaching ODF status) and to support the poorest members of the community. The name CLBSA reflects the fact that some financial support is provided, which CLTS "purists" have advocated against. "Community-led" was kept to reflect this key element and "Basic Sanitation for All" added to be in line with government policy of "Basic Sanitation for All by 2017."

CLBSA Policy (NEWAH, 2007) outlines the following points:

1. Ignite and make the community in such a way that they realise that sanitation is a public concern and community people themselves are capable to solve the problem.
2. Mobilise local resources and activate local governmental and non governmental bodies (CBOs, NGOs, VDC and DDC) to support the achievement of 'Basic Sanitation for All'.
3. Explore various user-friendly technological options of latrine at local level that are suitable for all.
4. Create an enabling environment so that all community people including the poor, excluded and disabled have access to the use and maintenance of a hygienic latrine.
5. Support to construct school latrines by considering the specific needs of adolescent girls and women teachers such as their menstruation hygiene, and user friendly design especially for children and the disabled.
6. Provide technical skills and paid job opportunities to women, poor and excluded.
7. Provide specific support for construction of latrines to ultra poor and disabled, chronically ill and elderly – those who do not have any members to fall back for support.
8. Facilitate the community to declare the 'No Open Defecation' (NOD) and later 'Basic Sanitised' status through the initiatives of community people themselves.

3.3 Other agencies' community-led sanitation programmes

CLTS

Through sharing new knowledge and experience in this area WaterAid in Nepal and NEWAH have been able to motivate other agencies to explore the approach. Sector stakeholders initially formed a networking group to share experience and accelerate the CLTS learning process Unfortunately this group has now not met for over a year.

Other agencies have however begun to pilot CLTS in their programmes including, Plan Nepal; Environmental, Cultural, Agricultural Research and Development Society (ECARDS) Nepal; Rural Water and Sanitation Awareness Promotion Society (RUWSAPS); Rural Awareness and Development Organisation (RADO) Nepal; Integrated Development Society (IDS) Nepal; Rural Reconstruction Nepal (RRN) and Oxfam. In March 2006, RRN put a proposal to the sector to conduct a joint sector review of CLTS in Nepal but this never took place. However two reviews of CLTS activities have been carried out by Plan and a joint review has been carried out by WaterAid in Nepal and NEWAH.

School Led Total Sanitation (SLTS)

Adapting innovative CLTS ideas within their own ongoing sanitation projects, UNICEF and Nepal Red Cross used CLTS guidelines to develop a School Led Total Sanitation (SLTS) programme. Nepal Red Cross has implemented SLTS projects in all of their working districts while UNICEF are building on their existing school sanitation programmes, School Sanitation and Hygiene Education (SSHE), and incorporating SLTS guidelines in over 50 schools in 15 districts. In February of 2006 the first school, Panch Kanya Primary, within UNICEF's new programme was declared Open Defecation Free (ODF).

Sector District-Wide Approach

A sector initiative was launched to achieve total coverage in the district of Chitwan, a relatively wealthy and high coverage district. Although there was no obligation to adopt a specific approach to sanitation, UNICEF and the GoN encouraged people to implement the SLTS model. Sector agencies that engaged were allocated different Village Development Committees (VDCs) to implement programmes and, despite the intention to have a consistent approach across the District, a wide variety of approaches have been implemented.

WaterAid in Nepal and NEWAH took responsibility for Meghauli and Kathar VDCs. Even with a permanent district sanitation coordinator in place, this Government-led initiative has not gone well, with many agencies implementing activities with little contact with District Coordinator. It is unlikely that the total coverage target in Chitwan District will be reached by the end of 2009.

Section 4

Methodology

4.1 Composition of teams

In addition to the Country Researcher, the Country Research Team was comprised of Country Sanitation Specialists Oliver Jones and Kamal Kunwar, WaterAid Nepal, Independent Consultant Urmila Simkhada and translator/researcher Kalyan Bhakta Mathema, who worked with the Team Leader.

4.2 Selection of field-work locations

The following criteria for selection of field-work communities were used:

- Two CLTS hill communities (one more and one less successful)
- Two CLTS Tarai communities (one older and one more recent)
- One CLBSA community. The criteria for selection should be that implementation followed NEWAH's CLBSA guidelines (NEWAH, 2007) as closely as possible.

The number of communities to be visited and time available for travel was limited by the 12 days available for field-work. It was agreed that to make the best use of available time, field-visits would be confined to the two Districts with the majority of WAN supported projects; Morang District (Tarai) and Dhading District (hills) (See Appendix Four for the locations of these two Districts).

Table 1: Final projects selected

Project	Region	Geography	Size	NOD declared	Completed F/Y
Dumre Ekta Chok CLTS	Eastern	Tarai	70 HH	November 2004	04/05 (older)
Chisapani CLTS	Eastern	Tarai	85 HH	March 2008	07/08 (recent)
Darbesha CLBSA	Eastern	Tarai	195 HH	February 2008	07/08 (in progress)
Devisthan CLTS	Central	Hill	133 HH	March 2006	05/06 (older)
Amarkhu CLTS	Central	Hill	101 HH	August 2007	06/07 (more recent)

4.3 Data collection methods and tools

The field-work team consisted of Kamal, Urmila and Hazel (with Kalyan translator) – in effect three researchers. Two days were spent in Ekta Chok, Chisapani and Amarkhu, one and a half days in Devisthan and half a day in Darbesha CLBSA project. Half a day was considered sufficient as the CLBSA project was only very recently initiated and is still in progress, so the main focus of interest was whether any of the changes initiated to address some of the equity and sustainability issues were going in the right direction.

In each community the following sequence of activities was carried out, with variations:

- An initial introductory meeting with relevant community members, including Water and Sanitation User Committee (WSUC), community leaders, child representative/s and other key stakeholders

  The purpose of the meeting was to

  - explain the purpose of the research
  - get an overview of the current status of the community's sanitation
  - plan how to spend the two days, including organising groups for Focus Group Discussions (FGDs), identifying key informants such as sanitation masons, CHVs etc and identifying target households for in-depth interview
- FGD with the WSUC on its own
- A transect walk to verify information from the introductory meeting and WSUC FGD, during which any problem areas will be identified. Latrines observed using a latrine observation checklist and conversations held with community members along the way
- FGD with women users, where possible including some who are, or have been, Community Health Volunteers (CHVs)
- FGD with the child club – where it exists, if not, then a group of children.
- Semi-structured interviews with key informants; sanitation mason, health facilitator, shop-keeper etc
- Semi-structured household interviews with target groups
- Latrine observation checklist used during the transect walk and during household interviews. For households both with and without a latrine
- Photos taken of latrines/users (later used to identify each latrine) and of the community environment

For initial meetings and transect walk the whole team worked together, whilst for FGDs and HH interviews, the team split up to carry out parallel activities, coming together in the evening to collate and compare notes.

4.3.1 Sampling method

Purposive sampling was used to identify target households for in-depth structured interviews with the following characteristics:

- typical pukka latrines
- households without functioning latrines
- shared latrines
- ultra-poor households
- female-headed households
- disabled/chronically sick-headed households
- households with a disabled/chronically sick family member
- elderly-headed households/lone elderly people
- Dalit/ethnic minority households

These households were identified in the introductory meeting with the help of community members. Usually around 20 or more households were suggested but the final households interviewed largely depended on who was available. Community members and NEWAH staff accompanied the researchers and introduced them to the household.

The team considered trying to organise FGDs bringing together representatives from similarly disadvantaged households however, this was rejected for two reasons:

- the time needed to organise such meetings could have outweighed the time-saving advantages of interviewing in a group
- FGDs would not been suitable for elderly or disabled people who cannot walk far, women who cannot leave their young children or other marginalised people who may not feel comfortable speaking out in a group

Many of these categories of disadvantage overlapped, for example a female-headed household may also be Dalit and ultra-poor. 11-12 household interviews were carried out in each project, apart from Darbesha, where time constraints meant only two were possible.

Variations:

Transect walks worked very well in Ekta Chok and Chisapani. In Darbesha time did not permit and in the hill areas it would have taken a whole day to walk through the community. Instead the environment was observed by researchers as they walked from one household to the next.

4.3.2 Data collection tools

Data collection tools were designed to cover all the relevant questions for each type of informant, which helped to ensure triangulation of data from different sources and also made the compilation of a huge amount of qualitative data easier once collected (See Inception Report Appendices for complete set of data collection tools).

FGDs and interviews were handwritten on prepared datasheets which were typed up later, latrine observation datasheets were filled in by hand then entered directly into a single access database.

4.3.3 Data collected

WSUC FGDs : 4

FGDs with children: 4

Women's group FGDs (including one women's committee): 5

Household interviews: 49

Latrine observations: 68

Key informants met:

NEWAH staff (3), local leaders (2), school teachers (3), sanitation masons (7), health facilitators (2)

Transect walks 2

Table 2. Profile of individual informants

	Female	Male
Children	2	6
Female headed HHs	10	–
Elderly headed HHs	5	5
Disabled/chronic sick headed	2	3
Disabled/chronic sick in family	7	4
Land-less	5	4
Dalit	11	11
Janajati	16	17
Shared latrine	7	9
Ultra poor	10	14
In-migrant		1
Total	**34**	**42**

4.4 Limitations

The study suffered from several limiations, primarily due to the lack of time available coupled with the long distances and difficult travel conditions experienced in rural Nepal.

There was no opportunity to pilot data collection tools so adjustments needed to be made during the course of the field-work as needed. Fortunately all of the researchers had been involved in designing the tools which made it relatively easy to make adjustments and to use tools in a flexible way.

Time limitations

The selection of communities to be visited was constrained by the availability of time. This ruled out the inclusion of communities that would otherwise have fitted the criteria but whose remote location would have added several more days' travel to the schedule. A further investigation in these communities is strongly recommended, as proximity to roads and markets as well as connections to other communities with different experiences all appear to impact on CLTS outcomes.

Only half a day was available to spend in Darbesha, which only gave time to hold an introductory meeting, a focus group discussion with women, two household interviews, a sanitation mason interview and several latrine observations. This was adequate to address the key issues of CLBSA but insufficient to give researchers a multi-dimensional perspective of project implementation and to get beyond the issues of categorisation which dominated the two focus group discussions.

In Devisthan, miscommunication did not get us off to the best start. The initial introductory meeting attracted around 40 people because attendees thought the discussion related to problems with their water supply. On the positive side, it meant we met a more representative group who were not all CLTS enthusiasts and were able to hear quite frank accounts of defecation practices.

Section 5

Overview of projects visited

This section presents an overview of the background and achievements of each of the five projects visited.

5.1 Dumre Ekta Chok CLTS Project

Dumre Ekta Chok project is in Urlabari VDC, Morang District, in the Eastern Tarai. It is a community of mixed caste and ethnicity, including upper caste, Dalit, Janajati, and Tarai Janajati.

Photo 1: Children in Ekta Chok showing the former open defecation area
In the background, the community map is leaning against a new meeting shelter

Inhabitants make a living from farming livestock and rice, and collecting firewood from the jungle nearby. The community is 10 minutes drive from the main highway and is fairly compact as a settlement – it takes 15 minutes to walk from one edge of the community to the other.

During the project period Ekta Chok had a population of 375 people in 70 households. Three years later at the time of the study there were 80 households, including five incomer households.

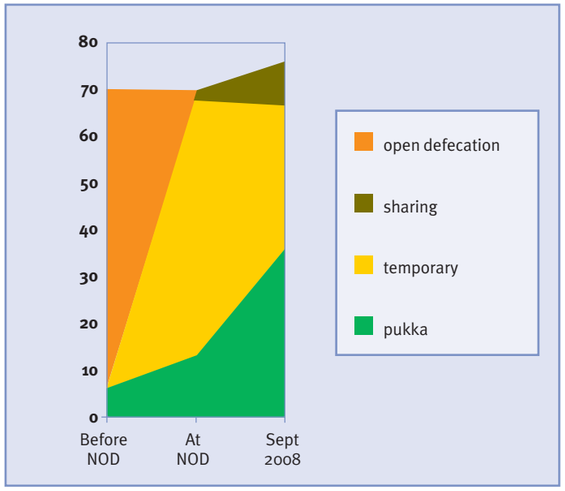


Figure 1: Reported progress on sanitation in Ekta Chok

Completed in November 2004, Ekta Chok was the first WaterAid Nepal/NEWAH CLTS project in the Tarai to declare NOD. The project was co-funded by Plan International. Before NOD there were only six latrines in the community. Open defecation was widespread. According to children interviewed, people had to hold their noses when walking through some of the worst open defecation areas and children often stepped in or slipped on faeces. Diarrhoea was reportedly common and outbreaks of jaundice frequent.

After ignition PRA, the WSUC was formed, which then mobilised a women's committee and a child club (CC). The programme focused on three main issues, the elimination of open defecation, the building of latrines and control of drunken, noisy and violent behaviour. Activities also included encouraging the construction of dish-racks, sweeping household compounds and weekly collective road sweeping.

Monitoring of open defecation and promotion of latrine construction was undertaken primarily by the WSUC and CC, whilst the women's committee focused mainly on drunkenness. The CC played a vital role in achieving NOD. Members would often get up at 4am to patrol open defecation areas and would raise awareness by blowing whistles and naming and shaming offenders with cartoons on the community board. Sometimes children were scolded or hit by adults; some even had faeces thrown at them. The majority of the community eventually complied.

It took four months from ignition PRA to declare NOD. At NOD, there were 68 latrines; 13 pukka and 55 temporary, with two households sharing neighbours' latrines. At the time of this study, according to the WSUC, there were 66 latrines: 36 pukka and 30 temporary, and four shared latrines between 10 households.[1]

The chart in Figure 1 illustrates the dramatic reduction of open defecation and the increased proportion of latrines described as permanent. It is based on data reported by the WSUC and implies no assessment of the hygienic status of the latrines.

1 However, this does not account for all 80 households – HEJ

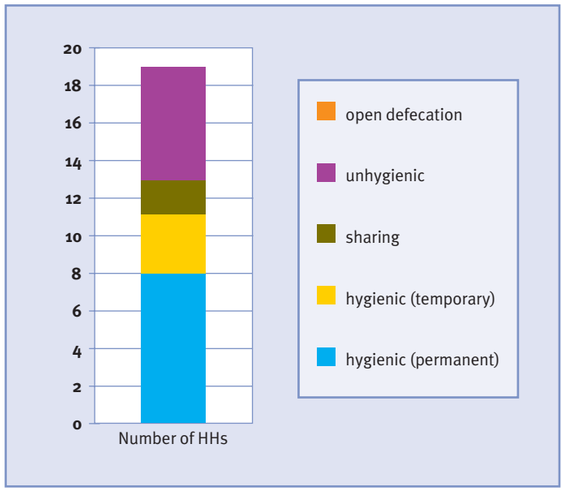


Figure 2: Sanitation status of 19 households observed in Ekta Chok

During the field-work, 19 households were observed and interviewed: 14 were using 11 hygienic latrines, so three were sharing and six were using unhygienic latrines, of which two were sharing (see Figure 2). No households interviewed were practising open defecation.

5.2 Chisapani CLTS Project

Chisapani CLTS project is also in Urlabari VDC, Morang District, in the Eastern Tarai. Geographically very similar to Ekta Chok, the community is also of mixed caste and ethnicity, many of whom have migrated from elsewhere due to landlessness, including a number of recent immigrants who have been made welcome.

Photo 2: River running through Chisapani, and former open defecation area.

Inhabitants make a living from farming livestock and rice, and fishing and collecting driftwood from the river which runs through the community. Flooding is a major problem and concern to the population.

Chisapani is about two km from the highway, reachable by vehicle. There are 88 households, which are more spread out than Ekta Chok – it takes about 30 minutes to walk from one edge of the community to the other.

This is the most recent of the CLTS projects visited. NOD was declared in March 2008, only six months previously, and the project was about to complete at the end of September 2008. Before NOD there were 16 latrines, including 15 pukka and one temporary.

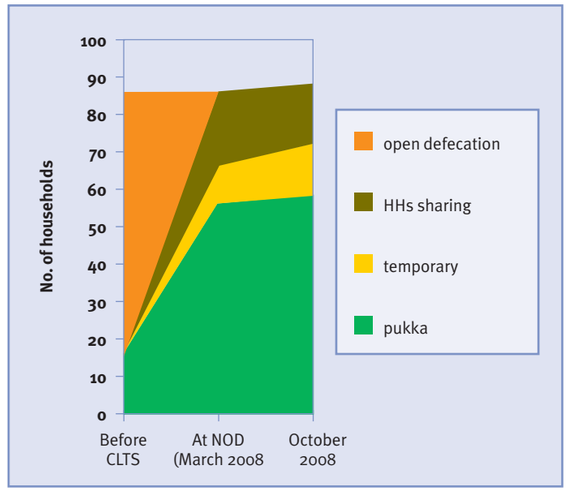


Figure 3: Reported progress on sanitation in Chisapani

Before CLTS, there was reportedly faeces all over the roads and paths and especially along the riverbank – a popular open defecation area. There were always flies around and a bad smell, "even while you were eating." One mother said, "Before having a latrine, we used to defecate on the riverbank. I worried that my children would get swept away by the river. They would often come back with other people's shit on their clothes. It was horrible having to clean up other people's shit."

According to the WSUC, the process of the sanitation programme was as follows:

- Baseline survey – (ignition PRA)
- Commitments of the community
- Committee formation (WSUC and Child Club). Committee members were selected on the basis of their leadership qualities
- Training and meetings conducted
- Health and sanitation awareness education
- Latrine construction
- New tube-well construction and rehabilitation of existing tube wells

It took six months from ignition PRA to declare NOD status. At NOD there were 86 households with 66 latrines: 56 pukka and 10 temporary, plus 20 households sharing. Six months later, at the time of the study, latrine coverage had increased: 88 households were using 72 latrines, indicating that 16 households were sharing latrines (See Figure 3). There were no communal or public latrines in the community.

The WSUC was still active, but the Child Club had not met for the past three months.

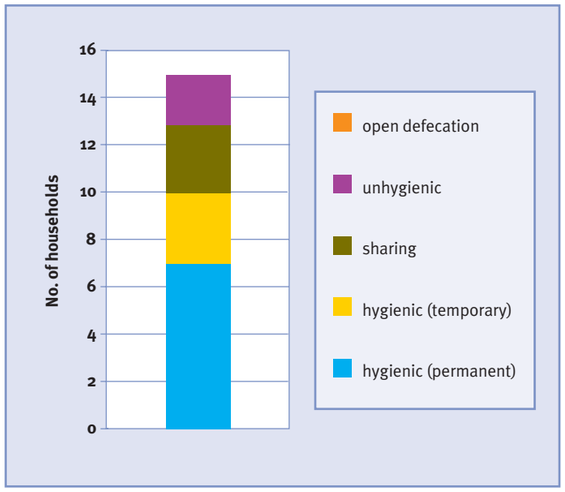


Figure 4: Sanitation status of 15 households observed in Chisapani

15 households were interviewed and their latrines observed: 13 households were using hygienic latrines, of which three were sharing, and two households were using unhygienic latrines (see Figure 4). All latrines were between four and ten months old, except one four years old that pre-dated the programme.

5.3 Darbesha CLBSA Project

Darbesha CLBSA project is in Darbesha VDC, also in Morang District, in the Eastern Tarai. It is reachable by road, three kilometres from the main highway and the nearest market. There are 195 households of mixed caste and ethnicity, the majority landless and daily wage labourers.

Photo 3: Darbesha WSUC office
Concrete rings and slabs can be seen in the foreground

NEWAH had already supported four sanitation projects in other wards of Darbesha VDC, using a graded subsidy approach. This was the fifth project to benefit the remaining unserved beneficiaries of different wards of the same VDC.

With limited time available for the research team in Darbesha, the focus was on specific issues identified in the review of CLTS that CLBSA was designed to address. These are drawn from the eight points in the CLBSA Policy outlined in Section 3.2.

According to the WSUC, before NOD there were eight households with pukka latrines.

The CLBSA process carried out was as follows:

- Application to NEWAH to provide support for sanitation programme
- Baseline survey by NEWAH
- Well-being ranking
- Agreement between community and NEWAH (subsidy in the form of Community Fund to be provided after NOD)
- WSUC and Child Club formation
- Ignition PRA, social map and action plan prepared (involving children, women, WSUC and health volunteers (all women))
- Training and meetings

Between ignition PRA and NOD, 123 temporary and two permanent latrines were built. Some community members helped sick and elderly neighbours dig pits, others invited them to share their latrine.

Well-being ranking was carried out with the aim of identifying the ultra poor households in need of subsidy. Households were identified as being in one of three categories, according to criteria decided by the WSUC. The process was carried out at a mass meeting, where 123 households (63%) were categorised as Category A (ultra poor), 37 as Category B (poor) and 35 as Category C (medium).

NOD was declared in February 2008, three months after ignition PRA. At NOD there were 133 latrines: 10 pukka and 123 temporary.

Eight months later, at the time of this study the project was in its second phase, moving towards 'Basic Sanitised' community status. The number of pukka latrines had increased to 89 (see Figure 5), the majority constructed with support from the Community Fund for Category A households.

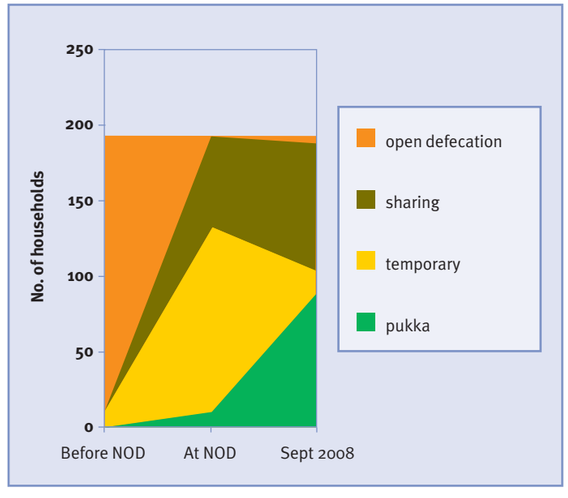


Figure 5: Reported progress on sanitation in Darbesha

5.4 Devisthan CLTS Project

Devisthan CLTS Project is in Bumisthan VDC, Dhading District, in the central hill area. It is a fairly homogenous community – 90% ethnic Tamang, most of whom are farmers. There are 131 households, living over a widely scattered area.

It is about two hours walk uphill from the main highway and currently unreachable by road. Most of the community has no electricity. Water is a major problem at the moment. Pipes were damaged during road construction and some women are spending up to three hours a day fetching water. The community was very spread out so to make best use of the limited time available, field-work and direct observation were confined to one part of the community.

Photo 4: View of part of Devisthan

The project was implemented from 2005-2006. A Sanitation User Committee (SUC) was established with a female Chairperson, to mobilised latrine building. This was separate from the Water User Committee, although some members were on both committees.

NOD was declared in March 2006, taking five to six months from ignition PRA. On declaration of NOD, all 133 households were reported to have a latrine, the majority of which were temporary type (exact figures were unavailable, but 111 is a reasonable estimate, if 22 are assumed to be permanent).

Two and a half years later, at the time of this study, there were at most 37 latrines still in use: 20-22 permanent and 12-15 temporary. (Again, precise figures were unavailable).

During the field-work, 16 latrine observations and household interviews were carried out. Seven households were using hygienic latrines, one was sharing a hygienic latrine with close relatives, three were using unhygienic latrines and six were openly defecating (See Figure 6).

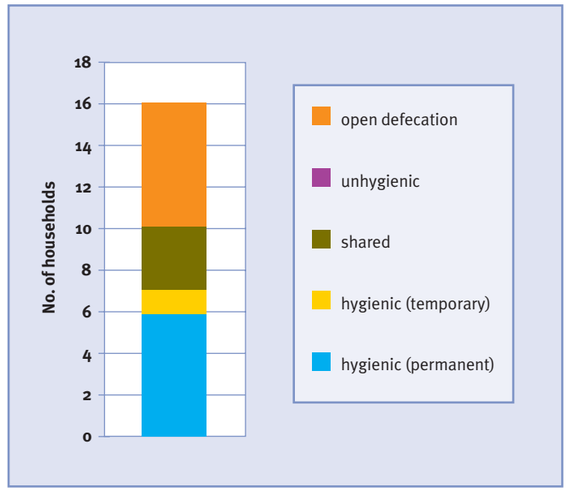


Figure 6: Sanitation status of 16 households observed in Devistham

5.5 Amarkhu CLTS Project

Amarkhu is also a hill community in Bhumisthan VDC, Dhading District, about one hour's walk from the main highway and nearest market. It was, until recently, reachable by road in the dry season. Electricity is available.

Photo 5: View of one of three clusters in Amarkhu

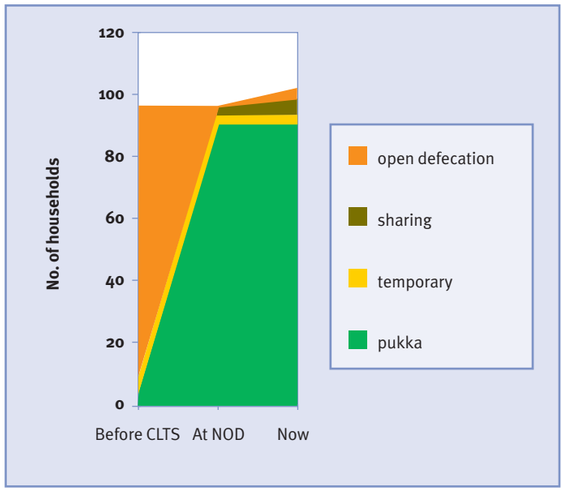


Figure 7: Reported progress on sanitation in Amarkhu

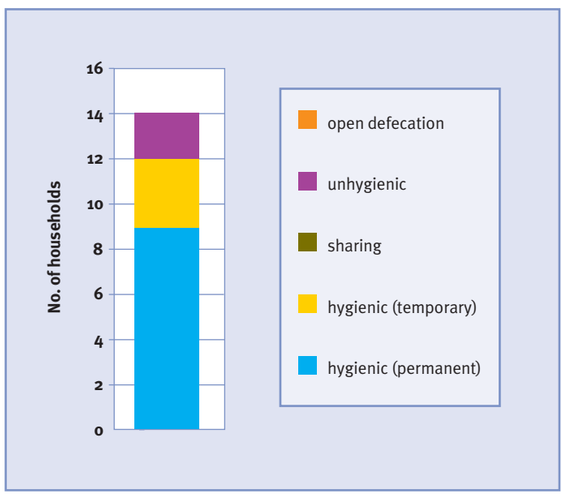
It is more diverse than Devisthan in terms of caste and ethnicity. There are currently 101 households, located in three main 'clusters': 48 Dalit in one, 49 Brahmin/Chhetri in another, and four Janajati in a third. Most are farmers.

Before the CLTS programme, there were only seven latrines in the whole community: three pukka and four temporary. At that time, faeces could be seen all over the roads and paths. Community leaders learned about a CLTS project in a neighbouring community, Karkidada, and requested support for a similar project.

The project started in July 2006, with water and sanitation being implemented concurrently. The WSUC was formed, consisting of seven members who were selected based on nominations from each cluster. The Child Club was also established and a child-to-child committee set up in the primary school. A health facilitator was appointed, health and sanitation volunteers and four sanitation masons were selected, with training was provided by NEWAH. To maintain a gender balance equal numbers of men and women were selected as volunteers and masons.

The stated aim was to clean up the community. A combination of 'carrot and stick' approaches were used. A campaign of 'One household, one latrine' was launched, where those without latrines were refused access to taps until they built a latrine. Support was also provided to the neediest households for latrine construction.

Figure 8: Sanitation status of 14 households observed in Amarkhu



Well-being ranking was used to identify the poorest households in need of support. 17 households were identified as Category A – ultra poor and received subsidy from the Community Fund.

NOD was declared in August 2007, 10-12 months after ignition PRA (longer than the other four projects). At NOD, 96 households were using 90 pukka latrines and four temporary latrines. Two households were sharing.

During the field-work, 14 households were interviewed and their latrines observed. Nine latrines were being used by single households, three latrines were being shared by six households and two households were practising open defecation (see Figure 8). No unhygienic latrines were observed.

Section 6

Achievements

6.1 NOD status

All communities visited had previously declared NOD. In none of the five communities however, did the research find 100% change to fixed place defecation.

- In Darbesha, where the project was in mid-implementation, some households were reported to be temporarily practising OD because their temporary pit was full and they were waiting for their subsidised pukka latrine. However they were reportedly not defecating in visible places.
- In Devisthan, a majority of the population had reportedly returned to open defecation, albeit in 'hidden' locations
- In the other three projects, there still remained a few individuals still practising OD for various reasons

Table 3. Reported sanitation progress in communities visited

Community	Number of households (at NOD/ now)	Number of latrines and coverage*			Time to NOD
		Before project	At NOD	NOW	
Dumre Ekta Chok	70/ 80	6 (9%)	68 (97%)	66 (83%)	Four months
Chisapani	86/ 88	16 (19%)	66 (77%)	72 (82%)	Six months
Darbesha (CLBSA)	195	8 (4%)	133 (68%)	104 (53%)	Three months
Devisthan	131		131 (100%)	37 (28%)	Five to six months
Amarkhu	96/ 101	7 (7%)	94 (98%)	94 (93%)	10-12 months

* coverage does not include households sharing latrines, therefore these figures underestimate the percentage of households using latrines.

6.2 Types and status of latrines

As previously mentioned, an unusual aspect of latrine classification in Nepal is the categorisation of latrines as either pukka or temporary. There may or may not be a superstructure. Examples of the range of latrines categorised as pukka and temporary can be seen in Photos 6 to 11 below.

Examples of pukka latrines observed

Photo 6:
Ceramic pour-flush pan, cement slab, mud plastered bamboo superstructure (Tarai)

Photo 7:
Concrete pour-flush pan and slab, mud plastered bamboo superstructure (Tarai)

Photo 8:
Ceramic pour-flush pan, cement slab, plastered stone superstructure, curtain (hill)

Examples of temporary latrines observed

Photo 9:
Offset pit, tin pan, and floor of stones

Photo 10:
Direct pit, wooden platform, swept earth floor

Photo 11:
One metre square open pit with partial plank platform

In only two communities, Chisapani, and Amarkhu, were the majority of households reported to be using pukka latrines (see Table 4).

Table 4. Types of latrines inspected

Community	Number of latrines inspected	Pukka latrines			Temporary latrines		
		hygienic	unhygienic	Not in use	hygienic	unhygienic	Not in use
Dumre Ekta Chok	20	9	–	1 (flood damaged	3	5	2 (1 full 1 flood damaged
Chisapani	15	10			3	2	
Darbesha (CLBSA)	3	3					
Devisthan	11	7		1 (damaged super-structure)		3	
Amarkhu	12	12					
Total	**61**	**41**	**0**	**2**	**6**	**10**	**2**

The majority of latrines were either direct or offset single pits. The pukka latrines invariably used the standard 'set' consisting of four concrete rings and a pre-cast slab. Innovations in design were rather limited. The exceptions were two latrines in Chisapani which each used an old cooking oil can for the pan, connected to an offset pit. In one case stones and pebbles had been used to form the latrine floor (Photo 9).

In both the Tarai communities, flooding was a recurring problem.

- In Ekta Chok, of the 20 latrines observed, eight, including one 'temporary' latrine, had latrine slabs/platforms that were higher than the surrounding land to reduce the risk of flooding
- In Chisapani, the frequency of flooding in the community led to flood precautions in the shape of raised slabs being incorporated into the design of latrines from the outset

User-friendly design features

A few examples were seen of interesting locally designed features that made latrines more user-friendly for the elderly, disabled or children.

In Ekta Chok, one latrine had shallow steps with cross-hatching in the cement to prevent them becoming slippery when wet (Photo 13). Two examples were seen of easy to use door handles. One household with a disabled daughter had chunky hand-carved handles on both the outside and inside of the door (Photo 14) to make it easier for her to get in and out of the latrine. Elsewhere, a door handle made of bent rod covered in a piece of pipe was observed, which made the door easy to close from the inside (Photo 15). These ideas originated from the households themselves, rather than from information provided by NEWAH.

Photo 12:
Latrine raised to avoid risk of flooding

Photo 13:
Low steps with cross-hatching to provide anti- slip surface when wet

Photo 14:
Hand carved latrine door handle

Photo 15:
Handle of rod and pipe to make it easier to pull door closed from inside

6.3 Coping strategies for families without latrines

Sharing

Sharing was seen in all four CLTS communities, most commonly among extended families and those sharing the same compound. Amongst these extended families, sharing was generally seen as a long-term solution, necessary for reasons of finance or space constraints. Although, when asked most users said they would prefer to have their own latrine. Sharing worked best when it was planned, with the cost, construction and maintenance being shared between households. In one household, two family members were practising OD as they had fallen out with the owner of the shared latrine and were refusing to use it.

A few examples of joint ownership between non-relatives were also observed, including two poor households of different castes in Chisapani.

Two households interviewed in Ekta Chok were sharing as a temporary solution, whilst their own latrine was full or flooded. It was reported that others in Ekta Chok were also sharing whilst saving to build a permanent latrine instead of wasting time digging yet another temporary pit.

Sharing appeared to become problematic when too many people were sharing over a long period of time with unequal commitment and contribution. When the cleaning and maintenance were not discussed, the burden fell on the owner which created resentment. This led to other users feeling unwelcome. For example in Ekta Chok, this situation had arisen within an extended family and three poor neighbouring households.

Also in Ekta Chok the caretaker of the community forest users' office reported that their latrine was used by a large number of people. Although this facility was for users of the forest, some residents were using it as a temporary solution to the lack of a household latrine.

'Hidden' open defecation

In addition to sharing, some families continue to openly defecate, albeit away from public areas.

In Devisthan, OD was continuing to be practised by the majority of the community. Most adults said they went away from the house to the jungle, some referred to 'secret' or 'hidden' defecation places such as bushes. At night elderly people and children use containers which are then emptied into the forest area.

6.4 Defecation when away from home

At school:
In all five communities, local schools had hygienic latrines. All the children used these facilities, even those from OD communities. In Amarkhu, children on their way to and from school and other passers-by were welcome to use latrines rather than defecate on the path.

In the fields, or in the forest:
When asked people claimed to run home to use their latrine when working in their fields. Others said they visited the forest. Most community members admitted to practising OD when they were far from home and said that they try to find hidden places to defecate, avoid open places, paths, or water points. Several children admitted to openly defecating if they were away from home, "Sometimes you can't help it!"

At the market:
There were no latrines at any of the nearby markets, so OD was the only option.

Insufficient information was gathered about how these OD situations, especially at the market, affect men and women differently.

6.5 Community perceptions of benefits

In the five communities studied the majority of respondents had similar perceptions of the difference that achieving NOD had made to their community.

Cleanliness – villages were reported to be much cleaner than before NOD. Roads, paths, verges, riverbanks and household compounds were free of faeces and the bad smells had gone. There were fewer flies and in Amarkhu people reported seeing fewer stray dogs. In all five projects, the research team's observations backed up the community's ideas.

Health – communities reported a reduction in the instances of illness, especially among children, water-borne diseases, including diarrhoea, vomiting and worms, and skin infections, especially on feet and legs. In Ekta Chok, no recent cases of jaundice were reported and water from tube-wells and shallow spring could be drunk without boiling. Women and children reported personal health benefits including improved personal hygiene and increased knowledge of the links between cleanliness and the reduction of disease.

Dignity, safety, convenience – personal comfort, privacy and safety for women and children, less stress for women during menstruation and improved dignity for women were all mentioned as benefits. “Before when we went to defecate we’d hide our faces or use an umbrella so we wouldn’t be recognised, now we don’t need to.” The convenience of using latrines at night, in the rain and for elderly and sick people was frequently mentioned.

Time saving – people do not have to walk far to defecate once they have access to a latrine so time is saved.

Esteem – in Ekta Chok and Amarkhu, the social status of the village was reported to have improved, with neighbouring communities envious of their clean community and coming to them for advice about how to achieve NOD. They had received visitors from other VDCs and Districts in Nepal and even from overseas. People in Ekta Chok had the opportunity to visit other communities to see the sanitation status.

Women’s empowerment and social cohesion – in all five communities, women reported improved social harmony, with neighbours getting to know each other for the first time, and said they had more confidence and ability to organise. In Ekta Chok, the women’s group were applying skills learned during the sanitation project in new directions – they had become a credit and savings group.

Elderly, disabled and sick people – this group reported specific benefits, particularly to do with the reduction in walking distance. In Chisapani, one woman with an elderly sick mother-in-law, who needed help getting to and from the latrine, found having a latrine convenient and time-saving. An elderly blind woman in Amarkhu who now had a latrine spoke about the difficulties of OD, before stepped people’s faeces when defecating and was worried about being seen.

In four projects the majority of the community believed that the adoption of latrine use was permanent. In several communities, children said they preferred to use latrines. One woman in Chisapani said, “Looking back, I feel we were like animals.” In Devisthan, the general consensus was that the habit of not defecating in open places was permanent.

It was clear that an overwhelming majority of the community had benefited from a cleaner environment and improved health. Opinions were also expressed that the benefits of sanitation are greatest for children, women, elderly and the sick, for whom having a latrine makes life so much easier. It was also noted in Amarkhu, where the population is denser, the difference made by sanitation is more noticeable and the perceived benefits are greater.

In two communities, Ekta Chok and Devisthan, respondents felt that those who had understood the messages of the programme and had the resources to act on them had benefited most from it. These are the two communities where no well-being ranking was carried out.

The research set out to examine whether the impacts of sanitation programmes were felt equally amongst all members of the community. Equity considerations included the extent to which benefits are felt equally by households and members of those households, and the extent to which additional burdens are shared equally.

Section 7

Equity

7.1 Exclusions because of poverty

In three communities, Ekta Chok, Chisapani and Devisthan, there was clear evidence that poorer community members were more likely to be using unhygienic latrines or practising OD. Of the seven households interviewed that were practising OD, five, from Devisthan, said they did not have the resources (time and money) to build a latrine. (The other two respondents were resistant to using a latrine).

In Ekta Chok, of the six unhygienic latrine households met, two were considered by the community to be poor and four ultra poor. None were upper caste (Brahmin or Chhetri).

In Chisapani, the two unhygienic latrines observed both belonged to ultra poor households – an lone elderly man who begged for a living and a household with a severely disabled elderly woman.

In Devisthan, the poorest and most disadvantaged were least likely to be using a latrine. Of the seven households studied who were using hygienic latrines, six had medium income and one was poor. The remaining nine households using unhygienic pits or practising OD were either ultra poor or poor combined with another category of disadvantage – three female-headed, two elderly-headed and one with a disabled family member. This backs up the assertion frequently heard in Devisthan that for most people financial constraints were the main factor preventing them from rebuilding or upgrading their latrine.

In Amarkhu, both the people practising OD were ultra poor single women, one was elderly and the other had mental health problems.

The most worrying situation seen was in Ekta Chok, where an unhygienic pit latrine was being shared by three neighbouring households (At least 12 people), at least two of whom were ultra poor. The owner had dug three pits and said that he could not ask the other households to contribute to construction, maintenance or cleaning because sharing was a temporary situation. When interviewed, however, one of the sharers said his family had been using the latrine for three years.

Temporary pit latrines are commonly built by the poorest households. These latrines, being more susceptible to damage, place high labour demands on households with the least capacity. One respondent said she had dug eight pits since the project started. To avoid this repeated work, 73% (eight out of 11 unhygienic temporary latrine households) said they would prefer to upgrade to a more permanent structure but the main obstacle was lack of financial resources.

A small number of households (two respondents) reported that they lacked the person-power to carry out labouring activities.

If money is available, other demands come first. One man said that if he had the NRs 12,000 needed to build a pukka latrine, his first priority would be to build a house.

There was limited evidence of information available at community level about using low-cost technologies to make temporary latrines more durable and hygienic. The exception was in Chisipani (see Section 6.2).

7.2 Other exclusions

People unwilling to change

There was a very small group of people who in spite of all the community's efforts, and for no other apparent reasons, persist in resisting latrine use (latrine 'resisters'). Some, mainly elderly people, seem to be unwilling to break the habits of a lifetime. This group included two individuals in Ekta Chok, at least one in Chisapani and two elderly women in Amarkhu. In two cases, the resisters had special needs including a disabled child and one woman with mental health problems.

Households with limited understanding

There were a number of households were no one participated in ignition PRA or other project activities. As a result, these people showed less understanding of the reasons for the sanitation project. Of the seven households interviewed practising OD, in six no family member had participated in project activities.

For example, in Devisthan one woman said the family built a latrine because they were instructed to but she was not aware of the sanitation project activities or the reasons for building a latrine. Their temporary pit did not last long and she now felt relieved that there was no longer the pressure to rebuild the latrine.

Cultural barriers to latrine use

No evidence was found of groups excluded from using latrines for cultural reasons. In mixed caste communities, acceptance of sharing latrines between castes was reported.

In Amarkhu, according to mixed caste FGDs, passers by, whatever their caste, were free to use a nearby household latrine even if they were not from the community. In Chisapani planned latrine ownership and sharing between neighbours of different castes was seen.

Apart from a single respondent, no evidence was found of elite groups or better off members of the community opting out or refusing to comply with latrine building.

People unable to comply due to physical obstacles

Despite willingness and availability those with a physical obstacle find latrines difficult or impossible to use.

- In Ekta Chok, an elderly woman was experiencing back pain, making squatting to use the latrine increasingly painful and difficult
- In Chisapani, an elderly disabled woman with a severe physical impairment was unable get into the family latrine because of the door, step and platform. Instead she used a hole in the ground near the house. She had been using this since before the CLTS programme and so felt she had not benefited from the programme as her difficult situation had not changed

Inaccessibility affects not only individuals, but also the rest of the family, in two main ways:

a. Extra work and time spent, or physically onerous/unpleasant tasks
   - In Ekta Chok, a three year old disabled child was held over bare soil to defecate by her mother
   - In Darbesha, at least two disabled people and one elderly single woman were unable to use the latrine without support. Another elderly woman could not walk as far as the shared latrine, defecated on the road and her daughter in law had to clean the waste up
b. Adverse health impacts of unhygienic open pits or concentrated OD close to the house

Using temporary solutions as a strategy

A number of households, particularly in Ekta Chok, were reported to be temporarily practising open defecation or sharing while their pit was damaged or full. Several families said they planned to rebuild after the festive season. Some were tired of repeatedly digging temporary pits were saving to upgrade to a lined pit.

Unable to build own latrine due to lack of land

Lack of land was an issue in all projects, particularly in the Tarai where many inhabitants were immigrants living on rented or donated land with only room for a house.

- In Ekta Chok, the community provided public land for four landless households to build latrines
- In Chisapani, at least two rented households had no problem getting permission from the owner to build a latrine, others built their latrine on a neighbour's land
- Several examples were also seen of sharing as a solution to the problem of limited land

Where space was short, there was also a limit to the number of temporary pits that could be dug. Given some families limited land it was surprising that only one respondent expressed concern about how he would cope when his pit filled up as there was no room to dig another pit.

7.3 Impact of subsidies on equity

Costs of latrines

Compared to other countries, such as Bangladesh, the cost of latrines is high in Nepal (see Appendix Five for details of costs). Costs in the Tarai and hill areas differ considerably, because of factors such as availability of materials and accessibility of markets (see Section 3.1.6).

In the Tarai, the cost of a pukka latrine is about NRs 5,000-8,000, depending on how much labour the household contributes.

Temporary latrines cost around NRs 500-1,000 for wood, bamboo and plastic sheeting. Most temporary superstructures require up to a day's maintenance every six to 12 months, those with cheaper materials need more regular maintenance. Temporary pits (i.e. unlined or lined with bamboo) are also more likely to collapse and fill more quickly. The ongoing maintenance and pit digging required makes the upkeep of a temporary latrine more time consuming than pukka latrines.

In hill areas, the cost of a pukka latrine was quoted as NRs 12,000-15,000. For temporary latrines the cost is far lower as materials, stones, bamboo, grass, etc, are almost all freely available locally. Time and labour to collect the materials is however a major input.

Well-being ranking

Three communities carried out well-being ranking to identify the poorest families in need of support. In each project, the ranking criteria were different.

Darbesha

- Category A: ultra poor, landless indigenous households
- Category B: poor, Dalit and Janajati
- Category C: medium, owning between 0.33 and 3.3 hectares of land[2]

Amarkhu, food sufficiency criteria were used as follows:

- Category A: three months rice
- Category B: six months rice
- Category C: rice all year.

Chisapani, criteria used were a combination of those suggested by NEWAH plus insider knowledge. The ranking process was carried out at a mass meeting, with community members calling out the category they thought each household was in.

Subsidy packages

Amarkhu

16 ultra poor households received latrine materials (pan, pipe, cement, rod) and one day's worth of skilled labour from the sanitation mason/s. Households had to dig their own pit and carry the materials up from the market themselves. The cost of this came out of the project budget. The existence of subsidy in this project means that strictly speaking it was not following the CLTS approach but was more of an adaptation that later came to be formalised into CLBSA.

Some problems arose, for example if people had been sick then recovered, or the other way round, they complained they should be in a different category. Some households preferred to stay in Category B to preserve their status (it's hard to admit in front of everyone that you only have food for three months of the year) and didn't think they would receive anything anyway. Then when subsidies were provided to Category A, they felt that the purpose of the ranking should have been made clearer from the outset.

In addition to the subsidy packages provided, five households were identified by the health facilitator as in need of further support from the WSUC. Three were helped to dig their pit and four received plastic sheeting for their latrine's superstructure. One family was not receiving support from the husband, who worked in Kathmandu, and another household was in debt. This shows some flexibility in the project. Those households who needed support received it despite not technically falling into Category A.

Darbesha

All Category A households received the same support from the Community Fund – four cement rings, ceramic pan, pipe, iron rod, cement and one day's labour from the sanitation mason. Households were expected to dig their own pit and build their own superstructure.

Examples were given of households who had added to the subsidy from their own resources. Six households added bricks to the bottom of their pit in order to save the fourth ring for use in a second pit in the future. Two households bought two extra rings and made twin pits using three rings for each. This is evidence of households taking ownership and using their initiative to make the best use of resources. However, it also indicates that some Category A households could have built a hygienic latrine with less support.

The well-being ranking used in this community appeared to be very broad with no account taken of individual family circumstances – female or elderly-headed households, vulnerable dependent family members etc. A number of households felt they had been missed out of Category A.

The fixed subsidy package in place is contrary to the new principles of CLBSA, which aim to encourage more varied levels of support based on differing needs and circumstances and promote creative options for mobilising support, such as micro-credit. This means that the resources available to support latrine construction, calculated by the total number of ultra poor in the community, are not just meant for the ultra poor. The approach aims to support the WSUC to allocate the available resources to achieve total coverage based on different needs. This could mean that people from all categories in the well-being ranking receive some level of support. In this community, no mechanisms had been put in place, such as a revolving loan fund, to support households other than Category A wishing to construct or upgrade. The NRs 8,000 prize money received on declaration of NOD has not yet been used.

2 Between 10 *katta* and 5 *bigha* of land

Chisapani
No Community Fund was available, so support was provided from community members themselves to ultra poor households, on a case by case basis according to need. This took a number of forms, including the provision of volunteer labour, donation of materials and technical advice.

No well-being ranking
In the two projects where no well-being ranking was carried out there were clear examples of households without latrines due to poverty. Whilst in the three communities that have carried out well-being ranking, the majority of the poorest households had (or would soon have) hygienic latrines.

There were indications that the more finely tuned and locally appropriate the ranking criteria, the better targeted the subsidy at those who need it. It is also evident that flexibility of approach is needed to identify households with circumstances or needs that are not captured by the well-being ranking.

7.4 Strategies used to promote sanitation – impacts on equity

Intra-community Support
In every community, examples were given of support (provision of volunteer labour, donations of materials and technical advice) to the poorest from other community members.
Another form of support to the poorest was through a sliding scale of charges applied by sanitation masons. One mason said that for very poor households he sometimes only charges NRs 300 labour, compared to the usual NRs 1,500.
In two communities the WSUC helped to reduce costs by taking a collective approach to purchasing materials and making latrine components.

Prize Money
Prize money awarded on declaration of NOD was provided by NEWAH to WSUCs to be used in whatever way they saw fit.

In Chisapani, the prize money had been used to purchase cement and steel for rings and slabs to help needy households upgrade their latrines. The household had to repay the WSUC in instalments with nominal interest. In Amarkhu, this money was put towards a revolving loan fund. In Darbesha, the money had not yet been used.

Competitions and prizes
The Child Club in Ekta Chok organised competitions for the best kept latrine. It was not yet possible to tell what the impact of this was.

Role of schools
In the three Tarai communities the role of schools was negligible, as there were no schools within the communities. Both the two hill projects had schools. In Amarkhu, the school was a joint partner in the sanitation programme and a Child-to-Child group was established in addition to the community's Child Club. Children from outside the community with no latrine at home were trained by the Child-to-Child group on latrine use and hand-washing, the children then went home and spread these messages. There was information that a significant number of household latrines were built in neighbouring communities.

7.5 Gender equity

In all five projects women have played a strong role in the CLTS process. All the WSUCs had women members and in Ekta Chok, a separate women's committee was set up. Women have been key in spreading CLTS messages from ignition PRA to follow up discussions with households on hygiene and disease.

Women have also been able to take on both unpaid health volunteer roles and paid positions. Two health and sanitation facilitators were women and in Amarkhu two of the four sanitation masons trained were women. Dalit, Janajati and upper caste women all participated equally. This attention to inclusion has worked well, the women are committed and the benefits of the programmes appear to be felt by the whole community.

However, in Amarkhu gender equality was implemented without sufficient flexibility and so some aspects of the way it has been applied appear to have disadvantaged a few. For example, it was a requirement that WSUC members and sanitation masons should build their own latrine as an example to the rest of the community, which caused problems for one female mason with a new baby.

7.6 Inclusion of other disadvantaged groups

In addition to gender equity, approaches to promote the inclusion of other disadvantaged groups, in particular people from different castes and ethnicity, have been fundamental to project implementation in a number of ways.

- WSUC's have included people from all castes and ethnicities
- The Child Clubs were inclusive of boys and girls from all castes
- Sanitation masons have been selected and trained from the more disadvantaged castes – Dalit and indigenous castes. In Darbesha, the mason felt he had benefited from the programme, both in terms of income and improved social status
- In Amarkhu, the health facilitator playing a vital role in the project was Dalit

Access for 'differently able' – physically vulnerable people
In contrast to the well integrated approaches to gender and caste, those with different physical needs, such as elderly, sick, or disabled people and pregnant women, are not taken into account within CLTS. No awareness about out how their needs might be better identified and addressed was seen.
No designs or ideas had been introduced that would make latrines more user-friendly for those with disabilities. Even in the CLBSA project there was no advice or information about technical options to improve accessibility for children, elderly, or disabled people, even though these groups are explicitly mentioned in NEWAH's CLBSA policy and guidelines. According to the sanitation mason in Darbesha, a single design of slab and pan was used.

Section 8

Sustainability

This aspect of the study sought to understand firstly to what extent the elimination of OD was a behaviour that was entrenched and becoming permanent, and secondly to what extent communities were willing and able to progress towards behaviours which may have greater health benefits (the use of sanitary latrines and hygienic behaviours).

Proxy indicators used for permanence of latrine use and progress on sanitation-related behaviours were:

- Full pits emptied and/or replaced
- New community members construct and use latrines
- Some moving up sanitation ladder – upgrading of household latrines
- Damaged pits and latrines are repaired or replaced

8.1 Use and maintenance of latrines

Whether latrines were used, maintained and hygienic was one of the key proxy indicators of how entrenched latrine use is.

The majority of respondents, including children, were able to define what constitutes a hygienic latrine and to make the distinction between this and the technical definitions of pukka and temporary latrines. Most respondents clearly recognised that although a pukka latrine was more likely to be hygienic, a temporary latrine could also be hygienic.

Of the 61 latrines observed, 93% (57) were in use, one of them only at night because of damaged superstructure. Four latrines were damaged and one had a full pit, these were all from the two older communities, Ekta Chok and Devisthan.

8.2 Hygienic status of latrines

77% (47) of the 61 latrines inspected were considered to be hygienic (see Table 4). Of the hygienic latrines, 87% (41) were pukka and 13% (6) were temporary. None of the pukka latrines were found to be unhygienic, whilst 63% (10) of the temporary latrines were unhygienic.

Of the unhygienic latrines, four were of a design that could originally have been hygienic – direct pits with platform of wooden planks. The remaining six unhygienic latrines were open pits, which could never have been hygienic as there was no way of covering the faeces to prevent flies or smells.

In Devisthan, the majority of temporary latrines that existed at NOD had filled up or collapsed and had not been re-dug. One informant commented that some of the pits were too shallow, so they filled up very quickly. Once this happened, households returned to OD, although not always immediately. One woman said she had dug three pits since the project started, two of which collapsed and one of which filled up. She has now returned to OD.

8.3 Children's faeces

Latrine use is reported to improve the way children's faeces are disposed of. In three CLTS communities, children under five defecate on the bare floor and their faeces thrown into the latrine. In Devisthan, faeces are disposed of in the forest area. In hill areas, elderly people and children use a container at night which is then emptied, in Amarku, into the latrine, or, in Devisthan, in the forest area.

8.4 Pit emptying

In both hill and Tarai communities, temporary latrine pits are simply buried with soil and a new pit dug. Of 49 households interviewed, 37% (18) had filled or damaged unlined latrine pits which they had buried and replaced with a new pit. In the two oldest communities, Ekta Chok and Devisthan, this percentage is 75% and 33% respectively. The high percentage in Ekta Chok indicates a willingness to continue with the construction and use of latrines.

In the Tarai, the pits of pukka latrines are usually emptied by the sweeper caste, *Dum'*.[3] The waste is then emptied into a second pit dug nearby and buried. One householder, in Chisapani, whose three year old latrine pre-dated the project, had a pit that had been emptied by Dum, at a cost of NRs 200.

In hill communities these emptiers are not available. In Amarkhu, the plan proposed by the WSUC was that once a pit was full, a second pit should be dug to turn it into a twin pit latrine system. This solution was also mentioned by one respondent, whilst other respondents did not seem to know what they would do when their pit was full. One was clearly worried about how or whether to empty the pit as he had no space to dig a second pit. One respondent talked about sharing his neighbour's latrine for a couple of days while he emptied his pit; the implication of this being that he will have to handle fresh faecal matter.

8.5 Upgrading

The issue of upgrading was not yet relevant in the recent/incomplete projects of Chisipani and Darbesha. In Devisthan no significant upgrading appears to have taken place, (only three latrines were observed that had been upgraded since NOD). In Amarkhu almost all latrines were pukka latrines with no need for upgrading as yet.

3 'Dum' are a community who are born and spend their life in the occupational caste of 'sweeping', scavenging and pit emptying. They are itinerant, going from one community to the next in search of work

In Ekta Chok, three years after NOD, upgrading was still going on. The reported total number of latrines had fallen since NOD and those actually in use may have been even less. However, the number of pukka latrines had increased from 13 to 36 in the last three years; an increase from 20% to 54% of the total number of latrines. Of the 19 latrines observed, five households were on their second latrine and three on their third latrine. Ten of the latrines observed were two years old or less, of which five were hygienic (four pukka and one temporary), indicating that construction and upgrading were still continuing.

In the Tarai, households with temporary pit aimed to upgrade to a ring-lined pit in order to avoid the chore of repeated digging. Other upgrade priorities included, digging a second pit, improving the superstructure and having a door instead of a curtain.

Problems upgrading

At least 41% of households interviewed (20/49)[4] had temporary unlined pits that had become full or damaged. 11 of these had upgraded to a lined pit. Of the nine households that did not upgrade, four were poor and five ultra poor from Ekta Chok or Devisthan. Of these, three from Devisthan had returned to OD, three were temporarily latrine sharing and six had dug at least one more unlined pit – two had dug three pits and one had dug eight. Digging temporary pits every one or two years was clearly time-consuming.

Information and knowledge sharing on low-cost options to make temporary latrines longer lasting seemed to be limited. One example that stood out was in Chisapani (see Photo 9).

One householder in Ekta Chok had learnt from early mistakes. He had previously dug two pits that quickly collapsed and then found a way of making the pit lining more durable using closer woven bamboo and wire. This system had lasted for two years.

The sanitation masons in Ekta Chok and Chisapani had received no training so they built what they had experience of. One mason said that sometimes he was asked to construct a temporary latrine but he always refused. This indicates that if households could not afford the materials for a pukka latrine, they were left to fend for themselves in design and construction.

8.6 In-migrants and new households using latrines

Figures for new households were available in Ekta Chok: 10 new households, (5 incomers), Chisapani, 2 households and Amarkhu, 5 hosueholds. Only one in-migrant in Ekta Chok was interviewed. He had been told to build a latrine, but had received no other advice or follow-up from the community. This would indicate a lack of information and understanding, and not necessarily a lack of resources.

4 Not all latrines inspected had someone available to provide the latrine's history

Section 9

Programme costs

Programme costs are presented at two levels: direct implementation costs incurred by NEWAH and local partners, based on figures provided by NEWAH to WaterAid Nepal, and national level costs, based on WaterAid in Nepal figures.

For ease of calculation, the exchange rate current at time of writing of 1USD = 80 NRs has been applied to all figures, even though the rate fluctuated during the implementation period.

9.1 Implementation costs

Table 5 shows a summary of CLTS costs, with hill and *tarai* costs presented separately, because of the significant differences. Most of the information is based on actual project costs provided by NEWAH, from which an average has been calculated.

For some budget lines, however, information from NEWAH did not appear to fully represent likely costs.[5] This applies particularly to local NGO costs, which include staff salaries and travel, and a proportion of NEWAH Eastern or Central Regional office overheads. Staff salary costs (for NEWAH and local NGO partner staff) were therefore calculated by estimating the average percentage of time spent by staff in each project (see Table 6), and applying this to their salary. (The different percentages for hill and *tarai* reflect the fact that more staff time is generally needed to cover fewer households in the hills, due to remote locations and the scattered nature of hill communities, compared to easily accessible and dense *tarai* communities.) Time spent on each project component of water, sanitation and hygiene were then also estimated, and the cost of the 'water' time deducted.

5 These projects are part of a much larger NEWAH programme in which staff and support costs are distributed between many projects, with the result that staff costs allocated to a single project do not always represent the actual cost to that project

Table 5. Summary of CLTS costs

	Hill (8 communities)			Tarai (9 communities)		
	Total NRs	per community		Total NRs	per community	
		NRs	US$		NRs	US$
Direct implementation						
– Local NGO costs	3,293,621	411,703	$5,146	3,919,010	435,445	$5,443
– Software (WSUC support, training & follow-up)	270,451	33,806	$423	185,496	20,611	$258
– Software (IEC)	53,280	6,660	$83	59,940	6,660	$83
– Hardware	95,410	11,926	$149	237,464	26,385	$330
– School Latrines	859,466	107,433	$1,343	39,819	4,424	$55
WAN programme support	578,500	72,313	$904	698,500	77,611	$970
Overall total	*5,150,728*	*643,841*	*$8,048*	*5,140,229*	*571,136*	*$6,881*
Total excluding school latrines	4,291,262	536,408	**$6,705**	5,100,410	566,712	**$7,084**

'Follow-up' means NEWAH staff follow-up visits – between 2 and 4 visits per community – for 2 years after project completion.

Hardware costs include latrine construction materials and labour for demonstration purposes and for sanitation mason training. In Amarkhu, the only community where a formal subsidy approach was used, this also included subsidised materials and labour for 16 households. In some communities the cost of improved cooking stoves was also included, including Ekta Chok, but this was negligible.

WaterAid in Nepal costs incurred at national level include programme support and development costs from 2003 – 2008, which include programme initiation, exposure visits, capacity building, advocacy meetings and workshops, and the review of CLTS.

School sanitation was a major project cost in the hills, where there was a school in 7 out of 8 communities, whereas only two *tarai* projects had a school in the community. In two of the hill communities, school sanitation exceeded 50% of the sanitation budget. The cost of school sanitation has therefore been deducted from the total costs to reduce this discrepancy.

Figures in Table 5 show that the average cost of sanitation per hill community was $6,705, and per *tarai* community was $7,084.

Table 6. Percentage of staff time spent in each project

	tarai	*Hill*
NEWAH Staff		
Social technician	30%	35%
Health motivator	15%	20%
Technical supervisor	10%	12%
Local Partner Staff		
Project Coordinator	50%	50%
Health & Sanitation Facilitator	100%	100%

9.2 Cost-effectiveness

A number of ways have been used to calculate cost-effectiveness.

Cost per latrine can be calculated in two ways:
a) based on the number of households that had built a new or upgraded latrine at NOD, the cost per latrine in the hills is $68 and in the *tarai* $126.
b) based on the number of latrines new or upgraded since ignition and currently in use at the time of the study, the cost per latrine in the hills is $108 and in the *tarai* $122.

The major difference between the two figures in the hills is because of the high number of latrines in Devisthan that had fallen into disrepair and been abandoned since NOD.

Costs per beneficiary household: if one assumes that every household in the target community benefits from CLTS, whether or not they own a latrine. Based on the average number of households in the study communities, the cost per beneficiary household in the hills is $58, and in the *tarai* $84.

Table 7. Cost-effectiveness of CLTS in study communities

	hill			*tarai*		
	Devisthan	Amarkhu	average	Ekta Chok	Chisapani	average
Average cost per community (from Table 5)			$6,705			$7,084
New latrines at NOD	110	87	98.5	62	50	56
Cost per new latrine	**$61**	**$77**	**$68**	**$114**	**$142**	**$126**
New latrines in use at evaluation	37	87	62	60	56	58
Cost per new latrine in use at evaluation	**$181**	**$77**	**$108**	**$118**	**$126**	**$122**
HHs in study communities	131	101	116	80	88	84
Cost per household	**$51**	**$66**	**$58**	**$89**	**$80**	**$84**

Hill and *tarai* costs: Unit costs per latrine and household work out higher in the *tarai* than in the hills, which is contrary to WaterAid Nepal's wider data on costs of sanitation in hill and *tarai* in its rural programme. One reason is that the CLTS communities in the *tarai* just happen to be smaller than those in the hill communities, whereas in Nepal as a whole the opposite is true – *tarai* communities tend to be larger and more densely populated than hill communities.

Cost of subsidies: Unit costs for Amarkhu, the community where a formal subsidy approach was used, do not appear significantly higher than the other study communities, because averaged hardware costs have been used. This masks the *actual* hardware costs for Amarkhu, however, which according to NEWAH data, are the highest of all 19 CLTS communities.

Implications for scaling up: Some project costs are fixed and will therefore be the same whatever the size or number of communities. WaterAid's initial programme development costs, for example, will be spread more thinly as CLTS or CLBSA are implemented in more communities, so the cost per community/household will fall. However, these economies of scale are limited. Other costs, such as for training and staff, start to increase in communities over a certain size. In the hills, the remoteness and scattered nature of communities mean that staff time – community mobilisers and sanitation promotion staff – cannot be utilised as effectively as in more accessible *tarai* areas.

Section 10

Discussion

10.1 Overall impact – community-wide sanitation

Evidence that NOD is seen not just as an individual household problem, but as a whole community concern, is demonstrated by two projects: in Chisapani, with evidence of strong intra-community support, and in Amarkhu with planned mechanisms for ongoing financial support for upgrading, rather than it just being left to individual households.

In the two older CLTS communities – Ekta Chok and Devisthan, upgrading of latrines appeared to be left entirely up to individual households. In neither were there community-led initiatives to support this. In Devisthan, sanitation seemed to be seen as an individual household issue, rather than an issue of community concern, or public good. It was considered a good thing that the overall cleanliness of the community had improved, but there was no concern expressed about the potential health risks of the majority of the community returning to open defecation.

In Amarkhu on the other hand, for households without latrines, the consensus in the women's FGD was either to persist in encouraging them to build, or to help them actually build a latrine. It was recognised that if one family, i.e. 6-8 people, continued open defecation, the health of the whole community could be affected. The issue should therefore be addressed not only an individual household problem, but by the WSUC as a whole community issue.

Proposed financing options in Chisapani and Amarkhu are revolving loan funds to support individual households, set up and managed by WSUC. These will not suit everyone however, as the very poor tend not to take loans. Some kind of hardship fund might be needed, funded by cross-subsidy – a percentage of loan interest or water tariff for example.

A further type of subsidy was seen in the form of a sliding scale of charges applied by one sanitation mason – NRs 1,500 for work outside the community, NRs 600 for inside the community, even less for the poorest.

The question is, does community responsibility extend only far as the elimination of open defecation, or also to ensuring that all fixed place defecation can be hygienic? If the community, for the overall good, has ended open defecation, one could argue that they also have a duty of care to the minority who may be adversely affected by this.

Pressure from the community and coercion to build latrines, e.g. penalties for non-compliance, have proved effective in changing the behaviour of the majority of the community. They appear to have worked best when combined with incentives and support, i.e. a carrot and stick approach.

When the 'stick' alone is used, as seems to have happened in Devisthan, once the stick has gone, some households see no reason to continue using latrines, as the obstacles outweigh any perceived benefits. One young woman spoke of the relief she felt after the pressure to build a latrine stopped.

Standard CLTS approaches of community persuasion, pressure and coercion have worked with the majority, but for a small minority (e.g. stubborn elderly, people with mental health problems, etc) more creative and targeted approaches may be needed to achieve genuine 100% latrine use, if that is truly the aim.

10.2 Eliminating public OD as a first step

In Devisthan, open defecation continued to be practised by the majority of the community, with most adults reportedly going to the jungle, or to 'secret' or hidden defecation places. Nevertheless, the surroundings were cleaner than before CLTS, because defecation on roads, paths and verges had disappeared. This indicates an increased awareness of the importance of cleanliness.

Because this community is very scattered, it is more possible than in densely populated communities to find hidden places that other people are unlikely to come across, and neighbours less likely to be affected with offensive smells. (That said, one respondent complained that her neighbour was defecating near her house which she was unhappy about.)

These defecation spots were not seen by the researchers, and there was no evidence that people were covering their faeces, so the *actual* health benefits may not be so great. For example, in one family visited, the young children had flies around their eyes and mouths, which was not seen in any of the other communities.

It was interesting that health benefits of this increased cleanliness were reported. In such a scattered rural community, this may be a 'good enough' result for now. However the improved community cleanliness could reduce the incentive to eliminate open defecation. Promoting the covering of faeces in the hidden locations may be a step in the right direction.

10.3 Impact of subsidy approaches

In three projects, well-being ranking has clearly provided benefits to the majority of the poorest, who otherwise would not have been able to build latrines. The problems that have arisen appear to have resulted from weaknesses in the way it has been carried out. These include lack of transparency causing some resentment (Amarkhu), and in Darbesha, poorly targeted criteria and distortion of expectations caused by neighbouring subsidy-based programmes.

However, the outcome appears to have been good; in Amarkhu among the owners of the12 pukka latrines observed, there were five medium, three poor and four ultra-poor households, indicating that benefits appear to be reaching the less well-off.

In Ekta Chok and Devisthan where well-being ranking had not been carried out, there were clear examples of households who had no resources to construct latrines. Apart from some initial support in the early stages, no further support had been provided.

10.4 Approaches to address the poorest and most vulnerable

A subsidy-based approach to support has limitations. There needs to be some way to facilitate the community to identify the different needs of community members in a more nuanced way. On the one hand a process is needed to map the resources (human as well as material) and skills available to different households, and also their needs in term of accessing latrines. This needs to be done at all stages of the project implementation process – in the initial community survey, in the well-being ranking, in the identification of support needs, etc.

If CLTS is supposed to promote community action, the community needs to understand how to allocate community resources (financial, labour or skills) to achieve total sanitation.

There is a wealth of knowledge, information and experience within parts of NEWAH about designs and technology options for disabled and elderly people, but most of this is based on pilot projects in NEWAH's Western region. There is still a lack of knowledge and skills among the majority of project staff and partners. A clear strategy is needed to disseminate NEWAH's existing learning on access for all including physically vulnerable, and to build capacity to implement CLBSA policy and guidelines on access for all.

10.5 Emergence of natural community leaders/ facilitators

An important factor in project success seemed to be active leadership from key people, who might be different in each community. In Ekta Chok, the Child Club was very active, and one of the child leaders has since pursued other areas of child advocacy, including radio broadcasting. Some former members of the WSUC in Ekta Chok have also got together with neighbouring WSUCs to form a community-based organisation, Gramin Sudar Kendra (GSK). Funded by Plan, GSK now works with NEWAH to implement CLTS in new communities in the District. Several women from the women's committee in Ekta Chok were involved with NEWAH in promoting CLTS in communities in other Districts.

Local leaders or elite groups were often the first to understand the implications and benefits, who have the resources to act on the new information, and seemed to be taking the lead, and setting an example. In Chisapani, the local community leader was the driving force behind CLTS.

10.6 Long-term monitoring and follow-up mechanisms

In Chisapani and Amarkhu, the most recently completed projects, the WSUCs were still active in monitoring and supporting latrine construction and upgrading.

Issues of monitoring and follow-up were clearer and of greatest concern in the two older projects – Ekta Chok and Devisthan.

In Devisthan, no monitoring was happening. Neither the SUC nor the CC were currently functioning. This was similar to the situation in Ekta Chok, but unlike Ekta Chok, it was difficult for people to remember who was on the SUC, apart from the Chairwoman, and it was not possible to convene a meeting. The former Child Club chairman was also unable to convene a meeting.

It is worth noting that there was no follow-up from NEWAH staff after project completion in Devisthan, which may have been a factor in the project's low success rate.[6] This was in contrast to standard NEWAH practice, which was to make at least 6-monthly follow-up visits for two years after completion .

In Ekta Chok, there were also problems with ongoing monitoring of sanitation. The poorest, incomers, sharers, etc. were not being followed up.

- The WSUC still existed but had not met for the last 3 months. They planned to start meeting again after festival season is over. The Child Club was almost inactive, club members during the project period received training, but no training had been received by newer club members.
- Some key male WSUC members were now more involved with GSK, whose focus of activities are outside the community, whilst the focus of the women's group was now on income generation activities. They plan to follow-up the NOD situation. No plans were reported for further development of sanitation in the community.
- Figures for current latrine status were imprecise, indicating a lack of up-to-date monitoring of latrines, their maintenance and use. The impression given was that the programme had achieved its objectives and that monitoring was no longer needed. This was not disputed by any respondents.
- Latrine upgrading was largely left to individual households, with no ongoing support mechanisms for this.

The role of follow-up and visits by outsiders, including the research visit, was emphasised in three of the CLTS projects, in re-energising, re-focusing, and providing learning opportunities for the community. This appears to indicate the need to build visits by outsiders into long-term project monitoring. This could be organised at VDC or District level.

6 The lack of follow-up was due to political unrest and instability in the area during the last few years

10.7 'Pukka' versus 'hygienic' status of latrines

Reporting formats by the WSUCs are currently determined by technology rather than by the state of the latrines. Reporting based on hygiene status would correspond to JMP reporting format, i.e. hygienic/ shared/ unhygienic/ open defecation. At the moment, the category 'permanent' seems to imply hygienic, even though when asked, communities distinguish readily between pukka and hygienic. The category 'temporary' was seen to cover a range of latrines from very acceptable hygienic latrines to open holes in the ground. This research has recorded both the technology and the hygienic status of the latrines observed. For communities to move into line with JMP reporting would require monitoring in the form of periodic direct observation to be carried out.

10.8 Declaration of NOD

It appears that the usual practice of the CLTS programme was to estimate how long it would take to achieve NOD and to set a date well in advance, which provided a goal to work towards. There was evidence that in some communities, e.g. Darbesha, Devisthan, there was a rush to dig temporary pits, with limited technical oversight or minimum standards, which resulted in pits filling up or collapsing very quickly. Setting a short time-frame to achieve NOD has advantages in terms of community motivation, but there also appear to be advantages in taking a slower, steadier approach. In the case of Amarkhu, which took 10-12 months from ignition PRA to NOD, 95% of households had pukka latrines at NOD.

One reason for this is that the subsidy from NEWAH for Amarkhu was provided before NOD was declared, thus eliminating the need to rush to declare NOD, which in Darbesha triggered the release of the Community Fund. It also enabled the poorest to move straight to construction of a pukka latrine, without the interim step of temporary latrine construction as seen in other CLTS projects.

This compares with Devisthan, which took only 5-6 months, where the majority of latrines at NOD were temporary, and most of which have since collapsed and been abandoned.

10.9 Maturity of the sanitation market

The sanitation market in Nepal appears to be characterised by high cost latrines, particularly in the hills, and a lack of innovation by communities and local masons. CLTS is a small part of sanitation programmes in Nepal, so demand for different technologies is still low, which may be why there are no entrepreneurs promoting alternative technologies.

The situation in the *tarai* seemed better, where most of the necessary skills and resources were available, with pit emptiers, skilled sanitation masons, and materials or components in local markets.

As yet there appears to be almost no interest in developing low-cost innovations to improve durability of temporary latrines, possibly because everyone aspires to have a pukka pour-flush latrine, which appears to be reinforced, or at least not challenged by NEWAH, whose targeted subsidies support construction of pukka latrines in all cases.

Advice on construction techniques and technical options need to be more widely available for households to make small-scale low cost improvements to improve the hygienic status of their latrine.

10.10 Pit emptying

In the *tarai*, the long-term costs of pit emptying appear not to be onerous. The information gained about one pit that had been emptied, indicates that this was after 3 years of use, by a household of five members, and cost NRs200. This is a fraction of the cost of the original latrine.

This was a latrine with a single pit, so the pit emptiers were handling fresh sludge. No further details about how the operation was carried out were available. The research team unfortunately did not meet any '*Dum*', as they are itinerant and none appeared during the field-work. It was therefore not possible to investigate the procedure for emptying a single pit latrine, i.e. when sludge is fresh and constitutes a potential health hazard for both emptiers and households. Further study is needed into how these emptying operations are carried out, and the implications of increased numbers of pits, handling of fresh sludge, health implications on emptiers and communities.

Most people have thought about what they will do when the pit is full, and dealt with full pits both temporary and permanent. However there appears to some uncertainty among some owners. Informed choice needs to be ensured, so that households are aware of different technology options and their implications (cost, space, reuse, etc.).

Appendix 1

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Appendix 2

Schedule of field-work 14 September - 2 October 2008

Date	Time	Activities
15 Sept	evening	Arrival of Ms Hazel Jones in Kathmandu (KTM)
16 Sept	am	WAN Office: Team Preparation
	pm	Fly to Biratnagar, drive to Urlabari
17 Sept		Field Work Ekta Chowk CLTS Project
18 Sept		Field Work Ekta Chowk CLTS Project
19 Sept		Field Work at Chisapani CLTS Project
20 Sept		Field Work at Chisapani CLTS Project
21 Sept	am	Field Work at Darbesha CLBSA Project
	pm	Return to KTM
22 Sept		WAN Office: Information Processing
23 Sept	am	Drive to Simle, walk to Devisthan
	pm	Field work Devisthan CLTS project
24 Sept		Field work Devisthan CLTS
	eve	walk to highway
25 Sept	am	Drive to Mahadevbesi, walk to Amarkhu
	pm	Field work Amarkhu CLTS project
26 Sept		Field work Amarkhu CLTS project
27 Sept	am	Field work at Amarkhu CLTS project
	pm	Return to KTM
28 Sept		Rest Day
29 Sept		WAN Office: Writing up and data synthesis
30 Sept		WAN Office: Writing up and data synthesis
01 Oct		WAN Office: Data synthesis and preparation for consultative group presentation
02 Oct	am	Consultative group meeting and presentation
	pm	Preparatory works for report
	Eve	Departure of Hazel Jones from Kathmandu

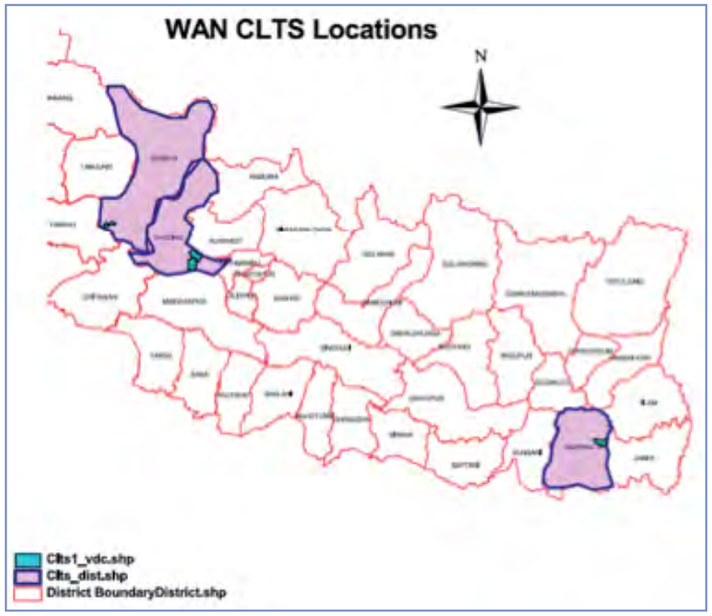
Appendix 3

WaterAid in Nepal
CLTS/SLTS/CLSBA Project locations

S. No	PASF	Phase	Progamme	Partner	Project WSH/SH	Location					Approach	Co-Funding	Beneficiary	NOD Achievement		Included in CLTS Assessment Y/N	Implementation	
						Region	District	VDC	Ward	Village/ Community	CLTS/ SLTS		HH	Declared or Not	Declared Date		Started	Completed
1	3330	P-0	RURAL	NEWAH	WSH	Western	Gorkha	Dhuwakot	1, 9	Bhorle	CLTS		27	Declared		Y	Dec-03	Mar-04
2	3456	P-0	RURAL	NEWAH	SH	Central	Dhading	Bhumisthan	8	Karkidada	CLTS		65	Declared	21/11/2004	Y	Dec-03	Mar-05
3	3859	P-0	RURAL	NEWAH	SH	Central	Dhading	Bhumisthan	6, 7, 8, 9	Sulkhola	CLTS		128	Declared		Y	Dec-04	Mar-06
4	3859	P-0	RURAL	NEWAH	SH	Central	Dhading	Bhumisthan	6, 7, 8, 9	Deurall	CLTS		38	Declared		Y	Dec-04	Mar-06
5	3859	P-0	RURAL	NEWAH	SH	Central	Dhading	Bhumisthan	6, 7, 8, 9	Devisthan	CLTS		133	Declared		Y	Dec-04	Mar-06
6	3870	P-0	RURAL	NEWAH	WSH	Eastern	Morang	Urtabari	7	Dumre, Ekta chowk	CLTS	Plan	70	Declared	11/11/2004	Y	Mar-05	Oct-05
7	3870	P-0	RURAL	NEWAH	WSH	Eastern	Morang	Urtabari	7	Dumre, Ekta chowk	CLTS	Plan	36	Declared	14/04/2005	Y	Mar-05	Oct-05
8	4204	P-0	RURAL	NEWAH	SH	Central	Dhading	Bhumisthan	6	Jugekuwa	CLTS		61	Declared		Y	Sep-05	Jun-06
9	4203	P-0	RURAL	NEWAH	SH	Central	Dhading	Goganpani	3	Goganpani	CLTS		78	Declared		Y	Sep-05	Jun-06
10	4223	P-0	RURAL	NEWAH	WSH	Eastern	Morang	Urtabari	1	Subidhajhoda	CLTS	Plan	70	Declared	20/02/2006		Feb-06	Jun-06
11	4223	P-0	RURAL	NEWAH	WSH	Eastern	Morang	Urtabari	7	Redcross Chowk	CLTS	Plan	60	Declared	26/03/2006	Y	Feb-06	Jun-06
12	4250	P-0	RURAL	NEWAH	SH	Central	Chitwan	Kathar	1 & 9	Kathari	SLTS		352	Declared				
13	4351	P-1	RURAL	NEWAH	WSH	Central	Dhading	Bhumisthan	3, 4	Amarkhu	CLTS		101	Declared			Jul-06	Aug-06
14	4697	P-1	RURAL	NEWAH	WSH	Central	Dhading	Bhumisthan	1	Dadagaon	CLTS		94	Declared			Jul-06	Aug-06
15	4701	P-1	RURAL	NEWAH	WSH	Eastern	Morang	Urtabari	1	Bishal Tole	CLTS	Plan	65	Declared	23/06/2007		Jul-06	Mar-08
16	4701	P-1	RURAL	NEWAH	WSH	Eastern	Morang	Urtabari	1, 5	Bakrahadil	CLTS	Plan	54	Declared	19/09/2007		Sep-06	Mar-08
17	4701	P-1	RURAL	NEWAH	WSH	Eastern	Morang	Urtabari	7	Sirujhar	CLTS	Plan	92	Declared	26/01/2007		Jan-06	Mar-08
18	4871	P-2	RURAL	NEWAH	WSH	Western	Gorkha	Dhuwakot	9	Ripthok	CLBSA		76	Declared				
19	4871	P-2	RURAL	NEWAH	WSH	Central	Baglung	Bhimglthe	2	Bhimgithe	CLBSA		94	Declared				
20	4871	P-2	RURAL	NEWAH	WSH	Central	Baglung	Binamare	6, 9	Kusunde	CLBSA		45	Declared				
21	4872	P-2	RURAL	NEWAH	WSH	Western	Syangja	Chilaunebas	2	Chilaunebas	CLBSA		79	Declared				
22	4872	P-2	RURAL	NEWAH	WSH	Western	Gorkha	Gakhu	9	Nayasanghu	CLBSA		109	Declared				
23	4893	P-2	RURAL	NEWAH	WSH	Eastern	Siraha	Padaria	9	Padaria IV	CLBSA		239	Declared	24/02/2008			
24	4893	P-2	RURAL	NEWAH	WSH	Eastern	Siraha	Siswani	8, 9	Barchahawa	CLBSA		147	Declared	24/02/2008			
25	4893	P-2	RURAL	NEWAH	WSH	Eastern	Siraha	Itharwa	1	Mahesbari	CLBSA		80	Declared	17/02/2008			
26	4894	P-2	RURAL	NEWAH	WSH	Eastern	Morang	Darbesha	3, 6	Darbesha	CLBSA		195	Declared	16/02/2008			
27	4894	P-2	RURAL	NEWAH	WSH	Eastern	Morang	Sorabagh	2, 4	Sorabagh	CLBSA		138	Declared	27/01/2008			
28	4894	P-2	RURAL	NEWAH	WSH	Eastern	Morang	Takuwa	3, 8	Takuwa	CLBSA		161	Declared	09/02/2008			
29	4894	P-2	RURAL	NEWAH	WSH	Eastern	Morang	Bablyabirta	1, 3	Bablyabirta	CLBSA		123	Declared	12/01/2008			
30	4894	P-2	RURAL	NEWAH	WSH	Eastern	Morang	Urtabari	4	Munal tole	CLTS	Plan	34	Declared	19/03/2008			
31	4894	P-2	RURAL	NEWAH	WSH	Eastern	Morang	Urtabari	1	Chisapani, Madhumalia-9	CLTS	Plan	85	Declared	29/03/2008			
32	4895	P-2	RURAL	NEWAH	WSH	Eastern	Udayapur	Risku	8	Tapi	CLBSA		60	Declared	25/03/2008			
33	4895	P-2	RURAL	NEWAH	WSH	Eastern	Udayapur	Tawashree	6	Laleri	CLBSA		55	Declared	11/03/2008			
34	4895	P-2	RURAL	NEWAH	WSH	Eastern	Udayapur	Ranchawati	4	Gohiya	CLBSA		58	Declared	11/03/2008			
35	4895	P-2	RURAL	NEWAH	WSH	Eastern	Udayapur	Chilaune	3, 9	Chilaune	CLBSA		99	Declared	17/02/2008			
36	4896	P-2	RURAL	NEWAH	WSH	Eastern	Sanshuwasabha	Mamling	6, 9	Dhodebehultar	CLBSA		77	Declared	17/02/2008			
37	4896	P-2	RURAL	NEWAH	WSH	Eastern	Sanshuwasabha	Mamling	4	Maming	CLBSA		47	Declared				
38	4897	P-2	RURAL	NEWAH	WSH	Central	Dhading	Jhariang	3, 7	Nyancho	CLBSA		90					
39	4897	P-2	RURAL	NEWAH	WSH	Central	Dhading	Darkha	5	Singang	CLBSA		92					
40	4898	P-2	RURAL	NEWAH	WSH	Central	Chitwan	Meghaul	5, 9	Dharampur	CLBSA		515	Declared				
41	4899	P-2	RURAL	NEWAH	WSH	Central	Kavre	Mahankalchaur	2, 3, 4, 5, 7	Mahankalchaur	CLBSA		270	Declared				
42	4900	P-2	RURAL	NEWAH	WSH	Central	Chitwan	Kathar	1, 2, 3, 4	Kathar II	SLTS		640	Declared				
43	4900	P-2	RURAL	NEWAH	WSH	Central	Chitwan	Kathar	3, 5, 6, 7	Kathar III	SLTS		663	Declared				
44	4907	P-3	RURAL	NEWAH	WSH	Eastern	Siraha	Brahman Gauchari	7, 8, 9	Brahman Gauchari	CLBSA		157					
45	4908	P-3	RURAL	NEWAH	WSH	Central	Chitwan	Meghaul	5, 8	Telaul Parsadhap	CLBSA		308					
46	4909	P-3	RURAL	NEWAH	WSH	Central	Chitwan	Kathar	3, 5, 6, 7, 9	Kathar IV	SLTS		372					
47	4910	P-3	RURAL	NEWAH	WSH	Western	Gorkha	Ghyachok	3, 4, 5	Ghyachok	CLBSA		88					
48	4911	P-3	RURAL	NEWAH	WSH	Western	Gorkha	Gakhu	6	Beldada	CLBSA		69					
49	4912	P-3	RURAL	NEWAH	WSH	Eastern	Morang	Biratnagar	7	Rampur	CLBSA		203					
50	6321	P-3	RURAL	NEWAH	WSH	Eastern	Udayapur	Sirise	6, 9	Kolbot	CLBSA		46					
51	6321	P-3	RURAL	NEWAH	WSH	Eastern	Udayapur	Sirise	6	Khamare	CLBSA		44					
52	6321	P-3	RURAL	NEWAH	WSH	Eastern	Udayapur	Sirise	7	Patnabhanjyang	CLBSA		51					
53	6321	P-3	RURAL	NEWAH	WSH	Eastern	Udayapur	Routa	4	Namanta	CLBSA		68					
54	6321	P-3	RURAL	NEWAH	WSH	Eastern	Udayapur	Routa	2	Yamuta	CLBSA		59					
55	6321	P-3	RURAL	NEWAH	WSH	Eastern	Udayapur	Routa	1, 2	Pabu	CLBSA		113					
56	6322	P-3	RURAL	NEWAH	WSH	Central	Dhading	Gumdi	1	Chinchok I	CLBSA		86					
57	6322	P-3	RURAL	NEWAH	WSH	Central	Dhading	Gumdi	1, 2	Chinchok II	CLBSA		97					
58	6322	P-3	RURAL	NEWAH	WSH	Central	Sindhull	Ranichuri	1	Fiting	CLBSA		75					
59	6322	P-3	RURAL	NEWAH	WSH	Central	Sindhull	Ranichuri	6	Tansar	CLBSA		82					
60	6323	P-3	RURAL	NEWAH	WSH	Eastern	Bhojpur	Tungecha	7	Semeng	CLBSA		39					
61	6323	P-3	RURAL	NEWAH	WSH	Eastern	Bhojpur	Keurenipani	5, 8, 9	Ramche	CLBSA		52					

Appendix 4

WaterAid in Nepal CLTS locations



Appendix 5

Case examples

Box 1: Example of planned latrine sharing

In Chisapani, an example was seen of planned latrine sharing, i.e. joint ownership between neighbours who were unrelated, and of different castes – one Janajati and the other Dalit. Both households were poor, one household's land was flood-prone and unsuitable for a latrine, the others less so. Both households saw the advantage of pooling their resources, and reached an agreement at the outset. They shared the costs and labour for construction and maintenance, and cleaning was also shared equally. They saw it as an arrangement which may be long-term, although if the situation changed and the second household wanted to build her own, the neighbour would help her with this. They would share the costs of any future upgrading, emptying etc. Of course these arrangements are very recent, and there is no knowing how long they will last, but the key appears to be joint and clear decision-making and planning from the outset, and acceptance of equal responsibility.

Box 2: Details of latrine cost estimates

Tarai
The materials needed are available locally at a cost of NRs 3,000 – 5,000 (depending on design) for a 'set' of concrete rings, concrete covers, and concrete water seal pan.

The labour charge for skilled masons is about NRs 200 a day, working out at NRs 5,000 for a twin pit latrine with brick built superstructure, NRs 1,500 for a twin pit up to slab level, and NRs 1,200 for a single pit latrine up to slab level.

Households usually dig their own pit, which usually takes one day, collect their own sand and aggregate from the river to build up the latrine platform, and build their own superstructure, amounting to several days work.

Hills
The cost of materials in the hills includes the cost of portering non-local materials, such as bags of cement, ceramic pan, pipe, etc. up from the market on the highway at NRs 200 per trip. Other materials, such as stones to line the pit and to build walls, are freely available in the local surroundings, but time-consuming and hard work to collect.
The cost for skilled labour is NRs 150 per day, i.e. lower than in the *tarai*.

WaterAid

WaterAid's vision is of a world where everyone has access to safe water and sanitation.

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