

Lessons learned from community mobilization to improve sanitation in a rural village in Nepal

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Abstract

Livelihood and Environmental Awareness Project (LEAP) operates in Devichaur VDC, Lalitpur district Nepal since 2010. The development partners are KEMA (Finnish NGO) and Community Development Forum (CODEF, Nepali NGO). The project will be completed in 2015. Gender and Social Inclusion, WASH, Income Generating Activities and Capacity Building are the key components of the project.

The Devichaur Village Development Committee (VDC) area comprises of 577 households and a population of 2883, having 80% ethnic (Tamang) inhabitants. The VDC has been declared as Open Defecation Free (ODF) zone since July 2014, which means that there is not human excreta openly seen and most (98%) of the household have a hygienic water seal toilet. The baseline situation in 2010 was that only 41% of households had toilet. Outbreaks of water borne diseases were common and caused a significant risk especially to children.

Elements that contributed to the success:

- Mobilization of women's groups. 22 women groups were established with 340 members covering the VDC. They implemented the village level awareness campaign.
- Input of the Female Community Health Volunteers (FCHV). They visited the households with a sanitation and hygiene checklist.
- CODEF coordinated the community, Village WASH Coordination Committee (VWASHCC) and district office to implement the national sanitation and hygiene master plan.
- Matching funds were provided for latrine construction in the beginning, later switched to a policy where only the ultra poor received support.
- people were motivated with the integrated approach where WASH was only part of an integrated project with a strong IGA (income generating activity) component
- A national level top down political pressure to show progress with the Millennium Development Goals as well as national target "WASH universal coverage by 2017.

Challenges included ultra-poor households, high illiteracy rate, landless people, mistakes made in construction or high cost of concrete and transport. Poor maintenance of toilets is a sustainability risk. Problems in health statistics prevent reliable monitoring of environmental health.

The key activities carried out were: Sanitation strategic plan formulation, cluster level campaign, school level campaign and monitoring, sanitation training to committee members, local political leaders, toilet mason training, hardware support to poor families, triggering exercise, exposure visits, "sanitation card", innovative means of conveying sanitation and hygiene messages.

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Now the community is scaling up sanitation and post ODF activities (water supply and water safety management, preventive health care like hand washing at critical times, animal hygiene). People have realized that ODF and sanitation is a precondition for certain income generating activities, such as home stay tourism and increased production of high quality milk.

Key words: WASH ODF Sanitation in rural communities, integrated approach to sanitation, community lead sanitation

Introduction to Nepal

Nepal is located in South Asia between China in the north and India in the south, east and west. Nepal falls in the temperate zone north of the Tropic of Cancer. The country can be divided into three main geographical regions: Himalayan region, mid hill region and Terai (plain) region. Nepal has five major seasons: spring, summer, monsoon, autumn and winter. In mountainous regions, hills and valleys summers are temperate while winter temperatures can plummet under zero. Eighty percent of the precipitation is received during the monsoon (June-September). The population of Nepal recorded in 2011 was about 27 million. Nepali is the official language of the state, spoken and understood by majority of the population. Multiple ethnic groups have their own mother tongues. English is spoken by many in Government and business offices. There are many ethnic groups live in different parts of the country. Magars, Gurungs, Tamangs, Sunuwars, Newars, Thakalis, Chepangs, are the ethnic inhabitants of mid hill and valleys. However majorities are Brahmins, Chhetris and Thakuris, the caste groups. The majority of Nepalis are either Hindus or Buddhist. The two have co-existed in harmony through centuries.

At the national level, Nepal has many challenges. The nation is still struggling with the process of agreeing on a new constitution after the civil war and establishment of republic. Since more than a decade there have been no local elections, so there are no local elected bodies in the VDCs. The VDC secretary is nominated by the bureaucracy and the people's participation in the governing system is weak. Due to a long time of political instability in-country employment has been weakening so many young people go for foreign employment. As per preliminary census 2013/14 per capita income is USD 703. In the country still 23.8 % people are under poverty line.

Customs

The diversity in Nepal in terms of ethnicity again makes room for various sets of customs. Most of these customs go back to the Hindu, Buddhist or other religious traditions. Hindus worship cow. Cow is also the national animal of Nepal. Nepalese consider cow dung to be pure for cleansing purposes. Another interesting concept among Nepalese is division of pure and impure. "Jutho" referring to food or material touched by another's mouth directly or indirectly, is considered impure by Nepalese. During menstruation women are considered impure and hence are kept in seclusion until their fourth day purification bath. Nepal is a patriarchal society. Men usually go out to work while women engage in household chores. However, in cities, roles can differ. Most Nepalese abide by the caste system in living habits and marriage. Rural Nepal is mostly agrarian, while some aspects of urban life carry glitz and glamour of the ultra-modern world.

Sanitation situation in Nepal

In Nepal, hygiene and sanitation programs began from the late 1990s. During the initial years, sanitation was usually combined with water supply projects. Only from the early 2000s, sanitation focused program packages were launched by different agencies with different names, approaches and modalities. The

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approaches and modalities were found to have been modified from time to time after gaining lessons learning. From around 2005, total sanitation approaches were introduced in Nepal to increase Open Defecation Free communities, school catchment areas or VDC through Community Led Total Sanitation (CLTS) and School Led Total Sanitation (SLTS). Besides these, Basic sanitation package (BSP), School Sanitation and Hygiene Education (SSHE) and Integrated WATSAN were also effectively implemented by different organizations. Thus, there has been a great shift of approach from the conventional awareness raising approach to a behavior change approach as a movement.

Sanitation status and coverage in Nepal has been improving now a day, especially it has been accelerating since the launching of sanitation and hygiene master plan 2011. Now Sanitation coverage is 70% in the country. 23 out of 75 districts in Nepal have been declared as ODF (30%) so far and it is in the rapid increasing trend. However there are still some challenges/bottlenecks in the sanitation progress. The sanitation sector has been affected by fragmented efforts. Terai sanitation coverage is low due to its issues not addressed. High dependency on external budgetary support, inadequate mobilization of local resources, less consideration to supply and demand, inadequate toilet options, patchy planning, low level of involvement of political entities and inadequate contribution of local Government bodies are contributing to slow pace of sanitation development.

Research objective

To find an affordable model for implementing sustainable sanitation in a rural village in the hilly region of Nepal

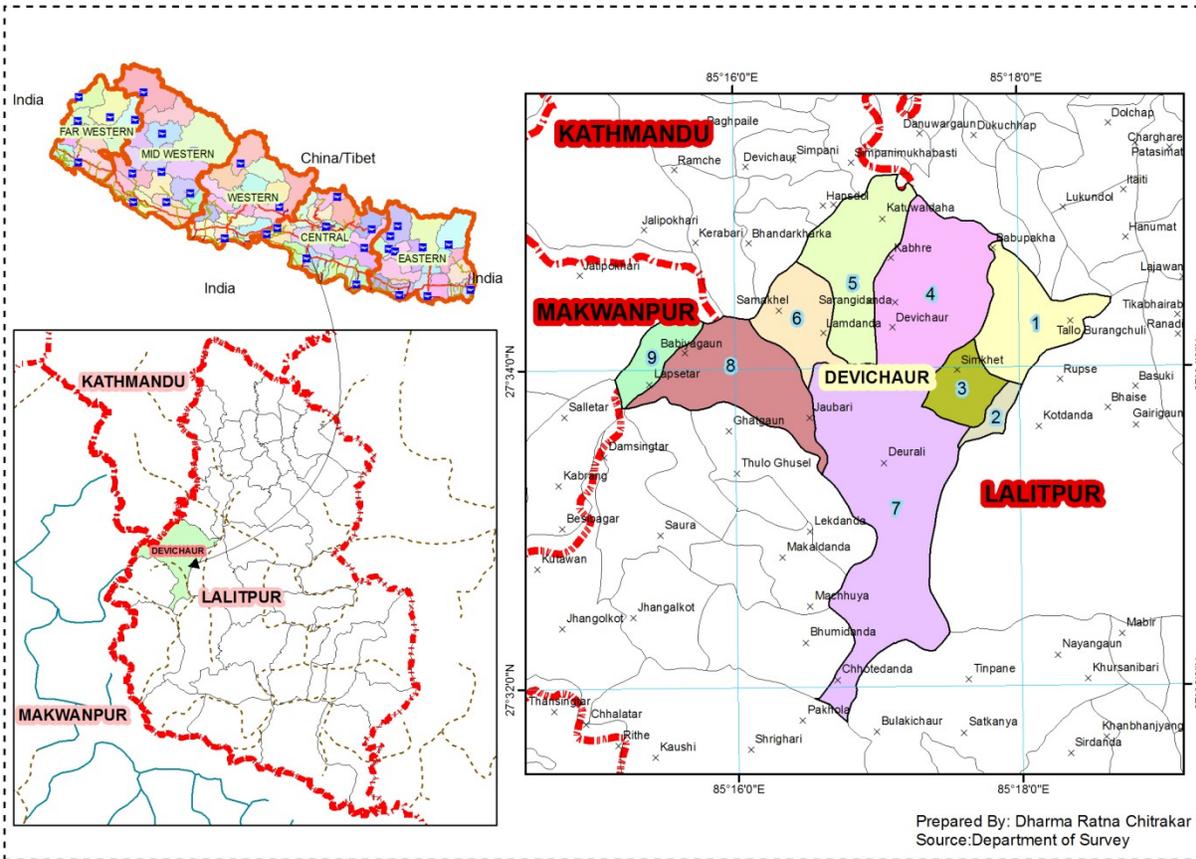
Introduction to LEAP project and the target area

Livelihood and Environmental Awareness Project (LEAP) has been implemented in Devichaur VDC since 2010 by Mikkeli Association for Sustainable Development (Finnish NGO, Mikkelin Kehityksmaayhdistys ry in Finnish) and its local partner Community Development Forum (CODEF a Nepalese NGO). The project is mainly funded by the Ministry of Foreign Affairs of Finland and 15% of project cost is covered with funds collected by KEMA. First phase of the project (2010 to 2012) has been successfully completed and the second phase is coming to an end in 2015.

Devichaur is one of the 41 administrative areas in Lalitpur District, called VDC (Village Development Committees). It is situated in the hills, close to Kathmandu Valley about 30 km. Its altitude ranges from 960m to 2,340m above the sea level. It has a total area of 12 square kilometres. The VDC comprises of 9 wards. Again there are small villages in the wards. There are about 20 villages within 9 wards and the VDC. Chhotidanda and Ghodakudne villages of ward no 7 are remote and still there is no road connection. Devichaur is rich in natural resources; water and forest. There is fertile agricultural land on the slopes of the hills and maize is the main crop of the VDC.

As per census 2011, there are 577 households having 2883 population (1408 male and 1475 female). There is one VDC office, one health post, one area forest office and 5 schools. There are 80% of the inhabitants are Tamang (ethnic group) and the rest are Brahmin. Agriculture is the main occupation of the villagers however livestock keeping and milking are growing. Young men from the village went abroad for foreign employment and some works as the hotel and restaurant labour in the cities.

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There are challenges for the village overall development in line with national targets. Some of the wards are still not connected with road. Many communities lack adequate vehicles so transportation of materials and products is time consuming, expensive as well as unsafe. Alcohol production and misuse is common in the VDC. Another challenge prevails in gender issues. There is not much discrimination in the household chores but gender based violence often occurs in the village. Nearly half of the people are illiterate in the VDC.

LEAP phase I experiences

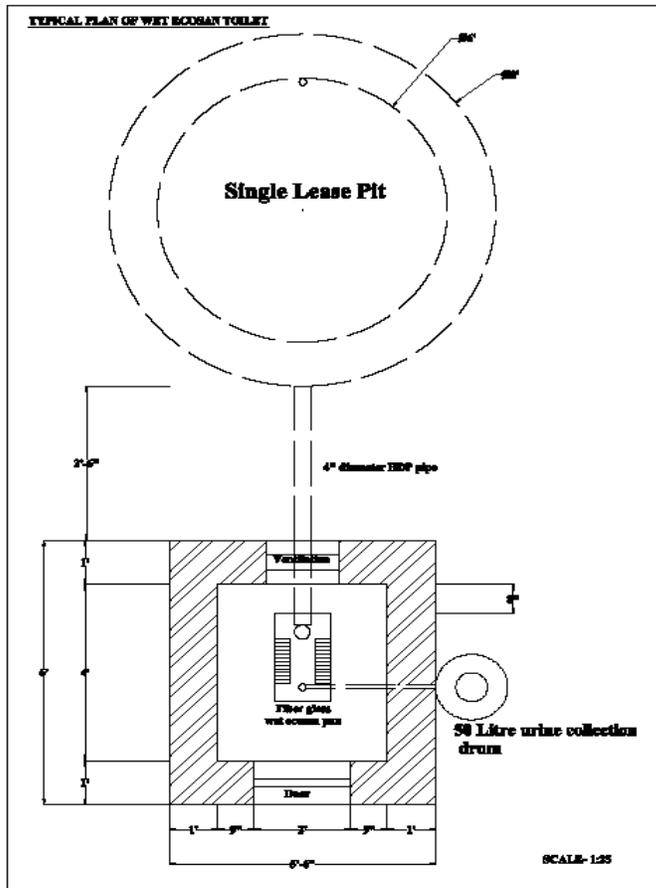
Project phase I objective was to strengthen villager’s ability to develop the village in a sustainable way, strengthen women’s decision making power, improve sanitation and health by building composting toilets and increasing health education. Small-scale IGA-activities were developed in order to increase the sustainability.

Women have been the LEAP core target group since its inception. 15 women's groups were established, one or two in each of the nine wards. These groups and their umbrella committee have participated in the planning and implementation of all activities and in proposing beneficiaries. There were five components of the project; Women empowerment, health and sanitation, institutional development, poverty reduction and capacity building. Sanitation part integrated with other components. At the beginning of the project there was only 41% sanitation coverage in the village and most of the toilets (78%) were direct pit and temporary in nature (baseline 2010).

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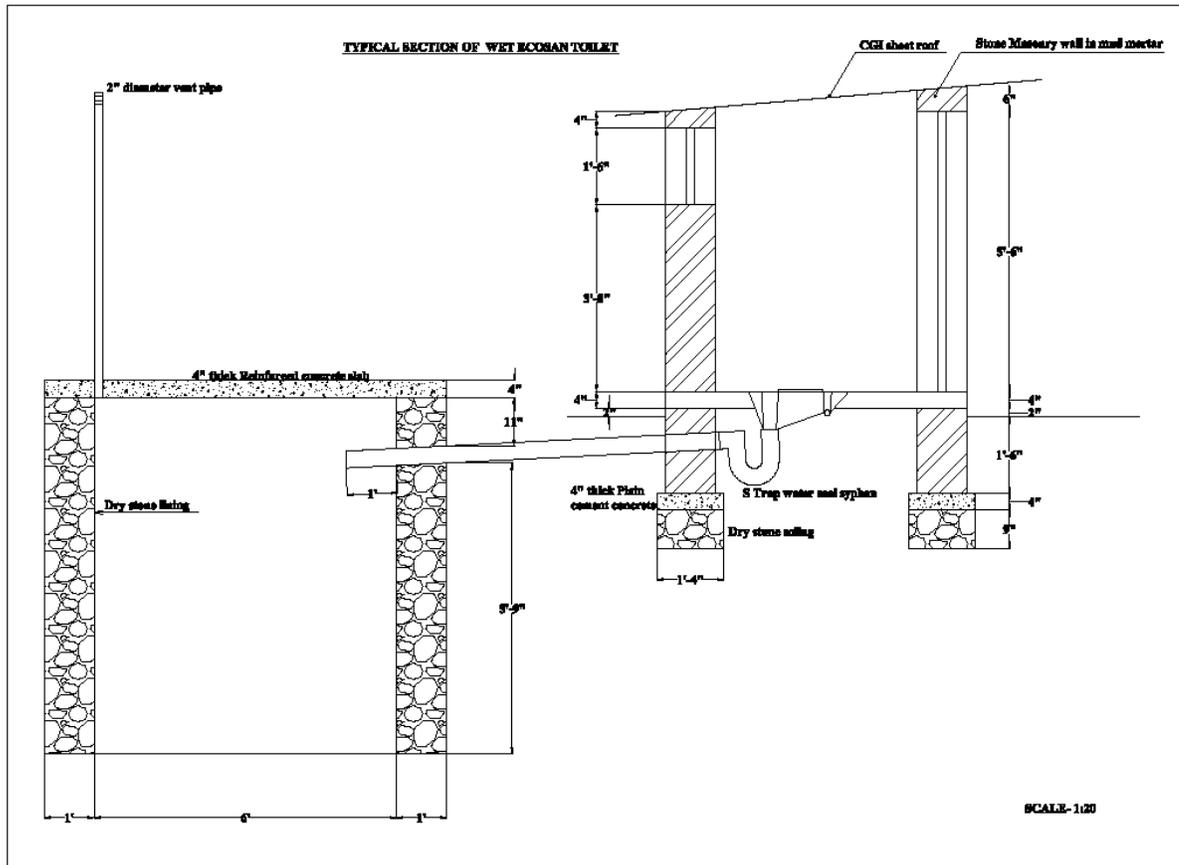
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Women group members as well as female women health volunteers were mobilized for household toilet promotion. First the group members were encouraged to build toilet. Female Community Health Volunteers (FCHVs) conveyed the message for latrine construction. In the network meeting and FCHV meeting sanitation issues and improvements planned were discussed. LEAP encouraged to build wet eco-san toilets in the village. Normally people build a single pit latrine with water seal S- trap fitted ceramic pan. Wet eco-san is a technique of separation of urine and feces using a special pan. Urine collects in a drum while feces in the pit. Anal washing water is discharged into the feces pit. People were trained and a visit was arranged to another district having experience with Eco-san latrines. About 80 nos wet eco-san toilets were built in project phase I. Collection and use of the urine for growing vegetables was introduced. There was no prior practice of using urine as fertilizer.



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Despite the effort, sanitation coverage could not speed up as desired. The mid-term review found some the deep rooted reasons. Medium and better off family build toilet while the poorest were found excluded. Another interesting aspect is difference between caste and ethnicity. Brahmin families build toilet faster in their home when there were subsidy however Tamang families lacked behind due to their low interest and slowness. Of the latrines already constructed, some problems have been noticed. Maintenance part found neglected, toilet doors are broken and there are cracks in the walls. Urine that was not used was discharged into the soil.

LEAP phase II approach and findings (2013-2015)

The overall objective of phase II is to reduce poverty in Devichaur VDC through improved income generation and better environmental health.

Development problems that the project going to addressing are:

1. generally weaker position of women in decision making on household level, committees and income activities
2. poor environmental health awareness and health services leading to diarrhea, eye problems due to contamination, smoke and close contact with animal excrement

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3. lack of opportunities for cash crops, lack of protein sources, poor access to market, poor access to investment financing
4. poor ability to utilize government services

The project targeted total population from 577 HHs of the Devichaur VDC. However, the project specifically targets the poor, Vulnerable & Socially Excluded group of the VDC.

LEAP has hired local mobilizers (one woman and another man of Tamang family) to familiarize project activities in the Tamang community in their language. Similarly there are two local volunteers (one woman and one man of Tamang family) to facilitate at the women group level meetings. Tamang staffs are good facilitators to communicate project information and activities. Compositions of FCHVs are mix of Tamang and Brahamin.

Expanding activities to water safety and hygiene awareness

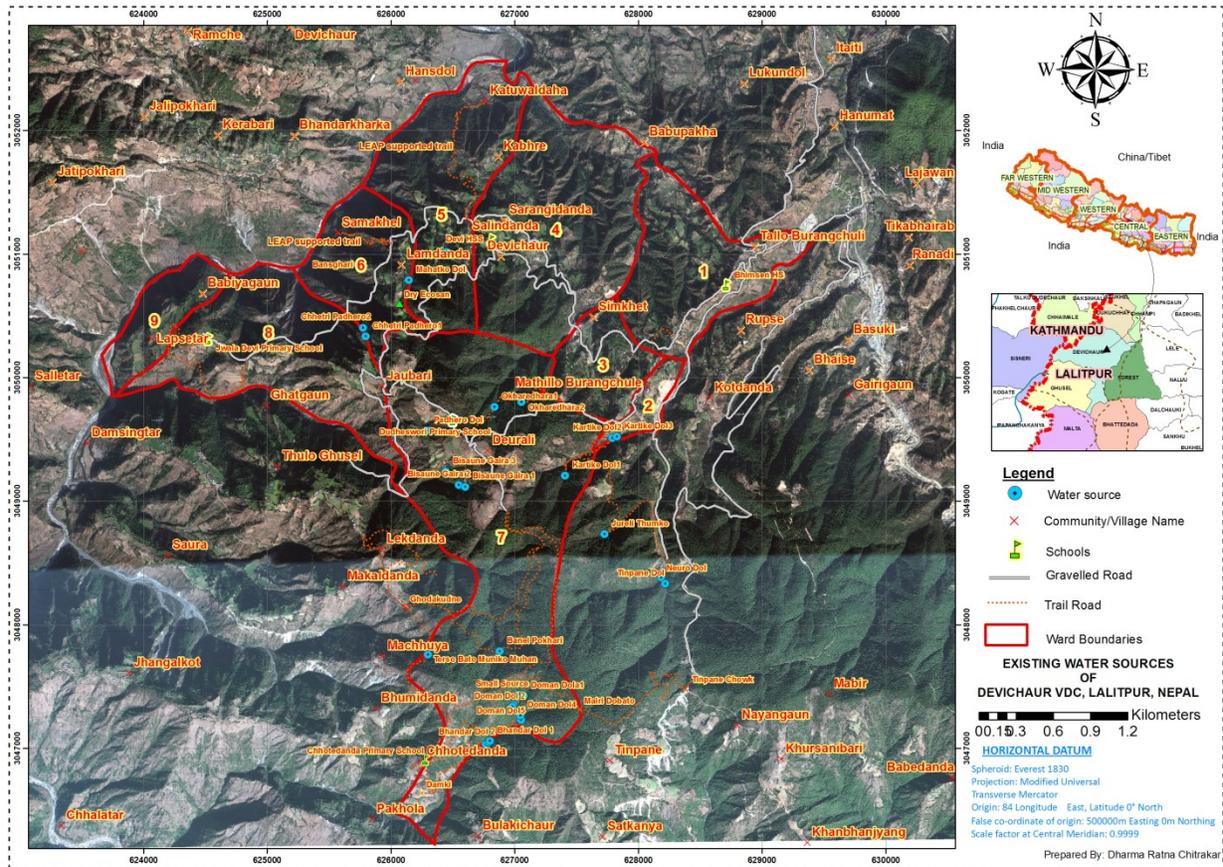
After reviewing the first phase project impact, KEMA and CODEF realized that toilets and its use is the primary and initial step towards total sanitation. Water safeties, hygiene awareness, change of habits and animal hygiene are other areas that need to improve. Total sanitation indicators are: 1) latrine use at household level, school level, institution level and their maintenance. 2) Hand washing with soap at critical time (before eating meal, before child feeding, after anal cleaning, after handling waste at work). 3) Water safety 4) food safety and 5) clean environment (solid waste management).

Water safety actions were added in the work plan. A simple technical survey with key informants was carried out and a draft water resource map prepared and shared with the inhabitants during World Water Day 2014. It was useful to map the water sources available, its current use and water source registration status. The first step is to have the water sources registered at the District Water Resource Committee. Until it is registered water cannot be used, mentioned in the government policy guideline. It was also realized that hardware intervention only cannot sustain the water schemes without the management system being improved. Water quality is another issue that needs regular monitoring. For the water quality improvement, priority was given for source protection. Bio-sand filter was installed in a higher secondary school so students having clean water to drink. Water sources were improved in two villages (Chhotidanda and Samakhel). In one village water safety plan training was provided.

Water resource in Devichaur VDC plotted in the GIS map with blue circles. In the VDC there are 9 wards and water source occurrence in the particular wards has been shown. Most of the water sources have been used for drinking water.

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Finnish intern students from University of applied science, Mikkeli carried out a study on water quality at Devichaur VDC in 2012 and 2014. Both of the study shows that water quality is not satisfactory. First thing, there is not proper water supply system. Most of the villages drink water directly from source through pipe and there are not any safety measures. Second, most water schemes lack maintenance. Third- water handling behavior found still poor among the people.

Alignment with national strategy and the use of policy instruments

The project strategy was revised to align better with the national sanitation strategy. Instead of working alone the project joined forces with the local and district level authorities.

The national guideline for sanitation promotion, SHMP 2011 strongly discourages the traditional subsidy model for promoting sanitation. Better-off households were expected to pay for the toilet construction materials. External latrine construction materials (non-local materials like cement, rebar) were supported to the poor families. LEAP financed a matching fund with the VDC. The District Water and Sanitation Office supplied a pan and pipe to poor as well as to better off families.

LEAP facilitated the establishment of a VDC level WASH coordination committee. It is a multi stakeholder's forum (VDC, health post, School, ward representative, political party and supporting organizations). To speed up sanitation in Devichaur the committee adopted a two prone strategy; motivation and enforcement. Motivation ways through material support, training and information. Enforcement was implemented by employing a practice of delivering each head of household a sanitation card – verifying that the owner has a toilet in use. The VDC outlined that the sanitation card is a condition

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for getting benefit from VDC services. The villagers need a recommendation letter from VDC to acquire services from government offices such as citizenship certificate, foreign employment and pension allowance. This enforcement practice was useful to create pressure against those persons who were ignoring the campaign, even when they could afford a toilet on their own resources.

It was found that many households had started latrine construction but left it incomplete due to the hired mason could not continue or mason could not be found. Other situation encountered that some of the completed latrine houses have something wrong technically like pan not set at horizontal level, door height is too low, door could not be closed properly. Local mason training was organized to help overcome such situations.



The photo shows a typical low cost toilet that the villagers were trained to construct. It can be built in a day. Wall, door and roof can be built after casting the vertical poles in the concrete. It costs less than the traditional one. However people did not like it very much because they prefer a strong and thick masonry wall.

How to reach the poorest households

The mid-term assessment indicated that the project approach did not reach the poor households, because it was the more well-off and mostly Brahmin who took an active role in the women's groups. Participatory method "Well Being Ranking" was used to identify different well-being groups of families in all the wards. Some of women group members and local persons were selected as the Key informants. Poverty indicators were prepared and agreed with them. The well being category and indicators are presented in table 2 and the result of the classification in table 3.

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Well being exercise orientation to the staffs and network members

Table 1: Well being Ranking

Well Being Category	Indicators
Ultra Poor (A)	Food sufficiency: not any or less than 3 months Employment/Income: Daily subsistence labor. Less than 2 USD incomes. House: Living other house or having small hut with mud wall. Asset: Land less or land having lowered productive. No other assets
Poor (B)	Food sufficiency: Up to 3 months from own product Employment/Income: In country temporary or labor in the Gulf country. House: Having small house Asset: Having some asset (cattle)
Medium (C)	Food sufficiency: About 6 month from own product. Employment/Income: Engaged in productive agriculture and livestock firm. In country basic employment or labor in the Gulf country. Some agriculture product sale (milk, vegetable). House: Bigger house with animal shed. Asset: Land and cattle
Better Off (D)	Food sufficiency: 12 month or more from own product. Employment/Income: Teacher, government job, N/INGO, Own business. Or foreign employment. House: Modern RCC slab casted. Rented. Assets: Transport (motorbike, tractor or more),
Total	

Table 2: Summary of well-being classification result in all the wards in the VDC

Household Head	Total Nos. of families	No. of families			
		Ultra Poor	Poor	Medium	Better off
Total of Ward 1	92	4	37	42	9
Total of Ward 2	60		17	21	22

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Total of Ward 3	47		15	27	5
Total of Ward 4	76	5	23	34	14
Total of Ward 5	48		16	25	7
Total of Ward 6	54		22	31	2
Total of Ward 7	73	1	19	52	1
Total of Ward 8	41		7	28	5
Total of Ward 9	33		8	15	10
Grand Total	524	10	164	275	75
Percentage		1.91%	31.30%	52.48%	14.31%

Women have been the main promoters of improved sanitation in the village. Women are more vulnerable in the backward situation of open defecation and they want a toilet in their home. In Devichaur, women groups have the largest network and if they unite they can bring change.

Sanitation and water safety improvements also offer employment. There is a proverb in Nepali language “PHOHAR BATA MOHAR KAMAU” It means make money from waste. Sanitation worker like toilet cleaner and septic tank emptier is considered low status. But there is opportunity of employment in sanitation related work in cities. One example the toilet pan of a school in Devichour blocked and the cleaner was not available in the village so it was hired from the city with the cost NPR 1000.00 (10 €) per toilet. In the near future there are many toilet pits being filled up and needs such service.

Introducing appropriate technology and linkages between sanitation and income generation

One of the reasons for the low coverage toilets in the villages was the lack of toilet options and affordable cost. There is a mindset and general perception of a toilet that it should have ceramic pan, masonry wall with corrugated roof and good appearance from outside. Many families used excessive funds to build the latrine using commercial building materials. The sanitation market in Nepal is poorly developed. There is not real sanitation entrepreneurship. Local shopkeepers don't have complete sanitation products for sale.

The dry eco-san toilet was piloted in a family at ward no 6, Devichaur in 2014. LEAP designed the first dry toilet in Devichaur. Finnish monitoring members and intern students expressed some doubts that the collection tank is too heavy to be moved after getting it filled up. However the pilot dry eco-san toilet is now in use and the owner is managing it properly. Sawdust and wood-ash is used as covering material. The cost of constructing the dry toilet found higher than the wet eco-san due to big drum.

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Dry Eco san Toilet and owner



Excreta collection system

In phase II sanitation was introduced as a integration with water supply or linkages to income generation. The motivation for improved sanitation comes from the different benefits of sanitation; social, health, prestige, economic and so on. Urine application as fertilizer in some families is a good example. The farmer who uses urine also was observed to maintain the toilet well. For the sustainability of the sanitation and its scaling up, sanitation needs to be linked with income generating activities.

Every year two Finnish intern students, with different background from Mikkeli University of Applied Sciences came to LEAP for 3 months. The students had background in environmental technology, forestry, animal health or tourism industry. Practice shows the mutual benefit of the internship program: the students learn about grassroots development cooperation and they provide valuable insights to the local development partners. Raising awareness of milk hygiene, for example was one of the contributions to the WASH component.

Sanitation and cleanliness has been the basis and precondition for other development and social activities. Home stay tourism was initiated in one community. A clean toilet is a mandatory condition for receiving tourists. Another community is now focusing in improving cattle shed management for animal and milk hygiene. Some of the families with a new toilet have connected the toilet to a bio-gas plant.

More emphasis on maintenance and good practices

Phase I project focused on wet- eco san toilet building. It is obvious that the sustainability of sanitation requires more attention to the use and maintenance. In a follow-up study in 2014, 7% of the Eco-san toilets had some faults that needed repair (figure 1). The use of urine as fertilizer had been introduced. Similarly, 38% of the households that had received an eco-san toilet were using urine (figure 2). This new practice needs continuous encouragement and is linked with the development of vegetable gardening. The need for fertilizer varies in different seasons.

Figure 1: Wet- Eco San toilet status

Figure 2: Urine use status

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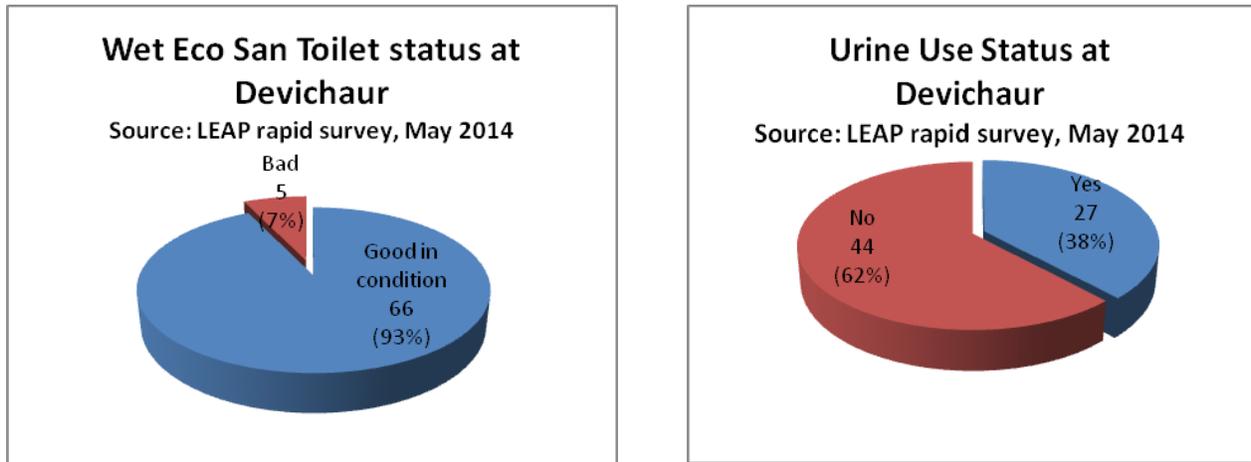
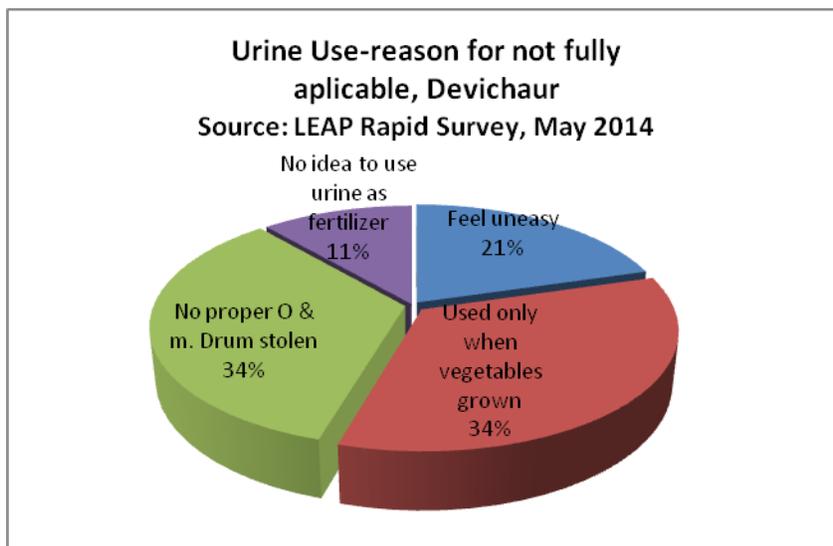


Figure 3: Urine Application and its problem



Challenges in monitoring the impact

In the project document the occurrence of diarrhea was chosen as the key indicator of a successful sanitation intervention. The disappointing data (2010-2012) came up that there had been an increasing trend of diarrhea. However in the mid project the data found misleading because of the method of collecting the statistics. The data is collected by the Female Community Health Volunteers, one in each ward. The health post assigns them certain health tasks and provides them with a check list. An interview of the FCHVs revealed that every time they delivered a bag of Oral Rehydration Solution (ORS) to a customer, this was registered as a diarrhea case. Because the ORS bags were provided free of charge people, gladly requested them on every opportunity. The solution was even used as refreshment or energy drink! In addition it appeared that patients from the neighboring village also visit the Devichaur health post for diarrheal treatment causing some deviation in the statistics.

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Recent health post data 2011-2015 shows that there is decreasing trend of diarrheal diseases in Devichaur VDC. The diarrheal cases recorded 329 patients in 2012/13, 261 patients in 2013/14 and 67 patients in 2014/15 (mid -year).

Table 3: Health Post Data 2012 to 2015 (mid)

Nepali Fiscal Year	English Year	Diarrheal cases	Remarks
2069/70	July 2012/June 2013	329	
2071/71	July 2013/June 2014	261	
2071/72	July 2014/June 2015	67	Mid- year data (From July 2014 to Dec. 2014)

Culmination of the sanitation campaign and the way ahead

Devichaur VDC was declared as Open Defecation Free (ODF) on 12 July 2014, after long time hard work of V-WASH-CC, LEAP and schools. Vice House of Speaker, parliament of Nepal, Ms Onsara Garti was the chief guest and she inaugurated the ODF program. In the program, Lalitpur district level constitution assembly members, district level government officials, district level politicians, support organization heads and plenty of community members as well as school students were present in the program. The ODF declaration program was formal and different activities were carried out; ODF program inauguration, ODF vow, speech from different speakers, award and certificate distribution, inauguration of recent LEAP supported school latrine (renovated as girls friendly latrine) and singing/dancing. LEAP organized sanitation materials demonstration and sale event during the program.

Devichaur was 13th of the 41 VDCs in the Lalitpur district that reached ODF status. DDC put pressure to VDC for ODF. VDC secretary (also V-WASH-CC chairperson) took it seriously. LEAP increased its support (material support to the poor families), political parties mobilized their members, responsibilities delegated to ward coordinators. LEAP organized V-WASH-CC and ward coordinators sanitation sensitization workshop meeting, which breakthrough for the rapid progress. Support, motivation and enforcement tools applied. There were joint efforts to support; pan & pipe support from WSSDO, other material support (cement and reinforcement to the poor) from LEAP matching with VDC fund. At the last moment, LEAP also supported some of the poor families for mason support.

Practically all the households now have a latrine. However sanitation activities will not cease after ODF. Post ODF activities will include promotion of behavior change, scaling up, total sanitation and promoting urine.

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Vice House Speaker, Onsari Gharti, Chief Guest



People Rally on the occasion of ODF declaration

Conclusions

The innovation of the LEAP is the integration of sanitation issues with two other objectives: the strengthening of the participation of women and poverty alleviation by providing income generating activities (IGA). Income generation has been diversified by providing training in agriculture, animal husbandry, non-timber forest products, handcraft, bee-keeping, mushroom growing and charcoal briquette production from small bushes. A microloan scheme was successfully introduced and the pay back of loans has been effective. The project has significantly facilitated the access of the community to District level extension services and financing and awareness of their rights. The project has increased community based voluntary action, e.g. tree planting and maintenance of foot paths and cultural events. Among the success factors were the following:

1. women as community mobilizers
2. toilets alone are not the solution: also water safety, hygiene awareness, change of habits, animal hygiene
3. link sanitation with poverty alleviation (IGA, focus on poor and excluded population)
4. good cooperation and cohesion with national strategy and District procedures, health post
5. cost sharing with beneficiaries, subsidies mainly to poor households
6. after initial introduction of sanitation use peer pressure and make sanitation an issue of community pride
7. use of existing local knowhow and resources: social mobilizers (Tamang), FCHVs
8. affordable technology.

Epilogue

The devastating earthquake on April 25th and May 12th, 2015 was a disaster for Devichaur damaging almost all 95 % of the houses and also many newly built toilets and water pipes. The budget of the last year of LEAP was reoriented to support reconstruction and to ensure sanitation and health even in the disaster situation. The energy of the population is now focused on rebuilding their homes and struggling

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with their daily life, so much of the phase-out activities had to be cancelled. However, the sense of solidarity and cooperation that the project has strengthened remains supportive.

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*Mr. Yubraj Shrestha has 25 years experience in WASH sector in Nepal. He has been contributing WASH in different ways. Sanitation and hygiene related studies, marketing and water safety are his contributing area. He works in and WASH leading NGO, CODEF as LEAP project manager.

**Mr. Raimo Lilja is the project coordinator of the Devichour village development project in Nepal. He is board member and volunteer of KEMA (Mikkelin Kehityksmaayhdistys ry in Finnish). Raimo Lilja has over 30 experiences in environmental management in Finland and several developing countries. He is managing director of the Finnish consultant company Ecolabel Partnership (Ekoleima Ay).

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Abbreviations

BSP	Basic sanitation package
CLTS	Community Led Total Sanitation
DPHO	Department of Public Health Office
FCHV	Female Health Volunteer
GPS	Global Positioning System
HP	Health Post
IGA	Income Generating Activities
LEAP	Livelihood and Environmental Awareness Project
MoH	Ministry of Health
ODF	Open Defecation Free
ORS	Oral Rehydration Solution
PHC	Primary Health Care
SLTS	School Led Total Sanitation
SSHE	School Sanitation and Hygiene Education
SHMP	Sanitation and Hygiene Master Plan
VDC	Village Development Committee
WSP	Water Safety Plan
V-WASH-CC	Village Water Sanitation and Hygiene Coordination Committee

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Autobiography- Yubraj Shrestha

Yubraj Shrestha is a WASH sector activist in Nepal who spent 25 years in WASH project management and implementation different parts of the country from NGO side. Project design, M&E, livelihood, and study are his competent areas. Currently, since Feb 2013, he has been working as the Project manager for Livelihood and Environmental Awareness project (LEAP) at Community Development Forum (CODEF). From Jan. 2011 to Oct. 2012, he worked at Rural Village Water Resource Management Project (RVWRMP) phase II, as a Water Resource Advisor in Kailali district. Similarly he spent about eighteen years since Nov. 1992 to end December 2010, in Nepal Water for Health (NEWAH) as the technical officer, program support & maintenance officer, new initiative manager, PME manager and regional manager in Central and Western Region of Nepal. His first job was in the Primary Health Care and Drinking Water Project, Nepal Red Cross society as a technical supervisor from 1987 to 1990.



Autobiography – Raimo Lilja

Mr. Raimo Lilja is an environmental consultant from Finland with over 30 years' experience in environmental management. He is the owner and managing director of an environmental consulting company Ecolabel Partnership (Ekoleima Ay). Formerly he has worked in the environmental administration in Finland. He has worked in environmental projects such as waste management development and capacity building of the environmental administration in several developing countries, e.g. Egypt, South Africa, Nepal, Laos and Myanmar. Raimo Lilja is a founding member and longtime board member and volunteer of the Mikkeli Association for Sustainable Development (Mikkelin Kehityksmaayhdistys ry KEMA). Currently he is volunteering as the project coordinator for the Livelihood and Environmental Awareness Project (LEAP) in Lalitpur, Nepal.

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